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REGULATORY IMPACT ASSESSMENT OF PROPOSED ENERGY LAW ON VULNERABLE CUSTOMERS IN GEORGIA

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20 September 2019

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DATA

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ABSTRACT

This Regulatory Impact Assessment (RIA) examines the effects of expected market reform following the adoption of the new Energy Law, as well as effect of potential increase in energy tariffs on vulnerable customers.

Options for definition of “vulnerable customers” and potential forms of assistance are considered and analyzed from the point of view of their effectiveness, efficiency, ease of implementation, compliance with the principles of competitive market, European Union (EU) energy policy and legislation, political acceptability.

Economic analysis of three options for compensation of vulnerable customers in case of tariff increase indicates, that the monetary compensation is the most appropriate option with respect to its efficiency in welfare for vulnerable customers. Tariff subsidization is the least appropriate measure, especially tariff subsidization for all residential customers.

The analysis of past dynamics of tariff changes, inflation, growth of income and levels of social assistance suggests, that the growth rate of social assistance has exceeded the growth of average household income while the real tariff levels have dropped over the last decade. This suggests that the existing system of social assistance implemented by Social Service Agency (SSA) can address properly the issues of welfare preservation for vulnerable consumers in future.

The main recommendation is to accommodate the expected changes within the existing system of social assistance implemented by the SSA and to step-up the communication activities in relation to the new energy law and energy tariffs. Stakeholder consultations have been conducted for data collection and for validation of main findings. Furthermore, detailed study of suggested options may be needed for design of concrete measures regarding implementation of the recommendations of this RIA.

We do not assess the current status quo and performance of social assistance system. Any general improvements (not related to New Energy Law (NEL) and tariff changes) that might be needed/desired in this respect are beyond the scope of this RIA.

ACRONYMS

AA	Association Agreement
BAU	Business-As Usual
CPI	Consumer Price Index
DSO	Distribution System Operator
ECS	Energy Community Secretariat
EE	Energy Efficiency
EnC	Energy Community
EnCT	Energy Community Treaty
EP	Energy Poverty
EU	European Union
G4G	Governing for Growth in Georgia (USAID Project)
GDP	Gross Domestic Product
GEL	Georgian Lari
GNERC	Georgian National Energy and Water Supply Regulatory Commission
GoG	Government of Georgia
GWP	Georgian Water and Power
HH	Household
HPP	Hydro Power Plant
HUS	Housing and Utilities Subsidies
kWh	Kilowatt Hour
MoESD	Ministry of Economy and Sustainable Development of Georgia
MoF	Ministry of Finance of Georgia
MoLHSA	Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia
MoU	Memorandum of Understanding
NEL	New Energy Law
NGO	Non-Governmental Organization
OECD	Organization for Economic Co-operation and Development
OFGEM	Office of Gas and Electricity Markets
PSO	Public Service Obligation
PSS	Public Service Supplier
RIA	Regulatory Impact Assessment
SAS	Social Assistance System
SCP	South Caucasus Pipeline
SDG	Sustainable Development Goals
SoLR	Supplier of the Last Resort
SoW	Scope of Work
SSA	Social Service Agency of Georgia
TBD	To Be Determined
UAH	Ukraine Households
USAID	United States Agency for International Development
USS	Universal Service Supplier
VBC	Volume-Based Costing
VC	Vulnerable Customer
WEG	World Experience for Georgia

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EXECUTIVE SUMMARY

This study analyses the potential impacts of the draft NEL, as of March 2018 on vulnerable customers and suggests the measures for supporting them.

In this respect we consider different options for defining “vulnerable customers” and different mechanisms for supporting them in case the new conditions created by adoption of the NEL cause an impact on their welfare or create any kind of disadvantage compared to other customers of electricity and natural gas. The potential options are assessed based on their Effectiveness, Efficiency, ease of implementation, compliance with the principles of competitive market, EU energy policy and legislation, political acceptability.

Another aspect of this RIA is an analysis of options for mitigating the effect of growing energy prices on vulnerable customers. This approach was taken by modification of the initial Scope of Work (SoW) (in agreement with USAID Energy Program) in order to account for the difficulties that may arise for the vulnerable customers due to energy price increases irrespective to introduction of the new legislation, that may have a negative impact on the implementation of the NEL. This approach is also justified by high political sensitivity of energy tariff issues and potential for relating it unduly to the process of harmonization of Georgian legislation with the EU energy acquis.

Implementation of EU directives through NEL and following secondary legislation is a gradual process of building relations, institutions and their capacity. We limit our assessment to the initial period of five years when the competitive markets will be set up and start operation however, their maturity will be not enough to support the wide scale participation of households and especially vulnerable households in retail market competition.

We do not discuss the current status quo and assume that the current system of social assistance addresses more or less adequately the needs of low income and vulnerable citizens within the budgetary and technical resources provided by the state. Any general improvements (not related to NEL and tariff changes) that might be needed/desired in this respect are not within the scope of this RIA.

Most of the analysis and conclusions in this RIA are neutral to the type of energy and can be applied in case of significant as well as less important changes in energy prices. Except, that according to RIAs on electricity and natural gas sectors there is less expectation of gas tariff increases.

In order to assess the existing social assistance system, we analyze the trends in tariffs, income and assistance levels over the last decade in Georgia. Dynamics of the last decade serves merely for the illustration of suggested concepts, we do not intend to use the 2009 data as a benchmark and measure for adequate energy consumption or other economic and social parameters.

DEFINITION OF VULNERABLE CUSTOMERS

The provision of the draft NEL on vulnerable customers (Article 112) is short and defers the decisions for definition of the category of vulnerable customers as well as the forms and amount of their support to central government and local authorities. Therefore, this RIA was designed in order to provide the factual evidence and guidance for the decisions of these bodies.

In our discussion we try to draw a clear distinction line between vulnerable customers and energy poverty issues that can affect various groups of population irrespective to their income levels and social status. Energy poverty is a matter of energy policy rather than specific and individual social support as in case of Vulnerable Customers (VC). Vulnerable customers are being considered only in the context of electricity and/or gas supply, while energy poverty is a broader notion and covers living conditions, percentage of energy costs, health effects etc. In compliance with the best international practices and Energy Community (EnC) recommendations, vulnerability of particular consumer should not be defined based on their energy consumption but rather based on social conditions and general level of income or other factors (health conditions, disability, etc.) justifying the need for consumer to have special conditions of electricity or gas service. Therefore, we relate the definition of VC, in accordance to recommendations of EnC to their general poverty and “*Belonging to a category of citizens with lowest income*”¹

¹ ICRB treatment of the Vulnerable Customers in the Energy Community – 2013.

Increase in electricity and gas prices affects the welfare of all residents, however only support to least income socially vulnerable part of population could be economically justified. Indeed, at the background of gradual inflation and increase of real incomes following country's development, may cover the effects of tariff changes for relatively well-off population as can be observed in the analysis below. Therefore, separation of really vulnerable part of the population requires adequate information and a reliable data base.

The existing Social Assistance System (SAS) relies on the data base maintained by SSA, which monitors the income levels of the households with the account of all assets as well as special conditions of life. This is in line with the recommendation of EnC that *"for the definition of low income, beside the income all available assets shall be taken into account"* Therefore, we rely on the existing SSA capacity and for the objectives of providing the energy related financial assistance, **we suggest to define the Vulnerable Customers as those, who have difficulty in covering their basic daily needs as measured by the scores below 100000 in the data base of SSA.** Another group of VCs are the customers with disabilities and those requiring special care. This category of customers is also registered in the SSA data base.

EXPECTED EFFECTS OF NEL AND POTENTIAL PRICE INCREASES, THE RATIONALE FOR ASSISTANCE

Potential effects of NEL² on vulnerable customers include the following: a) The **quality and reliability of supply** are expected to gradually increase and thus there is no need for corrective action in this respect; b) The energy prices are less and consequently **affordability** of energy is going to improve compared to the Business as Usual (BAU) scenario according to previous assessments, however the BAU scenario envisages the increase in energy costs and may require state intervention to protect vulnerable customers; c) **Market opening** will offer the wider spectrum of opportunities of choosing the suppliers and terms of contract. This may require higher activity in the market and put some people with limited information and abilities at disadvantage.

Energy tariffs in Georgia are in general, lower than those in developed countries. With the country development and changes in energy mix, one may expect that the energy prices will increase. However, the economic growth and related household incomes may outpace this increase. The **affordability** of energy. I.e. the price of the unit of energy relative to household income may increase or decrease depending on actual dynamics of tariffs and incomes. In a long term perspective, for policy purposes, this can be considered as a long term gradual process. However, the tariff changes are happening at once, with substantial time intervals (3 years under current tariff regulation) and may require immediate reaction for compensation of the most vulnerable low income part of the population. This kind of compensation is in the focus of this RIA.

We do not examine and benchmark the current energy affordability or adequacy of energy services, which is a function of existing socio-economic and energy systems and requires special long term policies to be addressed. Instead, we concentrate on changes in customer welfare as measured by change in energy expenditure for the same amount and types of energy. We assume that this change should be compensated fully for the vulnerable customers.

Another form of support potentially required due to NEL adoption is potential disadvantage that disabled people or persons with special needs may experience in a competitive retail market, due to lack of information or inability to act based on this information. Some tested measures from international best practice are discussed and recommended for implementation in this respect.

This RIA does not consider specifically the measures falling under general categories of service quality (e.g. providing of full information on consumption or available options) or security of supply (conditions of disconnection) for all residential consumers, that are covered by regulations of Georgian National Energy and Water Supply Regulatory Commission (GNERC).

MEASURES FOR PROTECTION OF VULNERABLE CUSTOMERS

There are financial and non-financial forms of assistance to vulnerable customers. This addresses financial, physical or mental disability, or other special conditions of customer vulnerability. Financial assistance is mainly targeted towards economic hardship and compensation for low income while

² USAID Energy Program – RIA on electricity prices and RIA on gas prices.

non-financial measures are intended to help the people with disabilities or being in special conditions putting them at a disadvantage in competitive market.

Among the schemes of pecuniary assistance we examine three main schemes of support for vulnerable customers that can achieve the set goal of at least preserving the welfare at the level existing before the tariff change. These are: tariff subsidization, energy vouchers for the fixed amount of electricity or gas and provision of the additional equivalent amount of money to the vulnerable households, for their own disposal. The rigorous economic analysis shows that in case of rational action by vulnerable customers, monetary compensation of households is economically the most preferred option, while compensation through vouchers is the second best option and tariff subsidization is the worst option. Tariff subsidization has direct and indirect costs due to market distortion and the effect of relatively high energy consumption with its negative externalities. This is especially detrimental if applied to the whole population rather than to its socially vulnerable part only. The latter is also costliest measure. Compensation of each 1 tetri increase in tariffs for whole population would cost 25 mln. GEL in the first year and the amount of compensation will gradually increased in the following years.

Non-financial support schemes are mainly of 3 types: Protection from disconnection, Energy Efficiency Measures and Information measures and campaigns. These measures are relevant to all consumers but are mostly applied for vulnerable customers, and in some cases, require special attention to a narrow range of vulnerable customers having disadvantage due to health, age or disability reasons. There is some overlap of these measures with existing and planned measures aiming at protecting all customers. However, we recommend to implement these measures in compliance with best international practices and to target them primarily to vulnerable customers.

Energy efficiency can be considered as additional form of support of vulnerable customers; however it is hard to relate directly to tariff changes and should be a part of more general energy efficiency policy where the vulnerable customers can be chosen as primary beneficiaries.

MAIN CONCLUSIONS

1. The analysis of data shows that the widely discussed and acclaimed issue of energy tariffs is hardly based on sound economic rationale. Indeed, over the last decade the level of incomes as well as the level of assistance to vulnerable part of population have been increasing gradually in real terms, while the energy tariffs have decreased – also in real terms. Therefore, the affordability of energy service has increased for all population and more so for the vulnerable population, whose level of declared income and the level of social assistance is growing faster in real terms than average household income.

We do not attempt to assess the affordability of energy service as an absolute parameter. Instead we focus in changes in existing status quo caused by one of the factors, e.g. growth of energy prices, changes in average incomes etc. Assessment of an absolute affordability of energy entails the interaction of energy system, economy and social sphere and is more relevant to comparing different countries or historical development in specific country.

2. There is an existing active system of social assistance in Georgia which is implemented by the SSA. The programs implemented by SSA include monetary assistance, provision of special gears for disabled, childcare programs, medical programs and etc.

The SSA has a sound data-base and the robust capacity for identifying and ranking the socially vulnerable customers, monitoring their conditions, income and energy consumption, providing different forms of assistance allocated by the state. In our analysis we have relied on the data base information and analytical tools available at SSA. This system can provide a sound basis for targeted energy related assistance to special groups of vulnerable customers.

However, the Social assistance system lacks a clear and transparent procedure for determining the level of subsidy to vulnerable population. The level of support is being defined mostly based on previous practice and ad hoc decisions largely determined by budget availability and allocation by the Ministry of Finance of Georgia (MoF).

Based on the analysis of data from the last decade and past performance of social assistance system one can conclude that the assistance from pecuniary social assistance system is progressively increasing and exceeds the rate of inflation and growth of real per capita income in Georgia. Here we assume that SSA will continue the growing trend in social assistance for socially vulnerable

population, in line, or exceeding the growth of average household real income brought by country's economic development.

3. It is crucially important to communicate properly the information about support mechanisms and programs to vulnerable customers. All necessary measures should be taken in order to communicate the purpose of additional assistance related to tariff change. Likewise special actions should be designed to inform and enable the customers with special needs about the assistance on available to them.

4. The level of declared income as well as the amount social assistance of socially vulnerable families registered in the SSA data base has increased gradually over the last decade. Over the last decade the average growth rate of income has been 11.97% and the average household assistance has grown 2.93 times from 2008 to 2018³. In real terms the growth in declared income was 8.4% and the growth in assistance was 7.76%. The average household income over the same period of time has grown 1.48 times in real term⁴.

5. The energy prices in Georgia have remained relatively stable over the last decade while the real value of energy compared to other goods in the consumer basket has even dropped. The reduction in real value of energy tariffs is about 20-25% (in 2009 GEL). Therefore the tariffs over the last decade lag behind the changes in the cost of consumer basket (as measured by official Consumer Price Index (CPI) and growth of real Gross Domestic Product (GDP) and incomes of population in real terms. effectively the unit energy costs are being reduced and unless there is a significant growth of consumption, the share of energy costs is reducing in the total expenditures of average household.

6. In order to assess the trends in affordability of energy we suggest to consider the dynamics of tariffs together with the dynamics of income in real terms. This gives a better measure of change in energy affordability than the share of income spent for the same amount of energy. Indeed, the share of energy expenditure may remain the same even with growth of income due to its increased consumption.

Comparison in the trends in tariff changes and household incomes indicates that affordability of energy has increased significantly over the last decade. Therefore a likely factor for negative discourse on energy tariffs seems to be systemic: tariff changes happen at once and once in a number of years therefore are highly visible. There may be a parallel process of increases in income and in assistance levels as well as increase in the price of other goods however these happen more gradually and attract less attention. One main problem lies in short-term worsening of the welfare for vulnerable customers, compared to the period immediately before tariff adjustment and before the SAS catches up with assistance. Another problem may be the discontent of more wealthy population who is worse off immediately after tariff change irrespective to whether the affordability of energy may have increased or decreased in long run.

7. The current tariff structure of Volume-Based Costing (VBC) in electricity is not an effective measure to address the energy poverty or vulnerable customers. This is not also a cross-subsidy that benefits one category of customers at the cost of others. This can be made an effective measure for energy saving and should can be designed accordingly. One might consider introduction of similar scheme in the gas sector.

8. Existing structure of energy subsidies in Georgia is not equitable – and provides much higher level of assistance to some customers than to others. Some Tbilisi residents are getting 530 GEL a year compared to below 50 GEL in regions, Mtskheta-Mtianeti residents are getting much higher subsidy compared to other region. In some cases, it encourages disproportionate consumption of energy. The efficiency of existing assistance schemes deserves a more detailed analysis.

9. Protection of vulnerable customers may be considered as a preliminary supportive measure for reduction and eventual elimination of current subsidization and cross-subsidization in energy tariffs. In this respect, it can be considered as a cost saving measure rather than additional expense. Based on the analysis of data from the last decade and past performance of social assistance system, we assume that SSA will continue the growing trend in social assistance for socially vulnerable population in line, or exceeding the growth of average household real income brought by country's economic development.

³ SSA Database

⁴ [National Statistics office of Georgia](#) (GEOSTAT)

10. The analysis of available data shows that the real (inflation corrected) incomes of households increase gradually while the tariff levels remain relatively stable. Therefore, the affordability of energy increases over time. There is a similar tendency for the vulnerable population, whose reported real income as well as Assistance levels increase in real terms over time. This indicates the necessity of shifting the political discourse from discussion of energy tariffs to interplay of economic growth and energy prices. It may happen that economic growth outpaces the expected tariff changes and thus diminishes the impact, including, on vulnerable population.

RECOMMENDATIONS

- Develop and approve a transparent and sound methodology for defining the level of assistance to vulnerable customers, that would take into account the changes in consumer basket, changes in population income and the needs to reduce the inequality in the society. Take into account the seasonality of consumption while developing such a scheme;
- Design and implement a communication plan for vulnerable customers to inform them about the mechanism of changing the level of assistance in case of tariff changes as well as other forms of support for the vulnerable households with special needs Establish the coordination between energy regulator, Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs of Georgia (MoLHSA), MoF and SSA that would allow to promptly reflect the tariff changes in the portfolio of support to vulnerable customers;
- Design and conduct the awareness raising campaign about energy tariffs, their adjustment and relation to economic conditions of population, in order to address the negative attitude to tariff adjustments even done in line with best international practices and utility needs;
- The tariff history shows a drop in real value of end user tariffs which requires a closer research to be properly analyzed and understood. Conclusions and lessons learned should be derived;
- Eliminate the current tariff subsidization of tariff in regions and accommodate it into the general assistance package with the provision of compensation for standard average household consumption;
- Eliminate the current tariff subsidization in regions and internalize corresponding amounts (e.g. based on past average consumption) in the basic social assistance payments. While defining the level of assistance to the vulnerable customers, we use the average household consumption in Georgia;
- It is advisable that the burden of energy price changes gets fully absorbed within the social assistance system. Try to shift fully to the monetary compensation within the SSA program.

GNERC

- Start discussion with distribution companies on allowing partial payments for vulnerable customers in winter months so that the full cost gets redistributed over the year;
- Develop the detailed mechanisms for prohibition of disconnection of people in critical conditions include responsibilities for informing the customers of their rights, and mechanisms of payment and cost recovery after critical condition is over;
- SSA and Ministry of Economy and Sustainable Development of Georgia (MoESD) -after adoption of the Energy Efficiency (EE) law consider creation of a mechanism for simple energy audit, energy advice and dwelling weatherization for vulnerable customers;
- Start discussion of volume based costing in the gas sector which can serve as a step to cost recovery tariffs and a measure for energy saving.

ISSUES TO EXPLORE FURTHER

- It may be advisable to distribute the short summary of this RIA to political parties in order to facilitate more sound political debate in pre-election period.

Interaction and coordination between state and local support mechanisms.

BACKGROUND

ABOUT USAID ENERGY PROGRAM

USAID Energy Program is a \$7.5 million 3-year project aimed at supporting Georgia in the energy market development per Georgia's obligations under the Energy Community Treaty (EnCT). The ultimate goal of this program is to enhance Georgia's energy security through improved legal and regulatory framework and increased investments in the energy sector.

USAID Energy Program is designed to build the capacity of the Government of Georgia (GoG) and relevant institution(s) to evaluate the fiscal and long-term security impacts of regulatory changes, promote energy investments, primarily in variable renewable energy development, support integration of non-hydro renewable energy into the power system, and provide strategic advisory services to the GoG to increase Georgia's energy security.

USAID Energy Program assists the GoG to continue to implement competitive markets in electricity and natural gas. USAID Energy Program also supports the GoG in further integration of renewable energy project and will continue to promote cross-border trade in clean energy between Georgia and Armenia, and Georgia and Turkey.

ENERGY SECTOR REFORM AND NEW LEGISLATION

By signing the Protocol on the Accession of Georgia to the EnC on 14 October 2016 which was ratified by the Parliament of Georgia on 21 April 2017, the country has committed to transpose and implement number of EU directives and regulations in energy sector, including Directive 2009/72/ENC on electricity market and Directive 2009/73/ENC on natural gas market. These directives and regulations will introduce significant changes in the energy sector of Georgia, and this will be implemented through adoption of the NEL and the following secondary legislation. The preparation of the NEL was guided by the Energy Community Secretariat (ECS). The draft aims to address the gap between the existing Georgian legislation and EU energy legislation, applicable for the EnC contracting parties. The NEL covers electricity, natural gas and drinking water sectors. Consumers should have unrestricted access to electricity and natural gas and the utilities are obliged to ensure the uninterrupted supply of such products as well as adequate information. Prices should be economically justified and affordable. Special support mechanisms should be developed for vulnerable customers. This study analyses the impacts of the draft NEL, as of March 2018 (included in a separate Annex A) on vulnerable customers and suggests the measures for their support. Another aspect of this RIA is an analysis of options for mitigating the effect of growing energy prices on vulnerable customers.

