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# Technical Assistance for Improvement of Performance-Based Tariff Regulation of EMRA for Turkish Energy Markets through Introducing an Enhanced Monitoring System

**Project Identification No: EuropeAid /139125/IH/SER/TR**

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# Task-5: Social Tariff & Vulnerable Consumer Action plan

**Activity 5.2 –Report**

CFCU CENTRAL FINANCE & CONTRACTS UNIT

DAI human dynamics

REPUBLIC OF TURKEY ENERGY MARKET REGULATORY AUTHORITY

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## Abbreviations

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| ACER | Agency for the Cooperation of Energy Regulators |
| ARERA | The Italian Regulatory Authority for Energy, Networks and Environment (former AEEGSI) |
| AU | Acquirente Unico (Italy) |
| BEIS | Department for Business, Energy & Industrial Strategy |
| BOTAS | The Turkish Petroleum Pipeline Company |
| CAPEX | Capital Expenditures |
| CEER | Council of European Energy Regulators |
| CER | Commission for Energy Regulation |
| CNMC | The Spanish National Commission on Markets and Competition |
| COR | Reference Marketers In Spain |
| DCC | Data Communications Company |
| DNO | Electricity Distribution Network Operators |
| DSO | Distribution System Operator |
| DUoS | Distribution Use of System |
| EC | European Commission |
| ECRB | Energy Community Regulatory Board |
| EDSO | European Distribution System Operators |
| EI | Energimarknadsinspektionen, Swedish Regulatory Authority |
| EML | Electricity Market Law |
| EMRA | Energy Market Regulatory Authority |
| EUAS | Turkish Electricity Generation Company |
| EU | European Union |
| FDD | Default Distribution Supplier |
| FUI | The Supplier of Last Resort in Italy |
| GB | Great Britain |
| GDN | Gas Distribution Networks |
| kW | Kilowatts |
| kWh | Kilowatt hours |
| LCNG | Liquid to Compressed Natural Gas |
| LNG | Liquified Natural Gas |
| MENR | Ministry of Energy and Natural Resources |
| MGP | Day Ahead Market in Italy |
| ML | Liberalised Market in Spain |
| MPEG | Daily Products Market in Italy |
| MS | Member States |
| NG | Natural Gas |
| NGG | National Grid Gas |
| NGGT | National Grid Gas Transmission |
| NGO | Non-Governmental Organization |
| NBP | National Balancing Point of UK |

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|---|---|
| NRA | National Regulatory Authority |
| OMIP | Iberian Energy Derivatives Exchange |
| OPEX | Operational Expenses |
| PVPC | Voluntary Price for Small Consumer |
| QVD | Retail Sale Quota Component |
| REE | Red Eléctrica de España |
| SME | Small and Medium Sized Enterprises |
| SoLR | Supplier of Last Resort |
| TDCV | Typical Domestic Consumption Value |
| TIVG | Integrated Text on the Retail Sale of Natural Gas and Other Gases Distributed through Urban Networks |
| TOTEX | Total Expenditure |
| TSO | Transmission System Operator |
| TTF | Title Transfer Facility of the Netherlands |
| TUR | Former Last Resort Rates in Spain |
| TWh | Terawatt hours |
| UK | United Kingdom |
| WACC | Weighted Average Cost of Capital |

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# 1 Introduction

EU legislation for energy retail markets is aimed at supporting all customers, but in particular consumers in vulnerable circumstances. Consumer vulnerability is multi-dimensional and there is a wide range of factors which can increase the risk of consumers being vulnerable in markets supplying essential services such as energy. These factors include people's individual circumstances and needs, which can be short- or long-term, and may fluctuate over time. Other critical contributory factors arise from the policies, practices and behavior of market players, and the way that the energy market operates, for example, if there are barriers to accessing affordable energy or to obtaining information and advice. Member States should thus identify and address the factors that contribute to consumer vulnerability in their respective energy markets[1]

In accordance with the Terms of References, this report is aiming a vulnerable consumer action plan and social tariff methodology for both electricity and natural gas sectors and it will include the following analyzes:

- Analysis of current regulatory structure and stakeholders for vulnerable consumers in the field of energy
- Analysis of EU countries examples and best practices for vulnerable consumer support mechanisms in energy and benchmarking of 3 EU examples with Turkey and identification of gaps and provision of recommendations.
- Vulnerable consumer action plan that will be prepared according to analysis of current regulatory structure and other country examples and will include the actions to be taken per responsible body as well as their timing.

In the approach of this task, aforementioned activities are handled for electricity market and natural gas market respectively in line with stakeholder insights gathered via workshop under Task 5.1. Thus, instead of recommending a single social tariff implementation, two alternative scenarios are studied for both markets comparatively – i.e. Direct Support Mechanism and Social Tariff Mechanism. These two scenarios are supported with their stakeholder analysis results, roles & responsibilities, advantages & disadvantages.

[1] https://ec.europa.eu/energy/sites/ener/files/documents/20140106_vulnerable_consumer_report_0.pdf

# 2 Electricity Sector Report

## 2.1 International Benchmarks

### 2.1.1 Great Britain

#### 2.1.1.1 *Current Regulatory Structure*

OFGEM defines vulnerability as when the personal circumstances and characteristics of a consumer combine with aspects of the market to create situations where consumers are:

- Significantly less able than a typical consumer to protect or represent his or her interests in the energy market
- Significantly more likely than a typical consumer to suffer detriment, or that detriment is likely to be more substantial.

Their strategy builds upon the already extensive work delivered under our 2013 Consumer Vulnerability Strategy and sets out their priorities to help protect gas and electricity consumers in vulnerable situations until 2025. The energy market is going through great change with the impact of digitalization, decarburization, and decentralization. Therefore, the new strategy sets the outcomes that Ofgem expects the industry to achieve, to be not left behind for vulnerable consumers by the pace of change in the energy industry. Other regulators and government have referenced Ofgem's definition, which shows their recognition of the multidimensional nature of vulnerability. The National Audit Office (NAO) also recognized our work in this area in its 2017 report and recommended regulators and government to work more closely together on vulnerability.

Every vulnerable situation will be different, but there are a number of things, Ofgem know about various vulnerabilities that affect a person's ability to engage with the customer service function of an energy company.

Mental Health

There is wide evidence that many people who suffer from poor mental health have difficulties with different methods of communications.

- Money and Mental Health Policy Institute (MMHPI) found that 75% of customers who have experienced mental health problems have serious difficulties engaging with at least one commonly used communication channel.
- 54% of customers who have experienced mental health problems, and 32 % of those who have not, have serious difficulties using the telephone.
- Consumers who experience mental health problems struggle to understand information provided by essential service providers. This is particularly prevalent when a consumer is narrow unwell or when information contains jargon or data that is not presented in a meaningful way.
- 37 % people who have experienced mental health problems exhibit significant levels of anxiety when dealing with essential service providers, indicative of at least a mild phobia of this situation. This is almost three times the rate amongst people who have never experienced mental health problems.

Age-related Vulnerabilities

- The CMA (Competition and Markets Authority) reports that some older people will face challenges when navigating markets due to personal characteristics arising from multiple health conditions, sensory

impairment, disability and cognitive impairment. Recent research into cognitive ageing has highlighted the complex nature of the ageing process and how this can affect the ability of older people to make decisions. A fear of change and unfamiliar decisions can increase the propensity to 'stick with what you know' which can in turn result in greater risks for older people of being left behind and/or receiving poor outcomes.

- Alzheimer's Society also highlighted the challenges faced by people with dementia and their careers. These include navigating bills and communications, differentiating what is the most important information, accessing and reading meters, understanding what they have to do in relation to utilities (such as providing meter readings), challenges caused by memory problems such as remembering passwords or information required to access their accounts, understanding different methods of paying bills, and more.

Disability

- The CMA reports that consumers with physical conditions or disabilities were particularly unwilling to tolerate any uncertainty or disruption in markets that they are dependent.
- Scope's research states that 56% of disabled adults consider a supplier's customer service reputation as an important factor when choosing a supplier.
- One of the challenges that disabled people face is having access to this information when switching. 62 % of disabled people say they shop around, but Scope highlights that price comparison tools lack this information.

Low income

- People on low income are more likely to prefer to pay for their bills in ways other than direct debit because this allows greater control to their budgets.
- Consumers on low incomes are also less likely to have switched, because of limited access to banking and internet products.
- It also means that they are less likely to be able to communicate with their energy company through digital means (Consumer Vulnerability Strategy 2025, 31).

The Standards of Conduct contain enforceable overarching principles that are relevant across many supplier activities and licence guide themes.

SLC 0 (Standard Licence Conditions) Standards of Conduct:

- The domestic Standards of Conduct contain, amongst other things, a broad vulnerability principle that clarifies to suppliers that to uphold their obligation to treat all domestic customers fairly, they need to make an extra effort to identify and respond to the needs of those in vulnerable situations. The domestic Standards apply to all activities of the licensee and any representative, which involve, or otherwise relate to, dealings with a domestic customer.

SLC 26 Priority Services Register

- Suppliers must establish and maintain a Priority Services Register (PSR) of domestic customers who may need priority services because they are in a vulnerable situation. The Priority Services Register is a free service provided by suppliers and network operators. Each energy supplier and network operator maintain its own register. The SLC sets out factors that may indicate someone should be on the PSR, and the priority services that suppliers must offer these customers for freedom, e.g. communicating with the customer in an accessible format, and conducting meter readings if the customer is unable to do.

