

VYTAUTAS MAGNUS UNIVERSITY

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**HOUSEHOLD CONSUMERS' RIGHT TO BE SUPPLIED WITH
ELECTRICITY IN THE EUROPEAN UNION**

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List of abbreviations

CFR - The Charter of Fundamental Rights of the European Union

DSO - Distribution System Operator

IEM - Internal energy market

NRA - National Regulatory Authority

OECD - Organisation of Economic Co-operation and Development

PSO - Public Service Obligations

RES - Renewable energy service

SGI - Services of general interest

SGEI - Services of general economic interest

SOLR - Supplier of Last Resort

TFEU - Treaty on the Functioning of the European Union

I. INTRODUCTION

Topicality

A number of attempts to capture the characteristics and relationships originate in the functioning of energy system. How one defines the energy system stems from the field one is engaged in. With respect to social science, the energy system is a complex and multi-layered sector with the mission to ensure energy service for all stakeholders in a fair and equitable manner. In contrast, engineering science understands the energy system as the chain of technological operations in production, distribution, consumption, or environment sciences focusing on the resource extraction, pollution from the generation and consumption of energy, and production of renewable energy. This results in the diversity preferences of limits in its functioning in the upstream and downstream of the energy chain, namely, production-consumption¹ and mining waste.² Also, the intrinsic characteristics of energy system vary in the literature, such as path dependence,³ socio-technical system,⁴ lock-in,⁵ and inertia.⁶ Nevertheless, the context of energy systems is most significant from the social science perspective to examine the outcomes that the functioning energy system produce for the society and individuals.

Whereas energy systems affect all spheres of life, their failure impinges not only on a restricted enjoyment of energy services but also on the environment, economic development, social and political stability. Recognition of such heterogeneity and complexity is mandatory to give due account of the nature and structure of energy systems against which the social justice demands could be proclaimed in a view to ensure the use of adequate energy services for household consumers. Indeed, it is a system of social and personal spheres within the notion of well-being to be governed by overlapping, competing, and conflicting tasks. This distribution between different demands is reflected in the contested demands of energy security, equity, and sustainability.⁷ Hence, the task is to balance policies on energy finance, the environment, and energy security within the energy trilemma in a just and equitable manner.⁸ Accordingly, there is a need to set the criteria for the judgement of existing regulations and to guide the future of energy rules derived from the demands of social justice.

¹Stefan Bouzarovski, Saska Petrova, Sergio Tirado-Herrero, *From Fuel Poverty to Energy Vulnerability: The Importance of Services, Needs and Practices*, SPRU Working Paper Series 25 (2014): 8.

²Benjamin K. Sovacool, Matthew Burke, Lucy Baker, Chaitanya Kumar Kotikalapudi, Holle Wlokas, *New frontiers and conceptual frameworks for energy justice*, *Energy Policy* 105 (2017): 689.

³Benjamin K. Sovacool, Roman V. Sidortsov, Benjamin R. Jones, *Energy security, equality, and justice*, (London and New York: Routledge, 2014): 188.

⁴Andreas Goldthau, Benjamin K. Sovacool, *The uniqueness of the energy security, justice, and governance problem*, *Energy Policy* 41 (2012): 233.

⁵Roger Fouquet, *Path dependence in energy systems and economic development*, *Nature Energy* 1 (2016): 2.

⁶Andreas Goldthau, Benjamin K. Sovacool, *The uniqueness of the energy security, justice, and governance problem*, *Energy Policy* 41 (2012): 235.

⁷*World Energy Trilemma: Priority actions on climate change and how to balance the trilemma*, World Energy Council 2015.

⁸Raphael J. Heffron, Darren McCauley, Benjamin K. Sovacool, *Resolving society's energy trilemma through the Energy Justice Metric*, *Energy Policy* 87 (2015): 169.

Either perspective treats the main demands of the energy system differently on the grounds of public interest, environment protection, and outcome fairness, even though their realization is underpinned by the same issues. In that light, one may argue that international recognition of energy security and environment are more important to human well-being and development than beating out economic competitors,⁹ representing the idea that demand for equity encompasses or matches other demands. It would be inequitable to restrain the acquisition of social goods such as energy carriers, and it would be unsustainable as households may shift to more polluting and hazardous solid or liquid fuels if they could not afford to meet even basic energy needs. However, strict adherence to justice demands leaving financial rationale unaccounted results in incomplete judgement of the current state of beneficiaries of the energy system. Understanding the economic dimension of energy finance, energy sources, carriers' prices, insurance costs, subsidy supports, tax incentives, and affordability¹⁰ is done in quantitative terms, which highlights economic influence on the functioning of energy systems. The issues require not only economic structure but also a framework integrating economic–justice requirements for the governance of energy regulation.

Furthermore, discipline advocates for this field of study occupy the most significant area of concerns in the operations of energy systems. This triggers competition between demands for energy system design and regulation by means of the competing morality of the rise in energy provision and environmental protection in energy decision-making.¹¹ For instance, the environmental sciences declare the primary need to foster the transition to RES, decrease pollution, and prohibit polluting activities. Meanwhile, political science shows the need for political stability in the case of system failures or energy shocks, whereby energy security trumps environmental concerns or energy poverty. In light of justice concerns, legal discipline highlights the respect for values through value-based regulation such as the value of equity, which refers to household consumers' access to and ability to afford an energy service.¹²

The realization of one task is interlinked with others, impeding their actualization. In that regard, the decision to increase taxes on carbon and other fiscal instruments, while having the positive intention to combat climate change and regulate consumption practices, also has regressive effects in terms of energy poverty.¹³ The measures' design and implementation on the

⁹ Raphael J. Heffron, Darren McCauley, Benjamin K. Sovacool, *Resolving society's energy trilemma through the Energy Justice Metric*, Energy Policy 87 (2015): 171.

¹⁰ Raphael J. Heffron, Darren McCauley, *The concept of energy justice across the disciplines*, Energy Policy 105 (2017): 28.

¹¹ Kirsten Jenkins, Benjamin K. Sovacool, Darren McCauley, *Humanizing sociotechnical transitions through energy justice: An ethical framework for global transformative change*, Energy Policy 117 (2018): 70.

¹² Alister Forman, *Energy justice at the end of the wire: Enacting community energy and equity in Wales*, Energy Policy 107 (2017): 650.

¹³ Stefan Bouzarovski, Harriet Thomson, Marine Cornelis, *Confronting Energy Poverty in Europe: A Research and Policy Agenda*, Energies 14, 858. (2021): 4.

households' access to energy service are offset by their effect on climate change.¹⁴ The tensions between different objectives of affordability and sustainability are unavoidable because the more people who escape energy poverty, the more pollution comes from CO₂ emissions.¹⁵ On the one hand, energy consumption increases the pollution because fossil fuel is the primary source of energy; on the other hand, the promotion of RES reduces accessibility of energy service because of the highest cost of energy in comparison to fossil fuel-based energy that is subsidized in many forms.

The political agreement between member states of the establishment and the functioning of internal energy markets in the EU confine the energy system to its development based on technological and economic reasoning. The internal energy market is vested with the task to ensure "affordable but cost-reflective and reliable supplies to consumers" underlined with a favourable perception of market mechanisms to guarantee the successful execution of the task.¹⁶ The implementation of a market model in the energy system bears benefits as well as externalities on social groups. For instance, competition decreased the price of energy in the long run for consumers, but due to blanket prices of energy the benefit was shared between all social groups alike without recognition of energy-poor households' and vulnerable consumers' needs. Even though the competition rules in its operation should uplift the quality of service and ensure effective realization of choice, affordable prices, and sustainable development,¹⁷ the lack of effective competition has the opposite effect in terms of market concentration's resulting in less attuned tariff schemes, higher prices, and a lack of choice between suppliers and resources.

There is a need to combine the efforts of different science fields by internalising the social costs of carbon emissions to fight energy poverty on sustainable grounds.¹⁸ As the sustainability policies on the provision of energy service alone do not put the same positive outcomes on all end users,¹⁹ there should be a holistic approach to environmental protection through social and economic development.²⁰ Otherwise, poverty alleviation measures alone might promote economic growth and yield an increase in energy demand beyond expectations, provided that the elasticities between income and energy consumption are sufficiently high.²¹ Although this

¹⁴ Darren McCauley, Vasna Ramasar, Raphael James Heffron, Benjamin K. Sovacool, Desta Mebratu, Luis Mundaca, *Energy justice in the transition to low carbon energy systems: Exploring key themes in interdisciplinary research*, Applied Energy 233-234 (2019): 917.

¹⁵ Shoibal Chakravarty, Massimo Tavoni, Energy poverty alleviation and climate change mitigation: Is there a trade off?, Energy Economics 40 (2013): 72.

¹⁶ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Energy 2020: A strategy for competitive, sustainable and secure energy, COM (2010)639: 13.

¹⁷ Report on the commission - White Paper on services of general interest, (2005/2101(INI)): 8.

¹⁸ Stefan Bouzarovski, Sergio Tirado Herrero, *Understanding the core-periphery divide in the geographies of European energy poverty*, Energy poverty handbook (2016): 88

¹⁹ Benjamin K. Sovacool, Matthew M. Lipsonc, Rose Charde, *Temporality, vulnerability, and energy justice in household low carbon innovations*, Energy Policy 128 (2019): 496.

²⁰ Lakshman Guruswamy, *Energy Justice and Sustainable Development*, 21 Colorado Journal of International Environmental Law & Policy 231 (2010): 246.

²¹ Shoibal Chakravarty, Massimo Tavoni, *Energy poverty alleviation and climate change mitigation: Is there a trade off?* Energy Economics 40 (2013): 70.

would be a positive step in introducing social justice into energy decisions, for real change to occur there should be an inclusive quantitative economic model for a fair economic energy policy applied to the measuring of outcomes.²² At the current stage, the techno-economic perspective to energy system development and problems is still promoting a cost–benefit evaluation framework for decision-making.²³ However, the priority of the market as a sole tool to solve social issues is not adequate in the energy system, which proposes values based a framework of energy justice that enables us to identify injustice and to justify any mitigation measures.

The access to energy services by household consumers in the EU is a predominant task of the complex and multilevel energy system. Inevitably, the following questions emerge, provided that the objective is to ensure the enjoyment of energy service for the human development and well-being: what the energy system is, how the demands of energy system are interrelated, how it should be governed, and how to guarantee the fairness within. Accordingly, the pressing issue in terms of equity is the recognition of significance of unrestricted access to energy services to human well-being, which has to be ascertained against the social justice demands. Respectively, the design of tools to address the identified challenges should be based on values for it to be fair and understanding of the process for it to be effective. The development of energy law should take into account the heterogeneity of issues that need long-term solutions and design rules not in silos of energy security, sustainability, and market regulation, but in a coherent mode.²⁴ To that end, this research aims to investigate the social meaning of energy services through conceptualizing the framework of energy justice and the structuring of legislation on energy in the EU, generating a novel theory on the process of access to energy services and analysing its coherency.

Scientific problem

The discourse on energy is dedicated to the engineering and economic issues sustaining the understanding that an energy system is the assemblage of technological solutions to be governed by the cost–benefit rationale. With respect to the electricity sector, due consideration is given to the functioning of grid as a means of infrastructure maintenance and operation as well as the economic justification for the management of energy system development and the activities performed.²⁵ This leaves a vacuum for deliberating how people interact with energy and what consequences it produces for the public well-being and development. Despite emerging research

²² Ramazani Sari, et al. *Energy justice - a social sciences and humanities cross-cutting theme report*. Cambridge: SHAPE ENERGY (2017): 12.

²³ Benjamin K. Sovacool, Matthew Burke, Lucy Baker, Chaitanya Kumar Kotikalapudi, Holle Wlokas, *New frontiers and conceptual frameworks for energy justice*, Energy Policy 105 (2017): 689.

²⁴ Raphael J. Heffron, Kim Talus, *The evolution of energy law and energy jurisprudence: Insights for energy analysts and researchers*, Energy Research & Social Science 19 (2016): 4.

²⁵ Benjamin K. Sovacool, Michael H. Dworkin, *Global energy justice: problems, principles, and practices* (Cambridge: Cambridge Law Press, 2014).

on social inequalities caused by the current paradigm of the energy system,²⁶ there is a lack of energy decision-making and regulation in the EU assessment from the social justice perspective. Furthermore, there is an absence of available coherent tools in the literature to execute such assessment. Therefore, the research proposes the right to access energy services as a conceptual tool equipped with requirements for the possible mitigation of injustices in electricity sphere. Although the latter correlate with underlying notions in the framework of energy justice, they are distinct in terms of purpose.

Because economic and social justice perspectives adhere to divergent rationale, values, and principles, the question regards what paradigm should guide energy decisions being translated into the normative base. Against this background the research has recognized the heterogeneity of understandings that are overlapping, conflicting, and distinct. For instance, as far as the electricity sector governing rules are concerned, EU legislation promotes the internal electricity market underlined with the economic rationale incorporating market demands in the right to be supplied, whereas from the social perspective it could be argued that the social demands of equality and dignity should be accommodated in the electricity regulatory regime that takes account of the whole process of access to energy service.

The literature just recently started to recognise the injustices in energy services,²⁷ whereby the assessment of energy system output as an unequal and unfair distribution of benefits is derived from electricity consumption. The discourse makes clear that energy deprivation is the greatest injustice in the energy system.²⁸ Social justice demands to be conceptualized regarding distribution, procedure, and recognitions of justice within the paradigm of energy justice²⁹ to address the injustice issue. Whereas the process of energy justice reflects the supply and consumption stages to the great extent where household consumers acquire electricity for their personal needs,³⁰ the benefit stage is still unnoticed where the household realizes its needs or fails to. Despite the triad of tenets clearly articulated and orientated to the policy design and regulatory process,³¹ this triad lacks the capacity to consider the complete process from the transaction and delivery to the consumption and experience of well-being. Also, there is little literature on the deliberation of the design of the energy justice framework specifically for energy services sustained exceptionally through electricity, as until now there has been an endeavor to present a

²⁶ Darren McCauley, Raphael Heffron, Hannes Stephan, and Kirsten Jenkins, *Advancing energy justice: The triumvirate of tenets*, International Energy Law Review 32(3) (2013).

²⁷ Neil Simcock, Gordon Walker, Rosie Day, *Fuel poverty in the UK: beyond heating?* People, Place and Policy 10/1 (2016).

²⁸ Gordon Walker, Rosi Day, *Fuel poverty as injustice: Integrating distribution, recognition and procedure in the struggle for affordable warmth*, Energy Policy 49 (2012)

²⁹ Darren McCauley, Raphael Heffron, Hannes Stephan, and Kirsten Jenkins, *Advancing energy justice: The triumvirate of tenets*, International Energy Law Review 32(3) (2013).

³⁰ Kirsten Jenkins, Darren McCauley, Raphael Heffron, Hannes Stephan, *Energy Justice: A Whole Systems Approach*, Queens Political Review Vol. 2, No. 2 (2014).

³¹ Gordon Walker, Rosi Day, *Fuel poverty as injustice: Integrating distribution, recognition and procedure in the struggle for affordable warmth*, Energy Policy 49 (2012):

framework of energy justice as a one-size-fits-all.³² Accordingly, the research focuses on the development of the framework of energy justice that takes into account the whole process that household consumers encounter from supply until their well-being is assured customized to the specificities of electricity sphere.

The focus on policy and its underlying process appeals to decision-makers in energy on the apparent issues;³³ however, the drawback rests in failing to give due account to the ancillary rights to the right to be supplied, or the source for the possible assistance on vulnerable household consumers. Even now, the literature gives only some fragmented attention to the EU legislation on energy.³⁴ However, there are some dedicated studies on the EU policies on energy poverty as injustice³⁵ and its measurement.³⁶ Therefore, there is a need to give a comprehensive structural view of the current regime of the energy sector related to electricity acquisition and consumption. This needs to be done to judge the conditions for the household consumers' effective realization of their needs and the social justice demands thereof.

Qualitative research on household consumers electricity consumption for the enjoyment of energy services is largely absent in the literature apart from research on the household's vulnerabilities³⁷ and energy expenditure.³⁸ The theory systematically describes and conceptually explains the process of access to energy services as it is understood from household consumers' perspectives and experiences. Hence, the theory deliberates on the process of access to energy service and yields real-life understandings of social justice demands against which normative rules may be judged.

Statements of dissertation

1. S1: The right to be supplied with electricity in the EU does not guarantee the realization of household consumers' needs.
2. S2: The right to be supplied with electricity in the EU does not meet the social justice demands.
3. S3: The concept of energy justice fails to take due account of the nature of the process of access to energy services.

³² Benjamin K. Sovacool, Roman V. Sidortsov, and Benjamin R. Jones, *Energy security, equality, and justice* (London and New York: Routledge, 2014).

³³ Kaja Prime, Renata Slabe-Erker, *Social policy or energy policy? Time to reconsider energy poverty policies*, *Energy for Sustainable Development* 55 (2020).

³⁴ Steve Pye, et al., *Addressing Energy Poverty and Vulnerable Consumers in the Energy Sector Across the EU*, *L'Europe en Formation* 378(4) (2015); Florin Vondung, Johannes Thema, *Energy poverty in the EU – indicators as a base for policy action* (Eceec Summer Study, 2019).

³⁵ Stefan Bouzarovski, *Energy poverty in the European Union: landscapes of vulnerability*, *WIREs Energy Environ* 3 (2014).

³⁶ John Hills, *Fuel poverty: the problem and its measurement*. (CASE report 69, Department for Energy and Climate Change, London, UK 2011).

³⁷ Lucie Middlemiss, Ross Gillard, *Fuel poverty from the bottom-up: Characterising household energy vulnerability through the lived experience of the fuel poor*, *Energy Research & Social Science* 6 (2015).

³⁸ Maciej Lis, Agata Miazga, *Who will be affected by rising energy prices? Map of energy expenditures of Poles*, Institute for Structural Research, IBS Working Paper No. 11 (2015).

Research object

The conditions for household consumers' ability to actualize their well-being through the access to energy services.

Research aim

To stipulate the right to be supplied with electricity established in the EU legislation implication on the household consumers realization of individually needed level of enjoyment of energy services to their well-being.

Research tasks

1. To conceptualize a coherent framework of energy justice calibrated for the ascertainment of energy injustice in the access to energy service by electricity.
2. To propose evaluative/guiding criteria for the right to energy services for electricity sector.
3. To structure umbrella legislation in the EU on the right to be supplied constituting of internal and external components, legislative mechanisms, and measures.
4. To generate grounded theory on the process of access to energy service by household consumers.

Novelty of topic

The changes in technology give impetus for new forms of energy services as well as emergence of energy market based on competition. In fact, the definition of natural monopolies has changed in infrastructure industries, as a natural monopoly in the electricity industry remains a part of the transmission and distribution of electricity, whereas other parts of the electricity value chain (production, supply and retail) are to a great extent governed by the market model. Transformation from monopoly into market economy in energy systems is sustained by a belief that energy is a good exchanged on the market with the capacity to determine a fair price by supply-and-demand interaction.³⁹ However, the development of an energy system brings new issues of fairness and equity in distribution of energy services between members of society, which legal researchers try to address. The focus in the research is shifting from the fairness of supply price to the fairness in access to energy services.

³⁹ Andreas Goldthau, Benjamin K. Sovacool, *The uniqueness of the energy security, justice, and governance problem*, Energy Policy 41 (2012): 238.

Following on that, the prevailing path in the discourse to address the given issue is by introduction of the concept of energy justice. The latter has multiple meanings and functions. The energy justice requires “an equitable distribution of energy service”.⁴⁰ Having said that, it is designated with the function of being an analytical tool, a decision-making tool, and a conceptual tool.⁴¹ Energy justice may be applied to energy policy examination under the conceptual framework of energy justice,⁴² the injustice investigation in energy production,⁴³ and energy consumption.⁴⁴ Additionally, the consideration of energy justice may come from the energy activist and advocacy groups that articulate and elaborate energy justice.⁴⁵ Other literature tries to introduce the normative version of energy justice by setting an energy justice metric underlined with competing aims in economy, environment, and politics related to energy.⁴⁶ In this vein, a special justice framework within which to advocate for the recognition of geographical circumstances on energy injustice has been introduced.⁴⁷ Further, other researchers emphasize climate change⁴⁸ and energy security⁴⁹ as the pivotal challenges of energy systems in light of energy justice.

Despite the trend to deliberate on social justice demands in energy, the endeavour is devoted to the examination on energy decisions against the theoretical assumption without examining the dynamics in the process of the realization of domestic and social needs through energy services. It must be noted that there are few attempts to contemplate on how human well-being correlates with energy⁵⁰ and why energy poverty as an energy injustice⁵¹ is so important in today’s policy agenda. To contribute to the discourse on energy’s significance to human well-being, the research systematically and conceptually constructs the constituent elements, underpinning values and criteria of the framework of energy justice. The framework makes reference to a capabilities approach for the examination of injustice in energy, that is, the person’s ability to do and to be⁵² and “what normative conclusions we draw from the fact of the basic

⁴⁰ Benjamin K. Sovacool, Roman V. Sidortsov, Benjamin R. Jones, *Energy security, equality, and justice*, London and New York: Routledge (2014): 26.

⁴¹ Benjamin K. Sovacool, *et al.*, *New frontiers and conceptual frameworks for energy justice*, Energy Policy 105 (2017): 677.

⁴² Darren McCauley, Raphael Heffron, Hannes Stephan, and Kirsten Jenkins, *Advancing energy justice: The triumvirate of tenets*, International Energy Law Review 32(3) (2013).

⁴³ Raphael J. Heffron, Darren McCauley, *Achieving sustainable supply chains through energy justice*, Applied Energy 123 (2014).

⁴⁴ Sara Marie Hall, *Energy Justice and Ethical Consumption*, Local Environment 18(4) (2013): 422.

⁴⁵ Sara Fuller, Darren McCauley, *Framing energy justice: perspectives from activism and advocacy*, Energy Research & Social Science 11 (2016): 2.

⁴⁶ Raphael James Heffron, Darren McCauley, Benjamin K. Sovacool, *Resolving society’s energy trilemma through the energy justice metric*, Energy Policy 87 (2015).

⁴⁷ Stefan Bouzarovski, Neil Simcock, *Spatializing energy justice*, Energy Policy 107 (2017): 640.

⁴⁸ Karen Bickerstaff, Gordon Walker, and Harriet Bulkeley, “Introduction: making sense of energy justice”; in: Karen Bickerstaff, Gordon Walker, and Harriet Bulkeley, eds., *Energy justice in a changing climate: social equity and low-carbon energy* (London and New York: Zed Books, 2013).

⁴⁹ Benjamin K. Sovacool, *Energy & Ethics: Justice and the Global Energy Challenge* (New York: Palgrave Macmillan, 2013).

⁵⁰ Rosi Day, Gordon Walker, and Neil Simcock, “Conceptualising energy use and energy poverty using a capabilities framework,” *Energy Policy* 93 (2016): 255.

⁵¹ *Ibid.*, 260.

⁵² Martha Nussbaum, *Capabilities as fundamental entitlements: Sen and Social justice*, Feminist Economics 9:2-3 (2003): 33.

capabilities”.⁵³ Provided that the basic capabilities are fundamental entitlements that ensure a life with dignity, the basic capabilities sustained when the secondary capabilities are satisfied that require energy service.⁵⁴ Based on this philosophical grounding, the research proposes a more developed concept of energy justice that accommodates the wider concerns of social justice.

Due to the later concerns, the concept of a social market model was introduced in the EU that is in line with the socio-energy system approach. On that account, the socio-energy system design comprehensively integrates social concerns.⁵⁵ The proposed notion of socio-energy system refers “to the sets of interlinked arrangements and assemblages of people and machines involved in the production, distribution, and consumption of energy, in their supply chains, and in the lifecycles of their technologies and organizations”.⁵⁶ Hence, the latter confirms the notion of an energy system that shows social character. Given the shift of understanding in the nature and function of energy system from engineering process to the social need embedded in the public and personal well-being, new frontiers open up for the research on the drivers, experiences, and consequences of household consumers regarding their access to energy services. Additionally, social injustices may be inferred in the operation of a socio-energy system that does not address reasoned social justice demands under value basis.

Research methods

The theoretical literature analysis method used for the investigation of the energy justice paradigm shows coherence in the discourse regarding social justice demands and its development. Also, analysis was conducted on the legislation in the EU with a view to present the built-in values in energy structure and regulation dynamics. In the execution of empirical research, the constructivism methodology of grounded theory was employed to collect, interpret, and analyze data in generating the theory on access to energy services by household. The data were gathered through semi-structured interviews adhering to the narrative type of interview to conceptualize shared understandings of the meaning of electricity to individuals’ overall well-being and experiences in the process of access to energy services.

The structure of dissertation

The dissertation offers an introduction, theoretical section, empiric research, findings, discussion, conclusions, recommendations, and a list of references. The

⁵³ Martha C. Nussbaum, *Capabilities and Human Rights*, Fordham L. Rev. 66 (1997): 296.

⁵⁴ Rosi Day, Gordon Walker, Neil Simcock, *supra* note 94: 260.

⁵⁵ Clark A. Miller, Jennifer Richter, Jason O’Leary, *Socio-energy systems design: A policy framework for energy transitions*, Energy Research & Social Science 6 (2015): 29.

⁵⁶ P. 31 Clark A. Miller, Jennifer Richter, Jason O’Leary, *Socio-energy systems design: A policy framework for energy transitions*, Energy Research & Social Science 6 (2015): 31.

conceptualization of energy justice is drawn from shared views in the discourse on the phenomenon of energy poverty. The research proposes a more developed version of energy justice consisting of distributive, procedural, and recognition justice systems, and a capabilities approach describes the instances of injustice, explaining the application and justifying the measures for mitigation. Moreover, the theoretical part elaborates on the process of access to energy service and articulates the category of the right to access energy services that captures the issues of vulnerability, minimum threshold, availability, affordability, and status of right. Moving forward, the dissertation examines the structure of legislation with respect to the right to be supplied in the EU under its rationale and value underpinnings, where the latter right is an objective function as an umbrella for other rights, measures, and mechanisms. Lastly, the dissertation proposes generated grounded theory regarding household access to energy services, highlighting the uncompromised exercise of energy services in well-being that is followed by the discussion and conclusion sections.

II. MEANING OF ACCESS TO ENERGY SERVICE

“Energy service” is the general term for a number of services in the consumption stage, by which provision is sustained through any form of energy (i.e., energy carriers) such as electricity, heat, gases, and liquid and solid fuels. The literature reflects the divide between two camps regarding the more specific definition of “energy service”. The first adheres to the definition of energy services as “*the benefits that energy carriers produce for human well-being*”⁵⁷; the other states that “*an essential feature of an energy service is the useful work obtained*”.⁵⁸ For the purpose of households access to energy services in the EU, energy services are defined as “*those functions performed using energy which are means to obtain or facilitate desired end services or states*”.⁵⁹ In discussion of the process of access to energy service, the focus is not only on the actual energy service, but also on the access to which forms of energy. For instance, heating may be provided using several forms of energy such as electricity, gases, and solid fuels. Because the forms of energy and energy services in themselves may be divided into separate groups, a comprehensive view of the issue can be maintained provided that they are aligned within each approach. On that account the access to energy service is understood as the access to electricity supply with an affordable price on continuous basis for the adequate enjoyment of heating, cooking, lighting, cooling, warming, and food storage to attain a decent level of well-being and development.

The meaning of “access” may be articulated by employing the energy justice principles of affordability, availability, and sustainability supplementing with sufficiency and is derived from the original definition of availability in energy justice. This term implies the availability of proper conditions on grid functioning under energy security requirement and supplier of last resort mechanisms under the security of supply. Indeed, the access reflects households' economic ability to enjoy sufficient energy service in the best sustainable mode. The affordability and sustainability are connected spheres of concern with common and contradicting objectives. Both principles foster the well-being of households, even though affordability experienced directly by the households determining the actual ability to acquire energy, whereas sustainability has an indirect effect on the households due to the energy externalities on the environment being in this respect more challenging to assess and quantify by the households. Nevertheless, the measures on affordability are implemented by the cheaper and dirtier usage of energy resources such as coal, which is in contradiction with the principle of sustainability.

⁵⁷ Vijay Modi, et al., *Energy and the Millennium Development Goals*, New York: Energy Sector Management Assistance Programme, United Nations Development Programme, UN Millennium Project, and World Bank (2006): 9.

⁵⁸ Steve Sorrell, *The rebound effect: an assessment of the evidence for economy-wide energy savings from improved energy efficiency*, Project Report. UK Energy Research Centre (2007): 20.

⁵⁹ Michael James Fell, *Energy services: A conceptual review*, Energy Research & Social Science 27 (2017): 137.

However, the measures regarding sustainability put extra financial burden on the household, negatively affecting the principles of affordability because of the micro-generation support measures usually financed by inserting the certain amount on support in the final price of supply.

The principle of sufficiency's being derived from availability is also related to the intragenerational equity in the principles of decision-making of energy justice, where all households should be guaranteed with adequate energy services. While affordability characterizes a good prescription for the supply stage, sufficiency defines the energy service in the consumption stage, even though they both are assessed against the personal situations of income and need. The sufficiency confers social sensitivity to the issue what of requires assessment in the social context to determine the benchmark of sufficiency and the design of measures underlined with the solidarity in society beyond the solidarity among end users. In this vein, the access to "sufficiently accessible" energy service may be understood to encompass the latter requirements and needed energy sources "must be available without undue time investment, and their use must be feasible given available knowledge, skills, beliefs and material arrangements".⁶⁰ Because the physical access to the grid does not ensure access to energy services due to low-income household consumers, energy prices, and inefficient equipment, the real access to energy service requires to address physical access and end-use equipment.⁶¹ Also, the practices of disconnection may be attributed to the lack of access to the grid condition and appear as points to consider.

Knowing which of the energy services of heating, hot water, cooling, cooking, storage, and lighting are the most essential to sustain contemporary lifestyle, despite the characteristics of energy service on volume, content, quality and motivation,⁶² pertains to the social, economic, and traditional context in which households reside. The northern countries have different ideas as to what is thermal comfort at home from residents in the southern part of Europe. This is not only the feeling of comfort but also the divergent financial costs between households and countries to maintain the accustomed level of warmth at home. In the EU, heating constitutes the greatest expense by household for energy services, and it accounts for 80% of households' energy use.⁶³ This results in the considerable attention devoted to the injustice examination in the inadequate heating of households; non-heating energy service remains ancillary energy related household consumers' concern.⁶⁴

A distinction should be made between the injustices in the consumption stage where the energy poverty manifests and the injustice regarding poverty with respect to cold homes,

⁶⁰ Rosi Day, Gordon Walker, Neil Simcock, *Conceptualising energy use and energy poverty using a capabilities framework*, Energy Policy 93 (2016): 260.

⁶¹ Shonali Pachauri, Daniel Spreng, *Energy Use and Energy Access in Relation to Poverty*, Economic and political weekly 25 (2003): 5.

⁶² Michael James Fell, *Energy services: A conceptual review*, Energy Research & Social Science 27 (2017): 135.

⁶³ Filippos Anagnostopoulos, Maarten de Groot, *Energy performance of the housing stock*, Energy poverty handbook (2016): 70.

⁶⁴ Neil Simcock, Gordon Walker, Rosie Day, *Fuel poverty in the UK: beyond heating?* People, Place and Policy 10/1 (2016): 38

which results in poor living conditions or uninhabitable home in the benefit stage. Hence, the warm and lighted home, stored and cooked food, and hot water are assumed to be one of the most important benefits for contemporary well-being standards in the EU. These also require most of the energy expenses in household consumers' energy costs.

The energy service is understood as a beneficial vehicle for secondary capabilities, whereas energy services offer the benefits of energy. Moreover, the energy service benefits the household consumers. As one may put it that functions or activities performed by the use of energy may be ascribed to energy services⁶⁵ and the final benefit of sustenance', 'hygiene' and 'thermal comfort' may be defined in terms of 'final energy services' and 'final services'.⁶⁶ Nevertheless, the suggested terms lack true meaning because the term 'services' includes issues involved in the demand for comfort and thus does not reveal the survival-level need for energy. The existing social characteristic in the consumption of electricity is missing what adheres to the prevailing thinking on energy as a commodity in line with products and other goods.

2.1. CONFERRED MEANING ON ELECTRICITY

The question is how the households understand energy and its significance to their well-being as well as whether it corresponds to the experts' judgement in the discourse. In experts' views on energy, the prevailing perceptions on energy is as commodity, as necessity, as an ecological resource, and as a strategic material.⁶⁷ Even though energy *per se* and energy service are different ideas, some may conflate their meanings. Consequently, the elaboration on the distinction between the former and the latter enables considering the energy service to be the benefits of energy, i.e. heating, cooking, lighting, cooling, and energy *per se* is the source of these benefits.

The household consumers perception of energy service encompasses instances of how energy service is understood, how it is significant for functioning, how and whether it can be substituted with other services, and what aspects most concern household consumers' in the access to energy service. These and similar questions explore household consumers interests that mirror concerns in the provision of energy service. The identified types and levels of concern by household consumers on energy service promote the discourse on the right to energy service in terms of the content and status of right. If there is an overwhelming acknowledgement of the universal significance of energy service to human well-being, then there is a formal process to

⁶⁵ Michael James Fell, *Energy services: A conceptual review*, Energy Research & Social Science 27 (2017): 136.

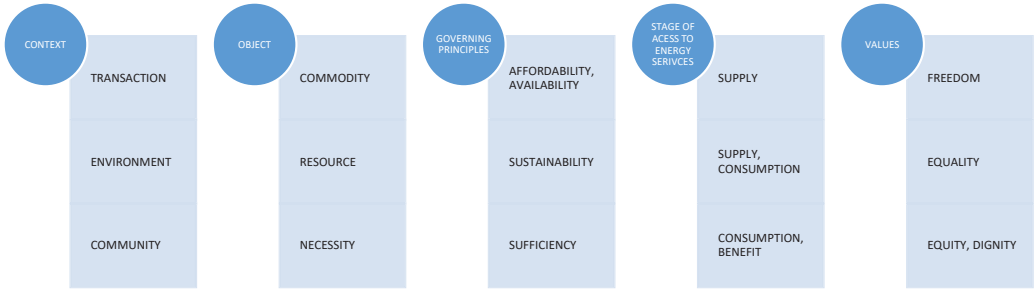
⁶⁶ Jonathan M. Cullen, Julian M. Allwood, *The efficient use of energy: tracing the global flow of energy from fuel to service*, Energy Policy 38 (1) (2010).

⁶⁷ National Research Council, *Energy Use: The Human Dimension*. (Washington, DC: The National Academies Press.) (1984): 15.

name it as human right under universal human rights, derivative right, or contractual ethics.⁶⁸ This shows how the data on the household consumers’ views may contribute to the furtherance of the conceptualization and recognition of the right to energy service in national, supranational, and international legislation.

In parallel with experts’ view on energy, the household consumers’ views may follow the similar attributions on energy service because they access to energy service in comparable context of transaction, environment and community. If the household consumers in the process of access to energy service deal with acquiring the energy in the transaction, then the energy service is apparently understood as a commodity or good. Accordingly, assessment is executed by employing the affordability principles to judge the final price impact on the household consumer’s disposable income. In contrast, when the environmental issues of pollution and climate change are faced, the final price of supply and externalities ascendant from the dirty or unsafe generation of electricity and the contribution to clean energy appear as the household’s focus of concern. In this case, the principle of sustainability rationalizes the measures of support for renewable energy and justifies the recognition of the responsibility of household consumers to contribute to the reduction of pollution from the operation of its facilities. Lastly, in the public sphere of community functioning, energy service may be ascribed as a public good or necessity for escaping the poverty in society as well as for the social and economic development of an individual and state. This perspective adheres to the principles of sufficiency under socially recognised benchmarks. Hence, the context is important to the perception of how the energy service is understood (Figure 1).

Figure 1. Contextual meanings of energy⁶⁹



From the doctrinal view, the categorization of energy service in line with any conferred meaning of energy portrays the multiple facets of energy production and supply, which

⁶⁸ Adrian J. Bradbrook, Judith G. Gardam, *Placing access to energy services within a human rights framework*, Human rights quarterly Vol. 28, No. 2 (2006).

⁶⁹ Made by Author of this dissertation

are intrinsically related to the values affirmed by individuals offering expectations for energy services, particularly stakeholders in the energy system. Accordingly, provided that energy is considered a commodity or set of commodities, this adherence values freedom of choice and beliefs in effective and efficient market functioning.⁷⁰ Also, these household consumers support limited intervention on behalf of the National Regulatory Authority centred on transaction without taking any externalities into account.

A different view is provided when energy is perceived by society in terms of ecological resources, where intrinsic properties of energy pertain to being renewable, polluting, and exhaustible are considered.⁷¹ In the context of the environment, the household should have a claim against national governments and supranational and international institutions for the sustainable social and economic development of energy such as incentivising RES and reduction of polluting emissions. Indeed, the household consumers have a reasonable expectation not only on the grounds of sustainability but also on human right instruments.

Moreover, energy may be seen as a social necessity. This view accepts the plurality of energy because its equity as a value is appreciated to the extent of the guarantee of a minimum energy threshold for survival, not just a commodity or resource.⁷² These expectations translate into valid claims against national governments and even against other actors in the energy system. Though in the context of community the claim against the national government on the grounds of equity can be made to introduce measures to fight energy poverty, energy's end users have a moral responsibility to contribute to fair energy system functioning while taking into account their personal circumstances.

Lastly, energy may be viewed in doctrinal discourse as strategic material for a country's economic and political stability and development.⁷³ Although this perception mirrors the national government's mandate on the interest of national security, it may also be akin to the household consumers' interest of the constant and reliable access contemplated within the concepts of energy security and security of supply. Whereas the former is the expression of the household consumer's expectations for the functioning of the energy system in the interest of public security, the latter manifests in the distribution stage of access to accommodate the household consumer's expectations for energy service. Though, beliefs about energy's social purpose determine the household consumer's adherence to values and rules that ensure the functioning of the energy system.

⁷⁰ National Research Council, *Energy Use: The Human Dimension*. (Washington, DC: The National Academies Press.) (1984): 15.

⁷¹ National Research Council, *Energy Use: The Human Dimension*. (Washington, DC: The National Academies Press.) (1984): 17.

⁷² National Research Council, *Energy Use: The Human Dimension*. (Washington, DC: The National Academies Press.) (1984): 19.

⁷³ National Research Council, *Energy Use: The Human Dimension*. (Washington, DC: The National Academies Press.) (1984): 19.

The perception of energy both unveils the interests of household consumers to receive energy needs and informs household consumers' actions in every stage of access to the energy service. The corresponding values may be inferred from the identified interest of different groups of households. For instance, the household consumers suffering energy poverty may emphasize with the need to formalize the claim to minimum access to energy service reflecting the dignity of human beings to sustain their minimum well-being. Meanwhile, the household consumers with poor health conditions, low incomes, and seniors may stress the need for equal levels of enjoyment of energy service because the same conditions of access do not take into account personal specificities to convert personal resources into the same level of enjoyment of the energy service, e.g. inefficiency, cumbersome access to information, scarcity of financial resources, special needs. Each situation exposes the intrinsic characteristics of household consumer groups and the underlying values to be cherished as demands of social justice. With reference to the acknowledged social values of equality, freedom, and dignity in philosophical doctrines, the corresponding values appreciated by households will be distinguished, contemplated, and aligned with doctrinal views in the discussion section.

Notwithstanding the importance of how energy service is perceived by household consumers in the furtherance of understanding the household consumers' interests and values, the equivalent significance of justice concerns in access to energy service investigation may be viewed in terms of the emerging relationship between stakeholders. When the household consumers want to access energy services, they form relationships with the suppliers, regulatory authorities, national government, other households, and supranational and international institutions. Some of them are formalized and some informal, meaning that there are no regulatory mechanisms specifying the object and subjects conferred with rights and obligations. Although the formalized modes of relationships may be reviewed on the basis of legislative conformity to the legislation's social values, the current interest is to examine the relationships that the household consumers may be not aware of. Indeed, the relationships with actors in energy may implied from human rights instruments or the demand for social justice.

What mode of relationship is formed appertains to the applicable sources of law. In the national legislation the rules are set to regulate business activities, where household consumers form relationships by willingly taking action such as entering into contractual agreements with the supplier. Notwithstanding that the terms of contractual agreements are to a great extent formalized, there are instances of uncertainty regarding the fairness of the terms of agreement with suppliers and the rules of energy market regulation under the demand for social justice. International law enables forming relationships with the other community members, national governments, and supranational institutions just by being a citizen under national or supranational

law, by being human being with international institutions based on human rights. In such case, the formation of relationships may be implied without the expression of will to enter into a relationship by households. In other words, the source of law related to energy service determines the implied or explicit mode of relationships with different stakeholders in the energy system.

The classification of relationships may be performed in line with the doctrinal social justice view as a background sample for further investigation on justice in access to energy services. From the social justice perspective, the emerging modes of relationships may be grouped into institutional, community solidarity, and citizenship categories.⁷⁴ These modes of relationships explain the rationale of the social principles of need, equality, and desert to govern the just allocation of resources.⁷⁵ In contrast to such distributive justice, justice in access to energy services is assumed to be the capacity of the household to claim what they are entitled to according to their personal circumstances. The suggested modes of relationships formed in the distribution of resources fit for the contemplation of the process, whilst the actual enjoyment of energy service forms diverse modes of relationships.

In accordance with the formed modes of relationship in the consumption stage of energy service, they may be identified as legal, political, and moral. The nature of relationships is subjected to the context of transaction, environment, and community for the latter to be explicit or implicit in nature. The formed relationships are exposed in the transaction between supplier and consumers, in the public governance between government and citizens, in the energy regulation between national regulatory authorities and household consumers, and in the environment among household consumers. For instance, in the transaction of commodity there is the public interest to set rules that empower the household consumer to act in the energy market in conducive forms, freely choose the supplier, and access clean energy services with a possible safety net when these rules do not ensure that household consumers meet their minimal energy needs without disproportionately financial burden. The identified explicit and implicit relationships reveal the possible claims by the household consumers against duty holders or responsible entities to present tools for the assessment of the level of enjoyment of energy services.

Against this background, the objective is to conceptualize forming relationships based on the process that contributes to the justification of household consumers' rights to access energy services while accounting for their divergent obligation holders. Identifying those relationships reflects the household consumers' valid claim to enjoy fair and sufficient levels of energy service. In addition, tools to examine the outcomes of energy policy and regulation in the

⁷⁴ David Miller, *Principles of social justice*, Harvard University Press (2003).

⁷⁵ David Miller, *Principles of social justice*, Harvard University Press (2003).

EU must be designed in accordance with that claim. Consequently, the legislation on household consumers' protection in the EU should be guided by the bottom-up approach to identify the household consumers' predominant views on the meaning of electricity, causes for the consumption practices, responsive strategies to the emerging hindrances, and final benefits yielded by the energy services. The theory generation on what aspects of the process and how and why it identifies the values and interests of household consumers' groups determines the means to examine the outcome of energy policy and regulation.

2.2. STAGES OF ACCESS TO ENERGY SERVICES

To assert household consumers' enjoyment of energy services to conform to justice demands, individuals' fundamental interests are at stake. The first thing to consider is the energy service significance to human well-being in contemporary society. On that account there are many studies confirming that energy is a condition for the realization of human rights⁷⁶ and is linked to human development.⁷⁷ Today, society is so accustomed to the amenities of hot water, a warm and lighted home, and long-term food storage that the absence of these almost is unimaginable in developed countries, though their absence is common in developing countries. Therefore, access to amenities depends on the nation's (or group of nations') perception people's right to social goods. When the society favours a minimum endowment of certain goods, individuals are granted entitlements to them.⁷⁸ If the agrees that each individual is entitled to benefit from energy service to meet minimum domestic needs, then the opposite situation may reasonably be seen as unjust. In other words, the concept of justice emerge from the social meanings and values that need to be publicly recognised and balanced to guarantee minimum well-being and development.

While the significance of energy *per se* is recognized, ethical and responsible consumption also plays a part in access to energy services. The issue of access to energy services mainly focuses on the household's under-consumption situation, even when over-consumption may be attributed to the related injustice issues.⁷⁹ The determination of consumption levels depends on the basic energy needs and technical and behavioural criteria rather than on simply the volume consumed by the household consumers. Despite some attempts to set the specific benchmark on engineering grounds for the minimum energy need of the household consumer in

⁷⁶ Clark A. Miller, Alastair Iles, Christopher F. Jones, *The Social Dimensions of Energy Transitions*, *Science as Culture* 22:2 (2013).

⁷⁷ Rafaela Hillerbrand, *Why Affordable Clean Energy Is Not Enough. A Capability Perspective on the Sustainable Development Goals*, *Sustainability* 10(7) (2018).

⁷⁸ Guido Calabresi, A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, *Harvard Law Review* Vol. 85 No. 6 (1972): 1100.

⁷⁹ Tim J. Chatterton, *et al.*, *Mapping household direct energy consumption in the United Kingdom to provide a new perspective on energy justice*, *Energy Research & Social Science* 18 (2016): 72.

terms of watt per person,⁸⁰ a better approach is to aim attention at the final energy benefits of decent living conditions through adapting behaviour practices and employing the best available technological solutions.

The studies on energy consumers demonstrate that the consumer behaviour is less elastic towards energy end uses when changes in energy prices occur.⁸¹ Hence, the hinges to ethical energy consumption may not be satisfactory performed only on the pressure from energy price and economic solutions. In general, the policies and measures seeking to change energy consumption practices that help household consumers to meet basic energy needs should be designed while taking into account the possible efficiency savings from technical innovations and behavioural change,⁸² household consumers' financial situation correlation with energy price, and the extra payment for 'luxury' consumption.

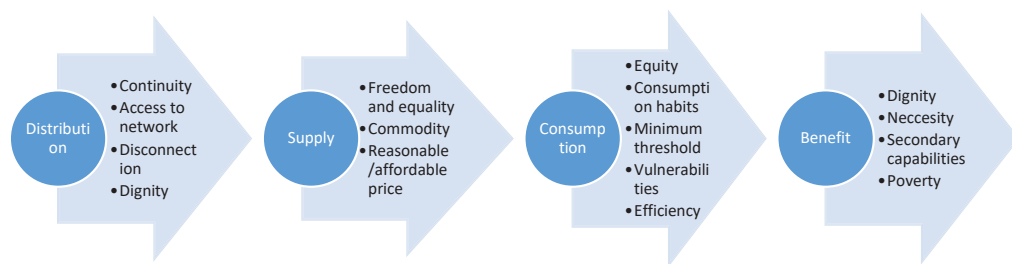
To that end, the first step is to speak of justice in energy in terms of interests to produce the reasonable ground for the household consumer's claim of adequate and effective protection. It may be argued that the injustice is assumed to be the disregard of the pivotal interest of living a qualitative life from the enjoyment of energy service, meaning that it is important not only to ensure socially recognized well-being standards but also see the modes of how household consumers sustain their well-being. In this case, the interest represents the widely recognised value favoured by either social group, in this case affluent household consumers, vulnerable household consumers, vulnerable household consumers in energy poverty, and household consumers in energy poverty. Though justice is established where the different interests are balanced without the disproportionate upholding of any specific interest of either group at the cost of other. Different interests of social groups identified in each stage of access to energy service require protection appropriate with the appreciated value to be respected and protected. (Figure 2).

⁸⁰ Shonali Pachauri, Daniel Spreng, *Energy Use and Energy Access in Relation to Poverty*, Economic and political weekly 25 (2003): 2.

⁸¹ Ines M.L. Azevedo, *Consumer End-Use Energy Efficiency and Rebound Effects*, Annual Review Environment and Resources 39 (2014): 403.

⁸² Ines M.L. Azevedo, *Consumer End-Use Energy Efficiency and Rebound Effects*, Annual Review Environment and Resources 39 (2014): 409.

Figure 2. Stages of access to energy services⁸³



The first stage of access to energy services is distribution with the focus on technical possibility to access the electricity grid without interruption. The second stage would be where the actual flow of energy takes place after the transaction occurs, or it may be understood as the interconnected processes of access to grid, i.e. supply, distribution through the distribution system. This stage should ensure the availability of energy service in terms of the continuity of supply. Indeed, the availability also concerns the supply stage with respect to suppliers' failure governed by the SOLR mechanism in the EU. For the distribution stage, the availability of energy service depends on the reliable and equitable functioning of distribution system linked with high-voltage transmission lines and substations. The rules for connection to the distribution system enhances or impedes availability, but the household consumers' physical access to the grid starts in this part of energy system.

There may be technical impediments to the grid due to a low capacity for new users and being remote from the household consumer. There are also financial impediments such as a high price for connection and cumbersome administrative procedures with the number of requirements for the submission of application for grid connection. The purpose of the energy system is jeopardized if these hindrances are realized, which urges the state's appreciating the value of dignity so as to introduce protective and supporting measures.

In fact, the issue of not enjoying energy service from the social justice perspective is not just the lack of technical capacity to access, but also the danger of disconnection due to debt. To the most part, the proper functioning of the grid is the focus of energy security and not the actual access to the grid. The flow of energy through the grid does not have socially intrinsic characteristics but continued flow urges social demands to ensure decent living conditions. When the interrupted flow of energy constrains human well-being and development, then the question arises of under what circumstances the disconnection is justified. This depends on the perception of access to energy as a desire or as a right. For instance, electricity is understood as a good in the supply stage, so disconnection for arrears seems a normal outcome for not paying. But when the

⁸³ Made by author of this dissertation

electricity is understood as a need in the consumption or benefit stage, then disconnection for arrears may be unjust. Either way, the outcome is the same, but the context and the specificity of the object makes the difference in how we see that outcome. Therefore, representation of social views and experiences is required to explain the social meaning of electricity access and the context of the process.

After the connection is made, the goods are supplied to the household consumers in a transaction with the supplier's obligation fulfilment, suppliers' condition of a last-resort option, and, in case of microgeneration, community schemes and self-generation. In the supply stage, the electricity is understood to be a good, so the features of price, continuity, and quality are attributed to electricity. In turn, the household consumers' interest is to buy electricity for the lower price, to obtain it when needed, and to secure it for quality drawbacks. As mentioned above, the distribution aspect in the supply of goods is important in this case because these goods may only be acquired by the grid, which means limited access to goods. The supply also may not be changed instantly, which requires a reliable supplier and secure grid functioning and supply management. Hence, the household consumer interest in the supply of electricity correlates with the interest of an available electricity supply at all times best understood by using the constituent elements, values, and criteria of the tenets of distributional and procedural justice.

The next stage is the consumption of electricity where the energy carrier or goods are converted into services. The term "services" usually refers to the activities that from the social justice perspective is assumed as needs. Even though such socially neutral description as services enables to look at the phenomenon without prejudice to its effect, thinking of the access to energy service in term of stages helps better to capture the alteration of meanings of electricity. Unlike the supply stage where electricity is understood as a good by the stakeholder, the consumption stage is where most household consumers apprehend electricity and relate to the need conferred with the social meaning.

The distinction between goods and services is important both for understanding household consumer interest in access to energy services and as to why the same term contains divergent assumptions regarding access to energy service. The focus on energy service as services rather than goods to be supplied facilitates the search of mitigation options for energy poverty as well as assessment of the well-being resulting from the consumption of goods.⁸⁴ This results in the need to design policies and measures for goods in the supply phase and adequate policies and measures for the performance of activities, namely services, by consuming electricity. Indeed, the consumption of electricity is the prerequisite for the activities of heating, water heating, cooling,

⁸⁴ Felix Creutzig, *et. al.*, *Towards demand-side solutions for mitigating climate change*, Nature climate change Vol. 8 (2018): 270.

cooking, refrigeration, and lighting.⁸⁵ So “energy services” are mentioned, it refers to the consumption and conversion of useful energy. Consequently, household consumers interest is to use energy efficiently without curtailing the benefits of warmth, light, and stored food. At the same time, the efficiency gains should not counterbalance a consumption increase as the reward for the savings made. This is understood as the energy efficiency gap where the current energy consumption volumes weighs against the possible consumption when the cost-effective, life-cycle, energy-efficient, and end-use alternatives are chosen.⁸⁶

The last phase of access to energy service is the benefit received by the household consumers in question. These necessary benefits are objects of social justice concerns. To a great extent, social justice on this issue focuses on the benefits significance to human well-being, the socially and materially reasonable thresholds for a decent life. Despite the social demands on the energy-related benefits, the merits of the previous stages in access to energy service usually comprehended from the energy significance in contemporary societies in line with the capabilities approach. In contrast to understanding of electricity as a commodity in the access to energy service, the final phase to the access of energy service consideration is distinct in object that is a necessity. Even though it is a challenge to quantify and measure these necessities, doing so provides a rationale for the design of policy and regulation of the supply of electricity and energy service *per se*.

Because the formal division of access to energy services into stages notes the assumed features characterizing the process that appears theoretically reasonable, the actual incidents emerging in the process have a wider coverage with respect to personal situations, social prejudices, and perceptions of the quality of life. Taking into account the social context of household consumers' operation, the choices and behaviour in every stage of the process are influenced by "their perceptions of prices, prestige and status effects, attitudes and values, lack of knowledge about the application of energy-efficient devices, lifestyles, what others are doing, moral licensing and personal norms, and habits."⁸⁷ To avoid incomplete and irrelevant analytical structuring of the process, this study opts to generate the theory on the respective process that systematically and conceptually explains the drivers, impediments, strategies, and outcomes. The theory may be exploited for the more comprehensive and justified theorization on the acquisition of energy, consumption, and empowerment obtained from energy services in light of transforming justice demands.

⁸⁵ Michael James Fell, *Energy services: A conceptual review*, Energy Research & Social Science 27 (2017): 134.

⁸⁶ Ines M.L. Azevedo, *Consumer End-Use Energy Efficiency and Rebound Effects*, Annual Review Environment and Resources 39 (2014): 395.

⁸⁷ Ines M.L. Azevedo, *Consumer End-Use Energy Efficiency and Rebound Effects*, Annual Review Environment and Resources 39 (2014): 407.

III. THEORY ON JUSTICE IN ENERGY

The contemporary issues of climate change, energy security, and access to general services in the EU are characterized by concerns of justice. The world is facing challenges similar to the EU's related to inadequate energy access, energy security, and transition to low-carbon energy.⁸⁸ Therefore, the examination of the key issues in energy and their effect on the environment, economy, and household consumer requires the conceptualization of energy justice. In the absence of a common concept, it would be impossible to agree on common underlying values to be appreciated. Hence, without an agreement on common values and their highest importance that requires legal protection, there are no normative bases against which action, processes, policies, and effects may be evaluated. Therefore, the need to introduce the concept of energy justice or the term of "energy ethics" reflecting the idea of energy justice in the discourse accommodating household consumers' experiences, conceptualization, and evaluation of energy in their daily lives⁸⁹ is apparent with a view to attaining social justice in the EU energy system. The term of energy ethics will not be employed in reference to the bottom-up approach to the energy service, even though the insights emphasize the household consumer perception of energy services *per se* and their significance to well-being.

Each challenge contains specific causes, features, and consequences for the economy, public, and environment. There seems no agreement about a common concept of energy justice that encapsulates the particularities of energy security, environment protection, and household consumers' access to energy service in the EU that in some instances overlap as well as contradict each other. Because the demands of justice with respect to energy challenges varies, the concept of energy justice should be crafted to examine the resulting injustice against the appreciated values in particular areas. This part conceptualizes energy justice as related to the energy challenges of household consumer access to energy services in the EU.

The need to consider justice in energy is conditioned by the recognition of energy service significance to human well-being that recently appeared in the discourse on energy issues in the EU. The shortage of access to energy service strips many of basic goods such as heating, lighting, and transportation, and obstruct development.⁹⁰ Energy justice requires "an equitable distribution of energy service" based on the derivative entitlement "to the basic goods that these services provide or make it possible to secure".⁹¹ The capabilities approach is a great example of

⁸⁸ Andreas Goldthau, Benjamin K. Sovacool, *The uniqueness of the energy security, justice, and governance problem*, Energy Policy 41 (2012): 232.

⁸⁹ Jessica Smith, Mette High, *Exploring the anthropology of energy: Ethnography, energy and ethics*, Energy Research & Social Science 30 (2017): 1.

⁹⁰ Benjamin K. Sovacool, Roman V. Sidortstov, and Benjamin R. Jones, *Energy security, equality, and justice* (London and New York: Routledge, 2014): 47.

⁹¹ *Ibid.*, 26.

how values are built in the energy discourse, the philosophical basis of which comes from examining the regulation and operation of energy systems affecting household consumer' inability to access sufficient energy. Additionally, the underlying rationale of energy justice implementation in energy systems is as "a precondition for the realization of social justice".⁹² However, the idea of justice in access to energy service in the EU requires indicating the adherence to a value or a set of values that the EU appreciates and protects in pursuit of social justice.

While the divergent approaches to energy justice exist, the application of the concept adapts to different challenges in the energy literature. Also, energy justice is tailored to the injustice investigation in energy production⁹³ and consumption.⁹⁴ Additionally, the consideration of energy justice may come from energy activists and advocacy groups that articulate and elaborate the energy justice frame.⁹⁵ Other literature tries to introduce the normative version of energy justice by setting the energy justice metric underlined with energy-related competing aims in the economy, environment, and political realm.⁹⁶ A special justice framework to advocate for the recognition of geographical circumstances on energy injustice has been introduced.⁹⁷ Other researchers emphasize climate change⁹⁸ and energy security⁹⁹ as the pivotal challenges of energy justice. Given the divergent application capabilities of energy justice, the agreement upon a common concept is problematic because this reveals the complexity of the energy system and how the injustice manifests in energy.

Capture the nature of energy justice under one definition is insufficient, so the literature has discussed its nature with an analytical tool, a decision-making tool, and a conceptual tool.¹⁰⁰ With the analytical tool, the concept of energy justice may be understood as the sum of built-in value categories that should be examined in aggregation to reach the coherent outcome of energy regulation and justice.¹⁰¹ Accordingly, energy justice contains the topics of energy efficiency, energy externalities, human rights and social conflicts, energy and due process, energy poverty, energy subsidies, energy resources, and climate change.¹⁰² With the decision-making tool, energy justice is guided by eight principles: affordability, availability, due process, information, prudence, intergenerational equity, intragenerational equity, responsibility. They are

⁹² Benjamin K. Sovacool, *supra* note 3: 47.

⁹³ Raphael J. Heffron, Darren McCauley, *Achieving sustainable supply chains through energy justice*, Applied Energy Vol. 123 (2014).

⁹⁴ Sara Marie Hall, *Energy Justice and Ethical Consumption*, Local Environment 18(4) (2013): 422.

⁹⁵ Sara Fuller, Darren McCauley, *Framing energy justice: perspectives from activism and advocacy*, Energy Research & Social Science 11 (2016): 2.

⁹⁶ Raphael James Heffron, Darren McCauley, Benjamin K. Sovacool, *Resolving society's energy trilemma through the energy justice metric*, Energy Policy 87 (2015).

⁹⁷ Stefan Bouzarovski, Neil Simcock, *Spatializing energy justice*, Energy Policy 107 (2017): 640.

⁹⁸ Karen Bickerstaff, Gordon Walker, Harriet Bulkeley, *Introduction: making sense of energy justice*; in: Karen Bickerstaff, Gordon Walker, and Harriet Bulkeley, eds., *Energy justice in a changing climate: social equity and low-carbon energy* (London and New York: Zed Books, 2013).

⁹⁹ Benjamin K. Sovacool, *Energy & Ethics: Justice and the Global Energy Challenge* (New York: Palgrave Macmillan, 2013).

¹⁰⁰ Benjamin K. Sovacool, et al., *New frontiers and conceptual frameworks for energy justice*, Energy Policy 105 (2017): 677.

¹⁰¹ Benjamin K. Sovacool, Michael H. Dworkin, *Global energy justice: problems, principles, and practices* (Cambridge: Cambridge Law Press, 2014): 14.

¹⁰² *Ibid.*

of the same importance but carry different weights, which has to be followed by decision-making processes of authorities and consumers.¹⁰³ With regard to the decision-making tool, the latter should be supplemented with the additional two principles of resistance and intersectionality.¹⁰⁴

The contribution of deliberation on energy injustice to the latter discourse rests in the justification of a new distinct category of capabilities in the energy justice frame that emphasizes the need to secure opportunities for human functioning and well-being. The demands for justice are justified if they advance justice on the set of values and do not present only one perfect justice.¹⁰⁵ Also the freedom granted by the capabilities approach acknowledges the rights and corresponding responsibilities of the individual honoured with the freedom to choose the social realization.¹⁰⁶ Lastly, the current tenets are supplemented with new criteria such as the difference principle transposed from the John Rawls in *A Theory of Justice*, which justifies resulting inequalities in energy distribution on the grounds of reciprocity and enables them to offset that inequality in the EU.

3.1. VALUES IN ENERGY JUSTICE

Efforts to define “justice” have sparked debate between philosophers for the considerable part of human history. Different schools of thought have tried to define “justice” based on distinct and contradicting values. For instance, from the libertarian view the paramount value for a human being is freedom, and the adherents to this view advocate for free choice and minimal government intervention.¹⁰⁷ This occasionally extends the value of freedom to the economic freedom of the market and political freedom in democratic regimes. To the extent of energy, freedom as a value is important for energy end users’ empowerment to freely choose suppliers, resources, consumption volumes, and practices. The libertarian view stands in contrast to egalitarian theory, which supports the principle of equality for all people and appreciates equality more than freedom. For this study, all end users should be able to enjoy the benefits of energy service equally. While both principles are value driven and recognised in democratic regimes, they are hardly balanced in practice when a policy decision should be made and measures implemented.

While the acknowledged values of equality and freedom divide the community into the political right and left, the question is how to balance the contradicting values and related interests. To that end the concept of justice referred to as ‘fairness’, essentially meaning the fair

¹⁰³ Benjamin K. Sovacool, *supra* note 12: 219.

¹⁰⁴ Benjamin K. Sovacool, *et al.*, *supra* note 13: 687.

¹⁰⁵ Amartya Sen, *The Idea of Justice* (London: Penguin Books, 2009): 9.

¹⁰⁶ *Ibid.*, 19.

¹⁰⁷ Milton Friedman, Rose Friedman, *Free to choose: a personal statement* (Florida: Harcourt Books, 1990): 29.

distribution of goods, may provide a suitable tool.¹⁰⁸ The inherent difference principle in justice is that fairness seems pertinent to justice in energy to offset the discrepancies of a strict application of freedom and equality in effect, process, or action examination. More on the difference principle will be presented in the section on distribution justice.

Furthermore, the idea of the greatest happiness for the majority championed by utilitarian appears reasonable and sound as a policy objective. Nevertheless, it falls short of recognising vulnerable and deprived social groups in the justice investigation of policy and measures. While some suggestions emphasise the righteousness of process, as in deontology, others argue for attention to justice conceptualization aimed at its effect.¹⁰⁹ In the case in which the focus is on the consequences of action, justice is achieved when opportunities for persons to realize their functioning are ensured.¹¹⁰ On the whole, the perception of the idea of justice depends on how the priority of value or a mix of values is appreciated.

While justice theory has a long history, energy justice has been acknowledged as a meaningful concept only recently. From a cosmopolitan viewpoint, energy justice is understood as “a global energy system that fairly disseminates both the benefits and costs of energy service, and one that has representative and impartial energy decision-making”.¹¹¹ The contemporary notion of energy justice affirms the requirement of fairness in the distribution of energy service without specifying the underlying values employed in distribution. However, what is fair and just depends on the recognised value of the community or political structure. Hence, the proposed definition sets guidelines on the distribution and procedural requirements of energy justice designed for the general application in energy. The normative element in energy justice is contained in the idea of how things ought to be or what justice is.¹¹² In other words, the effort is to attain perfect justice in what may seem like a justifiable objective, despite being unattainable in practice.

The idea of energy justice gains much attention in the discourse on energy, which develops with new insights on the issues’ nature and demands for energy justice. This development mode enables the concept of energy justice to be complemented with new value-driven characteristics that specify the constituent elements and criteria. To that end, the conceptualized version of justice in energy, affirmed as the triad of tenets composed of distribution, recognition, and procedural justice,¹¹³ sets strong foundations for a more

¹⁰⁸ John Rawls, *Justice as fairness: a restatement*, ed. Erin Kelly (Cambridge & London: The Belknap Press of Harvard University Press, 2001).

¹⁰⁹ Benjamin K. Sovacool, Michael H. Dworkin, *Energy justice: Conceptual insights and practical applications*, *Applied Energy* 142 (2015): 437.

¹¹⁰ Amartya Sen, *supra* note 20.

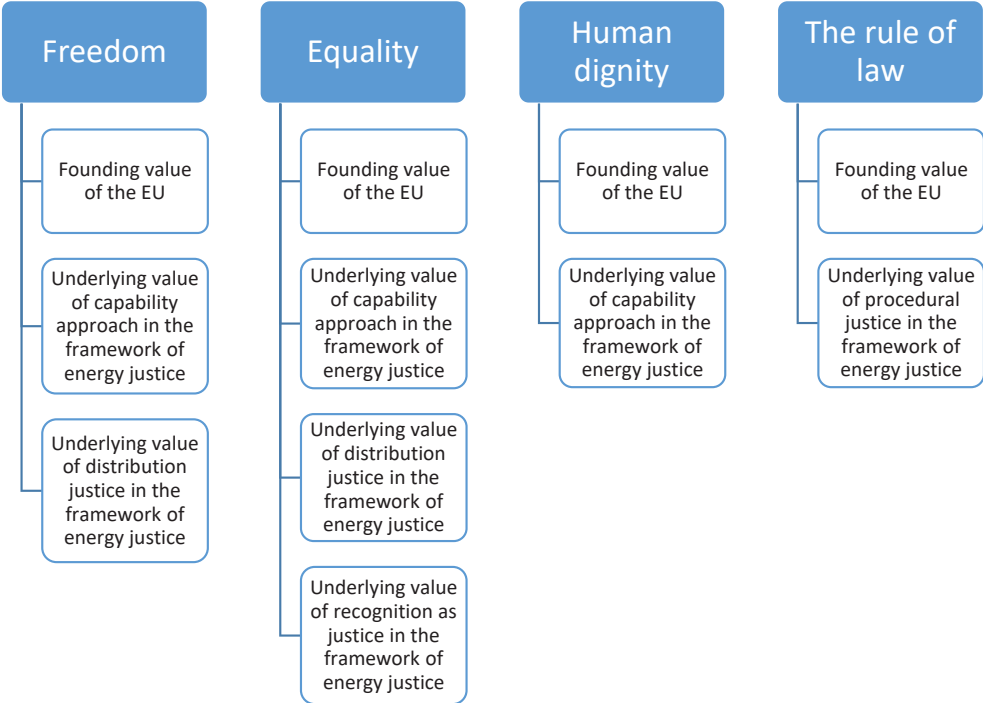
¹¹¹ Benjamin K. Sovacool, Michael H. Dworkin, *Energy justice: Conceptual insights and practical applications*, *Applied Energy* 142 (2015): 436.

¹¹² Benjamin K. Sovacool; Michael H. Dworkin, *supra* note 14: 19.

¹¹³ Darren McCauley, Raphael Heffron, Hannes Stephan, Kirsten Jenkins, *supra* note 5: 107.

comprehensive framework to be applied on energy injustices in the EU. In accordance with the EU values of the respect for human dignity, democracy, freedom, equality, the rule of law, and respect for human rights,¹¹⁴ the demands for energy justice within inherent values unfold within the tenets of distributive, recognition, and procedural justice along with a capabilities approach to justice (Figure 3).

Figure 3. The shared values: the European Union v. the framework of energy justice¹¹⁵



Even though the current concept of energy justice is unsatisfactory for the examination of household consumers’ access to energy service in the EU, the suggested definition sets a strong foundation. The tenets of distributive and procedural justice are contained in the suggested definition of energy justice. It enables the selection of the priority of a value (or mix of values) that would guarantee a fair outcome in terms of sufficient access to energy service for all household consumers and strong involvement of household consumers in important decision-making. On that account, fairness implies equality at a minimum access to energy service and for freedom to choose the supplier, source, consumption volumes, and practices. Procedural justice supported by a due process requirement complements the conceptualization with legal process and enforcement capacity. Provided that the values of equality and freedom are respected and

¹¹⁴ The Treaty on European Union, Official Gazette (2012, no. 13-390), art. 2.

¹¹⁵ Made by author of this dissertation

protected, despite resulting in contradictory outcomes in some instances, the current definition contains the social and market perspectives that enable an accommodation of the latter view within the EU context.

3.2. ROOTS OF ENERGY JUSTICE IN ENVIRONMENTAL JUSTICE

The predominant view of energy justice focuses on the triad of tenets that address unjust occurrences in the energy system. This view has its roots in the abovementioned issues of environmental injustices in the US.¹¹⁶ The close connection between energy and environment, such as pollution from energy,¹¹⁷ establishes favourable conditions for the application of the climate frame on energy to identify injustice in the energy system and propose proper solutions. Due to the latter's similarities, the literature on the examination of energy justice in the low carbon transition integrates into the same framework of environmental justice¹¹⁸ as well as the examination of justice throughout the supply chain of energy resources.¹¹⁹

Furthermore, discussion of environmental issues and challenges is a large part the energy literature, which also addresses concerns of benefits and cost distribution. In the context of climate change and environmental protection, the concept of environmental justice or 'climate frame' makes a distinction between distributive and procedural justice, whereas each dimension is further characterized by responsibility, rights, and recognition criteria.¹²⁰ Environmental justice both relates to distribution of "environmental benefits and ills" and to distribution of coherent responsibilities.¹²¹ In sum, the climate framework has been taken into energy discourse as a useful vehicle to examine and address energy injustices.

For the purpose of rectifying injustices in energy, the triad of recognition, distributive, and procedural justice, usually applied in the environmental sphere, shifts to the energy sector and provides a reasonable theoretical basis. The concept of energy justice borrows and incorporates these three fundamental elements, encompassing distributive and procedural justice, and justice as recognition.¹²² For the coherent execution of conceptual application, the exploration divides into a three-pronged test in the following fashion: what the concern is (distribution), who is affected (recognition), and proposing strategies for remediation

¹¹⁶ Andrew Dobson, *Justice and the Environment: Conceptions of Environmental Sustainability and Theories of Distributive Justice* (Oxford: Clarendon Press, 1999).

¹¹⁷ Jason Byrne, Chloe Portanger, *Climate Change, Energy Policy and Justice: A Systematic Review*, *Analyse & Kritik* 02 (2014): 316.

¹¹⁸ Sara Fuller, Harriet Bulkeley, Energy justice and low-carbon community programmes in the UK: 64; in: Karen Bickerstaff, Gordon Walker, Harriet Bulkeley, eds., *Energy justice in a changing climate: social equity and low-carbon energy* (London and New York: Zed Books, 2013).

¹¹⁹ Raphael J. Heffron, Darren McCauley, *supra* note 6.

¹²⁰ Sara Fuller, Harriet Bulkeley, *supra* note 30: 64.

¹²¹ Kirsten Jenkins, et al., *Energy Justice: A Conceptual Review*, *Energy Research & Social Science* Vol. 11 (2016): 178.

¹²² Stefan Bouzarovski, *Energy Poverty. (Dis)Assembling Europe's Infrastructural Divide* (Switzerland: Palgrave Macmillan, 2018): 26.

(procedure).¹²³ The basic assumptions of the tenets' common ground states that "meaningful recognition and fair procedures are prerequisites to distributional justice,"¹²⁴ or that procedure and recognition are distinct types of injustice linked to inequalities in distribution.¹²⁵ On that account, recognition stands for identification of the social group with special needs suffering injustice in energy system, while distributive justice refers to specific injustice related to the dissemination of disproportionate costs and benefits among end users, and procedural justice covers the possible solutions to mitigate and remedy injustice.

The tenets of energy justice follow the same assumptions as the environmental framework. In the broadest sense the respective tenets are characterized by the assumptions of distributive justice, which focus on fair distribution of resources, procedural justice on due process requirements, and recognition that reveals which groups are mistreated or disregarded.¹²⁶ The elaboration on the securement of a fair distribution of benefits and externalities as well as participation of community or citizens affected in the decision-making process, with due regard to recognition of specific social group's needs, combines the concepts of environmental and energy justice. Nevertheless, the environmental frame has a few important attributes such as categories of right and responsibility, which the current conceptualized version of energy justice lacks. Although the concept of energy justice does not incorporate all elements of the environmental frame, the latter provides a useful vehicle due to similarities in the examination of injustice in energy policy and regulation.

Overall, the contemporary apprehension of energy justice rests to a great extent on the environmental frame developed and designed for environmental injustice investigation. The commonalities and interrelatedness between energy and environment make it possible to adapt environmental frame with some adjustment to the area of energy. In addition to the adapted framework on energy, the current version of energy justice augments the implied values of the tenets in light of the notion of fairness.

3.3. DISTRIBUTIVE JUSTICE

Distributive justice is the first tenet in the framework of energy justice and may be seen as a cornerstone. It articulates the significant elements that enable an examination of how the distribution should be executed, who the actors are, and what the object of distribution is. Building

¹²³ Kirsten Jenkins, *et al.*, *supra* note 33: 176.

¹²⁴ Ross Gillard, Carolyne Snell, Mark Bevan, *Advancing an energy justice perspective of fuel poverty: Household vulnerability and domestic retrofit policy in the United Kingdom*, *Energy Research & Social Science* 29 (2017): 54.

¹²⁵ Gordon Walker, Rosi Day, *Fuel poverty as injustice: Integrating distribution, recognition and procedure in the struggle for affordable warmth*, *Energy Policy* 49 (2012): 70.

¹²⁶ Stefan Bouzarovski, *supra* note 34, 26.

on the current work on energy justice and accommodating the challenge of household consumers to access energy service in the EU, this section elaborates on the more developed constituent elements of what, who, and how.

In general, distributive justice suggests that physical security and conditions that create it, namely, employment, shelter, air, water and environment, are basic human rights.¹²⁷ Even though energy is not mentioned as a basic human right, the realization of it exists as an opportunity to use energy service within decent living standards, which should be understood as a derivative entitlement. In other words, it is reasonable to suggest that if social justice translates into more or less equal opportunity(s) to obtain “the basic goods of life” and “develop capabilities”, then fair distribution of energy service is critical.¹²⁸

While the what and who issues are less debatable in distributive justice, the mode of distribution opens more discussions. One may argue that socially just societies act “for the equitable distribution of these basic goods”,¹²⁹ however, the interpretation of what is equitable with respect to the mode of distribution is highly debatable. Due to different schools of thought, modes of distribution may be justified on the basis of different values such as equality, utility, or freedom that promote different objectives of the maximization of welfare, the respect of freedom, and the cultivation of virtue.¹³⁰ If the distribution of energy service were performed based on the utility the energy confers to the end user, then priority would be awarded to the ones that most benefit from the energy consumption such as intensive energy users. Meanwhile, the libertarian view on distribution would argue that energy service should be distributed to the ones that deserve the most by freely taking action that should be remunerated. The freedom to act underlies the mode of market distribution, where competition and private initiative uplift the winners and bring down the losers. Lastly, the concept of intragenerational equity refers to equality where the distribution should be performed “in accordance with the needs of recipient”.¹³¹ This is mainly due to human needs’ variations based on “the specific cultural and historical context”.¹³² Overall, household consumers should effectively use from distribution despite the identified mode of distribution.¹³³

The energy literature tends to use the same principle and value to address inherently different problems and challenges. The same is true in the distribution of household consumers’ access to energy services in the EU, where market and freedom are the prescription for every shortcoming. The drawback of trying to address all issues in the distribution of energy services

¹²⁷ Benjamin K. Sovacool, Michael H. Dworkin, *supra* note 24: 440.

¹²⁸ Benjamin K. Sovacool, Roman V. Sidortstov, Benjamin R. Jones, *supra* note 2: 25.

¹²⁹ *Ibid.*, 31.

¹³⁰ Michael J. Sandel, *Justice: what’s the right thing to do?* (New York: Farrar, Straus and Giroux, 2009): 19.

¹³¹ Benjamin K. Sovacool, Roman V. Sidortstov, Benjamin R. Jones, *supra* note 2: 31.

¹³² *Ibid.*, 45.

¹³³ Benjamin K. Sovacool, Michael H. Dworkin, *supra* note 24: 440.

with one principle is the failure to encompass specifics of each situation. For instance, the market approach, based on freedom, is employed to ensure low-price, reliably supplied, and efficient consumption through price systems and satisfying household consumers' needs. One can see how different objectives are unsatisfactorily pursued with the same tool. Nevertheless, there is a growing advocacy to balance the market approach with a social approach,¹³⁴ which may be viewed as a social justice requirement, where freedom is balanced against equality. In this vein, using the difference principle to narrow the gap between worst-off and well-off justifies inequalities resulting from market failures, presenting the opportunity for a balancing act.