The draft Law of Georgia on Energy and Water Supply developed by the ECS creates a basis for energy sector reform and defines the general structure of the market. Completely new institutions will be introduced once the new Energy and Water Supply Law is enacted. Firstly, unbundling at the transmission and distribution level should be carried out. Supply and distribution activities should be separated. Consumers will have a right to choose their supplier freely based on the prices, quality of electricity/natural gas or service, terms of payment and other conditions offered. Switching of consumers from one supplier to another will facilitate the competition at the retail market and once this instrument is executed successfully, this will eventually lead to decreasing in prices of electricity and natural gas.

NEL implies the possibility of establishing Universal Service Supplier (USS) which will provide electricity with the consumers at the regulated prices set by the Commission according to the approved methodology. USS will supply electricity to the Household consumers and small enterprises. The operational rules for universal service supply will be developed and adopted by the regulatory authority. Universal service supply shall be provided at fair, comparable and market-based prices set and applied by universal service suppliers in a transparent and non-discriminatory manner.

In natural gas sector household consumers and small enterprises shall be entitled to supply with natural gas by the Public Service Supplier (PSS) in accordance with the draft Law of Georgia on Energy and Water Supply. The procedural rules for PSS will be developed and approved by the regulatory authority like in electricity sector.

Both - USS and PSS will supply electricity and natural gas under Public Service Obligation (PSO) to all those final customers who are eligible for that type of supply; exclusively in accordance with the

requirements laid down in the draft Law of Georgia on Energy and Water Supply; They will undertake measures to achieve secure, reliable of prescribed quality of electricity or natural gas to final customers, and undertake measures to achieve the most acceptable electricity or natural gas prices for final customers.

Besides these, Supplier of Last Resort (SoLR) will be introduced in both electricity and natural gas sectors to protect consumers. The SoLRs shall supply a final customer with electricity or natural gas, without a specific application to be submitted by the customer, if its electricity or natural gas supplier has defaulted on supply and that said customer loses electricity or natural gas supply without any form of protection. Regardless the reason of defaulted supply. The SoLR may supply final customers for a time period up to three (3) calendar months. In case the final customer fails to conclude a new supply contract with another supplier in the above-referred time period, the system operator in charge shall terminate the delivery of electricity or natural gas.

The Draft NEL envisages the definition of Vulnerable Consumer. According to the Article 3 of the draft Law, „**Vulnerable Customer**“ is a household consumer which due to his/her status or conditions is authorized to use the system and/or receive electricity and/or natural gas under special conditions in accordance with the provisions of the legislation. Nevertheless, proposed definition is quite general and vague and doesn't include the criteria for recognizing a person as a vulnerable consumer.

Article 112 of the draft NEL provides for the protection of vulnerable customers: “To protect the vulnerable customers, the state and local self-governance bodies, based on consultations with the Commission and other stakeholders shall develop special programs / measures / benefits for electricity and natural gas demand satisfaction and/or improved accessibility and shall define the vulnerable customers eligible for the support through these programs / measures / benefits.”

Energy tariffs are believed to have the biggest impact on population, and therefore are considered the most sensitive issue, especially for vulnerable customers. The energy debate in Georgia is mostly concentrated around the issue of energy tariffs. The tariff level is widely considered to be an indicator of energy policy of the government and reduction in tariff is being considered as the welcome development irrespective to the cost paid by the society as a whole for such reduction. Actual or potential tariff increases cause a hot political debate and governments are reluctant to increase it without compelling necessity. As a result, the tariffs both in electricity and natural gas are subsidized which means that the public good is being used to keep the consumer prices low compared to the natural market value and full cost recovery level. Tariff subsidization is conducted under the declared objective of consumer protection; however, this is not targeted specifically to vulnerable customers but on the contrary benefits most those who consume more of energy. Below we will consider tariff subsidization among other potential options. Since the social impact of the NEL through its effect on tariffs is likely to be one of the decisive factors in its discussion and approval.

In order to better understand the issue of customer vulnerability and possible support mechanisms, below we summarize experience of the EU member states and their approach.

DEFINITION OF THE SUBJECT OF RIA

ENERGY POVERTY AND VULNERABLE CUSTOMERS

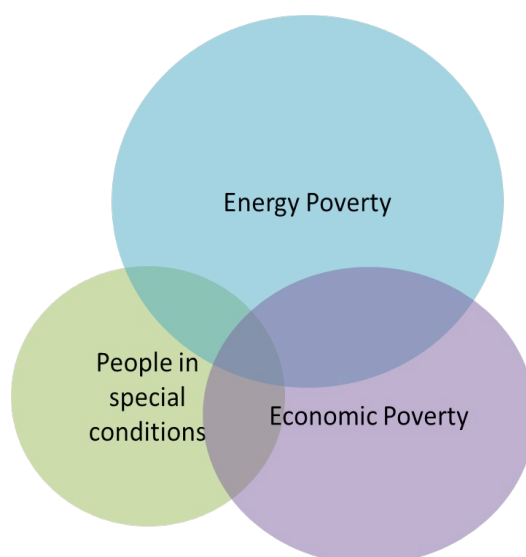
Sometimes, in the literature, there is no clear distinction made between the concepts of energy poverty and vulnerable customers, however these concepts differ from each other significantly.

- Energy Poverty is generally defined as a situation, when individuals or households are not able to adequately heat their homes or obtain other required energy services at necessary quality and an affordable cost;
- Vulnerable customers (who are electricity and gas consumers according to the EU Legislation) are an important part of the energy poverty, however energy poverty is not limited to this category. Energy poverty can be related to the geographical-territorial areas (climatic zones, clean energy access and related health issues), conditions of the distribution network (security, quality of supply), housing type (inefficient building stock), energy expenditure shares in total revenues and other factors, which requires complex approach.

We define **“Energy poverty as the state where consumers are deprived of possibility to receive clean energy and/or to satisfy the basic energy needs continuously, safely, and at a socially**

affordable price” (World Experience for Georgia (WEG), 2018). A short discussion of Energy Poverty and VC can be found in Annex 1.

Picture 1: Interrelation Between Energy Poverty, Vulnerable Customers and People with Disabilities



Energy poverty and vulnerable customers require different policies. Energy poverty is mostly the subject of energy economic or e.g. regional policy addressing the groups of population under similar energy supply conditions. Vulnerable customers are mostly related to social protection measures and social support schemes. Energy assistance for socially vulnerable customers can be considered as a short-term measure in the process of liberalization of energy markets. In contrast, energy poverty is related to number of factors which requires complex approach and is a subject of long-term energy policy. State Energy Policy should be targeted at addressing and gradual reduction of energy poverty.

Therefore, for the purpose of this RIA and as a suggestion for the new Energy Law we recommend a definition that delineates these two concepts and assigns to Energy Poverty characteristics of addressing the household groups through relevant policies vulnerable consumers to be supported individually through social protection and assistance measures.

The key points being: the distinction between individual (VC) versus group (Energy Poverty); assistance (VC) vs. Policies and programs (Energy Poverty); and social / economic (VC) vs technical / accessibility (Energy Poverty) which reduces ambiguity and allows to have monitoring and policy assessment tools.

This is in line with the recommendation of EnC on definition of vulnerable customers⁵.

In this RIA we concentrate on vulnerable customers and defer the topic of energy poverty issues to discussion of state energy policy and regional development or housing energy efficiency policy.

HOUSEHOLDS IN MOUNTAINOUS AREAS AND CONFLICT ZONES SUPPORTED UNDER STATE PROGRAMS

There is a number of special purpose support programs, that serve for state policies for regional development (e.g. energy subsidies for mountainous areas), compensation for living in high risk areas (vicinity of conflict zones), etc. These programs are not, strictly speaking, targeting the socially vulnerable customers who suffer from poverty and inability to pay for basic energy needs nor are they directed only against certain forms of Energy Poverty. Rather they serve as a tool for achieving regional development, demographic or national security objectives. Often the principle rationale of tying these programs to energy consumption is the ease of administration. Indeed, one-time transfer of the amount and further use of the billing system for offsetting the payments of distribution company is a much easier option compared to multiple transfers to individual consumers. This achieves the

⁵ Energy Community Regulatory Board “Treatment of the Vulnerable Consumers in the Energy Community”. 2013

goal of support through reducing the customer spending rather than providing additional disposable income in the form of cash. We leave this class of support schemes out of our consideration as they are related mostly to regional, rural development and national security policies rather than energy market conditions.

In summary, the subject of this RIA is to examine and recommend based on stakeholder consultations, the mechanisms for protection of vulnerable part of electricity and natural gas customers who may face difficulties in consumption of adequate amount of electricity or gas due to increased energy prices (irrespective to NEL) and who may have difficulties or disadvantage in seizing the opportunities provided by introduction of a new competitive market and new relations under the NEL.

VULNERABLE CUSTOMERS IN THE EU

Protection of Vulnerable customers is one of the key components of the EU Legislation and market rules. As it is often stated in the EU communications, energy is essential for the people to heat their homes, cook, or get other required services, thus, well-functioning electricity and gas markets are crucial. Market success itself can be assessed by well-informed and well protected consumers, who can benefit from competition, transparent offers, compare information on consumption and costs, freely choose most competitive suppliers; who are aware of their rights and have effective means to solve any eventual dispute in case something goes wrong.

According to the Directives concerning common rules for the internal market in natural gas (2009/73/EC) and electricity (2009/72/EC) "Member States shall take appropriate measures to protect final customers, and shall, in particular, ensure that there are adequate safeguards to protect vulnerable customers. In this context, each Member State shall define the concept of vulnerable customers which may refer to energy poverty and, inter alia, to the prohibition of disconnection of electricity (gas) to such customers in critical times". The member states should define vulnerable customers based on their particular situation. There are no strict rules or recommendations in the directives. Each member state decides based on its own approach.

According to the Article 28 of the New 2019/944 Directive-Vulnerable customers:

1. Member States shall take appropriate measures to protect customers and shall ensure, in particular, that there are adequate safeguards to protect vulnerable customers. In this context, each Member State shall define the concept of vulnerable customers which may refer to energy poverty and, inter alia, to the prohibition of disconnection of electricity to such customers in critical times. The concept of vulnerable customers may include income levels, the share of energy expenditure of disposable income, the energy efficiency of homes, critical dependence on electrical equipment for health reasons, age or other criteria. Member States shall ensure that rights and obligations linked to vulnerable customers are applied. In particular, they shall take measures to protect customers in remote areas. They shall ensure high levels of consumer protection, particularly with respect to transparency regarding contractual terms and conditions, general information and dispute settlement mechanisms.

2. Member States shall take appropriate measures, such as providing benefits by means of their social security systems to ensure the necessary supply to vulnerable customers, or providing for support for energy efficiency improvements, to address energy poverty where identified pursuant to point (d) of Article 3(3) of Regulation (EU) 2018/1999, including in the broader context of poverty. Such measures shall not impede the effective opening of the market set out in Article 4 or market functioning and shall be notified to the Commission, where relevant, in accordance with Article 9(4). Such notifications may also include measures taken within the general social security system.

There is no single, commonly adopted definition of consumer vulnerability in the literature as well. Most often vulnerability refers to an ex-ante assessment of the likelihood of a potential negative outcome on consumer's well-being. It is an assessment of risk, rather than a reflection of a negative outcome that has or is certain to materialize. Two broad vulnerability categories include vulnerability related to *personal conditions* of the consumer and a broader concept which takes into account the *transactional situations in which consumers find themselves*. Most recent definitions also recognize that vulnerability is not a static condition. Consumers may move in and out of states of vulnerability and they may be vulnerable in respect of some categories of transaction but not others.

- Research document of the European Commission defines "vulnerable consumer" as: "A consumer, who, as a result of socio-demographic characteristics, behavioral characteristics,

personal situation, or market environment: Is at higher risk of experiencing negative outcomes in the market;

- Has limited ability to maximize their well-being;
- Has difficulty in obtaining or assimilating information;
- Is less able to buy, choose or access suitable products; or
- Is more susceptible to certain marketing practices.⁶

As a requirement in the directive, most Member States have either defined the concept of vulnerable consumer explicitly, or have done so implicitly, even if they do not recognize the term. For example, Finland and Luxembourg do not use the terminology but do recognize concerns around vulnerability to access or affordability of household energy.

Most recent study⁷ by INSIGHT_E - a multidisciplinary energy think tank which provides the European Commission and other energy stakeholders with advice on policy options and assesses their potential impact, categorizes the definition of vulnerable customers in the EU member states as follows:

- Energy affordability (low income /high expenditure);
- Receipt of Social welfare;
- Disability/health;
- Range of Socio-Economic groups.

The most common type of definition is based on receipt of social welfare, which includes approximately 40% of Member States. In this category, vulnerability is related to social circumstances.

Member state's definitions of vulnerable customers:

Table 1: Definitions of Vulnerable Customers

Country	Definition
Austria	The concept of vulnerable customers is implemented through a series of protection mechanisms for clearly identified groups of people/households according to social security and energy laws
Estonia	A household customer to whom Assistance benefit has been awarded pursuant to section 22(1) of the Social Welfare Act: A person living alone or a family whose monthly net income, after the deduction of the fixed expenses connected with permanent dwelling calculated under the conditions provided for in subsections 22 (5) and (6) of this Act, is below the Assistance level has the right to receive a subsistence benefit. Subsistence level is established based on minimum expenses made on Consumption of foodstuffs, clothing, footwear and other goods and services which satisfy the primary needs
Latvia	There is no clear definition of vulnerable customers yet, but plans exist to introduce several measures to inform and support vulnerable customers
Lithuania	The persons to whom according to the procedure established by the Laws of the Republic of Lithuania social support is granted and/or social services are provided can be defined as socially vulnerable customers. The list of socially vulnerable customers and the groups thereof and/or additional social guarantees, related to supply of electricity, which are applied to such customers or their groups, are set by the Government or its authorized institution. Developing the definition (list) of vulnerable customers is currently under discussion
Germany	Vulnerable customers eligible for support are in line with the social security system (CEER 2013). Additional support is provided in terms of consumer protection in line with the Third Energy Package
Hungary	Vulnerable customers shall mean those household customers who require special attention due to their social disposition defined in legal regulation, or some other particular reason, in terms of supplying them with electricity
France	Special tariffs are reserved for households with an income below or equal to a threshold of entitlement to supplementary universal health cover. These tariffs are available for both electricity and natural gas consumers. From the end of 2013, these social tariffs were further extended to cover all households with an annual reference fiscal income per unit (revenue fiscal de reference) lower than EUR 2,175. The number of households benefiting from the social tariff is expected to increase from 1.9 million to 4.2 million, equivalent to 8 million people
Malta	Vulnerable customers are supported through social policy. Recipients of social security are eligible for support

⁶⁶ European Commission "Consumer Vulnerability across key markets in the European Union", 2016

⁷ Ensight –E "Energy poverty and vulnerable consumers in the energy sector across the EU: analysis of policies and measures", 2015

Country	Definition
Poland	The energy law states that vulnerable customer of electricity is a person who is eligible to housing allowance (income support) because the level of its income is lower than a certain degree. That means that the concept of vulnerable customers is based on poverty
Portugal	The concept is defined in the energy sector law and corresponds to that of Economically vulnerable customers which correspond to people receiving certain social welfare subsidies (social security system) with some contract limitations (e.g. contracted power). These customers have access to a social tariff
Romania	Vulnerable customers are defined as household consumers with low income within the limits laid down in the Ordinance 27/2013
Slovakia	Act on Energy Industry defines vulnerable household electricity customer as a strongly disabled person and who's vital functions are depending upon the offtake of electricity and uses electricity for heating. The Distribution System Operator (DSO) keeps records of vulnerable customers and can disrupt electricity distribution only after previous direct communication of these electricity customers with the DSO

As can be seen, the ambiguity in definition of vulnerable customers results in range of interpretations. The Enight-E report highlights that the definition should do two things; it both identifies the problem and those most vulnerable to the consequences. For some Member States, vulnerability is about disability, because of social circumstances, or due to age, while in other Member States it is about recognizing those that have difficulty in affording energy costs.

This subjective distinction is based on who drives policy, how the problem has been defined, and typically the type of measures undertaken. For Member States with more social policy-focus, the issue of vulnerability is often viewed as a function of low income, and therefore poverty. Other countries, including those in Western and Southern Europe, tend to view this as a distinctive energy policy issue which, of course, has important social dimensions. For some Member States the approach as mixed e.g. defined in energy law but based on socio-economic criteria, as in Portugal or France. This distinction is important as it highlights the different outlooks on the problem, and approaches to addressing the issue.

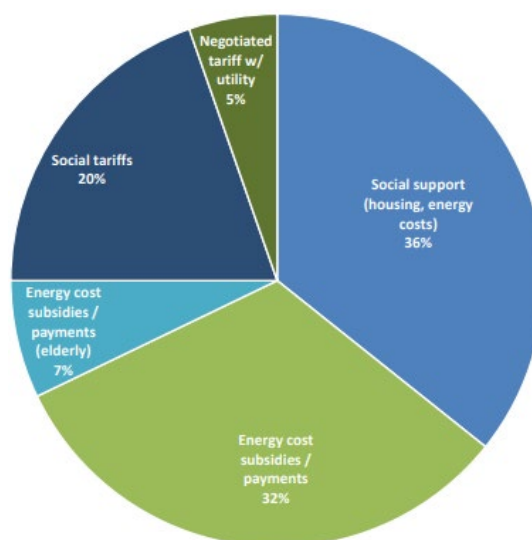
MEASURES TO ADDRESS VULNERABILITY IN EU AND ENC

Measures to support vulnerable customers are also diverse and differ among countries. 4 types of measures are currently in place in the EU:

- Financial interventions - Such interventions are introduced to support payment of bills;
- Additional consumer protection - These are specific measures that provide protection for consumers using the retail markets;
- Energy efficiency - Such programs target improvements to the efficiency of building stock, or energy using appliances;
- Information provision & raising awareness - These measures improve understanding of consumer rights and information on market tariffs and energy saving measures.

Financial support measures include Social tariffs, Social support, energy cost subsidies and etc. over 40% of the member states use financial support measures as an intervention. Support is either provided via general social welfare payments or through direct payments to help cover the cost of energy. In a number of countries, social tariffs are also offered (Cyprus, Spain, France, Greece, Portugal, and Belgium). Social tariffs are a set tariff available to vulnerable customers to ensure that these households have access to energy at special fair prices, however, social tariffs are often criticized and their efficiency is doubted. The most often used argument is that social tariffs inherently induce a double penalty effect with people just above the eligibility threshold being excluded for the tariff and having to contribute to its funding.

Graph 1: Share of Different Financial Support Measures in the EU to Protect Vulnerable Customers



Additional protection mechanisms include disconnection safeguards. Approximately 80% of the Member States have some form of protection from disconnection due to non-payment. In addition to the disconnection safeguards, a number of Member States have specific measures to protect consumers who are in debt, allowing for switching to other suppliers even if indebted.

Disconnection is prohibited especially in critical times, like winter periods (Finland, Spain, Greece, and Netherlands) where those who are disconnected due to lack of payment must be reconnected. In Spain this protection is available for the whole year, not only winter period, but only available in case of extreme vulnerability. In some countries, for example, Turkey, Montenegro, Spain, Italy, France, Malta, Portugal, Israel, Albania, Greece, distribution system operators are obliged to warn the vulnerable customers prior to disconnection. These non-financial support schemes mitigate the risks of causing additional difficulties or financial losses⁸. In Belgium number of steps need to be taken before a household gets disconnected, which include the account being taken from a commercial supplier to the DSO and the installation of a budget meter.⁹

In other countries this measure is directed to vulnerable customers defined in different ways. In Finland, all low-income customers who are in a difficult situation such as with a serious illness or unemployed are protected against disconnection. In Italy, it applies to customers who depend on health safety equipment. In Greece, citizens over 65 living alone or living with other senior citizens are protected against gas disconnection. In Hungary, a special group of disabled customers, whose life or health is in immediate danger in the case of disconnection (this may include the breach of the contract, or disconnection due to maintenance or failure of the electricity or gas supply systems) are protected against electricity and gas disconnection.¹⁰

In addition to the disconnection safeguards, there are number of specific measures to protect consumers who are in debt, allowing for switching to other suppliers even if indebted. For example, in England, Suppliers are required to offer domestic customers a range of payment options when they become aware, or have reason to believe, that a customer is struggling, or will struggle, to pay their electricity and/or gas bills. These payment options are:

- Payment by regular installments;
- Payment by direct deductions from social security benefits received by the customer.