SLC 27 Payments, security deposits, disconnections, and final bills

- Rules about the requirement to offer a wide range of payment methods, including cash and prepayment meters. This only applies to suppliers with over 50,000 domestic customers. Any differences in price between payment methods must be cost-reflective. Suppliers with under 50,000 customers must also offer customers the chance to pay for energy through a prepayment meter as an alternative to a security deposit, or if they become aware or have reason to believe that the customer will have difficulty paying for their energy.
- Rules on security deposits. The SLC sets out cases where domestic customers are not required to pay a security deposit. Where a security deposit is charged, it must not exceed a reasonable amount. There is a list of services that suppliers must offer to customers in payment difficulty. Suppliers must take all reasonable steps to find out customers' ability to pay and take this into account when calculating payments. Suppliers also have to provide energy efficiency information to customers in payment difficulty. Rules on disconnecting properties where charges have not been paid. This includes rules that suppliers must not disconnect certain vulnerable customers during the winter or disconnect anybody whose debt the supplier has not taken all reasonable steps to recover first by using a pre-payment meter (PPM)

SLC 28 Prepayment meters (PPMs)

- Rules on information that should be given to consumers before a PPM is installed, steps a supplier must take to ensure it is safe and practicable in all circumstances of the case for a consumer to use a PPM (additional guidance on what this means is here), and resetting PPMs.
- *SLC 28A Prepayment charge restriction (PPM price cap):* Between 1 April 2017 and 31 December 2020, the amount of money suppliers can charge a domestic prepayment customer is subject to a price cap. This applies to all domestic prepayment customers, except those with a fully interoperable smart meter (also known as a SMETS2 meter). The SLC sets out how the price cap is calculated and updated, and rules about how suppliers must report their compliance with the price cap to Ofgem.
- *SLC 28AD Regulation of charges for Domestic Customers supplied under certain Domestic Supply Contracts:* From 1 January 2019, customers who pay standard variable and default rates are protected from being overcharged through a price cap, in order to ensure that prices paid closely reflect the cost of energy supplied. Customers that benefited from the WHD safeguard tariff have been moved onto this default tariff cap. However, customers benefiting from the prepayment meter cap are exempt.
- *SLC 28B Warrants relating to Pre-payment Meters and other supplier actions to recover debts:* Rules to protect customers having PPMs force-fitted under warrant to recover debt, and to improve protections for all consumers in the debt recovery process. Prohibits suppliers levying any PPM warrant charges, and banning installations entirely, for the most vulnerable customers. Caps the amount that suppliers can levy for warrant-related costs in all cases where a warrant is used to force-fit a PPM to recover debt to £150. This condition includes a proportionality principle covering costs and actions of suppliers, for all customers in the debt recovery process.

SLC 32 Reporting on performance (Social Obligations Reporting)

- Requires suppliers to submit information to Ofgem, Citizens Advice, and Citizens Advice Scotland when requested. This includes data on the number of domestic customers in debt, disconnections carried out, and the number of domestic customers on PSR of a supplier. Data from suppliers are requested quarterly and annually in the form of Social Obligations Reporting.

SLC 35/41 Smart metering installation and installation code of practice – domestic consumers

- Rules to ensure that consumers have a good experience of the end-to-end smart meter installation process and know how to use, and benefit from, the smart metering equipment to improve the energy efficiency of their homes. Requires suppliers to collectively prepare a domestic installation code setting out minimum standards of service for domestic smart meter installations. This code has been developed and was approved by Ofgem in April 2013, that is called the Smart Meter Installation Code of Practice (SMICoP).
- All domestic gas and electricity suppliers must comply with the SMICoP. One requirement of the SMICoP is that suppliers must identify and meet the needs of specific customer groups during the installation process, including those customers with certain vulnerabilities prescribed in the licence. Suppliers should consider the opportunities that the smart meter rollout may bring in relation to their obligations to vulnerable consumers, given that they will be visiting their customers when installing smart meters.
- Many licence conditions apply to both the supplier and their representatives. This means that any person or third party directly or indirectly authorized to represent the supplier in its dealings with customers must have the same considerations for vulnerable consumers as the supplier themselves. Suppliers will be held responsible if any of their representatives fail to do so.

#### 2.1.1.2 *Financial Measures*

Ofgem's policies and applications impact vulnerable consumers positively could be listed as follows:[2]

- Redress: In 2013-2015 20 investigations were completed, securing £89.9 million in consumer compensation and redress to support fuel poor and vulnerable consumers. This includes £49.7m for energy efficiency measures for fuel poor consumers.
- Unreturned credit balances: Following the investigation, suppliers have promised to hand back £153m of unreturned closed account credit balances to customers. Where suppliers cannot identify affected customers and hand the money back directly, they have already committed to contribute £38m to social funds and initiatives.
- Online price comparison sites: According to the changes in Confidence Code, the voluntary accreditation for online price comparison sites, so customers will be told about the Warm Home Discount. This should ensure that consumers in receipt of the £140 discount do not accidentally lose it when switching supplier or end up worse off.
- Cost of calls: Suppliers are ensured to be offered free phone or low cost geographic numbers for customers to use; and that telephone numbers are easy to find, including prominently displayed on suppliers communications and websites.
- Prepayment Meters (PPM): The amendments to the Debt Assignment Protocol should make switching easier for a significant proportion of the 7% of electricity PPM and 10% of Gas PPM customers who are in debt. OFGEM is also working with suppliers to abolish costs for installing and removing PPMs to make switching easier, to increase tariff choice for PPM customers and to ensure they are treated more fairly.
- Social Tariffs: It has been encouraged that the introduction by companies of tailored social tariffs for consumers in vulnerable situations.
- Free services to customers with additional needs: New changes were announced to update and expand the Priority Services Register so that any customer with additional communication, access or safety needs can access services for free.
- Support during outages: OFGEM's protections require networks to offer customers in vulnerable situations additional support. More than 85,000 customers were provided with extra help when their supply was interrupted during the 2013-2014 storms.
- Advice: More than 350,000 consumers have benefited from Energy Best Deal since OFGEM commissioned Citizens Advice to do the first pilot in 2008. Energy Best Deal provides customers in vulnerable situations

[2] OFGEM, The Top 10 ways we made a positive difference or consumers in vulnerable situations

and those who support them, with face to face advice, training and support to help with switching, financial management and accessing social support.

The reasons why Ofgem consider that disengaged vulnerable consumers need protection, and objectives for such protection. The main reason is two-tier market. The domestic retail energy market is split into two tiers, where energy prices are very different depending on whether or not a consumer engages (by changing tariff or supplier). Engaged consumers benefit from competition and get good deals, while those who do not engage face high prices. This two-tier market is a big concern for vulnerable consumers.

According to Ofgem generally any such protection should:

- be capable of rapid implementation;
- minimize unintended consequences and market distortions;
- complement our wider market reforms by maintaining an incentive for consumers who are able to, to engage;
- ensure that suppliers with efficient costs can compete; and
- minimize the administrative burden and cost of implementation.

There are a limited number of options which would achieve main objective of offering financial protection to vulnerable consumers as quickly as possible. According to analysis, Ofgem suggests that a vulnerable customer safeguard tariff would be the most effective option to meet all these objectives.

**The Safeguard Tariff[3]**

In accordance with the Article 3.29, a safeguard tariff can be designed to complement the wider reforms which are underway in the market, such as the roll-out of smart meters and the engagement remedies proposed by the CMA. Headroom can be used to allow suppliers (with efficient costs) to compete for vulnerable consumers on price, therefore maintaining some incentive for consumers to engage. Where some vulnerable consumers are unable to take advantage of the wider reforms, a safeguard tariff can provide them with protection.

In accordance with the Article 3.30, another objective is that the measure minimizes any unintended consequences or market distortions. One of the main challenges for the safeguard tariff is whether it would result in price increases for other (non-eligible) consumers, in order to recover the lost revenue from vulnerable consumers. For the most engaged consumers, this risk is mitigated by competition and the opportunity to switch onto cheaper tariffs available in the market. However, there may also be a group of other consumers who are not eligible for the protection of the safeguard tariff but only occasionally engage with the market, and may find themselves on more expensive tariffs. There may also be wider effects on competition and the incentives for new entrants to enter the retail market. These risks can be mitigated through safeguard tariff design. The role is that headroom will play to minimize any unintended consequences or market distortions. Finally, the aim to minimize the administrative burden for the government and suppliers. Whilst there is likely to be some additional burden involved in implementing a new safeguard tariff, thus there are options to mitigate these costs.

Another important option is social tariffs. In accordance with the Article 3.33, social tariffs previously existed to help households in fuel poverty, but they were voluntary schemes which varied by supplier. Voluntary supplier actions, such as social tariffs, were replaced by the Warm Home Discount. The rationale in the associated impact assessment said that a regulated scheme would “significantly improve the targeting and cost-effectiveness of

[3] OFGEM, Financial protections for vulnerable consumers, Published in 2017

expenditure and the clarity for eligible households". Under this option, suppliers would retain the ability to set their own tariff levels and eligibility criteria (building on the criteria used for the WHD scheme), potentially in conjunction with consumer groups. This would give suppliers flexibility to offer support to vulnerable consumers in innovative ways and would align with our broader aim to make suppliers take responsibility for thinking about how they treat their consumers, especially vulnerable consumers. However, this option would not guarantee a reduction in the detriment faced by vulnerable consumers, if suppliers retained control over their tariff levels. The level of protection could also vary across suppliers, leading to inconsistent outcomes. It is considered that if they tried to address this by providing suppliers with detailed guidance on how to set their social tariff, the benefits of flexibility would be reduced and the outcomes could be similar to a safeguard tariff.

Other options are Uniform rebate payments, Mandated Tariff Design, Mandatory SVT (Standard Variable Tariffs) format.

*Table 1: Direct impact of temporary safeguard tariff on eligible customers:*[4]

| | |
|---|---|
| Total number of households protected (directly or indirectly) | 2.19 million |
| Total number of households seeing immediate reduction in bills | 0.91 million |
| Average saving per eligible dual fuel customer per year | £122.25 |
| Average saving per eligible single fuel electricity customer per year | £85.41 |
| Average among all those saving (£ per customer per year) | £110.18 |
| Total reduction in bills per year | £100.3 million |

#### 2.1.1.3 *Stakeholder Analysis*

Stakeholders are individuals or organizations that affect or can be affected by the activities of the network company. They may have a direct or indirect interest in a network company's business, and their contact with the network company may be anything from daily interaction to occasional contact.