To the extent of the demands of energy justice in the EU, the requirements for distribution mode aspect may be added to the political philosophy doctrines on justice. In this vein, the political theory of justice as fairness¹³⁵ deals with distribution within the basic structure of institutions that should ensure "fair, efficient, and productive system of social cooperation" in the long-term.¹³⁶ On that note the theory of justice sets out two principles that explain possible social and economic inequalities arising from distribution in line with the principle of justice. The second principle of justice consists of two conditions: fair equality of opportunity and the difference principle.¹³⁷ The resulting social and economic inequalities from distribution are just, provided that "they are attached to offices and positions open to all under conditions of fair equality of opportunity" and "they be to the greatest benefit of least-advantaged members of society".¹³⁸ Here, the emphasis should be added on the difference principle that permits inequality from distribution of primary goods, while least advantaged, namely, "belonging to the income class with lowest expectations,"¹³⁹ are treated within reciprocity with well-off individuals.

Due to this, the difference principle confers social requirements on the distribution of goods in terms of balancing freedom and equality. The well-off household consumers freely choose which energy service to use and adjust the consumption volumes to internal preferences, but the granted freedom in access to energy service should bear the costs. In other words, equality requires for the well-off household consumers to pay extra for energy service to secure the same for vulnerable household consumers. In the context of the EU energy system, it sets the basis for justifying public support of household consumers in energy poverty at the expense of affluent household consumers. It also validates the coordination between the functioning of a liberal energy market in the EU and execution of social support in the EU through public intervention measures to narrow the widening access gap between household consumers. (Figure 4)

¹³⁴ Kim Talus, *Introduction to EU Energy Law* (Oxford University Press, 2016): 60.

¹³⁵ John Rawls, *supra* note 23, 50.

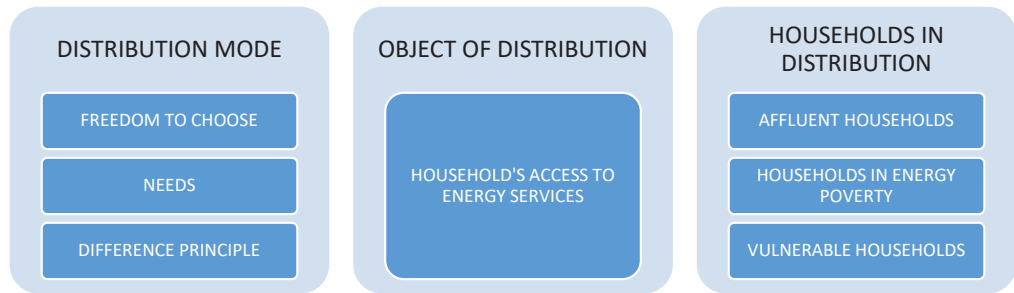
¹³⁶ *Ibid.*, 50.

¹³⁷ John Rawls, *supra* note 23, 42.

¹³⁸ John Rawls, *supra* note 23, 43.

¹³⁹ John Rawls, *supra* note 23: 59.

Figure 4. Distributive justice in the framework of energy justice¹⁴⁰



Discussing household consumers' access to sufficient energy service in the EU requires elaborating on and defining the notions of access and energy service. For the purpose of distributive justice, access should mean physical connection as well as freedom of choice in the use of energy.¹⁴¹ The access in legal terms should be considered as conditions enabling or impeding to use energy service effectively. The conditions may be related to internal conditions that household consumers are able to alter and external conditions that are outside the direct control of household consumers. The former encompasses the characteristics of low-income, inefficient consumption, special needs, and being uninformed. The latter concerns the regulated and unregulated activities of suppliers and competent authorities. On that account 'access' refers to the household consumers' capacity to acquire the sufficient level of energy service due to proper conditions.

With respect to the distribution of energy service, there are possible variations that should be distributed from the household consumers' perspective, which may relate to goods, energy supply, energy service, and the like. There should be some convincing explanation of what in this case should be fairly distributed. In this context, in some instances the terms in literature and policy documents are used interchangeably; for instance, the energy supply may refer to energy service and vice versa. In addition to the changing definition of terms, the next issue is the alteration of the definition of energy service. In some contexts energy service may cover components of energy, environment, technology, human, and physical capital beyond technological and social spheres.¹⁴² In other contexts energy service refers to energy carriers and measured in "units, temperature or heat".¹⁴³ The energy literature greatly focuses on the energy service as energy carriers without due regard to human well-being, namely, experienced

¹⁴⁰ Made by author of this dissertation.

¹⁴¹ Kirsten Jenkins, *et al.*, *supra* note 33: 178.

¹⁴² Stefan Bouzarovski, Saska Petrova, *A global perspective on domestic energy deprivation: Overcoming the energy poverty-fuel poverty binary*, *Energy Research & Social Science* 10 (2015): 34.

¹⁴³ Andreas Goldthau, Benjamin K. Sovacool, *supra* note 1: 233.

satisfaction or energy benefits.¹⁴⁴ However, the presented conceptualization of energy justice in the EU focuses on the access to energy service, where the energy service is understood as the benefits received by end users by converting electricity into useful services such as heating, lighting, cooling, washing, and cooking.

For the purpose of energy justice in the household consumers' access to energy service in the EU, the 'who' refers to the household customers and vulnerable consumers as separate categories of end users. Taking into consideration the divergent situations of household consumers, the household customers should be split into the categories of affluent v. household consumers in energy poverty. The similar distinction between this kind of household consumer is performed in categorizing household consumers into an inability to access a sufficient amount of energy service; household consumers with low incomes but high consumption due to inefficiency; and household consumers in energy poverty due to financial and technical constrains.¹⁴⁵ With regard to vulnerable household consumers, this category of end users is labelled as household consumers with specific needs, in some instances prescribed as a critical dependence or/and gained social status that makes them more vulnerable than other household consumers; therefore, special treatment should be attributed to this particular group of household consumers. Even though a vulnerable household consumer may not be in energy poverty, their characteristics make them more likely to find themselves in energy poverty. Also, these latter household consumers may be more challenged in gaining access to energy service in comparison to other household consumers, namely, to effectively exercise the implied right to energy service.

The investigation of injustice in energy in the EU requires embodying the EU founding values regarding energy justice. Also, the EU context requires the balancing of values in the distribution of access to energy service. Here the access means the removal of impediments for actual and effective access and energy service refers to the benefits of heating, cooling, food storage, and cooking enjoyed by the household consumers. Meanwhile, the balancing act may be performed based on the difference principle to offset the inequalities in distribution, where some household consumers can acquire the benefits of freedom and market mechanisms, whereas other household consumers are unable to secure the sufficient access to energy service.

3.4. RECOGNITION AS JUSTICE

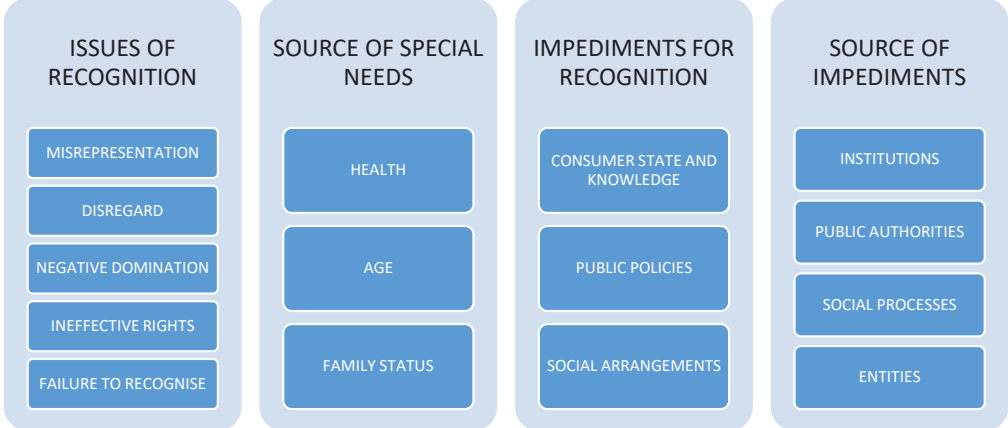
The demands of energy justice call for the recognition of the heterogeneity of disadvantaged social groups treated unfairly in energy related social arrangements and practices

¹⁴⁴ *Ibid.*

¹⁴⁵ Raffaele Miniaci, Carlo Scarpa, Paola Valbonesi, *Energy affordability and the benefits system in Italy*, Energy Policy (2014): 3.

to comply with social justice requirements. Justice-based policies must recognize that public policies should redress disadvantaged social groups and provide a level playing field.¹⁴⁶ For the latter to be substantiated, recognition as justice brings it about that all individuals possess the right “to pursue social esteem under fair conditions of equal opportunity”.¹⁴⁷ Also and more important, it argues for the capacity of individual to claim the protection from the competent authorities and government with opportunity for redress. This section presents recognition justice and its constituent elements. (Figure 5)

Figure 5. Recognition as justice in the framework of energy justice¹⁴⁸



As recognition justice, injustice may manifest itself in a number of ways. The social phenomena of misrepresentation, disregard, misrecognition, and other vices confronted in the access to energy service may be attributed to unjust situations and to the form of recognition as justice. With reference to environmental justice, the recognition requirement manifests itself as a form of negative domination, misrepresentation, or failure to confer effective rights.¹⁴⁹ Due to the shift of the environmental framework to the energy system, the suggested forms of negative recognition point to possible instances of injustice in the access to energy service. In fact, the form of recognition may refer to a wide spectrum of manifestation from “failure to recognise” to “misrecognising”.¹⁵⁰ Misrecognition as a separate type of injustice specifies the institutionalized patterns to refute individuals and social groups from functioning in society as partners worthy of respect.¹⁵¹ The latter is manifest in public life and may be objectively ascertained by whether

¹⁴⁶ Ross Gillard, Carolyne Snell, Mark Bevan, *supra* note 36: 54.
¹⁴⁷ Nancy Fraser, *Social justice in the age of identity politics: redistribution, recognition, participation*, Discussion Papers (1998): 101.
¹⁴⁸ Made by author of this dissertation.
¹⁴⁹ Kirsten Jenkins, *et al.*, *supra* note 33: 176.
¹⁵⁰ *Ibid.*: 176.
¹⁵¹ Nancy Fraser, *supra* note 58: 100.

impediments are created for peer participation in society without being affected by erroneous subjectivity.¹⁵² Even though the types of unrecognition appear to be ascribed as injustice, they do not conform to the legal categorization of injustice but provide a moral assessment of social vices.

Each social group with special needs encounters different obstacles when aiming to use the electricity supply that arise in a variety of EU contexts. This is because of the vast internal heterogeneity of the EU,¹⁵³ where the economic and social contexts reveal the instances of inequalities that some household consumers suffer from.¹⁵⁴ The characterizing criteria of unrecognised social groups in energy are special needs with the exclusion of intrinsic characteristics of minorities or unemployment.

At the supply side of the energy chain in the EU, the impediments for energy use by household consumers may represent a lack of obligation fulfilment by the supplier as well as household consumers' deprivation due to different capability to receive the electricity supply. Accordingly, the impediment for special needs satisfaction may be internal, depending on the consumer's state and knowledge, and external, depending on public policies and social arrangements. The nature of impediments in electricity supply use correlates with needs identification, form(s) of recognition, and operational context.¹⁵⁵ This supports the idea of a close link between the special needs of social groups, impediments hindering needs fulfilment, the source of impediments, and forms of social vices that should be explored in a coherent frame.

The following input in recognition justice has the aim of determining the source of injustice manifestation. Here, there are two possible ways for injustice manifestations from the social structures and institutions and social processes.¹⁵⁶ In some instances, the responsibility to protect, categorized as obligation, i.e. taking positive action, may be implied from the power to act. The power to act is usually conferred on public authorities by mandating public policies. However, the authority is not always the source of discrimination; there are strong societal biases to "cultural domination", recurrent cases of "non-recognition" and "stereotyping".¹⁵⁷ Accordingly, the social vices emerging from institutional and social arrangement in access to energy service should be uncovered. Also, negative recognition may originate from entities that are not part of the public authority. This scenario appears possible in the EU energy system, where undertakings are conferred with the public service obligation to supply electricity to vulnerable household consumers or with the obligation of being the supplier of last resort. Consequently, the forms of unfair treatment may appear as acts or omissions from the institutions or entities

¹⁵² *Ibid.*: 101.

¹⁵³ Ross Gillard, Carolyann Snell, Mark Bevan, *supra* note 36: 55.

¹⁵⁴ Udo Pesch, *et al.*, *Energy justice and controversies: Formal and informal assessment in energy projects*, Energy Policy 109 (2017): 830.

¹⁵⁵ Nancy Fraser, *supra* note 58: 103.

¹⁵⁶ Ross Gillard, Carolyann Snell, Mark Bevan, *supra* note 36: 55.

¹⁵⁷ Kirsten Jenkins, Darren McCauley, Raphael Heffron, Hannes Stephan, *Energy Justice: A Whole Systems Approach*, Queens Political Review Vol. 2, No. 2 (2014): 78.

conferred with corresponding duties that are implied or explicit. The identification of the source enables them not only to design tailored solutions to the form of recognition but also elaborate on the scope of responsibilities conferred.

While the recognition as justice refers to external input, it also makes reference to internal characteristics of the group of household consumers. The purpose of recognition is to introduce remedy for injustice by referencing specific human needs and dismissing the perspective on recognition as a generic human need.¹⁵⁸ Here the category of need is introduced that characterizes the social group based on specific needs and their effect on well-being that make some household consumers more vulnerable than others. One may argue that the needs are subjective preferences; however, the distinction of needs as objective condition and wants as individual preferences overrides this concern. The basic needs may be deliberated by experts, with an account of experiences under consideration.¹⁵⁹ Furthermore, the recognition of certain needs and vulnerabilities of individuals is not the only useful data to be obtained; it also legitimises certain claims for redress.¹⁶⁰ Respectively, the needs of household consumers in distributive justice supplemented with social groups' specific needs in recognition justice presents a more comprehensive view, which may advance on policy design in the EU to satisfy needs and identify proper forms of redress.

With respect to a value-driven conceptualization of energy justice in the EU, the recognition justice distinction in the separate tenet in the energy justice conceptualization is underpinned by the EU value of equality. The same equality demand may be derived from the category of human needs within the notion of basic human needs of “physical survival/health and personal autonomy”.¹⁶¹ In this case “autonomy” refers to interdependence and interaction between individuals to comprehend their capabilities.¹⁶² Additionally, the normative conception of participatory parity suggests two conditions for social arrangements to be just, namely, the distribution of resources should ensure participants independence and “voice”, and the institutionalized cultural patterns ensures equal respect and equal opportunity to social esteem, making reference to the value of equality.¹⁶³ Based on that, the demand of equality in access to adequate energy service in the EU correlates with the equality in recognition justice.

Due to the apparent need to recognise the special needs of social groups, recognition as justice should be examined as a separate concern. Recognition as justice highlights the comprehension of the difference between social groups and satisfying special needs.¹⁶⁴ However,

¹⁵⁸ Nancy Fraser, *supra* note 58: 102.

¹⁵⁹ Ian Gough, *Climate change and sustainable welfare: the centrality of human needs*, Cambridge Journal of Economics 39 (2015): 1201.

¹⁶⁰ Gordon Walker, Rosie Day, *supra* note 37: 72.

¹⁶¹ Ian Gough, *supra* note 69: 1197.

¹⁶² *Ibid.*: 1199.

¹⁶³ Nancy Fraser, *supra* note 58: 102.

¹⁶⁴ Gordon Walker, Rosy Day, *supra* note 37: 71.

in distributive justice the criterion of household consumer need is construed within economic rationale. The focus is on individual needs to sustain well-being, where identified needs are understood as universal and common to all household consumers. However, it must be acknowledged that the sharp distinction between recognition and distribution justice is redundant because they overlap in their areas of concern, even though they do not correspond in their requirements.¹⁶⁵ Thus, there are reasonable grounds to argue that recognition and distribution are two distinctive “spheres of justice”.¹⁶⁶ An analytical distinction is performed on cultural injustice related to recognition and the economic injustice to redistribution.¹⁶⁷ Even though they concern different domains, both should be incorporated in the same energy justice framework to sufficiently capture claims of social equality and recognise the differences of social groups.¹⁶⁸ Overall, without establishing the separate tenet of recognition justice, distributive justice will not possess sufficient completeness to take the task of rectifying energy injustice into a full view of social justice.

3.5. PROCEDURAL JUSTICE

Justice requires setting up an effective process in the access of energy service that guarantees the protection of the corresponding right to access adequate energy service, a procedural justice requirement. Respectively, the process should be fair and the energy policy and regulation should comply with due process. This translates into the responsibility of the competitive EU authorities to respect the rule of law as the community value enacted in primary law.¹⁶⁹ While procedural justice relates to democratic governance and due process, the rule of law as the EU founding value, underpinned by due process, presents a coherent argument for the prescription of the built-in value in procedural justice.

The literature on this matter elaborates on the preferred constituent elements of procedural justice to be translated into the legal process with the reference to the “participatory justice”,¹⁷⁰ or “public participation” and “due process”.¹⁷¹ Based on the environmental framework and in accordance with the UN’s Aarhus Convention,¹⁷² the constituent elements of procedural justice are “information accessibility, participation in decision-making and effective forms of

¹⁶⁵ David Schlosberg, *Defining the justice of environmental justice: global movements north and south*, Environmental Politics 13, No. 3 (2004): 530.

¹⁶⁶ Nancy Fraser, *supra* note 58: 104.

¹⁶⁷ Nancy Fraser, *From Redistribution to Recognition? Dilemmas of Justice in a ‘Post-Socialist’ Age*, Political Science (2003): 72.

¹⁶⁸ Nancy Fraser, *supra* note 58: 98.

¹⁶⁹ *The Treaty of European Union*, *supra* note 19, art. 2.

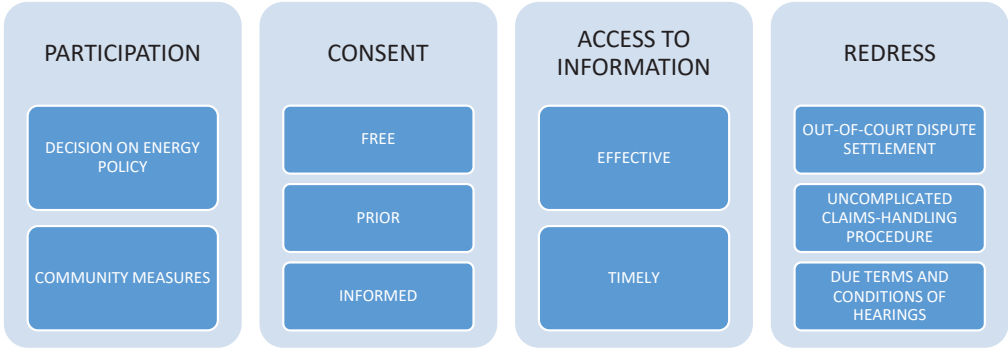
¹⁷⁰ Gordon Walker, Rosy Day, *supra* note 37: 72.

¹⁷¹ Benjamin K. Sovacool, Roman V. Sidortsov, Benjamin R. Jones, *supra* note 2: 27.

¹⁷² *Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters*, UNECE (May 2020).

redress in law”.¹⁷³ Additionally, procedural justice relates to “free prior and informed consent”, representation in decision-making, and access to information.¹⁷⁴ The latter categorization is reiterated in other procedural justice literature.¹⁷⁵ Based on preceding research on energy justice, the primary concern of procedural justice is the questions of ‘how’ and ‘who’,¹⁷⁶ which require thorough examination. (Figure 6)

Figure 6. Procedural justice in the framework of energy justice¹⁷⁷



The conditions for accessible and effective participation in the energy-related decision process for household consumers guarantee fair outcomes to affected parties. Therefore, participation in the EU energy decision-making process may take many forms in terms of the capacity to influence the decisions on energy policy and to engage in energy-related community measures. While the former consideration of procedural justice as a form of democratic governance is widely acknowledged, the latter, such as community energy schemes, voluntary sector initiatives and microgeneration, and low-carbon initiatives,¹⁷⁸ are mainly unnoticed in the discourse on energy justice. In other words, community-level participation has more or less the same importance on guaranteeing fair process in the access to energy service in the EU in terms of democratic governance as does the process of public policy on energy.

In the prevailing view on procedural justice, for the decision to be fair, affected parties or representatives must agree with it. For a voice to be heard in the public discussion, there should be effective legal mechanisms in place enabling public authorities to hear consumers within a reasonable timeframe. In this case the decision-making process encompasses the period from the public policy design stage up to its implementation. The participation in decision-making

¹⁷³ Gordon Walker, Rosy Day, *supra* note 37:72.
¹⁷⁴ Benjamin K. Sovacool, Roman V. Sidortstov, Benjamin R. Jones, *supra* note 2: 26.
¹⁷⁵ Kirsten Jenkins, *et al.*, *supra* note 33: 185.
¹⁷⁶ Benjamin K. Sovacool, Michael Dworkin, *supra* note 24: 437.
¹⁷⁷ Made by author of this dissertation
¹⁷⁸ Ross Gillard, Carolyn Snell, Mark Bevan, *supra* note 36: 55.

to be effective does not require the physical presence of all affected individuals in each step until the final decision is reached.¹⁷⁹ Effective participation is adequately ensured when related information is disclosed by public authorities in advance to the public and the final decision is made while taking different views into account.

Participation in the energy decision-making is adequately fulfilled, provided that the affected parties consent to the participation in any form of energy governance through community and public policy. With regard to the affirmation of these decisions, consent should comply with the following: there must be no coercion to give consent, the consent must be given before an energy-related decision is taken, and adequate access to related information is provided.¹⁸⁰ Hence, the requirement to enable access to related information on a consumer's behalf should be set as an inherent condition for warranting interested parties' effective participation and valid consent. Nevertheless, for vulnerable household consumers there are multiple impediments to effective participation and due process,¹⁸¹ which correlates with the recognition justice requirement to comprehend the inherent differences of the involved social groups. The focus here should be on the level of engagement by public authorities with affected social groups and effective participation in the form of governance.

In the legal context, the outcome lacks legitimacy when procedural requirements are infringed upon or the set process deviates from due process standards. To contain the constituent elements of procedural justice in the legal process, there should be legally recognised rights regarding participation in any form of energy governance. Such a legal right for a household consumer, understood as the right to participate, should encompass the right to information and an obligation for the decision-making body to obtain the consent before long-term, sensitive, and expensive decisions are taken. In the absence of legal right there is no other force, except legal enforcement, that would enable the household consumers to participate in the low-carbon, co-generation activities, and the like that enable the securing of sufficient access to energy service.

When legally recognised rights are infringed upon, due process calls for effective forms of redress available to the affected individuals and social groups by the decisions of public authorities and private entities' actions or failures to act. Hence, an impartial body hearing household consumers' claims should be present as the out-of-court dispute settlement with the claimant's right to appeal the latter's body decision to the court. The terms and conditions for the hearing play critical roles for effective redress as they may hinder the capacity to protect the household consumer's rights. In that sense, the good practice should be to enact laws or relevant

¹⁷⁹ Kirsten Jenkins, *et al.*, *supra* note 33: 185.

¹⁸⁰ Benjamin K. Sovacool, Michael Dworkin, *supra* note 24: 440.

¹⁸¹ Ross Gillard, Carolyn Snell, Mark Bevan, *supra* note 36: 56.

legislation where public authorities are obliged to disclose information for the public to access it easily.¹⁸²

Overall, procedural justice contains demands for a legal process in the advancement of justice under one of the EU's founding values of the rule of law. Contingent on the appreciated EU values, further requirements are specified to guide the energy policy regarding household consumers' access to energy service. Elaboration with respect to participation, including consent, information access, and redress, puts constituent elements of procedural justice into separate frames within the triad of tenets.

3.6. COHERENCE OF ENERGY JUSTICE

The suggested conceptualization of energy justice on the triad of tenets sets the foundations for the diagnosis of injustice in the household consumers' access to energy service in the EU. Nevertheless, some considerable demands of rights, responsibilities, and the minimum needs for well-being are unspecified for a comprehensive and adequate concept of energy justice. In contemplation of well-being, the capabilities approach is presented to take into account the significant elements of rights and responsibilities that are missing in the current concept of energy justice. More important, capabilities should go before other energy justice tenets because they establish justification for distribution and "what it takes to function in that distribution,"¹⁸³ while regarding recognition justice as it is affirmed as the capability.¹⁸⁴

The comprehension of the fundamental nature of energy to human well-being has provoked a debate on energy deprivation from public institutions, scholars, social groups, and communities. Questions emerge on how human well-being correlates with energy¹⁸⁵ and why energy poverty as an injustice¹⁸⁶ is so important in today's policy agenda. In this vein the application of the capabilities approach to the examination of injustice in energy is supported by energy's significance to human well-being; a person's ability to do and to be¹⁸⁷ is related to the end-list of the ten capabilities¹⁸⁸ that need to be protected.¹⁸⁹ For the conceptualization of energy justice in the EU, the deliberation should be on "what normative conclusions we draw from the fact of the basic capabilities".¹⁹⁰ The justification of the latter set is upheld in "the central

¹⁸² Raphael J. Heffron, Darren McCauley, *supra* note 6: 2.

¹⁸³ David Schlosberg, *supra* note 75: 520.

¹⁸⁴ *Ibid.*

¹⁸⁵ Rosi Day, Gordon Walker, Neil Simcock, *Conceptualising energy use and energy poverty using a capabilities framework*, Energy Policy 93 (2016): 255.

¹⁸⁶ *Ibid.*, 260.

¹⁸⁷ Martha Nussbaum, *Capabilities as fundamental entitlements: Sen and Social justice*, Feminist Economics 9:2-3 (2003): 33.

¹⁸⁸ Life; bodily health; bodily integrity; sense, imagination and thought; emotions; practical reason; affiliation; other species; play; control over one's environment.

¹⁸⁹ *Ibid.*: 33.

¹⁹⁰ Martha C. Nussbaum, *Capabilities and Human Rights*, Fordham L. Rev. 66 (1997): 296.

requirements of a life with dignity,”¹⁹¹ or that people possess value in and of themselves.¹⁹² This approach is based on one of the EU’s founding values, human dignity,¹⁹³ which guides demand for social realizations. Additionally, the right’s protection is incorporated in the capabilities analytical model as ‘underlying variables’ (“entitlements, contextual variables, conversion factors”) substantiating that ‘capabilities set’ significance for human development and well-being.¹⁹⁴

Provided that the basic capabilities are fundamental entitlements that ensure a life with dignity, the basic capabilities are sustained when the secondary capabilities are provided with the necessary energy service.¹⁹⁵ For instance, the basic capability of good health requires secondary capabilities to be satisfied, such as being able to keep comfort temperature indoors and to store and cook meals.¹⁹⁶ The consequences of not having a secure, accessible, and affordable energy service possibly affect other activities of people’s daily lives. Lack of access to energy service leads to a degradation of “access to education, health, information and participation in politics”.¹⁹⁷ Also, the issue of a threat of having inadequate access to energy service is not only constrained to household consumer level but also has widespread consequences in the ‘energy chain’.¹⁹⁸

The capabilities serve as justification for social sensitivity on household consumers’ ability to access energy service, producing favourable basis for legal recognition of the right to access to sufficient energy service with its corresponding responsibilities. In other words, the capabilities confer justification for the “rights claims” despite both being characterized as “fundamental entitlements”.¹⁹⁹ In this sense the human being has valid claims to securing basic capabilities by being granted rights based on the virtue of being human.²⁰⁰ However, there is still uncertainty with regard to the human right to be respected and protected, meaning that capabilities are not rights *per se*, but justification for the recognition of rights. If we accept a person’s health is a virtue in society, then we may assert to being entitled to adequate shelter and healthy living conditions against which moral rights could be derived. Against that the questions emerge to determine the nature of rights derived from the capabilities, who possesses them, and what the rights grant.²⁰¹ On that account, the household consumer should have the legal right to access an

¹⁹¹ Martha Nussbaum, *supra* note 96: 40.

¹⁹² Martha C. Nussbaum, *supra* note 98: 286.

¹⁹³ *The Treaty of European Union*, *supra* note 19, art. 2.

¹⁹⁴ Polly Vizard, Sakiko Fukuda Parr, Diane Elson, *Introduction: The Capability Approach and Human Rights*, *Journal of Human Development and Capabilities* 12:1 (2011): 4.

¹⁹⁵ Rosi Day, Gordon Walker, Neil Simcock, *supra* note 94: 260.

¹⁹⁶ *Ibid.*: 259.

¹⁹⁷ Mikel González-Eguino, *Energy poverty: an overview*, *Renewable and Sustainable Energy Reviews* 47 (2015): 379.

¹⁹⁸ Stefan Bouzarovski, *supra* note 34: 111.

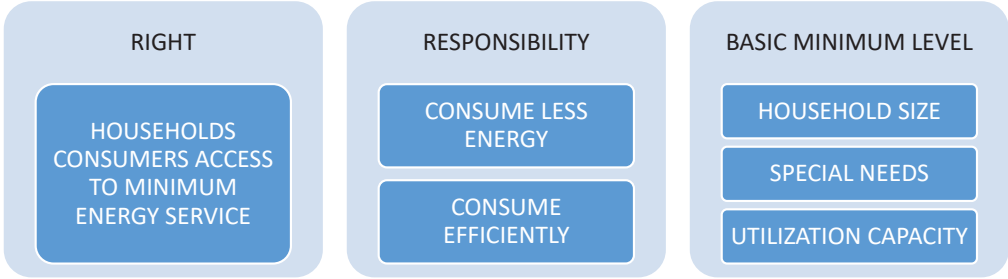
¹⁹⁹ Polly Vizard, Sakiko Fukuda Parr, Diane Elson, *supra* note 102: 12.

²⁰⁰ Martha C. Nussbaum, *supra* note 98: 293.

²⁰¹ Martha Nussbaum, *supra* note 96: 37.

energy service that secures minimum energy needs in light of social justice and the capacity of legal enforcement. To the extent that the right is respected and protected by a state, it also confers responsibility on the household consumers to take positive action in changing energy consumption practices by adhering to beneficial and efficient consumption. (Figure 7)

Figure 7. Capabilities in the framework of energy justice²⁰²



One of the constituent elements of the capabilities approach acknowledges the basic minimum level of human well-being. This intellectual exercise sets the requirement to sustain a “basic minimum level for individuals to flourish”.²⁰³ The elaborations on this basic minimum level were dismissed in the theoretical approach and left for public policies to deliberate upon what is acceptable in particular situations and contexts.²⁰⁴ However, examining the link between well-being and energy supports a threshold level for basic and secondary capabilities²⁰⁵ that inevitably requires some level of energy service. That level should be contingent on “household size, specific individuals’ needs and circumstances and on the local environment”.²⁰⁶ The appropriate level of resources should be made available to different social groups due to their needs and their capacity to use the resources as needed.²⁰⁷ Consequently, establishing a minimum threshold of access to energy service solves the energy poverty issue in pursuance of securing the decent well-being of household consumers.

The conceptualized energy justice framework with three tenets may be not comprehensive enough for energy injustice’s valid examination and mitigation. The transposed tenets from the environmental framework lack the capacity to capture new demands for justice with regard to minimum well-being and respect of human dignity. However, some elements of the capabilities approach are linked with distributional justice, consisting of the distribution of

²⁰² Made by author of this dissertation

²⁰³ Martha C. Nussbaum, *supra* note 98: 284.

²⁰⁴ *Ibid.*: 300.

²⁰⁵ Rosi Day, Gordon Walker, Neil Simcock, *supra* note 94: 261.

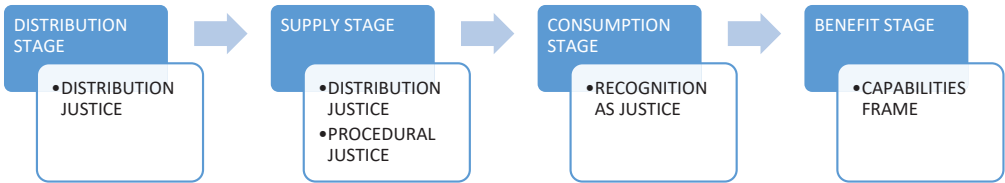
²⁰⁶ *Ibid.*: 260.

²⁰⁷ Martha C. Nussbaum, *supra* note 98: 284.

goods and the underlying processes to sustain distribution.²⁰⁸ In addition, the recognition tenet correlates with the human respect inherent in the capabilities approach because it recognizes the justice of giving the same weight to social life as other capabilities.²⁰⁹ In fact, the elaboration of environmental justice was articulated by intellectual leaders that set limited capabilities on injustices in distribution, recognized procedural justice, and called for integrating them without contradicting them.²¹⁰ Nevertheless, it is reasonable to suggest that there is a need to extend the three tenets framework by incorporating the human well-being perspective, which justifies the benchmarking of a minimum access to energy service within household consumers' rights and responsibilities.

The process, as the household consumers' access to energy services is understood here, stretches from the distribution of electricity up to the benefit of energy services. The benefits produced by energy services are the main reason why household consumers opt to acquire and consume electricity in the first place. Therefore, incorporating the benefit stage into our understanding of the process shows where the actions of household consumers are directed to sustain personal well-being. Here the elaboration on the idea of well-being is needed, and the capabilities fill that void by designating a value base and demands in well-being. The capabilities framework sets entitlements on persons society should reasonably recognise, respect, and protect, contrary to any individually perceived level of well-being. As the capabilities are accepted as legitimate social concerns, the previous stages of consumption, supply, and distribution are guided by the personal responsibilities in the previous stages. For instance, healthy living conditions require a minimum consumption level, affordable and uninterrupted supply through distributions networks, and responsibility toward environmental demands for effective and efficient consumption, prefer a supply from renewable energy, and a switch to microgeneration, if possible, to ease the load on the grid. (Figure 8)

Figure 8. The framework of energy justice v. the process of access to energy services²¹¹



²⁰⁸ David Schlosberg, *supra* note 75: 520.
²⁰⁹ *Ibid.*: 520.
²¹⁰ *Ibid.*: 528.
²¹¹ Made by author of this dissertation

The triad of tenets in EU energy injustice examination needs to be complemented with a capability approach on several grounds. First, the basic capability for human well-being infers the requirement of a minimum set of energy services based on the recognition of a need for energy for human well-being. Second, the capabilities approach supports fair access to energy service by indicating the different opportunities for household consumers to benefit from energy service. Third, the capabilities approach stipulates the value basis for the legal recognition of the household consumers' right to access sufficient energy service and their corresponding responsibilities. Therefore, the examination of household consumers' capacity to access to sufficient energy service in the EU should follow the capabilities, equitable distribution, recognition, and procedural justice.

The identified conceptualization of energy justice is not only supplemented with the capabilities approach; each of its elements is reformulated with additional criteria to better capture the social justice requirement in the access to energy service in the EU. The suggested new principles in some instances overlap between categories due to common underlying values, such as how human well-being determines the need for distributional justice and capabilities as well as the category of need in distribution and recognition justice. In sum, the categories are framed in pursuit of revealing the particularities and challenges in the access to energy service in the EU and should be considered as the whole; in other words, the holistic view is preferred.

Another benefit of the conceptualization of energy justice from the EU perspective is the base for further development of energy justice in furtherance of demands for the remedy of specific injustices in energy system. One of its possible accommodations is the development of evaluative criteria. Such evaluative criteria could be used to assess the energy measures' compliance with the demands of justice as well as to guide the policy makers on the pivotal points in household consumers' access to energy service. Overall, there may be many forms of application of the suggested conceptualization(s) of energy justice on the diagnoses of energy injustice.

IV. RIGHT TO ACCESS ENERGY SERVICES

The conceptualization of energy justice is needed along with a design of an elaborated normative framework to investigate injustice access to energy service and conceptualization of corresponding rights. The energy justice framework, including the constituent elements of distributional, recognition, procedural justice, and capabilities, serves as the value-driven justification for the establishment of EU household consumers' right to access energy service. This provides a set of criteria when considering the stages of the access to energy service. In sum, the distributional, recognitions, procedural justice, and capabilities approaches in the framework explain what the issue is, how it should be addressed, and what value it represents, thus forming a consistent tool to examine household consumers' access to energy service.

The underlying justification of the right to access energy service is the framework within which to identify the incidents of particular significance that impede or enhance the household consumers' access to energy service from the social justice standpoint. Other forms of injustice related to climate change or environmental degradation would require different underlying concepts and rationale that may be built on the same values to investigate the respective injustice. While the presented energy justice framework is suited mainly to the issue at hand, i.e. adequate access to energy services, it is not sufficient for instances of injustices examination in resources distribution or energy plants construction-related injustices. Furthermore, the suggested framework and the concept of right are not designed for a whole energy system approach, but for the purpose of injustice related to conditions for the household consumers to enjoy energy service in the EU investigation. Hence, the chosen framework better encapsulates the particularities in the EU regime than a cosmopolitan view of energy systems.

In general, the distinct purpose of the framework and the concept of a right to access energy service makes them divergent yet connected with a process versus outcome focus. The framework elaborates on the principles and issues that explain what should be taken into consideration when measures are designed and implemented to avoid injustice. In contrast to the theoretical lens, it does not seek to describe or explain why household consumers opt to enjoy energy services and what strategies household consumers employ to warrant access to energy services. The theory is fragmented into divergent but related concepts. The whole is more than the sum of elements, which explains the need to consider not only each element but also the relationship between them to favour the outcome. It captures inside one frame different approaches to energy as a good, energy service as a need and benefit, and energy as a necessity.

While the framework is designed to facilitate the identification of the injustice in the process, the suggested concept of right may be used to determine whether the objective is

sufficiently achieved and justify the claim on the access to energy service. The household consumers' ability to enjoy energy services reflects in a particular household consumer's interest to meet energy needs despite divergent inherent conditions. As a result of a specific household consumer's situation, it emphasizes equality, dignity, and freedom of fit to its personal situation, including the principles of affordability, availability, vulnerability, and minimum threshold requirements. For instance, affluent household consumers favour the freedom to choose the supplier and type of resource, whereas vulnerable household consumers seek sufficient energy service, and household consumers in energy poverty worry about being cut off from the energy service. This disparity calls for a guarantee of minimum access to energy service. All in all, household consumers seek to enjoy affordable and available energy service with respect to their intrinsic conditions related to age, health, income, and family status. It's clear that individual interests sometimes overlap regarding what provides a reasonable base for the construction of a category of right constituting various concerns that complement one another.

The conceptualization of the right requires to distinguish the primary concerns from the social justice perspective. These social concerns are translated into social principles for practical application in household consumers' assessment of the level of access to energy service. The consideration of justice within the category of rights shows the importance of a sufficient and fair access to energy service and provides a useful tool to examine the context of household consumer capabilities. The endeavour here is capture within one frame the specific criteria inherent in different social groups for household consumers to meet their energy needs. Therefore, the concept of vulnerability is introduced to capture the household consumers' particularities of health, age, and status to meet energy needs. In contrast, the widely acknowledged concept of energy poverty, altered in some ways but retaining core ideas of low-income, inefficiency, and high prices, translates into the requirement for a universally applicable minimum access to energy service requirement. The issue of energy poverty has a strong philosophical underpinning to support its mitigation significance and explains possible distributional shortcomings. Despite some similarities and interrelatedness between the two concepts, they possess their own underpinned values and have been formed for different purposes. Additionally, the principles of affordability and availability are set up in the right to access energy service based on value-justified criteria for the assessment of conditions produced by policy and regulation for household consumers' ability to enjoy energy service and as an objective for the energy development.

The ascertainment of a matter as just or unjust inevitably deals with the possible conferral of rights on the individuals infringed. Without the recognition of the corresponding right, the affirmation of a sustained individual injustice would lack a foundation. Hence, when considering justice issues, the category of rights justifies moral ideals and, in the case of political

and legal recognition, is capable of being claimed and enforced. The former requires the matter to be ascertained against respected values such as freedom, equality, and dignity, constituting the concept of right. Concurrently, the latter concerns the status of the right to determine the sphere for the realisation of that conferred right and the identification of the duty holder. Whereas the realization of a right appertains to the status of a right, due regard is given to the philosophical views on the current status of the corresponding right and possible scenarios of convergence in national, supranational, and international law.

The notion of justice involves the legal categories of rights and obligations, so that the individual may, respectively, claim protection of the right through legal mechanisms and processes and to identify the duty holder. Hence, discussion of rights claims the protection of identified rights are set along with corresponding obligation to provide for and protect those rights.²¹² Consequently, the consideration on the right to access energy service appears necessary in the investigation of the energy consumer protection in the EU. The construction of the right to access energy service requires explanations on the meaning and status of that right in view of providing a comprehensive conceptual tool investigating justice concerns on the household consumers' ability to enjoy sufficient energy service.

The recognition of the fundamental right to access energy service in the EU enables the legal requirement for household consumers to claim that right from stakeholders at every level of the energy system. The right to energy service implies the conferral of obligations on the stakeholders, e.g. government, regulatory authorities, suppliers, in the energy system. In reference to a doctrinal view on right to access energy service, the principle serves as a reasonable justification for the latter implication where the principle imposes an obligation on authorities to design and implement measures that do not obstruct the acquisition of basic goods.²¹³ Even though the principle only refers to the sources of regulation, there are other important system actors ensuring the implementation of measures and energy system functioning in production, distribution, and supply. Following this debate, one may assume that the right to energy refers to "legal supplier obligations, end-use services or the possibility of demand".²¹⁴ The stakeholders have corresponding obligations to household consumers to foster economic, technical, and regulatory access to energy service (protection) and not creating conditions that hinder enjoyment of energy service (respect), and to enshrine this in legislation (recognise).

To the extent that energy justice is perceived as a social justice concern, the public view, constituted from the household consumers consuming energy service for personal ends, on

²¹² Gordon Walker, *The Right to Energy: Meaning, Specification and the Politics of Definition*, L'Europe en Formation Vol. 337 (2015): 26.

²¹³ Benjamin K. Sovacool, Roman V. Sidortsov, Benjamin R. Jones, *Energy security, equality, and justice*, (London and New York: Routledge, 2014): 42.

²¹⁴ Stefan Bouzarovski, *Energy Poverty. (Dis)Assembling Europe's Infrastructural Divide* (Switzerland: Palgrave Macmillan, 2018): 48.

the nature and purpose of energy services is as the appropriate basis for justice contemplation in energy systems. It is important to consider household consumers' views on the responsibilities of other energy stakeholders through which justice should be ascertained. Some household consumer duties and responsibilities are comprehended as rights, shifting blame for injustice in energy onto government, companies, and regulators.²¹⁵ However, this social perspective helps define not only the scope of injustice but also the parties responsible for the energy-related injustice to occur. Approaching the household consumers' access to energy service from the established modes of relationships serves to see both the right's holder and a duty holder who is responsible for the injustice. The entities are conferred with different types of responsibility,²¹⁶ degrees of responsibility on different actors,²¹⁷ or a different mix of responsible actors.²¹⁸ Here, the relationship between the citizens v. government and customers v. national regulatory authorities emerges to help discern the actions by household consumers and other stakeholders. Hence, the duties and responsibilities of household consumers, suppliers, national regulatory authorities, and governments should be derived from the bottom-up to construct them in light of social justice requirements. Informed judgements relying on philosophically grounded ideas and principles complement the chain of reasoning that helps recognize particular duties and responsibilities.

The granting of household consumers' right to access energy service is accompanied by the household consumers' and several duty holders' duty and responsibility. When protection is granted to ensure significant interests of an individual or social group, the party who enjoys the special treatment must keep in mind of possible externalities and do everything reasonable not to impede other parties' exercising their rights. These requirements relate to one another since some externalities are others' rights infringement. For instance, the externalities may concern climate change and the environment, which are part of the individual rights to a healthy and safe environment. In other words, a philosophical collision may appear when the right to energy is considered with sustainable development requirements.²¹⁹ By this assertion of due regard to other right holders and other side effects in energy consumption, the idea is to remind household consumers that their rights are have related responsibilities and duties.

Efficient, green, and local energy consumption belong in the category of responsibilities that require social awareness to be acquired by the education programs, hinges, and social norms. The social norms can be a powerful tool as social feedback by social

²¹⁵ Kirsten Jenkins, Darren McCauley, C. R. Warren, *Attributing responsibility for energy justice: a case study of the Hinkley Point Nuclear Complex*, Energy Policy Vol. 108 (2017): 851.

²¹⁶ Kirsten Jenkins, Darren McCauley, C. R. Warren, *Attributing responsibility for energy justice: a case study of the Hinkley Point Nuclear Complex*, Energy Policy Vol. 108 (2017): 851.

²¹⁷ Kirsten Jenkins, Darren McCauley, C. R. Warren, *Attributing responsibility for energy justice: a case study of the Hinkley Point Nuclear Complex*, Energy Policy Vol. 108 (2017): 855.

²¹⁸ Kirsten Jenkins, Darren McCauley, C. R. Warren, *Attributing responsibility for energy justice: a case study of the Hinkley Point Nuclear Complex*, Energy Policy Vol. 108 (2017): 859.

²¹⁹ Lars Löfqvist, *Is there a universal human right to electricity?*, The International Journal of Human Rights 24(6) (2020): 712.

sanctioning, conditional cooperation, and social learning.²²⁰ Meanwhile, the educational programmes for children can influence their behaviour patterns in energy consumption and educate adults about new technological solutions and their effect on the environment and energy costs. Also, measures should encourage household consumers to prefer the energy resources, appliances, and patterns of consumption that benefit them while considering the outcomes of their energy consumption practices.

In general, the household consumers should use energy service efficiently, prefer renewable energy sources, consider self-generation options, adapt consumption practices to new energy tariffs when possible, join energy communities, use smart meters and other innovations that minimize consumption volumes, lower their energy bills, and prioritize energy from renewable resources. It is reasonable to incentivise household consumers to change their energy-related practices based on technological innovations and schemes of cooperation in energy services. A similar path is advocated in the Sustainable Development Goals on the promotion of efficiency and RES.²²¹ Meanwhile, the question is where the line lies between duty and responsibility with regard to responsible energy consumption (ethical consumption). The household consumers may endeavour to use energy efficiently to meet reasonable energy needs in a short term, but in the longer term the rebound effect may manifest in the forms of direct, indirect, and economic issues. Often, short-term gains from efficient use result in a "greater use of that same end-use more often or more intensely".²²² Because the interpretation of this threshold changes in accordance to technological development, financial situation, and social acceptance, the answer to that may be found in the data on the apprehension of energy service by household consumers and their perceived relationships with stakeholders.

In the legal context, these rights and obligations are used to identify injustices and possible forms of redress. The right as a legal category may have several features based on the purpose of granted right to be side-constrained or a right as the sum of objectives expressing the disperse interest of household consumers. Indeed, the objectives help explain the meaning of access as well as justify the suggested content of the right set within the categories of affordability, availability, vulnerability, minimum threshold echoing the household consumers' interest. When considering whether individuals have a moral right to access energy services, the focus should be on what the right to energy service means. The following work considers the possible content and specifications of the right to access energy services.

²²⁰ Karin Nyborg, *et al.*, *Social norms as solutions: Policies may influence behavioral large scale tipping*, *Science* Vol. 354 (2016): 42.

²²¹ Laurence L Delina, Benjamin K Sovacool, *Of temporality and plurality: an epistemic and governance agenda for accelerating just transitions for energy access and sustainable development*, *Current Opinion in Environmental Sustainability* 34 (2018): 2.

²²² Ines M.L. Azevedo, *Consumer End-Use Energy Efficiency and Rebound Effects*, *Annual Review Environment and Resources* Vol. 39 (2014): 397.

Talking about right should capture the underlying values and household consumers' interests related to energy service under one concept. Also, the formed modes of relationships translate into the rights v. duties thinking on the issue. If the right is legally recognised, the right holder may claim the protection of that right with respective legal consequences of responsibility on national governments to guarantee adequate enjoyment of energy service and capacity for redress.

4.1. STATUS OF RIGHT TO ENERGY SERVICES

The way the category of right is specified in legal regimes results in the how effective its implementation will be sustained. The affirmation of the right to a particular sphere results in a level of protection and the demands for realisation, but the general notion is that the recognition of the right ensures equality and non-discrimination between right holders to enjoy the granted protection. Because the status of the right has the same importance as the content of the right, due regards should be given to its status in the international, supranational, and national legal regimes. The status of the right implies the significance of the claim the individual can make against a national government, international institutions, entities, and other individuals. In fact, the significance of the claim *per se* is not the concern in access to energy service, but the capacity to effectively and efficiently exercise the right and realize different forms of redress, though the status of the right to a great extent determines the capacity of realization of the right.

The significance of energy service to human development does not require any deeper investigation because the contemporary services in education, health, work, housing, communication, transportation, and entertainment need energy services. The question is what the status of the right to energy service should be. If it is the right enshrined in the international law of human rights, it could be claimed by all individuals against national government in the absence of national recognition. Also, it encourages national recognition of right in a view of the top-down convergence of energy related rights. However, if for now the right to energy service is unjustifiable in the sphere of human rights on an international level, then the identification of the instances of national or supranational recognition would provide validation in states lacking legal recognition. This represents the bottom-up approach to the convergence of energy rights between national, supranational, and international legislation.

Due to the status of a right's significance for its realization, substantial advocacy devoted to an international recognition of the right to energy service is in the sphere of human rights. However, there is currently no clear specification of the right to access energy service in

international instruments on human rights.²²³ If the right is recognised as a human right, there is a much easier path to supranational and national recognition by leaning on the internationally recognised significance of a claim to human well-being. To a great extent states usually avoid supporting international recognition of a right to energy service. However, national legislation in many cases grants substantial protection of households.²²⁴ If the right is recognised in the international human rights framework, it is reasonable to appeal for the national and supranational recognition of the customized version under common value basis or universal recognition of human rights.²²⁵ Additionally, the benefit of the right to be recognized as a human right provides international attention²²⁶ and imposes a three-fold obligation on states.²²⁷ Also, human rights are aligned with the notion of basic needs, which makes them attractive from the social justice perspective to consider in terms of human right terms.²²⁸ Due to the strong international adherence to the human rights, from the doctrinal perspective it is promising to seek philosophical backing or doctrinal correlation of the right to access energy service with the human rights approach.

For the claim of specific interest to attain international recognition, it should specify the essential need for all humans regardless of social, political, or religious traditions. With respect to energy service, the claim can be made on national governments to ensure fair and sufficient access to energy service as a precondition intrinsically connected with human development. On that account one may rightly suggest that human development is intrinsically connected with human rights.²²⁹ Even though the significance of energy for human development is well known to the international community, legal recognition of the right to energy still lacks international political support. For instance, the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the International Covenant on Civil and Political Rights (ICCPR) do not contain any provision on energy access significance to human development with the exception of the leading document of ICESCR highlighting that the right to adequate housing requires access to energy for cooking, heating and lighting.²³⁰ It may be argued that the right to energy service is implicit in the ICESCR.²³¹ In any case, one of the exceptions to the common international view on energy is the international instrument on women rights that makes more specific reference to

²²³ Adrian J Bradbrook, Judith G. Gardam, *Placing access to energy services within a human rights framework*, Human rights quarterly 28(2) (2006): 400.

²²⁴ Clark A. Miller, Alastair Iles & Christopher F. Jones, *The Social Dimensions of Energy Transitions*, Science as Culture 22:2 (2013): 143.

²²⁵ Stephen R. Tully, *The Contribution of Human Rights to Universal Energy Access*, Northwestern Journal International Human Rights 4(3) (2006): 532.

²²⁶ Adrian J Bradbrook, Judith G. Gardam, *Placing access to energy services within a human rights framework*, Human rights quarterly 28(2) (2006): 407.

²²⁷ Adrian J Bradbrook, Judith G. Gardam, *Placing access to energy services within a human rights framework*, Human rights quarterly (28)2 (2006): 405.

²²⁸ Stephen R. Tully, *The Contribution of Human Rights to Universal Energy Access*, Northwestern Journal International Human Rights 4(3) (2006): 531.

²²⁹ Ashvini Ambihapahar, Access to energy: a human right?: 2. https://www.academia.edu/29424868/Access_to_Energy_A_Human_Right

²³⁰ CESCR General Comment No. 4: The Right to Adequate Housing (Art. 11 (1) of the Covenant) E/1992/23 (1991), Art. 8(b).

²³¹ Adrian J Bradbrook, Judith G. Gardam, *Placing access to energy services within a human rights framework*, Human rights quarterly (28)2 (2006): 400.

states' responsibility to ensure electricity supply.²³² Despite current non-recognition of right to energy service as a human right, introducing a human right approach to energy discourse puts pressure on national and international recognition of right to energy services.²³³

Although the international instruments are almost absent from the provision with reference to the right to energy service, it is reasonable to advocate for future recognition provided that a convincing philosophical foundation is suggested in energy discourse. The endeavour should be to unfold the relationship of energy service with the human functions of being and doing along with the adopted underlying values in energy. Accordingly, the energy services such as lighting, heating, cooling, and cooking juxtaposed with the good health, education, and security expose the strong relationship between the human needs. This linkage conceptualized under the framework of energy justice whereby distribution of justice on the accessibility of energy services sets the value of a justified distribution of lighting, cooking, heating, and other capabilities of living a healthy, educated, and secure life.

A similar link is in rights-talk where under the moral right to provide assistance to those in energy poverty correlates with recognition of human rights. In the case of electricity, the arguments were laid to consider the right to access electricity under three different philosophical grounds: Rawls modern contractual ethics,²³⁴ derivative rights from basic human rights, and a universal human right.²³⁵ Even though the suggested paths to the right to access electricity in the sphere of human rights is not comprehensive, they may be adapted for the right to access energy service with some alterations. The philosophical reasoning on the principles of justice emerging from common social agreements and energy service's significance to human well-being is still standing. The distinction rests in the objective to present justification for the recognition of the right to access energy service at any level of legislation that would foster a bottom-up or top-down convergence without exclusive furtherance of a human rights approach.

Modern contractual ethics argues for society to agree on the significance of energy service to the community ascribed as a social good and following the agreed-upon principles of justice that enables households to meet energy needs.²³⁶ The common agreement in and between societies as the means of recognition of the right to access energy service is not new, but agreement on the principles of justice may be a starting point in the chain of reasoning. If society agrees on the basic requirement of justice, then there is a chance for society to ask whether the existing access to energy service complies with those justice requirements. For instance, the

²³² *Convention on the Elimination of all forms of Discrimination against Women*, United Nations General Assembly (1979), Art. 14.

²³³ Adrian J Bradbrook, Judith G. Gardam, *Placing access to energy services within a human rights framework*, *Human rights quarterly* (28)2 (2006): 390.

²³⁴ Lars Löfquist, *Is there a universal human right to electricity?*, *The International Journal of Human Rights* 24(6) (2020): 715.

²³⁵ Lars Löfquist, *Is there a universal human right to electricity?*, *The International Journal of Human Rights* 24(6) (2020): 714.

²³⁶ John Rawls, *Justice as fairness: a restatement*, Ed. Erin Kelly. Cambridge & London: The Belknap Press of Harvard University Press, 2001.

difference principle ascribed to energy service translates into the assertion that of a household over-consumes it should assist under-consuming households. Hence, the articulation on the principles of justice that the society may reasonably agree to enables confirming the high legislative status of the respective right under the latter requirements in the national legal regime. Similar reasoning may be exercised in the supranational level based on common agreements between states on the shared values reflecting the explicit demands of justice realization at the supranational level.

This assertion leads to suitable philosophical assumptions regarding justice for the EU legal regime and tradition more than for the more common sphere of human rights. To infer human rights from the principles of justice is redundant due to the lack of any international sovereign power to adhere to these principles. This approach is more logical for the bottom-up path relying on national and supranational levels of legislation adhering to the common cherished values of freedom, equality, and dignity. The EU was built on the common agreement between member states to form a community of nations to cherish common values, principles, and rules for the benefit of all members of societies, which is a friendly setting for bottom-up path. Also, the energy service framed in the category of a service of general economic interest acquires strong support between states and the commission for the right to be the recognized and respected as a fundamental right in the EU.²³⁷ Indeed, the EU was established on founding treaties between states that adhere to the common tradition of the family of European nations and reflect the principles in modern contractual ethics. Likewise, the requirements of justice may be found in the EU's primary law on founding values and provisions in secondary legislation in the service of general economic interest that helps ascertain household consumers' level of access to energy service.

With regard to the top-down approach, the road to the international recognition of the right to access energy service leads to understanding the energy significance to the realization of recognized human rights. In such a case, the right to access energy service is derived from the basic right related to human survival.²³⁸ Provided that energy is not a basic human need *per se*, it is vital for other needs.²³⁹ In terms of human rights, the phrase 'right to energy or energy service' is a derivative right to socio-economic rights that may be extensively interpreted to divergent situations by interest groups. This is conditionally due to the non-binding nature of such international instruments and the lack of dedicated provisions on energy therein. Even though there is no international agreement that the right to energy service is a human right, the complementary significance to other human rights realization in social and economic spheres is

²³⁷ Charter of Fundamental Right of the European Union, Official Journal of the European Union 326 (2012), Art. 36.

²³⁸ Lars Löfqvist, *Is there a universal human right to electricity?*, The International Journal of Human Rights 24(6) (2020): 716.

²³⁹ Water, energy, health, agriculture and biodiversity: synthesis of the framework paper of the Working Group on WEHAB (2002): 7.

apparent. The question is left open as to whether the recognized basic needs may reasonably be fulfilled to an adequate level without energy service.

Thus, a strong doctrinal argument can be made that if the right to energy is a basic good, then energy service is upheld as a derivative right to basic goods.²⁴⁰ In this case, the assertion refers to household consumers' being entitled to basic goods that can only be guaranteed by "means of energy service"; "the derivative right to energy service" should then be acknowledged.²⁴¹ Additionally, the Brundland report reiterates the energy service's contribution to "adequate food, shelter, clothing, water, sanitation, medical care, schooling, and access to information".²⁴² It seems reasonable that the basic goods of health, security, and education forming human well-being conditions would not be obtained, provided a person lacks access to energy service. Stemming from that the right to energy service under basic right status should refer "to a sufficient, regular, reliable, efficient, safe, and affordable supply of (ideally clean and sustainable) energy".²⁴³

Lastly, the right to access energy service may be perceived as a universal human right, granting all individuals right to enjoy energy service. One of the most substantial developments in global energy concerns is the introduction of an obligation to protect human rights in the production and use of energy as a universal human right.²⁴⁴ Interpreting the right to energy service as a universal human right transfers from the consideration of rights that may be reasonably agreed to politically and implemented in practice into the moral sphere of rights that deserves appraisal and responsiveness with its origin in the idea of human dignity. Even though perceiving energy as a universal human right is infused with moral acknowledgement, this avenue for justification is problematic due to the states' limited available resources to satisfy the existing energy needs and a possible shift to the cheapest and dirtiest energy resources to solve the issue.²⁴⁵ Also, one may argue that the energy service may not be aligned with the good health that has universal importance to secure condition for the minimum level of human well-being.²⁴⁶ Having said that, the benefit of the framework rests in the fact that it encompasses energy and well-being under one holistic approach, urging logic based on a value chain and not just on fragmented pieces. Because the understanding of the object of concern alters in the process, the fragmentation institutes the conflicting paradigms hindering the ability to attain the preferred outcome.

²⁴⁰ Benjamin K. Sovacool, Roman V. Sidortsov, Benjamin R. Jones, *Energy security, equality, and justice*, (London and New York: Routledge, 2014): 46.

²⁴¹ Benjamin K. Sovacool, Roman V. Sidortsov, Benjamin R. Jones, *Energy security, equality, and justice*, (London and New York: Routledge, 2014) 46.

²⁴² Report of the World Commission on Environment and Development: Our Common Future, World Commission on Environment and Development (1987).

²⁴³ Adrian J Bradbrook, Judith G. Gardam, *Placing access to energy services within a human rights framework*, *Human rights quarterly* (28)2 (2006): 403.

²⁴⁴ Sovacool, B. & Michael H. Dworkin, *Energy justice: Conceptual insights and practical applications*, *Applied Energy* 142 (2015): 438.

²⁴⁵ Lars Löfquist, *Is there a universal human right to electricity?*, *The International Journal of Human Rights* 24(6) (2020): 719.

²⁴⁶ Lars Löfquist, *Is there a universal human right to electricity?*, *The International Journal of Human Rights* 24(6) (2020): 719.

As abovementioned, in an international setting the right to energy is being favoured by some human rights advocates who may be found in political agreements and declarations without a binding force to guarantee enjoyment of energy service by all. At the current stage of energy law development, the discourse on energy has focused on justification for the international recognition of the right to energy service through the human rights approach or provisions in legal instruments concerning energy. This reflects the possible avenues of doctrinal justification in human rights, customary international law,²⁴⁷ and political agreement in the emergence and recognition of individuals' rights in international settings. Because energy-related injustice requires international or at least regional decisions and solutions, recognition should be international in nature and effect.

For the individual to have a real and effective claim on national or supranational authorities, the existing international instruments on this matter need effective binding mechanisms for human rights protection. Likewise, a considerable difference exists between traditions and values in regions and countries of democratic and autocratic regimes, making it unlikely for the unified international value acceptance. The last argument in that regard stems from the dichotomy between developed and developing countries with different economic and technological development. In other words, due to the scarcity of financial and technical resources, developing countries cannot ensure the same level of well-being as the EU member states or OECD countries.

The most reasonable ground for the recognition of the right to access energy service is guided by the philosophical justification of modern contractual ethics. This is due to the contractual agreement forming the basis of cooperation between nations and shared values as justice requirements inherent to the European tradition. Hence, for the energy claim of EU household consumers to be effective, the right to access energy service should be attributed to the status of fundamental EU rights, fully reflecting the EU tradition and benefiting from the EU regime. The full force of the right to fundamental rights would be attained when the free-fold obligations (recognise, respect, and protect) are conferred on the states.

4.2. CONTENT OF RIGHT TO ENERGY SERVICES

When considering the demands that individuals can claim on each other, entities, governments, and institutions based on their recognised entitlements, there is a need to formalise the claim for the one to contain the criteria against which the realization may be ascertained. There

²⁴⁷ Adrian J Bradbrook, Judith G. Gardam, *Placing access to energy services within a human rights framework*, *Human rights quarterly* (28)2 (2006): 400.

are few possible ways to set the latter criteria, including experts' judgements built on value basis, the political process through the compromise of values, and household consumers' views reflecting personal interests by consciously or unconsciously mirroring particular values and experiences. Having said that, the following seeks to present a reasonable conception of the right to access energy service through normative requirements that built on the values set in the framework of energy justice. It must be recognized that the presented category of rights is underlined with the assumption social inputs are preferred in the construction of rights. Despite that, the benefit of such propositions lays in the systemic and value-validated structure assisting in considering energy distribution, supply, consumption, and benefit.

The acknowledged energy services' significance to human well-being and socio-economic development indicate that sufficient and equitable access to energy service is the objective of public interest in either state. The character of public interest in an effective claim to energy service signals the social nature of demand. Therefore, when the claim formalizes into rights-talk, it preserves its social character. On that note, the latter right is considered a social right with the associated values of freedom, equality, and dignity. Despite the strange alignment of freedom as a liberal idea with social rights, the freedom in access to energy service limits public intervention in household consumers' right to access energy service by freely choosing the energy source, supplier, forms of microgeneration, energy services, and consumption practices. This enables household consumers to freely choose the operation practise in managing energy needs and consumption as well as using individual measures to affect the affordability and availability of energy services. With respect to equality, the equality in energy service may be seek the assurance of uninterrupted accessibility to energy services for all under fair and equitable conditions (availability) while taking into account different needs and states (vulnerability). Meanwhile, dignity requires helping those in energy poverty. Consequently, the concept of rights should be considered in light of the attributed values of freedom, equality, and dignity manifesting in the energy policy objectives. Considering the scale of these issue, it is reasonable to apprehend the right in the legal realm as the effective exercise of household consumers' right to access socially adequate energy services, accounting for personal circumstances in line with ethical consumption requirements.

4.2.1. Affordability V. Availability

The concepts of affordability and availability capture the intrinsic issues impeding household consumers from benefiting from socially prevalent energy services. These concepts are

transposed from the proposed energy decision-making principles: availability, affordability, due process, information, sustainability, intragenerational equity, intergenerational equity, and responsibility.²⁴⁸ The utility of the latter principles helps energy public policy decision makers to make decisions with a view of the broader concerns. However, the suggested concept of the right to access energy service employs availability and affordability for different purposes that specify the demands on the process; these complement each other and should be pursued in coordination. Here the affordability attributed to economic conditions on the access to energy service,²⁴⁹ and the availability refers to quality in supply, continuity in supply, and sufficiency of energy service. In aggregation, they capture the economic, social, regulatory, and to some extent technical conditions regarding household consumers' wish to access energy service.

Any proposed conceptual idea draws upon the context and purpose of the one, and the construction of right to access energy services incline to the similar parameters. In this vein, the context of the process to be formalized is created in deliberation of human well-being as a guide for systemic investigation on what inputs are significant and how greatly. Therefore, thinking of energy services in terms of well-being urges us to consider the stages of access and their interrelations under the intrinsic conditions of the quality of supply, continuity of supply, and sufficiency of energy services. While some of this is contained within the specific stage such as quality of supply's being the requirement for distribution, others like continuity of supply encompass several stages or sufficiency of energy services that focus on stages such as the benefit stage. Though some of underlying requirements overlap on continuity, the different perspectives to the issues help us elaborate on a more customised view to assess the conditions.

The right to access energy services through availability contains the normative basis for the assessment of the effectiveness of regulation on energy and institutional oversight. While availability implies the right on household consumer, it also may be applied to assess the energy systems ability "to guarantee sufficient energy resources when needed"²⁵⁰ or secure "access to clean and efficient energy sources".²⁵¹ Additionally, the availability may be viewed as a technical issue such as a lack of access to the energy grid, disconnection, or cumbersome administrative regulations access. The availability major concern may be to guarantee accessibility to energy infrastructure for poor or marginalized communities²⁵² or "sufficient energy resources of high

²⁴⁸ Benjamin K. Sovacool, Michael H. Dworkin, *Global energy justice: problems, principles, and practices* (Cambridge: Cambridge Law Press, 2014).

²⁴⁹ Raffaele Miniaci, Carlo Scarpa, Paola Valbonesi, *Energy affordability and the benefits system in Italy*, *Energy Policy* 75 (2014): 290.

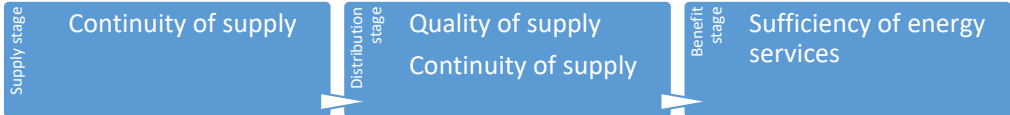
²⁵⁰ Benjamin K. Sovacool, Michael H. Dworkin, *Global energy justice: problems, principles, and practices* (Cambridge: Cambridge Law Press, 2014): 367.

²⁵¹ P. 13, Shonali Pachauri, Daniel Spreng, *Energy Use and Energy Access in Relation to Poverty*, *Economic and political weekly* · January 2003, CEPE Working Paper Nr. 25.

²⁵² Benjamin K. Sovacool, Michael H. Dworkin, *Energy justice: Conceptual insights and practical applications*, *Applied Energy* 142 (2015): 438.

quality”.²⁵³ There are a variety of interpretations on the meaning of availability depending on the context and the purpose; nevertheless, the reiterated conditions of sufficiency and accessibility quite accurately reveal the core demands for availability. Because the term of access is used to define the process, it is more suitable to employ sufficiency as the underlying term in examining the availability to measure the level and forms of energy services, whereas continuity ascertains the stability in supply. (Figure 10)

Figure 9. Availability anatomy²⁵⁴



The demand for sufficiency of energy services is fuelled by demand for the personal judgement of sufficiency, or whether the household consumer is able to enjoy the benefits of energy in accordance with its personal needs. Given the fact that the quantitative capture of the personal biases to benchmark the sufficiency is a fruitless endeavour, benchmarking the availability of access to energy services may be approached by examining EU legislative measures and incidents. The exercise of assessment is conducted by judging whether the household consumer could without any unreasonable hindrances realize the preferred level and forms of energy services. Here the rationale is that the household consumers should be able to enjoy energy services that it finds in need of while rejecting the idea of universal needs as lacking accuracy due to the constant emergence of new forms of energy services and changing lifestyles that guide the preferences of energy services. Additionally, not all energy services can be quantified. For example, heating may be measured by indoor temperature, but cooking and cleaning accompanied by the human action lack a quantifiable result. Hence, the consistent assessment of the enjoyment of energy services at home is quite challenging.

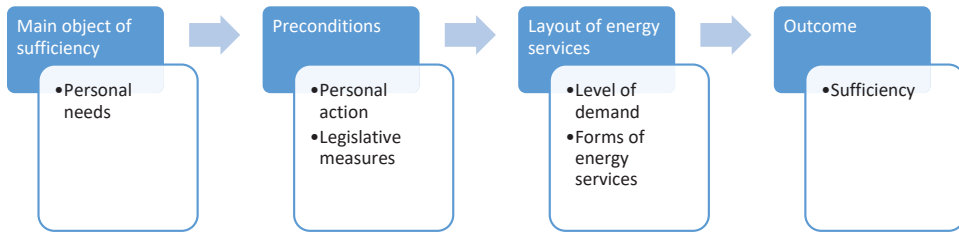
Adherence to the examination of preconditions for sufficiency does not result in the demand to sustain the preferred consumption practices and forms. Policies should favour the provision that empowers household consumers to use their freedom in energy for their assumed well-being standard. Hence, sufficiency is the objective of energy policy to be realized by personal action in the consumption and benefit stages and legislative measures in the distribution and supply stages. Respectively, the adherence to the consumption modes and types underpinned by individual subjective well-being closely correlates with the formed individual needs for energy

²⁵³ Benjamin K. Sovacool, Michael H. Dworkin, *Global energy justice: problems, principles, and practices* (Cambridge: Cambridge Law Press, 2014): 367.

²⁵⁴ Made by Author of this dissertation

services, where the sufficiency of the latter may be actualized when the continuity through the distribution stage is sustained and the supplier follows on its obligations. (Figure 11)

Figure 10. Sufficiency of energy services in availability²⁵⁵



Whereas the logical link exists between the stages and how incidents in the previous stage affect the next one, the judgement on sufficiency should take into consideration formal and informal aspects rooted in the insufficiency of energy services. Provided that the conditions are set that the household consumers could actually opt for verified technological solutions and schemes without limitations and restraints, the sufficiency of energy services may be implied whereby one may exercise freedom in choosing between available options, adapting practices and enjoying energy services as necessary. The assessment of sufficiency against the preconditions for the enjoyment of energy services is more useful than the search for and deliberation of universal needs, which are permanently changing and diverge person to person.

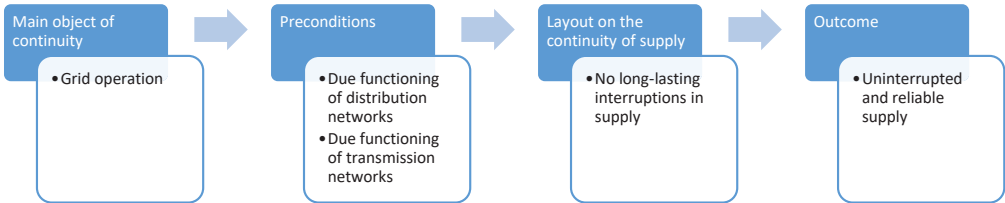
The conditions of availability may be grouped into the formal and informal in the assessment of the household consumers' capacity to access the energy service. The formal criteria refer to the conditions within close reach of regulations to be altered, maintained, ceased, or supplemented. Indeed, these conditions represent the structural issues in access to energy service to be appertained to the implementation of smart metering, RES, and microgeneration as well as regulatory hindrances related to the too-heavy, vague, or lack of regulation. Considerably, the principle of availability requires favourable public conditions sustained through policy and regulation that ensure reliable supply with regard to energy system functioning, provision of suppliers' obligation and supplier of last-resort implementation. With respect to the claim on the household consumers for clean energy, 'availability' refers to the one legally designated for acquiring electricity from RES and participating in any form of microgeneration schemes.

However, informal aspects of availability of energy service focus on inefficient consumption, lack of access to information, and participation in decision-making, which are experienced to the greatest extent in the supply and consumption stages. The reduction of energy consumption employing efficiency solutions is the centre of attention when the evaluation of

²⁵⁵ Made by author of this dissertation.

informal inputs in the availability of energy service is performed. Therefore, policies on seeking energy to increase the availability of energy service should to a great extent focused on the efficiency of energy end-use. Similarly, the end-use energy efficiency policies increase the reduction of energy consumption, management of CO2 emissions, and minimisation of grid investments and energy imports.²⁵⁶ The efficient consumption is linked with energy security as a policy concern and ethical consumption as the responsibility of the household consumer, that efficiency may have rebound effects when the saved energy may prompt even more consumption.²⁵⁷ Although inefficient consumption should be dealt with by introducing easily available options of switching appliances, the access to information on behaviour changes in energy consumption that improve the environment and lower energy bills should be widely available. (Figure 12)

Figure 11. Continuity of supply in the context of availability²⁵⁸



The continuity of supply under the concept of availability refers to an uninterrupted and reliable supply. At the current stage of energy system development, the demand of continuity may be claimed by the household consumers from a state due to the scarce alternatives for the public grid. Hence, from the well-being perspective the continuity of supply reflects the stable functioning of distribution and transmission systems, which may be reasonably translated into claims for stability in supply as socially understood in contemplating the underpinning conditions. Success in such operations determines the gratification of social and domestic needs. Provided that continuity is not guaranteed on a constant basis, the long-lasting interruptions may jeopardize the quality of life and in extreme cases may result in household consumer deprivation. Here, emphasis may be put on the duration of interruption in supply that makes the distinction for the failure to be attributed as a quality of supply issue or as the reliability of the grid. Therefore, the extra requirement needs to be integrated in the availability concept that assesses the follow-up of standardised characteristics of supply. Even though the nature of the issue is quite technical and hardly identifiable by household consumer, interruption of supply may hamper the enjoyment of energy services or damage

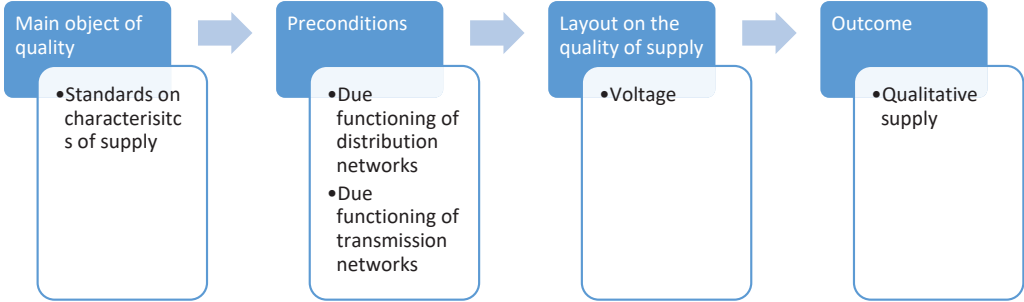
²⁵⁶ Ines M.L. Azevedo, *Consumer End-Use Energy Efficiency and Rebound Effects*, Annual Review Environment and Resources Vol. 39 (2014): 394.

²⁵⁷ Harty D. Saunders, *The Khazzoom-Brookes postulate and neoclassical growth*, The Energy Journal 13(4) (1992): 135.

²⁵⁸ Made by author of this dissertation

appliances, so the quality supply should be incorporated in the overall examination. The quality is not the constant flow of electricity through the grid until the premises; it concerns the lack of voltage fluctuations and compliance to other voltage parameters in line with LST EN 50160:2010. (Figure 13)

Figure 12. *Quality of supply in availability*²⁵⁹



This means the incidents on energy services in the context of well-being mould the issues to social demands for sufficiency of energy services and continuity and quality of supply. The latter demands linking into the coherent concept with regard to the common consideration on the how to assess the conditions of the provision of energy services when affordability and vulnerability are not an issue. Indeed, the availability may be seen as the precondition for the exercise of freedom by the household consumers with respect to the obtainment of electricity from any source accessible, choice of consumption, and forms of energy services. This is in contrast to the financial ability to acquire electricity concerning the issue of affordability, despite that both share the urge to know about personal energy needs. If the social concept is suggested, one must incorporate the purpose of process beyond the mere obtainment of an object. While this alters the meaning of an object into a necessity from being a good into a supply, it also forces us to contemplate on the cause and outcome interrelation from the supply until the capabilities include being able ignore small interruptions in inputs in the process. Additionally, approaching the process from the outcome considerably aids in explaining why household consumers tend to increase energy services with a more intensive exploitation of appliances.