⁸ [Vulnerable customers Report, MEDREG](#) 2016;

⁹⁹ [A summary of the National and European measures addressing vulnerable customers and energy poverty](#) ASSIST 2015;

¹⁰ Vulnerable Customers and Possible Support Schemes, Energy Regulators Regional Association (ERRA), INOGATE Programm;

A failed direct debit or an unpaid energy bill could be a sign that a customer is struggling financially. Supplier should monitor these signs and proactively engage with their customers to find the best way to repay the debt¹¹.

Member states also have measures to support energy efficiency, however, these measures are mainly focused on long term interventions cannot be applied at once to all vulnerable customers¹² and can be considered as measures to eliminate energy poverty, rather than support vulnerable customers. Energy efficiency support schemes include improving buildings energy efficiency, energy saving programs and consultations, investment subsidies in energy efficiency and etc.

In recent years the majority of EU countries have introduced some kind of loan or grant scheme for the retrofit of buildings and installing energy efficiency measures. In some cases these energy efficiency retrofit programs were funded at local level through municipalities – e.g. as in Lithuania. Barcelona for example, provides financial incentives for the renovation of properties and in case of vulnerable customers this can be up to 100% funding. Other renovation programs are focused more specifically on providing energy efficiency measures for the homes of more vulnerable customers (Czech Republic), in Belgium there is a ‘social renovation’ grant for private dwellings on the rental market that are below a certain rental price. In the UK the government energy regulator administers the ECO scheme – a requirement upon energy companies to install energy efficiency measures to vulnerable households.¹³

Provision of energy efficiency equipment (bulbs, appliances, etc.) to the vulnerable customers may be considered as a quite popular approach for promoting energy efficiency as well.

All suppliers must keep and maintain information about energy efficiency and be able to direct customers to sources where they may obtain further information or practical guidance. This information should include details about financial help available from the Government towards the cost of improvements to the home or information available through bodies for those in receipt of financial assistance. Such information must be provided free of charge should the customer request it by way of a telephone advice line and/or their website. Suppliers must provide energy efficiency information to customers in payment difficulty and when a smart meter is installed.¹⁴

The fourth category of the measures refers to information and awareness raising. This includes the availability of information on existing suppliers and their tariffs, information campaigns, price competition possibilities, transparent billing and etc.

Several countries have implemented policies to force utility companies to provide clear and transparent billing advice with clearly defined information on tariffs. In the UK, the government’s energy regulator ensures that energy companies provide considerably more simplified bills with information on cheaper tariffs. The Netherlands, like the UK also provides considerable national and local energy information on price comparison and tariff switching.¹⁵

Countries like Greece and Slovakia have humanitarian, voluntary groups and Non-Governmental Organizations (NGOs) who are able to provide energy advice to vulnerable customers. Raising general awareness, includes information in the press / media; flyers; websites; contact with communities and trade groups; targeted events; Leaflet, factsheets; guidebooks; case-specific guidance. This requires some interaction with the client via telephone; interview; visit; advice stand; written reports with specific recommendation. Countries like Greece and Slovakia also have humanitarian, voluntary groups and NGOs who are able to provide energy advice to vulnerable customers.

Other non-economic support schemes for vulnerable customers include:

- Special service for blind persons with telephone information on bills and a possibility of a personal visit to provide information on the safe use of gas;
- Indigent customers shall, in particular, have access to the following benefits: payment facilities, deferred payment, prepayment metering device, more frequent meter reading for vulnerable customers: in pensionable age, disabled, chronically sick, blind, partially sighted, deaf, hearing impaired (Great Britain).

11 vulnerable customers in the energy market- Ofgem, 2018

12 Except maybe of provision of efficient light bulbs and an information campaign

13 A summary of the National and European measures addressing vulnerable customers and energy poverty;

14 Smart Meter Installation Code of Practice

15 A summary of the National and European measures addressing vulnerable customers and energy poverty;

- Special treatments for disabled customers in gas and in electricity are the following:
 - reading of the meter on a monthly basis in the service location;
 - extraordinary supervision of the meter once in 12 calendar months;
 - settlement of the bill in cash in the service location;
 - establishment of the measuring place deviating from the general arrangement, but corresponding to the technical and safety rules;
 - Individual assistance to the interpretation of the bill provided according to the standard service agreement of the licensed operator (explanation, translation, etc. of the bill in the service location). etc.¹⁶

On the other hand, vulnerable customers are obliged to submit evidence to the system operator – a proof of receiving social welfare, and medical certificate, which proves the life and health of the customer or the person living with the customers, depend on medical equipment running on electricity, and the interruption of supply would endanger the life and health of the customer or the persons who reside with him/her.¹⁷

Protection of vulnerable customers is in the agenda of EnC contracting parties (including Georgia) since these countries took responsibilities to implement the third energy package, including the requirements of electricity and gas directives. The report of EnC Regulatory Board on “Treatment of the vulnerable customers in the Energy Community” summarizes the existing situation in Energy Community member states. According to the report¹⁸, the definition of vulnerable customers does not exist in most of the countries, however, this does not mean that specific customer categories are not protected with respect to the energy. In Ukraine, for example, there are no specific criteria to obtain the status of “vulnerable customer”. Customer categories that are eligible for receiving benefits are listed in the legislation. The subsidies are available for the persons whose amount of payment (including benefits) for consumed public utilities and fuels within consumption norms is more than 15(10) % of their monthly average total income.

The total Household (HH) monthly payment for utilities shouldn't exceed 15% of total HH income in Ukraine. If the share of total housing and utility expenditures in total income is higher than this required payment, the difference between the total bill and required payment is reimbursed by the state to utilities. Now the government is working on monetization of Housing and Utilities Subsidies (HUS). The money will be transferred to HH accounts. For example, if the HH with 3 members has UAH 100000 income per month than the required payment is UAH 1407 per month or 14.07% of the total income

It's important to note that HH is eligible for subsidy in the amount that doesn't exceed the approved by the government social consumption norms, e.g. 4.5 cubic meter of gas/m² of floor area/month at the heating season. This and other norms were gradually reduced each year to incentivize HH for energy efficiency. For example, natural gas norm was 7, 5.5 5 and now 4.5 m³ for the last 4 years. If the consumption is higher than the norm, the household will be responsible for the difference at market prices.

In Moldova the provisions of the **Law on natural gas** and **Law on electricity** introduce the concept of 'vulnerable customers', vaguely defining it as individuals that according to the social protection regulations are qualified as 'underprivileged person or member of an underprivileged family' (Art. 2). The same laws formulate several provisions (under Art. 84 and Art. 67 respectively) that explain what are the special conditions that the 'vulnerable customers' can benefit to reduce their energy precocity. Primarily, both laws reassure that such category of consumers are 'protected under the social protection policies', thereby transferring a big share of responsibility to non-energy public sectors. But even the coverage by the social protection policies should not hinder the energy market interests and functionality. Partially, the responsibility to support the vulnerable individuals is partitioned with the energy operators. However, there is no concrete obligation only the right to use 'mechanisms of support' in order to prevent the cut off of gas or electricity supply.

¹⁶ Vulnerable Customers and Possible Support Schemes, Energy Regulators Regional Association (ERRA), INOGATE Programm;

¹⁷ Vulnerable Customers and Possible Support Schemes, Energy Regulators Regional Association (ERRA), INOGATE Programm;

¹⁸ Source: ENC report 2013

EnC has developed the recommendations for the Contracting Parties on vulnerable customers in its Outline of the Social Strategy¹⁹. The countries are invited and proposed to implement the following definition into national legislations:

A socially vulnerable customer is an electricity consumer:

- using energy for supplying her/his permanent housing;
- Not exceeding maximum energy consumption per person: when defining electricity consumption level per person, Contracting Parties shall consider total consumption of up to 200 kWh / month for a family with up to 4 members and reflect seasonality;
- Belonging to a category of citizens with lowest income: for the definition of low income, beside the income all available assets shall be taken into account;
- Having her/his electricity consumption supplied through single-phase meter with a connection not exceeding maximum power. When defining power of a mono phase meter Contracting Parties shall consider power of up to 16 Ampere.

The definition shall not include more than a minority of population. Market prices of the electricity should be cost reflective and consumption of vulnerable customers should be financed by social allowances.

A socially vulnerable customer is also a gas consumer:

- using gas for supplying her/his permanent housing;
- not exceeding maximum gas consumption per person: when defining gas consumption level per person, Contracting Parties shall consider total consumption of up to 70 cubic meters/month for a family with up to 4 members and reflect seasonality;
- Belonging to a category of citizens with lowest income: for the definition of low income, beside the income all available assets shall be taken into account.

The definition shall not include more than a minority of consumers.

OUTLINE OF THE SOCIAL STRATEGY IN THE ENERGY COMMUNITY

ANNEX 15/11th MC/01-06-2013

The main recommended principles thus are:

- Make sure that this is residential consumer using the energy for household needs in typical limited amount;
- Consider the capped amount of consumption for support;
- Income level (including consideration of all available assets), should be used as a criterion.

In case of natural gas consumers – seasonality should be taken into account due to predominant use of gas for heating.

EXISTING SITUATION IN RELATION TO VULNERABLE CUSTOMERS IN GEORGIA

ENERGY LEGISLATION

The Law of Georgia on Electricity and Natural Gas is the current governing law for the electricity sector. It was adopted in 1997 and has been modified several times since then. Despite recent amendments, it remains incompliant with the EnC acquis. Below are provided the main areas that lack the description or are absent in the current law but are included in the New Energy Law. This includes:

- Introducing of the category of vulnerable customers;
- New market participants such as universal services supplier, supplier of last resort, entities operated under public service obligation;
- Introducing of protected customers in gas sector only;
- Unbundling of electricity and gas transmission and distribution network companies separating them from supply and generation on legal or ownership level;
- Organized Electricity Markets, such as day-ahead or intraday market. amending the concepts of balancing and ancillary services markets;

¹⁹ https://energy-community.org/dam/jcr.../PHLG062013_Outline_Social_Strategy.PDF

- Strengthening roles and responsibilities of GNERC. Adoption / modification of Market rules becomes responsibility of GNERC;
- Introducing electricity traders and suppliers as a non-licensed entity;
- Defining the framework for security of electricity supply rules, sets main roles and responsibilities for developing, adopting and monitoring those rules.

The existing primary/secondary legislation in Georgia doesn't define the term „vulnerable customer“ or „vulnerability“. Law of Georgia on Social Assistance which has been adopted by the Parliament of Georgia in 2006 envisages some categories of socially vulnerable persons that are the subject of some financial supports / aids of the Government. This Law applies to persons who are in need of special care and are residents of Georgia legally, and to deprived families and homeless persons. Orphans and children without parental care, persons with disabilities, persons of full legal age with limited capabilities and without family care, persons without breadwinner and homeless children. As per deprived families, this law states that a deprived family is a person or group of persons permanently residing in a separate place of residence, who lead joint household activities and whose social and economic conditions are below the level determined by the GoG. Above-mentioned level (poverty rate) is calculated according to the legislation.

In spite of the fact that there is no formal definition of vulnerable customers, there are several social assistance schemes in place that either include electricity and natural gas as one of the components, or is specifically targeted to subsidize the electricity or gas consumption by certain categories of consumers, or alternatively uses energy subsidies as a tool for providing special regional incentives and has demographic or other objectives.

VOLUME BASED COSTING IN ELECTRICITY

Volume Based Costing for household electricity customers is being used in Georgia since 2006. Under this scheme the household customer currently pays 0.145 GEL / kWh if the monthly consumption is below 100 kWhs, in the interval of 101-300 the consumers pay 0.185 GEL / kWh and - 0.23 GEL / kWh above 300 kWhs²⁰. This scheme initially was introduced as a form of social protection for low income customers. However, the experience has shown that this scheme does not effectively differentiate and benefit the low-income households. Indeed, in some cases the socially vulnerable low income families have high consumption as they cannot afford the gas heating in whole apartments and use electric heaters as substitute; also in many cases the rich part of population has several apartments and benefit from low tariff due to low consumption.

Initially the stepped tariff was providing a significant incentive for energy saving. However, this effect has become weaker in subsequent period while the real incomes of population have increased and the real value of electricity tariffs decreased (see the discussion below). Nevertheless, the stepped tariff continues to play a role (although weakened) of energy efficiency factor, providing the price signal to high consumers.

It is important to note that this is not a cross-subsidy as it does not provide the benefits to some category of customers at the cost of others. It does not address any customer category based on any social or economic feature²¹, but rather differentiates them based on purely energy consumption providing an incentive for energy saving.

PECUNIARY SOCIAL ASSISTANCE

The Pecuniary Social Assistance in Georgia is supposed to cope with the issues related to socially vulnerable part of the population. Therefore, below we examine the existing system and major trends in order to assess its ability to cope with potential effects of NEL on vulnerable customers.

MAJOR TRENDS IN SOCIAL ASSISTANCE SYSTEM

In 2014 the GoG adopted the Resolution N758 on Approving the Methodology of Assessment of Socio-Economic Conditions of Socially Unprotected (*vulnerable*) Households based on which the families are recognized as unprotected families and are the subjects of financial support from the Government. This Resolution implies the formula for calculating various indexes necessary for making

²⁰ [Residential Electricity Tariffs](#), TELASI

²¹ see e.g. discussion of social tariff in some European countries

legally justified and reasonable decision. To be more specific, household welfare index is calculated based on the following formula:

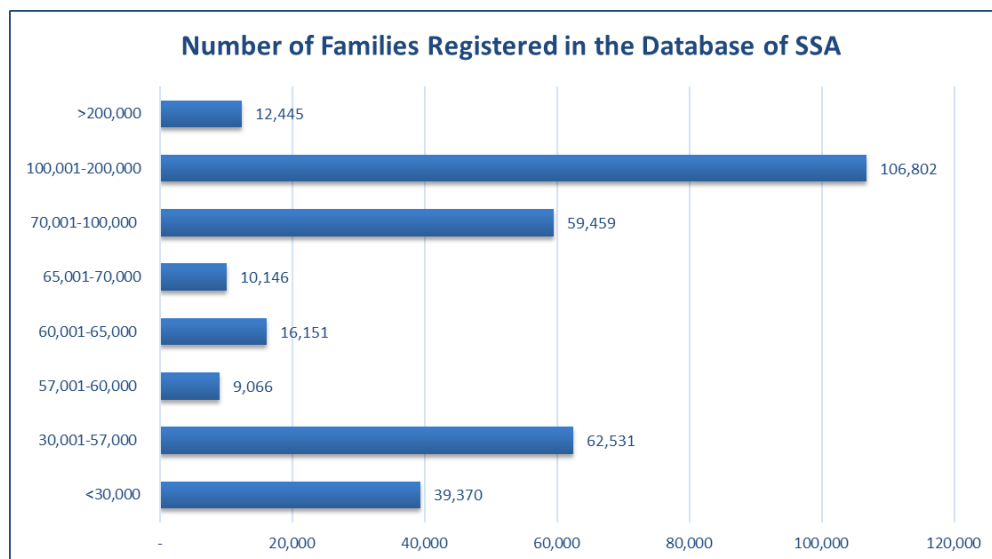
$$I = \frac{C}{N}$$

Where: C - Is a Household Consumer Index of (family expenditures), N - Index of household needs. The lower the welfare index the lower the level of household welfare is. The main targeted assistance program for socially unprotected population is Pecuniary Social Assistance ("Assistance allowance"). At the first stage, the benefits were granted to the families registered in the **"unified database of socially vulnerable families" (The SSA database)** and their family rating score did not exceed 52,000 units. Later in 2015, as a result of the support scheme and methodology modification, the assistance was renewed and changed as follows:

- Households with the rating score below 30001 - 60 GEL for every member of the family;
- Households with the rating score 30001 - 57001 – 50 GEL for every member of the family;
- Households with the rating score 57001 - 60001 – 40 GEL for every member of the family;
- Households with the rating score 60001 - 65001 – 30 GEL for every member of the family;
- Households with the rating score less than 100 001 – 50 GEL for every member of the family, under the age of 16.

As of July 2019, 315,970 families (949,263 persons) are registered in The SSA Database. 196,728 families (602,977 persons) are under the rating score 100,001. The distribution of families according to their rating score is given on the graph below:

Graph 2: Families registered in the SSA Database



The rating score is also used for provision of indirect financial aid, namely to mitigate the burden of utility bills.

There are several utility subsidy programs in Georgia financed by the MoLHSA or local municipalities. The aim of the programs is to provide assistance for targeted groups including socially vulnerable families, people who live in mountainous regions and in the villages near the occupation border line. These subsidies are provided from National Budget and/or Municipal budgets. The main schemes of subsidies include:

- **Socially vulnerable families** (excluding Tbilisi) under the rating score 70 000 – receive 0.039 GEL/kWh tariff subsidy on electricity. Number of such families is 65,907 receiving about 3.58 GEL subsidy on electricity per month. Financed by MoLHSA;
- **Mountainous Settlements** – from 2015, families living in the high mountain regions receive 50% discount on electricity tariff up to 200 kWh consumption. According to 2019 data, Number of such families is 80,256 receiving about 10 GEL subsidy per month. If a family lives in a mountainous area and at the same time is registered in the SSA Database as socially

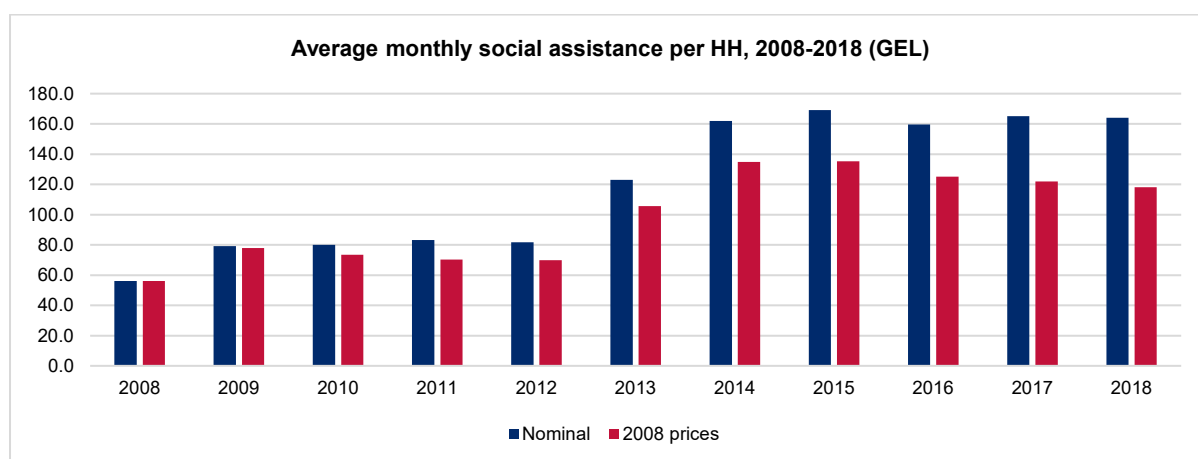
unprotected, it does not receive both subsidies. Such family Receives subsidy of Mountainous settlement. Financed by MoLHSA;

- **Families with 4 or more children under the rating score 300 000** – from July 2019, family receives 20 GEL if it is registered in the SSA database has rating score under 300 000 and has 4 children, in case of extra child fee increases for 10 GEL per child. The number of such families is 270. Total budget for this scheme is 3.5 mln. In 2019. Financed by MoLHSA.

SSA is implementing various social programs providing income, healthcare, special needs assistance etc. to the low income vulnerable population. However, the programs are limited to the category of households below 100000 rating which, according to methodology, corresponds to minimum lifeline of the households.

The analysis of SSA data shows that the amount of assistance is gradually increasing. Over the last decade the average growth rate of income has been 11.97% and the average household Assistance has grown 2.93 times from 2008 to 2018. The Graph 2 below shows the change in average monthly Assistance for the households on the SSA beneficiary list over the period between 2008-2018. The same graph indicates the growth in Assistance in real terms in 2008 prices. One can easily notice that the Assistance in real terms is growing and since 2008 the growth has been 2.1 times or annual almost 8% average annual increase over the last decade.