Stakeholders can include consumers, investors, regulatory authorities, local government agencies, non-governmental organizations (NGOs) and any other interested organizations. Ofgem expect network companies to pay particular attention to stakeholders that represent the interests of vulnerable consumers.

Through the Stakeholder Engagement and Consumer Vulnerability (SECV) Incentive aims to reward high quality activities undertaken by the network companies and outcomes these activities deliver. This encourages distribution network operators (DNOs) to engage proactively with stakeholders to anticipate their needs and deliver a consumer-focused, socially responsible and sustainable energy service. With specific regard to the consumer vulnerability element of the incentive, DNOs must be able to demonstrate evidence of the work they are doing to address consumer vulnerability issues through the current price control period for RIIO-ED1.

The main aim of stakeholders:

- To provide tailored support to their needs during a power cut and when accessing our wider services, for example connection

[4] OFGEM, Financial protections for vulnerable consumers, Published in 2017

- To develop innovative ways to support our customers and communities experiencing affordability and wider societal issues with an aim of reducing vulnerability in the future.
- To give our customers a voice – acting as an advocate when discussing industry policy and to share best practice.

Through the price control regulation of distribution companies, Ofgem also have outputs that the companies need to deliver and incentive schemes that encourage them to do more for vulnerable customers. Stakeholder engagement incentives are similar but distinct between electricity and gas. The latest Stakeholder Engagement Overall Panel Scores out of 10 as follows:

- Scottish Power Transmission (SPT) 4.94
- Scottish Hydro Electric Transmission plc (SHET) 4.06
- Western Power Distribution (WPD) 8.35
- UK Power Networks (UKPN) 7.95
- Electricity North West Limited (ENWL) 4.54
- SP Energy Networks (SPEN) 6.71
- Northern Powergrid (NPg) 7.01
- Scottish and Southern Electricity Networks (SSEN) 3.95

#### 2.1.1.4 *Risk Assessment (Barriers, Problems, etc.)*

Based on stakeholder feedback, we know that consumers can be reluctant to self-identity, which can make it more difficult to identify someone in a vulnerable situation. This is particularly the case for consumers experiencing mental health issues. Companies need to build trust and make sure that consumers are not penalized for self-disclosing. Ofgem proposes to focus on the following areas of concern. They observe that some companies are better at consumer testing and use focus groups to bring the voice of the consumer as an active consideration of their business strategy. This helps design adept data systems and business processes.

*Consumers in vulnerable situations are not identified effectively:* Having information on a customer's potential vulnerability allows the company to tailor their interactions with that consumer. One specific way to provide support is through the Priority Services Register (PSR). However, stakeholders have told that PSR data is not always up to date. A particular challenge for the industry is that some vulnerabilities can be temporary in nature. Under their licence conditions, suppliers and electricity distribution companies are required to maintain a PSR. As part of their obligations, all companies must ensure data is accurate and up to date. They are aware that most network companies validate their PSR data at set intervals, but we have concerns that not all suppliers are doing enough to make sure their PSR data is up to date. Failure to ensure that PSR data is kept up to date with current information leads to these services being diluted, or not being targeted at the consumers who need them. From monitoring our social obligations reporting (SOR) data and stakeholder engagement, some suppliers may not be going far enough to identify the vulnerability. Suppliers must take all reasonable steps to promote their PSRs and proactively identify customers who might benefit from additional support services. They must offer to add these customers to the PSR, outline what services are available to that customer and if the customer accepts – provide these services for free. Therefore, Ofgem are also concerned that not all consumers are having a good experience with PSR services, and we will consider whether or not they need to examine this further. The vulnerability principle in the revised Standards of Conduct, which requires suppliers to identify each vulnerable customer in an appropriate way, complements the PSR requirements. Poor identification of additional needs leads to consumers facing additional barriers in accessing the support they require to engage with their energy supply. In our 2019 Vulnerable Consumers in the Energy Market Report, it is noted that small and medium suppliers are getting better at identifying vulnerability, however, the proportion of their customers on the PSR is still relatively and that they do not think this is completely justified by the different customer bases these suppliers may have. Also, Ofgem accept that using PSR

data alone does not provide the full picture as a person may be in a vulnerable situation, but not require priority services available from the PSR in relation to their access, safety and communication needs. Companies will therefore hold more data internally on customers who may need a tailored approach beyond the PSR. It is expected to see these numbers to fluctuate as suppliers remove consumers who do not need to be on the PSR and add those that do.

*Consumers are not self-identifying as needing additional support:* Ofgem recognizes the challenges posed to companies when consumers do not tell them they may need additional support. We welcome research by consumer groups and industry to identify ways to address the perceived barriers for self-reporting. Some suppliers have established extra care teams to provide additional support to consumers in vulnerable situations to recognize vulnerable situations and talk to these customers about the support that is available to them. Since, some consumers have difficulties in self-reporting their vulnerable situations in the energy market. It provides insight into the barriers for consumers. In its draft forward work plan 2019/20, Citizens Advice outlined their intention to undertake research into barriers faced by consumers in self-disclosing so some suppliers deal with the extra care team.

*Smart data is not being utilized sufficiently:* Ofgem tries to encourage companies to use the data available to them to identify a potential vulnerability in line with data protection legislation. The majority of Electricity Distribution Network companies have now developed stakeholder-mapping tools from open-source data to ensure they engage with relevant individuals and organizations at an appropriate level. Mapping tools are effective in helping organizations make informed strategic, organizational and operational decisions on where to allocate resources and develop actions to meet customer needs. We said in our 2019 Vulnerable Consumers in the Energy Market Report that suppliers can learn from Electricity Distribution Networks in their approach to identifying vulnerability. They have seen appetite among essential service providers and regulators to build upon the PSR data sharing pilots that took place between United Utilities and Electricity North West. We facilitated this through the UKRN and in the 2018 report “Making better use of data to identify customers in vulnerable situations”, we found that key challenges to data sharing include the requirement for effective training of front line staff, technical issues in matching data sets, and data accuracy. The report concluded that there is still considerable scope for companies to go further in working collaboratively and across sectors. They support data sharing initiatives across industries, which help identification.

#### 2.1.1.5 *Monitoring of Vulnerability*

The temporary safeguard tariff is intended as a short-term measure. Therefore, Ofgem decides that they will take a proportionate approach to monitor and evaluation, recognizing that, over a short period, the potential for indirect impacts may be smaller compared to a remedy, which is in place for longer.

The main direct impact will be the change in bills for eligible vulnerable consumers who currently pay more than the temporary safeguard tariff level. This will depend on:

1. The amount is that consumers will pay under the temporary safeguard tariff. This is simply the level of the safeguard tariff.
2. The amount they would have paid otherwise. We will be able to use the SVT (Standard Variable Tariff) prices for consumers outside the scope of the temporary safeguard tariff as the counterfactual to estimate the amount that eligible consumers would have paid in the absence of the temporary safeguard tariff.
3. As part of the reporting provision in the licence condition, suppliers must provide us with their number of vulnerable consumers to whom the condition applies so the number of eligible consumers with each supplier

In addition to monitoring the direct impact of the safeguard tariff, they will be carrying out monitoring for compliance. This will draw on the information available through the reporting from suppliers. Ofgem will also cross-check against any other relevant information they hold, such as the number of WHD rebates paid by each supplier.

While Ofgem is interested in any impacts on consumer engagement, they don't intend to monitor this in detail. Eligible vulnerable consumers only represent a small proportion of the market, and so any changes in switching rates by these consumers might not make a noticeable impact on the overall switching rates that monitoring. They would, therefore, need to carry out bottom-up analysis to look specifically at the consumers in scope. This would require a baseline for the level of engagement by eligible consumers before the temporary safeguard tariff (based on a proxy measure, such as rates of external switching). This situation, it is needed that collect data showing how this changed over time and taking into account the overall trends in switching when interpreting the data. Although it could be possible to gather this information through a request for information to suppliers, because of the transitional nature of and the limited estimated impact, they do not intend to carry this out. Ofgem will pay attention to market developments as part of our ongoing general market monitoring – this will allow following any significant wider impacts resulting from the temporary safeguard tariff.

**Methodology for calculating impact on consumer bills and supplier revenues**

Number of customers

To estimate the impact of the safeguard tariff, it should know the number of customers who receive WHD, but who do not have a prepayment meter and who are on an SVT. To make estimation the number of customers in scope with each supplier, Ofgem used supplier account information to calculate the individual share of non-prepayment SVT accounts. Then, they used the supplier's share of non-prepayment SVT accounts to allocate the number of non-prepayments WHD customers on SVTs. (A supplier's WHD obligation is based on its share of all customer accounts, not just its share of SVT customer accounts. However, this approach helps us to take into account where a supplier has a lower than average proportion of customers on SVTs as well as those with a low proportion of their customer base on non-prepayment methods).

Customer savings and impact on supplier revenues

To estimate the total savings on consumer bills, Ofgem collected information on tariff unit rates, standing charges and online / dual fuel discounts for all evergreen electricity, gas and economy 7 tariffs, which record consumption separately in a 7-hour night time period, offered by the WHD Compulsory Suppliers as of 28 August 2017, which will be the base date for our assessment. For each supplier, they then allocated their estimated number of customers in scope between the tariffs they offer.

Firstly, they allocated customers between dual fuel and electricity only accounts, and standard credit and direct debit. Second, we allocated customers between paper and paperless tariffs using data for each supplier on its split of total accounts by administration type. Thirdly, they allocated customers between Economy 7 and single rate tariffs using information on the total number of profile class 1 and profile class 2 meter points served by each obligated supplier. Then, taken together, this meant that for each tariff, we have an estimate of the number of customers in scope (non-prepayment WHD recipients on SVTs). The total annual bill for each tariff was calculated based on the current Typical Domestic Consumption Values, as applicable from 1 October 2017. These are 3,100kWh and 4,200kWh of electricity per year and 12,000kWh of gas per year. Finally, this annual bill was compared with the level of the prepayment safeguard tariff that will apply from 1 October 2017 to calculate the estimated reduction in bills. Where there would be a reduction in bills on a given tariff under the safeguard tariff, this was multiplied by the number of customers in scope on that tariff. The total customer impact was then the sum

of the bill savings on each tariff. To calculate the impact on supplier revenues we followed the same approach, but excluded VAT.