In parallel with availability's being reflected by such incidents in personal and public spheres, the concept of affordability, i.e. supply price, income, energy needs, and efficiency, likewise influence individual circumstances. The literature on affordability of energy concerns the supply stage, where electricity is considered as a good. However, broadening the meaning of affordability by incorporating the context of human well-being for the purpose of energy services versus the electricity supply leads to many complementary points to evaluate. For

²⁵⁹ Made by author of this dissertation

instance, if a household consumer has a claim for affordable energy service, then the question is which energy service. Whereas the energy services are used by employing appliances, this results in a possible assertion that a certain capacity is needed for the electricity appliances, such as a personal computer for education. PCs were once a luxury, but COVID-19 has made distance learning a true need for many.

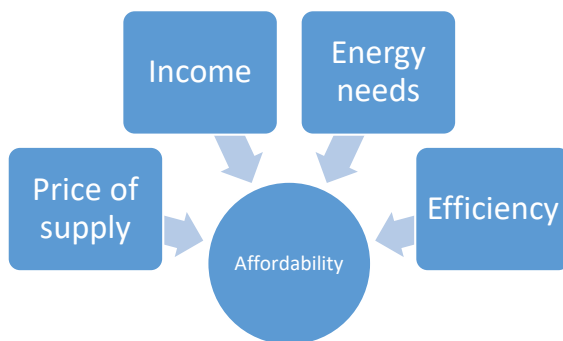
Therefore, the affordability of energy service in its specificity prompts to elaborate wider and conflicting concerns stepping over the supply stage into the consumption and benefit stages. Unaffordability is "functionally the same as the lack of access to reliable energy service".²⁶⁰ Although affordability and availability are closely connected in investigating the process, they employ different ideas and issues. In comparison to availability, affordability is more concerned with accurate data on household consumers' financial situation and less with regulatory issues and relates to equality and equity regarding access and a valid claim for support. Meanwhile, availability underlined with the freedom to realize the personal needs emphasizes the preconditions in the process.

Affordability in the discourse on energy deprivation related to internal households' conditions has a heterogeneous nature measured in the income/energy expenses proportion, energy needs, and technical capacity of households to meet energy needs. The energy needs to be understood here as a basic need in contrast to personal needs in availability without specifying volume. In fact, the volume may be high and still be ascribed as a basic need when there are structural factors locking in the households' consumption patterns, e.g. practices, volumes. This may be the result of long-term choices or the chain of choices resulting in the blocking out of options for less consumption.²⁶¹ Hence, a high consumption of energy due to inefficient appliances and infrastructure falls within the needs category. Nevertheless, affordability is not only about internal conditions experienced by households, but is also considerably affected by the external input of the price of supply. (Figure 14)

²⁶⁰ Benjamin K. Sovacool, *Fuel poverty, affordability, and energy justice in England: Policy insights from the Warm Front Program*, *Proceeding of the ICE - Energy* 93 (2015): 362.

²⁶¹ Tim J. Chatterton, *et al.*, *Mapping household direct energy consumption in the United Kingdom to provide a new perspective on energy justice*, *Energy Research & Social Science* 18 (2016): 77.

Figure 13. *Affordability anatomy*²⁶²



The energy price is external to the internal households' condition of income and domestic energy efficiency solutions. The price of supply usually attains the most attention in energy discourse in the view of the economic assessment of the level and trend of the price without social assessment of the values of equality and equity. Although economic forecasts on the price of supply are valuable in energy transition, the social perspective on energy price also contributes to the assessment of affordability. One may argue that the right price should be the competitive price in the market, so households should not pay full costs in cases of disproportionate expenditure of income on energy.²⁶³ The 'competitive price' is quite the vague term; it does not mean that it should only be determined by the market. On the contrary, the price of supply may be set by a different mechanism such as market, public intervention, and self-generation. Public intervention through a social welfare system, subsidies, benefits, and prices strongly affected by regulations and policies may have positive results on affordability. This mechanism garners much support for a stronger regulation from energy experts because the liberalization, privatization, and competition adversely effect households.²⁶⁴ From the social view, an affordable price should correspond to personal circumstances of energy needs and burdens on the budget without strong adherence to the market.

Affordability may be pursued in the price setting under market conditions or public intervention that enable households to acquire needed levels and forms of energy service to sustain their well-being. The self-generation option is currently not widespread among households due to the high upfront investment, rentability, construction rules, and low level of social acceptability. Which mechanism to choose depends on the possible impact on the households. Here, it must be noted that affordability may make references to the price of supply in the context of transaction and to the energy service in the context of how households perceive affordability. In the discourse

²⁶² Made by Author of this dissertation

²⁶³ Benjamin K. Sovacool, *Fuel poverty, affordability, and energy justice in England: Policy insights from the Warm Front Program*, Proceeding of the ICE - Energy 93 (2015): 370.

²⁶⁴ Stefan Bouzarovski, *Energy Poverty. (Dis)Assembling Europe's Infrastructural Divide* (Switzerland: Palgrave Macmillan, 2018): 110.

on energy, the affordability of supply is assessed through a direct approach (the level of domestic energy services achieved versus a pre-defined standard), income/expenditure approach (household income and domestic energy expenditures),²⁶⁵ and consensual approach (a household's self-assessment of its living conditions).²⁶⁶ In fact, the expenditure approach varies, such as with a ratio with income measured after housing costs,²⁶⁷ a ratio with a dynamic threshold based on twice the median spending,²⁶⁸ and after fuel costs poverty.²⁶⁹ Affordability's multi-dimensional nature requires data on different approaches for a comprehensive view.²⁷⁰

The principle of affordability is often used in the energy poverty literature, though the definition varies. Despite that, the trend is for affordability to be the constituent element in energy poverty conceptualization. The discourse on energy poverty usually refers to affordability as a major concern determining energy deprivation. This is in line with the idea that affordable energy is a basic human entitlement and the lack of it results in energy poverty.²⁷¹ Affordability is apprehended within stable and equitable prices, where 'stable' refers to minimum volatility and 'equitable' means no more than a particular percentage of income spent on energy service.²⁷² This approach to affordability measurement is based on energy spending as a budget share.²⁷³

Other options to measure affordability are based on residual income,²⁷⁴ which has advantages due to identifying the causes of energy poverty stemming from income poverty, over-consumption, or under-consumption and assessing the required financial support through the poverty gap indices.²⁷⁵ Also, affordability may be measured as the energy affordability gap from an actual home energy bill modelled in a specific context deducted the affordable energy bills, i.e. a set percentage value of income.²⁷⁶ Against this background the approaches to the affordability measurement may be grouped in a "normative" ratio between energy expenditure and overall expenditure; a "positive," the median value of the share of energy expenditure for the households in a state of relative poverty," and standard approaches, e.g. a general threshold.²⁷⁷ Overall, the

²⁶⁵ Sergio Tirado Herrero, *Energy poverty indicators: A critical review of methods*, Indoor and Built Environment 26(7) (2017): 1019.

²⁶⁶ Sergio Tirado Herrero, *Energy poverty indicators: A critical review of methods*, Indoor and Built Environment 26(7) (2017): 1020.

²⁶⁷ John Hills, *Fuel poverty: the problem and its measurement*. (CASE report 69, Department for Energy and Climate Change, London, UK 2011): 110.

²⁶⁸ John Hills, *Fuel poverty: the problem and its measurement*. (CASE report 69, Department for Energy and Climate Change, London, UK 2011): 113.

²⁶⁹ John Hills, *Fuel poverty: the problem and its measurement*. (CASE report 69, Department for Energy and Climate Change, London, UK 2011): 120.

²⁷⁰ Harriet Thomson, Stefan Bouzarovski, Carolyn Snell, *Rethinking the measurement of energy poverty in Europe: A critical analysis of indicators and data*, Indoor and Built Environment 26(7) (2017): 896.

²⁷¹ Sian Jones, *Social causes and consequences of energy poverty*, In: Katalina Csiba ed. *Energy poverty handbook*, 2016: 35.

²⁷² Benjamin K. Sovacool, Michael H. Dworkin, *Global energy justice: problems, principles, and practices* (Cambridge: Cambridge Law Press, 2014): 367.

²⁷³ Raffaele Miniaci, Carlo Scarpa, Paola Valbonesi, *Energy affordability and the benefits system in Italy*, Energy Policy 75 (2014): 290.

²⁷⁴ Raffaele Miniaci, Carlo Scarpa, Paola Valbonesi, *Energy affordability and the benefits system in Italy*, Energy Policy 75 (2014): 291.

²⁷⁵ Raffaele Miniaci, Carlo Scarpa, Paola Valbonesi, *Energy affordability and the benefits system in Italy*, Energy Policy 75 (2014): 291.

²⁷⁶ John Hills, *Fuel poverty: the problem and its measurement*. (CASE report 69, Department for Energy and Climate Change, London, UK 2011): 118.

²⁷⁷ Raffaele Miniaci, Carlo Scarpa, Paola Valbonesi, *Energy affordability and the benefits system in Italy*, Energy Policy 75 (2014): 292.

affordability indicators should incorporate the income and minimum standard of well-being and consider under-spending as a cause of energy deprivation.²⁷⁸

Affordability of energy service thus concerns underlying conditions of supply price, expenditure on energy, and efficiency measures. The supply price means the final cost of the energy supply to household. The proportion of income spent on energy varies; well-off households with the same proportion of income on the energy may see different effects on their residual income. On that account the establishment of a maximum threshold of expenditure on electricity supply is required to avoid inaccurate assessment of affordability. Meanwhile, the minimum threshold should be set with a ratio of income spent on energy measured after housing costs or overall income.²⁷⁹ Lastly, efficiency should be the input in principle of affordability to indicate the high or low consumption volumes of energy by household. The efficiency measurement shows the household's capacity to convert energy into useful energy by the ratio of energy consumed and the benefits of energy service received, such as lighting, heating, cooling, and the use of other essential appliances.

The issue of affordability emerges in the different context of energy poverty and right to access energy service. The concept of being a right encompasses the much broader concern of households' under-consuming over over-consuming. In contrast, energy poverty focuses on the search for the reasonable threshold to identify the energy-deprived households. However, the following conceptualization of rights comprises the minimum threshold requirement of access to energy service to sustain minimum well-being.

4.2.2. Minimum Threshold

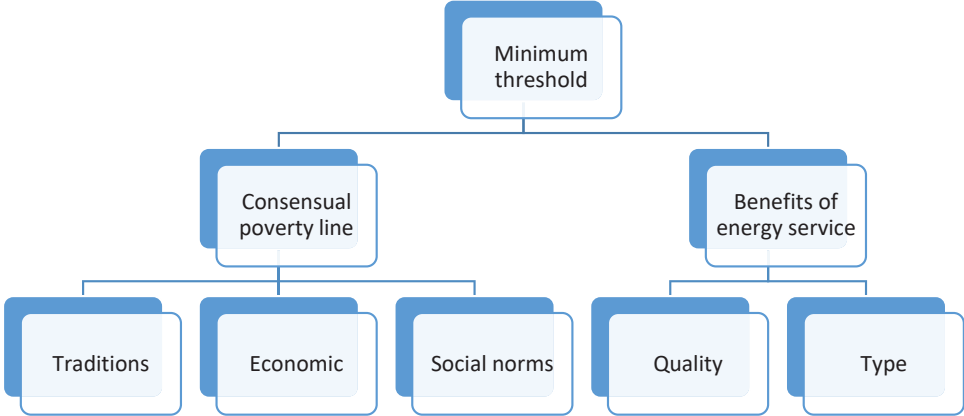
A minimum threshold of energy service as a human right is required for the recognition of the need to establish the guarantee of minimum access to energy service for households. The aim of such a minimum threshold is to justify the establishment of the threshold under which households are unable to live a decent life. The two aspects are important here, the benchmark of a decent life related to energy and the necessities required for the sustainment of a decent life. Even though the notion of a decent life is quite vague, it provides social sensitivity and context adaptability to the argument as well as the need to be value driven. In other words, a decent life refers to households' well-being and development understood in line with the capabilities approach discussed above. The secondary capabilities or benefits of energy service manifest in the benefit stage, so the well-being and development are considered here more as the

²⁷⁸ Raffaele Miniaci, Carlo Scarpa, Paola Valbonesi, *Energy affordability and the benefits system in Italy*, Energy Policy 75 (2014): 299.

²⁷⁹ John Hills, *Fuel poverty: the problem and its measurement*. (CASE report 69, Department for Energy and Climate Change, London, UK 2011): 110.

prerequisites for opportunities to function rather than being the well-being and development standard. (Figure 15)

Figure 14. Minimum energy services²⁸⁰



The necessity for the benefits of adequate energy service enjoyment may be perceived as the electricity supplied or as the energy services produced by the electricity. However, the ground-up views on necessities related to energy are diverse and based on multi-dimensional reasonings.²⁸¹ The preferred version of benefits initially should comply with the understanding of the necessity, which is irreplaceable by other goods or services. This supplements the understanding of energy significance to human well-being, which is widely acknowledged with the idea that electricity supply and energy service in some instances may be substitutable and result in the same benefits being enjoyed by the households. For instance, the warm home may be sustained through the energy service of heating through the use of electricity such as solid and liquid fuels, whereas a lighted home may be sustained through electricity, not solid and liquid fuel, on the grounds it is unsafe. The concept of a minimum threshold argues in favour of different policy coordination in threshold situations. Also, it encompasses social and energy areas that let us look at the issues from different perspectives and propose social as well as energy solutions.

Indeed, the necessity reflects the needs in light of preserving the adequate enjoyment of a warm and lighted home, where failure of that may be considered as living in poverty. Here, the distinction between a low living standard and poverty should be made, where the social phenomenon of poverty exists only when the society is willing to fight the existing phenomenon

²⁸⁰ Made by author of this dissertation

²⁸¹ Gordon Walker, Neil Simcock, Rosie Day, *Necessary energy uses and a minimum standard of living in the United Kingdom: Energy justice or escalating expectations?*, Energy Research & Social Science 18 (2016): 136.

perceived as unacceptable.²⁸² Respectively, there is a distinction between needs related to minimum benefits recognised in legislation, the absence of such needs as poverty, and the wants attributed to low, medium, and luxury consumption. In that regard, the prevailing view is to centre on necessities rather than desires to attain a minimal standard.²⁸³ It should be acknowledged that there is not a specific number or ratio workable here despite the abovementioned attempts to determine basic energy needs under a watts-per-person ratio. Still, the underlying ideas may be presented to capture particularities on the inability to access adequate energy service.

The idea of minimum well-being underlining the category of a minimum threshold correlates with the concept of energy poverty. Energy poverty is a justice concern,²⁸⁴ the same as the minimum well-being requirement backed by social justice advocates such as Martha Nussbaum. The overlapping features of both concepts stem from the fact that energy deprivation produces poverty in many spheres of life, so justice requires ensuring access to energy service to satisfy the essentials needs of lighting, cooking, heating, cooling, and so on. In fact, minimum well-being is adjacent to the state of poverty, and thinking about poverty inevitably touches on the question of whether the minimum well-being is satisfied. The literature on poverty presents a need for society to determine the basic necessities of life,²⁸⁵ at which point necessary goods and activities common in society identified by experts and the public are chosen from the list.²⁸⁶ Other than the income threshold and budgetary standard approaches to poverty measurement, the subjective measures or ‘consensual poverty lines’ defined by society²⁸⁷ seem adequate to determine the energy needed to sustain a minimum threshold of well-being. However, the realization of this measurement is too cumbersome due to the need to survey all household consumers or ascribe oneself falsely to the group experiencing energy poverty.

Contemplation of energy poverty should consider the economic and social aspects of energy deprivation. The socio-economic nature of poverty in energy is recognized in much of the literature.²⁸⁸ Energy poverty does not always mean income poverty, even though in some instances they overlap.²⁸⁹ The identified social dimension in the issue of energy poverty appeals to social justice demands in ways similar to how the idea of a minimum threshold refers to justice in the access to energy service. Due to the latter’s similarities, the elaboration of suggested energy

²⁸² Robert Walker, *Consensual approaches to the definition of poverty: towards an alternative methodology*, Journal of Social Policy 16 (1987): 215.

²⁸³ Gordon Walker, Neil Simcock, Rosie Day, *Necessary energy uses and a minimum standard of living in the United Kingdom: Energy justice or escalating expectations?*, Energy Research & Social Science 18 (2016): 131.

²⁸⁴ Ürgé-Vorsatz/Metz 2009; Wang et al. 2010; Howden-Chapman et al. 2012; Bulkeley et al. 2014b.

²⁸⁵ Michael Tomlinson, et al., *Bare necessities: poverty and social exclusion in Northern Ireland*, (Democratic Dialogue, Belfast, 2003): 19.

²⁸⁶ David Gordon, Ruth Levitas, Christina Pantazis, Demi Patsios, Sarah Payne, Peter Townsend, *Poverty and Social Exclusion in Britain* (The Policy Press, Bristol, 2006): 72.

²⁸⁷ David Gordon, Ruth Levitas, Christina Pantazis, Demi Patsios, Sarah Payne, Peter Townsend, *Poverty and Social Exclusion in Britain*, (The Policy Press, Bristol, 2006): 73.

²⁸⁸ Jason Byrne, Chloe Portanger, *Climate Change, Energy Policy and Justice: A Systematic Review*, Analyse & Kritik 2 (2014): 330.

²⁸⁹ Sian Jones, *Social causes and consequences of energy poverty*, In: Katalina Csiba ed. *Energy poverty handbook*, 2016: 28.

poverty characteristics in the literature and policy documents contributes to the appropriate conceptualization of a right to a minimum well-being as the demand of social justice.

The unifying ground of energy poverty and the introduced category of a minimum threshold embodies a diverse scope and purpose. The idea of a minimum threshold constitutes an element within the concept of rights concerning the minimum benefits of energy service, while energy poverty is a much broader and distinct category with its own constituent elements of income, prices, efficiency,²⁹⁰ and specific needs.²⁹¹ The purpose of a minimum threshold is to emphasize social justice concerns on the grounds of dignity to guarantee a social minimum determined by the society in question, whereas energy poverty addresses the measurement of specific internal and external conditions of the households under experts' specified criteria.

The term of energy poverty is not clear and may not be apprehended in the first instance. The suggested definitions of energy poverty make references to "a condition where a household is unable to access energy services in the home to a socially and materially acceptable level",²⁹² "an inability to attain sufficient levels of 'essential' energy services,"²⁹³ as "the inability to access a level of domestic energy services that would allow a household to participate in the customs and practices that define membership of society,"²⁹⁴ or as "a particular kind of techno-social assemblage, made up of an array of networked actors and materialities' and that 'a focus on the networked nature of energy poverty . . . can help to highlight its historical foundations and multidimensional character'".²⁹⁵ The literature identifies the condition or inability to meet energy needs that the society considers as basic, which reflects the nature of energy poverty. It is understood as social state of being subject to tradition and cultural and social norms. Therefore, the assessment of energy poverty should arise from the bottom up to capture the experiences of energy poverty that reveal the significance of social relations and stability of households' income.²⁹⁶ This is a challenging task also because it is experienced in a private space; it also changes over time and by place.²⁹⁷ Overall, the identified social nature of energy poverty echoes the social justice requirement of the guarantee of meeting basic energy needs.

As far as the EU energy policy is concerned, the concept of a minimum threshold does not fully align with the concept of energy poverty. In the EU there is no consensus on a

²⁹⁰ John Hills, *Fuel poverty: the problem and its measurement*. (CASE report 69, Department for Energy and Climate Change, London, UK 2011): 36.

²⁹¹ Stefan Bouzarovski, *Energy poverty in the European Union: landscapes of vulnerability*, WIREs Energy Environment 3 (2014).

²⁹² Stefan Bouzarovski, Saska Petrova, *The EU energy poverty and vulnerability agenda: An emergent domain of transnational action*, in Tosun J., Biesenbender S., Schulze K. eds, *Energy Policy Making in the EU: Building the Agenda*. (Berlin: Springer 2015): 129.

²⁹³ Neil Simcock, Gordon Walker, Rosie Day, *Fuel poverty in the UK: beyond heating?*, People, Place and Policy 10/1 (2016): 26.

²⁹⁴ Stefan Bouzarovski, *Social justice and climate change: Addressing energy poverty at the European scale*, (Brussels: Spring Alliance, 2014): 2.

²⁹⁵ Conor Harrison, Jeff Popke, "Because you got to have heat": the networked assemblage of energy poverty in Eastern North Carolina", *Annals of the Association of American Geographers* 101(4) (2011): 950.

²⁹⁶ Lucie Middlemiss, Ross Gillard, *Fuel poverty from the bottom-up: Characterising household energy vulnerability through the lived experience of the fuel poor*, *Energy Research & Social Science* 6 (2015): 153.

²⁹⁷ Harriet Thomson, Carolyn Snell, "Definitions and indicators of energy poverty across the EU", in: Katalina Csiba ed. *Energy poverty handbook*, 2016: 103.

common definition of energy poverty, despite the articulation of the phenomenon's intrinsic features now translated into policy objectives. Respectively, the EU objective on access to energy requires ensuring the well-being of customers by providing affordable, secure, and safe energy services, but not to reduce consumption and energy service costs *per se*.²⁹⁸ On that account, the commission proposed several solutions for the definition of household consumers troubled with energy bills. While one option assesses the proportion that household consumers spend above the predetermined threshold of expenses for energy services, another emphasizes household consumers' having payment difficulties with energy bills.²⁹⁹ The issue of energy poverty in economic thinking regarding the energy supply stage as a good acquired in the transaction emphasizes the energy price burden on the household consumers' finances. Considerable emphasis is put on affordability in EU legislation that specifies possible elements for the measurement of energy poverty related to "low income, high energy expenditure, and poor energy efficiency".³⁰⁰ The latter characteristics of energy poverty adhere more to the principle of affordability in the concept of right than to the category of a minimum threshold, except for the well-being requirement.

The legislation on energy poverty is underpinned by a number of suggestions in the literature on energy policies and related issues. Because EU legislation defines energy poverty by affordability criteria, the different concerns presented in the literature remain unformalized so far despite their coherence. As one study put it, energy poverty is determined by economic issues related to fuel affordability as well as being substantially attributed to the quality and other aspects of energy service.³⁰¹ The same is true with a minimum threshold requirement to address household consumers' access to reliable, safe, and high-quality energy service. However, the literature associates energy poverty primarily with affordability issues. For example, the vulnerable consumer working group advocates for a general definition of energy poverty that takes the simple approach of affordability³⁰² (low-income, unable to afford, adequate)³⁰³ and the need to be flexible.³⁰⁴ These criteria for energy poverty provide a foundation for the formalisation of the notion of basic energy needs.

The literature and EU legislation on energy poverty accord insights that may be used in the examination of household consumers' ability to access energy service. While the access to energy service is much broader concept, the energy poverty may be ascribed as related

²⁹⁸ Stefan Bouzarovski, *Social justice and climate change: Addressing energy poverty at the European scale*, (Brussels: Spring Alliance, 2014): 3.

²⁹⁹ Commission staff working paper on energy policy for consumer, Staff working document SEC (2010)1407: 10.

³⁰⁰ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), recital 41.

³⁰¹ Stefan Bouzarovski, *Energy poverty in the European Union: landscapes of vulnerability*, WIREs Energy Environ 3 (2014): 278.

³⁰² Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), recital 40.

³⁰³ Working Paper on Energy Poverty, Vulnerable Consumer Working Group (2016): 10

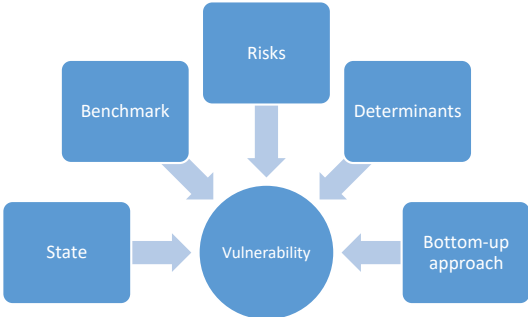
³⁰⁴ Working Paper on Energy Poverty, Vulnerable Consumer Working Group (2016): 10.

characteristic of household consumers in the access to energy service. For this reason, the definitions of energy poverty could be reset if the concept of a right to access energy service is understood. For instance, the outcome of energy poverty is socially related to an inability to enjoy the benefits of energy service, resulting in emerging hindrances to living a decent life. Accordingly, the necessity of a minimum threshold access to energy service may be justified as enabling individuals to pursue their life plan on a fair footing among members of society.

4.3.3. Vulnerability

The last parameter in the investigation of household consumers’ capacity to use a precondition in accessing energy service is captured under the category of vulnerability. In general, vulnerability results from the input of "life’s circumstances, social circumstances, availability of infrastructure, and the political climate".³⁰⁵ This distinction between the types of risks defines the layers of political, technical, social, and economic aspects of energy systems that affect household consumers' ability to enjoy the energy service *per se* and their benefits. Based on that, the six challenges are distinguished as a "quality of dwelling, energy costs and supply, stability of household income, tenancy relations, social relations within the household and outside, and ill health".³⁰⁶ This is not an end-list of challenges to energy vulnerability, but the representation of the web of causal effects intensifying vulnerability. Notwithstanding that the lack of availability of infrastructure and the adverse political climate enhance vulnerability, in essence they fall on all household consumers regardless of age, income, or social relations. Also, they are ascribed to the social circumstances of household consumers in their functioning. Consequently, vulnerability as a personal condition should be understood from the personal situation of a household consumer within its individual state and related social context. (Figure 16)

*Figure 15. Drivers of vulnerability*³⁰⁷



³⁰⁵ Lucie Middlemiss, et al., *Energy poverty and social relations: A capabilities approach*, Energy Research & Social Science 55 (2019): 227.
³⁰⁶ Lucie Middlemiss, Ross Gillard, *Fuel poverty from the bottom-up: Characterising household energy vulnerability through the lived experience of the fuel poor*, Energy Research & Social Science 6 (2015): 147.
³⁰⁷ Made by author of this dissertation

Due to the latter, the investigation of vulnerability inputs focuses on life's and social circumstances. The term 'vulnerability' has different meanings in a variety of individual and social contexts, though these have the common notion of being more sensitive and exposed to risks than others. The literature defines energy vulnerability "as the propensity of an individual to become incapable of securing a materially and socially needed level of energy service in the home".³⁰⁸ The emphasis is added on materially and socially accepted level corresponding to the consensual approach to energy poverty defined by persons in the specific context. Additionally, energy vulnerability may be defined as "a situation in which a person or household is unable to achieve sufficient access to affordable and reliable energy services, and as a consequence are in danger of harm to health and/or well-being".³⁰⁹ This approach is ascribed to the experts' judgement with the exposure to personal circumstances being the benchmark of vulnerability rather than the characteristics of vulnerability. The proposed definitions imply the causes of vulnerability are not as important in specifying the phenomenon as are the consequences in contemplation of energy vulnerability, though the second definition incorporates the state of health and the obscurement of well-being in general to be the criteria and not the risks. However, they both emphasize the personal state emerging from individual circumstances and are related to the social context of vulnerability.

Firstly, vulnerability is the characterizing feature of household consumers as individuals. It seems reasonable to suggest that identification of the intrinsic characteristics of household consumers contains the core causes of being vulnerable, namely, the associated inherent risks. The risks to energy vulnerability rest on "the likelihood of a household being subject to fuel poverty, the sensitivity of that household to fuel poverty, and the capacity that household has to adapt to changes in fuel poverty".³¹⁰ The best example of the risk associated with inherent condition related to the likelihood of energy poverty (unemployment), sensitivity of the household (age, health, family, and social status), and capacity (social relations and income). The individuals who are old or unhealthy are more likely to experience energy deprivation, but may not because some of them have sufficient personal financial resources or family support (capacity). Being ill or old does not inevitably mean not being able to pay energy bills and the choice to reduce energy consumption at the expense of health condition or refusing to light and warm the home.

³⁰⁸ P. 10 Stefan Bouzarovski & etc. From fuel poverty to energy vulnerability: The importance of services, needs and practices, SPRU Working Paper Series 25, University of Sussex Business School, 2014: 10

³⁰⁹ Rosie Day, Gordon Walker, "Household energy vulnerability as 'assemblage'": 15-29, In: Karen Bickerstaff, Gordon Walker, Harriet Bulkeley, eds. *Energy justice in a changing climate: social equity and low-carbon energy*. (London and New York: Zed Books, 2013).

³¹⁰ Lucie Middlemiss, Ross Gillard, *Fuel poverty from the bottom-up: Characterising household energy vulnerability through the lived experience of the fuel poor*, Energy Research & Social Science 6 (2015): 147.

In general, internal vulnerability notes how likely a household is to experience energy deprivation, how intensively and divergently it manifests, and households' agency to change the situation. It must be noted that the recognition of energy vulnerability from the household perspective may sometimes deviate from a formal understanding of energy vulnerability. This is also true in terms of perception of fuel poverty by the households.³¹¹ Knowing when and how households experience energy deprivation as well as what suitable measures would ensure a minimum level of access to energy service is much productive in understanding vulnerability in energy than expert judgements on how things are and how they ought to be. In this vein, having a more comprehensive view on energy vulnerability has substantial value to identify inputs undetected by outside perspectives.

The suggested inherent characteristics are general and formal; still, they are acknowledged in society as requiring moral sensitivity to the sphere of justice. The philosophical basis of vulnerability may be found in the recognition of justice, where the social groups interests' are discriminated against or disregarded in society for ethnic minority, gender, or status reasons. In a similar vein the category of vulnerability addresses the households' personal circumstances of health, unemployment, family status, and age that may be temporal or permanent conditions affecting the ability to meet energy needs. While some households have higher energy needs than other households, because of large families or illness, others have scarce financial resources to sustain above-average energy needs. This makes it difficult to conceptualize energy needs, which vary among individuals and households as well as what the yield of the same volume of energy can produce to different household. Consequently, vulnerability exposes the heterogeneity of characteristics of households that make unhealthy, old, unemployed, low-income, disabled, single parent, and multi-child families more exposed to energy poverty than other household consumers.

As mentioned, vulnerability may be perceived as an extreme likelihood of energy poverty resulting from the associated risks. One may consider that examination of energy vulnerability means the assessment of risks on the particular household consumer.³¹² This view implies that there are divergent risks affecting the degree of energy poverty in terms of poverty and life-threatening situations. The risks to consider relate to affordability, access and participation, socio-economic circumstances, and structural circumstances,³¹³ though the distinction of the degree of risks is made by the separation of internal and external conditions of energy vulnerability. This approach implies that the causes of vulnerability emerge from internal

³¹¹ Lucie Middlemiss, Ross Gillard, *Fuel poverty from the bottom-up: Characterising household energy vulnerability through the lived experience of the fuel poor*, Energy Research & Social Science 6 (2015): 148.

³¹² Harriet Thomson, Stefan Bouzarovski, Carolyn Snell, *Rethinking the measurement of energy poverty in Europe: A critical analysis of indicators and data*, Indoor and Built Environment 26(7) (2017): 880.

³¹³ Audrey Dobbins, Steve Pye, "Member State level regulation related to energy poverty and vulnerable consumers," in: Katalina Csiba ed. *Energy poverty handbook*, (2016): 134.

and external risks; one approach considers only the internal conditions, i.e. the category of vulnerability describing internal characteristics of household consumers that make them more likely to fall into energy poverty than others as well as the external risks to household consumers' capacity to acquire the needed level of energy. External conditions are related to price fluctuation, lack of access to energy related information, formal impediments, absence of real choice between suppliers, belonging to particular social group, and limited public support in emergency cases.

Subsidies are suggested when dealing with vulnerabilities and proper measures to address the issue.³¹⁴ Causes of such vulnerability must identify the risks to influence energy vulnerability. The latter manifests in the circumstances and processes hindering the household consumer to secure available and affordable energy contingent to the context.³¹⁵ It seems that the vulnerability concept aims to capture the main condition of vulnerability (formal threshold) with complementary ones (lack of affordability and availability) that affect well-being.

To a great extent, the category of vulnerability relates to the concept of energy poverty under the idea of sufficient level of energy service. The literature affirms them to be distinct concepts with respect to needing more support for vulnerable consumers in the mitigation and combating of energy poverty, although it reiterates the possibility for vulnerability to exaggerate energy poverty.³¹⁶ The task is to reveal the relation between vulnerability and energy poverty when seeking a reasonable basis to acknowledge the category of vulnerability under the demands of social justice. Therefore, the primary consideration is to distinguish and emphasize the common dual (social and energy) issues in the category of vulnerability and the concept of energy poverty.

Additionally, vulnerability increases the possibility of falling into energy poverty, magnify how energy poverty is experienced and hinders combatting energy poverty. They seek to define the benchmarks of basic energy needs regarding human well-being. To that end, the underlining ideas of a sufficient level of energy service are presented that make reference to the level of materially and socially reasonableness. Nevertheless, upholding a permanent threshold is problematic in light of energy vulnerability's being determined by a 'socio-spatial formation' where political, economic, organizational, place, and space components continually affect the household consumer situation.³¹⁷ Because energy poverty in itself is not an object of consideration here, other drivers are just mentioned without further elaboration on their significance to energy poverty.

³¹⁴ Audrey Dobbins, Steve Pye, "Member State level regulation related to energy poverty and vulnerable consumers," in: Katalina Csiba ed. *Energy poverty handbook*, (2016): 120.

³¹⁵ Rosie Day, Gordon Walker, "Household energy vulnerability as 'assemblage'," in: Karen Bickerstaff, Gordon Walker, Harriet Bulkeley, eds. *Energy justice in a changing climate: social equity and low-carbon energy*. (London and New York: Zed Books, 2013).

³¹⁶ Audrey Dobbins, Steve Pye, "Member State level regulation related to energy poverty and vulnerable consumers," in: Katalina Csiba ed. *Energy poverty handbook*, (2016): 121.

³¹⁷ Stefan Bouzarovski, *Energy Poverty (Dis)Assembling Europe's Infrastructural Divide*, (Switzerland: Palgrave Macmillan, 2018): 25.

V. EU LEGISLATION

5.1. THE RIGHT TO BE SUPPLIED IN THE EU

The following investigation focuses on the legal structure and mechanism the EU has established in seeking to guarantee the right to energy supply for the household. Accordingly, the investigation elaborates on the concept of a right to energy supply with contained elements, normative benchmarks, and proper tools. If households may not exercise the right to enjoy energy service at a socially acceptable level, households in energy poverty or even disconnection face misery, to say at least. Guaranteeing the right to be supplied is linked with the household's capacity to enjoy energy service at a decent level; however, legally it is limited to the guarantee of a reasonable supply in terms of quality, price, and continuity.

The following sections discuss the nature and function of the right to be supplied with electricity, i.e. the right to be supplied. They examine the elements of the right to access energy and its normative requirements. While the right to be supplied is the umbrella for implementing derivative or ancillary rights, the next section elaborates on the forms of ancillary rights and their corresponding functions. Later, the issue on the access to the adequate energy service will be examined under the concept of energy poverty with regard to what constitutes energy poverty and what measures are to be implemented. After the energy poverty sections, due consideration is given to the typology of households in light of the empowerment, protection, and support measures as the rationale for measures design and rules of implementation. This enables us to identify the characteristics of households and drivers of each category and elaborate on measures addressing the concerns of household groups.

Lastly, examination of the EU legal structures and concepts is performed to better understand their functioning in energy justice requirements. Examination of these categories confers an obligation on member states to ensure the enjoyment of universal service by household customer³¹⁸ and legal tools to fulfil their obligation under public intervention provisions.³¹⁹ The investigation pursued by the examination of the framework of service of general interest is a guarantee of universal service provision, on the one hand, and public intervention by member states as public service obligation (PSO) on the other.

The best-known idea about the EU that it is designed for establishing the functioning internal market to guarantee free trade between nations governed by market rules and principles

³¹⁸ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, *Official Journal of the European Union* 158 (2019), Art. 27(1).

³¹⁹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, *Official Journal of the European Union* 158 (2019), Art. 5.

in the processes of production and trade. This trend has involved the energy sector when the internal energy market directive was enacted to move from the monopoly regime into the market regime in energy. This aims to liberalize operations with decentralization, privatization, and diversification in the generation, distribution, and supply of energy. The liberalization is built on the assumption that a reasonable, cost-effective supply price would be ensured when actors in the energy chain act for their own benefit and make rationale choices in the market. Overall, the private initiative should "lower energy prices and guarantee supply, improved service quality, greater choice, and a choice that is adapted to meet the needs of consumers in general and of vulnerable consumers in particular".³²⁰

Nevertheless, it raises doubt about whether the profit-driven businesses of energy supply takes into account vulnerable households' specific needs without the measures of public intervention. Hence, the free market is not the cure for all pitfalls in well-being and in some cases may even exaggerate the exclusion or vulnerability of being less informed or having a lower income or special needs. One may even argue that the market-based regulation of the energy sector will not prevent deprivation considering that the situation involves liberalization, rebalancing, unbundling, privatization, and competition contributed to energy poverty.³²¹

One way or another, the liberalization of energy is gaining ground in the EU, affecting how the injustices in the energy system are understood. The context defines the issue. For instance, energy poverty may be put into context of personal circumstances, living conditions, prerequisites for development, or market externality. Energy poverty in EU legislation makes specific reference to the internal energy market,³²² so the EU perspective to energy poverty appears to be more economically oriented rather seeing it as a social issue manifesting in the supply stage. This affects the nature of the rights conferred on the households, the principles, indicators, and strategies to be applied to address the issue of energy poverty. When the issue is economic, the tools will be economic. Social issues such as personal circumstances and living conditions must be coordinated with social and economic policies to effectively combat the given issue.

The injustice of energy poverty is assumed to be due to supply inadequacy and is ascribed to the internal energy market sphere. Even though it is preliminary experienced in the consumption stage, it is best seen in the benefit stage where secondary capabilities are restricted. The supply stage functions on the bases of market rules within the framework of the internal market underlined by economic rationale with the reference to cost-benefit analysis, the champion

³²⁰ Opinion of the European Economic and Social Committee on 'Energy poverty in the context of liberalisation and the economic crisis', Official Journal of the European Union C 44/09 (2011), para. 5.1.

³²¹ Stefan Bouzarovski, *et al.*, *Multiple transformations: theorizing energy vulnerability as a socio-spatial phenomenon*, *Geografiska Annaler, Series B: Human Geography* 99(1) (2017): 36.

³²² Commission staff working paper an energy policy for consumer, Staff working document SEC (2010)1407: 10.

and virtue of low price, and the consideration of households as market actors making rational choices. These ideas are valid in the functioning of the internal energy market, providing easier understandable objectives and targets in the form of numbers to be compared, set, and achieved. However, focussing on numbers and targets may not achieve tangible results on the ground. Therefore, the research argues for a holistic approach consisting of supply, consumption, and benefit stages to present a comprehensive framework of the nature and drivers of and measures on energy deprivation.

Nevertheless, the focus in this section is not energy poverty *per se*, but the regulation of the electricity sector in the EU to correct injustices such as energy poverty. This can be done through rights-talk when the nature and function of rights are elaborated as the building blocks of legislation on energy and in particular households' access to energy. From the holistic view, the household access to energy consists of distribution, supply, consumption, and benefit stages. But with respect to rights-talk, it concerns making entitlements on household consumers' rights because the benefit is the outcome of the process, and the distribution is a precondition.

By the way of explanation, the supply stage consists of the right as an objective on price, security, and quality of supply and of the ancillary right as implementing tools. Concurrently, the consumption stage's right is an objective to enjoy sufficient energy services, while the latter ancillary rights perform the implementation function. Because the right as an objective for consumption is not enshrined in EU legislation, it is theorized and conceptualized in this work to be employed here as toll for comparison and examination of injustice in energy service. Nevertheless, the injustices in household access to energy in either stage should not be examined strictly under rights, but also by recognising and invoking the responsibilities on households to consume electricity efficiently and prudently.

Thinking about households' ability to acquire electricity and enjoy energy service in terms of their rights in social and economic areas enables us to understand the claims the right holder may make against energy injustice. This can be done by asking under what grounds the households can present the claim, but there is no straight-forward answer to this question. For the claim to be real and effective, the household should be able to make a claim in court if the household assumes that its rights are infringed. The identified right also forms the objective for the policy and measures design. With respect to EU law, the right has a direct effect when "it enables individuals to immediately invoke European law before courts, independent of whether national law test exist".³²³ Because the right to be supplied is enacted in the secondary legislation,

³²³ *Van Gend en Loos v. Netherlands Inland Revenue Administration*, European Court of Justice, (Case 26/62).

namely, its directive,³²⁴ this means the specified right has no direct effect. The exception to this is "when its provisions are unconditional and sufficiently clear and precise and when the EU country has not transposed the directive by the deadline".³²⁵ It must be noted that "it can only have direct vertical effect" by individual against Member State, but not Member State against individual.³²⁶ As those conditions are not met, the households may not directly invoke the prescribed right of supply before the EU and national courts.

The enshrined right to enjoy universal service only set the goals to be implemented in the national legislation. More specifically, it represents the group of objectives under one concept of right. Explicitly, it refers to the quality and price of supply, while implicitly to security of supply. Based on these elements of right, the following task is to disclose the meaning of quality and price.

The recognised right to be supplied with electricity deviates from the suggested right to access energy service in several ways. In comparison to how the right to access energy service is not recognised in EU legislation, the right to be supplied is enacted in the EU legislation. Furthermore, the right to be supplied within the market framework focuses on the price, quality, and continuity of supply. Meanwhile, the suggested right to access energy service concerns the households' ability to acquire and convert the energy into energy service uninterrupted, which meets the living standards accepted in society as decent. The object of the latter right is the guarantee of a basic need that may be referred to as the subsistence in the national context, and the former refers to the characteristics of a good. Lastly, the right of supply is designed for the supply stage, where the transaction between supplier and household is executed. The right to energy service concerns the consumption and benefit stages, where households may first experience the shortfalls in sufficient consumption and restrained benefits of a warm and lighted home, hot water, communication, and other domestic and social needs. Against this background, the following section examines the constituent elements of the right to be supplied with the view to unfold its relations with the energy poverty phenomenon and strategies for its mitigation.

Electricity recognised as a good in the EU should satisfy the set requirements of characterising attributes of a good such as price, quality, and continuity. The requirement basis determines the mechanism of market and public intervention to be applied, aiming to ensure the exercise of the right to be supplied. However, this would be fruitless without proper government legislation on quality standards as the responsibility of the trader and the designation of a supplier of last resort in case of supplier bankruptcy or a halt of business activities as well as an effective

³²⁴ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, *Official Journal of the European Union* 158 (2019), Art. 27.

³²⁵ Yvonne van Duyn v Home Office, *European Court of Justice*, (Case 41/74).

³²⁶ Criminal proceedings against Tullio Ratti, *European Court of Justice*, (Case 148/78).

out-of-court dispute settlement mechanism. The aim is to present the normative basis for the examination of current and future measures and legal mechanisms to judge the pertinence of the latter on the supply price and security of supply, the quality of supply such as voltage and frequency are left unexamined because the technical condition is specified in the standards for voltage characteristics of electricity supply. Thus, the elaboration of the right to be supplied is performed in light of the normative requirements of reasonableness, affordability, and availability to be applicable to the characterising attributes of a good.

The need to acquire energy for the household determines the concern in the distribution of energy in the EU. The concern is the affordability and availability of energy enabling the EU to avoid household energy deprivation. In general, the principle of affordability may refer to 'reasonable price' or 'cost-reflecting price' of electricity. The focus is on the price of supply, which inevitably leads to apprehension of a 'regulated price' and a 'market-based price'. While there is no specific definition of affordability in the EU legislation on energy, the affordability concern should be seen as an objective or evaluative criterion with the possibility for further adjustment within national, regional, and local contexts. Meanwhile, the availability of energy is more than just the security of supply associated with quality and safety requirements. Energy availability is intrinsically linked with affordability, where one is unable to acquire electricity without access to a reliable energy supply.

From the perspective of the household, the major concern electricity consumers encounter is fair access to energy service to counter any unequal distribution of energy supply to households. The inequality in access to energy manifests in the household's capacity to acquire the needed level of energy that is disproportionate to the disposable income or insufficient income in general to pay for that energy supply. Thus, the concept of equality laid on the similar requirements for the principle of affordability is joined by the claim on competent stakeholders to ensure the households capacity to pay for needed supply. In fact, energy inequality originates from different electricity consumers groups' needs, usage volumes, and divergent capacity to convert energy supply into energy service. While poor households use less energy than affluent households, financing of capacity mechanisms, new infrastructure, and promotion of renewable energy falls greatly on all electricity users without taking into account the causes of the needed investment and actual household situations. The identified inequalities in access to energy supply directs investigation to the current legal justification in EU legislation that underpins the requirement for the households to access energy supply following the concept of equality reflected in the principle of affordability.

5.1.1. Price of Supply

The category of price of supply transcends the EU legal system from the primary law until implementing legislation. Accordingly, the roots of the price of supply are deliberated with respect to the service of general economic interest, fundamental rights, and the right to universal service. The right to be supplied functions as an umbrella for the ancillary or derivative rights that are overviewed in due course. In the sections below, the normative basis for the price of supply is suggested under the benchmarks of reasonableness and affordability. In the end, the links between the regulatory regimes and normative requirements are unfolded.

For the most part, the supply price should follow the set criteria of efficient competition and energy system functioning to comply with EU law. But for the purpose of examination of injustices in energy supply in the EU, the supply price is the final end in the market that should be evaluated and one of the drivers of injustice in energy such as the energy poverty. Because the right to be supplied with electricity is granted under the IEM rules, the right is ascribed to the commodity sphere that results in how the supply price will be assessed.

In general, the supply price is the price of electricity sold to households. In fact, it is not the final price calculated into the bill for supply because there are other components aggregating the final energy cost. The widespread practices in the member states are to split the one within three components: "energy cost, grid costs and taxes, while further level of detail varies a lot".³²⁷ Nevertheless, here the supply price may refer to the final price for households as well as the price for electricity without network charges, levies, taxes, and other components. Which one of the references is used depends on the context. With respect to the affordability of supply price, the final price in the energy bill includes underlying factors such as income, needs, efficiency, and consumption practices. Also, when the type of supply price, e.g. fixed, variable, dynamic, is considered in light of the competition, the electricity price is reasonable.

The supply price as an economic variable in the EU may be formed through several sources such as competition in the market and public intervention. The competition output should be the reasonable supply price that the efficient market enables on a non-discriminative and transparent basis. If the energy market functions accordingly, then the reasonable supply price is set without additional government regulation. Meanwhile, public intervention in the price-setting of the supply in the IEM directive is attributed specifically to energy-poor and vulnerable household customers.³²⁸ For these groups of households the supply price deviates from the

³²⁷ ACER Market Monitoring Report 2018—Consumer Empowerment Volume (2019): 33.

³²⁸ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union L58 (2019), Art. 5(3).

effective competition sphere, where the price mechanism is public intervention under the following conditions: they "pursue a general economic interest and not go beyond what is necessary to achieve that general economic interest; be clearly defined, transparent, non-discriminatory and verifiable; guarantee equal access for Union electricity undertakings to customers; be limited in time and proportionate as regards their beneficiaries; not result in additional costs for market participants in a discriminatory way".³²⁹ In line with these requirements, the national regulatory authority can introduce special tariffs for vulnerable and energy-poor households for a limited duration to be shared among electricity end users.

The EU legislation on the internal electricity market provides several paths for energy-poor household protection that derogate from the general premise of market mechanisms in the supply of electricity. The member states may ensure energy-poor household protection with public intervention other than setting the price of supply³³⁰ or price setting under strict conditions laid in the legislation on internal electricity market.³³¹ If the member states decide to exercise public intervention on price setting for electricity supply, they should comply with general interest requirements and the principles of proportionality, follow PSO intrinsic principles, guarantee equal access, be time restricted, and not be discriminatory.³³²

In general, when the reasonableness of the supply price is considered, the method of cost benefits employed should justify the final price by calculating the intrinsic costs associated with the production, transmission, distribution, and supply of energy. In other words, the supply price should bear the reasonable costs in the energy chain with an efficient functioning of activities and effective competition in a non-discriminative manner. So, the supply price should comply with the reasonableness standard to be justified in the energy supply. From the household perspective, a reasonableness standard in the supply price is appropriate to the extent of choosing the supplier or energy source but fails to appreciate the households' capacity to pay for supply, in terms of low-incomes and high-costs, and convert it into energy service. The reasonableness should be altered with the affordability requirement of energy supply in the investigation of injustice in energy supply in the EU to the extent of low-income, high-cost situation complemented with the identification of special needs and possible inefficiency instances.

The EU's founding values of equity and dignity underlie the requirement for the affordability of energy supply due to electricity's being characterized as the social need. Some

³²⁹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, *Official Journal of the European Union* 158 (2019), Art. 5(4).

³³⁰ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, *Official Journal of the European Union* 158 (2019), Art. 5(2).

³³¹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, *Official Journal of the European Union* 158 (2019), Art. 5(3).

³³² Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, *Official Journal of the European Union* 158 (2019), Art. 5(4).

may even argue that affordable energy is more than the normative basis, but the right as "the basic human entitlement, where no person can be deprived of a minimum service".³³³ This suggestion echoes the literature on energy poverty where energy affordability is juxtaposed with the energy poverty phenomenon. Affordable energy is not just a socially valid idea, but indeed the benchmark in the bigger picture and not the end. We assume that affordability should be equipped with the meaningful criteria to be employed for the assessment of policy, so speaking of affordability would be socially acceptable and guide energy decisions.

The recognition of affordability as normative requirement for energy supply sets the complementary standard for reasonableness in view of the judging process of price formation, effect on households' disposable income, and over all on the deprivation of well-being. Even though the social principle of affordability lacks statistically based benchmarks in cases of self-assessment, it reflects households' capacity to acquire the needed volume of energy supply. The underlying elements for the affordability of the supply price may be acquired from the energy poverty indicators suggested by a low income and high expenditure of disposable income on energy.³³⁴ In the case of affordability of the supply price, the ratio of low income and high cost is the primary concern as the indicator of energy poverty by the EU Energy Poverty Observatory, which in some instances are seen to be one and the same phenomenon. However, the affordability is a normative concept to be applied to the examination of the phenomenon and not the phenomenon itself.

The price of supply as the element of the right to be supplied has a dual effect on the assessment of regulation. As the intrinsic element of right to be supplied, it is a variable that has normative implications for the right implementation. Accordingly, the judgement can be made as to whether the price is reasonable under current regulations and, if it is not, does not put so severe a burden on the households that it is understood to be an injustice. Looking at such injustice through the lens of affordability makes sense in terms of cost v. income, but how the bill on supply is composed must be examined. As mentioned, the supply price assessed alone (price per kwh) does not constitute affordability; the investigation and assessment of composition elements or inputs in its formation must justify the findings on affordability. For instance, if a person cannot pay the bills or the financial burden is overwhelming due to special needs related to disability, age, or family status, then the suggestion of affordability is valid. Otherwise, when the bill is boosted by wasteful or "luxury" consumption, or on the ignorance of efficiency that results in the

³³³ Sian Jones, "Social causes and consequences of energy poverty," in: Katalina Csiba ed. *Energy poverty handbook*, (2016): 35.

³³⁴ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, *Official Journal of the European Union* 158 (2019), Art. 29.

accumulation of bills that is hard to pay, the situation would not be labelled as an affordability concern from the social justice perspective.

One way or another, affordability would be quite a different injustice than energy poverty because energy poverty refers to households' actual inability to enjoy the adequate level of energy service and not its financial capacity to acquire the needed level of supply. The affordability of supply forms part of the concept of energy poverty as the root cause of the grievous living conditions of the energy poor and vulnerable. In sum, the injustices of an unaffordable price, namely, the bill on electricity supply, and the lack of energy service at home are related, whereas one of the drivers of energy poverty is the unaffordable supply price due to low incomes and high costs.

With respect to the approach to energy as a good or a basic need, the supply price may be assessed against the reasonableness or the affordability requirements aiming to judge it, though the supply price is an important element in the investigation of access to energy with different meanings as social and economic issues. Provided that energy is a basic need, then the supply price is ascribed to social issues judged by the affordability standard. Otherwise, when the energy is viewed as a good, then the supply price is viewed as an economic issue assessed by the reasonableness standard. It may be argued that the price of supply is what renders electricity to be perceived as a good, whereas if the supply is subsidized from the national budget such as are the police, primary education, and emergency medical assistance, then electricity would be stripped of one of the essential commodity attributes, namely, a price that is paid directly in exchange for a good.

Even though the requirements for price stem from different approaches, energy's being a good judged by a reasonable supply price is linked with energy's being the basic need for human functioning viewed from the affordability perspective. It may be said that affordability encompasses reasonableness within its judgement of the supply price. However, the right to be supplied with electricity is reasonable as an affordable price is part of the supply stage according to the EU legislation on the internal energy market. This thinking predetermines not only the principles under which the price is evaluated, but also the permissible measures to be applied to ensure that either of them would be attained. While the reasonable supply price should be sustained through empowerment measures, the affordable supply price is pursued by granting support to households.

But this line of reasoning has some inaccuracies in viewing the process holistically from the acquisition of energy until final benefits of secondary capabilities. The assessment of affordability is not in the supply stage but transcends all stages, which makes the process of division on specific operational grounds misleading. Indeed, the stipulation of unaffordable

supply bills rests on deliberation of consumption modes and types, specificity of households' situations, individual subjective well-being, supply pricing, availability of microgeneration, and stakeholder responsibilities. To reveal the social meaning of affordability, the process should be conceptualized under the households' experiences and understandings of the what, how, and why in access to energy services. Respectively, empirical research constructs the incidents into theory by conceptually presenting inputs into affordability, which has been refined.

The general rule stipulates that the supply price for households is freely set by the suppliers, i.e. the market-based supply price,³³⁵ and concurrently the household is empowered to freely choose suppliers. In theory, the supply price should affect the households' choice, but price is not so strong an argument as one might think when making the decision to enter into a supply agreement. Budget research reveals that a change in income has no correlation with the spending on energy.³³⁶ Thus, the burden of expenses on the income does not motivate households to change their consumption habits. Consequently, if the households were forced to use less energy by comprising their enjoyment of energy service under self-assessment approach, they would find themselves to be in energy poverty.

Households empowered with the ancillary rights to the right to be supplied, such as the right to choose a supplier, set a cornerstone for effective competition in terms of households' ability to switch suppliers anytime and without additional charge. This right reflects the rational choice theory thinking where buyers make decisions under the greatest benefit rationale. In this case, the presumption is that the households always seek the lowest price for the same or better conditions and quality of supply. The supplier may not be chosen under the rationale choice theory because the households are inert and habit restrained on electricity acquisition and usage practices. So even though the ancillary right to information on suppliers is prescribed as empowerment, usually the households stay with the same suppliers.

Based on the abovementioned significance of the way the electricity is perceived, the ancillary right has the same correlation with the status of electricity in the legislation as does the attributed normative benchmark. Because ancillary rights fall under the umbrella of the right to be supplied, inevitably they have to reflect the objectives of policies for the supply price and guide the implementing measures in the national legislation. In that regard, each right has the underlying rationale that explains its nature, such as social and market issues, and function, such as objectivity, protection, empowerment, and support. To the extent of the ancillary rights to the

³³⁵ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 5.

³³⁶ Maciej Lis, Agata Miazga, *Who will be affected by rising energy prices? Map of energy expenditures of Poles*, Institute for Structural Research, IBS Working Paper No. 11 (2015).

right to be supplied, the ancillary rights may be categorized under their intrinsic nature and function.

While the supply bill determines the injustice in terms of unaffordable supply, it also functions as the driver of injustice with respect to energy poverty. The significance of the supply price as the driver of energy poverty is recognised in the policy documents and literature on energy; however, its role in the regulatory structure is less examined. Therefore, what function the supply price performs and how it links the related household rights should be well understood. Because the right to be supplied is framed as the objective, the constituent elements should be designed and implemented with a goal of affecting the supply price. The supply price performs the guiding function for the ancillary rights and sets the normative requirements for the monitoring and evaluating purposes. In other words, the objective can only be judged against the set benchmark to evaluate its state of attainment and grants the idea with content. In this case, the principles of reasonableness and affordability represent the benchmarks to be employed. Whether the right to be supplied is warranted for the households, it is determined by the judgement of the supply price's being reasonable in the market context and affordable in the social context when all the factors are weighed. The supply price functions as the objective for policies and guidelines for measures under the normative requirements to determine whether the recognised element of the right to be supplied in the TFEU is warranted for households.

Overall, the supply price is an important element in energy regulation. Therefore, the SGEI reiterates the right of supply and some of the ancillary rights. Being judged under the affordability requirement, the supply price can be considered as an injustice *per se* or as a driver for the injustice of energy poverty. Also, the supply price may be used for the evaluation of the function of the energy system under the normative benchmark of reasonableness. Lastly, the divergence measures are put in place regarding competition, social policies, and other forms of public intervention to affect the supply price formation such as special prices for some household groups and compensation mechanisms.

5.1.2. Security of Supply

In this part, more elaboration on the roots of the security of supply in the right to be supplied is presented. Also, the normative requirement of availability is considered to determine a possible benchmark for the security of supply under which energy poverty is reconsidered. The task is pursued by unfolding the structure of the legal system in which the objectives set and implemented in the following legislation pierce through the legal order with the concept of

security. Finally, due consideration is given to the provisions on energy that contribute to the security of supply.

The security of supply as the element of the right to be supplied has its roots in the general rights of electricity consumers enshrined in the primary law of the EU. In that regard the pivotal 'energy article' on energy policy objectives at the EU level is detailed in the TFEU that implies the associated rights for electricity consumers. The article sets the security of the energy supply as one of the considerable priorities in the EU energy policy.³³⁷ This provision reflects the right to be supplied where the household consumers are conferred with the right to be supplied uninterruptedly. To the extent of the right to be supplied, the security of supply is contained within the supply stage. In contrast to the security of supply in the supply stage, which refers to the suppliers' obligation fulfilment and safety nets in case of failure, energy security assesses the state of the whole energy system.

Energy security in the distribution stage relates to disconnection requirements and an uninterrupted supply due to the maintenance of networks. The literature on energy defines energy security as "minimizing the vulnerability of vital energy systems and enabling the provision of energy services".³³⁸ This definition makes a distinction between the generation, transmission, and distribution stages v. the consumption stage. This is in contrast to the prevalent understanding of security as the access to energy resources and technical capability of networks that broaden the scope of energy security with the outcomes of energy system. Energy security may be juxtaposed with energy poverty as the opposite indexes of the functioning of energy system.³³⁹ Respectively, energy security is a broader concept considering the whole energy system than is the security of supply contained within the internal energy market.

The objective of the security of supply may be assigned to the general interest of the EU with recourse to a special regulation of services of general interest, in particular, the service of general economic interest. In this vein, the service of general economic interest refers to "universal service, continuity, quality of service, affordability, as well as user and consumer protection,"³⁴⁰ where security of supply falls under continuity requirement. EU legislation has an established mechanism under which the measures aiming for the continuity of supply may be designed and implemented. It must be noted that the continuity of supply is not a feature of

³³⁷ Consolidated version of the Treaty on the Functioning of the European Union, Official Journal of the European Union OJ C 326 (2012), art. 194(1)(b).

³³⁸ Murodbek Laldjebaev, Benjamin K. Sovacool, Karim-Aly S. Kassam, "Energy security, poverty, and sovereignty: complex interlinkages and compelling implications," in Lakshman Guruswamy, Elizabeth Neville eds. *International Energy and Poverty: The emerging contours* Routledge, (2016): 102.

³³⁹ Murodbek Laldjebaev, Benjamin K. Sovacool, Karim-Aly S. Kassam, "Energy security, poverty, and sovereignty: complex interlinkages and compelling implications," in Lakshman Guruswamy, Elizabeth Neville eds. *International Energy and Poverty: The emerging contours* Routledge, (2016): 107.

³⁴⁰ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest COM(2004)374: 4.

effective market functioning or affordability of goods' therefore, special safeguards are set to deviate externalities of ineffective competition or supplier's failure in its obligations. The SGEI mechanism stipulates the path for public intervention because there is an absence of special provisions in the legislation on internal energy market, except for the supplier of last resort or disconnection rules.

Security as the element of the right to be supplied only falls under the ancillary right of empowering household consumers to take action to secure supply, except in the switch to the micro-generation option. Reasons for that may be that the security of supply is out of direct control of the household consumers, and there is not many options for them to contribute to the security of supply. Therefore, the burden of the guarantee of supply naturally shifts to the suppliers, distributions system operators, and national regulatory authorities. The supplier is conferred with the obligation to supply under the supply agreement with household consumer supervised by the designated national regulatory authority. Even though the supplier performs its obligations, the grid's failure may jeopardize the continuity of supply with regard to the associated risks. The literature categories the risk into "natural (e.g., resource scarcity, extreme natural events), technical (e.g., aging of infrastructure, technological accidents), political (e.g., intentional restriction of supplies or technologies, sabotage and terrorism), and economic (e.g., high or volatile prices)" that occur in the energy system.³⁴¹ Neither of them is in close reach of the household consumers' actions, shifting the responsibility to other stakeholders in the energy system than household consumers. Thus, the performance of the stakeholders' obligations is the condition of the security of supply, which may interpreted as the broadening of the scope of security of supply or that security of supply is impotent without energy security.

The protective measures introduced in legislation are associated with the competence of these actors in their energy system. For instance, the supplier of last resort is designated to execute supply to household consumers in case of supplier failure or bankruptcy to form a safety net. Furthermore, the suppliers are awarded licenses to function by the national regulatory authorities after a check of the supplier's feasibility to perform its obligations. In distribution system operations, maintenance of networks is delegated to the distribution system operator supervised by the national regulatory authority.

The most prominent protective measure under this provision is the stringent rules of disconnection from supply for arrears. When the household consumers fail to pay the electricity bills, they face being disconnected from the supply, meaning the supply of electricity ceases. In

³⁴¹ Murodbek Laldjebaev, Benjamin K. Sovacool, Karim-Aly S. Kassam, "Energy security, poverty, and sovereignty: complex interlinkages and compelling implications," in Lakshman Guruswamy, Elizabeth Neville eds. *International Energy and Poverty: The emerging contours* Routledge, (2016): 101.

that case, the household consumer should receive information about possible alternatives measures to avoid disconnection that "may refer to sources of support to avoid disconnection, prepayment systems, energy audits, energy consultancy services, alternative payment plans, debt management advice or disconnection moratoria" without extra charge.³⁴² Also some member states stipulate extra protection in the rules on the recovery of arrears for supply from the last own and inhabited premises. The protective measures on security of supply contained in the IEM due to the security of supply object being a good and energy related.

As mentioned, the security of supply referred to in the right to be supplied does not have the same meaning as energy security in the whole energy system. This also has its root in the different approaches to energy. On the one hand, energy is the strategical asset guaranteeing functioning and development of society that demands to ensure the security of supply in the energy system. To a great extent, energy security circles around the "unimpeded access" or "interrupted access to source of energy" in the energy system, missing the coherence with "energy self-sufficiency", energy system resilience, and energy sources.³⁴³ On the other hand, energy is a basic need in the contemporary society, and the security of supply by the right to be supplied should ensure the uninterrupted access to supply.

Even though they are connected, energy security in the energy system concerns the interrupted supply from the failure of generation due to technical faults, grid maintenance, and resource shortfalls as well as import termination and hindrances. The literature on the security of supply in energy system refers to the four As of energy security: "availability" (elements relating to geological existence), "accessibility" (geopolitical elements), "affordability" (economical elements), and "acceptability" (environmental and societal elements).³⁴⁴ Meanwhile, with respect to the right to be supplied the security of supply refers to grid maintenance in distribution stage and when necessary the option of a supplier of last resort that is accessible to the household consumers in the supply stage. The later falls within the scope of the former, both have distinct and elaborated function related to the supply stage. However, the security of supply in the right to be supplied and energy security share concerns over the functioning of a network system in terms of maintenance and renewal with respect to transmission and distribution.

The element of security of supply requires the normative benchmark under which it is judged. The availability requirement used in the energy justice conceptual framework may be

³⁴² Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 10(11).

³⁴³ Murodbek Laldjebaev, Benjamin K. Sovacool, Karim-Aly S. Kassam, "Energy security, poverty, and sovereignty: complex interlinkages and compelling implications," in Lakshman Guruswamy, Elizabeth Neville eds. *International Energy and Poverty: The emerging contours* Routledge, (2016): 101.

³⁴⁴ Murodbek Laldjebaev, Benjamin K. Sovacool, Karim-Aly S. Kassam, "Energy security, poverty, and sovereignty: complex interlinkages and compelling implications," in Lakshman Guruswamy, Elizabeth Neville eds. *International Energy and Poverty: The emerging contours* Routledge, (2016): 100.

transposed into the EU legal structure on energy so as to have a benchmark to be achieved or sustained. It must be noted that in energy justice availability refers to "sufficient energy resources of high quality captured by the security of supply, sufficiency and reliability" dimensions.³⁴⁵ Meanwhile, in the EU context the focus on the resources of supply in energy justice is altered with the supply of electricity requirement under the availability benchmark, whereas the resources themselves do not fall into any stage of access to energy services. Here, it is assumed that security of supply and reliability relate to the same objective of an uninterrupted supply to household consumers, whereas sufficiency attributed to the affordability of supply may be effectively ensured by the social support of social tariffs, allowances, and other schemes.

Drawing the line for an availability benchmark appears an obvious and easy task, because if availability is interrupted, then availability is not ensured. In general, availability is achieved when the supply is sustained through all seasons, maintenance, natural disasters, and intentional accidents. However, short interruptions of supply are an unavoidable externality of the energy system. Availability should thus incorporate the capacity to manage the drivers of supply interruptions and the length of interruptions. For interruptions ongoing for several hours, availability is not jeopardized in the broader sense despite the possible negative consequences on appliances and in extreme cases on human health. Based on that, it is reasonable to suggest that the availability benchmark should refer to interruptions not longer than a day or a number of hours, and it should not reiterate more than once a year. These kind of interruptions in supply based on empirical evidence referred to in the theory would be accepted by the household consumers as justified, not incur great damage, and sustain decent living conditions on the premises. Because these interruptions occur due to the grid failure, it is an energy security concern to a great extent. But the availability may also be jeopardized by the suppliers' failure with its obligation in some occasions, even if they are rare. When the proper SOLR is set, then the interruption of supply is even more unlikely.

5.1.3. Ancillary Rights

The current regulatory regime in the EU predetermines the household consumer access to energy based on empowerment, protection, and support under the right to be supplied. Accordingly, the distribution of access to energy among household consumers is performed by granting ancillary rights for actively participating in the supply side and demand side with a designated safety net as protection and support. When empowerment does not warrant a

³⁴⁵ Benjamin K. Sovacool, Michael H. Dworkin, *Global Energy Justice: problems, principles, and practices* (Cambridge: Cambridge Law Press, 2014): 367.

reasonable supply price or energy costs under community schemes, the SGEI and social policies are enacted as support mechanisms as well as the ancillary rights as protective tools to avoid termination of supply or being cut off from the grid because the support measures are conditioned on the concept of energy poverty and vulnerability in the EU.

The current approach prioritizes the empowerment strategy where the supply and demand of energy leads to the coordination of a demand response and supply with a market mechanism seeking to lower electricity bills.³⁴⁶ Given that the supply price is the primary objective of regulation that is also reiterated in the right to be supplied, the ancillary rights are set for the attainment of the specified objective under the normative requirement in different ways. The EU regulation stipulates the protection of household consumers to the extent of achieving availability without due notice of the affordability requirement. In fact, the protection tools are confined within the transaction, suppliers' failure, disconnection, and capacity for redress in line with the EU objective to establish an internal energy market. The protective ancillary rights are ascribed to the distribution, supply, and consumption stages. In sum, the ancillary rights are the tools granted to the household consumer that may be grouped into several categories based on their purpose to protect, to empower, and to support the right to be supplied.

The household consumers are awarded special treatment in the EU legislation intended to protect the weaker and less informed party in the bargain from the deceptive business practices. The primary source of protection provisions enacted in the TFEU laid general framework with objectives to pursue such as to safeguard the health, safety, economic interest, and right to information with reference to cross-sectoral legislation for the stipulation of rights protecting the consumer.³⁴⁷ According to the 'energy article' in the TFEU, the underling legal justification for household consumers' rights constitute cross-sectoral and sector-specific consumers protection provisions.³⁴⁸ The protective group of rights prevail in the sector-specific legislation on energy and cross-sectoral legislation on consumer protection. The legislation on the internal electricity market establishes the most comprehensive framework for household consumer protection without prejudice by the EU rules on consumer protection. The sector-specific legislation on protective measures may be categorized in the contractual rights, disconnection rules, supplier's failure on its obligation to supply, and ancillary right to redress. Moreover, the cross-sectoral legislation on consumer protection focuses on the contractual rights

³⁴⁶ Communication from the Commission - Delivering the internal electricity market and making the most of public intervention, C(2013) 7243: 9.

³⁴⁷ To promote the interests of consumers and to ensure a high level of consumer protection, the Union shall contribute to protecting the health, safety and economic interests of consumers, as well as to promoting their right to information, education and to organise themselves to safeguard their interests. Article 169(1), TFEU Consolidated version of the Treaty on the Functioning of the European Union, Official Journal of the European Union *OJ C 326 (2012), Art. 169(1)*.

³⁴⁸ Consolidated version of the Treaty on the Functioning of the European Union, Official Journal of the European Union *OJ C 326 (2012), Art. 194*.

that grant protection for household consumers in the contractual relations between suppliers and household consumers.

Following the set consumer protection objective in the primary law, the secondary law within the cross-sectoral legislation provides rights to be enjoyed by all consumer in the EU. The cross-sectoral provisions on consumer protection concerns contract conclusion between consumer and traders,³⁴⁹ and unfair terms of consumer contracts.³⁵⁰ To ensure the attainment of set objectives, the EU measures made higher protection standards for consumer contracts.³⁵¹ The higher protection standards are also applicable to the supply of electricity to household consumers³⁵² in so far as the rules on the conclusion of contract comply with the maximum harmonisation requirement.³⁵³ The cross-sectoral rules on consumer protection grant household consumers higher protection in case of a withdrawal from the contract³⁵⁴ and comprehensive information provision requirements.³⁵⁵ The cross-sectoral legislation indicates that the vulnerable consumers' treatment in the EU are required when the social service support falls outside of its coverage.³⁵⁶

Alongside the contractual rights in cross-sectoral legislation is a more elaborate contract-related right enshrined in sector-specific legislation. In general, energy legislation grants protection to the household consumers combined within basic contractual rights.³⁵⁷ Household consumers have a right to be provided with information on the conditions of supply, in particular, descriptions of services and maintenance offered, ways to access information on tariffs and other charges, termination of conditions, compensation for quality failures, and redress mechanisms prior to the conclusion of the contract of electricity supply.³⁵⁸ Likewise, with respect to termination of supply contract rules, the household consumer may terminate the supply contract

³⁴⁹ Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, Official Journal of the European Union 304 (2011).

³⁵⁰ Council directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts, Official Journal of the European Union 95 (1993).

³⁵¹ Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, Official Journal of the European Union 304 (2011), Art. 1.

³⁵² Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, Official Journal of the European Union 304 (2011) Art. 3(1).

³⁵³ Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, Official Journal of the European Union 304 (2011) Art. 4.

³⁵⁴ Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, Official Journal of the European Union 304 (2011) Art. 9.

³⁵⁵ Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, Official Journal of the European Union 304 (2011) Art. 5/6.

³⁵⁶ Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, Official Journal of the European Union 304 (2011), Art. 3(3)(a).

³⁵⁷ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 11(5).

³⁵⁸ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 10(3).

provided that the supply price or contractual conditions are altered by the supplier.³⁵⁹ Furthermore, when the household consumer uses prepayment systems for electricity supply, these consumers may not be disadvantaged in comparison to other method users.³⁶⁰ As to cross-sectoral legislation, the sector-specific legislation offers extra protection provisions on billing information.³⁶¹

In addition to the protection tools in contractual relations, the energy legislation puts extra requirements for grid disconnection due to unpaid bills. The general provision in EU legislation obliges member states to provide adequate information on alternative measures to avoid disconnection.³⁶² The sources of support to avoid disconnection consist of information to change the household consumers' consumption habits and put restraints on household consumers such as a prepayment method. The member states enact national measures to avoid disconnection of supply by providing "payment plans, the installation of a prepayment meter, information about various kinds of (social) benefits, and, if applicable, the registration as a vulnerable consumer".³⁶³ The demand management comprises the intervention in the supply stage stipulating stringent conditions for the acquisition of energy and in the consumption stage that fosters a reassessment of consumption habits, although the considerable focus is attributed to the consumption stage where the demand level could be managed without compromising the sustainment of basic energy service.

In comparison to the protection tools in contractual rights that focus of supply stage, the disconnection requirement is one of the few tools designated to the supply and consumption stages. Other tools such as energy efficiency improvements measures designed for the consumption stage are characterized as the support tools and follow different rules. In addition to the general requirement that does not guarantee energy to be in constant supply, the specific provision is dedicated to the vulnerable household consumers that should not be disconnected in critical times,³⁶⁴ i.e. if they may face health risks. The common practice in member states is to forbid suppliers to disconnect household consumers for non-payment of bills "on specific days (e.g. weekends), seasons (e.g. winter) or in specific circumstances (e.g. if consumers critically depend on energy for life-supporting appliances)".³⁶⁵ Because disconnection is the ultimate state that makes peoples' lives miserable and inhabited premises uninhabitable, or even cause eviction,

³⁵⁹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 10(4).

³⁶⁰ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 10(7).

³⁶¹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 18.

³⁶² Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 10(11).

³⁶³ ACER Market Monitoring Report 2018—Consumer Empowerment Volume (2019): 15.

³⁶⁴ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 27.

³⁶⁵ ACER Market Monitoring Report 2018—Consumer Empowerment Volume (2019): 14.

this state of being is even more unjust in contemporary society than the injustice of energy poverty suggests. The risk of housing exclusion is incurred by the tenant to enter into new rental agreement, when they are blacklisted in special databases for prolonged payment of debts for energy.³⁶⁶

While the prolonged constant supply may be obstructed due to disconnection for arrears and usual short-term interruptions occur due to technical issues, the supply may also be interrupted if the supplier fails to fulfil its obligations under the agreement to supply electricity. Also, the supplier may terminate the supply for the arrears when a household consumer fails to pay a bill. Even though there are a number of safeguards to ensure the reliability of suppliers such as licenses, supervision, and reporting, in extreme cases the supplier may go bankrupt or its license may be revoked. In such a scenario, the member states may designate the supplier of last resort (SOLR) to compensate the suppliers' failure.³⁶⁷ The purpose of the SOLR is to ensure an uninterrupted supply, but not to substitute the suppliers' functions. However, the member states in some instances broaden the scope of the SOLR application by setting the default supplier for inactive consumers and consumers in debt that do not need extra protection.³⁶⁸ To that effect, the supply price of SOLR is usually higher than the supply price in the market in most member states.³⁶⁹ Thus, the higher prices of SOLR incentivise the household consumer to choose the supplier in the internal energy market. If the supply price of the SOLR were set lower, then it may be interpreted as the regulated price, which impedes the functioning of the internal energy market.

In regard to redress, the protection of household consumers designated in sector-specific legislation relates to complaints and out-of-court disputes. In essence, the complaint-handling mechanisms³⁷⁰ may be characterized as protective measures due to their purpose to protect household consumers from unfair behaviour and suppliers' failure to meet its obligations and business practices of undertakings. Household consumers' complaints should be handled by the supplier in a simple, fair, and prompt manner.³⁷¹ If an unsatisfied decision is reached by the supplier concerning a submitted complaint, the directive lays a mandatory requirement for the member states to establish out-of-court dispute settlement mechanisms to settle disputes between suppliers and household consumers.³⁷² Whereas the protection is the significant prerequisite for

³⁶⁶ Sian Jones, "Social causes and consequences of energy poverty," in: Katalina Csiba ed. *Energy poverty handbook*, European Union, (2016): 31.

³⁶⁷ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 27.

³⁶⁸ ACER Market Monitoring Report 2018—Consumer Empowerment Volume (2019): 10

³⁶⁹ ACER Market Monitoring Report 2018—Consumer Empowerment Volume (2019): 13.

³⁷⁰ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 26.

³⁷¹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 10(9).

³⁷² Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 26(3).

the empowerment of household consumers, protection and empowerment share the same need for redress in the dispute between supplier and household consumer. The main requirement for the redress is to be effective without prolonged hearings or unjustified requirements for complaint submission.