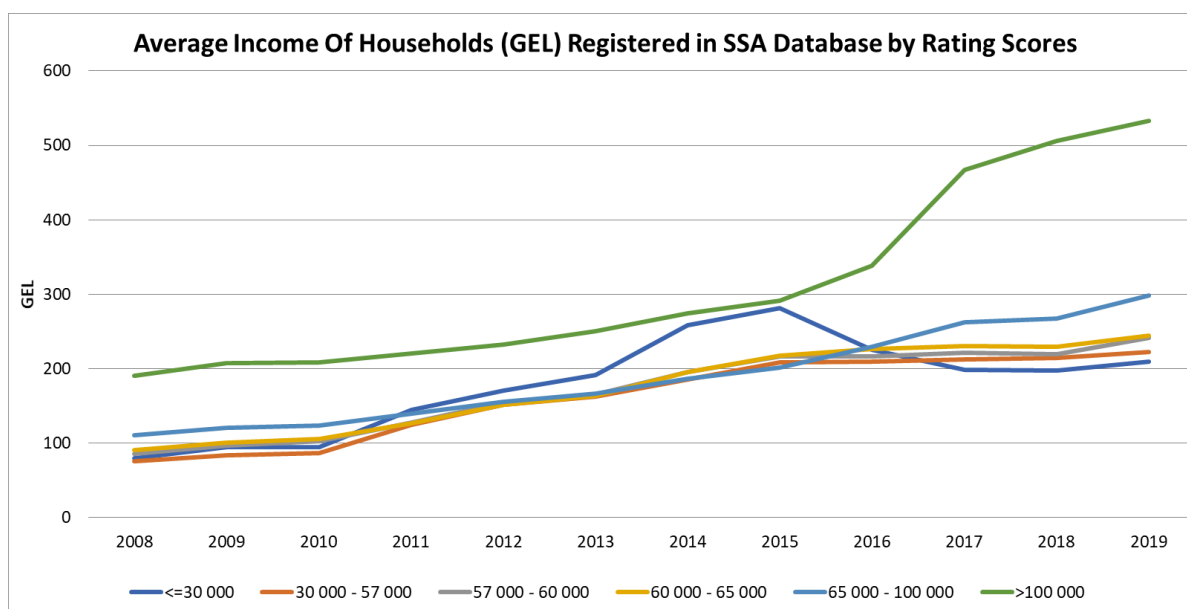
Graph 3: Nominal and Real Values of Average Monthly Household Assistance in Georgia



Households in the database of SSA are declaring their average monthly income (ex. assistance). This parameter is also growing in all score categories below 100000 rating score and shows the growth 2.76 times over the same period of time. In the category above 100000 rating score the growth is even higher (more than 3 times). This goes well above the level of inflation and indicates the increase in real income of the category of socially vulnerable population, even irrespective to the fact that these are officially declared levels of income without social assistance that in many cases may significantly underestimate the real income from informal economic activities of the vulnerable population.

The Social Assistance System includes the provision for energy costs of low income customers. In the case of electricity tariff change in 2015 additional mechanism was introduced and tariff subsidization of the customers in the regions in the amount of 3.95 tetri/kWh is still active. The corresponding amount is being transferred to Energo-Pro Georgia (distributor serving the regions) based on actual electricity consumption of each particular registered low income customers with the 70000 rating score. However, the most recent changes in tariff have not been reflected in social assistance package. This indicates an absence of the established procedure and mechanism for adjustment in assistance in case of tariff changes.

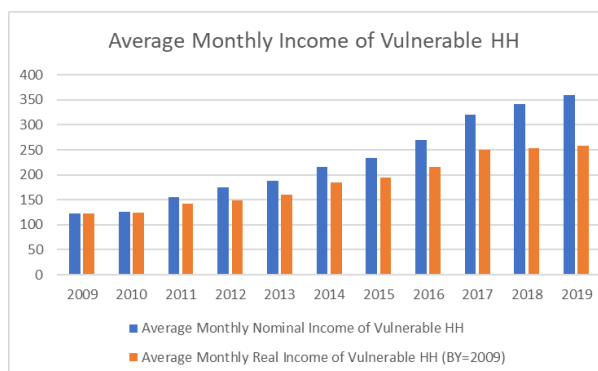
Graph 4: Average Declared Income of Households Registered in the SSA Database by Rating Scores



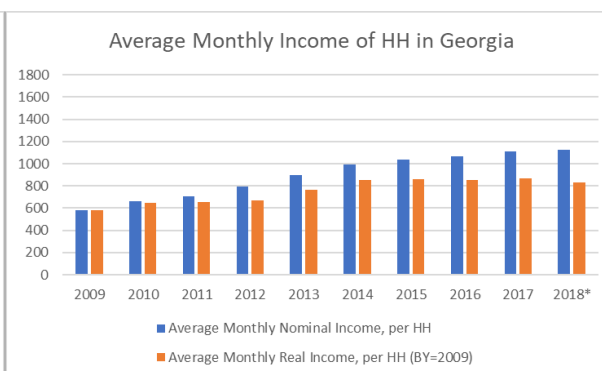
The growth in the declared income is much higher than the inflation factor (1.33) over the same period of time.

In order to have a more realistic picture of changes in vulnerable household income, in the Graph 5a below we have plotted the average monthly declared income for those households who declare the income levels above 50 GEL/month. For comparison the Graph 5b shows the dynamics of average household income in Georgia.

Graph 5a: Average Monthly Income of Vulnerable HH



Graph 5b: Average Monthly Income of HH



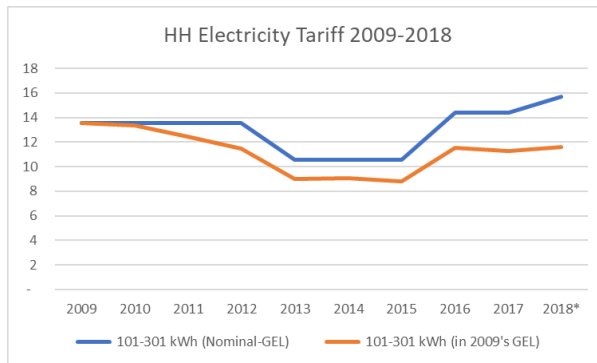
From the Graph 5a one can see that the declared levels of income of vulnerable population as well as the levels of social assistance are gradually growing, in nominal as well as in real term which could be considered as one of the indicators of economic development of the country. Although the trend in increase of the declared income (without social assistance) of socially vulnerable households is higher than the trend in increase of average HH income over the same period, the income level still remains very low.

PECUNIARY SOCIAL ASSISTANCE AND ENERGY PRICES

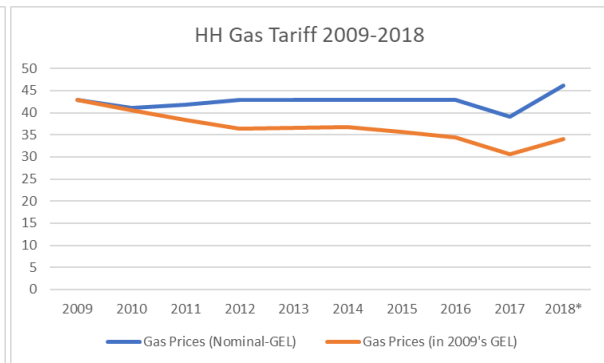
In order to assess the effect of price changes on the wellbeing of vulnerable population, we also examine the trends in energy prices as proxies and indicative parameters. For average electricity prices we have taken the changes in the second step (101-300 kWh) tariff in Tbilisi and the gas tariff for households in Tbilisi. The dynamics of tariff changes in Tbilisi and regions has been very similar, therefore this Graph illustrates the general trend sufficiently well.

Graph 6: Evolution of Energy Prices Over 2009-2019

6a: Electricity Tariffs



6b: Gas Tariffs

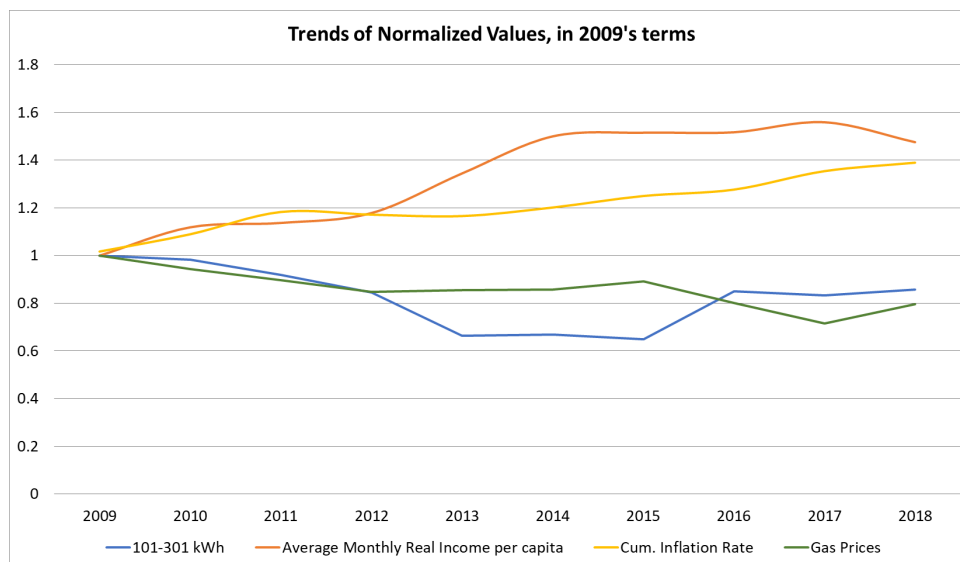


As can be seen from the graphs above, the energy prices in Georgia have remained relatively stable over the last decade while the real value of both electricity and gas (compared to other goods in the consumer basket) has even dropped. This reduction in the real value of tariff deserves a closer examination and could be used for deriving the lessons learned.

In order to assess the change in energy affordability over time, we suggest to compare the trends in total household income to trends in energy prices. This may be even a more accurate measure of energy affordability as the actual energy expenditure may change due to increased income of population.

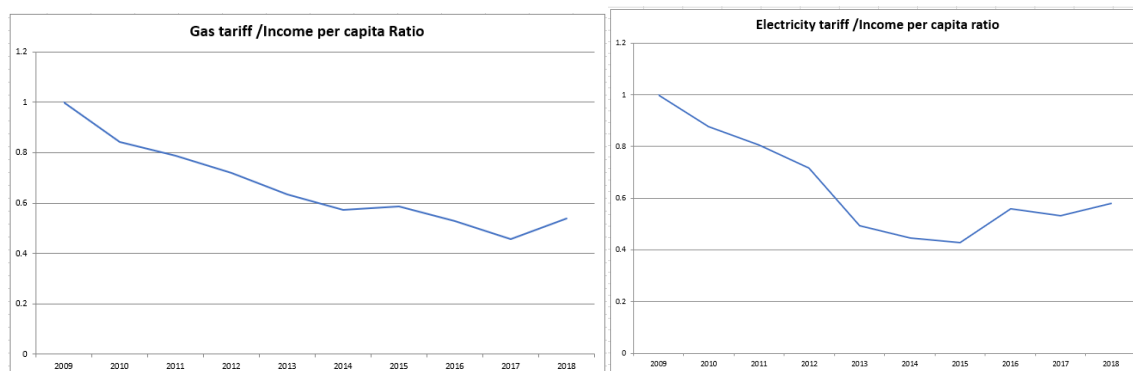
To compare these trends, The Graph 7 below depicts the trends in average income per capita since 2009 compared to the trends in electricity and gas prices starting from the same year. The graphs show the nominal values corrected for inflation. One can easily see that there is a growing tendency in population incomes while the energy prices remain relatively stable and diminish in real terms.

Graph 7: Comparison in Trends: Inflation, Income, Gas and Electricity Prices



There is a clear tendency in growth of real incomes (slowed down in 2018) while in real terms (corrected for inflation) the energy tariffs are below the 2009 levels by about 15-20%. Therefore, the affordability of energy has increased significantly over this period. The graph 8 shows that gas and electricity have become 40-50% more affordable to the population compared to 2009 levels. Assuming the same level of consumption.

Graph 8: Normalized Ratio of Energy Bills to Average Personal Income in Georgia 2009-2018



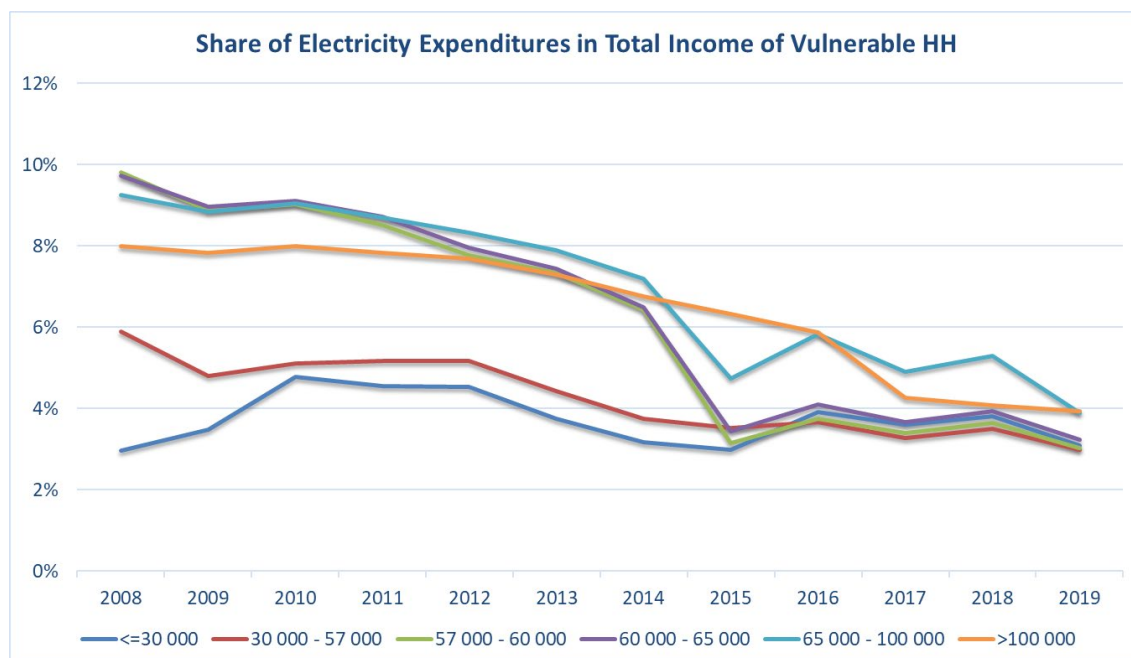
Similar tendency holds for the ratio of tariffs to the income of vulnerable population.

From the graphs above one can conclude that:

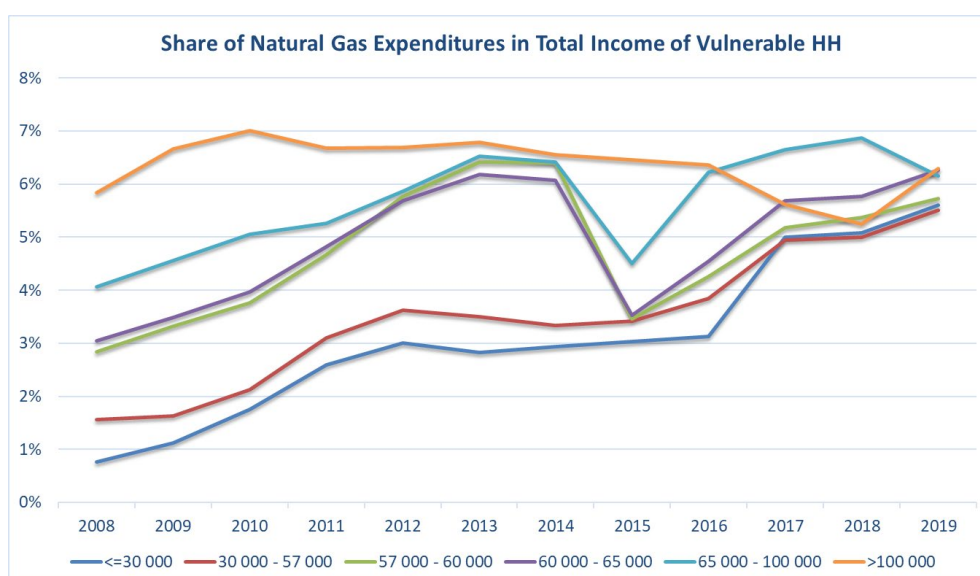
- The real (inflation-corrected) incomes of households increase gradually while the tariff levels remain relatively stable, leading to increased affordability of energy over time;
- The real incomes of vulnerable customers as well as real assistance levels increase making the energy more affordable over time.

The Graphs 7 and 8 below show the trends in shares of electricity and gas expenditures in the total registered budget of vulnerable households.

Graph 9: Share of Electricity Bills Compared to Vulnerable Household Incomes (Including Social Assistance and Excluding Electricity Tariff Subsidies)



Graph 10: Share of Natural Gas Bills Compared to Vulnerable Household Incomes (Including Social Assistance and Excluding Electricity Tariff Subsidies)

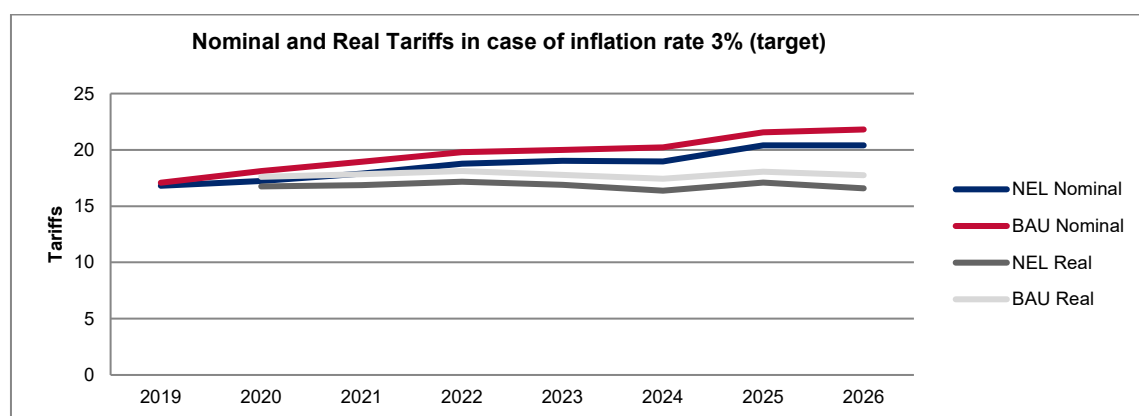


One can notice that the share of electricity costs is gradually decreasing for all vulnerable customers with different rating scores, while the share of gas expenditures is gradually increasing for most vulnerable segments. It might be indicative of increasing affordability of natural gas for this category of customers.

In summary one can conclude that the assistance from pecuniary social assistance system is progressively increasing and exceeds the rate of inflation and growth of real per capita income in Georgia.

The above assessment is further justified by the fact that the projected growth in electricity tariffs quoted in the RIA on electricity prices is just compensated by 3% inflation rate that is an official projection by the Georgian National Bank.

Graph 11: RIA EI Projections of BAU and NEL Electricity Tariffs vs Official Projection of GEL Inflation



The graph shows that the projected tariff increase is essentially compensated by the planned inflation and therefore leaves the real term energy costs stable. If the economic growth continues and reflects on the income of customers, this will effectively lead to improved affordability of electricity over time.

SPECIAL PURPOSE PROGRAMS

There is a number of special purpose support programs, some of them inherited from the past and some implemented in recent years, that serve for: state policies for regional development (e.g. energy subsidies for mountainous areas), compensation for living in high risk areas (vicinity of conflict zones), etc.

As for the natural gas, there are no such unified schemes, however, two support mechanisms can be identified. To be more specific:

1. Mountainous Settlements in Kazbegi and Dusheti Municipality (5700 beneficiaries) receive 700 m³ gas for free per month from October 15 till May 15;
2. Residents living in the villages near occupation border line (13 000 beneficiaries) receive 200 GEL Subsidy from Government of Georgia in winter as heating allowance.

In these programs, energy payments can be considered a tool for government special purpose Assistance. Transfer to energy companies is chosen partly because of ease of administering the support to the target groups of population. In most cases these schemes are intended the objectives that lie outside the energy policy or general social goals.

The table below summarizes all energy related subsidy schemes existing in Georgia, number of beneficiaries and Money spent from National or Tbilisi Municipality Budgets.

Table 2: Existing Subsidy Schemes in Georgia

Subsidy Scheme (2018)	Number of households	Subsidy per household	Total in GEL
Electricity			
Socially vulnerable families under 70 000 score - Tbilisi –electricity, water supply and cleaning service	45,000	106 GEL For 5 months	7 338 420
Socially vulnerable families under 200 000 score - Tbilisi -electricity, water supply and cleaning service		20 GEL For 5 months	
Socially vulnerable families under 70 001 score in Georgia (excluding Tbilisi) – Electricity subsidy	65,907	0.039 GEL/kWh electricity consumed	2 715 550
Mountainous Settlements	67 ,000	50% subsidy of electricity fee (up to 100 kWh)	9 342 571
Families with 4 or more children under 300 000 score– From 2019	270	20 Gel per family+10 Gel per child	3 500 000
Natural Gas			
Kazbegi-Dusheti municipality (gas subsidy)	5,700	700 m3 per month from October 15 till May 15 annually	7 363 300
Villages near the occupation dividing line (cash payment)	13 000	200 GEL annually	2 608 400

TARIFF SUBSIDIZATION

Electricity and gas tariffs are subsidized in Georgia and even more, in the gas sector there is a wide cross-subsidization between consumer categories. In general, the tariff for households is subsidized by the businesses, and other legal persons including public sector. There are two major sources of tariff subsidization: Cheap electricity coming from state owned Enguri/Vardnili Hydro Power Plant (HPP) cascade that as a result does not receive the full amount necessary for its full-scale rehabilitation and maintenance.