Assumptions and limitations

First, our estimate is based on the market price as of 28 August and the prepayment safeguard tariff that will come into force on 1 October 2017. This is the most appropriate and robust counterfactual that we could adopt given the difficulty in accurately predicting what might happen to prices before the temporary safeguard tariff comes into force, and how the prepayment safeguard tariff might change over the duration of the temporary safeguard tariff. All other data used is taken from the latest data or estimates available. In some cases, the time periods used are not consistent, but we considered that this was the most appropriate and transparent approach. Second, the estimations are based on a standardized level of annual consumption. Reductions in bills for individual consumers will vary significantly depending on their energy use. Third, due to the limited data available, analysis does not directly account for the proportion of each supplier's WHD customers. Instead, these proportions are all estimated using data on the WHD recipient group across all suppliers, or data across all customers. Non-Economy 7 restricted meter tariffs are excluded from the analysis, and profile class 2 customers on these tariffs are effectively allocated to Economy 7. Finally, the estimations for the number of customers in scope is based on a single WHD scheme year (2015/16). This will cause us to underestimate the number of customers covered by the temporary safeguard tariff, as at any time it will cover those receiving WHD both in the previous and current scheme years. The extent to which this simplification is significant will depend on the degree to which the identity of WHD recipients changes between scheme years. Our understanding is that the identity of WHD Core Group recipients should not change significantly between scheme years, because these customers are pensioners in receipt of the Guarantee Credit element of Pension Credit, and so their circumstances may be less likely to change than other benefit recipients (e.g. those receiving benefits based on employment status). There may be more variability in the identity of WHD Broader Group recipients between scheme years.

#### 2.1.1.6 Expectations for the future

How Ofgem plan to use your feedback based on the engagement with stakeholders so far, they have identified five themes where improvements can be made for consumers in vulnerable situations until 2025:[5]

1. Improving identification of vulnerability and smart use of data
2. Driving a step change in customer service
3. Supporting those struggling with their bills
4. Encouraging positive innovation
5. Ofgem working across boundaries (such as with Government departments and other regulators)

Alongside considering these five themes, they are minded to take a number of positions for the updated strategy, including retaining the current definition and retaining the scope of the strategy to only include domestic consumers.

### 2.1.2 Spain

In Spain there exist some vulnerable customers support mechanisms to mitigate energy bills burden and avoid drastic consequences of energy poverty.

At national level:

[5] Consumer Vulnerability Strategy 2025, Published in 2019

- Electricity social bonus (only for electricity): 25-40% discount on electricity bills depending on available income and household members. In use since 2009, last regulatory updated in 2018.
- Thermal social bonus (electricity, natural gas, diesel, LPG, etc.). Yearly payment to customers comprising all thermal energy uses: 25-124 €/year. Eligibility criteria are the same as for the electricity social bonus, but payment amount is set based on income level, climate zone and household members.
- Regulation on supply interruption due to non-payment. By virtue of national regulation vulnerable customers have a longer grace period between the default notification and the supply cut.

In addition, regional and local administrations have their own subsidies program to help vulnerable customers with energy bills.

#### 2.1.2.1 *Current Regulatory Structure*

The most important support mechanism for electricity vulnerable customers in Spain is the electricity social bonus.

The electricity social bonus was initially regulated in 2009 and since then above 2 million customers have been beneficiaries from this aid. However, existing regulatory framework dated from 2017 when a major revision of the electricity social bonus was done decreasing the number of beneficiaries.

Royal Decree 897/2017, of October 6, regulated the figure of the vulnerable consumer, the social bonus and other protection measures for electricity domestic consumers. This Royal Decree modified considerable the eligibility criteria for vulnerable customers establishing different income level and maximum energy consumption as the main criteria. Order ETU/943/2017 developed some of the key principles set by the Royal Decree.

Because of the new eligibility criteria, the number of beneficiaries drastically decreased: from 2.3 million customers in December 2017 to 1.2 million as of December 2019.

In October 2018, Royal decree-law 15/2018 increased by 15% the energy consumption limit to access to the electricity social bonus discounts.

Currently, the electricity social bonus is based on two discounts applicable on electricity bills up to a maximum level of energy consumed. Social bonus beneficiaries are classified under two categories depending on the income level: vulnerable customers and severe vulnerable customers. Vulnerable customers benefit from a 25% discount on its electricity bills while the discount applicable to severe vulnerable customers reaches 40%. In addition, the bills of customers in a situation of risk of social exclusion are borne by local administrations and the cost is included in the overall cost of the social bonus.

The cost of social bonus discounts (around 180-190 Million € yearly) is financed by contributions of all suppliers. These contributions are set by the National Regulatory Authority (CNMC) proportionally to the number of customers of each supplier following Royal Decree-Law 7/2016 provisions.

#### 2.1.2.2 *Stakeholders analysis*

The regulation, implementation and monitoring of the electricity social bonus involves different actors. In this section we summarise the role of key stakeholders.

- *National Government (Ministry for Ecologic Transition, former Ministry of Energy).* The national government has the power to regulate and legislate on public services obligations of electricity suppliers under the regulatory framework set by EU Directive 2009/72/EC transposed in Law 24/2013. Public service

obligations of electricity suppliers include, among other things, the financing of the social bonus. Spanish national government over the last 10 years has issued different laws setting the guidelines for the electricity social bonus: vulnerable customers definition, financial aids, application procedures, monitoring and reporting obligations, etc. In addition to regulatory responsibilities, the Ministry also has monitoring duties shared with the NRA.

In addition, Royal Decree Law 15/2018, entrusts the Government with the approval of a National Strategy against Energy Poverty. This Strategy was published in 2019 with different measures and objectives for the mitigation of energy poverty.

- *National Regulatory Authority (CNMC).* Obligations of the CNMC are mainly related to the monitoring of the social bonus. CNMC collects data from electricity suppliers and submits to the Ministry periodical monitoring reports including the number of beneficiaries, invoice data, etc. The CNMC is also responsible for the overall monitoring of the social bonus under the scope of retail electricity market monitoring.

  One of the critical responsibilities of the CNMC is to allocate social bonus cost between all electricity suppliers. The allocation parameters are set yearly by the CNMC based on the average number of customers of each supplier during the previous year.

- *Reference suppliers (8 companies).* Reference suppliers are those companies offering regulated tariffs (PVPC) to small customers (below 10 kW of contracted capacity). Parent company must establish a different company (reference suppliers) for regulated supply (at PVPC) subject to unbundling requirements. Reference suppliers play an active role in the application of the electricity social bonus since only customers under regulated tariffs can be beneficiaries from the bonus discounts. Reference supplier must apply the discount to vulnerable customers' bills but the final cost of the bonus is borne by all electricity suppliers.

  Reference supplier are responsible of: making social bonus application forms available for all customers; receiving application forms and related documents; review the application in collaboration with public administration data bases (income statements, civil register, etc) ; and accept/reject social bonus applications.

  Reference suppliers must comply with several reporting and transparency requirements such as the inclusion in all electricity bills of a notification informing about the social bonus. These suppliers must also inform the CNMC on the billing data of all the customers beneficiaries from the social bonus for monitoring and settlement purposes.

- *Electricity suppliers (around 250-300 companies).* All electricity suppliers (reference suppliers and free market suppliers) finance the social bonus cost proportionally to the number of customers served. Moreover, free market suppliers must inform eligible customers for regulated tariffs (PVPC) of the possibility to switch to a reference supplier to apply to social bonus discounts.

- *Eligible customers for the social bonus (vulnerable customers).* Customers must play an active role to apply to social bonus discounts. The application of the social bonus must be sent to the reference supplier by the eligible customers via telephone, internet or physical offices. Reference suppliers must provide to the customers the social bonus application form (harmonised regulated template). Applicants must fulfil the application form and send it to the reference supplier together with all the required support information.

- *Local and regional administrations*. Energy bills of customers in risk of social exclusion are completely or partially covered by local and regional public social services. The amount of electricity bills paid by public social services will be included in the overall cost of the social bonus and will be restored to the public administrations.

- Other entities. NGO and research institutes may contribute to the development of vulnerable customers regulation as advisory bodies. In addition, some NGO also manage additional support mechanisms to mitigate the impact of energy poverty.