In comparison to the protection tools on household consumers, empowerment is inherent, seeking to motivate household consumers to make decisions in supply and consumption. Empowerment refers to the role that the household consumers can perform in the energy market such as "supplier and/or product switching, prosuming, energy communities, demand response activities".³⁷³ With the empowerment to act and decide comes the responsibility to accept risks. The empowerment to take the risk in the market or community schemes, investment in RES, or market-based supply contracts requires risk-averse household consumers to be served with protection tools to assist in emergency cases such as disconnection for arrears that form due to the substantial price increase, failure of supplier, or community scheme. This means that the empowering ancillary rights should be calibrated not only on their task, but also against protective ancillary rights. In contrast to the protection tools on household consumers that to a great extent concern the availability of energy supply, the empowerment of household consumers should incentivise them to participate in the internal electricity market with a view to secure the affordability of energy supply.

Empowerment provisions are mainly set in sector-specific legislation on energy-establishing rules for household consumers "to act as active customers" and meet their energy needs by managing demand and supply. The conditions for consumer participation manifest in the areas of demand response, self-generation, micro-generation in the premises and remote installations, and energy storage.³⁷⁴ The supply side of empowerment ancillary rights refers to the right to freely choose the supplier,³⁷⁵ freely contract with their supplier,³⁷⁶ participate in community³⁷⁷ and demand-side schemes,³⁷⁸ and access to comparison tools.³⁷⁹ They are all united under the rationale that the household consumers act as rational consumers that seek for the lowest cost of commodity with the intrinsic market function to put pressure on suppliers to compete to offer the lowest price. The idea of empowerment is underlined by the rationality of humans in

³⁷³ ACER Market Monitoring Report 2018—Consumer Empowerment Volume (2019): 28.

³⁷⁴ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 3(1).

³⁷⁵ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 5.

³⁷⁶ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 10(3).

³⁷⁷ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 16.

³⁷⁸ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 17.

³⁷⁹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019).

decision-making by ranking their final ends by the principles of most effective means, weighing the alternatives, and lining up activities to being achieved.³⁸⁰

The household consumers have the right to participate in the energy communities such as renewable energy communities and citizens energy communities. The community schemes enable household consumers to cluster into communities to benefit from community projects.³⁸¹ As shareholders or members, they control the established legal entity not for business profit but for environmental, economic, and social community benefits.³⁸² The household consumer may opt for the generation option from renewable energy resources to lower electricity price in the long run by taking part in community schemes. Other community schemes are also incentivised on social grounds of reaping the benefits of distributed costs of generation as well as the grid's operation.

Empowerment to a great extent expresses the active role of household consumers in the liberalized internal energy market. This is reflected in the EU energy legislation advocating for the idea that effective market operation rests on the consumers' capacity to switch suppliers in a cost-, time-, and effort-friendly manner.³⁸³ This leaves the question open as to whether the household consumer understands itself as the market participants in the energy market that must be equipped with the corresponding market tools. And if some household consumers see themselves in that way, then do these rights motivate the household consumers to act? It raises doubt whether the comparison tools that enable them to compare prices of suppliers' offers³⁸⁴ is the ultimate tool for the household consumers or whether it is introduced for the development of energy market purpose. Based on the empirical research the commoditization of electricity is not what the most household consumers advocate for because electricity to a great extent is understood as an energy service and social need.

The group of ancillary rights falling under the demand side of empowerment motivates household consumers to change their consumption practices for financial reward. The household consumers can manage the final cost of energy by adapting its behaviour in the consumption stage. The household consumers are conferred with the right to participate in demand response through aggregation to benefit from the lower supply price,³⁸⁵ though the household

³⁸⁰ Rationality is understood in a way familiar from economics. Thus the parties are rational in that they rank their final ends consistently; they deliberate their guided by such principles as: to adopt the most effective means to one's ends; to select the alternative most likely to advance those ends; to schedule activities so that, *ceteris paribus*, more rather than less of those ends can be fulfilled. P. 87, John Rawls, *Justice as fairness: a restatement*, Ed. Erin Kelly. (Cambridge & London: The Belknap Press of Harvard University Press, 2001): 87.

³⁸¹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 16.

³⁸² ACER Market Monitoring Report 2018—Consumer Empowerment Volume (2019): 31.

³⁸³ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 12(4).

³⁸⁴ ACER Market Monitoring Report 2018—Consumer Empowerment Volume (2019) 32.

³⁸⁵ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 17.

consumer can opt for an aggregation contract with suppliers with regard to the purchase and sale of electricity.³⁸⁶ The demand response schemes reward household consumers for the ability for DSO or suppliers to switch consumers' appliances during periods of peak demand.³⁸⁷ This is translated into the right to dynamic electricity price contracts.³⁸⁸ The function of the latter is to empower household consumers to change their consumption behaviour to benefit from time-based rates, time-of-use pricing, critical peak pricing, variable peak pricing, real-time pricing, and critical peak rebates.³⁸⁹ The latter option is conditioned on smart metering.³⁹⁰ However, the habits of consumption depend not only on the price, but also on the family's situation, lifestyle, and working regime that diminishes the capacity to benefit from automation or private action.

5.2. ENERGY POVERTY

The EU measures an ancillary right, tool, or other concept for the set their purpose and implementation as underlined by a specific rationale. As mentioned, the ancillary rights seek to attain and sustain the objectives in the right to be supplied against the normative requirements of the empowering and supporting measures. Meanwhile, the supporting measures aim to assist the household consumers unable to meet their energy needs above the subsistence level. For that purpose, the elaboration of the concept of energy poverty is needed to specify the rationale of the supporting measures design and implementation. Additionally, energy poverty implies the benchmark in access to energy that distinguishes affluent household consumers with respect to empowerment and household consumers in energy poverty and vulnerable household consumers with respect to support. The latter requires specifying the concept of vulnerability as a driver of energy poverty and the personal conditions that magnify the hardships of the energy poor. It should be noted that the energy poverty phenomenon and vulnerability "are linked yet distinct issues".³⁹¹

The suggested concept of energy poverty in the energy literature is an attempt to conceptualize household consumer injustice in the energy system. It's more a holistic view to the injustice in energy compared to the unaffordable energy supply as injustice in energy. In short, the suggested concept of energy poverty considers the drivers of the phenomenon in the supply

³⁸⁶ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 13(1).

³⁸⁷ ACER Market Monitoring Report 2018—Consumer Empowerment Volume (2019) 31.

³⁸⁸ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 11(1).

³⁸⁹ ACER Market Monitoring Report 2018—Consumer Empowerment Volume (2019): 32.

³⁹⁰ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 21.

³⁹¹ Steve Pye, *et. al.*, *Addressing Energy Poverty and Vulnerable Consumers in the Energy Sector Across the EU*, L'Europe en Formation 378(4) (2015): 69.

and consumption stage. This understanding reflects the adherence to the basic need approach on universal access to the food, water, shelter, clothing, health care, education, information, and sanitary infrastructure³⁹² with the presumption that the lack of these resources makes peoples' lives miserable. On that account, it must be added that the phenomenon manifests in the consumption stage but is experienced in the benefit stage. Departing from the mainstream approach on defining energy poverty to be an inadequate consumption due to affordability and inefficiency issues, one may suggest that energy poverty is cold and uninhabitable homes. The recognition of the decrease of human well-being, provided that the supply is insufficient, widens the understanding of the energy poverty's significance to household consumers. Energy poverty is thus not a distinct form of poverty, but the manifestation of energy poverty drives poverty in general as a capability deprivation.

The determination of the nature of energy poverty is complicated by the vagueness of the terminology used when referring to the same issue. This may be related to the common idea of energy poverty that emphasizes issues in the energy system as well as the household's poverty, founded as it is in international, supranational, and national legal documents. This may be the case when the notion of the phenomenon emerges before a common understanding of the phenomenon. Additionally, the phenomenon may be called different names. For instance, ambiguity appears when the term of 'fuel poverty' is inserted into the debate on energy deprivation. When referring to fuel poverty one should take into account that the latter covers the whole quantum of energy sources: electricity, natural gas, liquefied petroleum gas, oil, coal, district heating, and other solid fuels.³⁹³ The lack of access to energy sources to assure heating, cooking, lighting, and other amenities due to low income characterizes the fuel poverty issue.³⁹⁴ But the focus on energy carriers in energy poverty is abandoned elsewhere and consideration is set on "the inability to secure adequate energy services".³⁹⁵ This suggests that the concepts possess common elements where fuel poverty has wider coverage on energy resources and energy poverty forms part of the fuel poverty framework.³⁹⁶

Policy documents and legal literature for energy poverty are often used when referring to fuel poverty. A reason for that is that the definitions referring to energy poverty and fuel poverty vary in national laws and legal literature.³⁹⁷ In some instances these terms are used

³⁹² Aleksander Szpor, *Energy poverty in Poland—buzzword or a real problem?*, IBS policy paper 2 (2016): 4.

³⁹³ Commission staff working paper an energy policy for consumer, Staff working document SEC (2010)1407: 10.

³⁹⁴ Harriet Thomson, Carolyn Snell, Jane Carolyn, Christine Liddell, *Fuel poverty in the European Union: a concept in need of definition?* People, Place & Policy 10(1) (2016): 5.

³⁹⁵ Stefan Bouzarovski, Saska Petrova, Sergio Tirado-Herrero, *From fuel poverty to energy vulnerability: The importance of services, needs and practices*, SPRU Working Paper Series 25, (2014): 16.

³⁹⁶ Harriet Thomson, *Fuel Poverty Measurement in Europe: A rapid review of existing knowledge and approaches* (Charitable Trust, 2013): 3.

³⁹⁷ Harriet Thomson, Carolyn Snell, Jane Carolyn, Christine Liddell, *Fuel poverty in the European Union: a concept in need of definition?* People, Place & Policy 10(1) (2016): 11.

interchangeably or contain the same meaning when referring to energy deprivation.³⁹⁸ Despite the ongoing haziness in that regard, for the purpose of this research the term energy poverty is used when referring to the households' inability to enjoy an adequate level of energy service.

Here, the distinction must be made between energy poverty and disconnection where no energy may be acquired. The difference is that household consumers in energy poverty enjoy some level of energy service despite the low level, and disconnection results in a complete loss of supply. If household consumers do not have alternative energy resources for enjoyment of energy services, the consequences are very harsh and may render the premises uninhabitable or cause health problems. Thus, disconnection as the long-term supply termination for arrears as well as the halt of supply due to technical issues in the distribution and transmission systems fall outside coverage of the phenomenon of energy poverty.

The task is to determine the nature of injustice when the household consumers struggle to enjoy energy service at the socially and culturally recognized level. This can best be done by defining the phenomenon in a clear manner to conceptualize, monitor, and assess the state of affairs in the process of access to energy services. Initially, the definition should be set, then it should be operationalized with clear indicators under which the assessment of the scale of problem is performed.³⁹⁹ The definition is critical for policy formulation, for the ascertainment of the scale and nature of the issue, support, and monitoring.⁴⁰⁰

Strangely enough, this requires different approaches to energy poverty. On the one hand, it is a state of being experienced by the household consumer, on the other hand, it is the framework for policy design. It may be said that the rationality clashes with the reality.⁴⁰¹ The former concerns the qualitative aspect of energy poverty with respect to the real experience; the later stipulates the quantifiable form against which the assessment and monitoring could be performed. Based on that, one might argue that the common definition is not an issue, but the problem is "rather the lack of a systematic, quantifiable way to measure and monitor energy poverty across the EU".⁴⁰² Accordingly, the definitions may be grouped based on the qualitative and quantitative grounds. The qualitative adhered literature on this phenomenon diverges on some features, but they all refer to it as a state of energy poverty.

The first group of definitions accentuates the significance of the context for the benchmark of a household consumer's state of being. One may assume that the energy poverty stems from the household consumers' inability to meet a socially and materially requisite level of

³⁹⁸ Harriet Thomson, *Fuel Poverty Measurement in Europe: A rapid review of existing knowledge and approaches* (Charitable Trust, 2013): 3.

³⁹⁹ Florin Vondung, Johannes Thema, *Energy poverty in the EU: Indicators as a base for policy action*, Eceee Summer Study, (2019): 569.

⁴⁰⁰ Richard Moore, *Definitions of fuel poverty: Implications for policy*, Energy policy 49 (2012): 19.

⁴⁰¹ Sergio Tirado Herrero, *Energy poverty indicators: A critical review of methods*, Indoor and Built Environment 26(7) (2017): 1026.

⁴⁰² I. Kyrianiou, et al., *Energy poverty policies and measures in 5 EU countries: A comparative study*, Energy & Buildings 196 (2019): 47.

domestic energy services.⁴⁰³ The threshold of energy service is contemplated against the households' ability to fully participate "in the customs and practices that define membership in society, while maintaining a healthy indoor environment".⁴⁰⁴ "Persons, families and groups of persons whose resources (material, cultural and social) are so limited as to exclude them from the minimum acceptable way of life in the Member State to which they belong".⁴⁰⁵ "Energy poverty describes a state in which a household is unable to access and/or afford sufficient levels of domestic energy services (such as heating, cooling, cooking, lighting . . .) for its social and material needs".⁴⁰⁶ The adherence for this approach rest on the argument that the context and consequences of poverty accord energy poverty definition and at the same time foster the effective management of the problem.⁴⁰⁷ Other definition emphasizes the experienced hardship due to insufficient access to energy service. The EU approach characterizes energy poverty as "a lack of adequate energy services in the home, with its associated discomfort and difficulty".⁴⁰⁸

The next category of definitions stresses the heterogeneous forms of energy poverty. In that regard, energy poverty is when "a household finds it difficult or impossible to ensure adequate heating in the dwelling at an affordable price and having access to other energy-related services, such as lighting, transport or electricity for use of the Internet or other devices at a reasonable price".⁴⁰⁹ The latter makes close connection of inadequate energy service and supply price, despite the fact that it is just one of the drivers of energy poverty involving low income, inadequate building quality, and high energy prices.⁴¹⁰ However, the acknowledgement of the ongoing changes in the pursuance to propose more accurate metrics of different energy services help distinguish between the recognised standards of energy service and complementary indicators that are under-used in the literature.⁴¹¹

Another group of definitions aims to quantify the phenomenon by employing the indicators of energy poverty. Because energy poverty manifests in different forms among member states⁴¹² against the social, cultural, and geographical contexts,⁴¹³ there is no single set of metrics

⁴⁰³ Stefan Bouzarovski, Saska Petrova, *A global perspective on domestic energy deprivation: Overcoming the energy poverty–fuel poverty binary*, Energy Research & Social Science 10 (2015): 31.

⁴⁰⁴ Stefan Bouzarovski, et al., *Multiple transformations: theorizing energy vulnerability as a socio-spatial phenomenon*, Geografiska Annaler, Series B: Human Geography, 99(1): 21.

⁴⁰⁵ Draft report of the meeting of the Expert Group on Social Determinants and Health Inequalities, European Commission (2006).

⁴⁰⁶ Florin Vondung, Johannes Thema, *Energy poverty in the EU—indicators as a base for policy action* (Eceee Summer Study, 2019): 571.

⁴⁰⁷ Aleksander Szpor, *Energy poverty in Poland—buzzword or a real problem?*, IBS policy paper 2 (2016): 4.

⁴⁰⁸ Stefan Bouzarovski, Saska Petrova, *A global perspective on domestic energy deprivation: Overcoming the energy poverty–fuel poverty binary*, Energy Research & Social Science 10 (2015): 33.

⁴⁰⁹ Opinion of the European Economic and Social Committee on 'Energy poverty in the context of liberalisation and the economic crisis', Official Journal of the European Union C 44/09 (2011), para. 2.3.

⁴¹⁰ Opinion of the European Economic and Social Committee on 'Energy poverty in the context of liberalisation and the economic crisis', Official Journal of the European Union C 44/09 (2011), para. 2.7.

⁴¹¹ Siddharth Sareen, Harriet Thomson, Sergio Tirado Herrero, Joao Pedro Gouveia, Ingmar Lippert, Aleksandra Lis, *European energy poverty metrics: Scales, prospects and limits*, Global Transitions 2 (2020): 29.

⁴¹² Florin Vondung, Johannes Thema, *Energy poverty in the EU: Indicators as a base for policy action*, Eceee Summer Study, (2019): 578.

⁴¹³ Florin Vondung, Johannes Thema, *Energy poverty in the EU: Indicators as a base for policy action*, Eceee Summer Study, (2019): 570.

to be applied for all national contexts.⁴¹⁴ Consequently, the suggested EU definition would be a guideline for policy and comprehension of the phenomenon, yet it would underused for context specificity on the form and intensity of the phenomenon. On that account the suggested energy poverty definition as "‘households that spend more than a pre-defined threshold share of their overall consumption expenditure on energy products’, where the threshold equals ‘double of the national average ratio number’"⁴¹⁵ shows the endeavour to define the concept in accordance with available data, but not to combat the phenomenon in different national circumstances. The EU and national insights on the phenomenon should lead to the main indicators, where national observations reveal the interdependencies of the drivers of energy poverty and the EU metrics employed for policy design.⁴¹⁶ There have not been many attempts to contain the dual purpose of definition to show the difference between the objective of the definition and the task of indicators.

Whereas the definition sets the objective, the indicators reflect the drivers of energy poverty and conferred with the task to foster the attainment of objective. Thus, the objective requires benchmarks for the evaluation of measurements. Here, the normative requirement of sufficiency should be employed to assist in the execution of the evaluation process. Accordingly, the actual usage of energy service by household consumers assessed against the needs for energy service for decent living conditions highlights the demand for a sufficiency of energy service at home. The quantification of a standard of need is quite a challenge, but it may be ascribed as a qualitative feature. It makes sense to determine the sufficiency of energy service from households' perspective, whereas the usages and needs are individual experiences and any discrepancy from the accustomed usages may be assumed to be discomfort or even energy poverty. In other words, empirical research validates the statement that customary consumption practices and needs are perceived by the households as the same characteristic. However, the standard of need attributed along with a claim for social appreciation is required for the monitoring and assessment of the issue to justify the public support measures.

While the objective is to ensure that households can enjoy sufficient energy services, the issue is to choose the measurement approach on a qualitative or quantitative basis, or both. Three broadly recognized measurement techniques are expenditure, consensual, and direct measurements.⁴¹⁷ The direct measurement seeks to identify whether adequate levels of energy services are warranted for the households.⁴¹⁸ This is quite problematic due to different standards

⁴¹⁴ Siddharth Sareen, Harriet Thomson, Sergio Tirado Herrero, Joao Pedro Gouveia, Ingmar Lippert, Aleksandra Lis, *European energy poverty metrics: Scales, prospects and limits*, Global Transitions 2 (2020): 28.

⁴¹⁵ Commission staff working paper an energy policy for consumer, Staff working document SEC (2010)1407: 10.

⁴¹⁶ Florin Vondung, Johannes Thema, *Energy poverty in the EU: Indicators as a base for policy action*, Eceee Summer Study, (2019): 571.

⁴¹⁷ Harriet Thomson, Stefan Bouzarovski, Carolyn Snell, Rethinking the measurement of energy poverty in Europe: A critical analysis of indicators and data, *Indoor and Built Environment* 26(7) (2017): 896.

⁴¹⁸ Harriet Thomson, Stefan Bouzarovski, Carolyn Snell, *Rethinking the measurement of energy poverty in Europe: A critical analysis of indicators and data*, *Indoor and Built Environment* 26(7) (2017): 887.

for sufficiency and data access.⁴¹⁹ Meanwhile, the consensual measurement technique relies on the self-reporting households on the experience hardship to enjoy an adequate level of energy service, with regard to certain basic goods or essential household attributes socially recognised as necessities.⁴²⁰ Even though it has the potential to expose the experiences and their causes, the risk is that households might not mention some of their experiences for personal reasons or do not find them relevant.⁴²¹ Consequently, the household may unwittingly be in hidden energy poverty because they are accustomed to their level of energy service. Lastly, the expenditure approach focuses on the percentage of household income spent on energy. This approach reflects the affordability of the energy supply with regard to the financial burden.

A number of drivers put household consumers in energy poverty; they depend on the household's internal and external conditions: natural systems (climate), structural (socio-political systems) and economic drivers (income), market system, and the macroeconomic and policy framework.⁴²² However, the drivers do not indicate energy poverty as such but present the aims for the measures and delineate the regulatory spheres. Indeed, household consumers may be aware or unaware of being in energy poverty due to the social and economic inputs from high energy prices, low household incomes, inefficient use of electricity, and specific energy needs.⁴²³ The drivers of price, income, and inefficiency are recognised as the pivotal concerns for the households. For instance, the EU legislation specifies "low income, high expenditure of disposable income on energy and poor energy efficiency" as one of the drivers of energy poverty.⁴²⁴ This was reiterated in the communication on this matter that summed up the most significant drivers in that regard encompassing a low-income, general poverty, inefficient housing stock.⁴²⁵ In addition, the notion of energy poverty in the EU emphasizes a number of ancillary causes such as access to energy service, infrastructure inadequacy, health, equity, affordability, and efficiency issues.⁴²⁶ Accordingly, energy poverty as a sum of social and economic issues arising from internal and external conditions is a complex and multi-layered issue that typically manifests in the consumption stage.

For energy poverty to be controlled and reduced, it must be measured with best practices shared. For the purpose of energy poverty measurement, the collected data should be

⁴¹⁹ Harriet Thomson, Stefan Bouzarovski, Carolyn Snell, *Rethinking the measurement of energy poverty in Europe: A critical analysis of indicators and data*, *Indoor and Built Environment* 26(7) (2017): 887.

⁴²⁰ Sergio Tirado Herrero, *Energy poverty indicators: A critical review of methods*, *Indoor and Built Environment* 26(7) (2017): 1020.

⁴²¹ Sergio Tirado Herrero, *Energy poverty indicators: A critical review of methods*, *Indoor and Built Environment* 26(7) (2017): 1025.

⁴²² Kaja Primc, Renata Slabe-Erker, *Social policy or energy policy? Time to reconsider energy poverty policies*, *Energy for Sustainable Development* 55 (2020): 33.

⁴²³ Stefan Bouzarovski, *Energy poverty in the European Union: landscapes of vulnerability*, *WIREs Energy Environ* 4 (2014): 276.

⁴²⁴ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, *Official Journal of the European Union* 158 (2019), Art.29.

⁴²⁵ A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy, COM(2015)80: 12.

⁴²⁶ Stefan Bouzarovski, Saska Petrova, *A global perspective on domestic energy deprivation: Overcoming the energy poverty–fuel poverty binary*, *Energy Research & Social Science* 10 (2015): 33.

analysed through technological, physical, and economic perspectives on the access to energy.⁴²⁷ To acquire trustworthy results in the execution process, the gathered information should be appropriate and comprehensive. The high bar for the data on context may affect understanding of energy poverty measurements due to data flattening and reduction, neglecting diversity, and ignoring contextuality.⁴²⁸ Thus, the data should balance the essential features of context against the distant factors contributing to the energy poverty.⁴²⁹ On this instance, the proper measurement of energy poverty level is challenging since the data are private,⁴³⁰ temporally and spatially dynamic,⁴³¹ and culturally sensitive,⁴³² leading to the lack of the reliable data on the incidence and nature of energy poverty.⁴³³

The EU is monitoring energy costs and public intervention,⁴³⁴ and reports to the member states efforts to combat energy poverty.⁴³⁵ However, this heavily relies on the publicly available data from the EU survey databases on unpaid bills⁴³⁶ and an inability to keep the home adequately warm,⁴³⁷ which results in an inaccurate understanding of the phenomenon. Furthermore, the chosen path for the monitoring and assessment of the scale of the problem intended for a consistent design of policies and measures in the EU safeguards the internal market to a great extent. The judgements of the policy translate into comparisons of the numbers set and attained without looking beneath the surface of numbers and into the divergent understandings of energy poverty in the member states and their identified drivers. The suggestion is to create a metric regarding historical trajectories,⁴³⁸ metrology,⁴³⁹ new representations, and policy updates.⁴⁴⁰ This framework captures the data assimilation, process of data, and outcome on policy.

The conceptualization of energy poverty with related vulnerabilities, in terms of a common definition, lets us identify the nature and scope of the issue and to approach it with adequate policies and measures. Therefore, the lack of a common definition that articulates the corresponding features hinders the endeavour to mitigate and combat the issue of energy poverty. The literature on energy poverty argues that recognition, clarification, and policy synergy may be

⁴²⁷ Mikel González-Eguino, *Energy poverty: An overview*, Renewable and Sustainable Energy Reviews 47 (2015): 380.

⁴²⁸ Siddharth Sareen, Harriet Thomson, Sergio Tirado Herrero, Joao Pedro Gouveia, Ingmar Lippert, Aleksandra Lis, *European energy poverty metrics: Scales, prospects and limits*, Global Transitions 2 (2020): 29.

⁴²⁹ Siddharth Sareen, Harriet Thomson, Sergio Tirado Herrero, Joao Pedro Gouveia, Ingmar Lippert, Aleksandra Lis, *European energy poverty metrics: Scales, prospects and limits*, Global Transitions 2 (2020): 28.

⁴³⁰ Being confined to the domestic domain.

⁴³¹ It varies over time and in different geographical settings.

⁴³² Expectations of energy service are subjective and socially constructed.

⁴³³ Stefan Bouzarovski, *Energy poverty in the European Union: landscapes of vulnerability*, WIREs Energy Environ 4 (2014): 278.

⁴³⁴ Regulated tariffs, energy taxation policies and the level of public support, as well as their impact on pricing mechanisms, including electricity tariff deficits.

⁴³⁵ A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy, COM(2015)80: 10.

⁴³⁶ Arrears on bills: Share of (sub-) population having arrears on utility bills. Income decile Urbanisation density Tenure type Dwelling type, EU statistics of income and living conditions and (EU- SILC) (2004-2017).

⁴³⁷ Inability to keep home adequately warm: Share of (sub-) population not able to keep their home adequately warm. Income decile Urbanisation density Tenure type Dwelling type, EU statistics of income and living conditions and (EU- SILC) (2004-2017).

⁴³⁸ This concerns the path dependencies of the technologies involved in measurement and of the sector where the problem manifests.

⁴³⁹ Data flattening and contextualised identification.

⁴⁴⁰ Siddharth Sareen, Harriet Thomson, Sergio Tirado Herrero, Joao Pedro Gouveia, Ingmar Lippert, Aleksandra Lis, *European energy poverty metrics: Scales, prospects and limits*, Global Transitions 2 (2020): 27.

achieved, provided a common definition is established.⁴⁴¹ Concerning recognition, the common concept would greatly improve attention on the issue in policy agenda settings⁴⁴² and would enhance the effectiveness of social policy design and practices that positively affect the realization of the scale and the nature of the issue with tailored evaluation and monitoring mechanisms.⁴⁴³ The clarification of energy poverty is interlinked with the possibility of designing policies in the social, environmental, and economic spheres, which may complement one another in pursuance of the same objectives. The separation of policies hides that at times these policies overlap with other important issues.⁴⁴⁴ The capacity to use synergies in EU policy on energy is both a necessity and has a great potential for effective reduction of energy poverty.

The lack of a common definition of energy poverty would impede coherent policy design on energy and counter-measures to energy poverty in the EU. Member states require crafted policy coordination on energy poverty.⁴⁴⁵ Along with the divergent local, regional, and national conditions and shared competence of member states on energy, a common definition fosters a convergence of policy design and sets favourable conditions to cross-border cooperation mechanisms. One may argue that a common definition would benefit synergies among separate policy domains as well as member states' cooperation.⁴⁴⁶ Without a common definition, measures prescribed by national authorities and consistent EU policy are hindered.⁴⁴⁷ Consequently, the common definition should be flexible to take into account national social, traditional, economic, and cultural circumstances. If the EU can agree on a common definition of energy poverty, it constitute favourable conditions for a holistic approach through the stages of access to energy services.

Nevertheless, some disagree with the idea of sharing a definition among member states. (Table 1) For that purpose, the arguments may be put in three categories by separate areas of concern.⁴⁴⁸ Due to different economic, social, and geographical circumstances,⁴⁴⁹ the common (shared pan-EU) definition would be broad and lacking the specificity required for effective implementation.⁴⁵⁰ In addition, member states would have to adapt a common definition in policy

⁴⁴¹ Harriet Thomson, Carolyn Jane Snell, Christine Liddell, *Fuel poverty in the European Union: a concept in need of definition?* People, Place & Policy 10(1) (2016): 10.

⁴⁴² Harriet Thomson, Carolyn Jane Snell, Christine Liddell, *Fuel poverty in the European Union: a concept in need of definition?* People, Place & Policy 10(1) (2016): 10.

⁴⁴³ Richard Moore, *Definitions of fuel poverty: Implications for policy*, Energy Policy 49 (2012): 19.

⁴⁴⁴ Harriet Thomson, *Fuel Poverty Measurement in Europe: A rapid review of existing knowledge and approaches* (Charitable Trust, 2013): 6.

⁴⁴⁵ Stefan Bouzarovski, *Energy Poverty. (Dis)Assembling Europe's Infrastructural Divide* (Switzerland: Palgrave Macmillan, 2018): 67.

⁴⁴⁶ Harriet Thomson, Carolyn Jane Snell, Christine Liddell, *Fuel poverty in the European Union: a concept in need of definition?* People, Place & Policy 10(1) (2016): 11.

⁴⁴⁷ Stefan Bouzarovski, *Energy Poverty. (Dis)Assembling Europe's Infrastructural Divide* (Switzerland: Palgrave Macmillan, 2018): 67.

⁴⁴⁸ These arguments principally relate to: limited evidence; comparability and relevance; and path dependency. Harriet Thomson, Carolyn Jane Snell, Christine Liddell, *Fuel poverty in the European Union: a concept in need of definition?* People, Place & Policy 10(1) (2016): 12.

⁴⁴⁹ Climate conditions, socioeconomic factors, energy markets and more.

⁴⁵⁰ Harriet Thomson, Carolyn Jane Snell, Christine Liddell, *Fuel poverty in the European Union: a concept in need of definition?* People, Place & Policy 10(1) (2016): 12.

setting and implementation to match local realities.⁴⁵¹ There are some strong arguments counter to the current wide understand by member states on energy poverty, primarily because of the lack of EU competence in social policy that hinders the EU from making wide, balanced, and consistent social policy.⁴⁵² Also, consumer protection grants the EU the capacity to design and implement short-term measures that have no long-lasting consequence, but are more about ‘putting out fires’.⁴⁵³

Table 1. Definitions of energy poverty in EU member states⁴⁵⁴

Member State	Definition of energy poverty	Criteria/factors of energy poverty
Austria	A household is considered energy poor if its income is below the at-risk-of-poverty threshold and, at the same time, it has to cover above-average energy costs. ⁴⁵⁵	Low-income; High costs.
Belgium	Federal—none.	None
	Flemish Region—households in ‘measured energy poverty’ spend too much of their disposable income on energy costs; the households in ‘hidden energy poverty’ are very economical in their energy consumption, meaning that their energy costs are abnormally low compared with households living in a similar situation; the households in ‘subjective energy poverty’ say that they struggle financially to heat their homes properly.	Expenditure on energy ratio; Under-consumption; Self-assessment.
	Walloon Region—energy poverty is not clearly defined in law. It is generally accepted that energy poverty means a situation in which a person or a household faces particular difficulties in meeting their basic energy needs at home.	None.
Bulgaria	The household consumers in a state of energy poverty due to a combination of low income, high energy costs and low energy efficiency of the homes they live in. ⁴⁵⁶	Low income; High costs; Inefficiency.
Croatia	None.	None.
Cyprus	Energy poverty may relate to the situation of customers who may be in a difficult position	Low income;

⁴⁵¹ Harriet Thomson, Carolyn Jane Snell, Christine Liddell, *Fuel poverty in the European Union: a concept in need of definition?* People, Place & Policy 10(1) (2016): 12.

⁴⁵² Stefan Bouzarovski, *Energy Poverty. (Dis)Assembling Europe's Infrastructural Divide* (Switzerland: Palgrave Macmillan, 2018): 63.

⁴⁵³ Stefan Bouzarovski, *Energy Poverty. (Dis)Assembling Europe's Infrastructural Divide* (Switzerland: Palgrave Macmillan, 2018): 66.

⁴⁵⁴ ACER Market Monitoring Report 2018—Consumer Empowerment Volume (2019): 17.

⁴⁵⁵ eControl (2013), Report ‘Energy poverty in Austria (revised version)’.

⁴⁵⁶ National energy and climate action plan of Bulgaria.

Member State	Definition of energy poverty	Criteria/factors of energy poverty
	because of their low income as indicated by their tax statements in conjunction with their professional status, marital status and specific health conditions and therefore, are unable to respond to the costs for the reasonable needs of the supply of electricity, as these costs represent a significant proportion of their disposable income.	Personal state; High costs; Expenditure on energy ratio.
Czechia	None.	The quality and energy performance of a building; The price of energy at the given place; The income of the household, The conditions and the quality of the indoor environment.
Denmark	None.	None.
Estonia	A person living alone or a family who in the last six months has received once the subsistence allowance for housing costs (including energy purchase) and whose previous month income (gross) is not higher than the minimum wage for equivalence scales 1,0;0,8;1,2 is deemed to be experiencing energy poverty. ⁴⁵⁷	State subsidy; Low-income.
Finland	Difficulty in maintaining or satisfying basic needs due to high energy costs. ⁴⁵⁸	High costs.
France	A household to be in a situation of fuel poverty where its expenditure on energy in the home exceeds 8% of revenue, where revenue by consumption unit (CU) is below the third decile of revenue per CU. The indicator of feeling cold, taken from the energy-info barometer produced by the National Energy Ombudsman using a sample of 1,500 people.	Expenditure on energy ratio; Self-assessment; Poor insulation, Insufficient heating, Heating breakdown, Heating restriction because of cost or energy shutdown because of non-payment.
Germany	None.	None.
Greece	Definition in Energy Poverty Action Plan	

⁴⁵⁷ The Welfare Development Plan 2016-202370.

⁴⁵⁸ The study in 2015, Pienituloisen omistusasujan energiaköyhyyden, is a follow-up to the Energy Poverty Survey in 2013.

Member State	Definition of energy poverty	Criteria/factors of energy poverty
Hungary	None	None.
Ireland	Spends more than 10% of its disposable income on energy services in the home. ⁴⁵⁹	
Italy	The inability to purchase a minimum energy basket of goods and services or a situation where access to energy services entails a diversion of resources (in terms of expenditure or income) higher than the socially acceptable level. ⁴⁶⁰	Low income; Expenditure on energy ratio.
Latvia	The share of households that could not afford heating due to lack of money', which the Plan sets as the main indicator in the energy poverty indicator. ⁴⁶¹	Low income.
Lithuania	Energy poverty—being unable to keep a home adequately warm and households spending a large share of income on energy. Hidden energy poverty—where households may spend too little and not acquire sufficient services. ⁴⁶²	Cold home; Expenditure on energy ratio; Under-consumption.
Luxembourg	None.	None.
Malta	Whether a household can afford the necessary energy services to meet its basic daily living requirements. ⁴⁶³	Low income; High costs.
Netherlands	None.	None.
Poland	None.	None.
Portugal	None.	None.
Romania	Energy poverty is defined as the impossibility of the vulnerable consumer to meet their minimum energy needs for the optimal heating of the home during the cold season. ⁴⁶⁴ Unofficial energy poverty: when it is impossible for a person or household to meet their minimum energy needs: lighting, optimal heating of the home during winter, support of cooking facilities, and hot water supply in the dwelling, but also the use of means of communications that require energy. ⁴⁶⁵	Reference to EU Energy Poverty Observatory set indicators and values.

⁴⁵⁹ Ireland's Strategy to combat energy poverty.

⁴⁶⁰ National energy and climate action plan of Italy.

⁴⁶¹ The National Energy and Climate Action Plan.

⁴⁶² The National Progress Programme 2021–2030.

⁴⁶³ National Strategic Policy for Poverty Reduction and for Social Inclusion 2014-2024.

⁴⁶⁴ Law 196/2016 regarding the minimum income for inclusion.

⁴⁶⁵ Vulnerable Consumers and Fuel Poverty Report, ASSIST Project, (2018): 72.

Member State	Definition of energy poverty	Criteria/factors of energy poverty
Slovakia	Energy poverty is a status when average monthly expenditures of household on consumption of electricity, gas, heating, and hot water production represent a substantial share of average monthly income of the household. ⁴⁶⁶	None.
Slovenia	None.	None.
Spain	Fuel poverty is the situation in which a household cannot meet its basic needs for energy supplies, as a result of insufficient income, and which, where appropriate, may be aggravated by having an energy-inefficient dwelling. ⁴⁶⁷	Low income; Inefficiency.
Sweden	None	None.

The notion of energy poverty varies between developed and developing world. This may come from the fact that energy is not recognised as a universal good in UN documents on poverty,⁴⁶⁸ laying ground for convergence on the legal concept and the issues. Initially, the term of energy poverty has been used by policy makers and researchers when construing the problem of energy deprivation, in terms of “inadequate access to energy,” on the household level in the developing world.⁴⁶⁹ Practically speaking, the developing world puts more emphasis on access to energy service as a primary concern. Therefore, most research is done “on investigating and ameliorating the consequences of inadequate access to ‘modern’ energy services, as a result of the lack of adequate energy infrastructure”.⁴⁷⁰ In some instances, income poverty refers to energy poverty because an insufficient income to satisfy a basic human need causes other forms of poverty.

Despite this misconception of the causes of energy poverty,⁴⁷¹ there is general agreement in the literature that income poverty is distinct from energy poverty.⁴⁷² Therefore, a different context between developed and developing countries determines that the latter is more concerned with access to energy service, while the former emphasizes affordability and availability of energy service. This view on energy poverty has been accommodated in the developed countries discourse on energy poverty “at the nexus of energy efficiency and

⁴⁶⁶ The law No. 250/2012 Coll. of Laws

⁴⁶⁷ ENPE

⁴⁶⁸ UN, 1948; UN, 1966; UN, 1995; CFHR, 2010.

⁴⁶⁹ Stefan Bouzarovski, et al., *From fuel poverty to energy vulnerability: The importance of services, needs and practices*, SPRU Working Paper Series 25 (2014): 1.

⁴⁷⁰ Stefan Bouzarovski, Saska Petrova, “The EU energy poverty and vulnerability agenda: An emergent domain of transnational action,” in Tosun J., Biesenbender S. and Schulze K. eds. *Energy Policy Making in the EU: Building the Agenda* (Berlin: Springer, 2015): 135.

⁴⁷¹ Harriet Thomson, Carolyn Jane Snell, Christine Liddell, *Fuel poverty in the European Union: a concept in need of definition?* People, Place & Policy 10(1) (2016): 10.

⁴⁷² Harriet Thomson, Carolyn Jane Snell, Christine Liddell, *Fuel poverty in the European Union: a concept in need of definition?* People, Place & Policy 10(1) (2016): 10.

affordability".⁴⁷³ In spite of the widely used distinction of developed v. developing countries, the reality is that energy deprivation on household level possess multidimensional hybrid characteristics resulting in the denial of the energy services.⁴⁷⁴ The concern over and injustice may not always be the way it seems, although some approach such injustices with a view of a particular action or measure aiming for a socially just objective; reality can sometimes be the opposite of that view.⁴⁷⁵

As mentioned before, vulnerability as a concept is related to energy poverty, though it is a distinct concept. Its autonomous conceptualization from energy poverty enables us to consider social groups as they share the characterising drivers of a vulnerability and energy poverty. With this perspective on vulnerability, the drivers and factors of vulnerability are unreliable access to energy carriers, being unable to pay, inflexibility among form of energy services, inefficiency in consumption, insufficiency in energy service, and a shortage of information on support.⁴⁷⁶ Vulnerability and energy poverty share inequalities in personal conditions and reveal the causal condition of an inability to participate meaningfully in the society in which one lives.⁴⁷⁷ The latter are founded on "low incomes, high energy prices, energy inefficiency within the built environment, above-average energy needs, inflexibility and precarity concerning living arrangements, a lack of social networks, and unhealthy energy-related practices in the home that affect how efficiently energy is consumed".⁴⁷⁸ The characteristics of vulnerability identify which households are more exposed to energy poverty, which are more sensitive to the consequences of curtailed energy service, and which can be identified by the energy poverty vulnerability index.⁴⁷⁹ Nevertheless, vulnerability operates as an autonomous device based on the 'socio-spatial formation'⁴⁸⁰ of a mix of social inequalities and inequalities of place.⁴⁸¹ To a great extent, vulnerability is characterized in social welfare and socio-economic group categories such as income, age, and health characteristics.⁴⁸²

⁴⁷³ Stefan Bouzarovski, et al., *From fuel poverty to energy vulnerability: The importance of services, needs and practices*, SPRU Working Paper Series 25 (2014): 1.

⁴⁷⁴ Stefan Bouzarovski, et al., *From fuel poverty to energy vulnerability: The importance of services, needs and practices*, SPRU Working Paper Series 25 (2014): 7.

⁴⁷⁵ Benjamin K. Sovacool, Matthew Burke, Lucy Baker, Chaitanya Kumar Kotikalapudi, Holle Wlokas, *New frontiers and conceptual frameworks for energy justice*, Energy Policy 105 (2017): 686.

⁴⁷⁶ Harriet Thomson, Stefan Bouzarovski, Carolyn Snell, *Rethinking the measurement of energy poverty in Europe: A critical analysis of indicators and data*, Indoor and Built Environment 26(7) (2017): 880.

⁴⁷⁷ Caitlin Robinson, Sarah Lindley, Stefan Bouzarovski, *The Spatially Varying Components of Vulnerability to Energy Poverty*, Annals of the American Association of Geographers 109(4) (2019): 1024.

⁴⁷⁸ Caitlin Robinson, Sarah Lindley, Stefan Bouzarovski, *The Spatially Varying Components of Vulnerability to Energy Poverty*, Annals of the American Association of Geographers 109(4) (2019): 1190.

⁴⁷⁹ João Pedro Gouveia, Pedro Palma, Sofia G. Simoes, *Energy poverty vulnerability index: A multidimensional tool to identify hotspots for local action*, Energy Reports 5 (2019): 189.

⁴⁸⁰ Stefan Bouzarovski, et al., *Multiple transformations: theorizing energy vulnerability as a socio-spatial phenomenon*, Geografiska Annaler, Series B: Human Geography 99(1) (2017): 25.

⁴⁸¹ Caitlin Robinson, Sarah Lindley, Stefan Bouzarovski, *The Spatially Varying Components of Vulnerability to Energy Poverty*, Annals of the American Association of Geographers 109(4) (2019): 1190.

⁴⁸² Steve Pye, et al., *Addressing Energy Poverty and Vulnerable Consumers in the Energy Sector Across the EU*, L'Europe en Formation 378(4) (2015): 70.

The characterising factors of vulnerability vary in the literature and among member states, also some of them are closely related, while some of them are distant in their effect on the households' capacity to enjoy sufficient energy services. The danger in the examination of the vulnerability factors is to reach a point where too many issues are identified than can be addressed through direct policy intervention. For instance, the methodology on vulnerability combines “(i) socio economic indicators of population (ii) climate variables, (iii) energy consumption levels, (iv) calculated energy demand for space heating and cooling, (v) climatization technologies details and (vi) construction characteristics of several building typologies distinctive for each of the country’s regions”.⁴⁸³ This methodology is quite complex, which hinders its application in practice. Therefore, there should be distinguished the most essential vulnerability characteristics that validate the measures of support for vulnerable households such as health risks for disabled or seniors.

5.3. MEASURES ON ENERGY POVERTY: SUPPORT AND PROTECT

The distribution of energy service in the mitigation of energy poverty proceeds under different conditions than when faced with the need to combat energy poverty. Accordingly, the concern in the distribution of energy service in the combat of energy poverty is distinct in nature and requires crafted measures. The mitigation of energy poverty is pursued by the empowering of households with conferred rights in energy to actively participate in the market. In contrast to a mitigation scenario, the combat of energy poverty is carried out by employing the supporting measures usually in social policies and less commonly in energy policies. Meanwhile, the protection measures in a form of rights and rules exist in both scenarios enacted in the energy and consumer protection legislation.

Because the households faced with energy poverty are not able to acquire energy service to a decent living standard, the concern is what support the EU and member states should introduce to assist energy-poor and vulnerable households. Due to the former’s shared competence in energy and the latter’s competence in social policies, the measures of support and protection diverge. One may suggest that universal social assistance schemes and subsidies cannot operate at the EU level.⁴⁸⁴ Also in question is what rules of protection need to be set to counterbalance the households' weaknesses in relation to contractual relations with the suppliers.

⁴⁸³ João Pedro Gouveia, Pedro Palma, Sofia G. Simoes, *Energy poverty vulnerability index: A multidimensional tool to identify hotspots for local action*, Energy Reports 5 (2019): 188.

⁴⁸⁴ Kaja Primec, Renata Slabe-Erker, *Social policy or energy policy? Time to reconsider energy poverty policies*, Energy for Sustainable Development 55 (2020): 35.

Following on that, the investigation of supporting measures to the energy poor and vulnerable seeks to present both the schemes and their underlying rationale.

Different measures are stipulated in the EU legislation to assist household customers in energy poverty and vulnerable customers. Where the household consumer is identified as being in energy poverty, the EU legislation accords the service of a general economic interest mechanism to combat energy poverty through, for instance, support for energy efficiency improvements⁴⁸⁵ and price setting.⁴⁸⁶ The recognition of energy poverty to be grounded in social and energy spheres affects the type of implemented policy.⁴⁸⁷ Meanwhile, for the households identified as vulnerable customers based on their intrinsic characteristics, the EU legislation introduced favorable treatment of social policies.⁴⁸⁸ While the responsibility to protect vulnerable customers falls on the member states, public authorities have a mandate to employ available tools in terms of targeted public support.⁴⁸⁹ The corresponding measures may relate to direct subsidies, price setting, compensations, and other forms of public support.

The member states were obliged to set national energy action plans, support vulnerable consumers through social security systems, and take energy efficiency measures.⁴⁹⁰ Because each country has different perceptions of vulnerable customers, the mixes of applied measures are different.⁴⁹¹ The internal energy market regulation addresses vulnerable consumers through short-term measures of social support and long-term measures related to energy savings. However, new attempts to address this issue suggest incorporating social security measures best practices in the energy field.⁴⁹²

Member states should integrate energy⁴⁹³ and social⁴⁹⁴ policies when energy poverty is concerned.⁴⁹⁵ The appropriate mix of sector-specific measures and social policy measures should be set to avoid blanket support and provide public support to those who are in need.⁴⁹⁶ On the EU level, the commission granted competence to facilitate policy integration on energy

⁴⁸⁵ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 28(2).

⁴⁸⁶ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 5.

⁴⁸⁷ Kaja Primc, Renata Slabe-Erker, *Social policy or energy policy? Time to reconsider energy poverty policies*, Energy for Sustainable Development 55 (2020): 32.

⁴⁸⁸ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 28(2).

⁴⁸⁹ Vulnerable Consumer Working Group Guidance Document on Vulnerable Consumers (2013): 4.

⁴⁹⁰ Commission staff working paper an energy policy for consumer, Staff working document SEC (2010)1407: P. 10.

⁴⁹¹ Vulnerable Consumer Working Group Guidance Document on Vulnerable Consumers (2013): 12.

⁴⁹² Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Delivering a New Deal for Energy Consumers, COM(2015)339: 7.

⁴⁹³ Energy policy aimed at reducing consumption and improving efficiency.

⁴⁹⁴ Social policy to support customers with paying their bills.

⁴⁹⁵ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Recital 41.

⁴⁹⁶ Vulnerable Consumer Working Group Guidance Document on Vulnerable Consumers, (2013): 15

poverty by sharing good practices among member states.⁴⁹⁷ To accomplish that, detailed and accurate information should be collected on elements constituting energy poverty.⁴⁹⁸ This reflects the argument that "the energy-poverty phenomenon is important because the policy measures will differ depending on how much poverty is experienced and what are the biggest causes of households' energy deprivation across member states".⁴⁹⁹ Following this strategic insight the EU law prescribed for member states to gather comprehensive information on energy poverty that could assist in providing targeted public support.⁵⁰⁰ Based on the latter the different tools should be tailored to the specific component of energy poverty related to energy and social domains. Despite the action taken by the commission, current information on energy poverty from member states is scarce. Consequently, the conditions and characteristics of energy poverty in the EU may not be sufficiently identified due to the absence of set measurement criteria and monitoring rules.⁵⁰¹

In addition, measures are not applied in vacuum; their implementation affects other policy areas or overlaps other matters. For instance, climate change and energy poverty policies pursue some similar objectives, so proper policy design and a mix of policy may emerge as sustaining their effective implementation in the long-term, even though some short-term objectives contradict or hinder each other's implementation.⁵⁰² Each policy area within and between member states should take into consideration other policy measures where policy is designed and implementation is executed. In that regard the path of a policy mix advocated by the EU institutions covers social, energy, and consumer protection coordination exercised by public authorities.⁵⁰³ The coordination of policy design and implementation may avoid an energy poverty trap, whereas the energy policy alone may not have a substantial effect on supply price and consumption level, and the financial burden with respect to social policy implementation may be beyond public finances.⁵⁰⁴ In sum, support of households based on their characterizing factors may be addressed with both short-term and long-term measures or structural relief measures.

The member states stipulate measures to support the households perceived by national regulations as energy poor or vulnerable under the recognised value of solidarity in the CFR. These are usually called short-term measures due to their short-lasting effects on the

⁴⁹⁷ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Recital 40.

⁴⁹⁸ Patrick Nussbaumer, Morgan Bazilian, Vijay Modi, and Kandeh K. Yumkella, *Measuring Energy Poverty: Focusing on What Matters*, Renewable and Sustainable Energy Reviews 16(1) (2011): 6.

⁴⁹⁹ Kaja Primec, Renata Slabe-Erker, *Social policy or energy policy? Time to reconsider energy poverty policies*, Energy for Sustainable Development 55 (2020): 35.

⁵⁰⁰ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Recital 40.

⁵⁰¹ Stefan Bouzarovski, *Social justice and climate change: Addressing energy poverty at the European scale*, Brussels: Spring Alliance (2014): 3.

⁵⁰² Stefan Bouzarovski, *Energy Poverty. (Dis)Assembling Europe's Infrastructural Divide* (Switzerland: Palgrave Macmillan, 2018): 55.

⁵⁰³ Stefan Bouzarovski, *Energy Poverty. (Dis)Assembling Europe's Infrastructural Divide* (Switzerland: Palgrave Macmillan, 2018): 63.

⁵⁰⁴ Kaja Primec, Renata Slabe-Erker, *Social policy or energy policy? Time to reconsider energy poverty policies*, Energy for Sustainable Development 55 (2020): 32.

household state of being, and are they applied routinely to the same households. As the drivers of low-income and disability to energy poverty and vulnerability are not easily overcome even with the structural measures, support is crucial to sustain the decent living conditions for all members of society. The most common form of short-term support for the energy poor and vulnerable is financial support.⁵⁰⁵ The different forms of short-term measures may be identified such as social tariffs,⁵⁰⁶ discounts, blanket regulated prices, and direct payments.⁵⁰⁷ Short-term measures such as social tariffs or other kind of public support have an instant effect on the problem, but without long-lasting repercussions.

Support of the energy poor and vulnerable may be financed through the national budget under the social welfare system and/or by shifting the financial burden onto other end users by their incorporation into the final supply price within the services of general interest. The implementation of either source should comply with different rules on regulation with respect to the internal market, state aid, or SGEI. Additionally, the chosen support measure should both follow the set rules and take into consideration its effect on other end users. For instance, in the context of internal energy markets, blanket prices have less favourable effects when targeting vulnerable consumers with public support funded by other consumers.⁵⁰⁸ Therefore, thorough consideration should be taken by public authorities to evaluate the negative effects of short-term measures on other consumers with low budgets or other vulnerable situations.⁵⁰⁹ With regard to direct payment to vulnerable consumers, the experience of such practices in different countries indicates that direct support through the social welfare system is more favourable and a fairer approach than energy price regulation.⁵¹⁰ Another approach suggests that financial support of social tariffs, subsidies, or benefits can create a long-term burden on public finances.⁵¹¹ With respect to funding through the burden sharing in the final price of supply, the increase in the final supply price of electricity for the non-eligible household would be modest, which seems reasonable from the social solidarity perspective. While the choice of funding the support measure is important for the rules to be followed, the form of measure more or less has the same significance. Effective schemes should evade the cumbersome administrative barriers that are usually used for schemes on allowance and to take advantage of positive effects in the coordination of divergent measures.

⁵⁰⁵ Claire Dhéret, Marco Giuli, *The long journey to end energy poverty in Europe*, EPC Policy Brief (16 June 2017): 2.

⁵⁰⁶ Regulated prices limited to a well-defined group of vulnerable customers.

⁵⁰⁷ Vulnerable Consumer Working Group Guidance Document on Vulnerable Consumers (2013): 17.

⁵⁰⁸ Vulnerable Consumer Working Group Guidance Document on Vulnerable Consumers (2013): 17.

⁵⁰⁹ Vulnerable Consumer Working Group Guidance Document on Vulnerable Consumers (2013): 27.

⁵¹⁰ Stefan Bouzarovski, *Social justice and climate change: Addressing energy poverty at the European scale*, (Brussels: Spring Alliance, 2014): 5.

⁵¹¹ Anna Bajomi, "How to tackle energy poverty – Good practices at a local level," in Katalina Csiba ed. *Energy poverty handbook*, European Union, (2016): 176.

On that account, the issues of energy poverty and vulnerability can only be tackled by a combination of measures, mainly in the social field and within the competence of authorities at the national, regional, and local levels. When phasing out regulated prices, member states need to propose a mechanism to protect vulnerable consumers, which could preferably be provided through the social welfare system and different forms of social policies. If provided through social policies, the mechanism could be implemented through schemes such as a solidarity tariff or a discount on energy bills. One may suggest that the cost of such schemes needs to be covered by non-eligible consumers collectively,⁵¹² but such transposition of the financial burden may buffer the effect on non-eligible households without affecting consumption practices. Those in support would not be motivated to save electricity in changing their behaviour and using it more efficiently. It may be said that it does not provide the sustainable solution for the energy poor.⁵¹³ Indeed, the electricity is a different kind of good characterized as a need to a certain extent, and a good is quite the ancillary characteristic. Respectively, the households consider electricity as a need when their usage corresponds to the habits; lowering the benchmark for support below those habits won't incentivise any change in behaviour. The demand response may be perceived as needs fulfilment, which makes support schemes counter-effective in action moulding, notwithstanding the scheme's solidarity function.

Nevertheless, in recognising electricity's nature as a need and a good justifies the differentiation of the final price in accordance with the comfort usages as a good and necessary usages as a need. The recipients of support should be in the volumes of necessary usage determined by the average household standard, but not the personally perceived level of need. Against this background the source of funding schemes can be differentiated in the general price for the necessary usage and the extra price for the comfort usage. This differentiation is justified from the solidarity perspective – enshrined in the CFR. Most would agree that life is not imaginable in contemporary Western society without electricity and energy service, therefore, the general price should be set until the usage volumes reaches the threshold admitted as reasonable for the decent well-being in the average home with exceptions for vulnerable households. In such a case, the household consumes above the predetermined threshold this may be assumed as the "luxury" consumption and the price per kw should be considerably higher. Expecting that all households use less energy for the sake of environment protection and global warming is naïve, but setting the "luxury" tariff that is few times higher than the standard final price per kw would have greater effect on consumption level between the households and in line with the EU values.

⁵¹² Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy, COM(2015)80: 12.

⁵¹³ Anna Bajomi, "How to tackle energy poverty – Good practices at a local level," in Katalina Csiba ed. *Energy poverty handbook*, European Union, (2016): 176.

The empirical evidence suggests that households do not change their energy practices or invest in efficiency with respect to electricity, provided that the final price is reduced. On the contrary, higher prices may incentivise them to reconsider their behaviour. This way the households would be motivated to use less energy, which translates into less investment into grids and generation facilities. The high-earning group of households may enjoy more energy service and then finance the energy-poor and vulnerable households in remuneration. The supply price may function as a stick penalizing over-consumption practices with higher bills and a carrot awarding the customary consumption with no extras.

However, the schemes are set up to support the energy poor and vulnerable with directed support and protection. (Table 2) These measures are considered to have long-lasting effects on consumption levels. The most common measure in the EU is the support for renovation projects that improve the households' energy efficiency. It is not support for the acquisition of electricity in the supply stage but is intended for the demand-side management in the consumption stage. In contrast to the social policies financed by national sources, the support to those in need for buildings renovation comes from EU funds. Financial support for efficiency improvement is not the only long-term measure. The rules for disconnection also have lasting effects by providing knowledge of possible consumption savings that may influence future decisions. It may be said that structural measures refer to additional protections for households, efficiency improvements, and consumer information.⁵¹⁴

The promotion of energy efficiency investment in energy legislation should cause long-lasting effects while reducing consumption and supply tariffs.⁵¹⁵ The survey on best practices to address energy poverty acknowledges the upgrade of energy efficiency to be the most suitable solution for that purpose.⁵¹⁶ This is in line with the principles of energy justice where the efficiency refers to "high penetration of efficient service".⁵¹⁷ The pursuit of efficiency has been a never-ending battle with nature. Therefore, efficiency is not an end in itself, but rather the direction of energy regulation and policy. Because the pursuit efficiency is a process, the suggested solutions appear more as supplements to technological development in the energy industry rather than real game changers. The supporting policies primarily focus on building efficiencies and do not support the acquisition of more efficient appliances. This may be because efficiency development confers a greater benefit in energy savings. While support for building efficiency investment is an ongoing process, the support for more efficient appliances is random.

⁵¹⁴ Claire Dhéret, Marco Giuli, *The long journey to end energy poverty in Europe*, EPC Policy Brief (16 June 2017): 2.

⁵¹⁵ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Recital 30.

⁵¹⁶ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Delivering a New Deal for Energy Consumers, COM(2015)339: 7.

⁵¹⁷ Benjamin Sovacool, Michael Dworkin, *Energy justice: conceptual insights and practical applications*, Applied Energy 142 (2015): 438.

The problems to using more efficient appliances stem from the high upfront costs, as higher efficiency class products are usually more expensive. Also, paying more for efficiency does not always result in the margin of savings covering higher prices in comparison to less efficient appliances. With regard to electricity consumption, the efficiency investment is often not seen by the household as a significant tool for energy savings and lower energy bills.

Table 2. Strategies for vulnerability in EU member states

Member State	Strategies
Austria	Minimum income instruments; Housing subsidies; Building support granted for housing construction and renovation works.
Belgium	Social tariff for electricity; Electricity campaign ‘dare to compare’; Social welfare to prevent the disconnection of energy supplies; Structural work to reduce energy consumption in housing; Subsidies for low-income households; Winter fuel allowance; Raising awareness of rational use of energy (RUE).
Bulgaria	Heating allowances; Cover of minimum quantity of electricity needs other than heating needs.
Croatia	Assistance for households facing the problem of meeting energy costs, based on the amount of energy required to meet the minimum standard of living.
Cyprus	Reduced prices on electricity tariffs (special electricity tariff); Financial incentives for installing a net-metering Photovoltaic system; More favourable payment terms of bills; Financial incentives for upgrading the energy efficiency of their houses; Safeguarding the continuous supply of electricity, during critical periods, to those vulnerable consumers that uninterrupted power supply is essential for reasons related to their health.
Czechia	Social policies or, where applicable, partially by consumer protection policies.
Denmark	Some of the general social policy measures provide financial support to energy related purposes.
Estonia	Subsistence allowance; Financial aid.
Finland	Social support system designed to guarantee a minimum income; Housing allowance; Direct subsidies; Tax credit for household expenses; Security deposits to energy companies.
France	Energy allowances (chèque énergie); The energy transition tax credit (CITE).

Member State	Strategies
Germany	Reasonable costs for heating energy (including the production of hot water as part of a centralised heating energy supply); Subsistence benefits; Loans; Non-repayable grants; Social assistance benefits directly to the energy supplier.
Greece	'Energy card'; Financing programmes to improve the energy efficiency of residential buildings; Social tariff.
Hungary	Extend subscription based electricity connection scheme; Fixed universal service tariffs.
Ireland	Retrofitting homes of people in energy poverty; Energy Engage Code—the energy industry has committed to never disconnect an engaging customer and to work with their customers on realistic and achievable payment plans for any arrears; Energy Supplier Handbook—a customer charter or code of practice; Household Benefits Package—income support to assist lower income households with their electricity and gas bills; National Fuel Scheme—income support to assist lower income households with their energy costs.
Italy	Policies for reducing the energy bills of families (e.g. social bonuses or tariffs); Policies for improving the energy efficiency of households (regulations, tax breaks, energy supply certification schemes, energy tutors, etc.); Subsidies to low-incomes families.
Latvia	Housing allowance; Vulnerable population groups are offered a certain amount of electricity at a reduced rate.
Lithuania	Social assistance.
Luxembourg	The cost-of-living allowance; The state rent subsidy; Minimum provision for domestic energy if he or she is unable to cover the costs of domestic energy.
Malta	The energy benefit scheme; Vulnerable households receive a direct reduction in their utility bills; The eco-reduction scheme under which households receive a direct rebate on 15-25% of their electricity bills; Financial schemes aimed at reducing energy and water consumption in low-income/vulnerable households through the replacement of old and inefficient appliances.
Netherland	Scheme that prevents people who cannot pay their energy bill (or pay it on time) from being disconnected.

Member State	Strategies
Poland	A lump-sum energy allowance; Flat rate energy allowance.
Portugal	The Energy Social Tariff; Energy efficiency; Renewable sources of energy.
Romania	Solidarity fund to financially support the vulnerable consumer; Social assistance.
Slovakia	Housing allowance; Social measures.
Slovenia	General housing policy measures (e.g. 100% subsidies in multi-household buildings); Targeted measures; Social policy measures.
Spain	In the event of a shortfall in income during a financial year, the corresponding tariffs or charges must be revised; Social energy bond; Direct aid; Minimum Essential Supply.
Sweden	Social policy.

Disconnection rules use the long-term measures enacted with respect to extra consumer protection, whereas support schemes relate to short-term measures. The question is how support schemes are designed or should be designed in comparison to disconnection rules. Provided that the energy poor and vulnerable are supported adequately, then arrears most likely won't be incurred by the household. Thus, the form of the measure is crucial for disconnection rules. When the scheme covers the final price in terms of allowances, the rules of disconnection for failure to pay for supply are redundant. Otherwise, the discounts or social tariffs compensate for part of the final price and still may end up in a household's disconnection. To a great extent, disconnection is avoided at any cost with stringent rules for disconnection and common practices in member states to annul the debt. It is rarely the case when the actual disconnection is executed or the debt is recovered. Accordingly, the support schemes may be grouped in full support that do not incentivise a change in consumption and partial support that plays as the intermediary between the ability to enjoy energy service and being disconnected. One may argue that partial support schemes are well-targeted subsidies whereby they confer financial assistance in the risk of disconnection or loss of housing due to debt.⁵¹⁸

⁵¹⁸ Anna Bajomi, "How to tackle energy poverty – Good practices at a local level," in: Katalina Csiba ed. *Energy poverty handbook*, European Union (2016): 176.

For the effective design and implementation of policies to combat energy poverty, consideration should be given to geographical conditions, any possibility for policy coordination, and measures of the adequacy of socio-technological conditions. The EU context may be one of the examples to show how geographical conditions determines what strategies should be taken for the energy poverty mitigation purposes. Each member state has distinctive social, cultural, and economic situations, so the mandate to take actions on this matter should be lowered from the EU level to the regional scale.⁵¹⁹ Also, the measures should take into account the uneven development between member states as well as monetary and material deprivation.⁵²⁰

5.4. THE TYPOLOGY OF HOUSEHOLD CONSUMERS

The household consumers that should be offer energy poverty mitigation tools stand as an overwhelming group of end users acquiring electricity for their own consumption unrelated to business or professional purposes. This investigation suggests that the category of household consumer functioning within a mitigation scenario is the “affluent household consumer”. In essence, this group of consumers use electricity service for personal purposes to satisfy daily needs regardless of being essential or basic needs. In this context, the term “affluent” is provided with the meaning of being able to satisfy the electricity needs not only due to the income, but also in tune with the demand of electricity by changing behaviour patterns and investing in efficiency measures with supply conditions such as electricity price volatility and different supply resources. The main characteristic elements of this group of household consumers aim for satisfied energy needs due to high-income or efficient usage, or both. The supplementary factor to put household consumers in this group is the capacity to exercise their conferred rights with a view of active participation in choosing and switching suppliers as well as becoming prosumers of energy. The consideration of the affluent household consumers that can fulfil energy needs focuses on whether the regulatory framework is adequate for the households to avoid energy deprivation situation.

The identification of what household consumers or who constitute each energy-poor household category is the first step in investigating the combating of energy poverty. Generally, under the secondary legislation on the internal energy market, household consumers fall within the category of final consumers, or consumers acquiring electricity for their own use.⁵²¹ The latter definition concerns not only household consumers, but also consumers acquiring energy for business purposes. Even though there is some common ground for social approaches on final

⁵¹⁹ Stefan Bouzarovski, *Energy Poverty. (Dis)Assembling Europe's Infrastructural Divide* (Switzerland: Palgrave Macmillan, 2018): 112.

⁵²⁰ Stefan Bouzarovski, Sergio Tirado Herrero, *The energy divide: Integrating energy transitions, regional inequalities and poverty trends in the European Union*, *European Urban and Regional Studies* 24(1) (2017): 80.

⁵²¹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, *Official Journal of the European Union* 158 (2019), Art. 2(3).

consumers to access universal service, when small enterprises want to enjoy a universal service provision, the distinction between households and non-households is more in line with the energy justice framework. The focus on household consumers, likewise, has a stronger case when the social objectives of general interest are the goal. Consequently, this study uses ‘household consumers’ for households using energy service to meet their energy needs for daily services. Accordingly, the following stage of investigation focuses on the categorization of energy-poor household consumers: vulnerable consumers and households in energy poverty. The household consumers in energy poverty and vulnerable consumers need to be categorized based on their intrinsic characteristics related to national particularities and in line with the EU framework.

Even though the concepts of vulnerable consumers and energy poverty are closely linked, characteristics of vulnerable consumers and household consumers in energy poverty diverge. Nevertheless, household consumers are in energy poverty situations due to low incomes, inefficient use of energy, high electricity prices, and having no special needs.⁵²² In this context, the EU legislation refers to household consumers in energy poverty that are unable to acquire "energy services needed to guarantee basic standards of living in the relevant national context".⁵²³ When the households falls into energy poverty, in line with the EU rules and complementary national legislation, the member states may design and commission public intervention to combat energy poverty and uplift households to affluent energy situations. On that account, member states should prepare integrated national energy and climate plans with underlying data on needed energy service, social policies, and EU guidelines on energy poverty.⁵²⁴ EU legislation suggests combating energy poverty with targeted public intervention through the service of a general economic interest mechanism.

In comparison with household consumers in energy poverty, vulnerable consumers are afforded with robust legal protection in the EU in terms of extra social support and special rules of disconnection. Although the issue of vulnerable consumers is asserted in the EU legislation, the unifying agreement between member states of the causal conditions to it is absent. Therefore, the vulnerable household consumers, here referred to as ‘vulnerable consumers’, lacks common definition on the EU level.⁵²⁵ Unfortunately, the respective absence of the definition of

⁵²² Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union L58 (2019), Art. 29.

⁵²³ Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council Official Journal of the European Union 328 (2018), Art. 3(3)(d).

⁵²⁴ Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council Official Journal of the European Union 328 (2018), Art. 3(3)(d).

⁵²⁵ Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC, Official Journal of the European Union 211 (2009): Art. 3(7).

vulnerable consumers in EU legislation has resulted in unequal consumer protection among member states.⁵²⁶ Despite overt divergence between member states, the EU legislation obliges member states to define vulnerable customer with reference to energy poverty and “to the prohibition of disconnection of electricity to such customers in critical times”.⁵²⁷ On that account, the concept of vulnerable consumers may contain the characteristic of vulnerable consumers related to income levels, poor energy efficiency, proportion of disposal income on energy, and special needs or ‘critical dependence on electricity equipment’ due to the age, health, and other social reasons.⁵²⁸ The EU widens the scope of vulnerable consumers including consumers in remote areas.⁵²⁹

Market thinking is not only characterized by the competition between suppliers that inevitably should result in the low price for the households, but it also defines the household. In the internal market the household is considered the buyer of energy for personal use that enters into an agreement with supplier under which it buys the goods. In other words, the consumer and supplier perform as agents in a transaction. The contractual relationships are formed between the market actors that regulate the corresponding rights and duties, while regulator conferred with the competence to “ensure the functioning of the energy market”.⁵³⁰ The shared competence in energy systems between member states and the EU stipulates different relationships of household vis-à-vis national government and household vis-à-vis the EU regulated under EU law. Accordingly, the national government is obliged to ensure the safe and secure grid access to households for both user and administrator; the commission granted competence to supranational oversight of public intervention affecting the functioning of internal energy market made of the citizen and supranational institution. This is in contrast with the view of households as members of society, justifying the individual’s claim on the national government to ensure sufficient enjoyment of energy services in line with the respect of dignity and guarantee of minimum well-being (citizen and national representative body).

The definition of a household results in an understanding of the rationale of the household choices and decisions *a priori*. Provided that households are seen as the market actors, the choices between energy resources and suppliers will be judged in terms of utility maximization on the personal level. Even though many choices may be explained under rationale choice theory,

⁵²⁶ Commission staff working document - Evaluation Report covering the Evaluation of the EU's regulatory framework for electricity market design and consumer protection in the fields of electricity and gas, COD(2016)379: 47.

⁵²⁷ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 28(1).

⁵²⁸ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 28(1).

⁵²⁹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 28(1).

⁵³⁰ Consolidated version of the Treaty on the Functioning of the European Union, Official Journal of the European Union *OJ C 326 (2012)*: Art. 192(1)(a).

it does not explain why households' decisions contradict their aspirations of well-being. For instance, some households decide to use more energy services, more intense using of appliances, and high-energy-consuming appliances, which results in a higher volume of needed energy linked with more investment in capacity mechanisms and infrastructure growing up the energy price per kw. Also, the more volume consumed, the greater effect on the environment due to CO₂ in the generation of electricity and extraction of gas, oil, and coal needed for the generation of electricity. Moreover, there is almost no elasticity between electricity prices and decisions on energy consumption behaviours, refuting the rationality of households in related decision-making on consuming less wastefully and more efficiently.

5.5. SERVICES OF GENERAL ECONOMIC INTEREST

Concerning energy service related to human well-being, in the EU framework energy service's intrinsic nature and objectives translate into the legal category of service of general interest. In general, the services of general interest encompass services of general economic interest, general non-economic services, and social services of general interest, therefore, the nature of services of general interest has always raised many questions in the EU. The SGI expanded on the Treaty of Rome, and the latter concerned the free market model. Later in the Treaty of Amsterdam, the concept of SGEI was enshrined that provided more clarity on the nature of SGI,⁵³¹ but input ambiguity whether non-economic services are excluded from the scope of SGI. The commission followed on this matter and in its communication referred to SGI as covering market and nonmarket services.⁵³² However, a common definition was created on the EU level that provides general legal basis for attainment of general interest objectives in providing social, public, and other essential services. Nevertheless, the changing circumstances in social life compelled the commission to admit that services of general interest are "complex and constantly evolving"⁵³³ following the "new economic, social and institutional developments, such as shift in consumer demands, technological change, the modernisation of public administrations and the devolution of responsibilities to the local level".⁵³⁴ However, the idea of a common definition to determine the main features of service of general interest that effectively takes into consideration evolving circumstances was dismissed.

⁵³¹ Treaty of Amsterdam amending the Treaty on European Union, the Treaties establishing the European Communities and certain related acts, Official Journal of the European Union 340 (1997), Art. 16.

⁵³² Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest COM(2004) 374: 22.

⁵³³ Green Paper on services of general interest COM(2003) 270: 9

⁵³⁴ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions accompanying the Communication on "A single market for 21st century Europe" - Services of general interest, including social services of general interest: a new European commitment, COM(2007) 725: 5.

The main features of services of general interest may be identified that contribute to the ascribing of energy service to the concept of services of general interest in the EU. Concerning services of general interest, they should be provided by public authorities or undertakings on the national, regional, or local level to consumers and businesses financed from public funds or market actors. However, due consideration must be given to the fact that services of general interest must not be confused with the concept of public service.⁵³⁵ Furthermore, on account of general interest, services of general interest refer to the citizens' essential needs and demand to guarantee access to public goods. Due to the prominent role of electricity in the contemporary lifestyle, the electricity supply unarguably possesses the character of a service that satisfies essential households needs to have lighted, warm, and comfortable homes. Energy service affects other areas of life in education, health, and transport due to emerging electric vehicles. Thus, the energy service demands public policies directed to guarantee access to public goods under the concept of services of general interest.

Until the establishment of community, the concept of service of general interest does not exist in any of the legal doctrines of member states. The same is true for the concept of services of general economic interest that has no legal tradition or language reference.⁵³⁶ The Treaty of Amsterdam was first legal document that recognized services of general interest to be identified as a 'common value'.⁵³⁷ In fact, the same 'value' status was reiterated in the TFEU referring to 'shared value' category with underlying economic reference to service of general economic interest.⁵³⁸ One may argue that objectives of general interest are intrinsic in the values of European countries and "form a set of common value for Europe".⁵³⁹ However, the general interest as a value was encapsulated in the legal category of services of general economic interest that was invented in the EU law with no legal definition. Consequently, the issue has been to determine the character and content of service of general economic interest in EU law that would correspond to different countries traditions, culture, institutions, and social models. The prescription of the service of general economic interest as a common value in the EU has implications for the establishment of a horizontal framework to pursue general interest and provides more secure legal protection for services provision and usage conditions of considerable significance to human well-being such as energy services.

⁵³⁵ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374; 22.

⁵³⁶ Pierre Bauby, "From Rome to Lisbon: SGIs in Primary Law," in Erika Szyszczak, Jim Davies eds. *Developments in services of general interest*, (Springer, 2011): 23.

⁵³⁷ Treaty of Amsterdam amending the Treaty on European Union, the Treaties establishing the European Communities and certain related acts, Official Journal of the European Union 340 (1997): Art. 16.

⁵³⁸ Consolidated version of the Treaty on the Functioning of the European Union, Official Journal of the European Union *OJ C 326 (2012)*, Art. 14.

⁵³⁹ Pierre Bauby, "From Rome to Lisbon: SGIs in Primary Law," in Erika Szyszczak, Jim Davies eds. *Developments in services of general interest*, (Springer, 2011): 22.

Respectively, values appreciated under the general interest objectives have priority over other objectives in the EU. In the case of tensions between general interest and the TFEU, provisions the tasks of general interest prevails.⁵⁴⁰ The objectives falling under general interest and captured by the category of services of general interest may be specified as primary, internal market and competition objectives in the TFEU are ancillary or subsidiary in the EU. Provided that electricity supply and consumption are recognised as values, the objective in the general interest is to sustain their enjoyment by end users. That is in the legal context apprehended as the objective to guarantee "availability of efficient service of general interest" for services assigned to service of general interest.⁵⁴¹ The latter objective is pursued in the variety of sectors ranging from network industries to social services. Even though the adequate or minimum threshold of energy supply and consumption are not identified as objective *per se*, their access and use to an accepted contemporary life standard of well-being unarguably is a condition to pursue security, health, and education enjoyment.

In a general sense, services of general economic interest are characterized as economic activity pursued to benefit public interest and supported by public intervention. For an activity to be designated as a service of general economic interest, there is no legal requirement to state it as long as the content of the latter gives reasonable ground to suggest it is true.⁵⁴² It may be argued that services of general economic interest follow in the footsteps of legal uncertainty on the EU level as the concept of services of general interest. Generally, national public authorities are granted competence by the TFEU to determine the services of general economic interest tasks and design organizational principles for that matter.⁵⁴³ Therefore, the measures designed for divergent tasks are in accordance with social, cultural, and economic realities in each member state producing heterogeneous modes of the SGEI implementation. Even though the precise definition is abandoned, the general framework in terms of principles and conditions for operation of services of general economic interest are elaborated in the sector-specific regulation, the commission's communication and EU case-law "with respect to energy, the services of general economic interest aim for secure, safe and affordable electricity in the EU".⁵⁴⁴

The main criterion for the activity in the general interest to be captured within the services of general economic interest is to examine whether activity is economic or non-economic in line with the commission criteria and EU case law. The provision of services that possess

⁵⁴⁰ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374, point 3.2.

⁵⁴¹ Green Paper on services of general interest (COM(2003) 270): 6.

⁵⁴² Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 22.

⁵⁴³ Wolf Sauter, *Services of general economic interest and universal service in EU law*, European Law Review 33(2) (2008): 175.