Another source is the cheap gas received by Georgia under the host government agreement on South Caucasus Pipeline (SCP). This gas is used as “Social gas” provided to households and to thermal power plants at below the regional prices and thus allows to keep the electricity and gas tariffs for households low irrespective to various external factors. The recent extension of the SCP and increased gas flows from Azerbaijan through Southern Gas Corridor, promise to increase the amount of the transit gas and in case of preserving the previous policies will allow the state to subsidize further the electricity and gas prices.

Tariff (per kWh or m³) subsidization is being considered as the measure for protection of vulnerable customers, however it has actually the reverse effect by diverting the public good to higher consumers i.e. mostly to wealthier people.

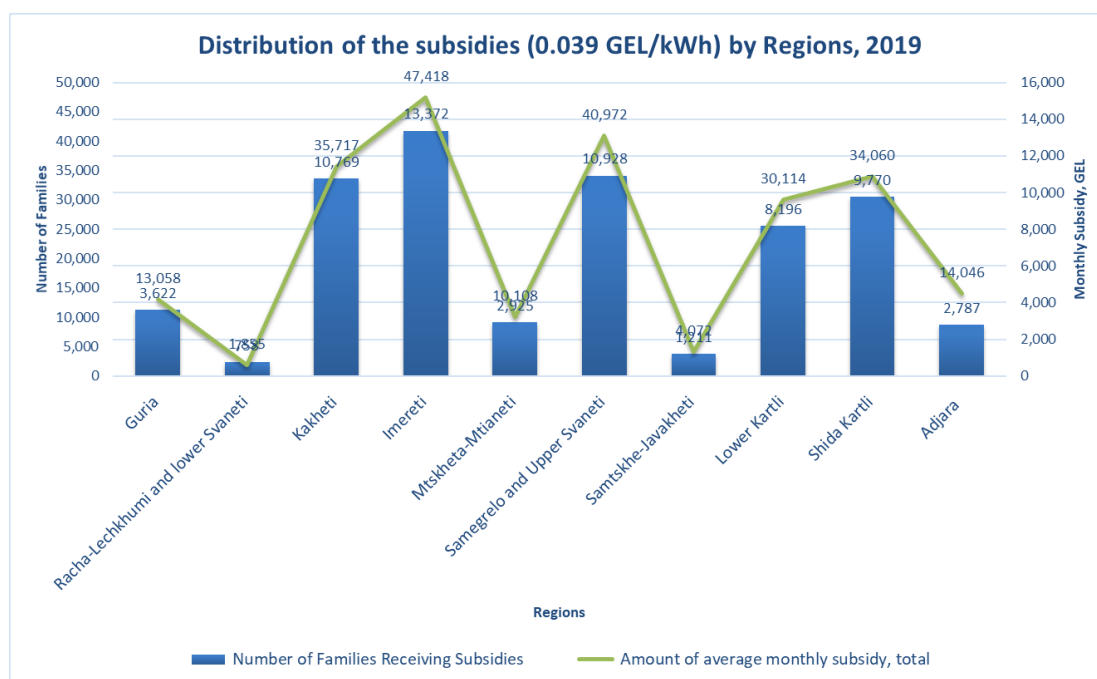
Protection of vulnerable customers may be considered as a measure for elimination of tariff subsidization and cross-subsidization (e.g. in gas sector) this way if the tariff subsidies get gradually removed, it can be considered as a cost saving measure rather than additional expense.

ENERGY RELATED ASSISTANCE SCHEMES

Although the general SSA assistance scheme includes electricity and gas consumption as one of the commodities, there are also special energy related support schemes that have remained as the inheritance of past or resulted from recent tariff changes as a measure of compensation. SSA data base contains an updated information on energy consumption of socially vulnerable low income population and allows to conduct the targeted and selective support programs.

After the recent tariff increase in electricity²² it was decided to compensate the population for this increase. All households in regions (except Tbilisi) are getting without limitation of the amount, the fixed compensation of 0.039GEL per each kWh consumed which is the difference between the old and the new tariffs; The Graph 12 below summarizes the utility subsidy by regions financed by MoLHSA.

Graph 12: Utility Subsidy by Regions



As the data shows, the financial support received by consumers on the SSA database differs broadly by category and by region. E.g. Tbilisi consumers are receiving much bigger assistance per household than in the rest of Georgia.

Tbilisi municipality has overridden this support mechanism and introduced utility subsidy scheme which is linked to the SSA Database and provides subsidization for all utility services except natural gas. In Tbilisi, families with rating score up to 70 000 receive 106 GEL per family from November through March. The families with rating score 70 001-200 000 receive 20 GEL during the same 5 months. The subsidy covers Electricity supply, waste disposal and cleaning service and water supply. The corresponding amount is transferred to Electricity Utility company Telasi. In case the customer does not use the full subsidy amount in some particular month, it cannot be transferred to the subsequent month or other period. Number of beneficiaries of this scheme amounted to 45 000 households in 2019 and GEL 7 338 420 was allocated from Municipal budget.

Before 2016 all households in Tbilisi were getting 20 GEL energy vouchers, however since 2016 the support has been focused only on vulnerable population and the support budget was reduced from 48 mln GEL to about 8 mln GEL.

Another subsidy is from Georgian Water and Power (GWP) who charges the consumers on social assistance list the flat amount of 3.89GEL/month – irrespective to the number of family members; while for the rest of population the payment equals the same amount multiplied by the number of residents. The payment for garbage disposal, on the other hand, is still proportional to the number of

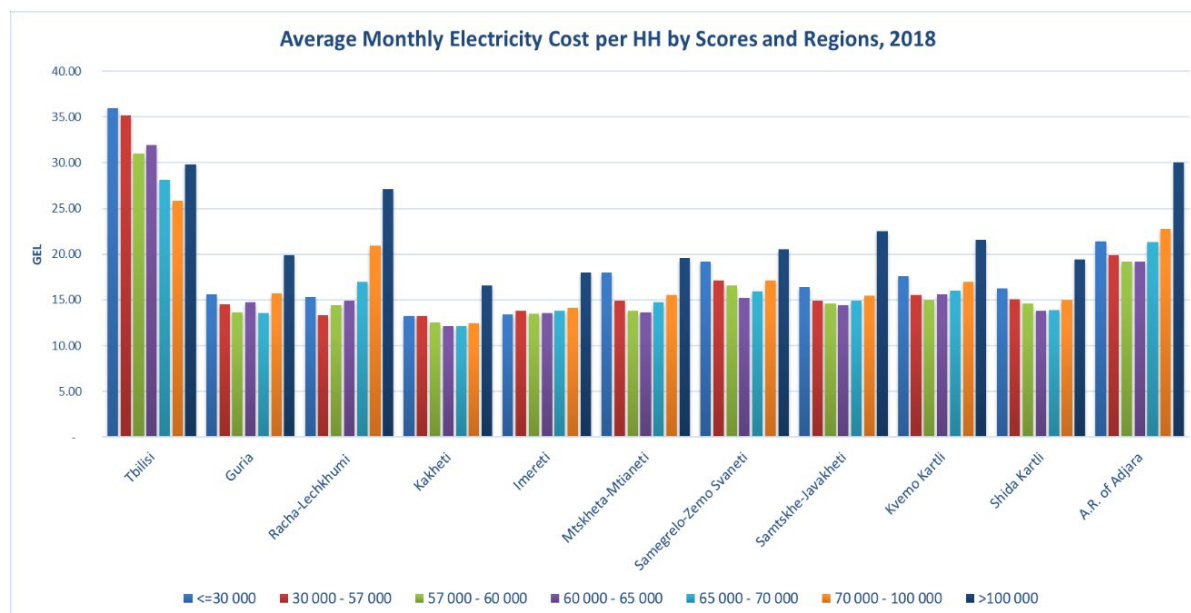
²² GNERC Resolution # 33 of December 4, 2008, last amended at May 30.2018.

residents in the household. The energy subsidy is not differentiated by the number of residents. Thus, if one deducts the costs of water and waste disposal depending on the number of residents, it appears that the households with the bigger number of residents are getting smaller compensation for electricity which can be considered as a flaw in assistance scheme design.

There is no assistance scheme for natural gas consumption except the special purpose programs described above. Some of the vulnerable customers have complained that they cannot use the amount allocated for electricity to cover partly the gas consumption.²³

Although there has been no assessment of existing subsidy schemes, nevertheless, some interesting conclusions can be derived from the energy consumption data. For example, the Graph 13 below shows the average monthly cost of electricity paid by vulnerable household by regions (differentiated by rating scores).

Graph 13: Average Monthly Electricity Expenditures

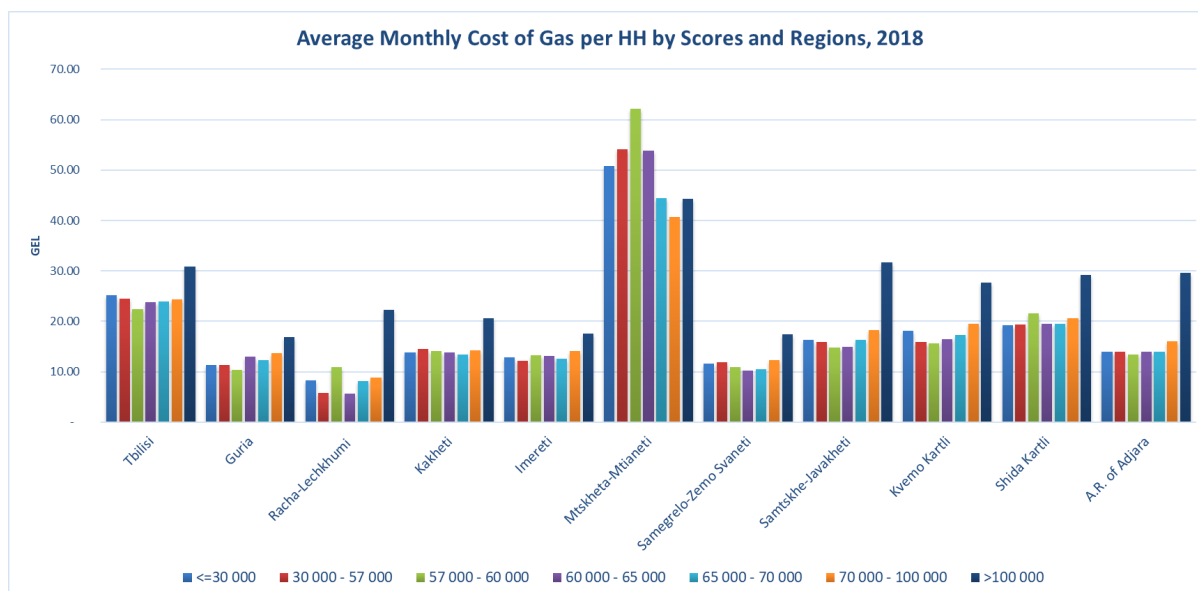


Average monthly electricity expenditure per household under assistance scheme ranges from 12 GEL (approximately 75 kWh electricity consumed) to 36 GEL (184 kWh). The highest amounts of average monthly electricity expenditures are among Tbilisi households - 26-36 GEL (140-184 kWh) per month, for other regions, the consumption patterns and therefore costs paid for electricity are more or less the same (around 15 GEL). The reason why Electricity consumption in Tbilisi is twice as much compared to other municipalities, is likely to be in the existing subsidy scheme, providing higher non-transferable compensation to families in Tbilisi (GEL 530 in a year) compared to families in regions (GEL 45 in a year). Inability of using the utility subsidy for gas payments encourages Tbilisi consumers to use excessive amount of electricity compared to other vulnerable customers.

A similar disproportion can be observed also in the gas consumption by households on the assistance list (Graph 14). Families receiving gas subsidy (in Mtskheta-Mtianeti Region, Kazbegi / Dusheti municipality) have the highest consumption (40-62 GEL / 72-110 m3).

²³ WEG Study on vulnerable customers and energy poverty http://weg.ge/sites/default/files/energy_poverty_web_ii_4.pdf

Graph 14: Average Monthly Gas Expenditures



Therefore, we can conclude that the existing structure of energy subsidies in Georgia is not equitable – and provides much higher level of assistance to some customers than to others (Tbilisi residents compared to regions as well as Mtskheta-Mtianeti residents. In some cases it encourages disproportionate consumption of energy. The efficiency of existing assistance schemes deserves a more detailed analysis.

NON-FINANCIAL PROTECTION MECHANISMS

There is no definition of vulnerable customer in Georgian energy legislation. GNERC Resolution #20 of September 18, 2008 on Electricity (Capacity) Supply and Consumption Rules gives general principles and an approach to prohibition of disconnection that applies to all residential consumers.

According to the resolution - if electricity supply disconnection may cause the damage to a person's life or health or cause incomparably high costs with respect to accrued debt and if this becomes known to a representative of the Distribution Licensee, he/she is obliged to take this circumstance into account and to determine an additional time-frame for the payment of the accrued debt and electricity supply disconnection (reasonable time-frame) that shall not be less than one month. In case of fixing the additional time frame, the corresponding protocol shall be drawn up and handed over to the consumer under the terms defined in these Rules (article 14, 6).²⁴

However, the mechanism of implementation is not fully specified. There is no clear procedure stating how the distribution licensees should be notified in such circumstances and what is the obligation of the customer. The reason why this norm is rarely used may be also in the fact, that consumers do not even have an information that such a measure exists.

The resolution also says, that disconnection of electricity supply due to non-payment is prohibited during evening hours, weekends or holidays and the day before them (article 9, 8).

Also, the electricity and gas bills contain information on consumed electricity or gas, previous and current meter readings, period of time and respective amount to be paid. It also has a contact information in case the consumer wishes to contact the distribution company. Electricity and gas distribution companies have websites that provide the information about the last bills and current account of the customer. Upon registration on the site the customer can also retrieve his payment

²⁴

[http://gnerc.org/files/Acts%20in%20English/Electricity%20\(Capacity\)%20Supply%20and%20Consumption%20Rules%20Final.pdf](http://gnerc.org/files/Acts%20in%20English/Electricity%20(Capacity)%20Supply%20and%20Consumption%20Rules%20Final.pdf)

history. This information can be considered as a basic set of information for all customers, there are no special provisions for people with disabilities or in need of care²⁵.

MAIN OBSERVATIONS IN RELATION TO EXISTING SAS

The Social Assistance System includes the provision for energy costs of low income customers. In the case of electricity tariff change in 2015 additional mechanism was introduced and tariff subsidization of the customers in the regions in the amount of 3.95 tetri/kWh is still active. The corresponding amount is being transferred to Energo-Pro Georgia (distributor serving the regions) based on actual electricity consumption of each particular registered low income customers with the 70000 rating score.

However, the Social assistance system lacks a clear and transparent procedure for determining the level of subsidy to vulnerable population. The level of support is being defined mostly based on previous practice and ad hoc decisions largely determined by budget availability and allocation by the MoF.

The existing structure of regional energy subsidies in Georgia is not equitable – and provides much higher level of assistance to some customers than to others (Tbilisi residents compared to regions as well as Mtskheta-Mtianeti residents).

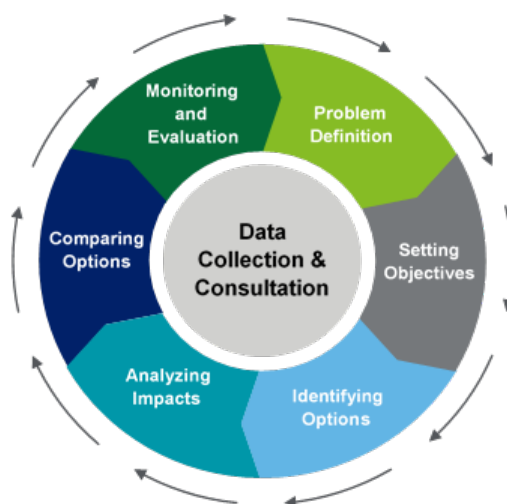
The growing trend in social assistance amounts exceeds the inflation and increases in real terms. The real increase over the last decade (2008-2018) has been 111% in (2008 GEL).

²⁵ Resolution N20, GNERC - <https://matsne.gov.ge/ka/document/view/79540?publication=0#> Electricity Supply and Consumption Rules

METHODOLOGY USED FOR RIA

RIA is a set of logical steps to be followed before and during the preparation of normative acts. It is a process that provides evidence on the advantages and disadvantages of possible regulatory and non-regulatory options by assessing their potential impacts. RIA should be carried out at an early stage in the development of a regulatory proposal and revised as evidence is collected and considered. The results of this process are summarized and presented in the RIA report.

Pic 2: RIA Process



Source: OECD

In ensuring a good and consistent process for introducing sound public policies, countries and international organizations developed standard definitions and principles. Internationally recognized standards for RIA are established by the Organization for Economic Co-operation and Development (OECD) and many other bodies. RIA emerged as a policymaking process to help in producing better regulations. According to the EU 2009 Guidelines, RIA is “a set of logical steps to be followed in the preparation of policy proposals. It is a process that prepares evidence for political decision-makers on the advantages and disadvantages of possible policy options by assessing their potential impacts as illustrated above. RIA guidelines also aim at improving the quality of legislation by considering all aspects linked to the costs and benefits of regulations, so as to ensure the compliance with targeted stakeholders and achieve a full understanding of the regulation by the authorities in charge of its implementation.

RIA, as a process of evidence-based policy making, greatly contributes to complying with the improved regulatory principles and facilitates the design of better regulations. Energy RIA will enhance this process in the energy sector.

This study applies the internationally accepted principles and standards for Regulatory Impact Analysis for assessment of impacts of the New Energy Law for Socially Vulnerable Customers in the Energy Sector of Georgia and examines the efficiency and effectiveness of various support mechanisms.

The RIA was carried out according to the following approach / methodology:

1. Desk Study of existing and proposed legislation, reports and available data;
2. Consultations with Georgian beneficiaries about current policy context, problems, ideas, research questions, priority aspects of the proposed new Energy law, and expected policy proposals. The beneficiaries of the project were MoESD, MoLHSA, GNERC, SSA, and representatives of the Georgian Parliament interested in energy policy;
3. Research of best international practices, experience of other countries related to problems, regulation and impacts of supporting schemes for vulnerable customers in energy sector;
4. Carrying out RIA according to the Methodology proposed in the USAID/Governing for Growth for Georgia (G4G) Report on Recommendations on RIA National Framework of Georgia. The latter suggested answering a set of questions in the RIA document, which were also called quality check criteria. Details about RIA methodology are presented in the mentioned report.

There has been some modification in the scope while setting the detailed objectives for RIA. Along with the initial goal of assessing the effects of NEL on vulnerable customers, it was deemed necessary to consider also the effect of potentially growing energy prices which are not related to adoption of the NEL but can be unduly associated with it and create obstacles to its implementation.

Therefore, in accordance with the problem formulation, the RIA has proceeded in assessment of the best policy options for mitigating the effect on vulnerable customers that may arise due to potential increase in energy tariffs and due to disadvantage in competitive retail market caused by some form of disability or special needs.

The historic trends in Social Assistance System performance were used to formulate the assumptions about its future potential performance. The analysis of past dynamics of tariff changes, inflation, growth of income and levels of social assistance suggests, that the growth rate of social assistance has exceeded the growth of average household income while the real tariff levels have dropped over the last decade. This suggests that the existing system of social assistance implemented by Social Service Agency (SSA) can address properly the issues of welfare preservation for vulnerable consumers in future.

The principle used for assessment of tariff increase compensation mechanisms was to preserve the level of welfare for the group of vulnerable customers against increased direct energy costs. A special attention was given to definition of vulnerable customers eligible to tariff increase compensation. We recommend to limit the assistance to customers with the rating scores below 100000 – i.e. to those customers who have difficulty in covering their basic social needs.

The methodology for evaluating policy alternatives for preserving the welfare against tariff increase solely relies on the standard microeconomic theory of decision making. Specifically, the behavior of a typical, rational household is analyzed. The household is assumed to be maximizing its welfare while consuming two commodities – energy and a composite good, given its preferences, the commodity prices and its income. Using the microeconomic tools of “budget constraint” and “indifference curves” as part of the welfare-maximization task, the methodology allows to clearly contrast and compare the policy alternatives with each other and rank them according to the effectiveness and efficiency criteria.

We do not intend to examine energy affordability or adequacy of the energy services which is a function of existing socio-economic and energy systems and requires special energy or economic policies to be addressed. Instead, we concentrate on changes in customer welfare as measured by change in energy expenditure for the same amount and types of energy as before the change. We assume that this change should be compensated fully for the vulnerable customers.

The assessment of options for protection of vulnerable customers with special needs relies mostly on international best practice and its application to Georgian realities, including prioritization through multicriteria analysis.

While developing the alternatives – root cause analysis and problem tree analysis was used. The priority in solutions was given to reliance on existing systems, data and capacity, to minimize wherever possible the disturbance of existing social support schemes and existing practices.

Stakeholder consultations were conducted in order to assess social and political acceptability and practicability of suggested measures.