*Table 2: Electricity Social Bonus: Roles and Responsibilities Matrix*

| Stakeholder | Spanish case | Role and responsibilities |
|---|---|---|
| Government | Ministry for Ecological Transition | • Overall regulation and legislation.<br>• Develop communication exchange protocols, templates, etc.<br>• Set allocation criteria of social bonus cost between suppliers.<br>• Overall monitoring.<br>• National Strategy against Energy Poverty |
| NRA | CNMC | • Social bonus settlement (from all suppliers to reference suppliers).<br>• Calculate and approve financial obligations of suppliers.<br>• Monitoring and reporting. |
| Reference Suppliers | 8 reference suppliers | • Manage social bonus applications.<br>• Review social bonus applications (cross check with public administrations data bases).<br>• Apply social bonus discounts.<br>• Information obligations. |
| Electricity suppliers | 250-300 suppliers (including reference suppliers) | • Finance social bonus.<br>• Information obligations. |
| Vulnerable customers | Around 1.3 beneficiaries of the electricity social bonus. | • Fill application form and send required documents<br>• Information obligations: update any relevant information for the social bonus. |
| Public social services | Regional and Local administration | • Payment of electricity bills of customers in risk of social exclusion. |
| Other entities | NGOs, sectorial organisations. | • Advisory role: participation on public consultations.<br>• Customer protection, media campaigns, etc. |

*Source: own elaboration*

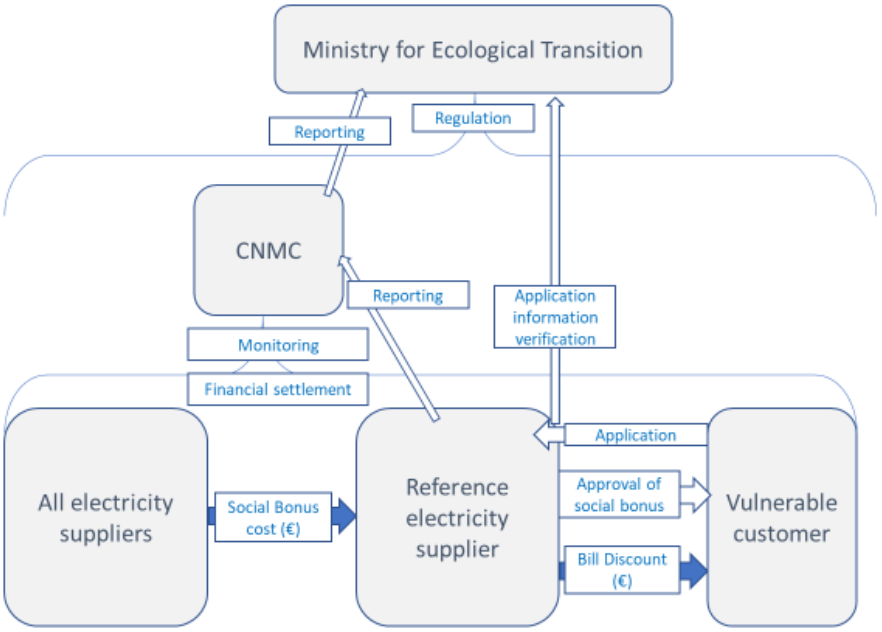



*Figure 1: Overview of electricity social bonus application*

### 2.1.2.3 *Vulnerable customers support mechanism: electricity social bonus*

In this section we provide a comprehensive analysis of the key elements of the electricity social bonus:

- Eligibility criteria: which are the requirements to be considered a vulnerable customers and benefit from the social bonus discounts?
- Financial measures: which are the discounts applied to vulnerable customers?
- Settlement of social bonus cost. We will explain how social bonus discounts are applied by reference suppliers and how bonus costs are borne by all electricity suppliers.

We will also analyse other protection mechanism applicable to vulnerable electricity customers.

### 2.1.2.4 *Eligible customers*

Eligible customers for social bonus discounts must initially comply with all the following requirements:

- The contract holder must be a physical person.
- The supply point of the contract mut be a main residence.
- The applicant must have a supply contract in force with a reference supplier under regulated tariffs (PVPC).
- Contracted capacity must be equal or below 10 kW.

In addition to the above requirements, customer or the family unit available income must be below a maximum income threshold. Income levels are defined based on the Public Income Indicator of Multiple Effects (IPREM). This

indicator is defined by yearly State Budget and is commonly used in Spain for the application of public aids and subsidies.

In the following chart we present the evolution of the Spanish yearly IPREM over the last 15 years.

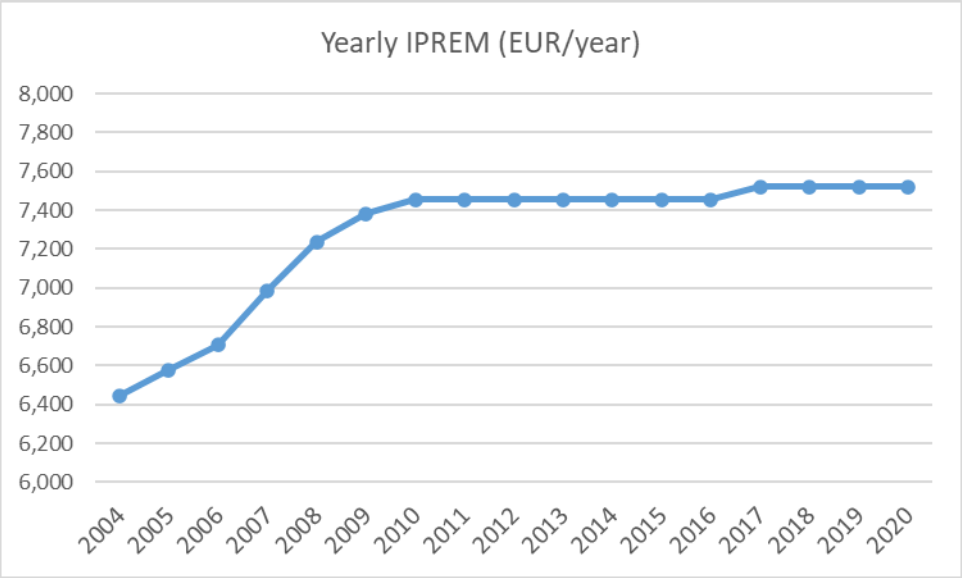



*Figure 2: Evolution of the Spanish yearly IPREM over the last 15 years*[6]

Based on yearly income of the family unit customers are classified into vulnerable customers and severe vulnerable customers.

*Table 3: Vulnerable customers maximum income*[7]

| | Vulnerable Customer | | Severe Vulnerable Customers | |
|---|---|---|---|---|
| | IPREM | 2020 income level | IPREM | 2020 income level |
| Family unit (no children) | 1.5 | 11,279 € | 0.75 | 5,640 € |
| Family unit (1 child) | 2 | 15,039 € | 1 | 7,520 € |
| Family unit (2 children) | 2.5 | 18,799 € | 1.25 | 9,399 € |
| Family unit (3 or more children) | No max income | | 2 | 15,039 € |
| Pensioner | Minimum pension | | 1 | 7,520 € |

The above income levels are increased by 0.5 IPREM if, within the family unit, there is a handicap person, gender violence victim, terrorism victim or a single parent.

In addition, those severe vulnerable consumers supported by the social services of a regional or local administration that finances at least 50% of the electricity bill will be considered consumer at risk of social exclusion.

[6] IPREM.com
[7] Source: CNMC

### 2.1.2.5 *Financial support for electricity social bonus beneficiaries*

Vulnerable customers benefit from a discount on its monthly electricity bills.

- The discount applicable on vulnerable customers' bills will be 25% of the PVPC (voluntary regulated tariff for small customers).
- For severe vulnerable consumer, the discount will be 40% of the PVPC.

In both cases, the discount is applied on the energy and power components of the bill. There is yearly maximum energy with the right to receive a discount. Yearly consumption limits for the social bonus discounts are as follows:

*Table 4: Maximum energy for the electricity social bonus*

| | **Maximum yearly energy for discount (kWh)** |
|---|---|
| Family unit (no children) | 1,380 |
| Family unit (1 child) | 1,932 |
| Family unit (2 children) | 2,346 |
| Family unit (3 or more children) | 4,140 |
| Pensioner | 1,932 |

Yearly limit is prorated between the number of days included on each bill. All the energy consumed above the maximum limit is charged at the usual PVPC without a discount.

Resulting tariff after the application of social bonus discounts is the social tariff (TUR):

> *Social Tariff (TUR) = PVPC (€/MWh) x Applicable (%) x Consumption below maximum (MWh) + PVPC (€/MWh) x Consumption above maximum (MWh).*

### 2.1.2.6 *Settlement of social bonus*

The application of social bonus discounts is responsibility of the reference supplier. Reference suppliers have 15 business days after the reception of the application to notify the customer whether the application is accepted or not. In case the social bonus request is accepted, the discount will be applied to the next bill issued at least 15 business days after the reception of the application. Otherwise, the discount will be applied on the subsequent bill.

The validity period of the social bonus is 2 years if the situation of the vulnerable customer does not change. Vulnerable customers must inform the reference supplier on any change affecting eligibility criteria that leads to the loss of social bonus benefits within one month after the change occurs.

The reference supplier must submit, before the 15$^{th}$ of each month, to the CNMC the billing information for the previous month of all social bonus beneficiaries to determine the total cost of social bonus borne by each reference supplier and required settlements. The settlement is carried out considering that social bonus cost is financed by each supplier according to the parameter set by the CNMC (following customers market share).

In 2018, total cost of the social bonus was 195 million €. In the following table we present the social bonus cost allocation parameters set by the CNMC in 2019 for the largest electricity suppliers:

*Table 5: Electricity Social Bonus Financing Parameters for 2019*[8]

| Supply Group | Customers | % of social bonus financed |
|---|---|---|
| Endesa | 10,620,986 | 36.26% |
| Iberdrola | 10,141,249 | 34.62% |
| Naturgy | 4,632,737 | 15.82% |
| EDP | 1,131,775 | 3.86% |
| Repsol | 656,883 | 2.24% |
| **Total 5 large groups** | **27,183,629** | **92.80%** |
| **Others** | **2,237,542** | **7.20%** |
| TOTAL | 29,421,171 | 100% |

#### 2.1.2.7 *Other support mechanisms*

In addition to the discounts on electricity bills, social bonus beneficiaries also have an extended grace period for the supply suspension due to non-payment. To interrupt the supply of general customers (under free market tariffs of PVPC), suppliers must wait at least 2 months after the notification of the non-payment. For vulnerable customers, the grace period for the supply interruption is 4 months. The electricity supply of customers under risk of social exclusion cannot be interrupted.

In addition to the electricity social bonus, electricity customers may also benefit from other financial aids to mitigate energy poverty. The social thermal bonus was introduced by the Royal Decree-Law 15/2018 to complement electricity social bonus in thermal uses: heating and cooking.

The budget allocated for the thermal social bonus in 2019 was 75 million €. Thermal social bonus is financed by national public budget.

Beneficiaries of the thermal bonus for 2019 are all the customers benefiting from the electricity social bonus as of December 31st, 2018. These customers do not have to carry out any action to receive the thermal social bonus.

Thermal social bonus aid is a unique yearly payment of between 25 and 123.94 € depending on the household characteristics and the geographical thermal zone.