⁵⁴⁴ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 8.

ordinary economic attributes are separate from services of general economic interest due to the latter “special characteristics”.⁵⁴⁵ The ordinary activities that are economic and affect intertrade in the EU should follow competition rules.⁵⁴⁶ Respectively, the commission underlined that for an activity in general interest to fall under EU law regime, it has to be economic in nature.⁵⁴⁷ The idea of economic activity destined to change affected by policy and market development.⁵⁴⁸ When determining an activity in general interest to be economical the number of factors have to be evaluated related to the purpose of activity, funding source and conditions, and social perspective.⁵⁴⁹ Furthermore, the ECJ set additional criteria⁵⁵⁰ to identify the activity in general interest to be deemed economic in nature.⁵⁵¹ For instance, the economic activity is always performed for remuneration (consideration) by any legal status organisation and type of services (the service provided is a social security or health service).⁵⁵² Hence, for economic activity in general interest—the services of general economic interest is assigned to justify public intervention, while for non-economic activity in general interest—the consideration rests on SSGI and SGNEI, respectively.

The complexity of what constitutes general interest requires multilevel solutions in the EU legal structure. As a result, the legislation on services of general economic interest consist of three levels: primary law, horizontal framework, and national law. Within the primary law, member states are conferred with competence “to provide, to commission and to fund” services of general interest within granted powers by the TFEU.⁵⁵³ The second level of regulation refers to “horizontal framework” encompassing EU secondary law, the commission’s communications, and case law. While the TFEU grants competence on the member states, the more significant competence is granted to EU institutions to establish principles and to set economic and financial conditions to commission and aid services of general economic interest.⁵⁵⁴

The horizontal framework is favoured in the area of consumers’ protection, the monitoring and evaluation of SGI, state aid, or structural funds financing.⁵⁵⁵ A reason for that is

⁵⁴⁵ *Corsica Ferries France SA v Gruppo Antichi Ormezziatori del porto di Genova Coop. arl, Gruppo Ormezziatori del Golfo di La Spezia Coop. arl and Ministero dei Trasporti e della Navigazione*, European Court of Justice, (Cases C-179/90).

⁵⁴⁶ Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 38.

⁵⁴⁷ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 22.

⁵⁴⁸ Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 34.

⁵⁴⁹ Green Paper on services of general interest (COM(2003) 270): 11.

⁵⁵⁰ The existence of a market, state prerogatives or obligations of solidarity.

⁵⁵¹ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions accompanying the Communication on "A single market for 21st century Europe" - Services of general interest, including social services of general interest: a new European commitment, COM(2007) 725: 5.

⁵⁵² Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 103.

⁵⁵³ Consolidated version of the Treaty on the Functioning of the European Union, Official Journal of the European Union 326 (2012), Art. 14.

⁵⁵⁴ Consolidated version of the Treaty on the Functioning of the European Union, Official Journal of the European Union 326 (2012), Art. 14.

⁵⁵⁵ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 12 .

based on the idea that the organizational and regulatory activities of services of general interest should be executed as closely as possible to the citizens in line with the principle of subsidiarity.⁵⁵⁶ Because the services of general interest concern citizens' social interest and well-being, the logical solution is to confer on national public authorities a competence to design and commission the services of general interest. Such adjustment to sectors circumstances and nature is preferred in the network industries.⁵⁵⁷

Lastly, member states are granted competence to organise and commission the provision of services of general economic interest as they see fit and enact in national legislation. The same competence of member states to determine the PSO and SGI mission by public authorities at national and regional levels is emphasized in the communication on service of general interest.⁵⁵⁸ The significance of this competence is the uniqueness of SGEI in nature and the scope that member states have in designing and commissioning services of general interest in line with national circumstances by any administrative body when the decision-making process of services of general interest can be ascribed to national, regional, or local public authorities.⁵⁵⁹ Accordingly, each member states based on its administrative structure can craft the custom-made solution that ensue pros and cons. While the crafted solutions are more effective for set tasks, it's a great challenge to oversee their compliance to the EU rules enabling some member states to take advantage of a favourable regime to fund undertaking but not disturb the functioning of their internal markets.

Despite the wide discretion for member states to design and commission services of general interest, the manifest error assessment sets a safeguard mechanism for services of general interest to follow EU law. Even though the member states are granted the discretion to regulate social interest matters, the power of public authorities to define services of general interest always remains under control.⁵⁶⁰ For that purpose the commission and EU courts conferred with review capacity to filter services that contravene EU rules on internal market and competition.⁵⁶¹ If the examined services of general economic interest fail to pass a manifest error assessment, then the latter has to be redefined or cancelled.

The services of general interest may enjoy more relaxed regulation on condition that it is ascribed as a service of general non-economic interest. A reason for that originates from the

⁵⁵⁶ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 7.

⁵⁵⁷ Green Paper on services of general interest COM(2003) 270: 17.

⁵⁵⁸ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 5.

⁵⁵⁹ Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 23.

⁵⁶⁰ Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 24.

⁵⁶¹ Fred Olsen, SA v Commission of the European Communities, European Court of Justice, (Case T-17/02).

competence granted on member states to provide, commission, and organize services of general non-economic interest.⁵⁶² Such services are exercised exceptionally as social functions or competences of public authorities financed from public or social funds.⁵⁶³ Concerning the social characteristic, the service of general non-economic interest can be categorized in two types: the provision of services of general interest “covering the main risks of life”⁵⁶⁴ and “services provided directly to the person”⁵⁶⁵ managed by public authorities in light of general interest objectives.⁵⁶⁶ Under this regime fall the activities of police, justice, health care, and social security. The further requirement to determine the service of general non-economic interest is the funding source. The funding source and social mandate of public authorities in this respect are not the main distinctive attributes of services of general non-economic interest.

The provision of service of general interest may be ascribed as a service of general non-economic interest only if its provision is unattainable on economic grounds, meaning it's not an economic activity. The general rule stipulates that “activities that are performed without any consideration, by the State or on behalf of the State, as part of its duties in the social field, for example, do not constitute an economic activity under the Treaty rules on the internal market”.⁵⁶⁷ Hence, social services performing an economic activity despite being named services of general non-economic interest should follow internal market and competition rules.⁵⁶⁸ It must be noted that the number of activities performed as social services may be dubbed an economic activity in nature.⁵⁶⁹

As mentioned before, vulnerable customers enjoy favourable treatment under EU legislation, whereas the support for this group of energy-poor households is left for member states to consider in averting competition and internal market rules of the EU. It must be noted that the concept of social services of general interest should not be mixed with the social service of non-economic interest.⁵⁷⁰ The latter is not subject to specific EU legislation, but the former may have

⁵⁶² Consolidated version of the Treaty on European Union - Protocol (No 26) on services of general interest, Official Journal of the European Union 326 (2012), Art. 2.

⁵⁶³ Report on the commission White Paper on services of general interest (2005/2101(INI)): 13.

⁵⁶⁴ Health, ageing, occupational accidents, unemployment, retirement and disability.

⁵⁶⁵ Social assistance services, employment and training services, social housing or long-term care.

⁵⁶⁶ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions accompanying the Communication on "A single market for 21st century Europe" - Services of general interest, including social services of general interest: a new European commitment, COM(2007) 725: 6.

⁵⁶⁷ Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 104.

⁵⁶⁸ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions accompanying the Communication on "A single market for 21st century Europe" - Services of general interest, including social services of general interest: a new European commitment, COM(2007) 725: 5.

⁵⁶⁹ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions accompanying the Communication on "A single market for 21st century Europe" - Services of general interest, including social services of general interest: a new European commitment, COM(2007) 725: 8.

⁵⁷⁰ Social services of general interest are those that respond to the needs of vulnerable citizens, and are based on the principles of solidarity and equal access. They can be both of an economic or non-economic nature. Examples include social security schemes, employment services and social housing.

binary interpretation based on its task and effect on the market.⁵⁷¹ There are some conditions to be followed by public authorities when public support is considered by employment of the social service of general interest to help vulnerable consumers. With regard to accessing energy service, the activity performed by competent national authority should aim at securing an established national energy threshold for vulnerable consumers.

The requirement to take into account the collateral effect on other household consumers leaves room for the socially engaged activity to be comprehended by the commission as economic. According to EU case law, the social nature of activity does not always characterize activity as non-economic because social service of general interest may refer to economic and non-economic activities.⁵⁷² Provided that social services of general interest operate on economic bases as referred in the EU case law in spite of the activity's being termed social, it will not prompt the commission to class it to services of general economic interest.⁵⁷³ However, the special derogation from the general rule are established in a form of specific services.⁵⁷⁴ Hence, keeping aside the specific service, the uncertainty remains for the vulnerable customers' protection mechanisms when the critical dependence on energy service issue addressed through services of general economic interest. Overall, the member states have a mandate to frame activities with the view of guarantee of access to vulnerable consumers within the social attributes, but the commission has the capacity to ascertain this type of public support and qualify it as economic in nature with resulting legal consequences.

5.6. UNIVERSAL SERVICES

The critical step in the investigation falls on the object of energy policy on the fundamental level that is regulated by the EU law to mitigate and combat energy poverty. So what matters are the conditions in line with the principles of equity and equality to benefit from the energy service to the extent needed to satisfy no less than basic human needs to live a decent life. Although fundamental rights in the EU laws on household consumers related to access to universal service should be taken as a pivotal concern, fundamental rights on energy is non-existent in the human rights discourse and have no philosophical underpinning so far. Accordingly, the EU

⁵⁷¹ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions accompanying the Communication on "A single market for 21st century Europe" - Services of general interest, including social services of general interest: a new European commitment, COM(2007) 725: 4.

⁵⁷² Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - A Quality Framework for Services of General Interest in Europe COM(2011) 900: 4.

⁵⁷³ Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 23.

⁵⁷⁴ Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 56.

Charter of Fundamental Rights is employed for legal justification purposes to assess the current energy policy and regulation adequacy in light of energy poverty mitigation and combat.

On that account, several suggestions may be constructed to contribute to the issue of energy poverty. The recognition that access to services of general economic interest is fundamental to the citizens of the EU sets reasonable groundwork to argue for equating the latter right with social and economic rights in a human rights framework granting household consumers justified claims for redress against energy poverty. Likewise, under its framework the right bears on services so universal to human well-being that a stronger case could be made for public intervention to guarantee the threshold needed to sustain a decent living standard. Hence, it may be argued that identification of a right as fundamental in the EU legal terms obliges EU institutions and member states to design policies and implement measures that would guarantee its actual and effective exercise by right-holders, in this case, household consumers. While Article 36 of CFR states that the EU "recognise and respects the access to services of general economic interest," the obligation to protect the given right by member states is not explicitly stated, therefore, implicit obligation to secure access may be argued.⁵⁷⁵

From the perspective of the household consumers, the major concern the electricity consumers encounter is the fair access to energy service. The fairness of access to energy service may be prescribed as unequal distribution of energy service to household consumers. Also, the fairness refers to equity within its evaluation the first step is to consider the equality aspect of energy service to benefit from it. The inequality in access to energy service manifest in the household consumers' capacity to acquire needed level of energy service that is disproportionate to the disposable income or insufficient income in general to pay for energy service. In addition, the inequality originates from different electricity consumer groups' usage volumes. For instance, poor household use less energy service than affluent household consumer, but financing of capacity mechanisms, new infrastructure and promotion of renewable energy falls greatly on all electricity user without taking into account the causes of needed investment and actual household consumers conditions. Respectively, the identified inequalities in access to energy service directs investigation to the current legal justification in the EU legislation that would reasonably underpin the requirement for the household consumers to access energy service following the principles of equity and equality.

In addition to acknowledgement of fundamental right of citizens to universal service derived from the recognition of SGEI in the CFR, the Treaty of the Functioning of European Union complements on the same universal service significance. In fact, universal service captured

⁵⁷⁵ Charter of Fundamental Right of the European Union, Official Journal of the European Union 326 (2012), Art. 36.

by services of general economic interest occupies the shared value category in the EU to foster social and territorial cohesion.⁵⁷⁶ Though, member states obliged to provide the service of general economic interest in a view of all household consumers could enjoy the conferred benefit of universal service. The concept of services of general economic interest mostly considered as justification for public intervention to help energy poor household consumer. All in all, the due consideration of universal service attribution to the status of shared value in the EU sets legal justification for member states to mitigate and combat energy poverty under the EU legislation.

While the first tier of legal justification to secure access to universal service is ascribed to fundamental rights of EU citizens, the broad provision in the CFR leaves room for interpretation on access to universal service definition. The scope of universal service is evolving and varies between economy sectors, for instance, water, heating, electricity, sewage, but the purpose of universal service - to aim the “*effective accessibility of essential services*”⁵⁷⁷ - is common in all infrastructure sectors in the EU captured by services of general interest. In fact, the universal service should not only be comprehended as a group of general interest objectives, the identification of universal service also grants special treatment on household consumers. The special treatment on universal service household consumers manifests as a grant of the “*minimum set of rights and obligations*”.⁵⁷⁸ As one put it, from the general perspective the universal service grants rights to consumers and entitle obligation on undertakings.⁵⁷⁹ Within the minimum set of rights, the right to access to universal service may be distinguished to require reasonable consideration.

In addition, the extent of the right to universal service is a dynamic, flexible⁵⁸⁰ and sector specific concept.⁵⁸¹ Therefore, in pursuance to manage to a reasonable extent the divergence of universal service organisation and provision in the EU, the universal service rights and obligations are structured with the assistance of common principles to benefit the provision of universal service.⁵⁸² Respectively, the precise definition of access to universal service is absent because it is unreasonable to take due account of all conditions, despite the benefit of introduced legal justification with fundamental rights on household consumers.

⁵⁷⁶ Consolidated version of the Treaty on the Functioning of the European Union, Official Journal of the European Union 326 (2012): Art. 14.

⁵⁷⁷ Pierre Bauby, "From Rome to Lisbon: SGIs in Primary Law," in Erika Szyszczak, Jim Davies eds. *Developments in services of general interest*, (Springer, 2011): 29.

⁵⁷⁸ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions accompanying the Communication on "A single market for 21st century Europe" - Services of general interest, including social services of general interest: a new European commitment, COM(2007) 725: 10.

⁵⁷⁹ Wolf Sauter, *Services of general economic interest and universal service in EU law*, European Law Review 33(2) (2008): 176.

⁵⁸⁰ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 8.

⁵⁸¹ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions accompanying the Communication on "A single market for 21st century Europe" - Services of general interest, including social services of general interest: a new European commitment, COM(2007) 725:10.

⁵⁸² Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 8.

Because the universal service refers to a minimum set of rights and obligation, consideration should be on the other sources of legal justification in the EU law with discerned rights on household consumers. As such, the provisions in the Treaty on the Functioning of European Union (TFEU) elaborated more comprehensively on the consumer's right to universal service. In the provision on the services of general economic interest, the right to universal service on electricity consumers is enshrined in TFEU, where universal service guarantees consumers of "a high level of quality, safety and affordability, equal treatment and the promotion of universal access and of user rights".⁵⁸³ Likewise, in the secondary law on universal service, the principles of service of general economic interest rendered in the commission's communication related to the issues of access to services, affordability, safety, security, quality, choice, transparency and access to information to be inherent in the latter concept.⁵⁸⁴ The suggested requirements for the universal service may be apprehended as objectives on energy policy. Otherwise, they may serve as evaluative criteria against which the current state of the EU legislation to mitigate and combat energy poverty could be executed.

On that account, the principles may be grouped as primary and complementary based on their relevance to effective services of a general interest provision. Universal service is the most significant set of principles in the provision of service of general economic interest and complementary provisions directly linked to benefit the provision of universal service. This approach suggests that the concept of universal service articulated in the principles of safety, security, and quality has prior significance in other policy objectives within services of general economic interest.⁵⁸⁵ This approach qualifies the requirements as objectives that call for different consideration due to their importance. Nevertheless, the different path may lead to examining service in a general economic interest provision in light of public policy objectives, where the public policy objectives related to universal service are ascribed as a catalogue of related objectives in the latter sphere, reinforcing its effective provision.⁵⁸⁶ Each principle considerably linked with one another, and their aggregation guarantees the adequate provision of universal service. For instance, the absence of a security of service provision that concerns security of supply⁵⁸⁷ has a negative effect on safe and affordable electricity service, and the universal service may not be effectively employed. This approach advocates for evaluative assessment of energy legislation on energy poverty.

⁵⁸³ Consolidated version of the Treaty on European Union - Protocol (No 26) on services of general interest, Official Journal of the European Union 326 (2012), Art. 1.

⁵⁸⁴ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 9 .

⁵⁸⁵ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 8

⁵⁸⁶ Wolf Sauter, *Services of general economic interest and universal service in EU law*, European Law Review 33(2) (2008): 177.

⁵⁸⁷ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 9.

Meanwhile, sector specific legislation on energy frame right to universal service within the internal energy market framework. The latter legislation elaborated on the enjoyment of universal service as "the right to be supplied with electricity of a specified quality within their territory at competitive, easily and clearly comparable, transparent and non-discriminatory prices".⁵⁸⁸ In this vein, for instance, the principle of affordability in EU law requires national governments to design tools and contribute financial resources to warrant tangible and effective use of electricity services for low-income customers. The right should guarantee that all consumers have "access to affordable high-quality services of general interest throughout the European Union".⁵⁸⁹ Such reference to rights to universal service in the energy system supports the idea of universal service consisting of the evaluative criteria of affordability and availability. Compared to the provision in the TFEU on the consumer's right to universal service, the secondary legislation discerns principal concerns of universal service, which may be pervaded in the principles of availability and affordability. Namely, the supply and quality requirements are embodied in the availability criteria, while conditions for supply price, more precisely capacity to pay the accumulated bills, leads to the affordability criteria.

Overall, the guarantee of universal service provisions may be structured in several tiers. The first tier involves the fundamental right of EU citizens to the SGEI, which serves as a legal justification and an obligation on the EU and member states for socially responsible energy policies in the EU. In this case, it contributes to advocating for the actual and effective protection of household consumers' rights related to energy and adequate measures to mitigate and combat energy poverty. The next tier encompasses complementary principles to the fundamental right to access universal service. These principles could be grouped under the evaluative criteria of affordability and availability. In this regard, "affordability" possesses different meaning due to the context in which it is apprehended.⁵⁹⁰ For instance, general affordability may be set for all energy consumers and specific affordability appreciated against the household consumers in energy poverty and vulnerable consumers unable to acquire needed energy services.

5.7. PUBLIC INTERVENTION

Guarantee of the provision of services of general economic interest to a great extent are sustained through public intervention by the member states. Even though the prevailing rationale in the latter provision contains the notions of competition and internal markets,

⁵⁸⁸ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 27(1)

⁵⁸⁹ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 4.

⁵⁹⁰ Gregory Pierce, Donald Shoup, *Getting the Prices Right*, Journal of the American Planning Association 79(1) (2013).

unfortunately, the market model as a mechanism of goods and services distribution is cannot take into account household consumers' specific needs and their possibility to meet them. The determination of the activity's economic character in support of energy-poor household consumers means member states must comply with the rules of services of general economic interest when designing and commissioning public support.

Due to the broad coverage of economic measures applied by member states on energy-poor households, a comprehensive examination is needed of the services of general economic interest in light of access to energy services. Accordingly, the following investigation elaborates on the conditions for which public intervention should be considered, how the public intervention should be designed, and what rules should be followed in latter commission for the measures to comply with EU legislation.

Generally, public intervention may be pursued to attain general economic interest, provided that market-based redress is absent. The underlying rationale of public intervention lies in the obligation of member states to secure the provision of services of general economic interest; without states' intervention the latter provision is considered uneconomical with negative repercussions on quality, affordability, and access.⁵⁹¹ When market forces and measures cannot ensure citizens' access to energy services at affordable prices with an uninterrupted supply, market failure occurs, which should be mitigated by government intervention.

The market failure may stem from obstructions to access the energy service, or the energy service acquired may not guarantee the requisite standard of well-being. Consequently, the identification of the cause of market failure conditions frames the SGEI.⁵⁹² While the identification of the cause of market failure has significance, the next act in market failure situations should be directed by the search for market-based remedies. Here, the demand-side response management and efficiency measures are some of the market mechanisms to benefit household consumers.⁵⁹³ In fact, in specific circumstances market-based remedies are appropriate.⁵⁹⁴ In some instances, offering financial or economic incentives without entrusting special or exclusive rights to undertakings for the provision of SGEI makes more sense. After the evaluation of market-based remedies or market measures and stipulation of market failure condition, public intervention may be pursued by member states within the framework of service of general economic interest to assist household consumers with energy poverty. It must be noted here that the notion of service of general economic interest is to help household consumers in

⁵⁹¹ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - A Quality Framework for Services of General Interest in Europe COM(2011) 900: 3.

⁵⁹² Wolf Sauter, *Services of general economic interest and universal service in EU law*, European Law Review 33(2) (2008): 180.

⁵⁹³ Communication from the commission - Delivering the internal electricity market and making the most of public intervention, C(2013) 7243: 9.

⁵⁹⁴ Wolf Sauter, *Services of general economic interest and universal service in EU law*, European Law Review 33(2) (2008): 180.

energy poverty, whereas the vulnerable consumers' incapacity to satisfy their energy needs is addressed through the social service of a general interest framework.

Despite the favouring approach of market-based supply price of electricity by the EU, the reality in the energy markets in terms of market concentration, shows the impotence of competition between suppliers. While the number of suppliers is low and the choice between suppliers is more formal than real to households, the granted market-related rights for household consumers may not be effectively used. Consequently, in the transition period from regulated prices into market-based prices the public intervention is a possible choice in exercising price setting right by member states with respect to affluent household customers.⁵⁹⁵ The latter price setting measures by member states should comply with the stringent regulation of the internal electricity market to avoid an adverse impact on establishing effective competition between suppliers.⁵⁹⁶ In that regard, it must be noted that the price setting for a transitional period for affluent households should be executed under the services of general economic interest rules.

Public intervention should aim to guarantee the access to energy service, but there may be complementary objectives benefiting the main objective. Such objectives may seek to establish a level playing field, rectify market failures, contribute to advanced knowhow implementation, and the empowerment of market forces.⁵⁹⁷ Additionally, the internalisation of environmental externalities may be successfully achieved through the "good aid", namely, phasing-out harmful subsidies⁵⁹⁸ and avoiding adverse spill-overs of the cost of environmental damage.⁵⁹⁹ Thus, public intervention should not deviate from the rationale that energy prices should directly correlate with external costs.⁶⁰⁰ Currently, the member states sometimes regulate energy prices for households, even the below-cost regulated prices, to protect household consumers, but the side effect falls on the competition and internal market.⁶⁰¹ The form of supply price regulation constitutes a fundamentally distortive measure; therefore, interventions in price setting should only be applied in limited exceptional circumstances.⁶⁰² With respect to resulting distortions, they may manifest as short-term and long-term.⁶⁰³ However, the public intervention

⁵⁹⁵ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 5(6).

⁵⁹⁶ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 5(7).

⁵⁹⁷ Communication from the commission - Delivering the internal electricity market and making the most of public intervention, C(2013) 7243: 5.

⁵⁹⁸ Communication from the commission - Delivering the internal electricity market and making the most of public intervention, C(2013) 7243: 6.

⁵⁹⁹ Communication from the commission - Delivering the internal electricity market and making the most of public intervention, C(2013) 7243: 7.

⁶⁰⁰ Communication from the commission - Delivering the internal electricity market and making the most of public intervention, C(2013) 7243: 8.

⁶⁰¹ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy, COM(2015)80: 12.

⁶⁰² Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Recital 15.

⁶⁰³ Short-term (affecting system stability, spot market prices and electricity production) and long-term (crowding out investments in new capacity or diverting them to sub-optimal projects). Communication from the commission - Delivering the internal electricity market and making the most of public intervention, C(2013) 7243: 7.

in a form of price control may be justified if applied properly.⁶⁰⁴ Correspondingly, the aid by member states should be targeted at market failures and objectives of common interest, while being least distortive on the market.⁶⁰⁵

Aid may take the form of being financed by the national budget, end users' contributions, uniform and differentiated prices, and special or exclusive rights conferral.⁶⁰⁶ In addition, the member states implement fiscal policies as the source of aid to certain undertakings conferred with public service obligation constituting tax breaks as well as fees and levies on the final consumer.⁶⁰⁷ In some instances, the practices of public intervention manifests as direct subsidies to undertakings.⁶⁰⁸

The guarantee of access to energy service for poor households is contained within the service of general economic interest provision. The investigation of the legal protection related to the combat of energy poverty leads to an evaluation of public intervention compliance with the requirements of service of general economic interest and related case law. Under this circumstances, the landmark case of the ECJ was stated in the decision on the conditions for public intervention by member states.⁶⁰⁹ As a result of provided elaboration on public intervention, the latter should seek to attain the general economic interest, comply with the principle of proportionality,⁶¹⁰ define public service obligations so they are transparent, non-discriminatory, and verifiable, and guarantee equal access.⁶¹¹ The established conditions for state intervention are applied to secure the access to universal service, such as public support for household consumers in energy poverty.

Based on the presented conditions of public intervention, the following focus is attributed on the grounds of legal justification to commission public intervention. The primary condition in this examination falls on whether the public intervention aims for general economic interest related to universal services that seeks to sustain the reasonable price of energy supply.⁶¹² Here, the condition concerns the price of supply of universal service without full acknowledgement of the affordable costs of energy service for household, which is the final objective of public policies, although the legislation on internal energy markets sets the objective for affordable universal services. This supports the principle of reasonableness to be the governing

⁶⁰⁴ The Queen, on the application of Vodafone Ltd and Others v Secretary of State for Business, Enterprise and Regulatory Reform. European Court of Justice (Case 58/08).

⁶⁰⁵ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - EU State Aid Modernisation, COM (2012)209: 4.

⁶⁰⁶ Through the State budget, special or exclusive rights, contributions by market participants, tariff averaging and solidarity-based financing. Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 13.

⁶⁰⁷ Communication from the commission - Delivering the internal electricity market and making the most of public intervention, C(2013) 7243: 3.

⁶⁰⁸ Communication from the commission - Delivering the internal electricity market and making the most of public intervention, C(2013) 7243: 3.

⁶⁰⁹ Federutility and Others v Autorità per l'energia elettrica e il gas. European Court of Justice (Case C-265/08).

⁶¹⁰ Federutility and Others v Autorità per l'energia elettrica e il gas. European Court of Justice (Case C-265/08).

⁶¹¹ Federutility and Others v Autorità per l'energia elettrica e il gas. European Court of Justice (Case C-265/08).

⁶¹² Federutility and Others v Autorità per l'energia elettrica e il gas. European Court of Justice (Case C-265/08).

criterion to assess the price adequacy to the structural costs and not the principles of affordability that lack clear components to be ascertained against. Exploitation of the term of affordability that is assigned with the social sensitivity is forced in the services of general economic interest, including universal service. The conditions of universal service do not consider the affordability elements of income, needs, or consumption practices to make a judgement whether the price is affordable to the household consumers. Hence, the justification for measures of support reveals the precedence of economic assessment against the social one in the legal judgement as well as in the policy design.

While the services of general economic interest are at the forefront of EU policy, its execution must follow the general EU principle of proportionality. For a proportionality test to succeed, there should exist a necessity to provide services of general economic interest at a requisite level, where otherwise it would fail to operate.⁶¹³ The EU case law leads the same path specifying that the scope of granted rights on undertaking should “not go beyond what is necessary” for the provision of services of general economic interest.⁶¹⁴ In fact, the grant of special or exclusive rights need deliberation in terms of necessity and proportionality.⁶¹⁵ Furthermore, the application of the proportionality principle conditioned to EU law provision is on services of general economic interest being enacted in specific field. Accordingly, in the pre-emption situation the notion of “the least restrictive means” applied,⁶¹⁶ and when no EU law provision contains services of general economic interest, the case-law refers to a “manifestly disproportionate” administrative law test.⁶¹⁷

Indeed, the member states maintain a wide discretion to impose public service obligations on electricity undertakings in pursuing objectives of general economic interest. In general, public authorities in member states have a mandate to confer on undertakings PSO when they see it necessary for a service provision in the general interest.⁶¹⁸ In the context of the electricity sector, a PSO may refer to “the security of supply, regularity, quality and price of supplies and environmental protection, including energy efficiency, energy from renewable sources and climate protection”.⁶¹⁹ Additionally, the PSO can be applied for the purpose of universal service, safety, security, interconnection of internal market as well as social and

⁶¹³ Wolf Sauter, *Services of general economic interest and universal service in EU law*, European Law Review 33(2) (2008): 178.

⁶¹⁴ The public authorities can grant such rights provided that they do not go beyond what is necessary to enable service providers to carry out their task of providing services of general interest under economically acceptable conditions. Albany International BV v Stichting Bedrijfspensioenfonds Textielindustrie, European Court of Justice, (Case 67/96).

⁶¹⁵ Criminal proceedings against Paul Corbeau, European Court of Justice, (Cases 320/91).

⁶¹⁶ Wolf Sauter, *Services of general economic interest and universal service in EU law*, European Law Review 33(2) (2008): 187.

⁶¹⁷ Wolf Sauter, *Services of general economic interest and universal service in EU law*, European Law Review 33(2) (2008): 186.

⁶¹⁸ Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 23.

⁶¹⁹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union L158 (2019), Art. 9(2).

territorial cohesion.⁶²⁰ Meanwhile, the PSO should avoid negative effect as fundamentally distortive measure manifesting in the accumulation of tariff deficits, limitation of consumer choice, poorer incentives for energy saving and energy efficiency investments, lower standards of service, lower levels of consumer engagement and satisfaction, restriction of competition, and fewer innovative products and services on the market.

Prior to the conferral of PSO on undertaking, national public authorities should consider what rights and obligations are to be granted to achieve the set tasks. The critical point relates to the assignment criteria and conditions for PSO. The undertakings may be obliged, by the way of the conferral of public service obligation in terms of special or exclusive right, to receive the provision of essential service according to pre-determined conditions.⁶²¹ On this point there are several possible assignment mechanisms, namely, tendering procedure or legal act⁶²² with due regard to the principle of transparency, proportionality, impartiality, and non-discrimination.⁶²³ In this context, it was argued that PSO implementation has to follow market principles, such as "by market parties playing by market rules within a regulatory framework".⁶²⁴

The public intervention seeks to compensate for the cost incurred by the designated undertaking in the provision of universal service. National regulators should conform to the rules on public procurement, the internal market or sectoral rules in line with sector specific regulation when defining compensation for such undertakings.⁶²⁵ While the EU law grants discretion to member states to decide the sources and extent of financial resources designated for the provision of universal service, the compensation for undertaking should be "under economically acceptable conditions".⁶²⁶ On that note, the commission fosters such aid by member states on measures to attain public policy objectives only when they induce the undertaking to act in such a manner that otherwise it would not.⁶²⁷ There is a threshold for the compensation not to be qualified as state aid as it should not affect trade between member states. However, the case law of EJC suggests that even a small amount of aid or undertakings of a small size may be prescribed to affect intra trade.⁶²⁸ Overall, the compensation on undertaking should be correspond to the requirement of

⁶²⁰ Green Paper on services of general interest (COM(2003) 270): 14.

⁶²¹ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest, COM(2004) 374: 8.

⁶²² Report on the commission - White Paper on services of general interest (2005/2101(INI)): 9.

⁶²³ Wolf Sauter, *Services of general economic interest and universal service in EU law*, European Law Review 33(2) (2008): 180.

⁶²⁴ Wolf Sauter, *Services of general economic interest and universal service in EU law*, European Law Review 33(2) (2008): 180.

⁶²⁵ Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 35.

⁶²⁶ Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 100.

⁶²⁷ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - EU State Aid Modernisation, COM (2012)209: 4.

⁶²⁸ Het Vlaamse Gewest (Flemish Region) v Commission of the European Communities, European Court of Justice, (Case T-214/95).

objectivity, transparency and proportionality.⁶²⁹ The designated aid should be complementary to private investment, not replace it.⁶³⁰

In general, the aid of member states should be designed based on landmark Altmark case, which established a four-part test for the aid to be compatible with EU law. The latter ECJ case law explained the conditions of good aid with reference to the compensation for service of general service provision that originate from "a public procurement procedure which allows for the selection of the tenderer capable of providing the service at the least cost to the community, or the result of a bench-marking exercise with a typical undertaking, well run and adequately provided with the necessary means".⁶³¹ Provided that the Altmark conditions are satisfied, the aid is not attributed to state aid and no framework rules are applicable.⁶³² However, the issue is to determine the common threshold and base for the assessment of cost incurred in the SGI provision because assessment has to take into consideration the number of factors of capital, operating, network, balancing, and associated external costs.⁶³³

⁶²⁹ Wolf Sauter, *Services of general economic interest and universal service in EU law*, European Law Review 33(2) (2008): 189.

⁶³⁰ Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - EU State Aid Modernisation, COM (2012)209: 4

⁶³¹ Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 77.

⁶³² Commission staff working document - Guide to the application of the European Union rules on state aid, public procurement and the internal market to services of general economic interest, and in particular to social services of general interest (2013) 53: 77.

⁶³³ Communication from the commission - Delivering the internal electricity market and making the most of public intervention, C(2013) 7243: 3.

VI. RESEARCH METHODOLOGY

6.1. FORMAL DECISIONS ON QUALITATIVE RESEARCH

Collecting data on the occurrences in the outside world and describing them do not translate into an explanation of underlying conditions for social function. The goal is to explain how the conditions relate to one another and what outcomes under the variation of relationships they produce. Thus, social science does not seek a descriptive investigation of events, but “the meanings given to events and the actions/interactions/emotions expressed in response, along with the context in which those responses and the events occur”.⁶³⁴ The prevalence and nature of interaction between persons and environment from the actors' perspective enables us to generate theory that describes and explains social phenomena. The perspectives are mirrors of what we feel about events and happenings, so the systemic documentation and analysis of constructed realities yields insights into what is going on from the people's view. Consequently, this tactic contributes to an understanding of phenomenon as it is conceived by the actors and reveals the problems to be addressed.

Despite the task of a theory in social science to explain a phenomenon, it accommodates the description mode for conceptual ordering. The latter invokes "the organization of data into discrete categories (and sometimes ratings) according to their properties and dimensions and then using description to elucidate those categories".⁶³⁵ Due to conceptual ordering, conceptual codes are infused with the account of underlying incidents from those codes derived. Furthermore, theory integration is enhanced when the findings are combined within the narrative. In such a case, the theorist could more easily grasp the theme of study, understand the specificities of phenomenon, and relate to the identified issues on the personal level. Nevertheless, such description is ancillary tool to the investigation of the phenomenon that presents the findings more vividly and forcefully because conceptualization and comparison of data are the main tools in the analysis procedures.

The task of an investigation in social science is to explain a phenomenon by identifying the pattern of actions and/or events as well as their relationships. In other words, the outcome of research should be a generated theory or theoretical explanation of a field of study. If the result of research is a theory, there should be "a set of well-developed concepts related through statements of relationship, which together constitute an integrated framework that can be used to

⁶³⁴ Juliet Corbin, "Taking an analytical journey", in Janice M. Morse *et al.* eds. *Developing grounded theory: the second generation*. (Routledge, 2009): 38.

⁶³⁵ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 19.

explain or predict phenomena".⁶³⁶ The researcher theorizes on data, but not on conceived ideas in line with conjectures and presumptions. In fact, theorizing is devised to explain in logic and systemic manner the prevalence of incidents and to establish links between them through statements of relationship.⁶³⁷ Notwithstanding the endeavor to generate a theory, the end result may be the theoretical explanation of phenomena in the case categories that are not dense and saturated. When a concept or a principle explains the incident(s) without an elaborate pattern of manifestation of incidents and established relationships, then a theory is not there or not integrated or the theoretical explanation of occurrences is only suggested.

The study of phenomenon in social science is inevitably framed by the bias of a respondent due to the sharing of one's personal views and experience with a researcher. This individuality and its plurality of meanings are taken into consideration in social science, which recognizes that the world constitutes multiple personally perceived realities informed by context.⁶³⁸ Following this assumption, the research follows constructivist and relativist ontology on the reality as the reflection of conferred meanings through the interpretation of incidents such as events, happenings, and acts. It must be acknowledged that the researcher likewise reflects a personal reality when immersed in the field of study and construes new meanings from other experiences. In an analogue to a researcher's bias on meaning of incidents, the subject, whose experience the researcher tries to document, conceptualize, and integrate, conveys their interpretation of reality with ascribed meanings.

The researcher seeks to understand what a process is and how it manifests in social realities. The social realities are the households' experiences of phenomenon under study, and they are multifaceted. Respectively, the research does not seek to verify an existing theory on energy, but rather to generate new theory on perceived social realities. Ontological views of researcher match relativists claim that "realities are comprehensible in the form of multiple, intangible mental constructions, socially and experientially based, local and specific in nature [. . .], and dependent for their form and content on the individual persons or groups holding the constructions".⁶³⁹ In fact, the researcher builds a theory on the interpretation of actors' experiences that are seated in specific context of time, space, social status, and personal experiences.

In trying to generate theory on social phenomenon with respect to the significance of electricity consumption to the households' well-being, the researcher agrees to the existence of

⁶³⁶ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 15.

⁶³⁷ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 25.

⁶³⁸ Jane Mills, Ann Bonner, Karen Francis, *The development of constructivist grounded theory*, *International Journal of Qualitative Methods* 5(1) (2006): 26.

⁶³⁹ E. G. Guba, Yvona S. Lincoln, "Competing paradigms in qualitative research," in N. K. Denzin & Y. S. Lincoln eds., *Handbook of qualitative research* (Thousand Oaks, CA: Sage, 1994): 110.

multiple realities that are the reflections of personal experiences of respondents. The realities or viewpoints refer to the how persons experience events and act accordingly in response.⁶⁴⁰ Thus, the actors share their experiences, conferred meanings, and responses to events affected by their background and context.⁶⁴¹ Likewise, the researcher concedes of their own experience in interpretation of data; the objectivity of findings is ensured through constant redound to one's own meanings conferred on incidents.

Keeping in mind the possible bias in data and its analysis, the epistemological suggestion of what constitutes knowledge calls for a tool that admits this and proceeds accordingly. On that account, knowledge is generated by availing of the subjective interpretation of events, process, and happenings. This is performed through the researcher and object of research, which are being interactively linked, producing scientific findings in the investigation process.⁶⁴² This is not a drawback in the objectivity of data because the bias, beliefs, and assumptions are rooted in the context and experiences of researched persons.⁶⁴³ The knowledge comes from the testimonies of actors of their perceptions and experiences. Such specificities are taken into account when considering the suitability of methodology to be employed in the investigation of social phenomenon. The purpose of the research is to collect, interpret, analyze, and incorporate the variety of experienced realities into a theory.

The method of grounded theory has its methodological provision with respect to its philosophical roots in determinism. Grounded theory recognizes the "determinism" being built in the theory in terms of actors' capacity to make conscious decisions in response to the existing conditions.⁶⁴⁴ The actors are urged to act and make decisions in response to external and internal conditions, such as emotional and physical states. Based on past experiences that mold the internal conditions, people make decisions or perform actions. This results in the building of knowledge about a reality. This view also attunes to constructivism, where the knowledge is not discovered but constructed by the person.⁶⁴⁵

⁶⁴⁰ Juliet Corbin, "Taking an analytical journey", in Janice M. Morse *et al.* eds. *Developing grounded theory: the second generation*. (Routledge, 2009): 38.

⁶⁴¹ Juliet Corbin, "Taking an analytical journey", in Janice M. Morse *et al.* eds. *Developing grounded theory: the second generation*. (Routledge, 2009): 39.

⁶⁴² E. G. Guba, Yvona S. Lincoln, "Competing paradigms in qualitative research," in N. K. Denzin & Y. S. Lincoln eds., *Handbook of qualitative research* (Thousand Oaks, CA: Sage, 1994): 111,

⁶⁴³ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 97.

⁶⁴⁴ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 5.

⁶⁴⁵ Juliet Corbin, "Taking an analytical journey", in Janice M. Morse *et al.* eds. *Developing grounded theory: the second generation*. (Routledge, 2009): 39.

6.2. QUALITATIVE RESEARCH IN LAW

The emerging new meanings in society on events, processes, actions, and happenings are in parallel with the changing and in some sense developing nature of law. The law seeks to conform to social realities that are constantly emerging, transforming, and vanishing. One of the inputs in the evolution of social realities in addition to the economic and technological innovations is social knowledge. As people interact with the outside world, they gain experience and form perspectives to events and happenings. This past experience determines the response to the encountered phenomena, and that encounter changes the phenomena, or their understanding of the latter. The evolution of knowledge is one step ahead of legislation, and it provides the understanding of social realities to be regulated. The regulation is not a self-fulfilling good, but should establish predictability for people and be devised to formalize the heterogeneous social realities on the abstract level.

The scientific findings should suggest the principles upon which the legal norms may be enacted or used in explaining the social meaning of ones in practice. While the norms in legislation due to its abstract character are explained by a court in the application of law, the theory that is grounded in data of social realities helps legal practitioners explain what the specific incident means to an individual. On that account, the law stops being formal justice and corresponds instead to the social realities of justice. Whereas the law is a product of knowledge about reality with accepted limitation, the task of social science is the generation of comprehensive and holistic understanding of a phenomenon that may be formalized within the legislation, employed for explaining legal norms or constituting a legal category.

With respect to this research, the aim is to add knowledge about energy services' significance to households' well-being. Additionally, the utility of research is that it introduces the systemic understanding of conditions causing problems in accessing energy services, what responses households make, and how they result in their well-being as well as what other implications the consequences have on the decisions and actions in response. Without knowing the full picture, energy service regulations are changed according to conjectures, assumptions, or outcomes of specific events.

Even though perceptions of energy change over time, we can contain it within the presence on the abstract level that sufficiently mirrors social realities. Although understanding of the phenomenon may change or be expanded according to the sample dictated by the research objective, the present study admits this but seeks social appraisal of electricity as people see and experience it in everyday life at home. The understandings of energy in general have been changing, it is shaped by technological development, social changes in perceptions of oneself,

others, and the environment, economic models, and information accessibility on energy. To an extent, energy consumption, at the beginning when the electricity was just started to be supplied to the households, was a luxury item for households as well as purposefully intended for the advancement of production automatization. Later on, it went through being a social need to a commodity. However, the perception of electricity has also changed with the recognition of social justice concerns in energy that take households' views and experiences into account in energy decisions. Based on the lack of recognition of social dimensions of energy, the methodology for this research captures social knowledge, conceptualizes, it and generates theory on household access to energy service with a view to social justice.

Given that the research seeks to determine the social significance of energy, electricity in particular, the social justice requirements of access to energy service should be considered. In that regard the justice is comprehensible as the balance of interest of households where each interests represent a value of equality, freedom, and dignity. These values are the reflection of the ones within the energy justice framework constituting coherency between doctrinal judgements and empirical evidence. Even though some of values were established through reasoned judgements in the conceptualization of energy justice, the research confirms the prevalence of interests as values in households' conferred meanings of distribution of supply, recognition of vulnerabilities, and the energy service significance to well-being.

Some interests may overlap or contain several values, yet justice reasonably could be claimed when the heterogeneous groups' interest are taken into account in energy decision-making. Proper appreciation of adhered values by households ensures the avoidance of poor living conditions from capability deprivation. While poverty related to a lack of adequate energy is an unacceptable state from a justice perspective, the consequences of not having enough energy service in a home have far-reaching negative effects in other spheres of life. The injustice stemming from a lack of access to energy service manifests in different forms. This requires a shift in the paradigm on energy as just another commodity into energy's being a phenomenon. Namely, energy has multiple meanings in society such as a need, a necessity, a service, and a comfort. It is also a commodity. When social justice in energy is contemplated, these meanings of energy attributed by the households should be incorporated into the conceptualization of full-fledged households' enjoyment of energy service and possible implication in failure of that.

In addition to justice demands, the social aspect in the social justice paradigm draws down the demands of justice into the social realities. For the concept of justice to be socially valid, the concept should be grounded in a social context. Therefore, the selection of grounded theory as a method for a research enables us to construe legal categories validated with evidence. The data on households' experience with respect to electricity supply, consumption, and benefit are

the evidence of social realities. Consequently, theorizing on households' access to energy service's significance to social functioning based on data analysis inputs social element in justice demands. Contrary to empirical research on the social meanings of energy, the findings would be the description of actual situation lacking plausibility, predictability, and explanation force. As the research seeks to produce a theory on access to energy service on the basis of which the legal categories are suggested, the data on conferred meanings to electricity itself, the underpinning conditions, responses to them and the consequences provide the evidence for judgement.

Despite the incorporation of individual perspectives into theory, this does not diminish the value of generated knowledge, as the conceptualization of incidents of diverse groups sustains the objectivity of findings. The conceptualization of action, process, and events as well as the recognized repetitions in the perceptions of the phenomenon make a theory relevant to the social life and let us explain similar instances under corresponding conditions. Given that the sample of respondents was chosen based on theoretical grounding, the gathered data represent the wide spectrum of possibilities and more properties in conditions, actions, and consequences.

6.3. OBJECT OF RESEARCH

As the theory building tool in social sciences, grounded theory sets the favorable methodological framework for researching the access to energy service by households. Altogether, the access to energy service is the process encompassing the distribution, supply, consumption, and benefit stages. Nevertheless, this categorization of energy system to a great extent draws upon the distinct technological process to be executed and forms relationships between stakeholders, but it does not represent the social perspective of how people understand energy consumption, conventions employing energy, the meaning of electricity, and perceived quality of life. To assess the current state of affairs in the energy system under the social justice requirement, the need is to build a theory on access to energy service by households from people's experiences and perspectives. Otherwise, the notion of social justice will always be readjusted under the technological and economic requirement for cost-and-benefit analysis or expert judgement of what seems logical.

The decision to use the abovementioned version of grounded theory as a methodological tool in the examination of the significance of electricity consumption practices to households' well-being was based on the fact that there are the links between different stages in access to energy service. These stages holistically constitute the integral process that explains each stage as an element in the process with regard to electricity consumption practices' being coherent series of action and the access as an overall process from the acquisition of electricity to

the benefit reaped by the household. Even though the study adheres to the Corbin and Strauss version of grounded theory to examine a phenomenon as a process, the underlying procedures and operations of methodology on classic grounded theory persist.

Due to the access to energy service being an ongoing endeavor built upon separate actions, the object of research is the process of access that constitutes of multiple actions. The access is here understood as the set of acts and activities performed in the energy chain by households and the benefit enjoyed from energy service. The household moves through all these stages from acquisition of electricity to usage of appliances to ensure the well-being demonstrating the process of access's being repeated constantly. Accordingly, the generated theory seeks to explain the conditions affecting households in acquiring and consumption of electricity, what decisions the household take in response, the variation in consequences.

6.4. GROUNDED THEORY (GT)

From the methodological perspective, grounded theory is attuned to the evolving environment and changing experiences of a person to generate a theory on a phenomenon. Thus, its "methodology is a living thing in the sense that it has to be given credit for the possessing the possibility of change".⁶⁴⁶ Even though the methods in grounded theory develop over time, its framework accommodates the particularities in the study of the process of acquisition and consumption of energy associated with the safeguard of social well-being. It must be noted that grounded theory is divided into traditional and developed modes of methodology; however, in this case the research adheres to the modern version of Corbin and Strauss. The former mode of grounded theory suggests that a theory emerges from the data untouched by the bias of researcher. The latter version of grounded theory recognizes researcher subjectivity in interpretation of conveyed actors' meanings on events, processes, and actions through personal experiences. Overall, grounded theory combines the methodological perspectives of recognizing bias and maintaining objectivity.⁶⁴⁷

Following the theory, legal categories are introduced that address the determined problems in the access to energy service by the households. The value of the theory is that it validates the construction of legal categories, whereas the suggested constructions are rooted in data, meaning that it is grounded in the conceptualized social reality of contemporary times and not assumed or presupposed as one sees fit. Additionally, a legal concept reasonably accorded

⁶⁴⁶ Juliet Corbin, "Taking an analytical journey", in Janice M. Morse *et. al.* eds. *Developing grounded theory: the second generation*. (Routledge, 2009): 37.

⁶⁴⁷ Jane Mills, Ann Bonner, Karen Francis, *The development of constructivist grounded theory*, International Journal of Qualitative Methods 5(1) (2006): 28.

with the social justice makes demands inasmuch as the social actors share their meanings of the considerable importance of electricity consumption to their capabilities to function in society. Failure to meet energy needs, is fallen living standards or the experience of poverty.

Grounded theory, as the name implies, is built on the data collected from the field of study guiding the theorizing process and the theory itself. The data constitute the incidents in relation to the phenomenon as conveyed by a person. Even though a person shares personal experiences and views with other, they are shaped by their present context. The latter input to the data requires the constant consideration of the emerging and changing social perceptions against entities, processes, events, materials, humans, and other living things. It may be argued that the theories are attached to the history and compelled to be reviewed.⁶⁴⁸ Meanwhile, the former refers to the fact that decisions taken are underlined with the previous causes experienced by a person. The knowledge, in terms of what people think they experience, is built upon previous experience. Rightly though, the knowledge constitutes new experiences and findings that are interpreted and conceptualized.⁶⁴⁹ The data for theory building are a person's knowledge about phenomenon itself and recognized broader social occurrences.

Grounded theory seeks to link the data with the theory that reveals the pattern of behavior. The theory should explain and describe the social phenomenon of interest as well as predict the possible decisions or actions if the corresponding conditions are met.⁶⁵⁰ Respectively, the suggested theory explains the what and how of the studied phenomenon. Because the object of study is changing due to the evolution of social conditions, grounded theory adheres to the processes of explanation and description.⁶⁵¹ The investigated process, on the one hand, may be divided into the stages, phases, factors, or steps of phenomenon; on the other hand, it is apprehended as the purposeful change of action in response to the prevailing conditions.⁶⁵² This is in contrast to the other versions of constructivist grounded theory research that focus on static action.

The generated theory consists of different forms of incidents characterized on the divergent abstraction levels and ascribed functions. As the data portray the incidence in the behavior under various conditions, codes are set to prescribe the incident to the abstraction and function. The former characteristic of an incident shows the incident being the category or the property of category that explains the phenomenon. Meanwhile, the latter refers to the relationship

⁶⁴⁸ Jane Mills, Ann Bonner, Karen Francis, *The development of constructivist Grounded Theory*, *International Journal of Qualitative Methods* 5(1) (2006): 28.

⁶⁴⁹ Juliet Corbin, "Taking an analytical journey", in Janice M. Morse *et. al.* eds. *Developing grounded theory: the second generation*. (Routledge, 2009): P 39.

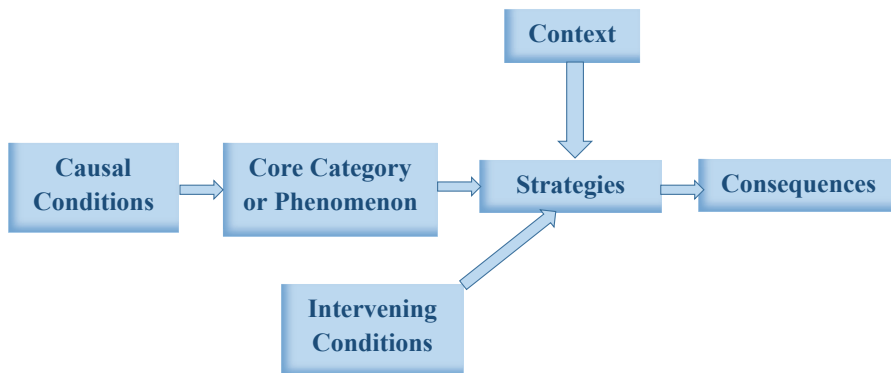
⁶⁵⁰ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 5.

⁶⁵¹ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 5.

⁶⁵² Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 10.

between the higher and lower level of abstraction for the theory building. In other words, grounded theory presents not only the conditions for the phenomenon to manifest, but also the interplay between the changing conditions and actors' decisions as well as the consequences of action and their response.⁶⁵³ Through the discovery of these relationships the theory is being integrated; it becomes dense and saturated.⁶⁵⁴

Figure 16. The framework of grounded theory



With regard to methodology, grounded theory has its framework of concepts that form the structure of the theory. The basic units of grounded theory are the concepts. Notwithstanding the concept's role in the theorizing, the significance is their development into properties and dimensions.⁶⁵⁵ More broadly, the concepts are identified, developed, and related to build an integrated theory.⁶⁵⁶ Initially in the identification of the data, a concept considered provisional and just is later recognized to fit a conceptualization role due to a constant repetition or significant absence in the data.⁶⁵⁷ The concepts are in the developing mode of theory building until they reach the explanation force of any aspect of phenomenon.

⁶⁵³ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 5.

⁶⁵⁴ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 35.

⁶⁵⁵ Juliet Corbin, "Taking an analytical journey," in Janice M. Morse *et. al.* eds. *Developing grounded theory: the second generation* (Routledge, 2009): 52.

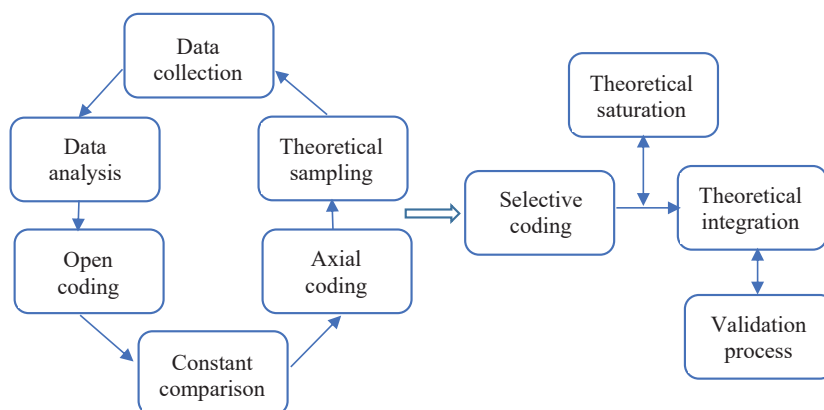
⁶⁵⁶ Strauss, Anselm L.; Corbin, Juliet M., *Basics of qualitative research: techniques and procedures for developing Grounded Theory*, (Sage Publications, Inc., 1998): 13.

⁶⁵⁷ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 7.

6.5. THE PROCESS OF THEORY GENERATION

Theorizing is performed by constant comparison and coding of acquired data from the field in the form of interviews leading to the generation of theory. The process of theory building to a great extent circles around three interchangeable operations: data collection, constant coding, and analysis of data.⁶⁵⁸ Even though the strict rules do not apply to the generation of grounded theory, there are procedures that set the guidelines for the researchers' activities. Grounded theory as a method in a qualitative research designed for the collecting of raw data, analyzing, conceptualizing and generating theory. The benefit of grounded theory rests in the theory's embeddedness in data that "offer insight, enhance understanding, and provide a meaningful guide to action".⁶⁵⁹ In short, grounded theory draws upon "the generation of emergent conceptualizations into integrated patterns, which are denoted by categories and their properties".⁶⁶⁰ The concept grounded in data is built around the core category in a view of explaining the pattern of behavior under the identified conditions.⁶⁶¹ In the light of the given framework of grounded theory, the following parts elaborate and articulate on the methodological requirements upheld in the theory building on access to energy services by household consumers.

Figure 17. The process of a theory generation under grounded theory methodology



In general, the procedures is as follows: data collection, data analysis, open coding, constant comparison, axial coding, and theoretical sampling, and this process is repeated until the core category may be derived. After the core category is established, the selective coding is

⁶⁵⁸ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 43.

⁶⁵⁹ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 12.

⁶⁶⁰ Barney G. Glaser, *Conceptualization: On theory and theorizing using grounded theory*, International Journal of Qualitative Methods 1 (2002): 24.

⁶⁶¹ Barney G. Glaser, Judith Holton, *Remodeling Grounded Theory*, Forum: Qualitative Social Research 5(2) (2004): 11.

performed to reach theoretical saturation, that is, the capacity to explain the phenomenon. If the latter state may be recognized, then the theoretical integration proceeds to prescribe the categories to the particular component of grounded theory. These procedures are employed throughout the research in close relation, sequentially and simultaneously.⁶⁶² For the purpose of ordered structure of basic operations, either of them is conferred with a particular function.

6.5.1. Data Collection

The data collection starts with the first interview followed with analysis of the acquired data. As it was noted, the data collection goes hand-in-hand with comparative analysis, so there are close methodological ties between these operations. Thus, the comparative analysis commences with the obtaining of new data.⁶⁶³ However, the tactics of gathering data are not preconceived for the following interviews in advance, which is referred to as “selective sampling” by Schatzman and Strauss. The decisions of the furtherance of collection of needed data are made on analytical grounds under the qualitative analysis method of theoretical sampling.⁶⁶⁴ Therefore, leading questions of second and later interviews are amended to guide for the detection of more divergences, contingencies, and qualifications for the emerging conceptual code.⁶⁶⁵ The result is data-driven data collection because the collected data raises questions to be answered with new data.

The initial sampling is performed to determine the possible vulnerabilities of household consumers' access to energy service that may face under-consumption. Even though the initial sampling outlines where the data gathering starts, it concomitantly guides the theoretical sampling not with the characteristics of actors, but with derived hypotheses for possible vulnerabilities to adequate access to energy service. Following on that, the initial set of sampling requirements for respondents was set that guides the research to reveal the heterogeneity in experiences for different household consumers. As the personal state considerably relates to household consumer characteristics of age, education, employment, members of household, the sampling requirements are set as:

- Households under research: The focus of the research is a person or a unit of persons living in a single dwelling that consumes electricity for personal needs and uses energy service

⁶⁶² Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 23.

⁶⁶³ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 6.

⁶⁶⁴ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 38.

⁶⁶⁵ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 26.

for well-being purposes. The commercial and professional activities are discarded from the research, except where the electricity is consumed in a home for performing working functions.

- Household by type: The theoretical sampling resulted in groups of household consumers: single-person, two adults with children, two adults both above sixty-five and without children, one adult with at least one child, and two adults with three or more children.
- Age: The sampling of age segmented into intervals from twenty to thirty and so forth until sixty to seventy intervals. The variation in groups gives more representativeness of data on the experience of divergent social groups with respect to actions and views and given meanings of incidents. As a person gets older, their lifestyle changes, so the consumptions level and practices alter. The same is true with the understanding of adequate levels and forms of well-being.
- Education: The researcher recognizes the effect of a person's education on their perception of energy, and electricity in particular. The household consumers reasonably do not understand the technical operation of electricity supply due to its specificity; however, they form an understanding of what it means to them, their accustomed lifestyles, and perceived quality of life benchmark. The knowledge of other spheres of life is part of the person's assumed knowledge in a similar stance as the experience contributes to the person's view. Accordingly, education characteristics of respondents in initial sampling accord variety in understanding what electricity is as a social construct.
- Employment: The latter sampling criterion correlates with education under the level of acquired knowledge presumption; still, the form of employment determines the needed energy services at home and electricity consumption levels. For instance, working at home all day results in more energy consumption than working in an office. Likewise, unemployment influences the understanding of energy service as per their well-being based on their decisions and acts by using more or less electricity as well as energy services.

Thus, the pattern of data collection presents the overall view of the research. However, the initial sampling was concluded with more consideration on household consumers' characteristics than theoretical assumptions that hold employment and the type of household to be the underlying characterizing attributes of respondents in initial interviews. Because the initial sample was constructed to observe the respondents with vulnerabilities that have a higher possibility of being troubled with meeting energy needs, the decision was made to build knowledge on household consumers' experiences from the distress, inconveniences, and hardships caused by disturbance in supply. The collected data in the initial interview enabled us to set

provisional concepts on the meaning of electricity, personal responsibilities, patterns of consumption, requirements for supply, and assumed well-being standards.

Table 3. Example of consumption practices

<i>Respondents</i>	<i>Excerpts</i>	<i>Provisional codes</i>
R2. Disabled person. Higher school diploma. Unemployed.	I could not say that we save electricity. We consume it according to our needs.	Uphold of personal habits
R7. Single mother. University degree. Designer	I think everything is fine. We do as we are accustomed.	Inertia in consumption
R8. Spouse. University degree. Lawyer.	Wasteful. It is not that we save electricity. Sometimes the lights are on everywhere. It is done for the convenience.	Useless usage of appliances

The data collection is theory guided and evolving in its underlying questions. With theory-guided sampling, it is assumed that the new target groups are selected by their theoretical relevance, boosting the emergence of categories with sufficient variety and specificity of their properties.⁶⁶⁶ Although the data represent actors’ different views and experiences, they may be grouped under common conceptual peculiarities. These views are slices of data assisting in the development of categories and their properties.⁶⁶⁷

The data collection was conducted through semi-structured in interviews with open questions on a particular subject. With the answers given to the presented open question, supplementary questions were given to receive more information on what, how, when, where and why. Even though the end of interview was not predetermined, the main points of significance guided the interview process. This type of interview adheres to the narrative mode of interviews that focus on respondents’ story emerging spontaneously in response to the maintained theme. This type of interview enabled the respondents to give meaning to events and convey their views and experiences. Furthermore, the attention to detail in the presented story produced new knowledge of the phenomenon.

The semi-structured interview was designed according to the spheres of interest in the process of access to energy services by household consumers. The goal was to collect the views and experiences related to the respondents’ perception of electricity and of themselves as consumers, their consumption motivation, what rights and responsibilities they assume to possess, and what injustices they have experienced. As the research seeks to present the social perspective

⁶⁶⁶ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 49.

⁶⁶⁷ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 65.

of electricity, the personal relationship with electricity enhanced the understanding of the causal conditions of the process, the context, the intervening conditions, the actions taken in response to the challenges in the process, and the final consequences.

With that in mind, the respondents’ answers to the question on their understanding of electricity and its characteristics revealed how household consumers interact with electricity through the energy services and the underlying motivations for their actions. Meanwhile, the questions on the perceived rights and responsibilities related to electricity by respondents disclosed the situation where they possess a right to enjoy constant and adequate energy services and share less binding responsibilities. With respect to the motivation of consumption modes and types, the research sought to indicate the patterns of consumption shared by the respondents. Lastly, the research collected data on the experiences of injustice related with electricity distribution, supply, and consumption. Based on the mentioned key areas, the semi-structured interview was built as follows.

Table 4. Semi-structured interview theme questions

No.	<i>Theme questions</i>
1.	How do you understand electricity as a household?
2.	Which characteristics are the most important? Why?
3.	Which characteristics best describe you as household consumers? Why?
4.	What factors influence your electricity consumption practices? Why?
5.	What responsibilities in electricity consumption do you observe? How?
6.	Which household needs are satisfied with the electricity consumption? How?
7.	What measures do you implement for the security of supply? How?
8.	How would you describe a situation when you may not satisfy household needs that requires electricity consumption?
9.	How do you understand the right to access to energy services?
10.	Who is responsible for the assurance of household's access to energy services?
11.	What instances do you consider unjust with regard to electricity consumption?

The decision to choose a narrative type of interview was based on the object of research. Whereas the research aimed to understand the significance of access to energy service to household consumers' well-being, it was important to document the respondents' story of energy consumption at home, impediments to adequate access to energy service, and challenges to their well-being. The details in respondents' interviews were important to the generation of

scientific findings that elucidated the new dimensions to incidents and implied meanings. The main goal was to set the comprehensive and detail as possible story on the process of access to energy service.

Overall, the researcher conducted fourteen semi-structured interviews with the persons that represent a unit of household consumers. The respondents' age varies from the low twenties to high sixties. Most of them had higher education, and a few had high school diplomas. The researcher gave due consideration to the representativeness of different household consumers groups. Therefore, the status of households encompasses the disabled persons, one adult with children, single persons, two adults with two children, and adults over sixty-five. With regard to employment, most respondents were employed or performed business activities; just one was unemployed. Those that were employed engaged in management positions and lower-level employees as specialists and unqualified workers; self-employed respondents engaged in private business and owners of businesses.

6.5.2. Data Analysis

The analysis of collected data underpinning the theoretical sampling is a distinct process in itself. It may be described as the constant comparison between differences and similarities of occurrences.⁶⁶⁸ For the purpose of theory building, comparison between incidents alone is of little benefit. Based on the comparison of facts, the researcher may describe the event, process, or action, but lack conceptualization of patterns that allow explaining the phenomenon itself. This is quite a challenge in the legal field of research, which draws upon the comparative method to the great extent. In contrast to the factual comparison, the methodology of grounded theory qualifies the explanation of a field of study. To that end, the comparison is the analysis procedure carried out between facts and later between concepts performed by turns or in parallel.

The analysis techniques are performed in several stages where the initial comparison proceeds between incidents guided by emerging concepts and later moves to theoretical comparisons. The concept-indicator model refers to the lower level of analysis between incidents designated for the discovering of new characteristics of conceptual code, whereas the theoretical comparison is meant to compare between the new concept on patterns from data with the provisional concepts. The comparison of incidents uncovers the similarities and differences so they may be classified them while theoretical comparisons disclose the properties and dimensions.⁶⁶⁹

⁶⁶⁸ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 9.

⁶⁶⁹ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 94.

Regarding the concept-indicator model, the latter explains how the conceptual coding executed. The researcher constantly compares the indicator to other indicators derived from the data to uncover the differences, similarities, and coherence that help identify the conceptual code.⁶⁷⁰ After the initial comparison of indicators in light of a conceptual code, the next step is to compare the additional indicators to the emerging concept to document the properties of categories. Comparing the incidents in data also allows us to discover the properties of categories that foster the generalization of properties and explanatory force.⁶⁷¹ The search for new incidences guided by the emerging concepts is called “theoretical sampling.”

It must be noted that the comparison activity constantly moves from one level of analysis to another. This method contributes to conferring more specificity on the category.⁶⁷² The constant comparison of occurrences reveals the properties and dimensions and their variations in underlining theories’ relevance and explanation force. Analytical levels are approached with different techniques in the analysis of data. While a factual comparison rests on classification of incidents, a theoretical comparison employs the flip-flop technique or systemic comparison, namely, "close-in" and "far-out" comparisons, to highlight the properties and dimensions of categories.⁶⁷³

The operation of conceptual coding is conditioned to the theoretical saturation of a category. The sampling is repeated through interchangeability of indicators until theoretical saturation is accomplished and no further result can be acquired from the data.⁶⁷⁴ The literature elaborates on a benchmark of theoretical saturation denoting that a category under consideration is saturated provided that a coding of data does not induce new information on properties, dimensions, conditions, actions/interactions, or consequences.⁶⁷⁵ The theoretical saturation may be claimed when the theorizing is reasonably considered sufficiently comprehensive,⁶⁷⁶ meaning that the data analysis and collection performed collectively do not bring any new results for the properties of the category.⁶⁷⁷

Even though the literature suggests that the theoretical saturation reached when no new evidence explaining the category may be produced, in fact, it is more than that. It is bounded with other operations in a way of forming the holistic approach to the theory building. On that account, the saturation claimed when the empirical limits of the data are reached, the theory is

⁶⁷⁰ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 25.

⁶⁷¹ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 24.

⁶⁷² Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 12.

⁶⁷³ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 94.

⁶⁷⁴ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 25.

⁶⁷⁵ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 136.

⁶⁷⁶ Lisa M. Given, *The SAGE Encyclopedia of Qualitative Research Methods*, (SAGE Publications inc., 2008).

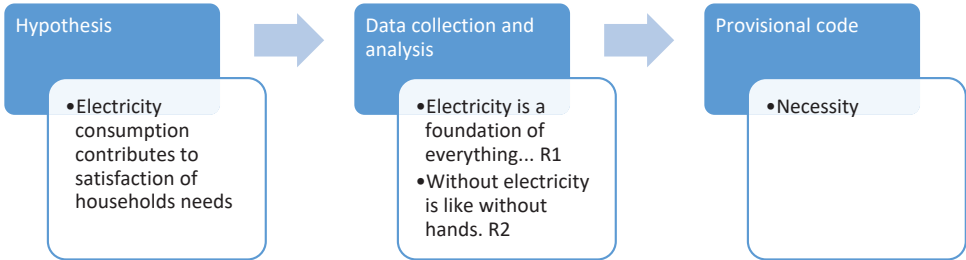
⁶⁷⁷ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 61.

then integrated to be in line with theoretical sensitivity,⁶⁷⁸ which calls for the researcher to be sensitive to the emerging issues and take due regard of their empirical implications.⁶⁷⁹ The competence to theorize on data is a personal capacity, unlike the operation of theoretical saturation in the grounded theory framework.

Nevertheless, emphasizing theoretical sensitivity forces us not only to follow operations and techniques, but also affects how one approaches theoretical abstractions. The suggested capacity is asserted in generating and relating concepts into a new theory or development of existing theory.⁶⁸⁰ When the researcher decides that the discovered concepts in theory building or development adequately represent the specificity and variations in the category, saturation may be claimed. This does not end the generation and development of theory but signals the researcher to focus on finding new categories or on the saturation of other recognized categories.

Respectively, the findings should be conceived through induction inquiry, elaborated by deduction of implication from hypothesis and verified in its validity.⁶⁸¹ The inductive inquiry starts with setting the provisional hypothesis based on the personal experience and knowledge.⁶⁸² Under the hypothesis the data are being collected and analyzed, so the basic units of grounded theory are set. Grounded theory being grounded in the data rests on the inductive analysis to the extent of gathering first data on which the preliminary codes are set. The induction method facilitates in "deriving concepts, their properties, and dimensions from data".⁶⁸³

Figure 18. Inductive method

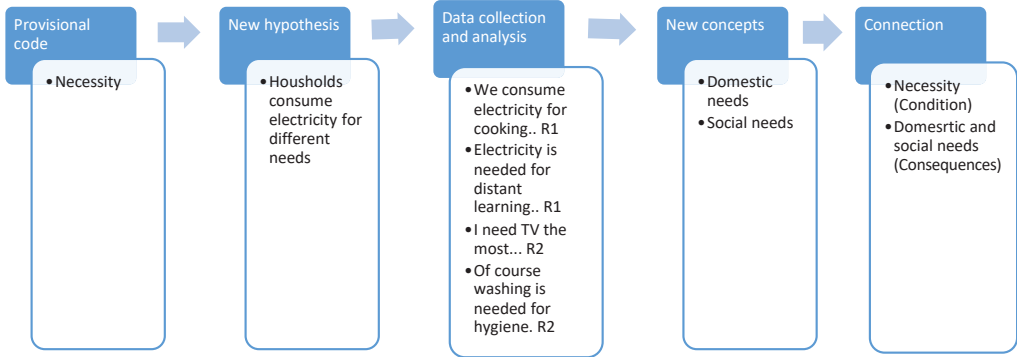


In contrast, the deduction method is a top-down analysis from the provisional conceptual codes to new hypothesis and then new data. The deduction draws upon contemplation of implications of theoretical hypothesis for the further data gathering.⁶⁸⁴ In other words, deduction method devised for "hypothesizing about the relationships between concepts - derive

⁶⁷⁸ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 62.
⁶⁷⁹ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 12.
⁶⁸⁰ Barney G. Glaser, Judith Holton, *Remodeling Grounded Theory*, *Forum: Qualitative Social Research* 5(2) (2004): 12.
⁶⁸¹ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 12.
⁶⁸² Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 12.
⁶⁸³ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 22.
⁶⁸⁴ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 12.

hypothesis from data".⁶⁸⁵ Additionally, the selective coding through analytical memos ensures the emerging theory integration.⁶⁸⁶ Even though the modes of inquiry are not performed sequential as presented, the verification naturally comes after the conceived hypothesis and consideration of implication of theoretical hypothesis when the new data and coding verifies the discovered linkage in concepts.⁶⁸⁷

Figure 19. Deductive method



The methodology contains the specific stages of inquiry that need to be performed in order to be grounded and valid. The researcher may choose to test a theory under the deductive method or construct their own through the collection and analysis of raw data by an inductive approach. Depending on the task of study, one of those may be chosen or both may be integrated in the same research. Regarding grounded theory, both methods are integral parts of data analysis. The uniqueness of grounded theory is the interaction between inductive and deductive research approaches in theorizing conceptual codes and their relations.⁶⁸⁸

6.5.3. Open Coding

The data reveal the actions or behaviors that form the analytical indicators, but not factual indicators, to complete the conceptual density. This is done to enrich the understanding of phenomenon by discovering the emerging conceptual codes of higher-level abstraction and the existing relationships between the categories. The conceptual density of categories and subcategories is significant in grounded theory because its attainment warrants the generated

⁶⁸⁵ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 22.
⁶⁸⁶ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 33.
⁶⁸⁷ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 17.
⁶⁸⁸ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 22.

theory with valid explanatory power.⁶⁸⁹ Here, the category as conceptual elements of higher abstraction represent the phenomenon itself, whilst the subcategories explain the manifestation of the phenomenon in term of "when, where, why, who, how, and with what consequences".⁶⁹⁰ It must be noted that the proceedings for theoretical sampling correlate with the theoretical density in a way of benchmarking the relevance of concepts in explaining and describing a phenomenon. Consequently, the constant shift of focus for new data to the new groups of population, events, or activities is done to achieve the theoretical density.⁶⁹¹

In line with the methodological requirements, the research in initial stages sets the provisional codes that emerge to the higher level of abstractions. After the first interviews were conducted, the provisional codes of necessity were set to code the significance of electricity to the assumed quality of life. Later in the research, this view was constantly highlighted by respondents when approached with the question of what electricity means to them in their household environment. Having this strong data representation, the provisional code of necessity persists throughout the analysis process.

Table 5. Sample of provisional coding (PC)

<i>Respondent</i>	<i>Excerpt from interview</i>	<i>Provisional code</i>
R1	Every person should have electricity. It is necessary. In my view it is necessary and needed, therefore, I should have it.	Necessity
R2	Electricity is needed in the household. Without electricity is like without hands. It is used for oven and water heating. If there were no electricity, it would be bad. It is necessary.	Necessity
R3	It is all electric appliances. For this era it is necessity.	Necessity

Another important suggestion for the concept is its relevance to the incident it represents. Essentially, the concept, as grounded theory implies, should be grounded in the data. Without the proper grounding, the concepts would be conjectured, resulting in being irrelevant to a particular situation or forced to fit.⁶⁹² Although the link between the data and theory is a concept, the latter represents conceptually the pattern in data and devised for theorizing. It is argued that "the essential relationship between data and theory is a conceptual code".⁶⁹³ Therefore, the failure

⁶⁸⁹ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, Qualitative Sociology 13(1) (1990): 14.

⁶⁹⁰ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 125.

⁶⁹¹ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 38.

⁶⁹² Barney G. Glaser, *Conceptualization: On theory and theorizing using grounded theory*, International Journal of Qualitative Methods 1 (2002): 19.

⁶⁹³ Barney G. Glaser, Judith Holton, *Remodeling Grounded Theory*, Forum: Qualitative Social Research 5(2) (2004): 13.

to establish logical thread in conceptual code would impede the verifiability of the theory in testing the methodological and logical consistency. In fact, they are the analytical representation of the incidents, events, and happenings designated for the theory building.⁶⁹⁴

The methodological rule of thumb suggests that data gathering and coding should be performed in tandem, so the coding is to be performed after the new data are collected. The coding paradigm enables us to detect indicators of strategies and tactics and interaction among actors, conditions, or consequences.⁶⁹⁵ To that end the gathered data start to be coded with the open coding for the provisional indicators and categories relevant to the questions and hypothesis.⁶⁹⁶ Open coding consists of fracturing and breaking the data apart analytically in view of generating theoretical categories.⁶⁹⁷ The codes are labeled by in vivo codes or social constructs to reflect what is going on in the field. The type of label should take into account the benefit of analytical usefulness as to how it relates to others and the conferred meaning by the respondent versus the relevance of social science's recognized categories.⁶⁹⁸ One way or the other, the code should enable it to be referenced to, focused on, and easily remembered.⁶⁹⁹

Although a view with final concepts and relationships is set after the open coding, the provisional relationships are introduced from the beginning of data analysis. Namely, when the first codes emerges, the properties of category being sought that fit are condition, strategy, interaction, and consequence.⁷⁰⁰ Initially, they are provisional conceptual codes with implied meanings and connectivity with a phenomenon. As the investigation progresses, the qualification of incidents through concepts might be altered or discarded. This process is facilitated by constant memoing in doing grounded theory.

In doing the extensive research in the field of social study using grounded theory, the amount of data may be overwhelming. Therefore, the system should guide the research process in theory building and development. The researcher is advised to write memos on the outcomes of analytical processes where the categories, properties, and hypotheses are set and amended as the research proceeds with new data and insights.⁷⁰¹ The theoretical notes may have more specific purpose to document the statements of relationships of categories.⁷⁰² In the later stage of investigation the researcher may come back to check whether the conceptual relationships still stand, have altered, or have ceased due to being provisional.

⁶⁹⁴ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 7.

⁶⁹⁵ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 28.

⁶⁹⁶ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 28.

⁶⁹⁷ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 29.

⁶⁹⁸ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 34.

⁶⁹⁹ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 34.

⁷⁰⁰ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 64.