PROBLEM DEFINITION

Georgia as a country who signed the Association Agreement (AA) with the EU and acceded to the Energy Community is undertaking an intensive reform for implementing the EU Acquis Communautaire in energy. Energy sector reforms in accordance to EU requirements shall make special ascent on consumer protection and especially on vulnerable customers. As mentioned above, according to the directives concerning common rules for the internal market in natural gas (2009/73/EC) and electricity (2009/72/EC) "Member States shall take appropriate measures to protect final customers, and shall, in particular, ensure that there are adequate safeguards to protect vulnerable customers. In this context, each Member State shall define the concept of vulnerable customers which may refer to energy poverty and, inter alia, to the prohibition of disconnection of electricity (gas) to such customers in critical times".²⁶

The period of reforms coincides in time with increased demand on electricity and production deficit leading to diminished share of cheap electricity produced by existing hydropower plants and increasing volumes of more expensive import, thermal generation, and output of new hydropower plants. Integration of more renewable power is likely to further increase the cost of electricity to the end user and in particular to affect the consumer tariffs for households to be supplied by the universal supplier. Although the analysis by RIA conducted by the USAID Energy Program shows that the effect of NEL reduces the energy tariffs compared to the BAU scenario, however it is still possible that the discontent with expected tariff increase, spills over to reform process and hampers its development establishing the new legislation and competitive market principles in energy sector.

This period is also marked with expected increased availability of the "cheap" transit gas from SCP agreement coming due to increased throughput of the SCP pipeline and the start of Southern Gas Corridor operations. This may tempt the government to increase the existing tariff subsidization and preserve the tariff levels by increased inefficient use of common assets, without sufficient consideration of alternatives and consequences.

The potential increase in energy prices as well as the new expected market rules affect the whole population and economy, however it has a stronger impact on socially vulnerable customers. In long term it is expected to improve the conditions of the sector, increase investment and affect positively the level of service and optimize the prices for consumers. However, in short term it may cause disturbances that need to be analyzed, and addressed through the state policies and measures.

It is anticipated that the NEL will have several effects on energy supply of vulnerable customers.

- Quality and reliability of supply

Quality and reliability of energy service are among the major objectives of EU energy acquis – it is expected that the adoption of the new law will positively reflect on this factor for all consumers including vulnerable customers will be receiving the reliable service at higher standards and greater diversity than now. It is not expected to have major disturbances in this field during the NEL implementation, but rather a gradual improvement in future years.

The issues of supply quality and reliability are being addressed by GNERC through various regulatory measures including incentive regulation, therefore there is no need for additional state intervention on behalf of customers.

- Affordability

Energy affordability for population and especially for vulnerable population is a major concern of energy transformation. According to RIA conducted by USAID Energy Program on the effect of the NEL²⁷, it is expected that the consumer prices for electricity will gradually increase following an increase in shares of import and new generation in electricity mix, due to demand growth. The prices for natural gas are likely to remain close to the current level due to increased availability of cheap gas to government and continued subsidization. In both cases, the effect of NEL is in moderate reduction of consumer tariffs compared to BAU due to improved investment climate and reduced interest rates. Although the overall effect of the NEL is in diminishing the otherwise growing power prices, the time of its approval and implementation may coincide with this growth and thus have a negative effect on its

²⁶ Article 3 (8) Electricity Directive 2009/72/EC and Article 3 (4) Gas Directive 2009/73/EC require protection measures to not *impede the effective opening of the market*.

²⁷ RIA on Electricity Market //

implementation. This may become a sensitive issue and may need to be addressed through the special measures targeted to vulnerable customers. Therefore, there is a need to examine the effect of higher electricity (and less of gas) tariffs on the vulnerable customers even in the baseline BAU scenario.

Energy price increases may have a direct and secondary effect on wellbeing of the vulnerable population. Direct impact comes through increased energy payments or reduced amount of consumption, while secondary effect is due to increased price of other services and goods. In long term both these effects should be accommodated by the social welfare system. However, in relatively short period there may be a need for corrective action in order to preserve the level of welfare for vulnerable people after tariff increase which happens at once and in incremental step.

Reduced welfare of the vulnerable population due to potential (rapid) increase in electricity and gas tariffs may limit their ability to satisfy the basic needs. This should be compensated through special state support measures of vulnerable population.

The government needs to be prepared for the potential price changes irrespective to the law adoption and to have the optimal course of action, based on analysis of alternatives, for protection of vulnerable customers in the process of its implementation.

- Market opening

New open market may offer various opportunities for the customer to choose among suppliers and to select the type of the contract most convenient and beneficial, complying with the priorities of particular consumer. This may be also related to the Demand Side Management measures allowing the households to participate in ancillary services market through the market aggregator and smart grid mechanisms. This kind of activity may require a higher level of awareness, mobility and decision making than in the current situation. Therefore, the customers in special conditions requiring care or having the limited ability of getting and processing the information may be at disadvantage compared to other customers.

There may be a need for helping the population with special needs not to get disadvantaged, to adjust to the new conditions and to benefit from the opportunities that the new market system offers through the competition and choice of alternative suppliers.

Therefore, we define the main problem as:

Negative competitive disadvantage and economic impacts on socially vulnerable households, related to adoption of NEL and perceived tariff increase, reducing their welfare and putting them at disadvantage compared to other customers.

The major point to mention here is that as indicated by the data from the SSA, the state social protection system has managed to increase the level of Assistance in real terms, and in case the existing trend continues should be able to gradually absorb the effect of tariff change. However, there may be short term perturbations.

The root causes of this problem as well as its consequences are depicted in the Pic.3 in the form of a problem tree.

There are three main factors that may lead to the loss of welfare and disadvantage of vulnerable customers potentially related to NEL. These are 1. Potential tariff increases due to increased consumption and new generation mix 2. Inability of households with special needs to compete on the open retail market 3. Inability of the social Assistance system to timely react to these challenges.

On the other hand, the results of the negative impact on vulnerable customers can be: 1. The inability of VC to cover their basic needs, 2. Public dissatisfaction with energy reform hampering its further development and 3. Negative political discourse strengthening the opposes to sound EU compliant energy policies.

There are several potential actions that can be undertaken to soften the effect of root causes:

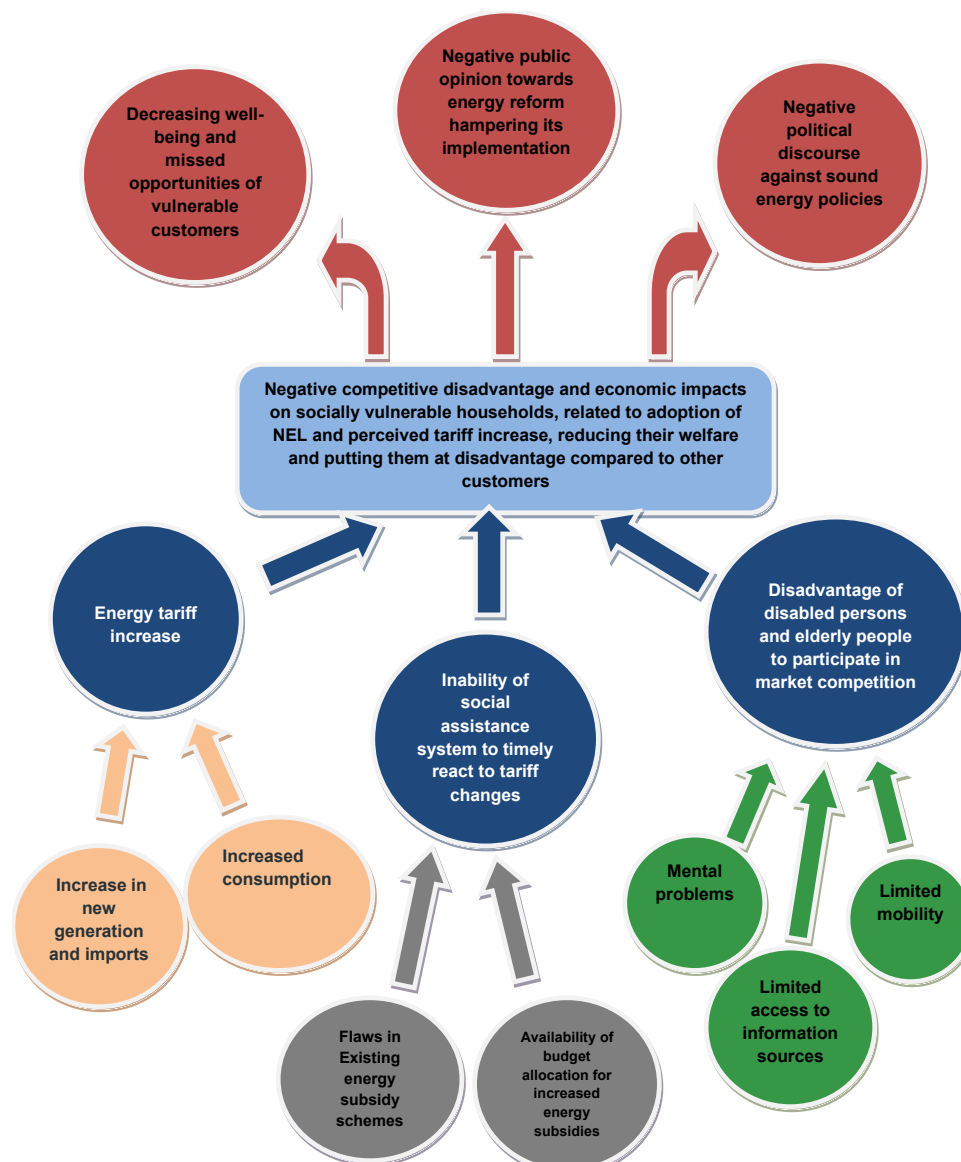
1. The tendency for tariff increase can be mitigated by: a. measures of energy efficiency that can curb the growth in energy consumption; b. Long term planning providing the optimal least cost solutions to generation mix. *However, there may be an opposite, although a healthy tendency of subsidy reduction, primarily in the natural gas sector. This can lead to additional increase in tariffs but can be mitigated for the vulnerable customers along the lines of findings and recommendations of this RIA;*

2. The SSA and the MoF should be informed ahead of time to be prepared for additional budget allocation for tariff increase compensation. Coordination between GNERC and SSA and MoF should be strengthened on this issue;
3. Measures for informing and preparing the vulnerable customers with special needs should be taken gradually in respect to their energy supply as envisaged by GNERC regulation. An institute of Universal Supplier in electricity sector and the Public Service Supplier in gas sector will create a secure regulated supply for all households including vulnerable households over the next coming years.

Negative consequences on VCs of potential tariff increase and competitive market can be mitigated by:

1. Compensation of tariff increase to vulnerable customers in order to preserve the level of their welfare;
2. Special information and enabling measures should be developed for vulnerable customers with special needs once the retail market competition gets implemented in residential sector;
3. Proper information campaign – to prepare the public opinion for evidence based discourse on energy tariff, vs current politicized and populist practice;
4. Information campaign to provide adequate information on the opportunities provided by competitive retail electricity and gas markets (later – close to actual start of retail market competition).

Picture 3: Problem Tree for Vulnerable Customers under NEL



SETTING THE OBJECTIVES

The policy for support of vulnerable customers can be broadly characterized through:

- Definition of the target group of vulnerable customers;
- The form and amount of support;
- Source of support and mechanisms of its provision.

Out of the broad range of possible support mechanisms we need to select those that fit best the Georgia conditions. The criteria of selection have been agreed with the key stakeholders and this includes:

- Effectiveness (really addresses the problem);
- Efficiency of public money use – maximizing the effect and avoiding excessive spending of resources, including for administration;
- Feasibility -availability of information, needed administrative capacity, availability of resources;
- Transparency and Equitability – providing equal treatment to the citizens in similar conditions;
- Minimum market distortion – not to affect the competition in the market;
- Other potential advantages and disadvantages.

We will set the objectives of state support for vulnerable customers from the requirement to compensate the potential disadvantage arising from or related to implementation of NEL to the vulnerable part of population while observing the above principles. Therefore, based on the above discussion, the objectives of this RIA are defined as follows.

OBJECTIVE 1

Protect the economically most vulnerable part of the society in the period of rapid tariff change to preserve their wellbeing and ability to satisfy the basic energy needs.

OBJECTIVE 2

Assure that vulnerable population including those with special needs does not get disadvantaged compared to other consumers after introducing the competitive energy markets and benefits fully from opportunities and prices offered by competition and the possibility of switching the suppliers.

In order to achieve these objectives this RIA attempts to:

- Suggest the principle of definition of vulnerable customers by central and local authorities;
- Analyze the level and forms of financial support adequate to the expected changes in energy prices;
- Recommend the interaction between the forms of support in electricity and gas sector;
- Recommend the principles of interaction between the state and regional support mechanisms and programs.

While achieving these objectives we recommend to follow the following main principles and conditions:

MAIN PRINCIPLES FOR SUPPORT OF VULNERABLE CUSTOMERS

Energy costs are a part of general expenditures of households and depend on many varying factors. It can be reduced or increased based on current priorities and the budget of each particular household. The structure of energy costs depends on different factors including dwelling and appliance properties, energy habits, family size, location, availability of energy sources, season etc. Therefore, relating the level of support to actual energy consumption or specifying the energy norms may be misleading. One can only specify the sanitary norms for temperature, light etc.

- Customers may be willing to shift the amount of support from one type of goods or service to another (electricity to gas) or to be able to use the Assistance for other needs thus maximizing their welfare. Such a condition should not be restricted without compelling reasons. However, this measure should be applied with caution to those who have difficulty in controlling their budget and spending;
- There is an established system of social welfare that takes care of the vulnerable part of population, including their need for energy services. We assume that the existing schemes and mechanisms of social protection (including the energy component) are adequate to Georgia's current realities and correspond to societal understanding of the fairness and the need for redistribution of wealth to most vulnerable members of society. Although this scheme requires

some improvements It is preferable, not to disrupt substantially this scheme to the extent practicable;

- Rapid energy price changes can have an immediate negative impact on the wellbeing of all consumers. However, this can be also considered as a part of dynamic interaction where due to development the income of population increases and balances out some of energy price increases. It is only the most vulnerable part of the population that may have difficulty in adjustment to the rapid tariff changes, while relatively well-off can reduce their savings and/or redistribute the consumption basket relatively easily. In all cases it is important to be sure that the price to be paid is fair;
- It is assumed that the system of social welfare takes care of general societal needs for protection of vulnerable population. We assume that there is a monitoring general consumer basket and corrective actions in the social welfare system irrespective to energy tariffs and it is only at the times of rapid changes in energy prices that the additional financial support may be needed;
- The objective of energy law is to establish the competitive energy markets. The consequence of such establishment should be allowing the supply and demand to balance each-other at the optimal level for the whole society. Artificially preventing the price signals to connect supply with demand through price subsidization schemes drives the whole system from the optimal equilibrium and causes additional costs. Therefore, it is desirable to minimize the market distortion through price subsidization. And avoid cross-subsidization and encouraging uneconomical use of energy resource (e.g. electricity for heating);
- There shouldn't be a fixed norm for electricity a cap may be introduced in case of tariff subsidization in compliance with the EnC recommendation in order to avoid the diversion of electricity use to other than household purposes.

IDENTIFICATION OF OPTIONS

DEFINITION OF THE TARGET GROUP VULNERABLE CUSTOMERS

The major defining factor of the state support mechanism is the definition of its target group. According to draft NEL Article 3 „**Vulnerable Customer**“ is a household consumer which due to his/her status or conditions is authorized to use the system and/or receive electricity and/or natural gas under special conditions in accordance with the provisions of the legislation. Nevertheless, proposed definition is quite general and vague and doesn't include the criteria for recognizing a person as a vulnerable consumer.

Article 112 of the draft NEL provides for the protection of vulnerable customers: “To protect the vulnerable customers, the state and local self-governance bodies, based on consultations with the Commission and other stakeholders shall develop special programs / measures / benefits for electricity and natural gas demand satisfaction and/or improved accessibility and shall define the vulnerable customers eligible for the support through these programs / measures / benefits.”

Therefore, strictly speaking, as per draft NEL the definition of vulnerable customers depends on the existence of state and local programs / measures / benefits and on the decision of central and local authorities on the inclusion of a group or individual customer into the vulnerable group. Thus the definition of the category of vulnerable customers is delegated to the state and local authorities who “based on consultations with the Commission and other stakeholders shall develop special programs / measures / benefits for electricity and natural gas demand satisfaction and/or improved accessibility and shall define the vulnerable customers eligible for the support through these programs / measures / benefits.”

There may be the vulnerability of population related to their living in high risk zones or in mountainous areas with poor accessibility. These groups of customers might be considered as vulnerable due to their living conditions State may decide to establish or modify the programs of support for such residents. However, the decision in most cases is motivated by considerations other than electricity or gas supply or is a part of energy poverty rather than vulnerability due to poverty.

Thus, following the recommendations of EnC on *Socially Vulnerable customers*, we also add the suggest to use the following definition for the purpose of our analysis:

Vulnerable Customer is a household electricity and/or gas consumer, who is registered in the Database of Socially Vulnerable Families (whose rating score equals or is lower than the threshold established by the government/or 100 000 rating score) or requires special assistance due to health and/or age conditions and/or some form of disability.

The issue of capping the maximum consumption required by energy community recommendation is addressed below through the discussion of the recommended forms of support.

ALTERNATIVE FOR SUPPORT SCHEMES

According to the above definition of vulnerable customers there are two major types of support mechanisms financial and non-financial forms of support. These support mechanisms are discussed and analyzed below for further stakeholder consultations.

ALTERNATIVE FINANCIAL SUPPORT SCHEMES

The following alternatives of financial support schemes will be analyzed and suggested for stakeholder consultations:

- Keeping the energy tariffs at existing levels for Vulnerable households receiving social assistance;
- Energy vouchers for vulnerable households providing the equivalent amount of electricity (gas) for free to compensate for the tariff change and allow the consumption of the same amount of energy within the same budget;
- Monetary compensation for vulnerable households;
- Continued energy tariff subsidies for all households.

NON-FINANCIAL SUPPORT SCHEMES

There are groups of customers who may be at disadvantage in open market conditions. In addition to economic-financial support, non-economic support schemes should be provided by the States to protect vulnerable customers and avoid their potential disadvantage in the competitive retail energy markets. It should be underlined that non- economic support systems co-exist with economic support systems, so they can create an adequate safety net for vulnerable customers.²⁸

Non-financial support schemes are mainly of 3 types: Protection from disconnection, Energy Efficiency Measures and Information Campaigns. These measures are relevant to all consumers but are mostly applied for vulnerable customers, and in some cases, require special attention to a narrow range of vulnerable customers having disadvantage due to health, age or disability reasons.

As an option we would recommend the GNERC to introduce the Volume based costing in natural gas as well.

²⁸ [Vulnerable Customers and Possible Support Schemes, Energy Regulators Regional Association \(ERRA\), INOGATE Programm 2011;](#)

ANALYSIS AND COMPARISON OF OPTIONS

ANALYSIS OF FINANCIAL SUPPORT SCHEMES

In this section we consider how the government can mitigate the effects of energy²⁹ price increase on the vulnerable groups of households. Specifically, using the standard microeconomic tools of budget constraint and utility maximization³⁰, we analyze and compare the following three subsidy schemes and rank them according to the effectiveness and efficiency criteria:

1. Tariff subsidy;
2. Voucher mechanism;
3. Money transfer.

The basic assumption behind the analysis is that the compensation should allow to preserve the welfare of vulnerable customers at the level prior to energy tariff increase. Below we examine several options for achieving this goal and use model assumptions for our analysis.

To set up a model, consider a typical vulnerable household with monthly income $M > 0$. The household aims at maximizing its welfare by consuming the two goods: energy, consumption amount of which is denoted by E , and a composite good³¹, consumption amount of which is denoted by C . The welfare of the household is higher, higher is the consumption of any good given that there is no reduction in consumption of another good. Simply put, if a household consumes more energy keeping the consumption level of the composite good unchanged, it would be better off and similarly, if a household consumes more of the composite good keeping the consumption level of energy unchanged, it would also be better off. The idea is captured by the notion of “indifference curves”, that gives all the combinations of C and E among which the household is indifferent to consume.