[8] CNMC

**The Covid-19 crisis: social protection measures**

On March 14th, to limit Covid-19 infections, the Spanish Government declared the state of alarm with important restrictions on commercial activities and free movement of people. Later, on March 31st, restrictions were enlarged to limit economic activity only to essential activities.

In order to mitigate the impact of the economic restrictions on vulnerable customers, the Government has implemented some measures that will affect the Energy Sector:

- Prohibition of energy supply cuts. Since March 15th, energy supply (electricity, natural gas and oil products) was guaranteed through prohibiting the cut of vulnerable customers' supply. Since March 31st, this measure was extended to include all customers. Under the state of alarm, supply cuts due to non-payment cannot be executed and only disruptions for security reasons are allowed.
- Social bonus extension. The benefits associated to the electricity social bonus will be expanded to include all unemployed people and self-employees affected by Covid-19 restrictions.
- Suspension of energy supply contracts for self-employees and small and medium enterprises. These agents are now allowed to suspend or renegotiate their energy supply contracts to, for example, decrease contracted capacity. In fact, most electricity companies, at their own discretion, had already allowed its customers to modify contracted capacity but now this right is granted at national level for all customers.
- Deferment of energy supply payments. While the state of alarm is in force, self-employees and small and medium enterprises may defer energy payments. Suppliers shall not bear network access tariffs associated to customers subject to the payment deferment option. Suppliers shall inform each distribution company on the list of customers affected by the payment deferment. Deferred payments will be settled between customers and supply companies during the first 6 months after the end of the state of alarm.

#### 2.1.2.8 *Monitoring*

The CNMC monitors the effectiveness and implementation of consumer protection measures and will be competent to issue binding enforcement resolutions. Monitoring activities include the supervision of the electricity social bonus. National government also monitors the implementation of the social bonus.

Reference suppliers must submit on monthly basis to the CNMC all the billing information of electricity social bonus beneficiaries. This information must be clearly broken-down into billing periods.

The CNMC monitors the settlement of the social bonus. For these purposes, on a quarterly basis, the CNMC publishes and sends to the Ministry of Ecologic Transition a detailed monitoring report including the number of beneficiaries. This report will also include any additional information requested by the Ministry. In addition, the

Ministry, in coordination with the rest of the organizations involved, monitors the overall implementation of the social bonus.

For the analysis of the monitoring activities related to the social bonus application we present the indicators used by the CNMC and by the Ministry.

#### 2.1.2.8.1 CNMC Monitoring indicators

The CNMC uses different indicators to monitor the application of the electricity social bonus:

- **Number of beneficiaries**. On a monthly basis the CNMC includes on the electricity sector indicator bulletin the number of beneficiaries of the electricity social bonus classified by category.

  Based on the information published on the bulletins in the following diagram we present how the number of beneficiaries of the new social bonus (as defined in the current regulatory period) has evolved during the last two years. We have to point out that during the first months of 2018 two social bonus regimes (old and new) coexisted. Gradually most customers were transferred from the old regime to the new one.

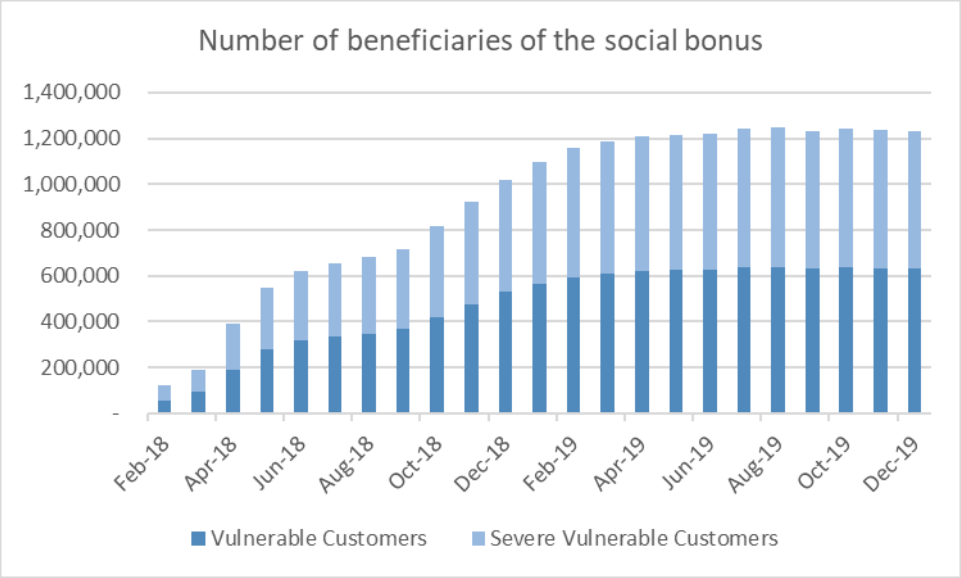



*Figure 3: Number of Beneficiaries of the Social Bonus*[9]

In the following table we present the breakdown of vulnerable customers as reported by the CNMC in December 2019.

*Table 6: Number of Beneficiaries of the Electricity Social Bonus*[10]

| December 2019 | Vulnerable customers | Severe vulnerable customers | Total |
|---|---|---|---|
| Pensioners | 98,582 | 72,494 | 171,076 |

[9] Source: Based on CNMC data
[10] CNMC indicator bulletin February 2020

| | | | |
|---|---|---|---|
| Large families (3 or more children) | 213,215 | 89,507 | 302,722 |
| Family (no children) | 282,554 | 338,771 | 621,325 |
| Family (one child) | 20,253 | 61,033 | 81,286 |
| Family (2 children) | 16,306 | 38,135 | 54,441 |
| **Total** | **630,910** | **599,940** | **1,230,850** |

- **Cost of the social bonus**. On a yearly basis the CNMC includes on the electricity retail market monitoring report the cost of the electricity social bonus classified by category.

*Table 7: Cost of Electricity Social Bonus[11]*

| Social Bonus Category | 2017 settlement (€) | 2018 settlement (€) |
|---|---|---|
| Vulnerable customers | 154,536,215 | 159,557,813 |
| Severe vulnerable customers | 29,620,091 | 35,618,152 |
| Risk of social exclusion | 17,107 | 38,274 |
| **Total** | **184,173,413** | **195,214,239** |

- **Customer complaints**. The CNMC monitors the number of complaints received by supplier companies on different topics. One of the complaints analysed focus on problems arising with the application of the social bonus. In 2018, around 40,000 complaints related to the electricity social bonus were received by reference suppliers (in 2017 this number was below 10,000). According to the CNMC most of these complaints are attributable to the new regulatory framework, still unknown by most of customers at that time.
- **Customers' awareness of the electricity social bonus**. Each 6 months, the CNMC carries out a multisectoral household survey. The survey collects data related to the telecommunications, energy and postal sectors. Last survey included 4,878 households and 9,109 individuals (1st semester 2019). Among other things, the CNMC asks the customers about their knowledge on the social bonus.

  In the following table and charts, we summarise the responses of the survey as reported by the CNMC:

*Table 8: Public Awareness on Electricity Social Bonus[12]*

| | | | |
|---|---|---|---|
| Aware of the social bonus | 66.2% | Aware of the requirements for the social bonus | 65.7% |
| | | Not aware of the requirements for the social bonus | 34.3% |
| Not aware of the social bonus | 30.4% | | |
| No answer | 3.4% | | |

[11] CNMC Retail Electricity Market Monitoring Report 2018
[12] CNMC Household Survey 2019 - 1st Semester

*Table 9: Public Awareness on Electricity Social Bonus[13]*

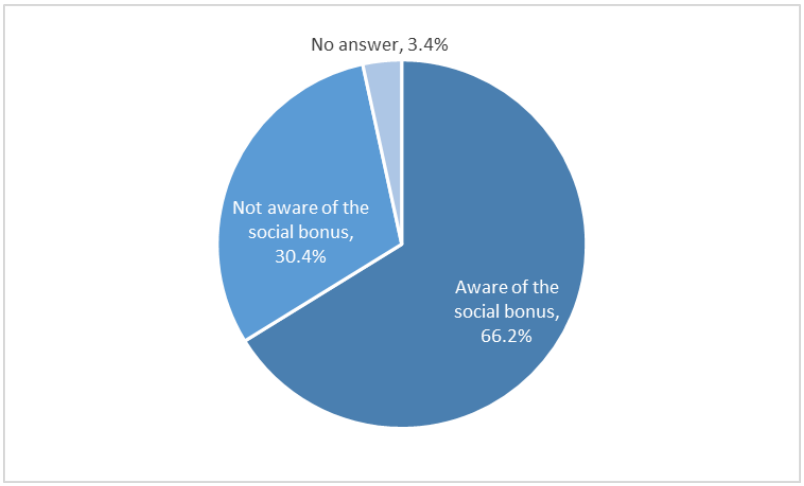
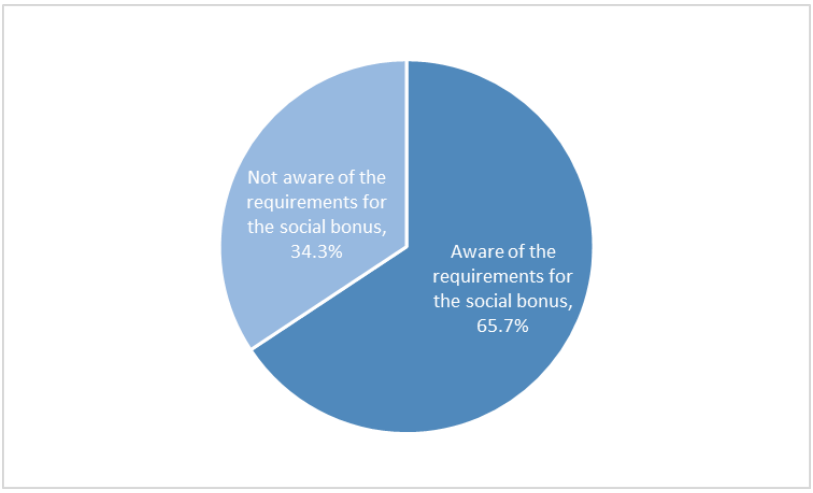



*Table 10: Public Awareness on Electricity Social Bonus[14]*




#### 2.1.2.8.2 Ministry for Ecological Transition Monitoring indicators

The National Strategy against Energy Poverty 2019-2024, approved on April 5, 2019 by the Government, aims, among other things, to improve knowledge about energy poverty. To this aim, the Government updates periodically the selected indicators for monitoring the evolution of energy poverty. These indicators are the same in use by the European Observatory on Energy Poverty.