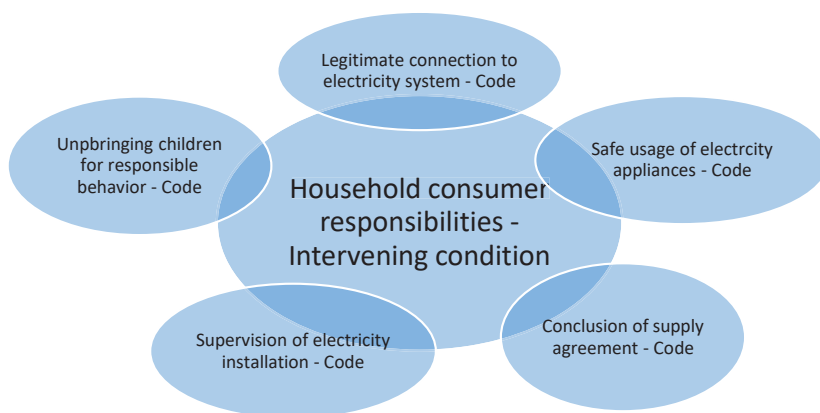
⁷⁰¹ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 10.

⁷⁰² Barney G. Glaser, Judith Holton, *Remodeling Grounded Theory*, *Forum: Qualitative Social Research* 5(2) (2004): 18.

6.5.4. Axel Coding

After the open coding is completed, the axel coding of the paradigm items begins. At this stage the categories are grouped within the categories and subcategories establishing the thread connecting them into the categories and their properties and dimensions.⁷⁰³ In essence, the axel coding enables us to establish the relationships between and among categories⁷⁰⁴ as well as how categories crosscut.⁷⁰⁵ The axel coding links subcategory to category and category to category.⁷⁰⁶ Before the relationships are established, the hypotheses are amended in accordance with the discovery of the occurrences of phenomenon.⁷⁰⁷ Due to the set of conceptual links, the axel coding is the vivid expression of the revealed elements interaction in the paradigm among and between them.

Figure 20. Axel coding



On that account, the concepts end up as properties or categories and in some cases are discarded for irrelevance or a lack of explanation power. Provided that the concepts are more abstract, higher-level, and related to the phenomenon, they may form the category that represents concepts.⁷⁰⁸ Otherwise, the concept is ascribed as the property of a category. The relationship among them and with the framework may be explained as a category's being a conceptual element of grounded theory, whereas a property is a conceptual element of a category and lower-level

⁷⁰³ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 123.

⁷⁰⁴ Anselm L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 32.

⁷⁰⁵ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 124.

⁷⁰⁶ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 126.

⁷⁰⁷ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 11.

⁷⁰⁸ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 7.

indicator of phenomenon.⁷⁰⁹ Either of conceptual elements stems from the collected data in the field of study. Consequently, the categories and their properties in grounded theory are underpinned with the evidence.⁷¹⁰

Table 6. The sample of surviving PC and development from PC to categories

<i>Respondent</i>	<i>Provisional codes</i>	<i>Properties</i>	<i>Categories</i>
R1.	Necessity	Necessity	Electricity characteristics
R5	Habitual consumption	Quality of life	Individual subjective well-being

The conceptual labeling of conceptual codes takes into account what purposes it will be employed for. However, the methodological guidelines require them to be "abstract of time, place, and people, and that concepts have enduring grab".⁷¹¹ The level of abstraction of the concept, in particular, the core category, determines the applicability of generated theory.⁷¹² If it is very abstract, the applicability capacity will be weakened. Meanwhile, the lower level of abstraction risks being the reflection of actions or representing just the piece of whole picture of the phenomenon. Nevertheless, they must be "analytical sufficiently generalized" to characterize the incident and adequately "sensitizing" to relate to other people's personal experiences.⁷¹³ Thus, the level of abstraction with respect to conceptual code is guided by the purpose of research. Respectively, the generation of theory pertains to the study of the objective and tasks, which inevitably results in the discarding of some incidences of weak relevance to the study design.

6.5.5. Theoretical Sampling

Theoretical sampling is a cornerstone in the generation of grounded theory. Its purpose is to uncover the categories and their properties as well as relations among them.⁷¹⁴ Also, it enables us to ensure the representativeness and consistency of theory by "specifying phenomena in terms of conditions that give rise to them, how they are expressed through action/interaction, the consequences that result from them, and variations of these qualifiers".⁷¹⁵ The literature defines it as "the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyses his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges".⁷¹⁶ It must be noted that the sampling is founded on

⁷⁰⁹ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 36.

⁷¹⁰ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 23.

⁷¹¹ Barney G. Glaser, *Conceptualization: On theory and theorizing using grounded theory*, *International Journal of Qualitative Methods* 1 (2002): 3.

⁷¹² Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 15.

⁷¹³ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 39.

⁷¹⁴ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 62.

⁷¹⁵ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 9.

⁷¹⁶ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 45.

theoretical grounds by employing concepts and their characteristics and instances.⁷¹⁷ In other words, the data gathering is controlled by the emerging substantive or formal theory.⁷¹⁸

According to methodological requirements of grounded theory, the sampling alters in the progression of research. The sample is not drawn from the characteristics of the group of population, and the same applies to the initial sample because it was formulated on the basis of the occurrences of the phenomenon.⁷¹⁹ After the first data are gathered, the sampling was conducted in line with the methodological requirements of grounded theory under the theoretical sampling procedure. The following sample was based in the derived hypothesis from the data about the possible forms or variations in incidents. The same operation had been reiterated throughout the research, where the data and new hypotheses guided the sample.

Table 7. Provisional concepts after first interview with R1

<i>Spheres of interest</i>	<i>Excerpts</i>	<i>Provisional codes</i>
Meaning of electricity	Electricity is a foundation of everything, because everything is connected to . . . even the water, refrigerator. . . If the electricity ceased, then we would be lost. There would be no heating, no water, nothing.	Necessity
Supply	When there is no electricity, then the person may not satisfy the ones needs and become angry. The one experience some kind of poverty.	Consequence of supply failure
Consumption	The practices that are more energy intensive like men work we prefer to perform on the weekend. However, this is not directly linked with the cheaper price of supply. On weekends we do more homecare, cleaning, washing and cooking.	Habitual consumption
Responsibilities	Maybe it is a responsible behavior with electricity that I forbid children to stick fingers into the sockets and change of the turn on/off devices.	Upbringing children for responsible behavior
Well-being	It would be catastrophic. It would be cold in the winter and no water. Children would cry that they are unable to access distant learning classes due to impeded internet connection. The children would not be able to watch cartoon.	Disruption of everyday life

Due to the theoretical sampling that guides the furtherance of data collection, the following sample was compiled of household consumers less likely to experience energy deprivation at home. This group was set up of respondents where one person in the household has

⁷¹⁷ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 8.
⁷¹⁸ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 45.
⁷¹⁹ Imelda T. Coyne, *Sampling in Qualitative Research. Purposeful and Theoretical Sampling; Merging or Clear Boundaries?*, *Journal of Advanced Nursing* 26(3) (1986): 629.

a high education and good employment record. Under this sample falls the household consumers with one person highly educated and employed as a business consultant as well as being a business owner or lawyer.

After the researcher conducted interviews with assumed vulnerable household consumers and affluent household consumers, the collected data from different groups showed the variation in meaning on electricity, consumption practices, and divergence in perceived well-being related to energy.

Table 8. Similarities in household consumers' views

<i>Respondents</i>	<i>Excerpts</i>	<i>Provisional codes</i>
R1. More than four persons household. University degree. Psychiatrist.	Electricity is a foundation of everything, because everything is connected to . . . even the water, refrigerator . . . If the electricity ceased, then we would be lost. There would be no heating, no water, nothing.	Necessity
R2. Disabled person. Higher school diploma. Unemployed.	Electricity is needed at households. Without electricity is like without hands. It is used for oven and water heating. If there were no electricity, it would be bad. It is necessary.	Necessity
R4. Single mother. University degree. Odonatologist.	Of course in this era without electricity it is impossible to live, since there are so much appliances exist in the household.	Necessity
R5. Spouse. University degree. Lawyer.	Electricity is needed everywhere and always, without it the one could not live.	Necessity

The results of the interviews allows us to compare the views and experiences of vulnerable and affluent households. This comparative analysis shows the difference and similarities between acquired data, whereby the variation of incidents may be indicated for the purpose of theoretical saturation. Also, the prevalence of the incident gives more explanation force to the derived concept from the data. Some of the incidents and meanings overlapped or were reiterated in the interviews when respondents referred to the significance of electricity to their understanding to the standard quality of life. The collected data yielded insights into the complexity and multiplicity of conditions leading to energy-related issues, problems, and happenings. To address the latter, the household consumers met energy needs by employing efficiency or alternative supply solutions, and in some cases they had no means to do anything except to wait for the elimination of technical issues in transmission or distribution systems.

Table 9. Differences in household consumers views

<i>Respondents</i>	<i>Excerpts</i>	<i>Provisional codes</i>
R1. More than four persons household. University degree. Psychiatrist.	I pay the bills once in a few months so that no one cuts off the supply. What we consume the respective bill we pay.	Households' responsibilities
R2. Disabled person. Higher school diploma. Unemployed.	I pay every month. I do not have outstanding debts.	Households' responsibilities
R6. Spouse. University degree. Lawyer.	Safety is first. Compliance with rules. Otherwise, you can make a lot of troubles. You must act responsibly. I am responsible for maintenance and safety.	Households' responsibilities
R8. Spouse. University degree. Lawyer.	Responsible consumer I suppose, as the assumed responsibility to turn off the appliances when leave the home for longer periods.	Households' responsibilities

6.5.6. Selective Coding

Procedural guidelines of grounded theory lay out steps to adhere to, but not to be constraining in the research. Accordingly, the procedures for coding are set to lead through the open, axial, and selective coding. Thus, the theorizing to the great extent ends with the selective coding that integrates and refines a theory.⁷²⁰ To that end, the final coding focuses only on "those variables that relate to the core variable in sufficiently significant ways as to produce a parsimonious theory".⁷²¹ This means that the proceeding data analysis is centered on the emergent core category.

The core category is a higher level of concept, which empowers us to generate the relevant and working theory. The latter relates to the properties, dimensions, categories as the incidences of core category performing the unifying function category. Thus, "the core category is central . . . appears frequent in data . . . relates easily to other categories . . . clear implications for more general theory . . . maximum variation."⁷²² This characterizes the core category is a conceptual element of higher abstraction level and the operational function in the generation of theory. On that account it may be said that the core category furthers theoretical sampling and

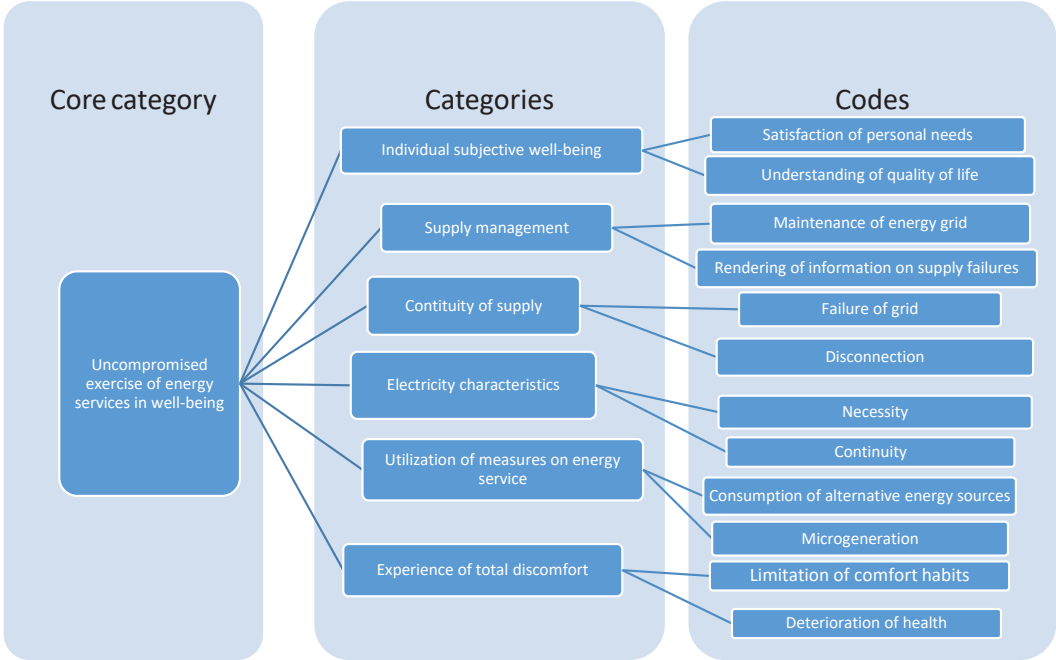
⁷²⁰ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 143.

⁷²¹ Barney G. Glaser, Judith Holton, *Remodeling Grounded Theory*, Forum: Qualitative Social Research 5(2) (2004): 16.

⁷²² Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 37.

data collection.⁷²³ Despite operational function for the theory building, the theory itself circles around the core category. Thus, the variations in the pattern of behavior in accordance with the existing conditions set "the main theme" of the phenomenon that is contained within the core category.⁷²⁴

Figure 21. Selective coding



After the methodological step of axel coding is complete on categories of individual subjective well-being, electricity characteristics, consumption modes and types, experience of total discomfort, gratification of domestic needs, household consumers responsibilities, state responsibilities, utilization of measures on energy services, and the continuity of supply, the researcher sought the core category that captures the meaning of all of these categories under one label. Even though the categories may be grouped under different meanings, they share specific attributes by constituting different groups. For example, the categories of individual subjective well-being, experience of total discomfort, and gratification of domestic needs are bound by the idea of well-being; the categories of electricity characteristics and consumption modes and types are associated with the energy services; the categories of household consumer responsibilities, state responsibilities, use of energy service measures, and continuity of supply deal with public and

⁷²³ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 33.

⁷²⁴ Ansel L. Strauss, *Qualitative analysis for social scientists* (Cambridge University Press, 1987): 35.

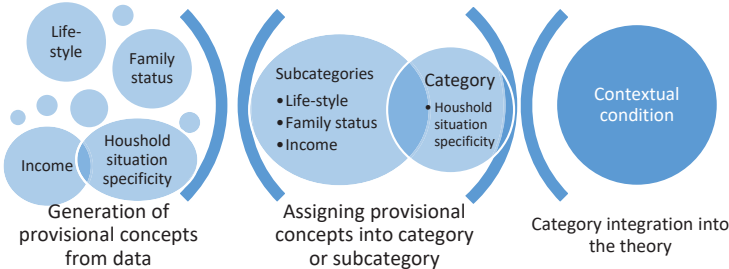
private conditions for the exercise of energy services that should be accounted for. On that basis, the core category of an uncompromised exercise of energy services for well-being was derived.

As the core category is established, the methodological steps from the theoretical sampling, data collection, and coding proceeds for the conceptualization density and saturation. In fact, the core category guides the research in view of refining the categories and their links. Newly derived concepts of specificity of households situation, pricing of supply, supply management, gratification of social needs, and suppliers responsibilities are thus the result of the core category’s guidance of the research process.

6.5.7. Theoretical Integration

The methodology on grounded theory requires us to ascribe the constructed category to a specific type’s being the condition, context, intervening condition, strategy, core category, or consequence. The grouping of categories in the paradigm in line with the formed relationships helps theory integration. The links between categories in grounded theory are exposed through the detection of links between subcategories. That being said, axial coding is the corresponding procedure on the elaboration of formed links between higher abstraction concepts. The next step is to introduce the derived categories from interpretation of data of households' experiences in the process of access to energy service and presenting the emerging links.

Figure 22. Theory integration process



These relationships are expressed by the determination of the category as a condition of a process, action/interaction, or consequence of action and they subcategory as a property or dimension. The conditions may be causal, intervening, and conditional depending on the category's relationship with other categories. Provided that the category instigates the manifestation of the phenomenon, they are being treated as the causal conditions.⁷²⁵ Meanwhile,

⁷²⁵ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 131.

some categories diminish, enhance, or alter the impact of causal conditions due to contingencies referred to as 'intervening conditions'.⁷²⁶ Ultimately, the categories fall under contextual conditions that represent "the specific sets of conditions (patterns of conditions) that intersect dimensionally at this time and place to create the set of circumstances or problems to which persons respond through actions/interactions".⁷²⁷ The source of contextual conditions is the causal and intervening conditions as "they crosscut to combine into various patterns dimensionally".⁷²⁸ Given the identified conditions the actors take deliberate action in response to happening, situation, issue or problem "to resolve a problem and in so doing shape the phenomenon in some way".⁷²⁹ These actions result in situational changes and impact the phenomenon itself, which constitutes the categories as being consequences in the grounded theory framework.⁷³⁰

For the theory to be properly comprehended, it has to be theoretically integrated. This means that every level of theory from the data to the theory itself should be clearly articulated to make logical sense even for a person without special knowledge in the field. Anyone who uses the theory should be guided by the hypothesis in specific situations to begin at general level then move to a preferred category and its properties, and finally to connect them with the data.⁷³¹ In compliance with the latter suggestions, the researcher integrates the categories into the theory of uncompromised exercise of energy services in well-being and the validation of the links of categories introduced in the research part on findings.

6.6. QUALITY STANDARDS OF RESEARCH FINDINGS

The benchmark for generated theories verifiability adheres to the requirements from qualitative research analysis. Although grounded theory is grounded in the data, the verifiability process should follow the pattern of theory building to ascertain its trustworthiness. The trustworthiness is increased through the comprehensive documentation of the theory-building process for preparation, organization, and reporting.⁷³² While the methodological requirements should be upheld in guiding the research, the latter does not strictly constrain the researcher. Due to that, an ascertainment of a theory in grounded theory methodology is executed by standing in the researcher's shoes and reiterating one's steps in data gathering, analyzing, conceptualizing,

⁷²⁶ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 131.

⁷²⁷ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 132.

⁷²⁸ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 132.

⁷²⁹ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 133.

⁷³⁰ Anselm L. Strauss, Juliet M. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage Publications Inc., 1998): 134.

⁷³¹ Barney G. Glaser, Anselm L. Strauss, *The discovery of grounded theory: strategies for qualitative research* (Routledge, 2000): 41.

⁷³² Elo, S., et al., *Qualitative Content Analysis: A Focus of Trustworthiness*, SAGE Open January-March (2014): 8.

and theory integrating. One of the quality standard claims is that the theory remains relevant provided that researcher's theoretical perspective is accepted, follows the footsteps of researcher's data gathering and analysis, and considers similar conditions.⁷³³

The generated theory grounded in data does not explain every case and variation in incidents, but it presents a pattern of behavior and assists in a prediction of instances related to causes, contexts, and consequences of the phenomenon. While a theory should be logically traced from the reliable data, other aspects are also judged in examining a theory itself such as the plausibility of the theory, and "the adequacy of the research process which generated, elaborated, or tested the theory".⁷³⁴ For grounded theory to be verified as trustworthy, it should be revised in the corresponding conditions and result in the same conceptualization of data under the theory's framework. Accordingly, for scientific findings to be trustworthy, the results should be consistent with results obtained with similar methods on similar samplings.⁷³⁵

The most widely accepted criteria in qualitative content analysis for trustworthiness of scientific findings comes from the positivist scientific paradigm that judges internal validity, external validity, and reliability.⁷³⁶ Internal validity pertains to whether the scientific findings authentically depict reality to a degree possible.⁷³⁷ External validity measures whether the constructed representations of reality may be compared legitimately with other groups.⁷³⁸

Validity criteria have to do "with the accuracy of scientific findings", namely, theory's representation of empirical reality and human experiences.⁷³⁹ The literature on validity in qualitative research presents divergent approaches to the validity of scientific findings, differentiating validity into apparent, instrumental, theoretical, internal v. external, convergent v. discriminant, catalytic, and relevant. Other literature substitutes validity as a standard of quality with trustworthiness underlined with criteria such as credibility, dependability, confirmability, transferability, and authenticity.⁷⁴⁰ The development of quality standards for qualitative research sets a more systemic group of components for a validity testing. Each type of validity measures different inferences "between treatment and outcome" (statistical conclusion validity), whether these inferences on relationships stand when treatments and outcomes are altered (internal

⁷³³ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 15.

⁷³⁴ Juliet Corbin, Anselm Strauss, *Grounded Theory research: procedures, canons, and evaluative criteria*, *Qualitative Sociology* 13(1) (1990): 16.

⁷³⁵ H.I.L. Brink, *Validity and Reliability of qualitative research*, *Curatiosis* 16(2) (1993): 35.

⁷³⁶ Tina Koch, Ann Harrington, *Reconceptualizing rigour: the case for reflexivity*, *Journal of Advanced Nursing* 28(4) (1998): 885.

⁷³⁷ N. Le Compte, J. Goetz, *Problems reliability and validity in ethnographic research*, *Review of Educational Research* 52 (1982): 32.

⁷³⁸ N. Le Compte, J. Goetz, *Problems reliability and validity in ethnographic research*, *Review of Educational Research* 52 (1982): 32.

⁷³⁹ N. Le Compte, J. Goetz, *Problems reliability and validity in ethnographic research*, *Review of Educational Research* 52 (1982): 32.

⁷⁴⁰ E. G. Guba, Y. S. Lincoln, "Competing paradigms in qualitative research," in N. K. Denzin & Y. S. Lincoln eds. *Handbook of qualitative research* (Thousand Oaks, CA: Sage, 1994): 114.

validity), inferences about categories patterns of behavior (construct validity), and judgement of whether the identified relationships stand in other contexts (external validity).⁷⁴¹

Next, data collection was performed through theoretical sampling. This exercise enabled us to look for new incidents that would constitute new provisional concepts or evidence of the repetition of instances and justify the reconceptualized category. For instance, when data are collected on the patterns of the consumption of electricity, the question is asked if other consumption modes are not prevailing or if on some occasions the household consumers adhere to it, and whether the household consumer seeks new energy services. If the household consumers shared their experience of energy saving at home and afterward one was asked about uncommon consumption, the respondents usually revealed consumption practices intended for luxury consumption such as an electric bathtub and leaving lighting on everywhere. When asked about their desire for new energy services at home, the respondents usually shared their plans for the acquisition of new appliances that inevitably would result in the more consumption. Thus, the data on consumption practices revealed variations, and as these consumption practices repeated the patterns were identified. Therefore, the design of supplementary questions in accordance with the theoretical sampling let us collect data representing the heterogeneity and repetition in incidents and conceptualize the category that would be a valid representation of the pattern of behavior.

Having said that, the relationships between the categories were tested through the theory integration. When the selective coding was performed against the established core category, the existing relationships between the core category, categories, and codes were verified. Later on, the categories were ascribed to the particular function of the theory. For instance, the researcher linked the core category of uncompromised exercise of energy service in well-being to the category of individual subjective well-being, which is further linked to the satisfaction of personal needs and understanding of quality of life. Given the established relation, the identified categories and subcategories were integrated in the theory where individual subjective well-being was the causal condition and the codes of satisfaction of personal need and understanding of quality of life were the properties of the latter category. Provided that the category of uncompromised exercise of energy service in well-being was the core category in the theory and new data did not provide new incidents that would force us to reconsider the name of the concept and its meaning in the process of access to energy services, then the established relationships held up against other categories. The core category should stand the test of other drivers such as causal

⁷⁴¹ William R. Shadish, Thomas D. Cook, Donald T. Campbell, *Experimental and Quasi-Experimental Designs for Generalized Causal Inference* (Boston: Houghton Mifflin, 2001): 38.

conditions, context, strategies, intervening conditions, and the outcomes of consequences. The data collection, constant comparison, and conceptualization ensured that the core category of uncompromised exercise of energy service in well-being has overwhelming and explanatory capacity regarding the reality of the process of access to energy services.

Reliability criteria deal with the internal and external replicability of a generated theory. The process of theory building should be repeatable for another researcher. This requires consistency and a degree of accuracy in a theory.⁷⁴² Provided that the scientific findings are consistent for some period of time due to the accurate reflection of studied group and may be reproduced employing the same methodology, the theory is considered reliable.⁷⁴³ External reliability determines whether a person "would discover the same phenomenon or generate the same construct in the same or similar settings".⁷⁴⁴ This criterion may be satisfied through the inductive analysis of collected data into theory building. Meanwhile, the internal reliability measures the possibility to link the generated concept with the underlying data.⁷⁴⁵ Such a top-down technique renders the deductive analysis on theory testing. A theory testing by deductive method is a different analytical act from deductive analysis in hypothesis testing under new data in grounded theory.

However, the qualitative analysis lists a number of additional qualitative standard that grounded theory should comply with to hold its value for practitioners and knowledge development. In fact, there are many terms used to refer to the quality standard of qualitative and quantitative research. Whereas quantitative research analysis draws upon the positivistic approach, qualitative research embraces the ideas behind the quantitative standards of the former by elaborating on and furthering judgement criteria. The qualitative researcher seeks to generate knowledge about "the experiences and actions of people as they encounter, engage, and live through situations".⁷⁴⁶ Their focus is to understand actors' "belief, experience and meaning systems".⁷⁴⁷

The scientific merit of qualitative research in view of constructivists is evaluated under different terms in comparison to the positivistic view. As the researcher adheres to the notion that there are multiple social realities constructed from the views and experiences of actors, the constructivism approach to knowledge studies the quality of knowledge with regard to the produced theory. It claims that the knowledge is socially constructed and the change in context

⁷⁴² P. Imelda T. Coyne, *Sampling in Qualitative Research. Purposeful and Theoretical Sampling: Merging or Clear Boundaries?*, Journal of Advanced Nursing 26(3) (1986): 599.

⁷⁴³ N. Golafshani, *Understanding Reliability and Validity in Qualitative Research*, The Qualitative Report 8(4) (2003).

⁷⁴⁴ N. Le Compte, J. Goetz, *Problems reliability and validity in ethnographic research*, Review of Educational Research 52 (1982): 32.

⁷⁴⁵ N. Le Compte, J. Goetz, *Problems reliability and validity in ethnographic research*, Review of Educational Research 52 (1982): 32.

⁷⁴⁶ Robert Elliott, *et al.*, *Evolving guidelines for publication of qualitative research studies in psychology and related fields*, British Journal of Clinical Psychology 38 (1999): 216.

⁷⁴⁷ H.L.L. Brink, *Validity and Reliability of qualitative research*, Curationis 16(2) (1993): 35.

alters the assumed knowledge.⁷⁴⁸ The meanings given to events, process, actions, and happenings change what is required to take into account in the design of quality standards.

Due to the ontological stance in the research that reality is constructed and not discovered, the research sustains the constructivist approach to the quality standards of qualitative research analysis. Respectively, the researcher observes the constructivist paradigm in qualitative research that ascertains the trustworthiness of research on "credibility, transferability, dependability, fittingness and auditability."⁷⁴⁹ Others claim that the qualitative standards to be maintained in the scientific findings pertain to "credibility, dependability, conformability, transferability, and authenticity."⁷⁵⁰ The suggested criteria for scientific findings evaluation are more articulated in comparison to widely accepted standards from positivistic paradigm. The denoted standards are concerned with data adequacy, conceptualization, application in another context, and methodological rigor.

With regard to a collected data for the field of study, they should be fit, dependable, and conformable. Here, the 'fittingness of data' refers to requirement to fit the data in other context than the chosen field of research.⁷⁵¹ Also, dependability emphasizes "the the stability of data over time and under different conditions" and the conformability assess the objectivity of data, its "accuracy, relevance, or meaning".⁷⁵² In other words, conformability deals with objectivity, namely, whether "the data accurately represent the information that the participants provided and interpretations of those data are not invented by the inquirer".⁷⁵³ Accordingly, the conceptualization of data was performed at several stages of open coding, axial coding, and selective coding to check the conceptual codes derived from the data. It must be recognized that the understanding and interpretation of data share some subjectivity as far as grounded theory methodology permits. Nevertheless, the researcher made audio recoding's of the interviews and listened several times to check whether the rewritten recording were accurate. The same double-checking was performed when the meaning of data was questionable in the conceptualizing process.

Thus, the data trustworthiness is intrinsically linked with the selection of participants in the study, so the theory's quality may be questioned when the sampling does not observe the methodological rules. In view of the sampling's significance to theory's verification, the sampling method for research should be unfolded with participants' descriptions.⁷⁵⁴ The researcher provides the requirements and basis for the initial sampling in the description on the process of theory

⁷⁴⁸ N. Golafshani, *Understanding Reliability and Validity in Qualitative Research*, The Qualitative Report 8(4) (2003): 603.

⁷⁴⁹ Tina Koch, Ann Harrington, *Reconceptualizing rigour: the case for reflexivity*, Journal of Advanced Nursing 28(4) (1998): 885.

⁷⁵⁰ Elo, S., et al., *Qualitative Content Analysis: A Focus of Trustworthiness*, SAGE Open January-March (2014): 1.

⁷⁵¹ Tina Koch, Ann Harrington, *Reconceptualizing rigour: the case for reflexivity*, Journal of Advanced Nursing 28(4) (1998): 885.

⁷⁵² Elo, S., et al., *Qualitative Content Analysis: A Focus of Trustworthiness*, SAGE Open January-March (2014): 2.

⁷⁵³ Elo, S., et al., *Qualitative Content Analysis: A Focus of Trustworthiness*, SAGE Open January-March (2014): 6.

⁷⁵⁴ Elo, S., et al., *Qualitative Content Analysis: A Focus of Trustworthiness*, SAGE Open January-March (2014): 8.

generation. In general, the household consumers are segmented by types in a view that these types best represent the group's energy needs and consumption practices. Meanwhile, the household consumers' motivation for consumption and desired outcomes are more comparable and so did not considerably affect the sampling.

Furthermore, the findings in qualitative research should not only represent the data accurately but also judge the extent of conceptualization of data related to the phenomenon. The generated concepts should be dense and saturated to capture the variations in social realities. To accommodate the mentioned requirements the generated theory is evaluated against its credibility and authenticity. On the one hand, the credibility of findings evaluates the "vividness and faithfulness to the description of the phenomenon".⁷⁵⁵ Thus, evaluation concerns to what extent the produced categories cover the data, ensuring dense and saturated categories.⁷⁵⁶ In that endeavour the participants in the research must be accurately specified.⁷⁵⁷ On the other hand, the authenticity is judged against "the extent to which researchers, fairly and faithfully, show a range of realities".⁷⁵⁸ In that regard the generated theory on access to energy services by household consumers portrays the variation on an abstract level between events, happenings, actions, acts, and process. The documentation of incidence in different forms as well as the wide representation in sampling on the types of household consumers ensure that the wide range of realities are conceptualized and integrated into the theory.

The last group of quality standards evaluates the theory trustworthiness by scrutinizing the theory building and integration. From the beginning of the research in collecting, analyzing, and conceptualizing data, the researcher keeps track of the steps taken and any rationale that may be auditable. In essence, the auditable criteria evaluate the coherence of "decisions made by the researcher at every stage of the research process".⁷⁵⁹ Under this criterion, the constructed theory should be presented in such a manner that any person could understand the research process and underlying logic. This requires "recognizing and disclosing initial assumptions, suppositions and values" of a researcher in systemic investigation that affected the yielded descriptions, explanations and justifications.⁷⁶⁰

Furthermore, the findings are more trusted provided that they have a broader application capability. When the findings are transferable to other settings or groups with the same or a comparable explanation force, they are fairly recognized to be a theory and not a description or theoretical statement on a specific instance. Indeed, the status of a theory implies that the

⁷⁵⁵ Tina Koch, Ann Harrington, *Reconceptualizing rigour: the case for reflexivity*, Journal of Advanced Nursing 28(4) (1998): 885.

⁷⁵⁶ Elo, S., et al., *Qualitative Content Analysis: A Focus of Trustworthiness*, SAGE Open January-March (2014): 7.

⁷⁵⁷ Elo, S., et al., *Qualitative Content Analysis: A Focus of Trustworthiness*, SAGE Open January-March (2014): 2.

⁷⁵⁸ Tina Koch, Ann Harrington, *Reconceptualizing rigour: the case for reflexivity*, Journal of Advanced Nursing 28(4) (1998): 885.

⁷⁵⁹ Tina Koch, Ann Harrington, *Reconceptualizing rigour: the case for reflexivity*, Journal of Advanced Nursing 28(4) (1998): 885.

⁷⁶⁰ H.I.L. Brink, *Validity and Reliability of qualitative research*, Curatiosis 16(2) (1993): 38.

scientific findings are equipped with the capacity to explain and predict incidents in multiplicity settings. Thus, whether a theory meets these requirements is judged by the transferability standard. The latter evaluates the extent to which the findings are generalized to be transferred to other settings or groups.⁷⁶¹ In line with the set requirements for a theory, the research sought to translate the data into abstractions within the conceptual codes that would allow a person to use a concept as a tool to predict instances in a particular area and the theory itself as the explanatory map of the entire process of access to energy services through the household consumers' view.

6.7. RESEARCH ETHICS

The performed research adheres to the qualitative research principles of ethics that requires the researcher to comply with the high standard of research. In that regard the researcher conducted interviews maintaining the respect to participants in research. Prior to the research the informed consent was given by the participants. Also, each participant was informed that the gathered interviews will not be public and won't be shared with other persons. Furthermore, the researcher during the research process observed integrity on how the interviews were conducted and questions formulated. It should be denoted that the researcher adhered to a requirement of moral responsibility.

Keeping in mind about the contextual basis for the application of ethical principles, the reflection of what was said by the respondent and researcher in the interview process were constantly carried out. This enabled to avoid the conduct of research without forcing the respondent to feel a shame or miserable for the situation the one is in. Additionally, the conveyed decisions made and action taken by a respondent were not judged against their underlying rationale or consequences be it social, economic or environmental.

Due to the intrusion in a private life of persons, the research adheres to the respect for research participants autonomy to act as free individuals. Therefore, the shared experiences and views of households on the study field was documented without pre-judgement in terms of giving comments on their shared stories or formulated questions that highlight the moral assessment of particular incident. Accordingly, the researcher aimed to show the respect for different view, interest, habits, and values. Lastly, the researcher endeavor to eliminate the possible feeling of inequality on the part of research participant that may be felt due to the form of interaction. In that vein, the questions were formulated open ended whereby the respondent can give as much data as possible on personal experiences without advance preparation or special

⁷⁶¹ Elo, S., et al., *Qualitative Content Analysis: A Focus of Trustworthiness*, SAGE Open January-March (2014): 2.

knowledge. In this way the respondent won't feel intimidated with the questions' specificities and avoided to feel as interrogated.

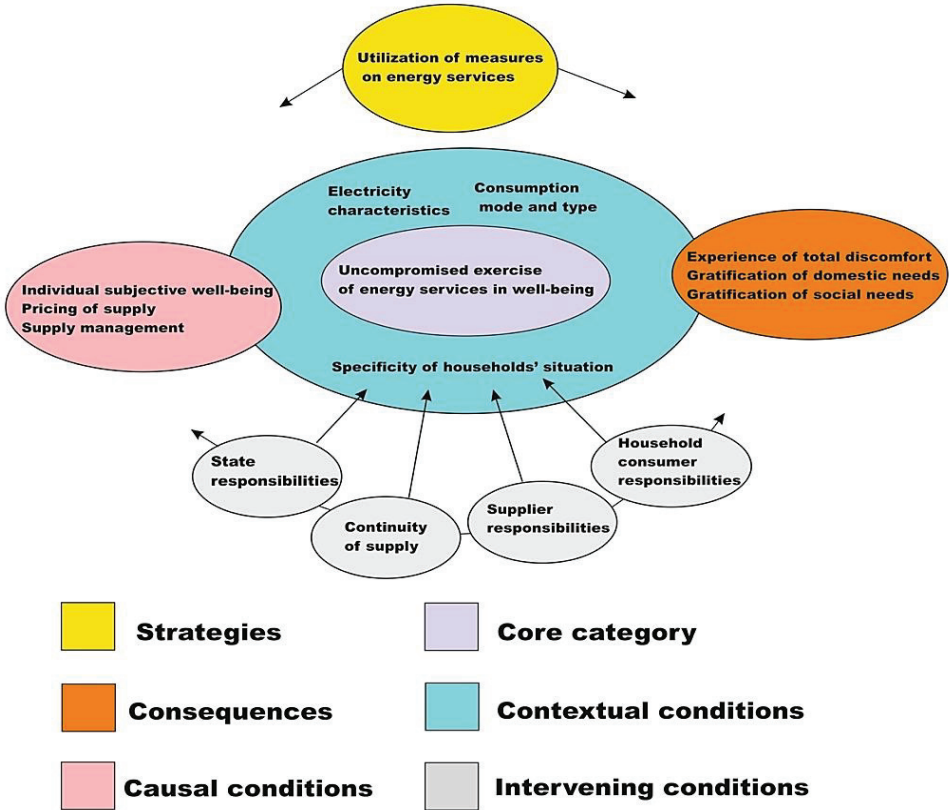
To comply with the ethical research requirements, the research participants were informed about the purpose of interviews and how they be conducted. It must be acknowledged that the purpose was formulate that the participants could grasp what questions be presented and what limits of their experiences to be expected. The theme setting gave more confidence in the participants on what to anticipate and their personal knowledge. As the interviews were conducted online and recorded, the respondents were informed about the use of records.

The confidentiality of participants was warranted by the coding of their real names and personal data with the conferred code. Based on the codes just the researcher can identify the actual person behind the code. However, the sampling forces to reveal some data on the employment, age, status, and education. But this is done without possible trace to identify a respondent. The characteristics of sample employed to show the representativeness of collected data without emphasis on actual persons

VII. FINDINGS

Figure 23. GT on the process of households (household consumers) access to energy services in well-being

GT scheme on the process of households access to energy services in well-being



Causal conditions

In accordance with the framework of grounded theory, the claim on a research is to formulate the conditions for the manifestation of phenomenon. The incidents that motivate and influence the performance of conventions of lighting, heating, cooling and others with the energy are the results of customary practices in domestic settings in a view of assumed states of well-being. The research aims to determine the patterns in the drivers of what instigates the considerations on the adequacy and security of supply, distribution of respective responsibilities, meaning of electricity and consumption practices.

As the data suggest the causes may be qualified in internal, external and intersection of both. The internal causes stem from how person understands the decent standard of well-being,

namely, what components are taken into account when judging one's well-being. Furthermore, the external grounds originate within the supply laying out main points on supply management. Lastly, the intersection between the latter and the former is the assessment of supply pricing. The *aspirations for comfort* are related to the actualization of supply pricing, whereas the more decisions made by household guided by the price of supply, the more the one urges for comfort is reduced. Also, the further the comfort levels are inflated the less consideration is given to the supply pricing.

That being said the root causes are the leads to events constrained within the household situation, customs and conferred meaning on electricity reduced or enhanced by intervening conditions. Either of the domains in the causal conditions section controlled by the specific stakeholder or in conjunction. Upon that factual basis the domains are converted into the concepts on the blueprint of incidences. Following on the interpretation of gathered data, the research prescribes the categories of *individual subjective well-being*, *supply pricing* and *management of supply* to be the causal conditions.

Category: individual subjective well-being

The individual subjective well-being consists of subcategories of *satisfaction of personal needs*, *aspiration for comfort*, *time saving* and *the understanding of quality of life*. How people perceive their own state of well-being is underpinned with the level of *satisfaction of personal needs* and *understanding of quality of life*. These properties of category reflect the views on a significance of material fulfilment what one apprehends as necessity in contemporary lifestyle.

Satisfaction of personal needs - This is normal satisfaction of essential needs. Without it [electricity] we would be deprived of comfort. We consume for warranting of essential needs. R8

Understanding of quality of life - This is a question for quality of life. The number of appliances at home that you may use. R5

Aspiration for comfort - I could not give up on anything. Everything I use is required for my comfort lifestyle. R11

This does not mean that the conveyed meaning on incidents attributed to being a need are objectively verified. On a contrary, the apprehended needs are what people are used to in everyday life. Even though ideas of personal need as well as state of comfort share the subjectivity on what is that they feel tied up with, the *aspiration for comfort* signals that the benchmark for personal need is guided by the subjective preference for comfort.

Aspiration for comfort - This is for the sake of comfort life, for instance, to transfer the physical work to washing machine. The more comfort you have at home, the more time you can spend for other activities. You may read, do sports while cook food in oven or use washing machine. Consequently, the health gets better. R8

Understanding of quality of life - In contemporary times it would be hard to get by without it, because everything is connected to it. Now the home care and quality of life is much better with electricity. R11

The households are tied to the experience of comfort that underlines their decisions.

Aspiration for comfort - I assume that I consume electricity when it is convenient for me. Simply when I need I turn on the appliances. Use TV or washing machine, I am not saving type of person. We live in the world, where the household should be organized in a way the one feels comfortable. R7

This aspiration has tendency to be elevated is what makes a group of personal needs wider and more sophisticated.

Satisfaction of personal needs - For beauty purposes, to dry and fan hair. In fact, to meet domestic needs. R5

Also, the property of *time saving* correlates with *aspiration for comfort* whereby the latter represent the intrinsic human characteristic of seeking more convenience in life and the former highlight the time saving benefit that may be used doing other activities instead of physical home care. The time saving is a product of exploitation of appliances what motivates households to use more appliances for conventions and new practices. Though both of them fosters households to attach to the race for automatization of domestic practices with demands on the utility to be derived and without due acknowledgement of the underlying systemic drivers for surge in consumption volumes.

Time saving - At first there is the direct connection with time saving and what you can do with appliances, it takes less time in comparison with hand work. Naturally you may have more time for entertainment, books and other activities. R5

The identified instances in data on drivers to adhere to the energy services for conventions and their new forms sets ground to construe the category of *individual subjective well-being*. Indeed, the underlying instances of the category comprise of the internal attributes of households calibrated for a maximization of personal utility.

Category: pricing of supply

The next category is built on the intertwined instances from the supply as a process and the personal condition as a state of being. Accordingly, in the crosscut stands the price for energy services that has a bearing on the sufficient access to energy service. With reference to the collected data, the pricing of supply is built upon *increase in supply price, ineffectiveness of supply price, insignificance of supply price* and *actualization of supply price*. This shows the variation in the meaning of pricing of supply conferred by the households which at times is in opposition of the one against the other. The critical dimensions of supply price, in term of area of concern v.

collateral, is exposed what goes to some extent against the current premise in energy regulation in line with rational choice theory about the price of a good being the ultimate vehicle under which energy consumers take decisions to use less, more efficiently or renewable energy.

In fact, the underlining rationale for a decision-making by households deviate from other consumers such as industrial users or commercial users. Even though on some instance their share the actualization of supply price as household thinks about their income and businesses about their profit, nevertheless the households' income is just a part of a whole well-being strategy. Therefore, households assess a supply price in a light of well-being whether it affect the overall well-being. This results in heterogenous views, on the one hand, it is assumed as insignificance to households' actions and decision with respect to energy services, on the other hand, it is actualized as the considerable factor in decisions of consumption practices.

Insignificance of supply price - The supply price should increase several times to consider my decisions. R13

Actualization of supply price - Supply price determines the consumption habits. When the price was low, everyone heated greenhouses and homes, electricity was used everywhere, after that it had changed. I think it is because of price. The price increased dramatically comparing with many years before. R6

The decision made in energy is not consciously underlined with the supply price. Respondents at first highlight their needs as pivotal input in decision and later contemplating on the subject change their opinion or admit the significance of price in consuming more through new appliances or more intensive consumption practices.

Insignificance of supply price - Supply price does not affect consumption. We have one tariff pricing scheme, because there is little difference between the tariffs. Also, you would not wash at night. The offer is designed that you may not benefit from lower tariffs. You just buy as you need. R4

Actualization of supply price - The access should be cheaper for household consumers. Then the consumption would increase. . . . maybe new appliances show up at home, if the price would be lower. We would just use more appliances. R4

Insignificance of supply price - I accept the price as it is. If you want to save, do not consume it. R10

Actualization of supply price - If it would be free or very cheap than many more appliances would be employed. It all goes to price. However, the price is important. R10

This indicates that households prioritize the convenience of electricity consumption for daily practices when contemplate about energy related decisions. This means that the *aspiration for comfort* is one of the main instigators in choosing what appliances and how

intensively they would be exploited. The *actualization of supply price* plays the supplementary role potentially to restrain the enjoyment of energy service. Nevertheless, it is a considerable variable in the decision of acquiring new appliances for modern energy services possibly resulting in increase in electricity consumption volumes.

Actualization of supply price - The price predetermines the consumption habits, therefore, I emphasized that previously we heated home with electricity and used many electricity consuming appliances. Of course the price is very important, because when the price was low people heated homes. . . (R6)

Actualizing the supply price - Provided that it is for free or very cheap, more appliance would work. It all goes to supply price. However, the price is important. . . (R10)

Meanwhile, the *ineffectiveness of supply price* refers to the incidents when the supply price may not be influenced by the households. In other words, the price of supply measured in kwh is accepted as not possible to be affected by any means on the part of households.

Ineffectiveness of supply price - You cannot run from the price. You pay for what it is. R2

Ineffectiveness of supply price - I do not think that I can influence the supply price. R5

Ineffectiveness of supply price - I think that the household consumers have little leverage on supply price, even though the one can freely choose a supplier. R10

Interestingly, when asked about the price of electricity respondents refer to supply price and not the actual bill. This seems contradictory as the expenditure on energy is the bill on supply and not a price per kwh. Some respondents are not aware that they may manage their expenditure on electricity through changing consumption practices, efficient consumption and microgeneration. In that regard the respondents do not reckon the right to freely choose supplier to be a substantial empowerment to manage their energy expenditures. The households believe that they are destined to pay what is asked from them without any remedy. Thus, when the remedy is designed in policy it should be recognized that the stable variable of supply prices is easier recognized by households in comparison to fluctuated energy bills what underlines the views on the *ineffectiveness of supply pricing*.

Because the *price of supply* is set out in some instances of influence zone from the household perspective, the issue being emphasized is a constant *increase in supply price*.

Increase in supply price - The supply price [fosters to opt for microgeneration]. This is the main factor motivating to think like that, because the price is on the rise and definitely not decreasing. (R14)

The households with the view of *insignificance of supply price* are unconcerned with the other properties of the price of supply. This group of respondents left the supply price unnoticed in the decision on consumption practices as well as do not give extra consideration on implementation of technical means on consumption management.

Insignificance of supply price - It depends on the [supply price] increase. When there are new offers on supply price it is worth to consider. Probably not [the marginal increase of supply price won't affect the consumption habits]. (R7)

Insignificance of supply price - The price should increase several times to reconsider [consumption practices]. (R13)

In contrast, the households *actualizing the supply price* also strongly concerned with the *ineffectiveness of supply price*.

Ineffectiveness of supply price - I think that we consumers have little leverage on the supply price, even though we have the capacity to choose the independent suppliers. (R10)

Actualizing the supply price - Provided that it is for free or very cheap, more appliance would work. It all goes to supply price. However, the price is important. I noticed that during the last seven years the price has increased dramatically. Living in big house translates into big bills. Thus, the price makes difference. (R10)

The variation of perception on the *price of supply* stipulates the opposition in the drivers of actions in energy. On the one hand, the price constrains the experience of comfort conveyed by energy services, on the other hand, the indifference to the price does not influence the practice or choice on efficiency. Provided that the social interest for development, environmental and security reasons is to lower consumption volumes while sustaining or boosting the quality of life, the policy on the design on pricing strategies should take into account the divergence in causal condition for using the energy services.

Besides that, the market being primary delegated with the mandate of price control for all consumers does not serve any much good when the well-off households seek to consume more energy resulting in increase of demand for electricity. It must be recognized that some households' *understanding of the quality of life* is highly elevated in comparison to other household infusing the hunt for new energy service. Keeping that in mind the disparity in how people ascertain the price level does not only substantiated by the *income level*, but the *individual subjective well-being*. Due to the suggested internal conditions the price has tendency to increase under the surge in demand, therefore, the price level apparently will increase for all consumers. The tool that is conferred with the mandate to manage the price by protecting from the surge of supply price has a counter effect due to the *individual subjective well-being*. Respectively, the

price of supply are strongly dominated by other causal conditions not so much in how it is built, but as it is understood.

Category: supply management

The management of supply may result in the issues of interrupted supply that the households should respond to. Therefore, the households underlined the *maintenance of energy grid* and *rendering of information on the supply failures* as the main features of *supply management*. The proper functioning of grid is one of the main conditions for the supply of electricity, therefore, positive experience of a grid maintenance by the households contributes to the full-fledged access to energy service. This property of category is important not in terms of technical or organizational aspects, but how people view the grid maintenance that is quick in response to their issues on supply.

Maintenance of energy grid - Because it took few hours to reestablish supply, I did not experience any shortage. (R1)

Maintenance of energy grid - If the shutting off is pre-planned beforehand, then it is ok. . . When the ones are pre-planned, then inform on a half day cease of supply. For a half day it is not significant. . . (R4)

Maintenance of energy grid - I call the maintenance service. At first, I went to them and find out where to go. After that they came, checked and repaired. R5

Additionally, the households highlighted the need on rendering of information on supply failures in timely manner. The social views on the management of supply are quite different in comparison to technical and management views on the appropriate grid supervision that warrants continues and quality supply. Here, it should be noted that households do not make distinction between the quality and continuity aspects of supply, on the other hand, the experts can make sharp distinction between the either of them - uninterrupted flow of energy v. the characteristics of voltage in supply.

Rendering of information on the supply failures - Sometimes the supply cease, but they send sms from when until when the electricity would be turned off and on again. . . The failures in the grid happens rarely and lasts not more than a half day. (R2)

Rendering of information on the supply failures - Previously I called the supplier, but now the supplier informs about failures and how long it would take to repair it. R3

As mentioned before the supply is principally the domain of other stakeholders then the households. This gives ground to characterize it as the external causal condition to the actions taken on the consumption practices and the adaptation of technical innovation. The *supply management* relates to the experience of shortage of energy by the households. If the failures in the grid removed in timely manner of less than the half of a day, it does not bear on the *individual*

subjective well-being. To some extent it may be employed as the benchmark for the quality of supply management regarding social sensitivity. Additionally, the opportune moment on *rendering of information on the supply failures* assist to adjust to the households' conventions to the occurrences in advance without impinging on any elements of well-being. In sum, the conceptualization of data on the causal conditions represents the interrelatedness of instances in the one end of energy chain until the final stages theorized under the framework of energy justice on capabilities.

Intervening conditions

While the causal conditions refer to what sets of patterns prompt the manifestation of phenomenon, the intervening conditions concerns with the incident that impede or foster the occurrences of causal conditions. The hindrance on causal condition may arise in term of reducing the capacity for the causal conditions to be operational or constrain from being present on any instances. For the time being, the conditions that foster the effectiveness of causes of phenomenon are also considered as intervening ones. Though for the condition to be ascribed to the type of intervening conditions the categories within should show possible close interaction in enhancing or weakening causal conditions.

Based on a collected data the researcher derived the categories that covers the assumed responsibility aspect conferred on stakeholders and incidents that underpin the continues supply. Here the supply is not defined as a sale of electricity by supplier to consumers. It defines a chain of activities from the electricity supply into a grid, its flow through a grid and a reach of premises where an electricity is consumed. Because all or some of performed activities may be curtailed by failure in a grid, limited alternatives or low-quality supply, they all constitute the basis for uninterrupted supply. At the same time, the measures and actions to be taken that directly or indirectly affect the continuity of supply reflected in a households' views on oneself, suppliers and authorities' responsibilities. The assumed responsibilities in some instance linked with the supply continuity, while thinking in terms of responsibilities in ensuring an access to energy service enables to display a broader view on supply and different perspectives to access.

The assumed responsibilities from the respondents' views may be grouped into the categories under the authorities, suppliers and household consumers. The decision to label categories with the characterizing attribute of responsibility was made not primarily to adhere to the legal sphere as these incidents are formalized or should be formalized. It must be acknowledged that terminology used is conducive for comparative thinking on implied social responsibilities in the guarantee of access to energy service against the established in energy policy and legislation, whereby the term was derived from the respondents given meanings to their shared experiences. The meaning of energy service to respondents' well-being controlled

they views on distribution of responsibilities between stakeholders. The data shows what responsibilities households construe in their minds and which of them they confer on other stakeholders in energy system and which attach to oneself.

Category: state responsibilities

The collected data indicates that households give considerable importance to the energy services for their assumed decent quality of life. Arguably this signifies the input on the conferral of such vast of responsibilities on a state. With reference to such premise in data interpretation, the construed category of *state responsibilities* grounded in data constitutes of *supervision of suppliers' activities, guarantee of access to alternative supply, information of price policy on energy supply, access to grid, minimal level of consumption, protection from disconnection, supervision of grid operation, differentiated support, social support, guarantee of affordable supply price, guarantee of uninterrupted supply*. The data evidence that the incidents which carry more weight on functioning and access to energy system are designated for the state level responsibility. Indeed, the households share the understanding of access to energy service being a social interest under which they assume to have a claim against the state for protection, empowerment and support.

The presented grouping of subcategories under the category of state responsibilities demonstrates the variation in understandings of the functions of a state. These understandings are not expectations of households but believes that drive their actions. For instance, understanding that access to a grid should be guaranteed by a state affects the households' decisions on buying or building home in remote area as well as customary unlimited consumption practices. This understanding is a believe that a state would develop a grid to their premises or increase grid capacity to their needs. These understandings are social views built upon the intrinsic relationship between electricity and well-being. This is in conflict with economic understanding advocated by the corporate interest groups judging investment in energy system under cost-benefit analysis.

With regard to the claim on protection of social interest, the households underline the *supervision of suppliers' activities, supervision of grid operation, connection to grid, disconnection, guarantee of affordable supply price and continuity of supply*. The *supervision of suppliers' activities* refers to the one of them being market supervision where the state should look after the suppliers' activities with respect to market domination, another is related to the significance on omission of supplier's obligation what may lead to being restrained to acquire electricity on a basis of supplier's bankruptcy, termination of contract.

Supervision of suppliers' activities - I think this is on a supplier. However, the state should regulate these matters that it won't happen the situation where there is only one supplier and you may not choose another supplier. The one controls the price. . . (R4)

Supervision of suppliers' activities - If the supplier bankrupt, then it should be possible to choose other supplier. In case the supplier is likely to bankrupt the state should inform the consumers. (R9)

Supervision of suppliers' activities - In fact it is a supplier and that it upheld it's obligations the state should regulate by legislation. Maybe some specific institution. R13

Furthermore, the significance of grid operation to access energy service underpins the view of households for a state to take responsibility to supervise its operation activities and development plans. To a great extent this is what a state does, even though not strictly for social interest, but for economic development in different branches of economy.

Supervision of grid operation - Maybe take due consideration on the quality because as far as I know there are stations and generators that back the supply in the supply failure. The state should invest in that. . . . Not the quality of energy services, but an infrastructure. The state should invest more and not just augment the budget from all of us. R6

Supervision of grid operation - If I live in apartment building, then I have a right to claim that at the level of regulation it would be guaranteed maintenance of common electricity grid. R8

Access to grid - Provided that there would be such a right [right to energy service], then it should be guaranteed by state. On that account I can claim to build the grid connection to my apartment or house. It should be guaranteed by state and it should be claimed from it.

Moving down through the energy chain from the transmission and distribution the additional type of responsibility relates to the supply of electricity. The gathered data suggests that the affordable and continues supply is the responsibility of a state.

Continuity of supply - We won't live without electricity. The state is responsible. . . as the structure that the enterprises function and generate electricity. (R1)

Continuity of supply - I can claim [from a state] that there would be ensured uninterrupted supply. (R3)

Guarantee of affordable supply price - The prices should be adequate. The accessible prices that the one may consume according to the one's needs. Without constraining oneself. (R3)

Guarantee of affordable supply price - That right should contain the price regulation by state which would warrant the affordable price for consumers. There should be price regulation. There should be a ceiling, where state set limits for the price that it would not go too high. (R8)

Guarantee of affordable supply price - . . .and price regulation because without it consumers cannot do. If someone would consider to price drastically what is priceless then I do

not know. Increase twenty times. Reasonableness should be adhered. That there would be effective competition on price levels. . . The state should supervise the energy price. (R10)

Despite the energy policies reiterate the affordability and security of supply to be the main objectives what correlates with respondents' emphasis on affordability and continuity issues, the social understandings derived from data indicate the affordable supply to be not the same as a reasonable cost of supply, but as an ability for households to pay the energy bill, built upon the acquired level of supply to sustain customary comfort levels. Interestingly enough that the failure to meet customary level of energy service by households are understood as a poverty experience or unsuitable living conditions to say at least.

Though to judge the affordability of energy service is quite a personal matter, therefore, the affordability metrics such as a percentage between income and energy expenditure or costs spend on energy advocated in energy poverty discourse does not fulfill the social sensitivity on how persons experience the state of curtailing their energy services due to inability to pay energy bills. However, one of the propositions in the discourse is to ask households about their opinion on their financial capacity to pay energy bills. The drawback of this approach is that you may not ask everyone. Therefore, the need is to construct representative subcategory that would expose the core meaning of social affordability. Respectively, the latter endeavor is actualized in the subcategory of *affordability* within the category of *electricity characteristics*.

The data reveals the households' comprehension on design of support that is underlined with the understanding of energy service significance to their well-being. To that regard the support should be differentiated and socially substantiated guaranteeing minimum level of consumption.

Social support - For the most part the disadvantaged the ordinary consumers, different condition should be set on them. State should support more. The consumers pay big bills on electricity and water, and etc. I think the price is too high. R6

Social support - Yes, the state's responsibility to guarantee the satisfaction of needs of all social groups. R12

Social support - There should be discounts for those social groups which income is minimal or lower. For seniors, disabled, big families. It would be reasonable and fair on behalf of a state. Charity, shelters. R7

Differentiated support - Though it should be differentiated support. (R5)

Differentiated support - If it would be one of the support measures for seniors, that would be fine. When there would be decent pension, then it may be ceased. Today they all save. Also, for other vulnerable groups. R10

Differentiated support - I think only about vulnerable and not everybody. Lonely parents or disaster such as fire or similar incident. R9

Minimal level of consumption - When a person is unable to consume electricity due to financial situation, then the one would have minimum [consumption] to be assigned on constant basis. If state have financial resources to sustain that it would be great. R7

The continuity of supply is one of the incidents constantly reiterated by the respondents as a matter of concern. In fact, the continuity of supply is a final result of proper grid operation and suppliers' obligation observance. These subcategories linked with one another with respect to dimensions of supply translated by households into responsibilities of state. It must be noted that the continuity of supply as understood by respondents relate to the quality of supply, whereas the instant interruptions in supply comprehended, on the one hand, as issue of continuity, on the other hand, as issue of quality. The subcategories are interwoven not only under the same category, but also between different categories revealing divergent interpretations of incidents and corresponding relations of categories.

Guarantee of uninterrupted supply - We would not live without electricity. It is state's responsibility. . . as the mechanism responsible that the enterprises operate, that the electricity would be produced. R1

Guarantee of uninterrupted supply - I can claim for the guarantee of uninterrupted supply. R3

Guarantee of uninterrupted supply - I could claim that if I observe my duties then the supply should be performed without interruptions, except for the reasons of force major or grid failure. R11

While the enjoyment of energy service may be curtailed due to the external conditions such as grid or suppliers' failures, the other way around is the restrain to access to supply regarding households' failure. Considerably, the failures of households' stem from financial constrains to pay for supplied electricity. Even knowing that the households may be disconnected for arrears, the respondents still think that it is unfair to be disconnected. This believe of unfairness grounded in the perception of contemporary well-being where energy service plays a substantial role in performing multiple activities to satisfy domiciliary and social needs.

Protection from disconnection - Unambiguously the state should help. However, nowadays the poor person is disconnected if the one does not pay the bill. This is drastic measures. Twenty first age and the one should be disconnected, although the one may not pay any accrued bill at all. This is a big problem. R6

Protection from disconnection - Maybe it should, because there may be many frauds and abuses. Better to supply in debt and a person may pay later, but not to disconnect. If after

several years the one does not pay at all. . . if a person struggles, so the one does not use lighting uselessly, produce something at home, therefore, the consumption levels are low. The one does not waist. R13

The empowerment of households to be claimed from the state construed through the *guarantee of access to alternative supply and information of price policy on energy supply*. With regard to access to alternative supply, the object of interpretation is the relationship between state and conditions for access to energy sources, in contrast to the subcategory of *access to renewable energy* in the category of *supply continuity* concentrating on actual incidents which may impede the possibility to experience the state of *individual subjective well-being*. The data highlights the understanding of existing connection between capacity to access to alternative sources and conferred power on a state to warrant this to occur.

Guarantee of access to alternative supply - Alternative option like sun modules. . . alternative energy sources. R12

Additionally, the specificity of terms and principles in structuring the supply price demand the dissemination of comprehensive information to public to avoid detrimental interpretation on energy policy.

Information of price policy on energy supply - When the price goes up, I start to wonder whether it is the state raise the taxes. Why everything gets more expensive. Does the supplier invest in the infrastructure or innovations? Prices rise even though nothing should be more expensive but gets more expensive. I would ask for more clear communication on why it get more expensive. For them maybe it is obvious, but for lay person it is not. R10

Establishing strong link between the two ensures the confidence in the energy pricing to households. Thus, it may positively affect the fairness of supply pricing as well as prejudice about the existing unfair pricing and shady deals behind it. The transparency in pricing structure and methods may greatly contribute to the inducing in participation of choosing supplier and in qualifying the supply price form seeing it as ineffective into manageable element in the process.

Category: supplier responsibilities

The reiteration of electricity significance constantly emerges in the data affecting how the shared respondents' views are interpreted. Notwithstanding that the views on the responsibilities on other entities may expose other constructions on the research object per se. In other words, contemplating about relations between subjects reveals the social characterization of the object. In this case the research leads the similar path by focusing on the subjects' responsibilities with respect to access energy services generated unexpected outcome. Namely,

the respondents view on the designated responsibilities discloses the fact that an electricity provision is a service comprising of grid operation and supply.

Regarding the distribution of responsibilities, the data implies that the responsibilities of suppliers are to be conceptualized under the subcategories of *observance of contractual obligations*, *management of supply failures*, *implementation of energy policy*, *protection from illegal connection* and *social pricing strategies*. Based on the latter conceptualization dual aspects emerge in thinking about suppliers' responsibilities. At first the function of an entity supplying electricity is interpreted taking into account the importance of electricity to their well-being. Here it must be underlined that supplier in many respondents' views is not a private enterprise operating in the energy market. The second aspect is what that entity, called supplier, sells to households. Whether it is a good or a service and whether it should be socially orientated in selling a good or rendering service. Although it is well assumed to be paid for, but the specificity of electricity determines that households understand it as a social good or in some instances as a provision of electricity as a social service. Viewing of supplier more than a private enterprise emerges in other areas of access to energy services such as *management of supply failures*, *implementation of energy policies* and *safeguard from illegal connection to electricity installations*.

This understanding is decisive for design and application of *social pricing strategies*. Thinking about electricity and entity that sells it in such term's conditions the understanding of households about the suppliers' responsibility to set pricing taking into account specific vulnerabilities of households. For instance, the data shows that senior or disabled people should enjoy specific pricing schemes.

Social pricing strategies - It is states concern, but those that supply should take into account the human factor involved and help [vulnerable] consumers. On the one side there is business, on the other, there is poor seniors and disabled. I think the businesses should assist. The supplier, because the state only legislates. In my opinion the supplier should do this. Lower the price for vulnerable groups. Lower the price for those groups and do not increase for other consumers, but on the account of their profit. R14

This subcategory correlates with the subcategory of *guarantee of affordable supply price* on a basis of pressuring the supply price to contract. Nevertheless, the responsibility for social pricing is understood by households to be a component in a license to operate in energy. When one decided to conduct in such socially sensitive activities as provision of electricity to households, the latter should take the associated risks. Whilst the social pricing relates to suppliers' responsibility to design social pricing schemes, the *guarantee of affordable supply price* outlines the responsibility of state to offset the possible pitfalls in pricing schemes.

Management of supply failures designated for the supplier's responsibilities that hindrances for supply should be removed in timely manner. When a supply is curtailed for any reason, the respondents view it as collapse of conferred responsibility by supplier to ensure that electricity actually and constantly reaches a premise. In case this happened to be not delivered the respondent view this as a failure of entity that entered into agreement to supply, in other words, failure on *observance of contractual obligations*. The data infers that the suppliers should be involved in the solutions of supply issues to some extent in parallel with a state. This pertains to the households' attitude towards the role of supplier and a nature of activities it performs.

Observance of contractual obligations - Supplier under the concluded agreement [responsible for continuity]. R2

Observance of contractual obligations - Supplier to which I pay for supply [responsible for continuity]. If I pay money, then responsible is the supplier from which I buy and pay money to. No one gives it for free. R9

It must be emphasized that the research construes the social meanings of incidents that households experience which may deviate from the existing structure of energy system and allocates types of responsibilities among stakeholders. Despite such split in formal and social understanding of energy, the respondents shared experiences enables to eliminate the dichotomy in the discourse on energy between electricity being a commodity v. a human right.

The *protection from illegal connection* to electricity installation rises many uncertainties for households how to deal with such occurrences. The technical and legal specificity of supply limits the households' possible actions to detect and protect from illegal connection. For one of those reasons the *vulnerability of electricity installations*, as a property for supply continuity, translates household views to supplier's responsibilities sphere. In other words, due to the fact that electricity installations in apartment buildings is an easy target for illegal connection, especially in old ones, households view themselves vulnerable to theft. The experience of vulnerability aimed at sharing the responsibilities, where the scope of recognized responsibilities influences the proper *maintenance of energy grid*.

Protection from illegal connection - This is the only instance when it was illegally acquired electricity from us. In that situation I believe that supplier could do more. As it points out that its hands are tied and here is civil matter. The one that is being robbed is the weaker party, therefore. The supplier could take some actions. Maybe to document the illegal connection and estimated the possible loss for illegal consumption. . . When the electricity theft is identified then the supplier should do that [the examination]. The supplier should have more rights and responsibilities in such affairs. R11

The scope and nature of conferred responsibilities on supplier indicate the understanding of the object under examination. Conferral of responsibilities on one stakeholder in supply presuppose the idea that respondents view a provision of electricity as a service which guarantees the operation of appliances through the technological means. The moment when the power plug of appliances is connected to socket the households view it as using services in a similar sense as when one turns the light on and enjoys energy service of lighting.

Observance of contractual obligations - Suppliers should ensure. I think that when the one chooses the supplier the legal relations for service provision are formed and that falls on the supplier. . . But when the one has chosen the supplier, then the chosen supplier should ensure. In my opinion they should be insured from such situation [bankruptcy]. R11

Management of supply failures - In general for me the reliability of supplier is a key. . . of course no one is protected from accidents and whatever, but it should be taken care in the shortest time possible. R5

This in contrast to formalized meaning defining electricity as a good in jurisprudence of ECJ and the EU legislation. Because the electricity is defined as a good, the means through which the electricity is acquired fall outside the responsibilities of seller. Nevertheless, households understand supply of electricity as a service to be ensured by a service provider or even a social good distributed more on value basis in line with *social pricing strategies* then on market principles.

The following subcategory of *implementation of energy policy* represents the understanding of function of supplier in energy system with reference to designated responsibility to adhere to sustainability requirements in energy. The similar understanding ascribed to access to alternative resources as a state responsibility. However, the data suggest that state responsibilities limited in setting the guidelines and overseeing their implementation, in the meantime supplier responsibilities lays in implementing them in practice. On that account the households' views the responsibility of suppliers to ensure that the electricity is clean, sustainable and green energy.

Implementation of energy policy - Of course [supplier's responsibility] is quite significant. The supplier should implement public policy, meaning a state perspective. I do not consider business or profit, but the perspective itself on supply with regard to sustainable, clean and green are all taken into account. R5

The social views on the provision of electricity seems coherent taking into account the lack of knowledge on the part of households about the existing specificities in the grid management and operation. The comparable path of generating the coherent framework for social justice on access to energy service to the one of respondents against electricity provision taken in

the theorizing on the energy justice in the research. This demonstrates the many sided perspectives to the same process - social, doctrinal and economic.

Category: household consumer responsibilities

The research reveals how the households understand their own responsibilities related to energy acquisition and consumption. Contrary to the respondents' views on state and supplier responsibilities that discern the incidents which are more onerous than others and ascribe to other parties, the households assume responsibilities that are restricted to activities at home. Respectively, the households' consumers assumed responsibilities refer to *legitimate connection to electric system, safe usage of electrical appliances, conclusion of supply agreement, timely payment of bills, supervision of electric installation and upbringing children for responsible behavior*. The defined subcategories elucidate the variation on households' consumers responsibilities that are adhered to. Although the responsibilities that are not observed are not shared by respondents. This confirms people subjectivity on their own perceived responsibilities, therefore, identified incidents do not suggest that household consumers do not have other responsibilities in energy consumption. On a contrary, the data supplements the formalized explicit responsibilities with implied ones as well as tie them to the subcategory of *understanding the quality of life*.

The data shows that households give due significance to the interaction with appliances that sustains the accustomed level of comfort. Many respondents share a view that the number of appliances used translates in the achieved quality of life. People feel tied to appliances for their well-being, therefore, safe interaction is an input in ensuring the quality of life what resonates with the *safe usage of electrical appliances*. Having said that, the manner in which the appliances is used that is considered as safe usage lacks more elaboration by households.

Safe usage of electrical appliances - You have full responsibility for everything that is going at your home. For all appliances you use you take responsibility. For safety when you leave the turned-on device at home. There are many stages. One appliance when in operation may catch fire another may have other issues. R3

Safe usage of electrical appliances - Safety first. Follow the rules. You can make stuff with electricity. In fact, to act responsibly with technical part and safety. R6

Safe usage of electrical appliances - I would say that it is consumers responsibility that nothing bad happen when leaving for longer periods. There is responsibility to turn off devices. Plug off form the socket. That there would not be the strike in the voltage resulting in broken appliances. . . . that there would not be any fire accident. R8

Conceptually it is significant that households do not take safety for granted and feel responsible for it. In pertinent to that their highlight the *upbringing children for responsible behavior* as a way to warrant safe usage.

Upbringing children for responsible behavior - Maybe it is a responsible behavior with electricity that I prohibit children to stick fingers in the sockets and change to safe switchers. R1

Additionally, the respondents assume *supervision of electric installation* to be the responsibility of households. It must be acknowledged that this responsibility more recognized by the private homeowners because the technical aspect where the ownership of installation is clearly comprehensible contrary to the ownership in apartment buildings. The different form of ownership reveals specific incidents experienced by the households enabling to render more saturated category of *household consumer responsibilities*.

Supervision of electric installation - When we bought the house, we initially updated the electricity installations for safety reasons. R1

Supervision of electric installation - Of course [safety measures are being taken] The safeguard devices are implemented in installations to mitigate the associated risks. R3

Supervision of electric installation - All wires in the house are installed and if there are defects they may catch fire, it is responsibility. Though you supervise and change the wires and sockets when necessary. This is more of personal responsibility. Responsible for technical section at home. R14

Some of the incidents reflected in data on *households 'consumers responsibilities* is on a flipside of suppliers' responsibilities. On behalf of a household the corresponding responsibility conceptualized under the subcategory of *legitimate connection to electric system*. The households that experienced the illegal connection to their electricity installation allocate the responsibilities to the suppliers on supervision of functioning of installation to the point of their power supply.

Legitimate connection to electric system - [Responsible] for illegal connection. I never do this, but I experience this when other persons tried to connect. This was unpleasant financially. R5

Legitimate connection to electric system - Maybe not to undermine other consumers. Do not connect your neighbors' wires like we had when our neighbors connected the wires and consumed electricity on our account. R11

This view validates the argument that households see electricity as a service provision activity what constitutes the social understanding. The decomposition of supply into the stages are underlined with the imposed technical characteristics in generation, transmission and distribution, while the supply as a sale underpinned with economic rationale. The given

articulation lays the structure for the trade in goods and makes quite infeasible to define electricity supply as a service because then the service provider would be responsible for the operation of grid and quality of electricity. So maybe the electricity is destined to be defined as a good and it may only be assumed as service in the states' monopoly structure. One way or the other the idea of observance of legitimate connection indicates the respondents undertaking to feel responsible for due connection. Respectively, the multiplicity of electricity provision is understood from responsibility perspective regarding the point of sale and the point of access to grid that are different affairs.

The detected divergence in responsibilities demonstrated with construction of another conceptual code on *households' consumers responsibilities* labeled as *conclusion of supply agreement*. The free conclusion of contract and formalization of relationships is apprehended in data as the prerequisite conditions before the transaction performed between a supplier and a household. Here the freedom to enter into agreement for supply refers to capacity to choose and change supplier at any given moment. Accordingly, the responsibility to conclude agreement hides within the right to freely choose supplier.

Conclusion of supply agreement - We formed the supply agreement and consumed. If it be redundant then we terminate [agreement]. R2

The understanding of the point of sale in light of responsibilities resonates with the households past experiences, even though there are instances where the supply takes places without legal agreement between parties, but under the regulatory regime. The freedom to choose supplier with the one the contract should be established on a part of household is a prerequisite for a stability and predictability of supply what makes its actualization the input in enhancing or suppressing the *price of supply*. In case the supply price is of considerable significance, the supply contract on pricing may match households' consumption practices. Therefore, the given responsibility is a hinge not only to be active and to formalize the supply agreement, but it also denotes the responsibility to manage the supply pricing and due payment on supply.

Due payment of bills - Every few months I pay bills that no one would disconnect. What we consume, the corresponding we pay. R1

Due payment of bills - I pay every month. I do not have arrears. R2

Due payment of bills - I am responsible for due payment. If the payments are due then you won't have any trouble. Otherwise, you may be disconnected. . . . There is a responsibility against supplier. . . R6

Due payment of bills - Responsible consumer for due payment. . . Conscious one that respect the supplier and pay bills on time. R10

The research acknowledges the limitation on the shared responsibilities on oneself to compose the bigger picture for the purpose of theory building. It is true that households won't admit that it should do what the one does not do without reasonable justification. Even though it presents the challenge for the category saturation, the focus on what spheres was being conveyed by respondents highlight the unity of prevailed relationship between oneself and outside world. Here the recourse should be made to the category of *individual subjective well-being* that conceptualizes the personal views against how their view themselves. It represents the primacy of self-interest in the orderings of preferences driving the process. Similarly, the inner conscious does not apprehend the externalities caused by the consumption to fellow citizen, public and environment. The conclusion may be drawn that the hard decisions in energy is a public concern to be delegated to state level what is in some tensions with the procedural justice demands on participation in decision-making process.

Category: continuity of supply

The assigned responsibilities on a state, suppliers and households demonstrate the understanding of explicit or implied relationship between incident and stakeholder. This is in contrast to the category of *continuity of supply* that conceptualizes incidents themselves. On that account the continuity of supply in the research constitutes of *the failure of grid, access to renewable energy, low-quality supply, vulnerability of electricity installations, connection to a grid, disconnection, long-term supply disruptions, force major disruptions, shortage of access to information and lack of individual remedy*. The category of *continuity of supply* conceptualizes the possible inflictions on causes of phenomenon in supply and well-being spheres.

The given subcategories relate to the category of *supply management* by suggesting possible shortfalls in the operation of grid and related activities. For instance, the concept of *maintenance of energy grid* within the category of *supply management* designates the set of instances to be responsible for due functioning of grid which be curtailed by the instances in the *failure of grid* or *force major disruptions*. Likewise, the *low-quality supply, long-term disruptions and lack of individual remedy* jeopardize the pursuit of *individual subjective well-being* through the leverage on *personal needs*.

Based on a data the research suggest that the functioning of grid is a constant concern from the household perspective. These views are grounded in the experiences of curtailed supply due to the *failure of grid* and *force major disruptions*. While the former refers to the ceased supply under the technical maintenance problems, the latter specify the interruption of supply in the case of nature disasters or caused by third parties' illegal activities.

Failure of grid - No, because we live in the city. When there is maintenance work that is the most disturbing. If there is no cataclysm, then there will be no problem. In the rural areas more can happen such as substation shutdown. It paralyzes. (R10)

Failure of grid - Sometimes the electricity is off, because there is something wrong with [electricity] lines. I have 8 kw inlet. It should be increased until ten or twelve kw. I do not know whether it would help, but such occurrences happen. Or maybe the grid restarts in winter. If you wash or cook the fuse get off. . . . This is due to the grid problem, but not mine installations. (R13)

Force major disruptions - It sometimes happens. This reiterates after natural disasters such as storms. One time this lasted [cease of supply] for a day and a half. Other times maybe few hours or an hour. It happens, but not often. (R5)

Force major disruptions - For natural disasters [resulting to supply disruptions] they are the result of unsolved grid problems. There is not alternative supply, the cables are not buried in the ground. (R9)

However, they both pose the types of hindrance to the functioning of electricity networks resulting in supply disruptions. The concern here is the impact of *long-term supply disruptions* on *personal needs*, whereas according to data the short-term supply disruptions are not accounted to be significant to *aspiration for comfort*.

Long-term supply disruptions - It is unjust that electricity cease for few days for the maintenance work. This is unjust. The longer disruptions. (R1)

Long-term supply disruptions - Cataclysm some kind. Catastrophe if it happens and for long period of time. This would be . . . evolution backwards. This is bad. In fact catastrophe. Even though we are patient people, but I can imagine that there is no hot water. . . not more than a week. After week I do not know. Maybe you endure the week like something temporary, but it would be hard any longer. (R8)

Nevertheless, provided that the disruptions are the result of issues in quality of supply where the voltage alters instantaneously for a second or shorter period causing damage to appliances, such disruption ascribed to the subcategory of *low-quality supply*.