Figure 1 depicts typical convex-shaped indifference curves for a household. Consumption bundle A and consumption bundle B lie on the same indifference curve, implying that the household is equally well off if it consumes A (with relatively more amount of the composite good but less of the energy) or B (with relatively less amount of the composite good but more of the energy), simply put – the household is indifferent between A and B or any other bundle lying on the indifference curve IC_1 . On the other hand, bundle C is strictly preferred over bundle A (and hence over any other bundles lying on the indifference curve IC_1), because C contains the same amount of the composite good, but more amount of energy compared to A . Easy to note that any bundle on IC_2 is strictly preferred than any bundle on IC_1 and any bundle on IC_3 is strictly preferred than any bundle on IC_1 or IC_2 . Therefore, indifference curves that are located upper-and-right contain more desired consumption bundles compared to the indifference curves located lower-and-left. Even though the slope and the exact shape of an indifference curve depends on the characteristics of a household's preferences, the following properties are shared by all indifference curves:

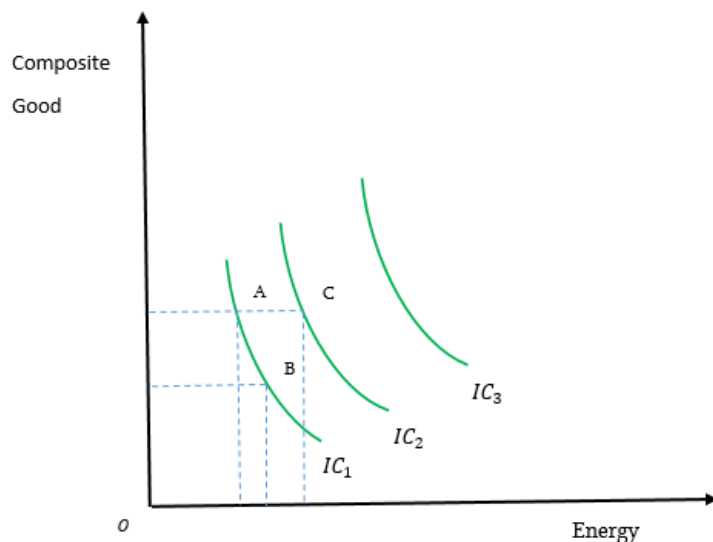
1. Indifference curves of an individual household are parallel shifts of each other, meaning that they do not cross each other (hence each bundle lies on a single indifference curve);
2. A household is better off while moving from a lower-left indifference curve to an upper-right indifference curve.

29 Without losing generality, we use ‘energy’ to refer to electricity and/or gas.

30 For a comprehensive coverage of the topics see, for instance, Chapters 2,3,4 and 5 in Varian, Hal (2014). *Intermediate Microeconomics: A Modern Approach* (9th Edition). U.C. Berkeley, W.W. Norton & Company

31 The basket of all other consumables

Figure 1: Indifference Curves



Back to the model description, let P_E^t and P_C^t stand for unit prices of energy and the composite good, respectively, in period t .³² Further suppose that the income of a typical household remains constant across time-periods. Given the setup of the model, the budget constraint of the household in the baseline period, $t = 0$ is given by:

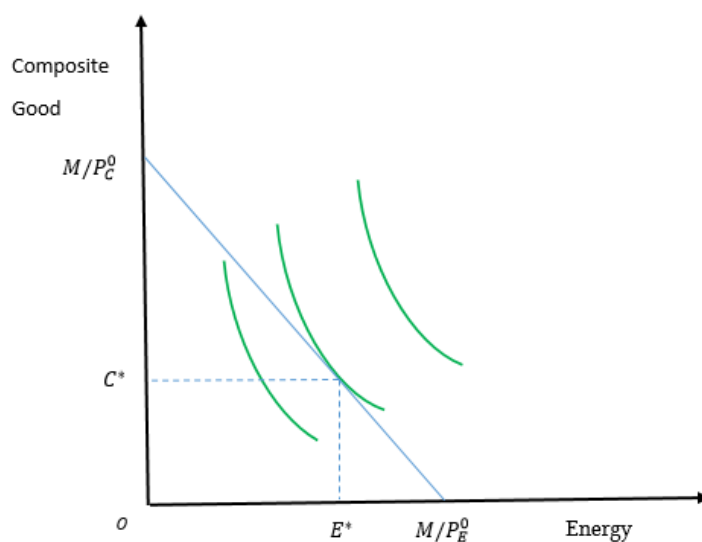
$$P_E^0 \cdot E + P_C^0 \cdot C = M \quad (1)$$

Observe that while a household enjoys consuming more amount of each good, the budget must be binding (the household will be spending all of its income). Suppose, in the baseline period the representative household optimally decided to purchase the consumption bundle of (E^*, C^*) , meaning that given the available income and the prices no other bundle could make the household better off. In this sense (E^*, C^*) is the optimal consumption bundle and it satisfies the budget constraint:

$$P_E^0 \cdot E^* + P_C^0 \cdot C^* = M \quad (2)$$

Graphically, the household pushes indifference curve to the upper-and-right direction as much as the budget constraint allows. The tangency point between the budget line and the respective indifference curve determines the optimal choice of the household, as depicted on Figure 2.

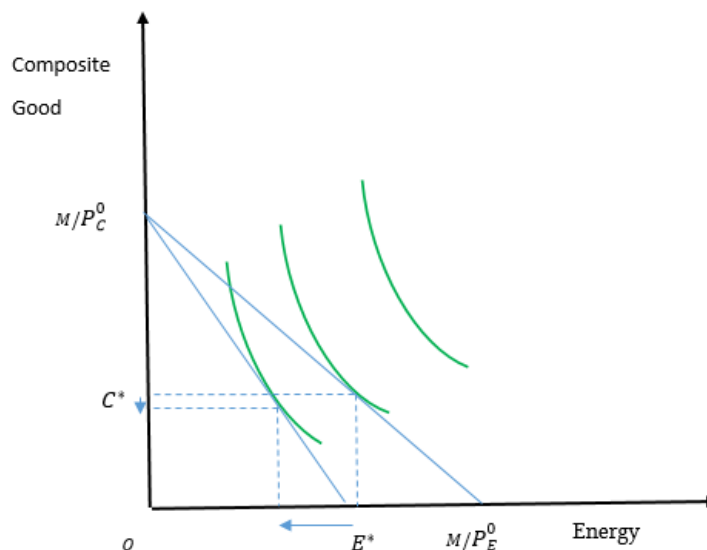
Figure 2: Optimal Choice



³² Period could stand for a month or a year, depending on the context.

Now consider the energy price increase in some period $t > 0$ (assume no change in the price of the composite good), so that $P_E^t > P_E^0$. The price increase would make the budget constraint pivot around its intercept point with y-axis, as depicted on Figure 3. As a result, household would get worse off, as long as the re-optimization results in consuming a bundle on the lower indifference curve.

Figure 3: Re-Optimization Outcome



Now we turn to the analysis of the three subsidy plans outlined above. The aim of the government is to ensure that under the new environment baseline optimal consumption bundle (E^*, C^*) is still affordable for the household.

Subsidy scheme #1 – Tariff Subsidy

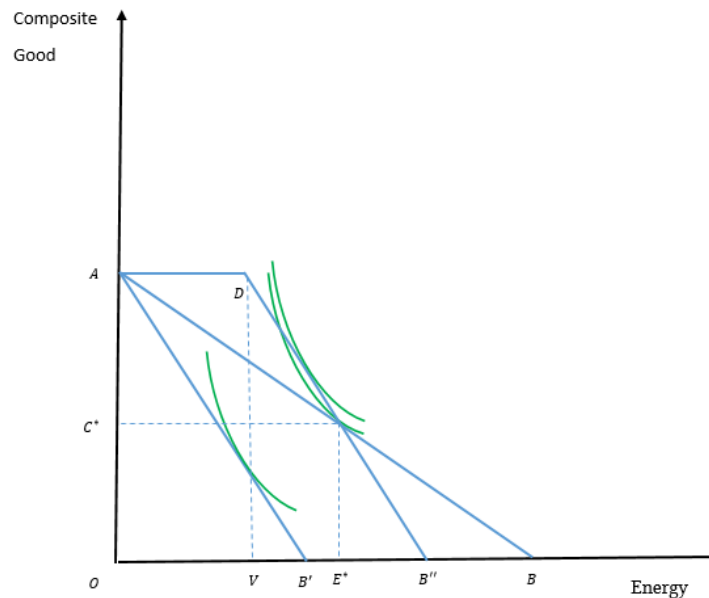
Tariff subsidy is the simplest subsidy plan in its essence: the government covers the difference between the new and the old price for each unit of energy consumed by the household at the baseline price. By doing so, the government ensures the energy price the household is facing in the new environment is the one equal to the baseline energy price. Therefore, the applicable budget constraint for the household under the tariff subsidy scheme would still be given by (1), the household would still optimally choose to consume the same baseline bundle (E^*, C^*) as depicted on Figure 2 and the total cost of the intervention for the government would amount $\{(P_E^t - P_E^0) \cdot E^*\}$.

Under the tariff subsidy scheme the household retains the baseline consumption bundle and hence welfare level, the cost of the intervention for the government is $\{(P_E^t - P_E^0) \cdot E^*\}$.

Subsidy scheme #2 – Voucher Mechanism

The idea behind the voucher mechanism is that the household can only spend the voucher-money on energy, i.e., within the capacity of the voucher the household consumes energy for free and the household purchases any extra amount at the ongoing (new) market price. Suppose the government allocates enough amount of energy vouchers to the household after the price increase, so that in the new price environment the baseline consumption bundle (E^*, C^*) is affordable for the household. Easy to note that necessary amount of voucher-money is equal to $\{(P_E^t - P_E^0) \cdot E^*\}$, that can buy the household the amount of energy of $V = \frac{(P_E^t - P_E^0) \cdot E^*}{P_E^t}$. Figure 4 illustrates the decision process of the household under the voucher scenario.

Figure 4: Optimal Choice with Vouchers



AB line represents initial budget constraint of the household at prices (P_E^0, P_C^0) , AB' line is the new budget line at prices (P_E^t, P_C^0) . The budget constraint under the voucher scheme is given by ADB'' . Note that DB'' segment is parallel to AB' .

Observe that under voucher mechanism, even though the baseline consumption bundle (E^*, C^*) is affordable, the household optimally chooses to consume some other bundle (tangency bundle between the third rightmost indifference curve and the DB'' line), containing less than E^* units of energy and more than C^* units of the composite good. The fact that other bundle rather than (E^*, C^*) is chosen implies that the household is better off under the voucher mechanism compared to the baseline scenario, in which the household consumes (E^*, C^*) . Note that Figure 4 depicts decision of the household that fully makes use of vouchers and purchases some extra amount of energy at the ongoing price.

The total cost of the intervention for the government amounts $\{(P_E^t - P_E^0) \cdot E^*\}$, the same as under the tariff subsidy scenario.

To compare effectiveness of the tariff and voucher schemes, the both are equally effective, as long as the baseline bundle is affordable under the both schemes. Though, the efficiency of the voucher mechanism is higher than that of the tariff mechanism – At the identical costs, the former ensures welfare improvement of the household, whereas the later keeps the welfare level unchanged.

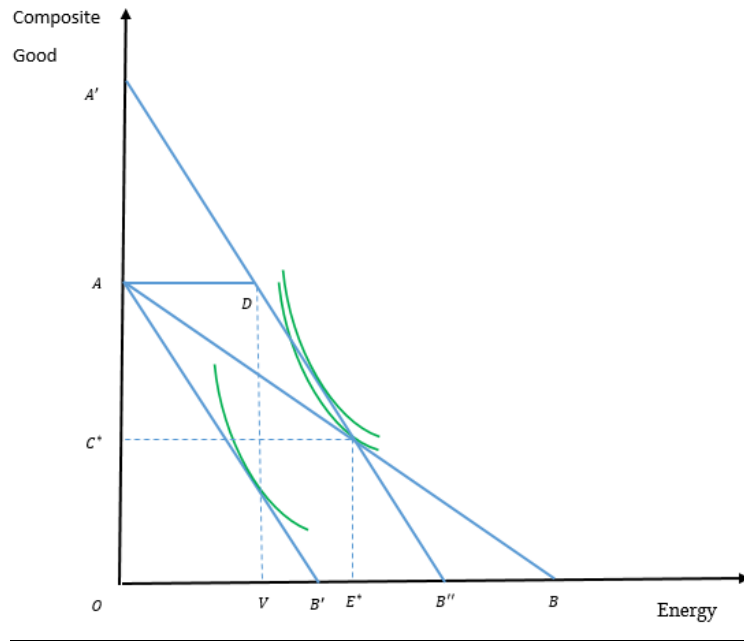
Even more, under the tariff subsidy mechanism the price of energy, the household is facing, does not deliver the signal to the household that energy production has become more costly in the economy³³ and the average household needs to economize on energy consumption. As a result, the household continues consuming the same amount of energy as before, it does not economize. On the other hand, under the voucher scheme the price is not distorted in a sense that the household is facing the actual energy price (that reflects the true cost of the production) and as a result the household is economizing on energy consumption. As we see, the price distortion with its consequences is an additional inefficiency the tariff subsidy scheme induces at the economy-wide level.

Subsidy scheme #3 – Money Transfer

Under this subsidy scheme the government pays a money compensation of $\{(P_E^t - P_E^0) \cdot E^*\}$ to the household and by doing so it makes the baseline consumption bundle (E^*, C^*) affordable to the household under the new price environment. The graphical illustration of the scenario is depicted on Figure 5.

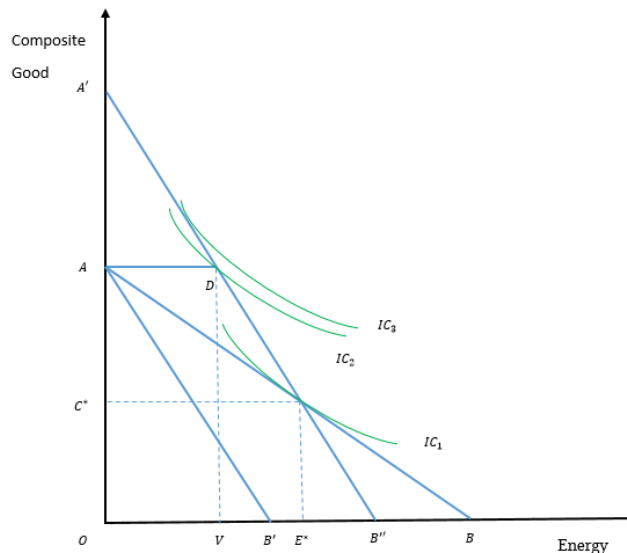
³³ Prices reflect marginal costs of production; a price increase implies that the production cost has gone up.

Figure 5: Optimal Choice under Money Transfer – Case 1



It must be noted that Figure 5 encapsulates Figure 4. Under the money transfer scheme, the budget constraint of the household becomes $A'B''$. The optimal consumption bundle of the household is the same under the money transfer scheme (the optimal bundle is given by the tangency between the third rightmost indifference curve and the $A'B''$ line) as it is under the voucher scenario. And one might mistakenly conclude that the two schemes are equivalent. Though, the voucher and money transfer schemes can only result in the identical outcomes, in terms of the consumption bundle and the welfare level of the household, if and only if under the voucher scheme the household fully makes use of vouchers and purchases some extra amount of energy at the ongoing price, which might not be the case all the time as Figure 6 illustrates.

Figure 6: Optimal Choice under Money Transfer – Case 2



In the case depicted on Figure 6, under the voucher scheme the household optimally consumes V amount of electricity for free and spends all its income on the composite good; and by doing so the household is better off compared to baseline scenario with initial prices (IC_2 is associated with higher welfare level than IC_1). But is it the maximum the government could do? Actually no, rather than giving out voucher of the value of $\{(P_E^t - P_E^0) \cdot E^*\}$, the government can transfer this amount to the household, giving it the freedom of spending according to its preferences. As a result, the household

would consume at a point of tangency between IC_3 and $A'B''$ and attain higher welfare (IC_3 is associated with higher welfare level than IC_2).

Therefore, money transfer in general is more cost-efficient than voucher scheme. Only in the case when under voucher mechanism the household still spends money on energy, the two schemes are equivalent. The both are superior than tariff subsidy mechanism in terms of welfare enhancement of the household. In addition, neither money transfer nor the voucher scheme distort prices, as the tariff subsidy does, and induce economic-wide inefficiencies.

In the brief analysis above we showed that when only the price of energy changes, but the price of the composite good remains unchanged, the proposed three subsidy mechanisms are equally effective (each guarantees the same baseline consumption bundle), but in terms of efficiency the money transfer scheme is the first best, the voucher scheme is the second best and the tariff subsidy is the least desirable mechanism.

Now we investigate the case under which not only the price of the energy changes, but also the price of the composite good increases over time (we allow inflation). To keep notations simple, let us get rid of the time notations and let P_E and P_C be prices of energy and the composite good, respectively, in the baseline scenario. Therefore, in the baseline period the household faces the budget constraint, equivalent to (1), given by:

$$P_E \cdot E + P_C \cdot C = M \quad (3)$$

As before, suppose the household optimally chooses to consume the bundle (E^*, C^*) , that satisfies (3), i.e.:

$$P_E \cdot E^* + P_C \cdot C^* = M \quad (4)$$

Suppose in the successive period the price of energy and the price of the composite good both change, but the income of the household remains unchanged. Therefore, the household in the next period faces the following budget constraint:

$$P_E(1 + \delta) \cdot E + P_C(1 + i) \cdot C = M \quad (5),$$

Where $\delta \geq 0$ stands for the price-inflation rate on energy and $i \geq 0$ stands for the price-inflation rate on the composite good. We can think of i as an overall inflation rate, as long as the weight given to energy in calculation of the consumer price index (CPI) is small.

How much money-transfer should the government make to the household to ensure that under the new environment baseline optimal consumption bundle (E^*, C^*) is still affordable for the household?

Total amount of income needed for the household to afford (E^*, C^*) is:

$$P_E(1 + \delta) \cdot E^* + P_C(1 + i) \cdot C^* = P_E E^* + P_C C^* + P_E E^* \delta + P_C C^* i \quad (6)$$

Using (4), we can write (6) as:

$$P_E E^* + P_C C^* + P_E E^* \delta + P_C C^* i = M + P_E E^* \delta + P_C C^* i \quad (7)$$

Using (4) once again, we have:

$$M + P_E E^* \delta + (M - P_E \cdot E^*)i = M + P_E E^* (\delta - i) + M \cdot i \quad (8)$$

Therefore, under the new environment baseline consumption bundle (E^*, C^*) is still affordable for the household if the government makes the total transfer of $\{P_E E^* (\delta - i) + M \cdot i\}$. The first component of the sum, $P_E E^* (\delta - i)$, is the amount of the compensation required due to the relative price increase in energy. Only if $\delta > i$ this amount is positive, meaning that if the energy price increase is higher than the overall inflation rate, compensation for energy expenses is required. The second component of the sum, $M \cdot i$, is the amount of the compensation required due to the overall inflation, that is not related to energy price increase.

Tariff subsidization for all residential customers

Due to relevance to the political background and previous practice we still leave among the options the possibility of tariff subsidization for all residential customers in order to examine the potential consequences. This option is most wasteful as it covers all population, besides it is antisocial and unfair since it causes spending of public money predominantly for wealthier population at the cost of potential other social programs.

COMPARISON OF FINANCIAL SUPPORT ALTERNATIVES

Table 3: Comparison of Financial Support Alternatives

Financial Subsidy Form	Tariff Subsidization all consumers	VC Tariff Subsidization	Energy Vouchers	Monetary transfer
Description	Keeping the tariff level for all households	Keeping the tariff level for VCs	Providing the equivalent of increase in average household	Adding to the social assistance equivalent amount of money
Effectiveness	Compensates for price increase All households. Does not allow alternative use and maximization of benefit	Compensates for price increase VCs. Does not allow alternative use and maximization of benefit	Provides the equivalent value within the capped amount	Covers the previous consumption and allows the flexibility in spending to maximize the welfare
Efficiency	Inefficient - Requires high spending of public resource	Less efficient prevents energy saving	Limited spending of public resource	Maximizes social welfare for the given cost
Practicality and ease of implementation	Requires intra-government coordination and budget redistribution. High budget	Existing scheme	Can be conducted easily through Discos as before	Limited to SSA. Additional amount to be added to regular assistance
Compliance with EU Market principles	Removes the market price signal causes market distortion	Distorts the market price signal for VCs	Keeps the price signal, minimal market distortion	Keeps the market signal, no market distortion
Political and Social Acceptability	High due to high level of populism in policy discourse	Less acceptable due to high level of populism in policy discourse and tariff increase for general HHs	High acceptability	Should be welcomed by VCs more than other forms of compensation. Adequate explanation needed
Other advantages	Established practice	Established practice, Clear attribution to energy	More disposable income to VCs Existing practice in Tbilisi Clear attribution to energy	More disposable income to VCs
Other disadvantages	Complicates the DSO control of consumer on large scale	complicates the DSO control of consumer	TBD	Complicated for consumers having difficulty of managing own budget, requires more communication

Table 4: Multicriteria Analysis of Financial Support Alternatives

Financial Subsidy Form	Household Tariff Subsidization	VC Tariff Subsidization	Energy Vouchers	Monetary transfer
Description	Keeping the tariff level for all households	Keeping the tariff level for VCs	Providing the equivalent of increase in average household	Adding to the social Assistance equivalent amount of money
Effectiveness	+	+	++	+++
Efficiency	---	+	++	+++
Ease of administration	+++	+	+	+
Compliance with Market principles	---	--	++	+++
SDG goal-7 Affordable and Clean Energy	+	++	+++	++
SDG goal-1 No Poverty	---	+	++	++
Total scores	-4	+4	+12	+14

Local support programs for vulnerable customers.