1. High share of energy expenditure in income (Disproportionate expenditure, 2M): Percentage of households with an energy expenditure (% of income) more than double the national median.
2. Low absolute energy expenditure (Hidden energy poverty, HEP): Percentage of households with an absolute energy expenditure less than half the national median.

[13] CNMC Household Survey 2019 - 1st Semester
[14] CNMC Household Survey 2019 - 1st Semester

3. Inability to keep home adequately warm: Percentage of the population that cannot keep their home at an adequate temperature.
4. Arrears on utility bills: Percentage of the population that has late payment of bills for housing energy supplies.

Data to calculate these indicators is obtained from the statistical instruments of the National Institute of Statistics, specifically:

- Family Budget Survey: Data for disproportionate spending and hidden energy poverty indicators.
- Living Conditions Survey: Data for inadequate temperature and late payment of bills

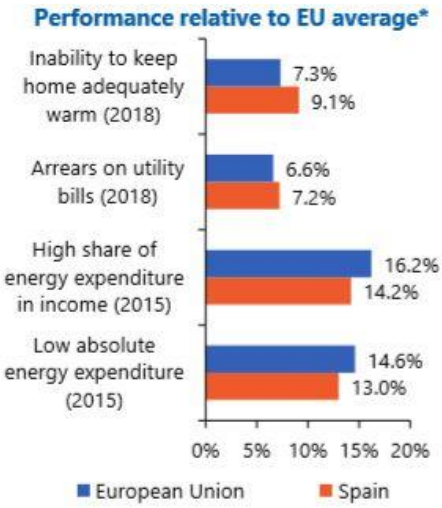
In the following table we present the evolution of the energy poverty indicators in Spain.

*Table 11: Energy Poverty Indicators Evolution in Spain[15]*

| Indicator | 2008 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| High share of energy expenditure (2M) | 15.9% | 16.6% | 16.6% | 16.7% | 17.3% | 16.9% |
| Low absolute energy expenditure (HEP) | 14.6% | 13.2% | 11.3% | 11.3% | 10.7% | 11.0% |
| Inability to keep home adequately warm | 5.9% | 11.1% | 10.1% | 10.1% | 8.0% | 9.1% |
| Arrears on utility bills | 4.6% | 9.2% | 7.8% | 7.8% | 7.4% | 7.2% |

According to the Ministry for Ecological Transition (National Strategy against the Energy Poverty 2019 – 2024) between 3.5 and 8.1 million people suffer energy poverty in Spain depending on the indicator selected. This is between 7.4% and 17.3% of total population.

In addition, the EU Energy Poverty Observatory (EPOV) provides an overview of the energy poverty situation in Spain at a glance. With key indicators, policies, and publications, it offers an understanding of the key aspects of energy poverty in Spain.




[15] National Strategy against the Energy Poverty 2019 – 2024

*Figure 4: Energy Poverty Situation in Spain*[16]

#### 2.1.2.9 *Risk assessment*

Current vulnerable customers support regime (electricity social bonus) has only been in place since the beginning of 2018. However, the number of beneficiaries has remained stable around 1.2 million customers since mid-2019. Therefore, we can consider the implementation of the new social bonus as already consolidated to assess the main problems and barriers.

Most of key stakeholders are aware of the limitations and problems of the social electricity bonus. The Ministry for Ecological Transition considered that the experience accumulated since the launching of the new social bonus and the analysis carried out for the preparation of the National Strategy against Energy Poverty reveal some deficiencies in the application of the bonus.

Currently the most important problem of the electricity social bonus is the limited number of beneficiaries. Considering that estimated people suffering energy poverty is between 3.5 and 8.1 million people the current number of electricity social bonus beneficiaries (1.3 million customers) is clearly insufficient. That is, there exist an important number of vulnerable customers that are not covered by the social bonus.

The question to answer is why there are so few beneficiaries of the social electricity bonus compared with the population in energy poverty. Below we try to summarise the main barriers and problems that limit the effective application of the social bonus.

- **Inadequate eligibility criteria**. Some of the requirements to receive the social bonus may limit its social outreach preventing some vulnerable customers to benefit from it and leading to some un-efficient solutions.
  - Only customers served under regulated tariffs (around 50% of domestic customers) may apply for the social bonus.
  - Maximum income levels are set at national level. The cost of living in different regions and rural/urban areas is not considered. The Strategy for 2019 and 2024 identified this as an important area for improvement.
  - Large families (3 or more children) are considered as vulnerable customers without any consideration on the income level.

  The problematic of defining adequate eligibility criteria is complex. There is a trade-off between covering the most possible number of vulnerable customers and cost efficiency principles. For example, under the previous eligibility criteria (before 2018) all customers with a contracted capacity below 3 kW were automatically considered as vulnerable customer without taking into consideration income levels.

- **Problems during the application process**. The assessment of the social bonus application procedure for the preparation of the National Strategy against the Energy Poverty concluded that current practices slow down and add complexity to the application process. This conclusion comes from an internal analysis carried out by the Ministry and was supported by numerous contributions during the public consultation. The application procedure is deemed as arduous and difficult for the consumer for different reasons:
  - **Excessive administrative burden**. The evaluation of the application is done by the supplier company requesting all the data to public administrations. There are several data protection issues affecting this

[16] National Strategy against the Energy Poverty 2019 – 2024

procedure since a private company is requesting personal data of customers. Customers also bear important administrative burdens to present all the required information.

- **Malpractices of reference suppliers**. The CNMC has observed a "certain lack of diligence by some reference suppliers during the application procedure"[17]. From 2017 to 2018 the number of complaints presented to reference suppliers on social bonus related issues increased from 10,000 to 40,000.

- **Lack of public awareness.** The public awareness on social bonus related issues is quite limited. According to CNMC last household survey of 2019:
  - Only 22% of households know the difference between regulated supply tariff (PVPC) and free-market tariffs. 64% of household do not know if their contract is under PVPC or free market tariffs. Having a regulated supply contract is mandatory to benefit from the social bonus.
  - Only 66% of households are aware of the electricity social bonus. Of this percentage, only 65.6% know the requirements to benefit from the social bonus.
- **Problems with the allocation criteria of social bonus costs**. The cost of social bonus discounts is borne by all suppliers proportionally to the number of customers. Therefore, those supply companies with the highest share of domestic customers are penalised with respect those suppliers serving large consumers.

In the following criteria we summarise the main problems identified together with potential mitigation measures under consideration and the key responsible of the mitigation measure.

*Table 12: Risk Mitigation Matrix*

| Problem/risk | Mitigation measure | Responsible |
|---|---|---|
| Inadequate eligibility criteria | According to the National Strategy against Energy Poverty, eligibility criteria should be focused on real available income levels.<br>Legislative actions are required to modify current regulatory framework | National government |
| Excessive administrative burden | Closer collaboration between public administrations and supplier may ease the application procedure.<br>Legislative actions may be required to modify current regulatory framework | Public administrations<br>National government |
| Malpractices of reference suppliers | Enforcement actions of the CNMC | CNMC<br>Reference suppliers |
| Lack of public awareness | Public and social media campaigns. | Public administrations |
| Problems with the allocation criteria of social bonus costs | Legislative actions are required to modify current regulatory framework | National government |

#### 2.1.2.10 *Action Plan*

Most of the risks and problems presented in the above section are included in the National Strategy against Energy Poverty as the main barriers to be overcome. In this section we will present the key lines of action of the Strategy

[17] CNMC (2018) monitoring report on customers' complaints

affecting electricity vulnerable customers. The Strategy has been prepared based on several proposals from different stakeholders on different topics. Among other things, the Strategy includes some recommendations to improve some critical elements of current social bonus that have been pointed out recurrently over the last years by NGOs, consumer protection associations, etc.

*Table 13: National Strategy against Energy Poverty Action Plan: Key Elements*

| Action | Some specific measures |
|---|---|
| Improve existing support mechanism | Modify existing social bonus (electricity and thermal).<br>Develop a new integrated social bonus for all energy uses. |
| Measures to prevent supply interruptions | Application of a minimum life-line supply more protected from supply interruptions.<br>Prohibition to interrupt supply in extreme climate conditions |
| Improving knowledge about energy poverty | New indicators.<br>More comprehensive approach to energy poverty analysis. |
| Subsidies for house rehabilitation and equipment renewal | |
| Public awareness program | |

#### 2.1.2.10.1 National Strategy against Energy Poverty

The National Strategy against Energy Poverty 2019 - 2024 approved by the Spanish Government in March 2019 seeks to address a situation that affects between 3.5 and 8.1 million citizens, reducing at least 25% the incidence of energy poverty but seeking to reach a 50% improve.

The Strategy uses a holistic approach to energy poverty structured under 4 different axis, 9 lines of action and 19 specific measures. We will focus our analysis on those lines of action most related to vulnerable customers protection.

The first axis, "improving knowledge about energy poverty", includes three measures aimed at updating and periodically calculating energy poverty indicators and conducting a more complete study of the minimum energy expenditure required by consumers according to the climate area in which they inhabit. In the previous analysis on energy poverty monitoring activities we have already outlined the key indicators used.

Probably the most relevant axis for our analysis is axis II aiming to improve current situation on energy poverty. There is one specific line of action focused on the upgrading of subsidies mechanism for energy poverty.