Low-quality supply - Sometimes the strike occurs in the supply when the light turns off for a second and then again turns on. Due to that the clock of oven was disrupted and now it cannot be repaired. . . it just intermits and reappear. You just sit and the light turns off. Or the computer turns off and you lost the unsaved information. (R8)

It must be noted that the research is not steered to quantify the meaning of long-term because the quality aspect is significant here. In fact, the concept put pressure on the rapidity of maintenance of networks in case of accident in the grid.

Thinking about what causes the disruptions in energy supply compels to appreciate the measures at household disposal to mitigate interruptions in supply. This idea is translated in the subcategory of *lack of individual remedy* that reflects the limited options on a part of households to implement means to prevent the disruption or switch to alternative supply.

Lack of individual remedy - You cannot influence at all [continuity of supply]. This is the supplier's ownership. R3

Lack of individual remedy - We do not have how [ensure continuity of supply]. If there be a sun battery, then there will be reserve. As there is no available complementary device therefore we wait until it will be turn on again. We do not have any other energy resources. (R4)

Lack of individual remedy - When you live in apartment building as I mentioned before you do not have any extra options. . . there is little imaginative elements. Of course, you may sit neat the candle, but this is twenty first century and so it is. (R5)

Vulnerability in electricity installation - The ultimate challenge is to protect from the illegal connection. (R5)

Vulnerability in electricity installation - There was one instance when the neighbor disconnected several rooms as we were with two little children. The cables were set as to divide the house in half. As we were detaching the electricity installation, he disconnected two of our rooms. Then it was cold. When he disconnected the electricity, the radiators in those rooms did not work. (R1)

This indicates that the vulnerability may manifest in different context and forms from *vulnerability in electricity installation* in grid security to *lack of individual remedy* in households' situation.

One of the remedies for assurance of supply points to renewable energy solutions such as microgeneration. The data contains this idea of alternative supply of green energy coded in the concept of *access to renewable energy*.

Access to renewable energy - We contemplated, but the location and the roofs position not to the south restricted the possibility [to opt for microgeneration]. In fact, financially this is not feasible, but interesting technology. R10

Access to renewable energy - As far as the sun power plant concern, it is the save of generated electricity in a grid. This is unjust that they take the electricity and constantly alter the price for saving it in a grid. Increase. In few years' time it increased forty percent. Even though they do not preserve but use it elsewhere. You may price for that, but there should be consistency. (R13)

The research suggests that renewable energy generation solutions not only considered individual measures for security of supply, but they are also coherent with the

considerations of supply price conceptualized in the category of *supply pricing* and the orderings in subcategory of *the understanding of quality of life* under the category of *individual subjective well-being*. Thus, lack of *access to renewable energy* may tramp the experience of quality when the household adheres to the sustainable way of life. Additionally, the microgeneration would have a positive effect on incidents accommodated in the subcategories of *increase in supply price* and the *actualization of supply price* in term of price management in a long run.

For the supply to be realized, the lines should be drawn between beginning and end of supply. The mentioned points of interest coded in the subcategory of *connection a grid* being a primary condition for supply and subcategory of *disconnection* being the ultimate state.

Connection to a grid - Connection price as such. It is expensive for a private house. Also the waiting term, it also takes time. You have electricity, but the beforehand expenses are such that. . . The price is quite too high, I think. (R4)

Connection to a grid - We have other house which is restrained by the grid capacity, it is in a rural area. There is low grid capacity and designated watts, this is the issue not to be contemplated in term of [supply] price. You are constrained since it is very expensive to upgrade the capacity. There you understand that it has shortage, the supply interrupts, the one may not turn on many appliances at once. (R10)

Disconnection - If the one disconnects the electricity, it would be unjust. On the other hand, if it is disconnected, there should be a reason. (R1)

Disconnection - I do not think that it is poverty only if it is disconnected for arrears, people create that kind of poverty themselves. (R9)

The conditions underlining the access to a grid inference the *aspiration for comfort* through facilitating the use of electricity appliances and eventually the *individual subjective well-being*. Meanwhile, the *disconnection* is a permanent cut off the grid, therefore, the respondents views this as an ultimate ratio and in some instances confers responsibility on a state to protect households form disconnection. The consequence of *disconnection* is the experience of a misery on the part of households.

Disconnection - Surely. Either of electricity or gas may cease. Then it would be poverty. (R3)

Also, this may cause the household to move out of premises making them uninhabitable without lighting, cooking, food storage and other energy services. All this amounts to the characterization of the activity of supply through the establishing opposite states of affairs within the experience of property.

The *continuity of supply* may reduce the effectiveness of *supply management* by the way of *shortage of access to information*. This hindrance stems from the lack of timely rendition

of information of incidents in the grid or maintenance that curtail the supply. The latter instance corresponds to the views coded in the subcategory of *rendering of information on the supply failures* where the claims against the means of management are conceptualized.

Shortage of access to information - Lack of information. For the generation as well as for supply. For the price also everything is covered nicely. The one who pays orders the music. You should know what it be and for what price. (R3)

Shortage of access to information - I do not know where to look for information. Every supplier does not provide information individually. The one should look for. If the one looks for, the one should understand what to look for. Therefore, it is too difficult to find [information]. (R4)

Nevertheless, the *shortage of access to information* represents also other instance where the shortage of timely and clear information demotivates to be active participants in the access to energy service. This comes into light when the decisions on choosing supplier and pricing scheme should be made. The haziness surrounding the principles and elements in the framework of supply pricing causes much stress for households and demotivates to take active role in choosing supplier. The prevalent premise is that the one may not influence what the one may not understand. It also gives more substantial impulse for the households' inertia to follow the same footsteps in consumption practices and stick to the same pricing schemes as well as the supplier.

Context

The methodology of grounded theory requires to set categories that in relation to other categories represent the dimensional intersection of causal and intervening conditions. The encounter of categories being causal conditions with the categories being intervening conditions produces patterns of incidents referred to as context. The emerging situations affect what decisions households make, but this is not what motivates households to perform. The patterns or context frame the conduct of households owing to object's and subject's inherent features. With respect to households' access to energy service, the *individual subjective well-being* as a cause for action when linked to the *households' consumers responsibilities* exposes the contextual conditions of perceived circumstances on electricity social nature and characteristics as well as consumption modes. Drawn upon the collected data the research conceptualized the categories of *electricity characteristics*, *electricity mode and type*, and *specificity of households' situation* to be the dimensional abstractions of causal and intervening conditions.

Category: electricity characteristics

Thinking about electricity is quite a tricky endeavor since it may not be experienced through the human senses at home. Therefore, what one thinks the electricity is depends on the interaction with it, namely, consumption.

Consumption - As a consumer I understand that electricity consumed through light, appliances and alike the quantity the one consumes. (R7)

Consumption - That it is related to appliances at home. Electricity is needed for appliances, lighting, heating. (R13)

Having said that the relation with electricity manifests through consumption per se, the consumption volumes aid in identifying their own standing in the pool of consumers. Hence the consumption levels may be a significant factor in categorizing consumers groups favoring social views.

Quantification - The consumers that are not industrial consumers, household consumers, households that consume a specific quantity of energy. (R11)

In case a person interacts with electricity in a home setting the understanding would be underlined with the benefits received from it. Thus, the meanings construed through experiences that households incur in their domestic environment. This affects what claim the households hold against the other entities acting in the process such as conferral of responsibilities or recognition of own responsibilities. The connection with the object interpreted in light of past experiences rationalize the claims against the others and oneself. The category of *electricity characteristics* is devised for documenting and informing about the social understanding of the phenomenon of electricity and the meaning place of significance to the process.

According to data, the electricity has multiple characterizing meanings such as *necessity, utility, commodity, continuity, sustainability, affordability, quantification, consumption, accessibility, capacity and dependance*. The wide characterization, consisting of divergence features with apparent tensions, is in contradiction to the formalized definition in legislation on energy where the electricity is being defined to be a good. However, the present energy regulation in the EU related to some social meanings embodied in the data, namely, the tradable good, the significance of financial capacity to acquire an adequate level of energy service, the need for uninterrupted supply, positive standpoint towards green energy. Indeed, the technical understanding of electricity is missing in the data and economic attribution confined to few meanings implied in the character of commodity to be valued in price as well as financial capacity to acquire electricity.

While respondents hold their own understanding of electricity, they also distinguish diverse attributes that are important to them or defines their relation. The most often reiterated understanding conveyed by respondents is the one of *necessity*.

Necessity - Everyone should have electricity. It is necessary. In my view it is necessary and needed, therefore I should have it. (R1)

Necessity - Electricity is needed at home. Without it like without hands. The one uses oven and water heating. If there be no electricity, it would be bad. It is needful. (R2)

Necessity - And of course the one may not live without electricity these days because there are a lot of appliances at home. (R4)

Necessity - That electricity is needed everywhere and always, and it is impossible to live without it. (R9)

Necessity - Necessity. I would not buy clothes, but I should have electricity. Necessary commodity. (R10)

Necessity - Electricity is necessary, but when it is [consumed] in large quantities then it is a good. As for the household consumer, it is necessity, I could not refuse it. Necessary commodity. (R13)

Whereas the electricity is perceived as a *necessity*, it reflects the existing link between the personal needs in *individual subjective well-being* and a *guarantee of minimum consumption* in *state responsibility*. The *personal needs* drive a person to take available actions. If a household has limited tools to satisfy *personal needs*, the respondents assume that the *state responsibility* is to establish measures to evade inadequate consumption. This is important since there is strong dependance on electricity with regard to *personal needs*. The concept of *minimum consumption* designated to perform the function of enhancing to actualize the satisfaction of *personal needs*. Nevertheless, the understanding of electricity as *necessity* motivates the households to take actions to satisfy their *personal needs* by employing electricity appliances to perform various task at home. So even though the *personal needs* are the cause of action, the subcategory of *necessity* reveals the motivation to use electricity more likely for well-being purposes than other modes of action or forms of energy.

Another frequently shared meaning is the *utility* of electricity derived in consumption.

Utility - Due to [electricity] you may employ many things. Starting with a stove and ultimately all other appliances. [Utility] is the most important attribute. Today we do not have any other source. (R3)

This subcategory relates to the subcategory of *aspiration for comfort* in the category of *individual subjective well-being* under the notion of benefit. The benefit derived from

consumption is the *utility*. The *utility* of energy services fosters the *aspirations for comfort* that constitutes the category of *individual subjective well-being* which leads to claim by households on access to energy service. The *utility* conferred on household is what guides the inner adherence to comfort conditions. The *aspiration for comfort* drives the level of *personal needs* under the constant urge for more *utility*. Here the electricity is the source of *utility* situated within the context of access to energy services.

As mentioned before few characteristics of *affordability* and *commodity* suit the formal or economic definition of electricity. The social meaning should not be in conflict or opposition to economic approach. The research assumes for a social sphere to encompass economic perspective to energy where the latter represent not the expert judgement on what is feasible in market terms, but from the respondents' views on what is fair.

Affordability - For me as a consumer it [electricity] should be financially accessible.
(R7)

Affordability - Money value how much I spend on electricity. How much can I afford to spend on electricity. R4

The evaluation of supply pricing on quantifiable incidents switched in qualitative terms to make judgement under households conveyed experiences and not under the demands of effective competition. This way should enrich the understanding of phenomenon of access to energy service with more variations and in some cases alter the understanding of some aspects. For instance, the price of electricity is recognized as important feature economically and socially, but socially the price judged in terms of *affordability* and from economic perspective it should be reasonable, namely, the result of effective competition.

Similarly because the electricity may be priced, the households ascribe it to *commodity*.

Commodity - This is a necessity, but since currently no one gives it for free so it is a commodity. If the regulation set the free supply to households as a necessity, natural right, that you have electricity at home and do not pay anything. . . Now households pay for increase in capacity, for everything, it means it is a commodity. (R8)

Commodity - Like a commodity. Electricity is not necessity. People used to live without electricity. This is a commodity that is supplied. (R3)

Though, the meaning changes when the context alters, but the patterns remain. Based on the data, the research devises the *affordability* and *commodity* to be the characterizing patterns of electricity underlining the *supply pricing*.

In parallel with the formal emphasis on the security of supply, the respondents highlight the need that electricity be constantly available at the premises in accordance with the

needs. The apparent element of sufficient availability stands on the several more focused concerns of constant flow of electricity, grid connection and power. The research conceptualizes these concerns under the subcategories of *continuity*, *accessibility* and *capacity*.

Continuity - Overall, that electricity be present at home. That it won't disappears. (R2)

Accessibility - Maybe accessibility if you live outside the city. . . Accessibility is important as a resource [electricity]. (R12)

Capacity. If the appliances are powerful and three phase [installation] are there, then the more powerful appliances you may turn on and consume electricity. (R14)

The understanding of electricity has relevance to the experience of past incidences. These are the consequences of the failure in the process of appropriate access to energy services. The failures apprehended as the potential outcome in the process affect the meaning of electricity as the dimensional item in the paradigm. In extending this idea, the connection between the context where respondents share their views on electricity affects the experienced consequences and vice versa. In this case the link emerges between the *breakdown of appliances* within the *experience of total discomforts* and subcategory of *continuity*. Whereas there are appliances vulnerable to fluctuation in supply itself, the impeded *continuity* possibly provokes the *breakdown of appliances*. The meaning of electricity shared by households withdrawn from the outcome of the failure of adequate access to energy services demonstrates the counter lead in the paradigm from the *consequence* to the *contextual condition* in establishing of conceptual link.

Continuity - These principles and that it would be permanent without interference, that it won't induce the problems to electric appliances. . . be safe. (R7)

It should be noted that respondents find it hard to explain what it means for them the availability of electricity. Some refer to availability as a quality feature of supply what is corresponding to the evaluation requirement for services because the characteristics of supply voltage are left outside the scope of supply agreement whereby the electricity may be assess as a good. The households judge the quality of supply through continuity of supply, but not the qualification of standard LST EN 50160:2010 on the characteristics of the voltage of supply by public distribution grid. When entering into the agreement with supplier the expectation of household is to acquire electricity when it is needed and that it won't damage the appliances. The households do not make decisions on the choosing supplier based on the voltage characteristics, even though one of the expectations is the qualitative supply.

Continuity - As I said that it [electricity] is uninterrupted or how it should be called. Just that the electricity supply be qualitative. Above all qualitative and uninterrupted. . . (R6)

Continuity - Maybe a quality, but I do not know what it is. That there would be uninterrupted electricity supply all the time. (R8)

Continuity - The price is not decisive factor. . . When the price increases, I wonder and again, but it is not a decisive factor. I would say as for consumer the qualitative supply, uninterrupted. (R10)

The conceptualization of data shows that the subcategories under the category of *electricity characteristics* are interrelated as a result of attachment of household to the energy services underlined with the electricity. The respondents feel that they are dependent on electricity in their everyday life to perform the conventions. Indeed, not the convention itself is conferred with significance, but the form of it. Thus, the home cleaning or washing may be done in many ways, despite that the views are that the activities should be performed in a certain way by employing energy services. Whereas the energy services are perceived to be a mandatory factor in the overall well-being, the electricity that sustains its enjoyment ascribed with the features of *continuity* and *dependance* reveals the difference in instances, but commonality in respondents' minds.

Dependance - Yes, because the greatest amount of energy around 80 percentage constitutes electricity. It would be considerable poverty. For those who have the central heating, maybe suffer less. (R12)

Continuity - Lighting. That enable to turn on appliances, without any restrictions. If the supply ceases, then you may get cold, be without internet. (R13)

The moderate group of respondents shared any suggestions on the sustainability reference with the energy service and in particular the electricity. Just few respondents mentioned the benefit of sustainable energy and those laid delimitation on the extent of its prominence.

Sustainability - The second thing is that it [electricity] should be as much as possible ecological nowadays. (R7)

Sustainability - Of course the electricity is one of the most less hostile to the environment.. this is important. (R6)

The conceptualized meanings of electricity are a clear evidence of heterogenous views prevailing in society to the same object and relation to it. While some understandings are contrasting in their meanings such as a *commodity* and a *necessity*, the fragmentation of instances within the codes set the coherence in the construction of social reality. The theory's relevance lays in the explanation force and absence of recognition and incorporation of contradictory specificities fails on its mission. The subcategories on the category of *electricity characteristics* represent the underlying factors for the assumed claims against the other entities be it a state, an institution, a

public or a fellow citizen. Accordingly, the conferred meanings to electricity being a rationale for the claims constitutes the *context* of the process of access to energy services.

Category: consumption mode and type

The research identifies the set of patterns in the behavior of respondents compiling the *context* of paradigm. The behavior refers to the activities related to the consumption of electricity when the latter through the appliances convert the electricity into energy services. The modes of consumption practices are one of the patterns of household behavior with respect to operation of home devices.

To that end, the research conceptualizes the types of consumption such as *beneficial usage of appliances, wasteful consumption, usage of "luxury" appliances* and *usage of effective appliances*. These subcategories display the diversity of behavior that respondents consciously or unconsciously adhere to. The benefit of the representation of contradicting patterns is to saturate the category for the theory integration purposes. On that account the research reveals that the same household may follow more than one of the patterns and, on some instances, they may carry out all modes, but not in conjunction. Meaning that the consumption practices may change but saving and wasting is the opposite practices what makes impossible to behave differently at the same time. Despite that households perceive they consumption practices as coherent while they uphold their habits that actually guides they actions incoherently.

The recognition of patterns enables to explain what drives households' decisions in response to *individual subjective well-being*. On that account the research from data construes the concepts of *inertia of households, uphold of personal habits* and *uninterrupted usage of appliances* that underlines the consumptions practices. These attributions of households steer the behavior of predominant groups of consumers such as single persons, disabled persons, families of four members and big families with more than four members.

According to collected data, the respondents confirm that the electricity is consumed 24/7 without interruption regardless of anyone being present at home or not. The boost in the number of energy service enjoyed inevitably results in dependency to some of them. The more appliances are dedicated for energy service provision, the more likely that the intervals of non-consumption shrink or disappear. The outcome of the growth in dependance on electricity appliances on the performance of convention and comfort activities is the need to be constantly connected to a well-functioning grid.

Uninterrupted usage of appliances - Our gas boiler does not function without electricity. There are heating, refrigerator, internet, tv. We consume constantly for refrigerator and heating. Practically constantly since the son has a distance learning. In our home it is

constantly. The husband watch tv. In our home there is no moment that we would not consume electricity. We do not have such interruption [of consumption] in our lives. (R9)

The detection of the fact that households use appliances constantly requires to acknowledge the reality that people face in case of failure of supply. The permanent need for supply bolstered by the fact that households endeavor to *uphold personal habits*. Notwithstanding which of the type of consumption prevails, they are all the product of personal habits.

Uphold of personal habits - It cannot be said that we save electricity. We consume it according to our need. R2

Uphold of personal habits - As it is now [preferred consumption level]. That we acquire electricity and everything functions. I could cook. . . (R1)

Uphold of personal habits - Currently we save already. That we would consume less it is very unlikely. If we consume more and the price increases, there should be some kind of intervals from. . . to. (R4)

The fact that households are inert with respect to behavior and accustomed conditions shows how the unfavorable behavior may be intensified.

Inertia of households - Until now I have not chosen [supplier] because I did not exceed the consumption level of five thousand kw per year. I think I will stay with Ignitis. The reason for that, is that I have had relatively little headache with them. Its reliability. In fact, I did not research the prices of other suppliers. Certainly not researched, but I think there would be no big difference. And the reliability is very important for me. (R5)

Inertia of households - Previously formed habits how to consume without considering the supply price. As the soviet times the electricity costed four cents. No one even save. For me it comes [the habits] from these times. . . the habit from former times when the electricity was very cheap and the one does not economize. (R8)

Inertia of households - Because I do not fall within the list that is mandatory [to choose supplier], therefore I have not chosen. (R11)

Another group of properties of the category of *consumption modes and types* revolves around the types of consumptions that household observes. The one that is to be encouraged is the effective use of appliances for performing everyday conventions at home.

Beneficial usage of appliances - Economizing maybe a bit. It is not like we turn on everything at home. You just use and then turn off. You try to economize as much as you can, as it is related to money. In general, we do not turn on lighting without purpose. (R4)

Beneficial usage of appliances - With regard to out consumption, we rationally counted how much electricity we consume and for what purposes. Just it is possible to decrease

the lighting, because sometimes we use it less rationally when we leave the lights on somewhere. (R6)

Beneficial usage of appliances - As much as I consume, I do not consume without purpose. If we are not in the room, I do not turn on the lights. Or tv are in several rooms, so when we watch in one room the other is turn off. There are no limits, I do not use limitless. (R9)

The data suggests that households employ divergent appliances for their consumption to be positioned in contradiction one to the other such as reasonable consumption under *beneficial usage of appliances* and *wasteful consumption* as unreasonable one.

Wasteful consumption - I love environment, but I do not feel that for that reason I would consume less. Sometimes I leave the tv on without the sound. I do what I need and the pictures just playing on tv in the background. Or the turn on of electricity [lighting] in several rooms. I feel that I do this. I understand that it is not good. I do not much economize. (R11)

Wasteful consumption - Improvident. It is not that I economize. Sometime the lights are on everywhere where possible. I prefer the comfort everywhere. (R8)

On the one hand, the subcategory of *usage of effective appliances* denotes the due type of appliances exploitation which use appliances of one of the highest class of efficiency available, on the other hand, the subcategory of *usage of "luxury" appliances* reflects the aspiration for comfort led by experience of utility indicating the instances where households employ appliances for strictly entertainment or leisure purposes.

Usage of effective appliances - I seek to change with other sources that use less electricity. I change the appliance to the one that is more efficient and use less electricity. (R3)

Usage of effective appliances - And then we look from the other side to the appliances that are more efficient and sustainable. (R5)

Usage of effective appliances - This is how economizing manifests that we have changed the old ones to the new washing machines and stoves that were much more expensive, but more efficient. (R6)

Usage of "luxury" appliances - The children turn on all kinds of heating devices, jacuzzi and other devices that are for pleasure. I am for moderate pleasure, that they would not be turn on twenty-four hours. R10

The "luxury" appliances considered the ones that do not sustain or improve comfort in performing daily activities at home in terms of bubble bath or swimming pool. Of course, "luxury" appliances may be highly efficient with respect to energy consumption, but the subcategory of *usage of effective appliances* captures the most significant devises for the provision of energy service such as lighting, heating, cooking, warming. Conceptualizing the efficient use of appliances for the extreme comfort is redundant for the theory generation on a socially

motivated process. The motivation behind the efficiency and "luxury" is quite different. The "luxury" stands for the energy services being prompted by the inclination for extreme comfort, on the other hand, the efficient consumption refers to the valuable saving of energy for the performance of socially recognized forms of energy services as needs.

In regard to expected type of consumption, the source of electricity also meant to be considerable for framing the contextual patterns. The data reveals that the respondents take due consideration of clean energy to be conceptualized under the subcategory of *consumption of sustainable energy*.

Consumption of sustainable energy - I am convinced that there should be more green energy. I am not for atomic energy. I agree consume less and give up esthetic stuff, if it ceases. When I had to choose the independent suppliers, they [suppliers] identified the benefits of green energy, Lithuanian green energy. It affects me as a consumer. I would choose it, even though I have to pay extra. (R10)

Consumption of sustainable energy - The effectiveness is when you install the sun battery, all other kinds of nature resources, when the energy is a private subject [generated/microgeneration]. (R14)

The latter comes into view as a possible practice to be conducted bringing together the category of *individual subjective well-being* and the category of *consumption modes and types*. One may believe that the consumption of green energy is the preferred type of energy against which the *personal needs* are brought into being. Thus, the *personal needs* are the cause for action, while themselves are the reflection of patterns in consumption. In fact, any type of consumption is an existing option for behavior affecting the households' strategies, but the realization of either depends on the mixture of causal conditions, intervening conditions and dimensional patterns.

Category: specificity of households' situation

The paradigm context constitutes not only of patterns of consumption, likewise it organizes the sets of households' situations. The given organization lines up the substantial indicators for possible input of energy deprivation. To that end the category of *specificity of households' situation* conceptualizes the possible drivers of vulnerability such as *lifestyle, family status* and *income level*. Either of them may also have the opposite effect to vulnerability, therefore, they may be considered as a benchmark for vulnerability to be assessed separately or in coordination of subcategories.

To a great extent the literature on vulnerability in energy reiterates the price of supply as the main drivers of inadequate level of energy consumption. On that account the term of affordability is introduced that ascertain the income spent on energy to judge the affordability of energy. There are two parameters to be used - the amount of energy bills and income level.

This is in parallel with the collected data on incidents that motivate households to uphold or alter their consumption practices and also influence the views on the energy characteristics.

The *income level* determines the level and sophistication of energy service enjoyed at home as the data suggests. The higher the income level, the rise in a number of appliances at home and more intensive enjoyment of energy services are detected.

Income level - If the financial capabilities restrict [consumption], then of course. My senior parents economize. They less concerned with esthetics. If you can afford, you allow yourself. (R10)

Income level - It would motivate, but at first the difference of price should accounted. If there is rise from fourteen cent to seventeen, then it is ok. But if it is the half of an euro, then you consider your [financial] capabilities. (R5)

Income level - Everything depends on the income level. When a person receives lower income, the one would automatically start to economize on food, on clothing. What can you economize in the household? You may watch less tv. You may not turn off the lights, that does not make sense. Everything depends on the income level. Provided that a person receives normal income, then the one feel comfortably. If a person gets minimum salary, then surely it may be ascribed to poverty. Then a person economizes on food, clothing, water and the same with the electricity. The one that get normal income, that lives normally and economize less. (R14)

It must be noted that in some instances the number of appliances possessed represent the experience of comfort. Also, the variation in *supply pricing* sets the drivers for consumption practices which in fact reflects the existing patterns of consumption enshrined in the context of paradigm. Meanwhile, the claim for affordable energy underpinned with the element of *income level* instituted in the subcategory of *affordability*. This recurrence to income regarding household financial capacity and characterizing feature of electricity demonstrates the link between household perception to electricity and financial state.

When a household judges the price of electricity, the one does this from personal circumstances and not statistical factors. Though how people understand a phenomenon depends on their state be it financial or health. This notion confirms the research provision that a reality is a social construction rooted in personal experiences.

Contemplating about household vulnerability through the income is the most widely accepted approach in light of energy poverty. Rightly though it is a significant factor on households' capacity to acquire electricity. Additionally, the supplementary benefit is that this criterion enables to weight the financial ability to take other measures such as obtaining efficient appliances, adapt consumption practices, abandon the excess of appliances, house insulation solutions or microgeneration to manage consumption volumes and sources. It must be noted that

respondent rarely relate the income to the options for managing the electricity bills, except for efficiency and microgeneration.

Nevertheless, there are other intrinsic life situations which affect the consumption practices and understanding of electricity.

Lifestyle - The works that are more energy intensive, for instance men work, we perform on the weekends. Despite that they are not related to cheaper electricity tariff. On the weekends we do working, cleaning, washing cooking. (R1)

Lifestyle - For example, an employed person does not stay at home, work with computers, comes home just to sleep and to eat. What is left is weekends and the one leaves homes. For such households the consumption volumes are minimal. And if a person stays at home, then the one cook or do other things. I just thing that while staying at home a person consumes more, then those that just come home to sleep. . . It depends much on the employment type. (R4)

Lifestyle - Of course the life and employment rhythms. Because during days we usually to do not consume and after work it starts [using appliances] whatever is possible. Lifestyle, life regime. . . (R8)

Family status - I think this is individual. . . people live differently. Because some families are with children. Others lives alone. This is individual. . . alone, spouses, family, with grandparents. . . The number of appliances they [household] use. (R4)

The respondents find themselves in different kind of situation that reasonably may be described as the input in the ability to acquire the sufficient level of need energy services. Hence not every personal situation is important, but just those that last for a long period of time, out of direct control by the household or household cannot easily make a positive change on a situation. According to these general criteria, the conceptualization of relevant situations to process under investigation found in data was performed.

The conceptualized incidences under the category of *specificity of households' situation* has relevance to the *individual subjective well-being*. How household lives predetermines what kind of habits form in a long run which later translates into being apprehensible as needs. The *lifestyle* affects the emergence and development of *personal needs*. Moreover, the *income level* may put restrains on the *aspiration for comfort* by molding the definition of comfort. Lastly, the divergent *family status* determines the respective *understanding of quality of life* when people form their habits on energy consumption consistent with the needs of family members. In sum, the *specificity of households' situation* situated in the context of the process evidences the settled patterns of incidents that being dimensional controls the structuring of causal conditions.

Strategies

The methodology of grounded theory sets the requirement to conceptualize the prevalence of actions under the paradigm item of strategies. In short, the categories under strategies elaborates on the instances of action/interaction by respondents of research. To that end, the research conceptualizes the households' responses in the event of occurrence of problems, issues or happenings. To the extent of access to energy services, the collected data points to the types of incidents exerted by households in their disposal aiming to ensure the availability of energy services at home. The variation in measures to be accessible to households present the actual countervailing acts to the situations of supply failures, a peak in supply prices or low-quality supply. In contrast to the categories under *context* introducing patterns of consumption practice upheld by households, the strategies refer to the instances where specific responses actualized in the process of access to energy service in connection with assumed meaning of electricity and accustomed behavior in enjoyment of energy services.

It should be noted that the formally access to energy services does not mean the supply of electricity to homes from household perspective. The actual process of access does not stop at the gates of premises. The social views on access to energy service diverge from the technical or formal understanding of energy chain. Based on the data the research implies that access means factual benefit of lighting, cooking and other energy services. It encompasses within the stages of supply as the constant flow of electricity until the socket and consumption where the conversion of electricity into energy service takes places. Therefore, thinking in terms of supply as a sell of goods is defected in light of how household experiences energy service. Against this background the households make decisions to perform as response to existent situation aiming to use available measure on supply and consumption.

Category: use of measures on energy services

The data shows the patterns on measures employed by household to ensure their private ability to benefit from energy services. The identified patterns conceptualized under the category of *use of measures on energy services* presenting the variation of available individual means to replace supply with other energy sources to produce energy service or avail other energy technologies to generate electricity. In that regard the research elaborates on the respective subcategories of *consumption of alternative energy sources*, *employment of generating equipment*, *adaptation of safety devices* and *microgeneration*. The coded categories are underlined with the meaning of electricity translated into characterizing features of *continuity*, *necessity*, *sustainability* and *affordability*. Even though the conceptualized responses are to the issue/problem/happening, they rationale are embedded within the apprehension of what electricity is for them.

Hence the research argues that the households opt to the *employment of generating equipment* in a view of securing the *continuity* of supply in the event of supply failure.

Employment of generating equipment - Maybe in the rural area, but it is not a concern in a city [acquisition of generator]. You may try with using generator. At the moment it is not a concern while living in a city. For economic grounds. With liquid fuels these generators functions. (R3)

In essence this is the substitution of commercial supply with private supply build on attachment to electricity appliances for enjoyment of energy service. From here comes consideration of electricity being treated as *necessity*. In fact, the *necessity* stimulates the urgency for *continuity* inducing the sense of insecurity that motivates to take responsive measures. However, the *employment of generating equipment* as a solution is not very adaptable to every type of premises what makes it an exceptional measure. The households see it as more fitted for private homes in remote areas than being easily integrated in every home.

The emphasis on *continuity* is in parallel with other subcategories of *consumption of alternative energy sources* and *microgeneration* with regard to their underlying function to use different methods and forms of energy as alternative to electricity. The actions performed contained within the mentioned subcategories is driven not only by endeavor for securing the *continuity*, but also financial pressure from increasing supply prices.

Consumption of alternative energy sources - We do not have additional measures except the gas. For boiler we need electricity because the motor that circulates the water in the winter has to be always turned on. We also heat with solid fuel, that also need electricity For motor to pump the hot water in the house. (R2)

Consumption of alternative energy sources - I told you that I have gas at home, therefore, I do not experience too much of discomfort. There would also be the third alternative - firewood, coal. You may find the way. (R3)

Consumption of alternative energy sources - I could change the water heating with gas [alternative to electricity]. For home heating I could not because the motors should work to pump the water. For cooking on gas stove, it is not worth and for the water heating I do not know what is cheaper [electricity versus gas]. (R13)

In this vein the households seek for more *affordable* energy services and the *affordable* electricity is one of the inputs in the equation of access to energy services. Despite the focus of research on the energy service produced through electricity consumption, the household sees themselves not to be constrained within one form of energy in access to energy services. The data presents broader setting on the possible measures being responses in a view of *affordability*. On the one hand, the households opt for *consumption of alternative energy sources* such as gas or

biofuel for heating and cooking which is cheaper and easily stored. On the other hand, the households invest in the microgeneration installations such as solar panels to benefit in the long run due to "free" electricity after the initial investment is recovered. The selection of microgeneration may also be induced from the adherence to renewable energy for environmental and life quality reasons reflecting the *sustainability* in the meaning of electricity.

Microgeneration - As we live at the suburb, we analyze the wind turbines and sun energy. At first glance it seems attractive for personal consumption. But when we consulted with specialists, we find out about the technical maintenance and requirements for alteration of sun battery. For wind turbines the price is extremely substantial. R6

Microgeneration - Electricity is attributed to renewable energy. It is possible to generate it. If I could, I would try it myself. . . production of electricity. Sun energy. I thought about it ten years ago, but then it was very expensive to buy all equipment. (R4)

For the most part the households' responses are directed to the measures on supply and its alternatives. Nevertheless, the data indicates that households take due consideration to the safe functioning of electricity installations at home referred within the subcategory of *adaptation of safety devices*. These types of measures are the reaction to the assumed *households' responsibility* in access to energy services and in particular the maintenance of installations' operation.

Adaptation of safety devices - We have insured the appliances. Fully reinstalled. Electric grounding and protection relays installed. We have taken measures to protect as much as possible from supply failures and accidents. Automatic shut off installed if necessary. Other measures were not implemented, but we considered them. R6

The responsibilities on installations maintenance formed through experiences of brake down of appliances and other devices. Here the consequences of impeded enjoyment of energy services infers on responsibilities that prompt to take measures. Additionally, the technical *accessibility* to supply has some correlation with the *adaptation of safety devices*, whereas the energy services may be constantly actualized when the due provision of electricity is not jeopardized by the ones' parameters fluctuation or occurrences of interruption.

Consequences

The explanation of a phenomenon requires to identify causes of it, how it manifests and the outcomes it produces. Similarly, the paradigm on grounded theory instructs the research to conceptualize the incidents representing the states and experiences resulted from success or failure of strategies. Hence the consequences as paradigm item presents the variation in the outcomes that likely to appear as the result of process. In this case a consideration of access to

energy service as a process conforms to methodological suggestion for decomposing the process into initial phase, core phase and ultimate phase.

Even though the process is repeated constantly in different segments of access to energy services, the thread between outset and outcome is established by setting interaction of different conditions leading to strategies implementation what produces states and experiences. Comparable exercise can be executed from the other end to give more explanation force of what is going on in the process. Consequently, the apprehension of the strategies does not always actualize as the response to the causal condition and context. In some instance they may be a product of past negative experiences building motivation to opt for specific measures.

With regard to the theory building on access to energy service by households in line with the demands of grounded theory, the research categorizes on conceptual bases the incidents that may be ascribed to be the consequences of action or inaction. The determined incidents are reasonably available measures to be exerted by households recognizing possible discrepancies in the *specificities of household's situation*. Keeping in mind of divergent availability of measures that may be implemented, the research presents the variation of possible outcomes and establishes the existing relations.

In this vein, the consequences are conceptualized under the categories of *experience of total discomforts*, *gratification of social needs* and *gratification of domestic needs*. The result may be in a form of benefit of energy service and also other forms of benefits underpinned with energy service. The collected data indicates that the benefit of energy services translated in domestic need, while the other forms of benefit are social in nature wherefore coded as social needs. On the other side there are incidents being a result of drawback on domestic and social needs referred to in the *category of experience of total discomforts*. That being said examination of access to energy service in light of households' views and experiences portrays much large picture reaching to other spheres of life then enjoyment of lighting, cooling, heating and other customary energy services.

The research through data gathering and analysis discovers the corresponding structure of the process as in the developed framework of energy justice built on distributional, procedural, recognition justice and capability approach. The empirical evidence on capabilities being the consequence of energy consumption validates the theoretical arguments for widening the framework of energy justice. The capabilities in theoretical part being sorted into the primary and ancillary corresponds to the needs in empirical part being coded as domestic and social.

Category: experience of total discomforts

The situation when the social and domestic needs are not met puts households in the position that jeopardizes they capabilities to do and to be. While some are the extreme in they

experiences, other are qualified as a disturbance of well-being. Either of them is understood through the experience of incident conceptualized under the subcategories of *disruption of routine, breakdown of appliances, move out of premises, deterioration of health, deterioration of mental condition, restriction of employment activities, dissatisfaction of indispensable needs* and *limitation of comfort habits*.

According to gathered data, the slight intensity of disturbance to well-being comes from *restriction of employment activities, disruption of routine, breakdown of appliances, and limitation of comfort habits*, on the other hand, *move out of premises, deterioration of health, deterioration of mental condition* and *dissatisfaction of indispensable needs* are the situations that makes households frustrating.

The common factor connecting all incidents under one roof of concept is the uneasiness regarding health, employment, financial losses and unbearable living condition induced on the part of households. Even though the common variable links the instances of uneasiness experienced by households, they are divergent in they effect and spheres of life. As pointed out earlier the initial distinction can be made between the incidents benchmarking the harshness to their capability deprivation. The provisional benchmarking exercise is performed based on the primacy of human health, housing and other general needs. This gives the picture of extremes in experiences within the category of *experience of total discomforts*.

Deterioration of health - In fact yes, because the autumn is the darkest season of all and if there is dark at home, then I feel very terribly. This has the negative effect on heath condition. (R5)

Dissatisfaction of indispensable needs - This is not just energy [poverty], this is absolute poverty. Energy poverty is when essential needs are unsatisfied. Neither food, nor you may sleep in a cold. Everything is related. In contemporary times a person cannot get by without electricity. (R4)

Move out of premises - Than we go to other home. There are no other measures. It depends on the term [of supply failure]. If it is less than a day, then anyway you go to work and children go to school. But if it lasts for a month, then it would be terrible. It depends on a term. If for a longer period, then you would be forced to live in a tent. I do not imagine these days life in a tent. (R4)

Move out of premises - The people suffered poverty when the electricity was disconnected for few days. People were forced to evacuate, rent or temporarily evacuate, because as you know they could not live without electricity. (R9)

Furthermore, the variation of incidents regarding divergent experiences under the category gives more saturation in a view of methodical requirements of grounded theory. Though

identifying heterogenous outcomes from scarce energy service at home explains why energy service is so important in contemporary standard of well-being. In short, it may be argued that adequacy of energy service has chain of reaction in substantial areas of human life and lack of access to energy service causes the frustration resulting in states that households see as unjust, for instance the *deterioration of mental condition*.

Deterioration of mental condition - This defines also other spheres of life such as health condition and mood. Like mental health. It does not suit me to be in a dark, so what should I do. (R5)

Deterioration of mental condition - My emotion state would be affected. Physical maybe not so much, because the heating would not cease and there be no threat to get cold. (R11)

With respect to the less stringent outcomes of inadequate energy service at home, the respondents share the views on the detriment effect on customary activities. Being accustomed to technologies in performing tasks at work, the resettle in the home environment of employment activities faced with supply failures may impede the capacity fulfil employment duties. This situation may manifest when the household is in a distant working mode due to health condition or pandemic coded within the subcategory of *restriction of employment activities*.

Restriction of employment activities - You may not connect to the rest of the world. You may not perform the working activities if you work from home. This opportunity stops. (R11)

While some experienced consequences are far-off, others are much closer in the chain coded within the subcategories of *disruption of routine*, *breakdown of appliances*, and *limitation of comfort habits*.

Because households are inert in they consumption practices and related decision, shortage of energy services results in the *disruption of routine*.

Disruption of routine - Once for several hour the electricity ceased due to supply failure. At that time, it was summer and we did not experience cold. Just there was no water for children. You could not use the water in the toilet and wash your hands. R1

Disruption of routine - If the situation be like that [cease of supply] then the activities and communication would stop, it would be cold and bad. I could not imagine the situation without electricity. I have never been in such situation. R9

Disruption of routine - Hard to imagine. According to present situation I hardly imagine how to endure. When we have supply failure, we have big confusion around the house. Because we count on the water supply from the well. Today it would be a little tragedy at home. (R6)

A similar tendency in connection to *context* evidenced in the consideration of *dependance* of electricity. Provided that there are no alternatives for the energy service provision

except the electricity, then the created habits constituting the routine be hampered due to the *dependance*.

Dependence - The challenge is the rise of electricity price. We do not have other alternatives to electricity. (R3)

Thinking of contextual conditions on the meaning of electricity with regard to conferred *utility* exhibits other relations between the causal conditions, context and consequences. The households are motivated by an experience of comfort referred to as *aspiration for comfort* recognized to be a cause of process. Given such views, the respondents suggest that one of the electricity characterizing features is the *utility* conveyed on households. Owing to expected *utility* from electricity consumption instigating the *aspiration for comfort* may result in *limitation of comfort habits* when the *affordability* or *continuity* is not ensured. It all amounts to the fact that the prospects of low-income and failure in supply render the restrain on the comfort habits.

Limitation of comfort habits - For me personally any bit of constrain on current consumption level would be poverty. If I was needed not to perform some of activities for economizing reasons, then it would be poverty. (R13)

Limitation of comfort habits - Poverty is not the right definition [consequences of restrictions on consumption]. It is discomfort. You need to connect different kind of stove. . . There would be discomfort and losses. (R6)

The consequences may manifest not only as the states, but likewise as the technical problems and financial loses. The respondents convey their experience on the incident when the electricity appliances are defected and, in some instance, irreparably. Thus, the outcome of poor supply may lead to situation to be conceptualized under the category of *breakdown of appliances*.

Breakdown of appliances - When it is ceased [to supply] where in my case a lot of appliances connected, then they break down, work is interrupted, and losses accumulate. (R6)

Breakdown of appliances - Once due to the spike in electricity the refrigerator broke down for my friend. (R8)

Despite that this type of occurrences are hardly proved in the legal sense, because it occurs gradually and imperceptibly. The reason for that is the *low-quality of supply*, not the source of electricity but electricity itself. However, to detect quality issues special devices need to be implemented at every home and bear the inherent costs. Additionally, the complexity with the quality of electricity rest in the nature of it where the seller of electricity does not guarantee the quality, just the being an intermediary between the generator, system operator and household. Respectively, the *breakdown of appliances* reasonably viewed by households as the result of *low-quality supply*, still the capacity to successfully litigate on the incurred losses are restrained for the lack of legislative base.

Keeping in mind of the social perspectives in seeing the energy service through the lenses of comfort and needs assists explaining exerted strategies, given meanings and designated responsibilities on stakeholders. On that account the research distinguishes the subcategories of needs representing the respondents' views that are the ultimate goal of the overall process. In comparison to the category of *experience of total discomforts* articulating the negative experiences, the following categories on gratification of domestic and social needs present the ends against which the process is calibrated.

Category: gratification of domestic needs

The data discloses the benefits reaped from electricity consumption of great significance to households. Hence, these benefits may be realized not only as a consequence of electricity consumption. It is what people do for hygiene, health and survival all the time throughout the human history to be understood as conventions. Being to a great extent of universal in nature the conventions each and all of them gives reasonable ground to define them as human needs. Whereas these needs are satisfied by households more conveniently by employing the electricity appliances, this gives ground to consider them in light of energy service. However, it must be recognized that energy services do not only serve the conventions to be socially recognized as needs, the tendency due to technological development is for the augmentation of new sophisticated energy services. When these new energy service transposes to the league of socially recognized needs depends on the spread of new appliances in a considerable part of human lives.

With reference to the mentioned before, to a great extent the conventions sustained by the way of energy defined as the energy services. As data shows, the households consume electricity for a variety of reasons such as *cooking, heating, cleaning, water supply, washing, water heating, lighting and medical treatment*. The *medical treatment* represents the new forms of energy services that may not still be treated on all occasions as needs, such as massage appliances for comfort or entertainment, while the appliance measuring blood pressure may be a lifesaving tool.

Cooking - So the electricity itself, because it needed for cooking. . . (R1)

Heating - Sometimes we use for heating. When the heating is off in the apartment, we sometimes use electric heater. For a transition period when [the central] heating is not on, but it is not warm. R8

Cleaning - It is important for hygiene, because we have many appliances that assist in keeping hygiene at home. All kind of washing devices. Robots. Air ionizer also needs electricity. (R7)

Water supply - The motor connected to electricity that lift the water from the well. (R1)

Washing - Of course washing machine is needed for hygiene. R2

Lighting - Lighting at night, while it is not necessary during the day. R2

Water heating - For hygiene. You wash yourself, though it heats the water. (R3)

Usage of medical appliances - For health for some extent. There are devices used for warming or massage. (R3)

In accordance with the literature on energy, these benefits of energy conversion are the services produced from energy, therefore, articulated under one concept of energy services to emphasize the underlying source. Following on that the category of *gratification of domestic needs* conceptualizes what conventions the households uphold and attributed in the research to energy services for being underlined with the focus on electricity consumption. This is in contrast to the category of *consumption mode and type* coding the prevalence of what appliances used and how they are exploited.

Category: gratification of social needs

The consequences of sufficient electricity consumption may be classified making reference to conventions and social activities. The relation between them is that the one goes prior to the other in succession and the former realization is firmly dependent of the latter. As the data indicates the *distant learning, communication, access to information, entertaining and employment activities* are the secondary needs sustained through or strongly dependent on the *gratification of domestic needs*.

Distant learning - The simple feature as the electricity should be accessible for children distant learning. If there be no internet, then children would not be able to take classes. (R1)

Distant learning - For education it is important because all children nowadays are learning from home, therefore, it is impossible to do that without electricity. (R7)

Communication - This is the basis of everything, because all communication performed on computers. . . (R1)

Communication - Telephone. Without telephone in contemporary times it is impossible. Internet access also requires electricity. This is all the social life. . . R4

Access to information - . . . I also like to watch news on tv in the evenings when the children fall asleep. (R1)

Entertaining - Also to satisfy the entertainment needs. Cartoons and computers. (R1)

Entertainment - I need the tv the most. I stay at home constantly, as I am unemployed. (R2)

Employment activities - The relationship show very clearly during the quarantine, because for the distant learning, distant working the computer is required for bigger part of a day and the telephone is on that you may work. So, if for instance the one is off, you do not have a job. . . (R4)

Contingent on the level of domestic needs fulfilment, the capability of learning, communication, access to information, entertainment and employment are possible to be actualized. This constitutes the final end in the process of access laying the ground for the human functioning in what ones do or be in their own life. The social needs are the end of the trail to be traced from the supply until the social functioning. What comes later is not the focus of research since it depends on the choice of households. From the social justice perspective, the conceptualized patterns in the process of access to energy service grounded in social views and experiences sets reasonable ground to construct theory against which social demands may be derived.

Even though households do not share the comprehensive view on the links and interactions of the process of access to energy service until assumed standard of well-being, the systemic research aid in describing and explaining the *what* and *how* of a process. Prior to being confronted with the questions on the benefits obtain from the electricity consumption, the respondents do not appreciate the significance of electricity to their well-being. Just after the questions are asked they realizes the plurality and multitude of conventions and social activities unhelp by constant usage of electricity appliances. From the shared meanings of experiences, the research systemically and conceptually constructs the representation of social reality on the drivers, context, strategies and outcomes of phenomenon.

The core category

The last phase in theory building under the methodology of GT demands the construction of a category of higher abstraction level wrapping up other categories under one concept. To do that the research considers the properties and dimensions of other categories in the paradigm for the unifying function. The category with most unifying force and central to a theory is the *core category*. Taking into consideration of the interaction between *causal conditions*, *intervening conditions*, *context*, *strategies* and *consequences* in the process of access to energy service, the emerging main theme asserted to be the sufficient capacity to perform conventions for the social functioning in as much as the energy, with emphasis on electricity, is consumed for that purpose. Proceeding from that argument the core category is coded as the *uncompromised exercise of energy services in well-being* comprising the demands for benchmarking, activity/process and purpose in labeling the main theme.

The first element in the code charged with the ability to evaluate the situation by comparison with the set standard. In this case the evaluation should be made against the requirement for an uncompromised capacity by households to acquire electricity for the performance of conventions. The emphasis added on the capability to act without jeopardizing the performance of customs confined to living conditions at home or compromising with other spheres of life. The hindrances to adequate enjoyment of energy services may originate from the

unaffordable supply, specific household's situation, extremely inflated personal needs and the failure on stakeholders' responsibilities. The pressure on all these areas is introduced by employing the demand of uncompromised access to energy services to be judged by outcomes of the process within the *experience of total discomfort*.

Meanwhile, the claim for due access refers to the instances when the either of social or domestic needs are waived because of conflict in their execution. For instance, the low power output in the grid limits the number of appliances used at home what forces the households to choose between energy service. Similarly, the *household' specific situation* such as *low-income* or *multi-members family* compels to trade the *distant learning* to *entertainment* or vice versus, whereas the household shares limited number of appliances.

The coded idea under the *exercise of energy services* is the core focus of the research in the theory building. As the research examines how the households' access to energy service and what does it mean to them, the center of interest is the process set up of separate stages. Some of them are the product of other stakeholders' activities positioned for the context and in other cases are the household activities itself. However, they are all connected and that connection captured by the performance of action/activity on the part of household. On that account the meaning of exercise most appropriately represents the acts of energy consumption and strategies to ensure constant consumption carried out for a specific purpose. The exercise is steered to the actualization of conventions by a benefit of energy. The suggested label is guided by the supply in the categories of *supply management* and *continuity of supply* as the source of energy, on the other hand, by the needs in the categories of *personal needs*, *consumption modes and types* and *domestic needs* being an elevated customary practice to the status of value.

As mentioned before the directed actions by employing the energy aims for conventions actualization. Meanwhile, the conventions are commanded by the urge to satisfy the one's perceived needs with respect to the social and individual *well-being* standards. Despite that some households associate personal interest with the idea of well-being, the latter is the abstraction of state with inferred properties. The respondents highlight the capability to do things more than the supply or consumption but give no explicit distinction between the energy service and secondary capabilities. When the households are asked about the benefits of energy services, they signify the lighting overlooking the benefit of lighted home or the heating over the warm home. Nevertheless, the households pertain electricity consumption to social needs of communication, employment, entertainment and distant learning without conscious awareness of coherent stages linking the two of them. This void in logic is filled in with the abstracted concepts on the conjunct patterns. The deficiency in theory building mediated through setting the conceptual density in the consequence of process.

With respect to *well-being*, the households underline the benefit of electricity to be energy service as well as the benefit of energy service to social functioning, without noticing the intermediary link of living conditions that is not the direct result of electricity consumption, even though the sufficiency of energy service are possible to evaluate on the outcomes that it produces. These outcomes are the shortfalls in health, living and social states build in the social well-being demands that is understood more in term of scarcity then sufficiency. For instance, the adequate warmth of home understood when the cold is felt at home possibly resulting in unbearable living conditions or deterioration of mental and physical state what gives ground to approach these states through the *experience of total discomfort*. Otherwise, theorization about living conditions on sufficiency bases does not represent the households conveyed views on experience of shortage of energy service conceptualized under the *experience of total discomfort*.

The last stage of the process in access to energy service is the state of well-being or lack of it. In the minds of households', the preferred states are manifolded and associated with decent well-being standard. To the extent of conventions performed with energy, the data implies the significance of energy services and the consequences of shortage thereof having an impact on the actualization of social functioning. Hence the overall process is understood in the well-being realm and the contribution of research is the systemic and conceptual explanation of under what condition with what strategies the households seek the state of well-being through energy. Although the households do not articulate the component of well-being per se, the analysis of data gives ground to suggest that the well-being is an aggregation of acquired utilities. The adherence to holistic view on a phenomenon prompts to document the benefits not only of electricity, but also of energy services within the sphere of well-being.

VIII. DISCUSSION

The apprehension of justice is quite a tricky thing to do because how one refers to justice depends on one's underlying justification. As the research adheres to the constructivist view on a reality, a similar approach is employed for justice consideration. The reference here will be made to justice demands implied from different domains and not justice with its general meanings advocated by philosophical doctrines when referring to justice. Thus, justice is a construction in peoples' minds articulated through the political process, social views, or experts' judgements. These sources are representations in the variation of proclaimed justice on the domains to be examined. It is acknowledged that these are not the comprehensive sources of justice that may be suggested for the scrutiny of their validity. Others may stem from the doctrine of natural law or be religiously motivated.

Either of these has an intrinsic characterizing rationale for the construction of the justice demands such as a compromise, a value, or an interest. According to the variation in the source and justification, a one perfect justice may not exist. That demands to examine each of them separately and then to compare them for their commonalities and differences. This does not mean that some general demand should be imposed for all, but it is the endeavor to contribute for the development and testing of either of them, whereas the ideas in the one domain in some instances may be transposed to the other without any harm done to the adhered demands and specificities of the domain.

Although recognizing diversity in the legislation's inherent function, the theory and the framework, the implicit or explicit demands of justice in one form or the other, may be accommodated in either of them. Thus, the theory may suggest the demand for the legislation, and the legislation may contribute to the theory development by explaining the instances previously unnoticed by research. Furthermore, the framework may inform the legislation on the value substantiated demands of justice through informed judgement. Likewise, the theory may inform the discourse compatibility of the framework to social realities.

Notwithstanding the aim to discover the justice, the research does not propose the definition for justice in energy to be universal in every instance and context. The objective is to set the demands that may be justified from different sources or domains and to give due part in the overall examination of the process. To that end, the discussion part seeks to accommodate the theory, the framework of energy justice, and the EU legal regime on energy, into the coherent and logical chain of reasoning. Against this background, the discussion tests the theory and the framework for their trustworthiness; later they are juxtaposed with the current legislation for the contrasting effect.

The generated theory on the uncompromised exercise of energy services in well-being describes and explains why energy services are employed, how households act in the process, what contextual factors interplay in the process, and what the possible outcomes are. This is not the construction of justice, but the picture of interpreted social realities on the access to energy service with implied demands for justice. The latter demands are inferred in the distribution of responsibilities and in the households' relation with electricity in the category of electricity characteristics. As one may argue that justice in energy is decoded and understood by households operating in the specific context,⁷⁶² which means that justice acquires new demands in the divergent stages of process. However, these are firsthand interpretations of justice that were translated into the demands that the theory links and explains. This refutes the assertion that either person's view on what is just or unjust instantly may be translated into justice claims.

The utility of the documentation, interpretation, and conceptualization of social views lies in its ability to explain a phenomenon and predict how it manifests. On that account, the theory on social understanding of electricity acquisition and consumption for energy services to sustain the assumed quality of life through the benefits of energy services gives the field a means of comparison with other domains. The theory itself is not the justice issue *per se*, but it implies the demands for justice to be observed in energy decisions. This is in contrast to the political process that formalizes justice demands through the legal categories on how it ought to be and the discourse that proposes the conceptual principles to adhere to in the decision-making on energy as well as the execution of related assessment. While both of these to a great extent are directed to the decision on energy, the theorization of the phenomenon focuses on the action and change for the explanation and predictability of reality.

Hence, the explanation potentiality of what, how, and why something is going on in the field of study enables us to infer what incidents are significant to their assumed well-being, how hindrances to the latter manifests, and why people act as they do. Overall, the theory constitutes the conceptual representation of reality with all its drawbacks, unreasonableness, and preferences for exclusive self-interest. A systemic and abstract picture of reality is requisite for the test of the framework of energy justice adequacy to the "real" world in contrast with the legally constrained perspective of the same incidents. Having said that, the suggested framework of energy justice is the product of the reasoned constructions of principles referring to the developed arguments on what areas of concern in decision-making should be governed by the values of freedom, equality, dignity, and equity. Hence, the theoretical part of the setup of the framework

⁷⁶² Alister Forman, *Energy Justice at the End of the Wire: Enacting Community Energy and Equity in Wales*, Energy Policy 107(C) (2017): 656.

is dedicated to the elaboration of the demands for energy decisions in policy, regulation, and legal assessment under informed judgement.

The next step is to empirically test its relevance with other domains by comparing the actual incident to the expected manifestations. This is the two-way approach in terms of testing. The theory on a process assists in determining the core justice concern; in this case, it is the uncompromised exercise of energy service in well-being that is in contrast to the philosophically motivated apprehension as people should have a sufficient supply of electricity. Meanwhile, the framework contributes to the assurance of category saturation in theory generation whereby the principles may refer to areas of concern to be unaccounted for in the collected data. For instance, procedural justice emphasizes the need for the empowerment of households in the process of energy-related decision-making, while households only actualize the need for information on decisions being made absent of the urge to be involved in energy decisions. This means that predetermined conceptions for demands are too abstract and are thus irrelevant in some instances in energy or are poorly calibrated to the real-world scenario. The testing exercise is intended to reveal the discrepancies in the conceptualizations for the benefit of further development of the framework.

The theory is a field where the concepts are being tested for their trustworthiness. If the concepts withstand scrutiny in the research field, they may be adapted in related spheres. The next stage is to apply the concept to the legal regime on energy in the EU to determine the correlation of the governing principles and values. The similar exercise should be done by comparing the process as it is understood by households with the legislative version. The discussion section proceeds with the analysis of the framework v. the theory, the framework v. legislation, and the theory v. legislation.

First, some elaboration is presented on the significance of social understanding representation through the theory on the uncompromised exercise of energy services in well-being. Understanding of the social processes and patterns ascertains reality by collecting the data on the choices and behaviour of individuals. The empirical research from the bottom up enabled us to identify the rationale of choices and behaviour of households derived from experiences, understanding, and self-assessment. Because the decisions on policies, regulation, and legal assessment in energy should reflect the specific context in line with norms, values, preferences, and structural factors,⁷⁶³ the bottom-up approach contributes to the identification and articulation of preferences promoted by individuals to motivate their actions and practices. The shift from top-

⁷⁶³ Felix Creutzig, *et. al.*, *Towards demand-side solutions for mitigating climate change*, *Nature climate change* 8 (2018): 268.

down information dissemination to employment bottom-up benefits by taking notice of alternative forms of knowledge that influence consumer actions and practices.⁷⁶⁴

The doctrinal views on justice are developed in the discourse to a great extent by the scholars and the researchers in a particular field. The construction of a concept rooted in the discourse as a rule is grounded in the philosophical approaches for a value driven justification. Following on this, the research likewise has focused on the early stages to elaborate on the recognized version of energy justice for the benefit of the investigation of other domains. The task was to generate the framework of energy justice with underlying values and introduce the more developed and calibrated version of the research objective to examine the conditions for households' ability to acquire sufficient amounts of electricity for the adequate level of energy service at home. These conditions are not restrained to the regulatory rules for the supply of electricity; rather, the overall conditions take into account the distribution, procedural, and recognition aspects in view of decent well-being requirement as justice demands.

Based on that, the research has elaborated on a framework calibrated for the electricity supply to evaluate the justice concerns of policy design. This source on justice construction refers to the experts' judgements on the desirable principals to be complied with in the ascertainment of energy decisions. In aggregation, the distributional, recognitions, procedural justice, and capabilities approaches within the framework holistically explain what the issue is, how it should be addressed, and what value it represents. They also simultaneously form a reliable tool to examine the process for the households to access energy service.

The framework of energy justice comprises the four pillars of distribution justice, procedural justice, recognition justice, and a capabilities approach whereby we divide the specific concerns under divergent justice demands within the coherent structure. Distribution justice concerns how the fair distribution of access to energy should be set under the values of freedom and equality. Next, procedural justice denotes that the households should be involved in the decision-making process and rendered with clear and exhaustive information under due process. Later, recognition justice recognizes the marginalized and vulnerable groups of population due to unequal private conditions under the value of equality. Lastly, the philosophical grounding in capabilities actualizes the significance of the benefits of energy services to human well-being in line with the values of dignity, equality, and freedom. The latter presents the experts' judgement on the justice to be understood in energy regulation, i.e. the doctrinal construction of justice.

Despite that the constructions of justice may overlap on some instances or share the consolidated objective that no one be deprived of the socially acceptable level of well-being, they

⁷⁶⁴ Philip Catney, Andrew Dobson, Sarah Marie Hall, Sarah Hards, Sheryllyn MacGregor, Zoe Robinson, Mark Ormerod, Simon Ross, *Community knowledge networks: an action-orientated approach to energy research*, Local Environment, 18(4) (2013): 507.

all carry divergent validation criteria. For instance, the political process produces justice in a form of legislation through voting. If the formalized claim obtains the majority vote, similar or qualified depending on the law, then that claim becomes the law and a benchmark for the assessment of one's rights and duties. Of course, the political process is much more complicated than that, but the underlying structure was built on the compromise through the voting system with a direct link between voting and legislation at the level of parliament. Even though the same principle is observed in parliamentary voting, the effect of voting for public representation in parliament is blurred in the process until the final voting for legislation. The compromise as a means for a construction of justice better manifests in parliamentary voting whereby elected representatives vote in favor of some ideas expecting that their ideas attain the similar support. The similar process is executed in the EU structure on the legislation process with the representatives of EU citizens, the commission, and board member states.

Against this background the examination of the legislation on the right to be supplied energy in the EU is performed in view of the fact that the corresponding right reflects the legal construction of justice demands. With respect to the primary law in the EU, justice may be understood as the distribution of significant rights on citizens that needs formal recognition and protection that reflect the EU's founding values. How these values are reflected depends on an agreement or a compromise translated within the secondary law. In comparison to expert judgement on justice in energy's being built on the aggregation of values or the promotion of a specific set of values, the justice in legislation is implied through the advancement of interest of particular group, whether an entity, an organization, or a social group. These interests are backed by the values, usually limited to some specific value, that result in the prioritization of one as primary and others as ancillary. Such allocation is apparent in the EU legislation on the energy that concerns the less regulated energy market under the interpretation of freedom to do business and equality as an accessory to mitigate market externalities.

S1: The right to be supplied in the EU does not guarantee realization of household consumers' needs.

The right to be supplied in the EU is oriented to the transaction situation regarding the trade conditions and market operation. In contrast to the exceptional market perspective upheld in the right to be supplied, grounded theory reveals that the process of access to energy services contains social and market characteristics such as attributing supply pricing to market elements and individual subjective well-being constructed through the social understanding inherent in personal beliefs and values. Whereas the legislation defines electricity as a good in line with the internal

electricity market rationale, this results in the focus on the related instances to the supply confining the social sensitivity on the possible occurrences of injustice. Even though the realization of household needs in the process of access to energy service does not entirely overlap with the right to be supplied focused on the energy market, grounded theory captures the market dimension constituted within the categories of supply pricing, supplier responsibilities, and electricity characteristics.

The legislation benefits the process on trade-related instances but fails to accommodate issues in the consumption and benefit stages regarding the households' situation specificity, individual subjective well-being, consumption modes and types, and the distributive stage under the continuity of supply, supply management, and state responsibilities. Thus, the conferred right to be supplied on the household consumers has a limited impact on their consumption modes and types of electricity due to their heterogeneity in individual subjective well-being or households' situation specificity. In the absence of consistency between how the process evolves and its legislative rationale, the public efforts to secure adequate energy services for household consumers has produced a constant gap in regulatory effectiveness.

Firstly, the theory is constructed from the data of household consumers' shared views and experiences about electricity consumption at home and its significance to their well-being. The task of theory is to give the systemic and conceptual explanation of social realities on how, what and why in energy, particularly in electricity. Thus, the data consist of the social sphere's affecting the conferred meanings on the research object. By way of explanation, the understanding of the issue is constrained by the context in which the data are grounded. Accordingly, the theory expresses the social perspective on electricity, drawing the inference that electricity has multiple attributes and is treated as a necessity and a commodity at the same time. This is in contrast to the legislative context where electricity is defined and its access is regulated. Within the context of internal energy market, electricity is a good to be supplied to the households. Yet the common ground is the legislative perspective on the feature of electricity of being traded paralleled with the concept of commodity within the category of electricity characteristics.

Having said that, the theory develops the understanding of electricity's encompassing the legislative definition of a good with discovering more heterogeneous and conflicting meanings of electricity, shifting the main concern from the form of energy to the benefit it yields. This opens up new possibilities to sway household consumers to more preferable behaviour or design policies that accommodate various interest and make sense to the final beneficiaries, i.e. household consumers. In addition to the fact that context in the theory and the legislation define electricity differently, they also affect understanding of related issues and solutions. For instance, the issue of energy poverty in the regulation of the internal electricity

market is addressed with a separate article recognizing the issue of insufficient access to electricity as the market externality. The latter is addressed through the legislative mechanisms of services of general economic interest even as the social views are prone to regarding electricity access with a focus on individual subjective well-being and social and domestic needs. This perspective to access emphasizes the energy services that electricity produces and refers to the state's and supplier responsibilities for the mitigation of the experiences of inadequate access to energy services.

Secondly, with respect to the approach to energy as a good or a necessity, the supply price may be assessed against the reasonableness or the affordability requirements aiming to judge it. The governing principle of supply price with respect to the affordability of electricity shares some similarities though it was built on different components. The legislative rationale for the affordable supply price draws on the link between household income and price. Meanwhile, the theory suggests that affordability is a much broader concept that requires taking into account underlying factors such as income, needs, efficiency, and consumption practices. Hence, the judgement of affordability is in a context related to being the outcome of qualitative analysis, which is in conflict with the quantitative approach to affordability in the legislation.

Moreover, the legislation makes reference to the reasonableness of the supply price as the guiding principle in the ascertainment of supply price adequacy. The adequacy of price is assessed against the market mechanism of competition and intrinsic components in the final price such as infrastructure charges or fees on sustainability measures. In that regard, the legislative approach specifies that the supplied electricity should be at competitive, easily and clearly comparable, transparent, and nondiscriminatory prices.⁷⁶⁵ The supply price is the market price prescribed in the legislation to be judged by the principle of reasonableness in its composition with due regard to the rendition of information to household consumers for functioning in the market. However, the theory does not give much emphasis on the reasonableness of the supply price because the supply price *per se* is not the only concern for household consumers, despite that in some instances it is assumed to be the significant factor triggering consumption modes and types. To that end, being the reasonable supply price (competitive, transparent, nondiscriminative, and justified) does not make much of social worth, provided that it is unaffordable to a household consumer, which is the cornerstone as to why the energy system is designed, built, and operated. When the final supply prices, accumulated into one bill, is unaffordable, then households' well-being may be impeded with the experience of great discomfort.

⁷⁶⁵ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union L58 (2019), Art. 27(1).

Fourthly, the demand for continuity in supply goes beyond the limits of the legislation and the theory. Indeed, it is the common requirement for the electricity supply and access to energy services. The demand of continuity in the legislation was set in the primary law under the security of supply as one of the considerable priorities in the EU energy policy.⁷⁶⁶ Whereas the security of supply is a much broader concept encompassing the access to energy resources apart from generation, grid operation, and available supply, the continuity in legislation is the reflection of the latter in the supply intended for the provision of services of general economic interest.⁷⁶⁷ Comparable to the legislative setting on continuity, the theory elaborates on its significance under the subcategory of continuity within the category of electricity characteristics. Furthermore, the continuity of supply is recognized as the intervening condition in the uncompromised exercise of energy service for well-being, for which its lack may obstruct the gratification of domestic needs or result in the experience of great discomfort.

A related issue is the disconnection from supply reiterated in the theory and energy legislation. Despite the emphasis on disconnection, the approaches to the conditions and rules of disconnection contains some divergences. The legislation prefers the routine of informing the household consumers about alternative measures to avoid disconnection.⁷⁶⁸ As the household consumers face disconnection due to arrears, the information relates to the "sources of support to avoid disconnection, prepayment systems, energy audits, energy consultancy services, alternative payment plans, debt management advice or disconnection moratoria" without extra charge.⁷⁶⁹ The specific provision is dedicated to the vulnerable household consumers that should not be disconnected in critical times,⁷⁷⁰ such as when they face health risks. When the disconnection is likely, the household may benefit from the supplier of last resort (SOLR) to ensure they would not be cut off from the supply despite the latter mechanism designed for the default supplier in failures and the bankruptcy of the supplier.

However, the theory does not allow for the disconnection to actualize by mandating the state introduce protective and supporting measures. Disconnection as the instance in the process is conceptualized in the continuity of supply representing the final argument in the energy system as a whole. The collected data indicate that the prevalent view to disconnection is that it should not be actualized and preventing it is the responsibility of state. Such understanding is

⁷⁶⁶ Consolidated version of the Treaty on the Functioning of the European Union, Official Journal of the European Union 326 (2012), Article 194(1)(b).

⁷⁶⁷ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - White Paper on services of general interest COM(2004)374: 4.

⁷⁶⁸ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 10(11).

⁷⁶⁹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 10(11).

⁷⁷⁰ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 27.

underlined with understand electricity as a necessity. In fact, the latter intervention into the process of access to energy services terminates household consumers' ability to sustain the socially acceptable level of well-being. Thus, the experience of well-being is a state opposite to a disconnection. The social perspective to disconnection seems built into the theory that should inform and validate the policies for support of all household consumers and the rules for alternative supply.

Fifth, the theory and the legislation diverge as to their function. The theory represents how the things are, and the legislation refers to how the things ought to be. For instance, with respect to the households' behavior in market, the theory reveals the households' inertia in choosing the supplier. In contrast to that, the legislation promotes the empowerment tools based on the premise that household consumers will be active in the energy market. The empowerment expresses the active role of household consumers in the liberalized internal energy market, refusing to recognise the social realities of human nature. This dichotomy is reflected in the EU energy legislation advocating for the idea that the effective market operation rests on the consumers' capacity to switch suppliers in a cost-, time-, and effort-friendly manner⁷⁷¹ and the theory revealing the motivation behind decisions such as the individual subjective well-being and the supply pricing. The legislative rationale doesn't appreciate why household consumers enter into the transaction of supply. Provided that the household consumers feel forced to buy a good (electricity) as a necessity, the rational decision-making should not be relied on here. Grounded theory shows that household consumers do not make much of weighting in on the different options of supply, but mostly follow their own customs.

Keeping this in mind, the desirable scenario should be designed with incentives other than the price component for the household to be active in choosing a supplier, letting it benefit from the better provision of supply and adjusted tariff schemes to its consumption patterns. It should be acknowledged that the legislation introduced tools for demand management such as a dynamic electricity price contract⁷⁷² and demand response schemes that reward households for the ability for DSO or suppliers to switch consumers' appliances during periods of peak demand.⁷⁷³ Nevertheless, these are forced rules on household consumers that may not be workable when the underlying rationale is not taken into account. Setting the measures that seems reasonable from the regulatory perspective on the energy market does not necessarily make sense for the real world. Accordingly, the benefit of grounded theory is the capacity to conduct preliminary ascertainment of a measure relevance to the process.

⁷⁷¹ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 12(4).

⁷⁷² Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union 158 (2019), Art. 11(1).

⁷⁷³ ACER Market Monitoring Report 2018 – Consumer Empowerment Volume (2019): 31.

S2: The right to be supplied in the EU does not meet social justice demands.

Though the legislation lays out regulation on the energy market for the uninterrupted supply of electricity under a reasonable price, this does translate into the guarantee of fair access to energy services by all household consumers. When the market fails to produce the mandated outcome, i.e. the distribution of adequate and constant energy to those in need of it, household consumers may fail to satisfy their needs. The internal energy market legislation rationale rests on the priority of freedom with its limitation to be realized due to households' situation specificity against the fair share to satisfy one's needs under the claim of dignity and adapted provision of energy services to the heterogeneity in household consumers' situations. Because the fairness of conditions may be assessed by employing value judgements, there is no need to select a champion for them, but only to use the holistic view proposed in process's framework. Having said that, it must be acknowledged that the EU founding values are of equal importance to be realized in the legislation; however, the energy sector legislation lacks the consistent adherence to the freedom, equality, dignity, and equity in the design on the provisions of universal services. The failure to accommodate under one legislative regime different household consumer interests produces an unfairness in the process, resulting in the experience of great discomfort.

First, legislation on the process of access to energy services defines the issue of energy poverty as "a lack of adequate energy services in the home, with its associated discomfort and difficulty".⁷⁷⁴ The elaborated meaning of energy poverty is set in the soft law; however, it gives more contextual elements to consider in the assessing the issue at hand. Namely, it is an experience when "a household finds it difficult or impossible to ensure adequate heating in the dwelling at an affordable price and having access to other energy-related services, such as lighting, transport or electricity for use of the Internet or other devices at a reasonable price."⁷⁷⁵ At the same time, the coherent framework of energy justice refers to the guarantee of the basic minimum level of energy services under the appreciation of human dignity. Both domains focus on the object of energy services and its relation to the functioning, but they diverge on the criteria for the

⁷⁷⁴ Stefan Bouzarovski, Saska Petrova, *A global perspective on domestic energy deprivation: Overcoming the energy poverty–fuel poverty binary*, *Energy Research & Social Science* 10 (2015): 33.

⁷⁷⁵ Opinion of the European Economic and Social Committee on 'Energy poverty in the context of liberalisation and the economic crisis', *Official Journal of the European Union* C 44/09 (2011), para. 2.3.

measurement of adequacy as to whether it is a normative minimum or a situation to be considered individually.

The legislation treats the personal situation to be the benchmark of adequacy in the judgement for energy poverty. The socially motivated terms of adequacy, sufficiency, and affordability vest the expansive field for the interpretation on the possible meanings with constituent input. These terms imply the threshold and call for an assessment of what factors induce that state, such the basic needs, special needs, income, and price. Of these, price gets the most attention, ascribing the issue of energy poverty to a market phenomenon. This is quite evident when the difficulty or impossibility of adequate enjoyment of energy services looks through the lens of market functioning that produces the supply price, be it reasonable or unaffordable. Every factor in the legislation is ascertained against the demand, such as the adequacy against the needs, the sufficiency against the special needs, the affordability against the income, and the reasonableness against the price.

Meanwhile, the coherent framework suggests considering the household status, special needs, and usage capacity in determining the threshold under which life would be miserable. Here, emphasis should be added on the needed levels of consumption for minimum energy services against the household status and conversion efficiency and the forms of energy services against the special needs that need to be evaluated. As the data suggest, households support the idea of guaranteed access to minimum energy service concurrent with the restriction of disconnection. Being in a safe position of supply transcends to the other spheres of life including a sense of assurance in satisfying essential domestic and social needs. Though it may be argued that the basic minimum level is not only meant for the minimum energy service, it is one of the safeguards to a socially acceptable quality of life. Provided that the quality-of-life concerns of medicine and education are tailored to personal situations to the greatest extent possible, the living conditions relating to the well-being necessitate similar treatment. Whereas the threshold of minimum energy services is approached through the demands for human well-being, the framework criteria against which it should be assessed comprise household status, special needs, and usage capacity or conversion efficiency. If the society agrees that human dignity matters in terms of how people actualize their needs at home, then the public interest is to guarantee that the dwelling is equipped with minimum energy services.

Second, the coherent framework of energy justice proposes to approach the energy system with social sensitivity, whereby formalizing the claims on access to energy services is done through establishing the right of the households to access to minimum energy services. This type of right recognition and protection is rooted in the respect to equal capacity to enjoy the available benefits of energy services for all members of society. Comparable judgements on

energy services are performed in distributional justice for the object of distribution; still, the capabilities approach within the framework focuses on the articulation and justification for legal recognition of the same object. Provided that the particular energy service is widely enjoyed by other households, has a positive effect on the mental/physical health, and adheres to the sustainability objectives, the corresponding right justifies its recognition by transposing the components of required minimum energy services not in the policy documents, but in the primary law that guides the process.

Although the coherent framework reasons the socially required minimum energy services in a dwelling to be of equal significance to other recognised, respected, and protected social rights, the legislation stipulates the right to enjoy universal services, what may be interpreted that universal services are those that applicable in all spheres of life, namely, the foundation of society well-being and development. Essentially, the latter right in electricity means the claim on the household consumers "to be supplied with electricity of a specified quality within their territory at competitive, easily and clearly comparable, transparent and non-discriminatory prices."⁷⁷⁶ Hence, the claim is restricted to the access to information on the supply prices in the energy market and ability to choose one's supplier, even though the right is conferred with the attributive characteristics to market functioning such as competitive and nondiscriminative prices. The broad formulation of the right to be supplied, referring to a variety of terms, makes it vulnerable to conflicting interpretation. The inconsistencies rest on the definition of electricity as a good in jurisprudence, labeling the supply of electricity or selling of a good as a universal service and granting under one right the claims to be realized by household consumers and policy objectives. Pounding all market attributes under one category of right in the legislation ruins the validity of the intrinsic claim.