Energy related assistance should be provided centrally by the central government through SSA. However, the municipalities may be free to implement their own initiatives. However, it is highly desirable that the principles of Fairness and equitability Transparency and practicability.

CONCLUSIONS

Financial subsidy schemes are designed to provide the opportunity of the same level of energy consumption within the same budget as before.

The existing subsidy mechanism is of "tariff subsidy" type, that as the evaluation document shows is the least desirable subsidy scheme. While considering abandoning the tariff subsidy scheme and creating either first best mechanism - Money transfer, or the second best - Voucher scheme, the policy makers should pay attention whether the administration costs of the new mechanism will be higher or lower than the current administration costs of the existing mechanism. To be more specific, administration costs would vary with the design of a mechanism. Therefore, the design that is cost minimizing, meaning that no other design can implement the specific subsidy mechanism at a lower cost, must be implemented.

ANALYSIS AND COMPARISON OF NON-FINANCIAL SUPPORT SCHEMES

Non-financial support schemes are mainly of 3 types: Protection from disconnection, Energy Efficiency Measures and Information Measures. These measures in most cases are relevant to all consumers but may be applied for vulnerable customers who require special attention due to health, age, disability or other special conditions.

The table below summarizes potential non-financial support measures.

Table 5: Non-Financial Support Measure

	Measure	Main features/comments	Status assessment
	Protection from disconnection		
1	Prohibit disconnection in winter periods	those who are disconnected due to lack of payment must be reconnected	One month grace period can be granted with partial payment (of x%) and redistribution of the debt
2	Warn the vulnerable customers prior to disconnection	Applies to all consumers but can be iterated or made more targeted to vulnerable people	Already in place for all customers under GNERC regulation. Additional warning for vulnerable not needed
3	Consumers on health safety equipment (or related health conditions) cannot be disconnected		Formally already in place under GNERC regulation lacks implementation details
4	Elderly people living alone are protected from disconnection	May be still disconnected in the next rading cycle	
5	Offering Different Payment Options	for example, payment by regular instalments, settlement of the bill in cash in the service location etc.	Seasonal redistribution of payment might be considered
6	Proactively engage with the customers to find the best way to repay the debt.	A failed direct debit or an unpaid energy bill could be a sign that a customer is struggling financially. Supplier should monitor these signs and proactively engage	Less relevant compared to the above measures
	Energy Efficiency Measures		
1	Provision of energy efficiency equipment (bulbs, appliances, etc.)	Can be conducted on a wide scale	To be discussed in view of state EE policy under new EE law
2	Energy Efficiency of Buildings	Low penetration- does not cover significant number of customers – more relevant to energy poverty	Expensive. Could be limited to weatherization support for vulnerable customers
3	Energy efficiency information (Information about consumption etc.).	suppliers must keep and maintain information about energy efficiency and be able to direct customers to sources where they may obtain further information or practical guidance	Partly Covered by GNERC regulation
1	Information Campaigns		
2	Raise awareness by different means (information campaigns)	Information in the press/media; flyers; websites; contact with communities and trade groups; targeted events. Leaflets;	Relevant at market opening and its relative maturity

Measure		Main features/comments	Status assessment
		factsheets; guidebooks; case-specific guidance. This requires some interaction with the client via telephone; interview; visit; advice stand; written reports with specific recommendation	
3	Offer Information on price comparison and tariff switching	more simplified bills with information on cheaper tariffs for vulnerable customers, energy advice centers and etc.	Relevant at market opening and its relative maturity
4	provide energy advice to vulnerable customers	For example, voluntary groups and NGOs who are able to provide energy advice to vulnerable customers.	To be recommended to donors and NGOs. Can be strengthened after adoption of EE Law
5	Special service for blind persons with telephone information on bills and a possibility of a personal visit	DSO should develop such service based on GNERC recommendation	To be discussed with GNERC and DSOs

From this wide range of measures, the following actions can be recommended for implementation for vulnerable customers in Georgia:

For all vulnerable customers:

- Prohibit disconnection (e.g. for one-month consumption) in winter periods;
- Warning of the vulnerable customers prior to disconnection;
- Offering Different Payment Options, e.g. mitigation of seasonality should be discussed;
- Information on Energy efficiency, information (Information about consumption and etc.);
- Information in the press/media about existing protection mechanisms.

Apart from these measures, For Vulnerable customers due to health and age reasons additional support should be offered, namely:

- Prohibit Disconnection of Consumers on health safety equipment (or related health conditions);
- Prohibit disconnection of elderly people living alone;
- Special service for blind persons or disabled persons with telephone information on bills and a possibility of a personal visit.

Out of these 3 types of measures, Energy efficiency measures are more expensive and difficult to implement. As it is often mentioned in the EU research documents, Energy Efficiency measures are mainly focused on long term interventions and can be considered as measures to eliminate energy poverty, rather than support vulnerable customers. Thus, it is recommended to focus on Information Campaigns and Protection from Disconnection, as well as on specific low cost additional measure for Energy Efficiency – e.g. lighting and weatherization.

MAIN CONCLUSIONS

1. The analysis of data shows that the widely discussed and acclaimed issue of energy tariffs is hardly based on sound economic rationale. Indeed, over the last decade the level of incomes as well as the level of assistance to vulnerable part of population have been increasing gradually in real terms, while the energy tariffs have decreased – also in real terms. Therefore, the affordability of energy service has increased for all population and more so for the vulnerable population, whose level of declared income and the level of social assistance is growing faster in real terms than average household income.

We do not attempt to assess the affordability of energy service as an absolute parameter. Instead we focus in changes in existing status quo caused by one of the factors, e.g. growth of energy prices, changes in average incomes etc. Assessment of an absolute affordability of energy entails the interaction of energy system, economy and social sphere and is more relevant to comparing different countries or historical development in specific country.

2. There is an existing active system of social assistance in Georgia which is implemented by the SSA. The programs implemented by SSA include monetary assistance, provision of special gears for disabled, childcare programs, medical programs and etc.

The SSA has a sound data-base and the robust capacity for identifying and ranking the socially vulnerable customers, monitoring their conditions, income and energy consumption, providing different forms of assistance allocated by the state. In our analysis we have relied on the data base information and analytical tools available at SSA. This system can provide a sound basis for targeted energy related assistance to special groups of vulnerable customers.

However, the Social assistance system lacks a clear and transparent procedure for determining the level of subsidy to vulnerable population. The level of support is being defined mostly based on previous practice and ad hoc decisions largely determined by budget availability and allocation by the MoF.

Based on the analysis of data from the last decade and past performance of social assistance system one can conclude that the assistance from pecuniary social assistance system is progressively increasing and exceeds the rate of inflation and growth of real per capita income in Georgia. Here we assume that SSA will continue the growing trend in social assistance for socially vulnerable population, in line, or exceeding the growth of average household real income brought by country's economic development.

3. It is crucially important to communicate properly the information about support mechanisms and programs to vulnerable customers. All necessary measures should be taken in order to communicate the purpose of additional assistance related to tariff change. Likewise special actions should be designed to inform and enable the customers with special needs about the assistance on available to them.

4. The level of declared income as well as the amount social assistance of socially vulnerable families registered in the SSA data base has increased gradually over the last decade. Over the last decade the average growth rate of income has been 11.97% and the average household assistance has grown 2.93 times from 2008 to 2018³⁴. In real terms the growth in declared income was 8.4% and the growth in assistance was 7.76%. The average household income over the same period of time has grown 1.48 times in real term³⁵.

5. The energy prices in Georgia have remained relatively stable over the last decade while the real value of energy compared to other goods in the consumer basket has even dropped. The reduction in real value of energy tariffs is about 20-25% (in 2009 GEL). Therefore the tariffs over the last decade lag behind the changes in the cost of consumer basket (as measured by official Consumer Price Index (CPI) and growth of real GDP and incomes of population in real terms. effectively the unit energy costs are being reduced and unless there is a significant growth of consumption, the share of energy costs is reducing in the total expenditures of average household.

6. In order to assess the trends in affordability of energy we suggest to consider the dynamics of tariffs together with the dynamics of income in real terms. This gives a better measure of change in energy affordability than the share of income spent for the same amount of energy. Indeed, the share of energy expenditure may remain the same even with growth of income due to its increased consumption.

Comparison in the trends in tariff changes and household incomes indicates that affordability of energy has increased significantly over the last decade. Therefore a likely factor for negative discourse on energy tariffs seems to be systemic: tariff changes happen at once and once in a number of years therefore are highly visible. There may be a parallel process of increases in income and in assistance levels as well as increase in the price of other goods however these happen more gradually and attract less attention. One main problem lies in short-term worsening of the welfare for vulnerable customers, compared to the period immediately before tariff adjustment and before the SAS catches up with assistance. Another problem may be the discontent of more wealthy population who is worse off immediately after tariff change irrespective to whether the affordability of energy may have increased or decreased in long run.

³⁴ SSA Database

³⁵ [National Statistics office of Georgia](#) (GEOSTAT)

7. The current tariff structure of VBC in electricity is not an effective measure to address the energy poverty or vulnerable customers. This is not also a cross-subsidy that benefits one category of customers at the cost of others. This can be made an effective measure for energy saving and should be designed accordingly. One might consider introduction of similar scheme in the gas sector.

8. Existing structure of energy subsidies in Georgia is not equitable – and provides much higher level of assistance to some customers than to others. Some Tbilisi residents are getting 530 GEL a year compared to below 50 GEL in regions, Mtskheta-Mtianeti residents are getting much higher subsidy compared to other region. In some cases, it encourages disproportionate consumption of energy. The efficiency of existing assistance schemes deserves a more detailed analysis.

9. Protection of vulnerable customers may be considered as a preliminary supportive measure for reduction and eventual elimination of current subsidization and cross-subsidization in energy tariffs. In this respect, it can be considered as a cost saving measure rather than additional expense. Based on the analysis of data from the last decade and past performance of social assistance system, we assume that SSA will continue the growing trend in social assistance for socially vulnerable population in line or exceeding the growth of average household real income brought by country's economic development.

10. The analysis of available data shows that the real (inflation corrected) incomes of households increase gradually while the tariff levels remain relatively stable. Therefore, the affordability of energy increases over time. There is a similar tendency for the vulnerable population, whose reported real income as well as Assistance levels increase in real terms over time. This indicates the necessity of shifting the political discourse from discussion of energy tariffs to interplay of economic growth and energy prices. It may happen that economic growth outpaces the expected tariff changes and thus diminishes the impact, including, on vulnerable population.

RECOMMENDATIONS

- Develop and approve a transparent and sound methodology for defining the level of assistance to vulnerable customers, that would take into account the changes in consumer basket, changes in population income and the needs to reduce the inequality in the society. Take into account the seasonality of consumption while developing such a scheme;
- Design and implement a communication plan for vulnerable customers to inform them about the mechanism of changing the level of assistance in case of tariff changes as well as other forms of support for the vulnerable households with special needs. Establish the coordination between energy regulator, MoLHSA, MoF and SSA that would allow to promptly reflect the tariff changes in the portfolio of support to vulnerable customers;
- Design and conduct the awareness raising campaign about energy tariffs, their adjustment and relation to economic conditions of population, in order to address the negative attitude to tariff adjustments even done in line with best international practices and utility needs;
- The tariff history shows a drop in real value of end user tariffs which requires a closer research to be properly analyzed and understood. Conclusions and lessons learned should be derived;
- Eliminate the current tariff subsidization of tariff in regions and accommodate it into the general assistance package with the provision of compensation for standard average household consumption;
- Eliminate the current tariff subsidization in regions and internalize corresponding amounts (e.g. based on past average consumption) in the basic social assistance payments. While defining the level of assistance to the vulnerable customers, we use the average household consumption in Georgia;
- It is advisable that the burden of energy price changes gets fully absorbed within the social assistance system. Try to shift fully to the monetary compensation within the SSA program.

GNERC

- Start discussion with distribution companies on allowing partial payments for vulnerable customers in winter months so that the full cost gets redistributed over the year;
- Develop the detailed mechanisms for prohibition of disconnection of people in critical conditions include responsibilities for informing the customers of their rights, and mechanisms of payment and cost recovery after critical condition is over;

- SSA and MoESD -after adoption of the EE law consider creation of a mechanism for simple energy audit, energy advice and dwelling weatherization for vulnerable customers;
- Start discussion of VBC in the gas sector which can serve as a step to cost recovery tariffs and a measure for energy saving.

ISSUES TO EXPLORE FURTHER

- It may be advisable to distribute the short summary of this RIA to political parties in order to facilitate more sound political debate in pre-election period;
- Interaction and coordination between state and local support mechanisms.

MONITORING AND EVALUATION

In this section, a general plan is suggested for monitoring and evaluation of the impact of New Energy Law on electricity prices to Vulnerable Consumers in Georgia. Table below summarizes a variety of data that could be collected and indicators that could be employed in order to evaluate the success (or failure) of the selected policy options.

The competent authoritative bodies should be able to track the implementation and evaluate the policy in terms of achieving the objectives. Monitoring should be conducted by the MoESD, MoLHSA and GNERC to measure the progress. Quantitative data for monitoring should be collected by the MoESD, MoLHSA, energy ombudsman and GNERC through various sources. Table 6 presents the proposed list for the progress indicators.

Table 6: Progress Indicators

INDICATORS	FREQUENCY OF EVALUATION	RESPONSIBILITY FOR MONITORING
Principles and mechanisms of protecting the vulnerable customers reflected in secondary legislation, including exact definition of vulnerability	Biennial	Government
Existing mechanism for reflecting tariff changes in social assistance package provided by SSA	Annual	GNERC, Energy Ombudsman, MoLHSA, MoF
Existing support schemes for vulnerable customers with special needs	Annual	SSA, MoLHSA
Communication plan for informing the vulnerable consumers on existing schemes and programs for their protection	Three-year plan	MoESD, MoLHSA Local Municipalities
List (database) of Vulnerable consumers	Annual	MoLHSA / MoF
Same Number or less disconnections of electricity to Vulnerable Consumers	Annual	GNERC
Same number of disconnections of gas to Vulnerable Consumers	Annual	GNERC
Arrears in utility bills of Vulnerable Consumers	Permanently, (Annual)	GNERC and DSOs
Value of the assistance delivered to VCs	Annual	Energy Ombudsman, GNERC/ MoLHSA / SSA

CONSULTATION AND DATA GATHERING

Different research activities have been undertaken during the course of the RIA, including: Literature review, Document analysis and Stakeholder consultations.

The objectives of literature review and document analysis were to:

- Provide an overview of the literature regarding the definitions of vulnerability, drivers of vulnerability and vulnerability indicators;
- Provide a more detailed overview of the EU countries experience regarding the existing financial and non-financial support schemes to protect vulnerable consumers, their effectiveness, efficiency, relation to social policies and etc.

Different studies and assessment reports of the consumer vulnerability Issues were analyzed during the literature review and document analysis, including reports prepared by European Commission, ECS, EU Energy think- tanks, OFGEM reports and etc. the process also included revision of EU directives and national legislations of some EU countries as well as Georgian legislation related to social protection and vulnerability issues.

Stakeholder Consultations Aimed to supplement the literature review with a particular focus on situation in Georgia including existing support schemes, social and economic conditions in the country and. Etc.

Stakeholder consultations consisted of interviews with key interested parties, including:

- MoESD;
- MoLSHA;
- SSA;
- GNERC;
- Tbilisi City Hall (Department of the Health and Social Services);
- Members of Parliament;
- Energy Community Secretariat;
- Sector experts from Georgia, Ukraine, Romania, Moldova.

According to the new energy law, MoESD, MoLHSA and local municipalities are responsible for defining vulnerable consumers and develop special programs for their protection. The consultations with the representatives of ministries aimed to understand, who should be considered vulnerable, how the responsibilities should be redistributed among different ministries and what should be the role of the municipalities. As MoLHSA representative told us, involvement of local municipalities are important in the process, some of them already have support schemes independent from the national ones. Municipalities use SSA database for this purposes, however, the ministry does not have an information what kind of support schemes are in action in particular municipalities, how much money is spent on them and etc. Lack of coordination is a problem.

One important support scheme which can be singled out from local support measures is implemented by Tbilisi municipality. The head of the Department of the Health and Social Services at Tbilisi municipality gave us detailed information on the process of creating existing support scheme (electricity subsidy for socially vulnerable people). He made an emphasis on giving money directly to the beneficiaries vs voucher system, saying, that having experience of giving money directly, it is more preferable for the Municipality to offer vouchers, as sometimes, the beneficiaries have difficulties with money allocation (might use the money for different purposes and ask again for the support) which is problematic for policy makers.

Consultations were also conducted with the representatives of GNERC to understand ongoing work and plans regarding the reform (including introduction of universal supplier etc.), Members of the Parliament from related comities and Sector experts.

Important target groups, who will be directly affected by the reforms are consumers itself (socially unprotected people, who are beneficiaries of existing support schemes). For understanding their opinions and attitudes, WEG's recent study on energy poverty and vulnerable consumers in Georgia was used, to be more specific, the results of Focus groups, which analyzed the existing support schemes, their weaknesses and gaps were used.

The consultations played an important role in developing options and selecting best alternative for the RIA purposes.

ANNEX 1: ENERGY POVERTY AND VULNERABLE CUSTOMERS

Energy Poverty is often defined in the literature as a situation, when individuals or households are not able to adequately heat their homes or provide other required energy services at an affordable cost³⁶. The term is sometimes used interchangeably with Vulnerable customers.

The concept of vulnerability is one of the key components of the EU Legislation and market rules. Research document of the European Commission defines “vulnerable consumer” as: “A consumer, who, as a result of socio-demographic characteristics, behavioral characteristics, personal situation, or market environment:

- is at higher risk of experiencing negative outcomes in the market;
- has limited ability to maximize their well-being;
- has difficulty in obtaining or assimilating information;
- is less able to buy, choose or access suitable products; or
- is more susceptible to certain marketing practices³⁷.

Vulnerable customers (who are electricity and gas consumers according to the EU Legislation) are an important part of the energy poverty, however energy poverty is not limited to this category. Energy poverty is related to the geographical-territorial areas (climatic zones, clean energy access and related health issues), conditions of the distribution network (security, quality of supply), housing type (inefficient building stock), energy expenditure shares in total revenues and other factors, which requires complex approach.

We define **Energy poverty as the state where consumers are deprived of possibility to receive clean energy and/or to satisfy the basic energy needs continuously, safely, and at an affordable price**“ (WEG, 2018)³⁸.

Policies on energy poverty and vulnerable customers requires different approaches. Energy poverty is the subject of energy policy, while vulnerable customers are mostly related to social policy. Energy assistance for socially vulnerable customers can be considered as a short-term measure in the process of liberalization of energy markets or due to special conditions of household. In contrast, energy poverty is related to number of factors which requires complex approach and is a subject of longer term State Energy Policy targeted at addressing and gradual elimination of energy poverty.

The table below illustrates the suggested treatment of differences between the terms of **vulnerable customer (consumer)** and **energy poverty**

Table 7: The Suggested Treatment of Differences Between the Terms of Vulnerable Customer and Energy Poverty

Term	Vulnerable Customer	Energy Poverty
Individual vs class or group	Individual Customer of electricity and/or gas network or a person in specific individual conditions	A group of customers (consumers) or a specific case considered as a representation of consumer class
Electricity and gas customers (network energy) vs general energy conditions	An electricity and/or natural gas customer in relation to Electricity and Gas Directives	Refers to energy conditions in a more general sense in relation to general energy policy, including regional etc.
Economic vs. technical	Financial/Economic affordability	technical availability of clean energy or excessive expense due to technical conditions (e.g. poor dwelling)
Examples	Poor families at social welfare support list Handicapped people unable to e.g. switch the suppliers Temporary health conditions requiring special care	Households in non-electrified areas Households in non-gasified areas using non-clean fuel in health-damaging conditions Households with excessive energy expenses in typical inadequate dwellings,

³⁶ Insight_E Energy Poverty and vulnerable customers in the energy sector across the EU, 2015

³⁷ European Commission “Consumer Vulnerability across key markets in the European Union”, 2016

³⁸ WEG “Energy Poverty and Vulnerable customers in Georgia” 2018

Term	Vulnerable Customer	Energy Poverty
Types of policies and measures	Social support schemes targeted to individuals Financial support Nonfinancial support	State energy policies and programs targeted to elimination of conditions leading to energy poverty (in an area or a group of population). EE policies, RE alternatives, network extension and improvement, etc.
Examples of measures	Electricity or gas vouchers Special tariffs (poor example) Targeted information measures Individual EE measure	Programs for gasification and electrification Cheap loans for building insulation and other EE programs Oversight of network operations - improvement of supply quality and service conditions.

Energy poverty in a sense of lack of supply, as well as excessive energy expenditure, should be addressed at the source of the problem including weatherization, education, heat insulation, network extension and improvement of service quality. This is more of a matter of policy towards certain classes.

State has to take the responsibility for energy poverty of its citizens and develop and implement effective policies for reduction of energy poverty.

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