Thus, employing a coherent framework for the interpretation of legislation makes sense to mitigate the tensions and determine the limits in the process of access to energy services. On that account, asking for information to make decisions as to which goods to buy from which trader correlates with the claim for a guarantee of the minimum energy services in a way of empowering informed judgement on choosing the supply schemes that best comply with their energy consumption practices. In contrast, if the households are conferred with the claim for minimum energy services, then that supplements the claim with demands for methodology on supply price prioritizing the low volumes of consumption against the high volumes of consumption through scaling the price versus the volume. Additionally, the process rationale is directed to the enjoyment of energy service, whereas the formalized claim is constrained within

⁷⁷⁶ Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, Official Journal of the European Union L158 (2019), Art. 27.

the supply stage in the process, resulting in a narrow scope for realization. Given the fact that the right to enjoyment of a universal service, understood as the right to be supplied, is market oriented, the coherent framework informs the justified shift of stipulation in the object to be regulated from the trade into a good in the provision of service.

S3: The concept of energy justice fails to take due account of the nature of the process of access to energy services.

The social realities in the access to energy services are unfolded in the systemic and conceptual level within grounded theory on the overall process. In accordance with the constructed theory, the household consumers are motivated to consume electricity for the energy service by the individual's subjective well-being as they seek the gratification of domestic needs that enables the gratification of social needs. As the households relate differently to electricity by conferring its meaning and their own habits, they correspondingly form their consumption patterns translated into the consumption mode and type referring to beneficial usage of appliances, wasteful consumption, usage of "luxury" appliances, usage of effective appliances, household inertia, upholding of personal habits, and uninterrupted use of appliances. Although the forms and intensities of consumption may be categorized under the specific features inherent in that act, they are guided by the understanding of a standard of well-being and supply conditions with respect to price and infrastructure management.

Moreover, the causes for consumption may be affected by the intervening conditions impeding or enhancing the individual's subjective well-being, supply pricing, and supply management. The conditions that interfere in the actualization comprise responsibilities conferred on a state, a supplier, a household consumer, and on continuity of supply. This is provided that the household consumers who anticipate that actualization of individual subjective well-being may be curtailed or rate the supply management to be deficient take responsive action by use of measures on energy services. Subject to the measures' success, the outcome experienced by the household consumers will be the gratification of domestic and social needs or the experience of great discomfort.

Because grounded theory conceptually explains the overall process of access to energy services, it facilitates identifying prevailing ideas on social justice demands in energy. The newly advanced concept of energy justice within the tenets of distributive, procedural, and recognition justice is designed for examining energy injustices. Therefore, we must ascertain its feasibility in the examination of injustice in the household consumers' access to energy service sustained through electricity. The asserted concept of energy justice is a feasible, new, and more coherent framework of energy justice developed in line with the EU's founding values of equality, freedom, equity, and

dignity. After the introduction of the coherent framework, grounded theory and the coherent framework of access to energy services may be compared to determine their relevance.

First, the distribution justice in the coherent framework argues for the distribution of access to energy services to be governed by the principles of freedom, equality (needs), and the difference principle. Indeed, the object of distribution is not a commodity to be traded in a market or distributed through institutionalized channels; it is the capacity to sustain a specific activity to the recognised level by employing electricity and appliances. Therefore, making decisions in energy in line with the governing principles set the guidelines at both the supply stage and consumption stage. In that regard, the principle of equality is prescribed for the conditions to ensure the adequate levels and reasonable forms of energy services in the home in line with individual needs. Meanwhile, the principle of freedom is designated for the evaluation of conditions to choose the suppliers, consumption practices, and forms of energy services employed.

Second, there is a need to compare the object in a coherent framework to be distributed under distributive justice and in grounded theory to be a focus of concern for well-being. Both share a cornerstone by signifying that consumers want the benefits of energy services. Consequently, the decisions made in energy should take into account the purpose of energy and not energy accessibility itself because it is a long way to go from energy's being out there and the premise of adequate light and heat. In that span, the determinants of conversion efficiency, affordability, personal circumstances, consumption practices, and lack of available individual remedy raise possible hindrances to the actualization of domestic and social needs. Thus, the common object is an indicator for the coherent framework to be operational in judging the decisions on energy.

Third, a constituent element in recognition justice is the special needs of a person due their physical state, age, or family situation. Comparable instances are coded in the category of specificity of households' situation that signifies the variation in personal situations as it affects the capacity to acquire electricity and convert it to energy services and to determine the needed level of energy services. The contextual factor of the theory reveals the social reality as it is transposed within the doctrinal view on energy justice. In other words, grounded theory matches the informed judgement on the demand of justice for assistance by special treatment of household consumers at risk due to their health or extreme burden on their budget. It's clear that the decision associated with energy supply and consumption should take into account the particularities of situation, where households may find themselves to be vulnerable in sustaining the socially accepted level of well-being. To that end, the demand for vulnerability mitigation rationalised under the value of equality implies that the adequate level of energy services for their personal needs should be guaranteed for all households.

Fourth, grounded theory conceptualizes the incidents when the household consumers feel restrained in the enjoyment of energy services due events out of their control or where they see themselves as not having enough measures to mitigate their situation. These instances are converted into the responsibilities of a state to act on emerging issues and take preventative measures through policy designs. Similarly, the coherent framework within recognition justice on impediments and sources of impediment makes public policies and social arrangements hindrances to adequate access to energy services caused by the institutions, public authorities, and entities. Despite the common actors of state as an entity embodying divergent forms of governance and entities executing the provision of supply shared by grounded theory and the coherent framework, the claims for policies and social practices are much more articulated, including differentiated support, social support, social pricing, and implementation of energy policy in the reconstructed reality.

Fifth, procedural justice emphasizes the need to draw the household consumers into the decision-making process on energy and community schemes where the conditions should be made for free, prior, and informed consent on the adopting decisions. This is in contrast to the theory that lacks recognition of the latter to be a justice concern by the households. The same inconsistency on demands is pertinent with respect to redress on the rights infringement situation, possibly related to the lack of experiences in the adjudication in cases of household consumers v. suppliers, except for the supplier responsibility to observe contractual obligations. Hence, the doctrinal view on justice demands exceeds the social understanding on the latter built into the theory. The coherent framework on access to information set the criteria of effectiveness and time to be the benchmarks of evaluation; meanwhile, grounded theory delegates the assurance of access to information on the state responsibility to inform on pricing policy and affirms the continuity of supply in terms of shortage of access to information to be an intervening condition in the process.

Sixth, the capabilities approach integrated within the framework of energy justice specifies the doctrinal demands on energy decisions for fair distribution of responsibilities similar to the responsibility of a household to use less energy more efficiently. At the same time, it recognizes the basic minimum level of energy services to the households. The underlying rationale is that people are free to choose energy services and consumption practices, though these decisions should be guided by reasonable consumption by using efficient appliances with care. These ideas are the propositions to address the prevalent patterns of beneficial usage of appliances, wasteful consumption, usage of "luxury" appliances, and use of effective appliances by promoting the useful at the expense of inexpedient. To that end, distribution justice introduces the difference principle to offset the uncontrollable surge in the demand for electricity that compensates the under-consumer by the over-consumers in line with justice demands for fairness.

IX. CONCLUSIONS

1. The right to be supplied in the EU legislation does not guarantee the adequate exercise of energy services for the realization of household consumers' domestic and social needs, whereas it has an indirect effect on well-being, limited in force on the demand side and lacks protection for minimum energy services. This conclusion is derived from the structuring of the EU legislation on the right to be supplied, generating grounded theory on the process of access to energy services by the household consumers, and determining the emerging links between either of these domains.

1.1. Because the design of the right to be supplied is intended for the extra protection of household consumers in the energy market, it does not concern the well-being *per se* but stems from the assumption that effective competition in the market contributes to the household consumers' well-being. The latter legal category is prescribed for the supply stage where a transaction occurs. Nevertheless, it does not account for the specific occurrences in the consumption and benefit stages, where the conversion of electricity into energy services is executed and the benefits of energy services are derived. This produces an indirect effect of the demands of the right to be supplied on human well-being that dissipates the household consumers' ability to profit from the conferred right. This results in the situation that access to adequate energy resources for the decent living conditions is not ensured for all household consumers.

1.2. Grounded theory presents the causal conditions for the household consumers' decisions on the consumption patterns regarding electricity for the enjoyment of energy services, which is in contrast to the underlining assumptions of the right to be supplied in the EU. The constructed grounded theory reveals that the consumption patterns are in part caused by the estimation of individual subjective well-being and supply management, whereas the supply price's significance is reduced to a small group of household consumers. The theory indicates that sometimes irrational causes guide the household consumer's actions and decisions such as inertia in choosing a supplier, customary comfort levels, and adherence to consumption practices. Meanwhile, the legal category of the right to be supplied should guide the household consumer's decisions specifically via price signals outgoing from the energy market functioning to motivate to alter consumption patterns or choose more efficient appliances. In the best possible scenario, the conferred right on the household consumers enables them to shop for the best option in the energy market, so a small group of household consumers appreciate the supply price as significant while keeping in mind that the final bill does not represent the price per kilowatt in direct terms. Consequently, the energy legislation rationale on household consumers' decision-making misses some of the most fundamental ideas governing the process of inertia and necessity.

1.3. The right to be supplied lacks recognition of adequate protection from energy poverty and protection from disconnection, despite the dedicated provisions in the internal electricity market directive's making references to the social policies under the SGEI. The external component of the right to be supplied on the rules for disconnection allows the supplier to terminate the supply, provided that the household consumer has arrears, appears in contradiction to the responsibilities of state in grounded theory to the protect households from disconnection. The causes of accumulated debt or existing vulnerabilities are not in the scope of the legislation on energy, segregating a pure trading condition from the capacity to acquire the needed level of electricity and convert it to the needed level of energy services. The design of umbrella legislation on the right to be supplied in the EU, where the safety nets of social policies on supply prevail over the safeguards of guarantee of minimum energy services, produces apt conditions for the experience of great discomfort. This means that possible energy deprivation may occur, which is in conflict with the assertion of the realization of household consumers' needs.

2. The right to be supplied in the EU is not qualified for the entire social justice demands in household consumers' access to energy services, where it is limited in scope and effect. Even though the right to be supplied lacks containment of social elements, as the developed coherent framework of energy justice also does, the structured umbrella legislation in the EU referring to the right to be supplied with coherent rights, legal mechanisms, and measures makes a positive move toward the recognition and protection of social justice in energy. The link between these domains manifests as the dichotomy between energy market regulation and public intervention governing the measures to lessen or to rectify the states recognized as injustices. The shortfall of such understanding is that the social demands are not incorporated in the overall contemplation of the process through introducing amendments in critical instance of injustice under distribution justice, recognition justice, procedural justice, and capabilities deprivation.

2.1. The recognition of the phenomenon of energy poverty under EU's umbrella legislation resembles the requirement within the right to access minimum energy services within the capabilities frame, despite being divergent on the criteria for the measurement of adequacy, whether it is a normative minimum or each situation to be considered separately. The EU's umbrella legislation contributes to social demands by setting stringent rules of procedure on any disconnection from supply in contrast to ruling out disconnection in all cases under a coherent framework of energy justice. The EU rules permit disconnection, which possibly results in household consumers' experiencing hardship or in some cases possibly forces household consumers to vacate their homes due to uninhabitable conditions. The developed coherent

framework of energy justice reveals the limited justice concern of the ancillary rights of the right to be supplied.

2.2. The right to be supplied contributes to the procedural justice requirement for access to information through the requirement that the supply price is transparent and comparable. This is also significant to other demands of consent to decisions by other parties in energy that should be free, prior, and informed. Provided that the household consumers are provided with clear information on the supply prices in the energy market, they are empowered to act by opting for the mostly suited offer on tariffs or to make decisions for participation in community schemes as well as invest in the renewable energy installations. Nevertheless, it does not safeguard household consumers with low incomes from failing to pay bills or force them to lower their consumption to an extreme level resulting in possible disconnection or energy poverty. Either way, the final condition from the capability approach in the coherent framework of energy justice is unjust.

2.3. The right to be supplied contributes to the affordability of energy services by ruling for the competitive price, i.e. that the household consumers should enjoy the reasonable price. However, the latter demand is too far off to guarantee affordable supply, to say at least. Despite that, the right to be supplied follows up with recognition justice through setting the demand for a nondiscriminatory supply price for household consumers to be translated as the protection of low-income household consumers from higher tariffs due to the negative bill payment history or arrears. Given the fact that the legislation requires the supply price to be reasonable and nondiscriminatory, the legal category fails to accommodate the vulnerabilities calling for more favorable treatment of household consumers with special needs that could be viewed as not allowing socially just access to energy services.

2.4. The umbrella legislation in the EU on social policies being responsive in nature, with respect to the injustice manifestations, means creating situations where some social groups' interests would not be accounted for in due time, resulting in the suffering of hardships whether energy related or energy caused. The adhered approach to the design of legislation in distribution of energy gives precedence to freedom over equality, which inevitably produces inequalities in all stages of access to energy services. This indicates that the values of freedom and equality should be integrated in the supply stage where the right to be supplied in the EU is dedicated. Having said that, the other value of dignity ascribed in the coherent framework of energy justice should also be integrated in the design of energy regulation as an exception to some requirements to establish more effective protection.

3. The concept of energy justice under the tenets of distribution, procedure, and recognition fails to represent the process of access to energy services by the household consumers as it currently stands. By failing to recognize the major challenge in household consumers' access to energy services is the restricted enjoyment of energy services, the past conceptualization of energy justice addresses issues of distribution, access to information, and special energy needs as separate concerns emerging on some occasions. Meanwhile, the developed coherent framework of energy justice for the access to energy services under electricity links issues under the ultimate goal of well-being even though they manifest in different stages of energy services. This approach is alleged with grounded theory where household consumers' actions and challenges are understood through their personal well-being.

3.1. The coherent framework is better equipped to accommodate the drivers for consumption and benefits derived from the energy services. The latter is complemented with the value of freedom that is counteracted with the difference principle in favor of the value of equality. Furthermore, the substantial element of capabilities is introduced in the developed coherent framework of energy justice. While capabilities approach represents philosophical thought on human well-being, it also contributes to understanding the end goal of the process of access to energy services. This understanding implies the demands in the supply, distribution, and consumption stages of the process. In contrast to the former concept of energy justice, the coherent framework recognizes that the decisions made in energy largely take into account the purpose of energy and not energy accessibility itself.

3.2. The suggested coherent framework of energy justice informs instances that grounded theory left unaccounted for. In that regard, procedural justice refers to free, prior, and informed consent on the adopting decisions and the effective capacity to participate in community schemes. This is in contrast to generated theory, which lacks recognition of the latter to be a justice concern by the household consumers. The same inconsistency on demands is pertinent with respect to redress the rights' infringement situation, possibly related to the lack of household consumers experience in the adjudication with suppliers.

3.3. That being said, the structuring of the process into the causes, context, interferences, responses, and consequences represents the overall process from the individual subjective well-being that motivates consuming energy until the final state of gratification of social needs. Comparably, the coherent framework of energy justice refers to the significance of energy service to human well-being through the incorporation of capabilities approach with reasoning on the responsibility to ensure the conditions for human functioning in choosing to do or to be. Additionally, the coherent framework advocates for the fair distribution of energy at the

supply stage under distributive justice like the conditions for access reflected in the causes for the process of supply pricing and responsibilities on the support in ensuring the adequate enjoyment of energy services conferred on a state and a supplier. While the coherent framework identifies the emerging vulnerabilities in energy and sharing of responsibilities to address it under recognition justice, grounded theory shares the social understanding that the household consumers' specific situation positioned in its context should be accounted for, and respective responsibility rests on the state. Thus, the corresponding instances of significance on the adequate enjoyment of energy services transcends the coherent framework and the theory, validating the judgements on the elements of energy justice that comply with the process as it manifests.

X. RECOMENDATIONS

Due to the inadequacy of the right to be supplied to the demands of social justice and the process of access to energy services to well-being, the identified concerns should be approached from the well-being perspective with the legal category encompassing underlying demands. Meaning that the value of dignity being linked to the right to energy services and the latter linked to the right to be supply, structures the hierarchy due to the category's scope, significance and purpose. The recognition of hierarchical relevance with respect to the legal structure on rights gives logical order of claims on dignity, underlying conditions and resources. Failure to recognize that makes claim for dignity futile in contemporary times and the right to be supplied lacks its rationale as being a right not contributing to the household consumers well-being but destined for better market functioning.

While just being the right to participate in the market, the right to be supplied is empty in force because the one does not confer anything new from social justice perspective. Therefore, the household consumers should be accorded with solid protection from disconnection due to the social significance of electricity to enhance the weak appreciation of solidarity in the markets. Additionally, the energy legislation should guarantee at least a minimum supply, not to mention the importance of adequate energy services at home as the real benefit aimed at by employing electricity consuming appliances. For instance, the basic supply may be regulated activity by the undertaking conferred with PSO and beyond that the unregulated activities may be performed by the supplier based on competition and consumer protection rules. Indeed, the adequate energy services at home overlaps with the demands for decent living condition on the fact that heating, lighting and etc. constitutes some of the energy services that makes premises inhabitable place. Respectively, the legal categories should be set to encompass the mentioned aspects of minimum supply, adequate energy services and protection from disconnection as inherent in the understanding of social justice.

The object of contemplation in energy should be shifted from the supply of goods into the provision of services. In the light of the possible legal category of the corresponding right, the introduction of the right to energy services may solve several issues. It would stipulate the responsible party for the continuity and quality of services what is currently lacking due to the supplier making supply agreement but lacks obligation to ensure the quality of electricity and the operation of infrastructure. Conferring obligation on the supplier to manage the mentioned aspects of supply as the representative of system operator or other forms that would make sense from the household consumer perspective. Furthermore, the determination of electricity provision as services aids from regulatory perspective to cover more segments of the process. Provided that

the right to energy services would be established, then the household consumer could claim for protection not only in supply stage under distributive justice, but for adequate energy services encompassing the supply, the distribution, the consumption and the benefit stages.

On the other hand, the claim being tied to the responsibility enables to guide the demand side more effectively through setting conditions for claim on consumption practices and forms of energy services than price signals. Contemplation of social justice demands from the household consumer perspective gives one-sided picture, where the justifications for claims against a state are derived from the fact that others have more or better of something. If it is presumed that it is how the society functions, then at least there should be some pre-conditions in the form of responsibility to treat the conferred benefit in certain way. In this case, the claim within the right to energy services should follow with the responsibility to observe certain consumption practices in saving electricity, consume it efficiently and participation in special programs, for instance, the community schemes, the consumption audit, the installation overhaul.

Whereas the electricity by household consumers is understood not only as a good, but also as a necessity and a utility, the legislation fails to account the heterogenous meaning of electricity resulting in specific focus on the trading rules. Indeed, the household consumers seek not the electricity supply, in particular, but the ability to enjoy the energy services for the sustainment of personal well-being. The primary focus by household consumers is on the benefit that electricity produces reflected in the understanding of electricity what validates the shift of claim from reasonable supply to adequate energy services to represent social realities. Respectively, the need, derived from the theory, to guarantee the social minimum, namely, the capacity to adhere to the customary consumption practices of electricity and forms, being translated into secondary capabilities, justifies the proposal for wider regulatory intervention.

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SANTRAUKA

Energetikos sistema iš esmės turi skirtingas charakteristikas ir vidinius ryšius, kurių identifikavimas priklauso nuo tyrimo lauko. Kuomet energetikos sistema yra socialinių mokslų tyrimo objektas, tuomet ji apibrėžiama kaip kompleksinis ir daugiasluoksnius sektorius, kurio uždavinys yra užtikrinti sąžiningą ir teisingą energijos paslaugų prieinamumą visoms suinteresuotoms šalims. Tuo tarpu inžineriniai mokslai energetikos sistemą mato kaip grandinę technologinių operacijų gamybos, perdavimo, skirstymo ir vartojimo etapuose, o aplinkosaugos mokslai sutelkia dėmesį į išteklių gavybą, aplinkos taršą dėl energijos vartojimo, atsinaujinančių energijos išteklių naudojimą. Tai nulemia skirtingą energetikos sistemos ribų nustatymą: nuo gamybos iki vartojimo inžinerinių mokslų srityje ar nuo kasybos iki atliekų aplinkosaugos moksle. Be to, skirtingos mokslo sritys akcentuoja kitokias energetikos sistemos savybes: inertiškumą, priklausomybę nuo ankstesnių sprendimų, sociotechnologinę struktūrą.

Kadangi energetikos sistema daro įtaką visoms gyvenimo sritims, bet koks trikdys ar avarija ne tik apriboja galimybę naudotis elektros energijos paslaugomis, bet ir veikia aplinką, valstybės ekonominę vystymąsi, socialinę ir politinę stabilumą. Tai sistema su sutampančiais, konkuruojančiais ir vienas kitam prieštaraujančiais uždaviniais, sudedanti iš asmeninės ir visuomeninės sričių, vertinamų per gerovės sampratą. Tokia reikalavimų įvairovė kyla iš energetinio saugumo, teisingumo ir tvarumo reikalavimų energetikos sistemai. Kyla poreikis nustatyti socialinio teisingumo reikalavimus atitinkančius kriterijus, leisiančius vertinti egzistuojantį teisinį reguliavimą ir veikiančius kaip gairės tolesniam energetikos sistemos reguliavimo vystymuisi.

Kiekvieno nurodyto energetikos sistemos uždavinio šalininkas akcentuoja skirtingas sritis, tačiau jų įgyvendinimas yra susijęs su tomis pačiomis problemomis. Politikos mokslai akcentuoja politinio stabilumo išlaikymą, įvykus energetikos sistemos avarijai ar energetikos išteklių stygiui, o teisiniai mokslai, kaip socialinių mokslų sritis, akcentuoja teisingumo idėją ir energetinio skurdo problemą. Iš esmės kiekvieno iš šių uždavinių įgyvendinimas tarpusavyje susiję ir tai riboja individualų jų įgyvendinimą. Manytina, kad apriboti socialinių gėrių, kaip energijos nešiklių, prieinamumą būtų neteisinga ir netvaru, nes būtinaie vartotojai gali pasirinkti labiau teršiantį ir pavojingą skystąjį ar kietąjį kurą. Tokį pasirinkimą paskatintų buitinių vartotojų elektros energijos įperkamo problema, neleidžianti užsitikrinti pakankamo energijos poreikio patenkinimo ar verčianti riboti kitų poreikių patenkinimą. Taip pat aplinkos teršimo mokestis, teigiamai veikiantis kovą su klimato atšilimu ir energijos vartojimo įpročius, tačiau šis mokestis atsispindi tiekimo kainoje ir tai sudaro sąlygas energetinio skurdo atsiradimui. Dėl to įtampa tarp įperkamo ir tvarumo, kaip energetikos sistemos uždavinių, yra neišvengiama, nes mažėjant

energetiniam skurdui didėja vartojimas ir CO₂ emisijų patekimas į aplinką. Vis dėlto atsinaujinančių energijos šaltinių skatinimas, leidžiantis užtikrinti energetikos sistemos tvarumą, didina elektros energijos tiekimo kainą, taip mažindamas elektros energijos įperkumą ir stumdamas buitinius vartotojus į energetinį skurdą.

Vidaus elektros energijos rinkai iškeltas uždavinys užtikrinti įperkumą, bet išlaidas atspindintį ir patikimą elektros energijos tiekimą buitiniams vartotojams. Toks rinkos modelio pritaikymas energetikos sektoriuje turi privalumų ir galimai neigiamų pasekmių skirtingoms socialinėms grupėms. Pavyzdžiui, konkurencija daro spaudimą tiekimo kainai ir neleidžia jai nepagrįstai didėti, bet tiekimo kainos universalumas neleidžia rinkai prisitaikyti prie buitinių vartotojų, patiriančių energetinį skurdą, ir pažeidžiamų buitinių vartotojų poreikių. Nepaisant to, kad konkurencijos taisyklės turėtų pakelti elektros energijos tiekimo paslaugų kokybę, įgyvendinti pasirinkimo teisę ir elektros energijos įperkumą, efektyvios konkurencijos nebuvimas turi priešingą efektą, kuomet rinkos koncentracija lemia elektros energijos tiekimo planų neatitikimą buitinių vartotojų poreikiams, aukštesnes tiekimo kainas ar pasirinkimo trūkumą tarp tiekėjų.

Jei tikslas yra užtikrinti naudojimąsi elektros energijos paslaugomis asmeninei gerovei ir vystymuisi, kyla klausimas, kas yra energetikos sistema, kaip energetikos sistemos uždaviniai yra susiję tarpusavyje, kaip jie turėtų būti valdomi ir kaip turi būti užtikrintas teisingumas. Dėl to svarstyta teisingumo problema, kuri nurodo į būtinybę pripažinti neapriboto elektros energijos paslaugų prieinamumo žmonių gerovei aktualumą, vertinant jį per socialinio teisingumo reikalavimus. Taigi priemonių dizainas, adresuojant juos nurodytiems iššūkiams, turi būti paremtas vertybiniu pagrindu; tai leistų jas laikyti teisingomis ir leistų atitikti elektros energijos paslaugų prieinamumo buitiniams vartotojams procesą, darytų jas efektyvesnes.

Iš tiesų energetikos teisės vystymasis turi atsižvelgti į energijos įperkumą, energetinio saugumo ir tvarumo problemų įvairiapusiškumą, kuriems reikia ilgalaikių sprendimų ir taisyklių, apimančių elektros energijos rinkos reguliavimą, atsinaujinančių energijos išteklių skatinimą ir naudojimą, valstybės pagalbos priemones. Tuo tikslu atliktas tyrimas siekia iširti elektros energijos paslaugų socialinę reikšmę, konceptualizuojant energetinio teisingumo kategoriją, struktūrizuojant energetikos sektoriaus teisinį reguliavimą, sukuriant grindžiamąją teoriją apie elektros energijos paslaugų prieinamumą buitiniams vartotojams ir analizuojant jų logiškumą bei nuoseklumą.

Mokslinė problema

Energetikos diskursas daugiausia nukreiptas į technines ir ekonomines problemas, palaikant supratimą, kad energetikos sistema yra technologinių sprendimų, paremtų kaštų ir naudos analize, struktūra. Atsižvelgiant į elektros energijos sektorių, didelis dėmesys skiriamas

tinklų funkcionavimui, apimant jų priežiūrą ir veikimą, taip pat šio sektoriaus valdymo ekonominiam pagrindimui. Trūksta dėmesio svarstymams, kaip žmonės veikia elektros energija ir kokias pasekmes ji turi visuomenės gerovei ir vystymuisi. Nors atsiranda tyrimų, susijusių su socialine nelygybe, kylančia dėl dabartinės energetikos sistemos paradigmos, vis dar trūksta energetikos sektoriaus teisinio reguliavimo analizių, nagrinėjančių socialinio teisingumo perspektyvą, ar tinkamų modelių, kurie būtų pritaikyti paaiškinant to priežastis. Dėl to disertacijoje pateikiama teisės į elektros energijos paslaugas kategorija kaip konceptuali priemonė, skirta išvengti ir kovoti su neteisingumo apraiškomis elektros energijos sektoriuje. Pastaroji koreliuoja su siūloma naujai konceptualizuota energetinio teisingumo kategorija, įvertinant tai, kad jų tikslai yra skirtingi.

Nors ekonominis ir socialinis teisingumas turi skirtingus pagrindimus, vertybes ir principus, kyla klausimas, kokia paradigma turėtų būti orientyras priimant energetikos sprendimus, kurie vėliau formalizuojami teisiniu reguliavimu. Disertacijoje pripažįstamas supratimų apie energetikos sistemos prigimtį ir paskirtį heterogeniškumas. Pavyzdžiui, Europos Sąjungos teisinis reguliavimas iškelia ekonominį pagrindimą, sujungdamas rinkos reikalavimus su teise į elektros energijos tiekimą, tuo tarpu iš socialinių mokslų perspektyvos gali būti pripažįstama, kad lygybė ir orumas, kaip vertybės, taip pat turėtų būti priskirtos elektros energijos sektoriaus teisiniam reguliavimui.

Literatūroje visai neseniai pradėta pripažinti neteisingumo atvejus, įvertinant energetikos sistemos veikimo padarinius dėl netolygaus ir nesąžiningo naudos, gaunamos iš elektros energijos vartojimo, pasiskirstymo. Diskurse aprašomas energijos prieinamumo ribojimas, kaip vienas didžiausių energetikos sistemos neteisingumo atvejų. Kartu literatūroje pateikiama energetinio teisingumo koncepcija, konstruojanti socialinio teisingumo reikalavimus per paskirstomąjį teisingumą, procedūrinį teisingumą ir pripažinimą kaip teisingumą, kaip priemonę pateikti neteisingumo atvejus energetikos sistemoje. Kadangi siūloma energetinio teisingumo koncepcija atspindi tiekimo ir vartojimo stadijas elektros energijos paslaugų prieinamumo procese, naudos stadija, kada buitiniai vartotojai patenkina savo buitinius ir socialinius poreikius, nėra įtraukta į šią koncepciją. Nors energetinio teisingumo principų triada, kaip trijų elementų junginys, yra artikuliuota ir orientuota politikos formavimui ir reguliavimo procesui, joje trūksta galimybės įvertinti visą procesą nuo tiekimo ir skirstymo etapų iki vartojimo ir asmeninės gerovės patyrimo. Be to, literatūroje nėra siūloma energetinio teisingumo koncepcija, skirta tik elektros energijos paslaugų prieinamumui, tačiau siūloma bendrai energetikos sektoriui taikoma energetinio teisingumo koncepcija, padedanti nustatyti neteisingumo atvejus. Atsižvelgiant į poreikį konceptualizuoti energetinio teisingumo kategoriją, pritaikant ją elektros energijos paslaugų prieinamumui analizuoti, disertacijoje dėmesys

sutelkiamas į energetinio teisingumo kategoriją, atsižvelgiančią į visą elektros energijos paslaugų prieinamumo procesą nuo tiekimo iki gerovės ir pritaikant ją elektros energijos sričiai.

Pripažintina, kad iki šiol literatūroje mažai dėmesio skiriama energetikos teisinio reguliavimo Europos Sąjungoje analizei. Vis dėlto atsiranda straipsnių, apžvelgiančių Europos Sąjungos politikos priemones dėl energetinio skurdo kaip neteisingumo ir jo nustatymo būdus. Atsižvelgiant į tai, kad nėra analizuojamas atitinkamas teisinis reguliavimas, reikia pateikti išsamią teisinio energetikos sektoriaus reguliavimo struktūrą, apimančią elektros energijos įsigijimą ir vartojimą. Atskleidus teisinio reguliavimo struktūrą, sietiną su teise į elektros energijos tiekimą Europos Sąjungoje, atsiranda galimybė įvertinti sąlygas buitiniams vartotojams efektyviai patenkinti savo poreikius ir tų sąlygų koreliaciją su socialinio teisingumo reikalavimais.

Taip pat ryškus kokybinių tyrimų apie buitinių vartotojų elektros energijos paslaugų naudojimą trūkumas, išskyrus atskirus tyrimus apie buitinių vartotojų pažeidžiamumą ir jų energijos išlaidas. Esant šios srities tyrimų stygiui, disertacijoje pateikiama bekompromisio elektros energijos paslaugų naudojimo gerovės patyrimui grindžiamoji teorija, kuri sistemiškai ir konceptualiai paaiškina elektros energijos paslaugų prieinamumo procesą, tai, kaip jis suprantamas buitiniams vartotojams dėl jų įvairiapusių požiūrių ir patirčių. Teorija leidžia konceptualiai apsvarstyti elektros energijos paslaugų procesą ir suteikia realų supratimą apie socialinio teisingumo reikalavimus, kuriais remiantis gali būti vertinamos norminės taisyklės.

Disertacijos ginamieji teiginiai

1. Teisė į elektros energijos tiekimą Europos Sąjungoje negarantuoja buitinių vartotojų poreikių realizavimo.
2. Teisė į elektros energijos tiekimą Europos Sąjungoje neatitinka socialinio teisingumo reikalavimų.
3. Energetinio teisingumo koncepcijai nepavyksta tinkamai atsižvelgti į elektros energijos paslaugų prieinamumo proceso prigimtį.

Tyrimo objektas

Elektros energijos paslaugų prieinamumo sąlygos, nulemiančios buitinių vartotojų gerovės galimybes.

Tyrimo tikslas

Nustatyti, kaip teisė į elektros energijos tiekimą Europos Sąjungoje lemia buitinių vartotojų galimybes realizuoti individualius elektros energijos paslaugų poreikius siekiant savo gerovės.

Tyrimo uždaviniai

1. Konceptualizuoti nuoseklią energetinio teisingumo koncepciją, pritaikytą nustatyti energetinio neteisingumo atvejus elektros energijos paslaugų prieinamumo procese.
2. Pasiūlyti teisės į elektros energijos paslaugas vertinamuosius ir kreipiančiuosius kriterijus.
3. Struktūrizuoti Europos Sąjungos teisinį reglamentavimą, siejamą su teise į elektros energijos tiekimą, vidinius ir išorinius komponentus, teisinio reguliavimo mechanizmus ir priemones.
4. Sukurti grindžiamąją teoriją apie buitinių vartotojų elektros energijos paslaugų prieinamumo procesą.

Technologijų vystymasis suteikia impulsą kurti naujas elektros energijos paslaugas ir atsirasti konkurencija pagrįstai elektros energijos rinkai. Iš tiesų supratimas apie natūralią monopoliją infrastruktūros sektoriuose yra besikeičiantis procesas. Natūralios monopolijos modelis elektros energijos sektoriuje taikomas perdavimo ir skirstymo etapams, kol kitiems etapams (gamybai ir tiekimui) daugiausia taikomas rinkos modelis. Transformacija iš monopolijos į rinkos ekonomiką energetikos sistemoje pagrįsta tikėjimu, kad elektros energija yra tiesiog prekė, kurios tinkama kaina nustatoma veikiant paklausai ir pasiūlai. Vis dėlto energetikos sistemos vystymasis teisės tyrėjams kelia naujų klausimų dėl elektros energijos paslaugų paskirstymo tarp visuomenės narių sąžiningumo ir teisingumo. Atsižvelgiant į augantį susidomėjimą teisingumo reikalavimų užtikrinimu energetikos sektoriuje, disertacijoje dėmesys nuo tiekimo kainos teisingumo nukreipiamas į elektros energijos paslaugų prieinamumo atitiktį teisingumo reikalavimams.

Diskurse vyraujantis būdas adresuoti teisingumo energetikos sektoriuje problemą – pateikti energetikos teisingumo koncepciją. Ši koncepcija turi skirtingas reikšmes ir funkcijas. Iš esmės energetiniam teisingumui reikia teisingo energijos paslaugų paskirstymo, tačiau jo paskirtis gali būti analitinė, sprendimų priėmimo ir konceptuali. Energetinio teisingumo samprata per jos konceptualumą gali būti taikoma analizuojant energetikos politiką. Taip pat energetinio teisingumo samprata gali būti papildoma tam tikrų idėjų šalininkų grupių, kurios siūlo savo energetinio teisingumo reikalavimus, ar per energetinio teisingumo skaičiuoklę, kuri apima ekonomiką, aplinkosaugą ir politiką, kiek tai susiję su energetika. Šiame kontekste taip pat siūloma įvertinti ir pripažinti geografinių sąlygų svarbą taikant energetinio teisingumo koncepciją. Kita literatūra pabrėžia klimato kaitos ir energetinio saugumo problematiką, patenkančią į energetinio teisingumo taikymo lauką.

Nepaisant tendencijos apsvarstyti socialinio teisingumo reikalavimų pritaikymą energetikoje, visos pastangos skirtos nagrinėti energetinius sprendimus remiantis teorinėmis

prielaidomis, bet netiriant socialinių ir buitinių poreikių patenkinimo per elektros energijos paslaugas proceso dinamikos. Reikia pažymėti, kad literatūroje randami tik keli bandymai nagrinėti, kaip gerovė koreliuoja su energetika ar kodėl energetinis skurdas, kaip neteisingumo apraiška, yra toks svarbus šiandieninėje politikos darbotvarkėje. Prisidedant prie diskurse palaikomos nuomonės apie energetikos svarbą asmens gerovei, disertacijoje sistemiškai ir konceptualiai konstruojami energetinio teisingumo dalys, jų kriterijai ir vertybės. Siūlomas naujas energetinio teisingumo modelis nurodo į gebėjimų metodą nagrinėjant galimo neteisingumo atvejus energetikos sektoriuje, pagal kurį vertinamas gerovės lygis atsižvelgiant į asmens galėjimą užsiimti norima veikla ir būti tuo, kuo pats pasirenka būti. Remiantis šia filosofine doktrina, pagrindiniai gebėjimai yra fundamentalios teisės, kurios užtikrina orų gyvenimą ir negali būti įgyvendinamos neužtikrinus antraeilių gebėjimų realizavimo. Pažymėtina, kad tokių antrinių poreikių realizavimui kaip šilti namai ar tinkamas maisto paruošimas ir saugojimas reikalingos elektros energijos paslaugos. Remiantis platesne gerovės samprata, disertacijoje pereinama prie naujos energetinio teisingumo sampratos, labiau atliepančios socialinio teisingumo idėją.

Atsižvelgiant į besikeičiantį supratimą apie energetikos sistemos prigimtį ir funkcijas, perėjimą nuo sistemos, kaip techninio proceso, prie sistemos, kaip priemonės socialinių poreikių, nukreiptų į visuomenės ir asmeninės gerovės realizavimą, patenkinimui, tyrėjams atsiranda naujų tyrimų krypčių, apimančių buitinių vartotojų elektros energijos paslaugų prieinamumo priežastis ir pasekmes. Be to, neteisingumo atveju gali atsirasti socialiai orientuotoje energetikos sistemoje, kurie gali būti sprendžiami pasinaudojant nauja energetikos teisingumo koncepcija, reprezentuojančia vertybiniu pagrindu nustatytus socialinio teisingumo reikalavimus.

Tyrimo metodai

Disertacijoje naudotas teorinis literatūros analizės metodas, siekiant nustatyti egzistuojančios energetinio teisingumo sampratos atitiktį socialinio teisingumo reikalavimams elektros energijos paslaugų prieinamumo procese ir pasiūlant naują geriau juos atitinkančią sampratą. Taip pat buvo atlikta Europos Sąjungos teisinio reguliavimo, sietino su buitinių vartotojų teise į elektros energijos tiekimą, analizė siekiant atskleisti jo struktūrą, vertybinį pagrindą ir teisinius mechanizmus. Tuo tarpu vykdant empirinį tyrimą, kuomet buvo renkami, interpretuojami ir analizuojami duomenys, naudota konstruktyvistinė grindžiamosios teorijos versija. Remiantis šia metodologija, disertacijoje pateikiama grindžiamoji teorija apie buitinių vartotojų elektros energijos paslaugų prieinamumo procesą.

Nauja energetinio teisingumo koncepcija

Energetinio teisingumo koncepcija, pagrįsta paskirstomojo, procedūrinio ir pripažinimo principų triada, sukuria prielaidas neteisingumo atvejų nustatymui elektros energijos

paslaugų prieinamumo procese. Nepaisant to tam tikri esminiai reikalavimai, apibrėžiantys teises ir atsakomybes, ir minimalūs gerovės poreikiai išsamiai nenagrinėti, kad būtų galima suformuoti išsamią ir pritaikomą energetinio teisingumo koncepciją. Svarstant apie gerovės problematiką, siejant ją su elektros energijos paslaugų naudojimu, gebėjimų doktrina pateikiama kaip galinti pagrįsti esminius teisės ir atsakomybių elementus, kurių trūksta senojoje principų triada paaiškinamoje energetinio teisingumo koncepcijoje.

Atsižvelgiant į tai, kad pagrindiniai gebėjimai yra fundamentalios teisės, kurios leidžia gyventi oriai, pagrindiniai gebėjimai gali būti palaikomi tik su sąlyga, jei antriniai gebėjimai gali būti įgyvendinami pasitelkiant būtinas energijos paslaugas. Pavyzdžiui, tokiam pagrindiniam gebėjimui kaip pasirūpinimas gera sveikata reikia tokio antrinio gebėjimo kaip sveikatai reikalingos oro temperatūros palaikymas namuose ar galėjimas pasigaminti maistą, jo saugojimas nuo greito sugedimo. Neturėjimas saugių, nepertraukiamų ir įperkamų elektros energijos paslaugų namuose sukelia neigiamus padarinius kasdienėms žmonių veikloms, nes ribotas elektros energijos paslaugų prieinamumas veda į sveikatos, švietimo ir informacijos prieinamumo mažėjimą. Taip šis neigiamas efektas pasiekia ir kitas visuomeninio gyvenimo sritis, todėl gebėjimų doktrina tarnauja kaip socialinio jautrumo dėl buitinių vartotojų galimybes naudotis elektros energijos paslaugomis atitinkamo, taip sukurdama palankias sąlygas teisės į pakankamą elektros energijos paslaugų prieinamumą teisinį pripažinimą su atliepančiomis atsakomybėmis. Jei tokia teisė būtų saugoma įstatymu, būtų pagrįsta reikalauti iš buitinių vartotojų atsakomybės už elektros energijos vartojimo įpročių keitimą į efektyvų ir sąmoningą vartojimą.

Viena iš gebėjimo doktrinos idėjų pripažįsta minimalaus bazinio gerovės lygio aktualumą. Ši idėja paremta argumentu, kad žmogaus vystymuisi reikalingas bent minimalus bazinių gebėjimų užtikrinimas. Vis dėlto aiški minimalaus bazinio lygio sąvoka nėra nagrinėta literatūroje, todėl viešosios politikos priemonėms paliekama nustatyti konkretų dydį pagal tam tikras situacijas ir kontekstą. Aiškinantis ryšį tarp gerovės ir elektros energijos atsiranda poreikis svarstyti bazinių ir antrinių gebėjimų lygius, kurių užtikrinimui reikalingas tam tikras naudojamų elektros energijos paslaugų kiekis ir intensyvumas. Šis lygis iš esmės priklauso nuo namų ūkio dydžio, specialių asmeninių poreikių, asmeninių situacijų ir gyvenamosios aplinkos. Tokio minimalaus bazinio lygio nustatymas padėtų išspręsti energetinio skurdo problemą ir užtikrinti buitinių vartotojų orumą per asmeninės gerovės patyrimą.

Elektros energijos paslaugų prieinamumo procesas gali būti skaidomas į keturis atskirus etapus (paskirstymo, tiekimo, vartojimo ir naudos), kurie gali būti sugretinti su naujais energetinio teisingumo koncepcijos principais. Nors patys principai nėra skirti konkrečiam etapui, tačiau jie padeda paaiškinti jų esmę ir ryšį su kitais etapais. Iš esmės nauda, gaunama naudojant

elektros energijos paslaugas, yra pagrindinė priežastis, kodėl buitiniai vartotojai pasirenka vartoti elektros energiją. Tad naudos etapo integravimas į proceso supratimą leidžia parodyti, kad buitinių vartotojų veiksmai nukreipti į asmeninės gerovės patyrimą. Tuo tikslu reikalinga išsamiau paaiškinti gerovės sąvoką – tai ir padaro gebėjimų doktrina su vertybiniu pagrindu ir reikalavimais gerovei. Jei gebėjimų užtikrinimas yra pripažįstamas kaip visuomenės interesas, tuomet vartojimo, tiekimo, paskirstymo etapai yra orientuoti pagal asmenines atsakomybes, kylančias iš gebėjimų doktrinos ir atspindintys naudos etapo esmę. Pavyzdžiui, gebėjimas susikurti sveikas gyvenimo sąlygas (naudos etapas) reikalauja minimalaus elektros energijos vartojimo (vartojimo etapas), įperkamas (tiekimo etapas) ir nenutrūkstamas tiekimas (paskirstymo etapas) per skirstymo tinklus ir atsakomybė dėl aplinkos tausojimo (naudos etapas) reikalauja efektyvaus ir sąmoningo vartojimo (vartojimo etapas), skatina rinktis atsinaujinančią energiją ar pačiam ją gaminti (tiekimo etapas), ir tai taip pat sumažina tinklų apkrovimą ir investicijų poreikį į jų priežiūrą ir atnaujinimą (perdavimo etapas).

Energetinio teisingumo idėjos konceptualizavimas reikalingas kartu su išplėtotu standartizuotu modeliu, padėsiančiu tirti neteisingumo atvejus elektros energijos prieinamumo procese. Kiti klimato kaitos ar aplinkosaugos sričių neteisingumo atvejai reikalauja kitokių konceptų ir pagrindimo, nors ir konstruojamų ant to paties vertybinio pagrindo. Be to, nors naujas energetinio teisingumo konceptas skirtas išskirtinai nagrinėti elektros energijos paslaugų prieinamumo sąlygas, šis konceptas nėra pritaikytas nustatyti energijos išteklių paskirstymo ar elektros energijos jėginių statymo ir paleidimo proceso neteisingumo atvejus. Tokiu būdu sukurta energetinio teisingumo koncepcija geriau atliepia tiek elektros energijos paslaugų naudojimo specifiką, tiek su tuo susijusį Europos Sąjungos teisinį reglamentavimą.

Iš esmės energetinio teisingumo koncepcija ir jos pagrindu konstruojama teisė į elektros energijos paslaugas yra skirtingos kategorijos, tačiau jos susijusios per proceso ir rezultato ryšį. Taigi energetinio teisingumo koncepcija išsamiai išdėsto principus ir problemas, nurodo, kokie apsektai turi būti svarstomi kuriant ir įgyvendinant priemones, leisiančias išvengti neteisingumo atvejų. Priešingai nei grindžiamoji teorija, ši koncepcija nesiekia apibūdinti ir paaiškinti, kodėl buitiniai vartotojai pasirenka vartoti elektros energiją ir kokias strategijas jie pasirenka siekdami užtikrinti elektros energijos paslaugų prieinamumą. Energetinio teisingumo koncepcija sumodeliuota nustatyti elektros energijos paslaugų prieinamumo proceso neteisingumo atvejus, o projektuojama teisė į elektros energijos paslaugas skirta nagrinėti, ar išsikelti tikslai, kylantys iš koncepcijos reikalavimų, yra pasiekti. Tuo tikslu šią teisę sudaro tam tikrą vertybę reprezentuojantys principai, leidžiantys atsižvelgti į skirtingas buitinių vartotojų situacijas ir iš to kylančius tokius iššūkius kaip įperkamumo, prieinamumo, pažeidžiamumo ir bazinio minimumo principai. Paprastai buitiniai vartotojai pirmenybę teikia laisvei pasirinkti

tiekėją ir tiekimo šaltinį, tuo tarpu pažeidžiamiesiems buitiniams vartotojams labiau svarbu užsitikrinti reikalingą naudojamų elektros energijos paslaugų lygį, o buitiniai vartotojai, patiriantys energetinį skurdą, nerimauja, kad nebūtų atjungtas elektros energijos tiekimas. Buitiniams vartotojams svarbus nepertraukiamas elektros energijos tiekimas, kad jie galėtų naudotis būtinomis elektros energijos paslaugomis, tenkindami savo asmeninius ir socialinius poreikius.

Sumodeliuotos teisės į elektros energijos paslaugas tikslas yra apimti skirtingus kriterijus, būdingus tam tikrai buitinių vartotojų grupei. Taigi pažeidžiamumo principas įdiegiamas siekiant užfiksuoti specifinius sveikatos, amžiaus ar šeimos statuso nulemtus poreikius. Plačiai pripažinta energetinio skurdo problema, išlaikant jos kertines idėjas apie mažas pajamas, neefektyvų vartojimą, aukštas tiekimo kainas, paverčiama į universalaus elektros energijos paslaugų minimumo reikalavimą. Rėmimasis energetinio skurdo problematika dėl savo atskleisto pagrindimo diskurse, konstruojant naują bazinio minimumo principą, leidžia siūlyti naują panašią, bet iš esmės skirtingą koncepciją, kuri reprezentuoja orumą kaip vertybę, bet ne lygybę, ir turi kitą uždavinį palyginti su energetinio skurdo koncepcija. Efektyviam visų teisių veikimui reikalingas teisinis pripažinimas, formalizuojant jas teisiniu reglamentavimu. Dėl to nurodyti vertinamieji principai formuluojami per teisės kategoriją, taip šiems principams atsiranda galimybė būti transformuotiems į teisinę galią turintį reikalavimą.

Grindžiamoji teorija

Metodologiniu požiūriu grindžiamoji teorija geriausiai tinka teorijai kurti esant besikeičiančiai aplinkai ir atsirandant naujoms buitinių vartotojų patirtims, susijusioms su elektros energijos paslaugų prieinamumu. Atkreiptina, kad pati grindžiamoji teorija skirstoma į tradicinę ir modernią. Moderni grindžiamosios teorijos versija sukurta Korbino (Corbin) ir Strauso (Strauss). Atliekant tyrimą laikytasi moderniosios grindžiamosios teorijos versijos metodologinių reikalavimų. Skirtumas tarp tradicinės ir moderniosios grindžiamųjų teorijų yra tas, kad modernioji versija pripažįsta tyrėjo subjektyvumą interpretuojant respondentų atsakymus per savo asmeninę patirtį, o tradicinė versija teigia, kad teorija išplaukia iš tik duomenų, nepaliesių tyrėjo šališkumo. Šios metodologijos rezultatas tas, kad sukurta teorija pagrįsta konceptualiu šių dienų socialinės tikrovės atvaizdavimu, bet ne numanomu ar tariamu pagal tyrėjo suvokimą.

Grindžiamoji teorija siekia sujungti duomenis su teorija atskleidžiant veikimo ir elgesio modelius. Taigi teorija aprašo ir paaiškina socialinį fenomeną, leidžia numatyti galimus sprendimus ar veiksmus, jei sąlygos yra tenkinamos. Kadangi tyrimo objektas nuolat keičiasi dėl technologinio ir socialinio vystymosi, grindžiamoji teorija nuolat gali būti papildoma naujais konceptais, taip išlaikant jos pajėgumą paaiškinti procesą. Empirinis tyrimas buvo atliekamas

nuolat koduojant ir lyginant renkamus duomenis interviu metu, taip vedant tyrimą teorijos kūrimo link. Iš esmės teorijos kūrimo procesas vyksta atliekant tris viena kitą keičiančias operacijas: duomenų rinkimas, nuolatinis jų kodavimas ir duomenų analizė. Nors griežto šių veiksmų eiliškumo nėra, tačiau jos yra orientyras, vedantis tyrėją teorijos kūrimo link.

Pirmieji duomenys analizuojami stengiantis suskaidyti į atskirus loginius blokus, atitinkančius vieną idėją. Toliau duomenys konceptualizuojami, jiems suteikiami laikini pavadinimai, kurie trumpai ir abstrakčiai galėtų paaiškinti vieną loginį duomenų bloką. Paskui duomenys lyginami tarpusavyje ieškant panašumų ir skirtumų. Turint pirmus konceptus, jie konceptualizuojami ašiniu būdu, taip parodant jų tarpusavio ryšius. Jei šie ryšiai plačiai atskleisti ir paaiškina tiriamą fenomeną, tuomet galima atlikti selektyvų kodavimą, kada iš turimų kategorijų kildinama pagrindinė kategorija, paaiškinanti visas kitas kategorijas. Priešingu atveju toliau tęsiamas duomenų rinkimas, siekiant papildyti turimas kategorijas arba atrasti naujų. Pažymėtina, kad šiuo etapu duomenys renkami papildytų pusiau struktūruotų interviu su klausimais, išvestais iš teorinio palyginimo tarp turimų konceptų. Taip daroma dėl to, kad dalis konceptų tampa kategorijomis, o kita dalis – subkategorijomis. Kadangi subkategorijos paaiškina kategorijas, reikia gauti naujų duomenų, kurie kiek galima geriau paaiškintų kategorijas, taip teoriškai prisotindami jas.

Baigus empirinį tyrimą buvo sukurta bekompromisio elektros energijos paslaugų naudojimo gerovės patyrimui grindžiamoji teorija apie buitinių vartotojų elektros energijos paslaugų prieinamumo procesą. Ši teorija teigia, kad *asmeninė subjektyvi gerovė, tiekimo kaina, tiekimo valdymas* yra priežastys, dėl kurių buitiniai vartotojai siekia naudoti elektros energiją energijos paslaugų naudojimui. Šio proceso kontekstą sudaro *elektros energijos charakteristikos, vartojimo režimai ir būdai, buitinių vartotojų situacijos specifiškumas*, kurie tiesiogiai nelemia buitinių vartotojų strategijų, bet atskleidžia procesui svarbius bruožus. Kuomet buitiniai vartotojai susiduria su iššūkiais siekdami užsitikrinti pakankamą elektros energijos paslaugų naudojimą, jie įgyvendina strategijas *panaudodami priemones elektros energijos paslaugoms*. Šių strategijų panaudojimui svarbus įsiterpiančiųjų sąlygų, pavyzdžiui, *valstybės atsakomybių, tiekėjo atsakomybių, buitinių vartotojų atsakomybių* ir *tiekimo pastovumo*, veikimas ar neveikimas. Jei buitiniams vartotojams pavyksta tinkamai įveikti kylančius iššūkius, jie gali tikėtis patenkinti savo *buitinius poreikius* ir *socialinius poreikius*, arba, priešingu atveju, gali *patirti visišką diskomfortą*. Remiantis sukurta teorija apie buitinių vartotojų elektros energijos paslaugų prieinamumą, galima ne tik paaiškinti, kodėl buitiniai vartotojai renkasi naudoti elektros energijos paslaugas ar kaip jie reaguoja į iškilusius iššūkius; remiantis sukurta teorija, daug svarbiau yra galimybė suformuluoti tinkamus socialinio teisingumo reikalavimus, atliepiančius buitinių vartotojų supratimą apie pačią elektros energiją ir jos svarbą jų gerovei.

Teisingumo samprata konstruojama atsižvelgianti į skirtingų interesų derinimą, todėl konceptualizuojant energetinio teisingumo idėją svarbu nustatyti, kaip skirtingai suprantama elektros energija. Be to, kiekvienos vertybės iškelimas lemia energetikos politikos formavimą ir tikslus. Taigi faktas, kaip skirtingos elektros energijos vartotojų grupės suprantą elektros energiją ir kokią vertybę jie remia, leidžia konstruoti energetinio teisingumo sampratą, pagrįstą interesų derinimo principu. Socialinis dėmuo atskleidžia buitinių vartotojų, kaip galutinių vartotojų, požiūrį ir supratimą apie elektros energiją.

Toks interesų atskyrimas pagal grupes yra formalus, nes skirtingiems interesams gali atstovauti ta pati grupė – asmuo tuo pačiu metu gali priklausyti kelioms grupėms su skirtingais interesais. Svarbu atskleisti kiekvieno intereso reikšmę tai pačiai grupei ir tai, kaip ji pasiskirsto tarp grupės narių. Skirtingos vartotojų savybės neleidžia visiems gauti vienodą naudą iš tų pačių elektros energijos prieinamumo sąlygų, todėl nustačius kiekvienos buitinių vartotojų grupės savybes galima identifikuoti jų interesų turinį. Žinant, kuriuos interesus buitinių vartotojų grupė laiko prioritetiniais, galima nustatyti bendrą interesų struktūrą, nulemiančią faktą, kaip suvokiama elektros energija. Nustačius šią struktūrą ir pabrėžiamas vertybes, galima konstruoti bendrą energetikos sistemos socialinio teisingumo sampratą. Energetikos teisingumo idėją, pagrįstą socialinio teisingumo samprata, sudaro vertinamieji kriterijai, atspindintys grupės interesus ir vertybes, apibrėžiant jas teise į elektros energijos paslaugas, jos įgyvendinimo sąlygas ir prielaidas, ir su šios teisės įgyvendinimu susijusias atsakomybes.

Išvados

1. Teisė į elektros energijos tiekimą Europos Sąjungos teisiniame reguliavime negarantuoja buitiniams vartotojams pakankamo elektros energijos paslaugų naudojimo realizuojant buitinius ir socialinius poreikius. Ši išvada padaryta remiantis struktūrizavus Europos Sąjungos teisinio reguliavimo sąlygas, susijusias su teise į elektros energijos tiekimą, sukurta grindžiamąja teorija apie buitinių vartotojų elektros energijos paslaugų prieinamumo procesą ir identifikuojant tarp jų esančius ryšius.

Kadangi teisė į elektros energijos tiekimą yra skirta buitinių vartotojų apsaugai elektros energijos rinkoje, ši teisė pati savaime nėra sietina su gerove. Vis dėlto egzistuoja netiesioginis ryšys, nulemtas supratimo, kad efektyvi konkurencija rinkoje prisideda prie buitinių vartotojų gerovės. Pastaroji kategorija priskirtina tiekimo etapui, kuomet tarp buitinio vartotojo ir tiekėjo įvyksta pirkimo–pardavimo sandoris. Tuo tarpu specifiniai atvejai vartojimo ir naudos etapais, kuriais vyksta elektros energijos konversija į elektros energijos paslaugas ir gaunama nauda iš elektros energijos paslaugų naudojimo, nėra vertinami. Tai sukuria netiesioginį teisės į elektros energijos tiekimą poveikį buitinių

vartotojų gerovės patyrimui, išsklaido buitinių vartotojų galimybes gauti naudos iš suteiktos teisės. Sukuriama situacija, kuomet buitiniams vartotojams nėra užtikrinama galimybė pasinaudoti pakankamais energetiniais ištekliais, reikalingais orioms gyvenimo sąlygoms.

Grindžiamoji teorija pateikia priežastines sąlygas buitinių vartotojų sprendimams dėl elektros energijos vartojimo modelių naudojančių energijos paslaugomis, kurios yra priešingybė teisės į elektros energijos tiekimą pamatinėms prielaidoms. Šiuo atveju grindžiamoji teorija atskleidžia, kad vartojimo modeliai daugiausia lemiami individualios gerovės supratimo ir tiekimo valdymo, o tiekimo kaina svarbi tik nedaugeliui buitinių vartotojų. Teorija rodo, kad kartais tokie neracionalūs veiksniai kaip inertiškumas renkantis tiekėją, įprastas komforto lygis ar elektros energijos vartojimo įpročiai yra buitinių vartotojų elgsenos vedliai sprendimų priėmimo procese. Tuo tarpu teisė į elektros energijos tiekimą skirta orientuoti buitinius vartotojus tik per tiekimo kainos signalus, ateinančius iš elektros energijos rinkos, ir tai turėtų versti vartotojus keisti vartojimo įpročius ar pasirinkti efektyvesnius elektros energijos prietaisus. Pagrįstai galima spręsti apie šios teisės paskatą ieškoti geresnių tiekimo kainų rinkoje daliai buitinių vartotojų, kuriems svarbu tiekimo kaina. Tačiau svarbu prisiminti, kad galutinė sąskaitą už elektros energijos vartojimą daugiau priklauso nuo vartojimo kiekio nei nuo tiekimo kainos už kilovatvalandę. To pasekmė yra ta, kad energetikos teisinis reguliavimas, pagrįstas racionalių buitinių vartotojų sprendimu priėmimu, užmiršta tokias fundamentalias procesą valdančias idėjas kaip inertiškumas ir būtinybė.

Teisė į elektros energijos tiekimą stokoja pakankamos apsaugos nuo energetinio skurdo ir apsaugos nuo tiekimo atjungimo, nepaisant atskirų nuostatų, referuojančių į socialinės politikos priemones per viešuosius interesus atitinkančių paslaugų teisinius mechanizmus. Struktūriškai antrinė nuostata, lyginant su teise į elektros energijos tiekimą, nustatanti tiekimo atjungimo taisyklės esant pradelstiems įsiskolinimams, leidžia nutraukti tiekimą, ir tai prieštarauja grindžiamoje teorijoje identifikuotai valstybės atsakomybei apsaugoti nuo visiško atjungimo. Pradelstos skolos susidarymo priežastys ar pažeidžiamumas nėra energetikos teisinio reguliavimo objektas, atskiriantis išimtinai prekybos taisyklės nuo buitinių vartotojų gebėjimo įsigyti reikiamą elektros energijos kiekį ir konvertuoti jį į reikiamas energijos paslaugas. Teisinio reguliavimo Europos Sąjungoje struktūra, apimanti teisę į elektros energijos tiekimą, kur socialinės priemonės triumfuoja prieš priemones minimalioms elektros energijos paslaugoms užtikrinti, sukuria palankias sąlygas visiško buitinių vartotojų diskomforto patyrimui. Tai reiškia, kad galimi energetinio skurdo atvejai, priešingi buitinių vartotojų siekiui realizuoti savo poreikius.

2. Teisė į elektros energijos tiekimą Europos Sąjungoje neatliepia visų socialinio teisingumo reikalavimų buitinių vartotojų elektros energijos paslaugų prieinamumo procese.

Europos Sąjungos teisiniame reglamentavime pripažintas energetinis skurdas panašus į naujoje energetinio teisingumo koncepcijoje numatytą teisės reikalavimą į minimalias elektros energijos paslaugas, tačiau jos skiriasi savo kriterijais įvertinant pakankamumą: ar tai bendras standartas, ar kiekviena situacija turi būti vertinama atskirai. Be to, šis teisinis reglamentavimas prisideda prie socialinių reikalavimų nustatant griežtesnes taisykles tiekimo atjungimo procedūroms, kurios kontrastuoja su energetinio teisingumo koncepcijoje visiškai atmetama galimybe atjungti tiekimą. Taigi Europos Sąjungos taisyklės leidžia nutraukti tiekimą, tai gali priversti namų ūkius patirti ekstremalų energetinį skurdą ar net priversti išsikraustyti iš namų dėl negyvenamų sąlygų. Dėl to pagrįstai galima daryti išvadą, kad Europos Sąjungos energetikos sektoriaus teisinis reguliavimas labai ribotai paliečia socialinio teisingumo iššūkius.

Teisė į elektros energijos tiekimą prisideda prie procedūrinio teisingumo reikalavimo užtikrinti informacijos prieinamumą per šioje teisėje išskirtus reikalavimus dėl tiekimo kainos skaidrumo ir palyginamumo. Tai taip pat svarbu prieš priimant su svarbiais energetikos klausimais susijusius sprendimus gauti laisvą, išankstinį ir informuotą sutikimą. Jei buitiniams vartotojams suteikiama aiški informacija apie tiekimo kainas rinkoje, jie tampa labiau gebantys veikti rinkoje, rinktis jiems palankesnę tiekimo planą, nuspręsti dalyvauti bendruomenės projektuose ar pasirinkti patys gaminti atsinaujinančią energiją. Vis dėlto plati informacijos apie tiekimo kainas sklaida neapsaugo mažas pajamas gaunančių buitinių vartotojų nuo elektros energijos tiekimo sąskaitų apmokėjimo laiku.

Teisė į elektros energijos tiekimą prisideda prie elektros energijos paslaugų įperkamumo per savo siekį užtikrinti konkurencingą kainą; tai iš dalies reiškia ir tinkamą kainą esant efektyviai konkurencijai elektros energijos rinkoje. Nepaisant tinkamos elektros energijos tiekimo kainos reikalavimo, sudarančio teisės į elektros energijos tiekimą turinį, pastarasis reikalavimas yra per daug nutolęs nuo gerovės sampratos, kad galėtų užtikrinti bent elektros energijos tiekimo įperkamumą. Vis dėlto teisė į elektros energijos tiekimą iš dalies atitinka pripažinimo, kaip teisingumo, reikalavimus užtikrinti nediskriminacinę tiekimo kainą tarp buitinių vartotojų; tai apsaugo mažas pajamas gaunančius buitinius vartotojus nuo didesnių tiekimo kainų dėl pradelstų išsiskolinimų ar prastos atsiskaitymų istorijos. Remiantis tuo, kad teisinis reguliavimas reikalauja užtikrinti tik tinkamą ir nediskriminuojančią tiekimo kainą, pagrįstai galima teigti, kad teisei į elektros energijos tiekimą nepavyksta atliepti pažeidžiamų buitinių vartotojų interesų su specialiais poreikiais.

Ši situacija atskleidžia teisinio reguliavimo klaidingumą, jei yra siekiama socialiai teisingo elektros energijos prieinamumo visiems būtiniams vartotojams.

Teisinis reglamentavimas, sietinas su teise į elektros energijos tiekimą, savo prigimtimi yra reakcija į neteisingumo atvejus. Tai sukuria situacijas, kuomet tam tikrų buitinių vartotojų grupių interesai nėra ginami laiku, tai verčia vartotojus patirti sunkumą, susijusių su nepakankamu elektros energijos paslaugų naudojimu. Europos Sąjungos teisinio reguliavimo energetikos sektoriuje pamatinės nuostatos remiasi labiau į laisvę, kaip vertybę, nei lygybės idėją, ir tai neišvengiamai sukuria skirtumų visais elektros energijos paslaugų prieinamumo etapais. Dėl to integravus asmens orumo, kaip vertybinio pagrindo, reikalavimą, esantį naujoje siūlomoje energetinio teisingumo koncepcijoje, į energetikos teisinį reguliavimą, šis leistų lengviau daryti reikalingas elektros energijos rinkos reguliavimo išimtis, neleidžiančias būtiniams vartotojams patirti socialinio neteisingumo atvejų, taip darydamas jų teisinę apsaugą daug efektyvesnę.

3. Literatūroje vyraujančiai energetinio teisingumo koncepcijai, sudarytai iš paskirstomojo, procedūrinio ir pripažinimo kaip teisingumo principų, nepavyksta reprezentuoti buitinių vartotojų elektros energijos paslaugų prieinamumo proceso taip, kaip jis vyksta.

Nesėkmingai bandant atlikti didžiausius elektros energijos paslaugų prieinamumo būtiniams vartotojams iššūkius (apribotas elektros energijos paslaugų naudojimas, sena energetinio teisingumo koncepcija) daugiausia dėmesio skiriama skirstymo iššūkiams, informacijos prieinamumui ir specialiems buitinių vartotojų energijos poreikiams. Tuo tarpu nauja energetinio teisingumo koncepcija, pritaikyta elektros energijos paslaugų prieinamumui, kylančias problemas traktuoja kaip susijusias tarpusavyje siekiant būtiniams vartotojams gerovės kaip tikslo, nors jos ir kyla skirtingais proceso etapais. Ši nauja koncepcija koreliuoja su empirinio tyrimo metu sukurta grindžiamąja teorija, kurioje buitinių vartotojų veiksmi ir iššūkiai yra konceptualiai atvaizduojami per jų asmeninės gerovės sampratą.

Nauja energetinio teisingumo koncepcija yra geriau pritaikyta įvertinti elektros energijos vartojimo priežastis ir buitinių vartotojų gaunamą naudą iš elektros energijos paslaugų naudojimo. Lyginant su senąja koncepcija, naujoji energetinio teisingumo koncepcija yra papildyta laisvės vertybe, kurios neigiamus socialinius padarinius galima neutralizuoti taikant skirties principą, taip nepažeidžiant lygybės, kaip vertybės, tarp buitinių vartotojų idėjos. Tai pat nauja koncepcija papildyta gebėjimų, kaip gerovės mato, doktrina, paremta žmogaus gerovės idėja, išreikšta per gebėjimą būti tuo, kuo pats asmuo nusprendžia, ir daryti tai, ką pats žmogus pasirenka, kuri leidžia pagrįsti galutinį viso elektros energijos

paslaugų prieinamumo proceso tikslą. Šis visas konceptualus supratimas apie proceso tikslą leidžia aiškiau nustatyti reikalavimus tiekimo, skirstymo ir vartojimo etapais, kurie atitiktų gerovės tikslą kaip sąlygą energetiniam teisingumui įgyvendinti. Lyginant su ankstesniaja energetinio teisingumo koncepcijos versija, naujoji koncepcija pripažįsta, kad sprendimai, priimami buitinių vartotojų, yra pagrįsti asmeninės gerovės supratimu ir aktualus ne elektros energijos prieinamumas pats savaime, bet elektros energijos paskirtis.

Nauja energetinio teisingumo koncepcija apima atvejus, kurių grindžiamoji teorija nepaliečia. Pavyzdžiui, procedūrinis teisingumas reikalauja laisvo, išankstinio ir informuoto sutikimo prieš valstybės institucijoms priimant sprendimus ir neapribotos galimybės dalyvauti bendruomenės energetiniuose projektuose. Tokia pat reikalavimų neatitiktis pastebima, kuomet buitiniai vartotojai nežino apie galimybes ginti savo pažeistas teises tiek teismine, tiek neteismine tvarka dėl neturėtų tokių patirčių ginčiuose su tiekėjais.

Proceso sustruktūrizavimas į priežastis, kontekstą, įsiterpiančius veiksnius, strategijas ir pasekmes reprezentuoja visą procesą nuo *asmeninės subjektyvios gerovės*, kaip vienos iš priežasčių vartoti elektros energiją, iki paskutinės būsenos, kuomet yra *patenkinami socialiniai poreikiai*. Palyginimui nauja energetinio teisingumo koncepcija referuoja į elektros energijos paslaugų reikšmę žmogaus gerovei, remiantis gebėjimų doktrina, kartu pabrėžiant atsakomybę užtikrinti sąlygas žmonių gyvenimui. Taip pat ši koncepcija atstovauja teisingo paskirstymo idėjai, tiekimo etapu per paskirstomojo teisingumo principą palyginamai su *tiekimo kainos* kategorija, kuri grindžiamoje teorijoje paaiškina proceso priežastis, ir *tiekėjo atsakomybės* bei *valstybės atsakomybės* kategorijoms, funkciškai veikiančioms kaip įsiterpiančios sąlygos. Be to, nauja energetinio teisingumo koncepcija nustato gaires identifikuoti atsirandančius pažeidžiamumo atvejus ir paskirsto atsakomybes padedant pažeidžiamiems vartotojams per pripažinimo, kaip teisingumo, principą; lygiai taip pat, kaip grindžiamoji teorija konceptualiai reprezentuoja buitinių vartotojų supratimą apie būtinybę įvertinti kiekvieno *buitinio vartotojo situacijos specifiškumą* ir to įgyvendinimą paskiria *valstybės atsakomybei*. Taigi tiek grindžiamosios teorijos, tiek svarbiausi naujos energetinio teisingumo koncepcijos atvejai koreliuoja ir tai leidžia pagrįstai teigti, kad siūloma nauja energetinio teisingumo koncepcija gali būti taikoma socialinio teisingumo reikalavimų užtikrinimui elektros energijos paslaugų prieinamumo procese.

Rekomendacijos

Atsižvelgiant į teisės į elektros energijos tiekimo neatitikimą socialinio teisingumo reikalavimams, išdėstytiems energetinio teisingumo koncepcijoje, ir elektros energijos paslaugų prieinamumą, susijusį su asmeninės gerovės procesu, nurodyti nuogaštavimai turėtų būti

vertinami per gerovės sampratą formalizuojant juos teisinėje kategorijoje. Kadangi orumas, kaip vertybė, pagrindžia reikalingumą teisės į energijos paslaugas pripažinimui, o ši teisė susijusi su teise į elektros energijos tiekimą, galima išskirti jų taikymo apimtį, svarbą ir tikslą – tai leidžia jas suskirstyti hierarchiškai viena kitos atžvilgiu. Papildant teisę į elektros energijos tiekimą aiškiais nuorodomis į pakankamą energijos paslaugų prieinamumą būtų atskleista tiekimo etapo paskirtis – ne kaip rinkos reguliavimo, bet kaip elektros energijos prieinamumo reguliavimo priemonė. Tuo tarpu teisė į energijos paslaugas, kildinama iš naudos etapo, leistų paaiškinti reikalavimus energijos paslaugoms tiek tiekimo etapu, tiek vartojimo etapu.

Kadangi teisė į elektros energijos tiekimą yra riboto poveikio dėl jos paskirties leisti buitiniams vartotojams dalyvauti elektros energijos rinkoje, ji nekelia jokių socialinio teisingumo reikalavimų. Manytina, kad būtiniai vartotojai turėtų būti labiau apsaugoti nuo elektros energijos tiekimo atjungimo, nes elektros energija turi didelę socialinę reikšmę, kurios neatliepia menkas solidarumas rinkoje. Be to, energetikos sektoriaus teisinis reglamentavimas turėtų garantuoti bent minimalų elektros energijos tiekimą ir įvertinti būtinų elektros energijos paslaugų poreikį buitiniams vartotojams. Pavyzdžiui, bazinis elektros energijos tiekimas gali būti valstybės reguliuojama veikla, kurios administravimas paskirtas viešąsias paslaugas teikiančiai įmonei; viršijus bazinį elektros energijos tiekimą ar nepatenkant į jį, tiekimas turėtų būti nereguliuojama veikla, paremta konkurencija ir vartotojų apsaugos taisyklėmis. Iš tiesų pakankamas elektros energijos paslaugų naudojimas namuose iš dalies sutampa su reikalavimu orioms gyvenimo sąlygoms, nes šildymas, apšvietimas ir kitos energijos paslaugos daro patalpas gyvenamu būstu. Teisinės kategorijos turi talpinti savyje išvardytus aspektus, apimančius minimalų tiekimą, pakankamas elektros energijos paslaugas ir apsaugą nuo elektros energijos tiekimo atjungimo.

Energetikos diskurse dėmesį reikia nukreipti nuo elektros energijos, kaip prekių tiekimo buitiniams vartotojams, į elektros energijos paslaugų teikimą. Atsižvelgiant į galimą tokios teisės formalizavimą, naujos teisės į elektros energijos paslaugas įvedimas į teisinę sistemą padėtų išspręsti kelias problemas. Tai nustatytų atsakingą šalį už paslaugų nepertraukiamumą ir kokybę (to dabar trūksta dėl tiekėjo išipareigojimo parduoti elektros energiją). Pareigos perkėlimas tiekėjui, kaip tinklų operatoriaus atstovui ar kitais pagrindais, administruoti kokybės ir nepertraukiamumo klausimus būtų pagrįstas iš buitinio vartotojo perspektyvos. Taip pat apibrėžimas elektros energijos tiekimo kaip paslaugos teisinio reglamentavimo atžvilgiu leistų apimti kelis elektros energijos paslaugų prieinamumo proceso etapus. Jei teisė į elektros energijos paslaugas būtų formalizuota, būtiniai vartotojai galėtų reikalauti ne tik apsaugos tiekimo etapu pagal paskirstomojo teisingumo principą, bet ir pakankamo elektros energijos paslaugų prieinamumo, apimančio tiekimo, paskirstymo, vartojimo ir naudos etapus.

Kita vertus, reikalavimų siejimas su atsakomybe leidžia valdyti paklausą daug efektyviau, nustatant sąlygas elektros energijos vartojimui ir elektros energijos paslaugų rūšims, nei tik tiekimo kaina. Buitinių vartotojų svarstymai apie socialinio teisingumo reikalavimus suteikia labai vienpusį vaizdą, kuomet valstybės atsakomybė pagrindžiama tuo, kad kiti turi daugiau ar geriau. Jei priimsime faktą, kad taip funkcionuoja visuomenė, tuomet galima nustatyti buitinių vartotojų atsakomybę vartoti elektros energiją tam tikru būdu ar nešvaistyti jos. Šiuo atveju teisės į elektros energijos paslaugas reikalavimai turi atitikti atsakomybę laikytis tam tikrų tausojančio elektros energijos vartojimo praktikų, vartoti ją efektyviai ir dalyvauti specialiose programose (bendruomenės programos, vartojimo auditas, įrenginių atnaujinimas).

Remiantis tuo, kad elektros energija buitinių vartotojų suprantama ne tik kaip prekė, bet kaip ir būtinybė ar nauda, teisiniam reguliavimui nepavyksta sugaudyti visų skirtingų elektros energijos interpretacijų, tai nulemia išskirtinį teisinio reguliavimo dėmesį į rinkos taisykles. Grindžiamoji teorija apie elektros energijos paslaugų prieinamumo procesą patvirtina teiginį, kad buitiniai vartotojai siekia ne tik elektros energijos tiekimo, bet galimybės naudotis elektros energijos paslaugomis savo asmeninės gerovės palaikymui. Vienas pagrindinių buitinių vartotojų tikslų yra nauda, kuri gaunama vartojant elektros energiją, atspindinti elektros energijos kaip reiškinio suvokimą, taip perkeliant dėmesį nuo tinkamos tiekimo kainos aktualizavimo į elektros energijos paslaugų prieinamumą. Atsiranda būtinybė teisiškai garantuoti socialiai teisingą elektros energijos tiekimo minimumą, kad būtų užtikrinta galimybė išlaikyti objektyviai įprastus elektros energijos vartojimo būdus ir kiekius, taip pateisinant didesnę valstybės įsikišimą į energetikos sektoriaus veiklą.

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2. Scientific Conference "Human rights issues in the age of globalization and rapid technological innovations".
3. 11th International Scientific Conference "Problems of Ensuring Public Security: Theoretical and Practical Aspects".

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