After the assessment of current framework, the Strategy presents a set of recommendations to improve current electricity social bonus:

- Reduce administrative burdens. The application procedure could be simplified if the review of data for the eligibility assessment is carried out directly by the public administration. Currently is the reference supplier who verifies each requirement upon request of data to public administration.
- Increase the overall transparency of the mechanism guaranteeing legal certainty.

- Take into consideration the diversity of cost of living and climate conditions among the Spanish territory.
- Income should be the main criteria to allocate social bonus aids.

The Strategy also proposes some modifications on the thermal social bonus such as the calculation of the aids based on the estimated energy consumption based on the fuel, household conditions and heating technology.

In addition to the modifications on existing support mechanisms (thermal and electricity social bonus) the Strategy recommends defining a **new integrated energy social bonus** for all energy uses. The new social bonus should be defined following three principles:

1. Harmonization of all energy sources. The new financial support mechanism must be configured as an integral aid for all energy supplies both electrical and thermal. The latter will include uses for heating, air conditioning in certain climatic zones, domestic water and cooking. The joint approach allows addressing the problem from a broader perspective and closer to the reality of Spanish households. The plural nature of the new support mechanism should not lead to added difficulties in terms of actions and administrative burden for vulnerable customers.
2. Automatization of procedures. It is necessary improve the automatization of all procedures, avoiding the complexity of current procedure. In neighbouring countries such as Portugal or France the eligibility assessment and aids concession is done automatically by the public administrations without any prior customer application. Income data should be cross check with other data bases (e.g. energy consumption, social services data base) to identify potential beneficiaries.
3. Coordination and collaboration among public administrations involved.

Moreover, the Strategy also recommends the application of a minimum life-line supply. For certain vulnerable customers identified by social services, the prohibition of supply interruption should be extended 4 months plus the regulated period. During these additional four months, the vulnerable consumer's supply will be adapted to the life-line supply. This life-line supply level will be estimated in advance based on the characteristics of the household.

Another proposed vulnerable customers protection measure is the prohibition to interrupt supply in extreme climate conditions. The application of this measure requires the definition of essential energy sources and a close collaboration between weather forecast agencies and utilities (suppliers and DSOs).

Other important measures included in the Strategy are:

- Subsidies for housing rehabilitation (isolation, efficiency, renewal of heaters, etc). Up 100% subsidies for vulnerable customers.
- Special financial aids for social renting houses.
- Subsidies for household appliances renewal. Up 100% subsidies for vulnerable customers.
- Rehabilitation program for residential buildings.

Public awareness program on Energy Poverty, smart meters, efficient consumption habits, etc.

### 2.1.3 Italy

In Italy, there is not an official definition of vulnerable consumers or energy poverty. However, some measures have been in place to address the issue for years and there is awareness in the country. The law, concerning public service obligations and consumer protection, specified that all domestic consumers and small businesses (with fewer than

50 employees and a turnover of less than €10 million) who do not choose their supplier on the free market are served under the protected-tariff regime. On the other hand, an informal definition provided by the Authority indicates that a family is vulnerable when more than 5% of income is spent for electricity.

In the country, in 2008 and 2009, as a result of specific legislative interventions, with the aim of ensuring households access to essential services, economic incentives for the supply of electricity, natural gas and water service (hereinafter also: *national social bonuses*) were introduced to compensate the expenditure incurred by households.

At the beginning of the introduction of the regulation in support of fuel poverty, just over 2 million households have at least once obtained the bonus for electricity and/or gas, but many of these households have decided not to renew the bonus claim. In addition, initially the balance between new entries and non-renewal has gradually thinned out. After the start-up year, the new entrants in the system progressively decreased[18].

In the face of a difficult economic situation for an increasing number of families, these trends have led the ARERA to have some insights, first of all, highlighted the existence of specific groups of customers who have not requested the bonus, although they are eligible.

Therefore, over the years, ARERA has undertaken a progressive minimization of information and "bureaucratic" barriers to access such as:

- a general promotion of bonus information
- a simplification and automation of access procedures
- punctual actions against specific categories of clients

In 2019, as has already happened in recent years, there has been a slow but steady growth in the total number of bonus recipients, i.e. compensation for the expenditure incurred for the supply of electricity, gas and water for households in conditions of economic vulnerability or serious health.

In particular, in 2019;

- 837,598 households were recipients of the electricity bonus for economic discomfort
- 558,514 for the gas bonus
- 447,213 for the water bonus
- 41,000 households received the electricity bonus for physical discomfort[19]

To summarize, at present, there exist several measures to protect customers including vulnerable household customers, utilities, activities relating to public service such as hospitals, nursing homes and rest, prisons, schools and other public and private facilities that perform an activity recognized of public service. Social bonus mechanism is applied for the electricity customers whose annual income does not exceed a certain threshold, where the mechanism is set up by the law and certified by equivalent economic situation indicator, that takes into account

[18] Report on the outcome of the fact-finding survey on the state of implementation of the electricity and gas bonus regulation of 27 February Resolution ARERA 72/2014

[19] From the ARERA data anticipated to the President of the Republic, the Presidents of the Chamber and Senate, the Prime Minister and the chairmen of the parliamentary committees, downloadable from the website www.arera.it , the two volumes of the Arera Annual Report on the State of Services and Activities.

income, assets, the characteristics of a family by number and type. The social bonus is a discount of the electricity bill each year, dependent upon the use, number of people in the family, and climate zone.[20] The vulnerable consumers are mainly identified through the welfare system and the SIA initiative, which is an organised programme to help households for addressing the reasons behind their state of poverty.

#### 2.1.3.1 *Regulatory Structure*[21]

In Italian electricity sector, the **Legislative Decree no. 93/11** did not provide a specific definition of vulnerable customers. On the other hand, Article 35 on **Public Service Requirements and Consumer Protection** required that all household consumers and small businesses with fewer than 50 employees and a turnover of less than €190 million that do not choose their supplier on the open market are served as part of the standard offer service.

The policy related to electricity vulnerable consumers and that aims to provide support in energy consumption to households living in poverty or which include a disabled, or a critically ill person (i.e. using medical device) has been set forth by the **Law 205** of 23 December 2005, and then was implemented through Ministerial Decrees in 2007 for electricity.[22]

The regulation also stated that the Ministry of Economic Development may adapt the standard offer service forms of provision, in particular with regard to industrial customers considering the competitive conditions in the retail market and as a result of the monitoring conducted at least every two years. The service fees are updated on a quarterly basis, by reference to market conditions related to procurement and marketing costs.

In Italy, a protection mechanism has been active since January 2009 and domestic customers with economic difficulties or those are in serious health conditions are protected related to electricity supplies, and they receive a bonus or discount on the electricity supplies.

The list of life-saving electro-medical equipment that gives the right to the bonus has been identified by the **Decree of the Ministry of Health of 13 January 2011**.

In 2012, changes were introduced to the electricity bonus rules for customers with serious health conditions and the bonus for physical limitation was split into three bands that are;

- in order to consider the type of equipment used
- the average hourly consumption of each type of equipment
- the average hours of daily use

Based on these elements, certified by the ASL (Local Health Authority), the customers are assigned to one of the three compensation bands envisaged. The three bands are then further differentiated in order to consider the power involved (up to 3 kW and from 4.5 kW). [23]

[20] Thomson H. and Bouzarovski S., August 2018, Addressing Energy Poverty in the European Union: State of Play and Action
[21] ARERA, 28 July 2016, Annual Report to the Agency for the Cooperation of Energy Regulators and to EC on the Regulatory Activities and the Fulfilment of Duties of the Italian Regulatory Authority for Electricity, Gas and Water
[22] Mİniaci R., Valbonesi P, Scarpa C., May 2016, benefits to vulnerable consumers in Italian energy markets: a focus on the eligibility criterion
[23] Vulnerable Consumer Working Group Guidance Document on Vulnerable Consumers, November 2013

The **Decree of the President of the Council of Ministers no. 159 of 5 December 2013** established a new ISEE[24] calculation procedure, designed to make more correct measurements of the economic condition of households and to improve equity access to social benefits, strengthening the fight against abuse, which in the past resulted in undue enjoyment of performances and benefits.

In 2014, ARERA sent the **Report 273/2014/I/com** to the Prime Minister, the Ministers of Economic Development, Economy and Finance, Labour and Social Policy that consist of some proposals to expand the number of potential beneficiaries of the electricity bonus in favour of the economically disadvantaged clients and the patients who use lifesaving electrical equipment and proposed a number of improvements to the decrees implementing the discount on bills. The proposal included[25]:

- extension of potential recipients, the access criteria to the facilitation and the amount on which to calculate the bonus
    - revaluation of the bonus by placing the expenditure before tax as a reference of discount rather than the expenditure net of taxes
- enhancing the reduction of energy expenditure of the most vulnerable families and to introduce some improvements with respect to the new method of calculation of the ISEE (Equivalent Economic Status Indicator)
    - annual indexation of the ISEE threshold level to improve the ability to intercept the economic hardship
- incorporating the legislation on bonuses with a principle which provides that, in the winter period alone, the recourse to suspension of supply for non-payment, as regards holders of electricity bonus, should be deferred.
    - completion of the Purchase Card assignment process to make feasible the automatic allocation of the electricity bonus and extend it to the gas bonus
- institutional information campaign involving the relevant ministries and recovering at least part of claimants who have not claimed the bonus to date.
- actions of administrative simplification in the application process

The Report does not contain any proposal on possible changes to the ISEE threshold levels. However, the objective remains to increase the ISEE threshold in order to broaden the range of possible beneficiaries of the bonus.

**Legislative Decree no. 102 of 4 July 2014**, transposing the European Directive on energy efficiency, was concluded in December 2015 with **Resolution 582/2015/R/eel of 2 December 2015**. ARERA was called to adjust the components of the electricity tariff, in order to go beyond the progressive structure with respect to consumption by identifying tariff components consistent with service costs and also to stimulate virtuous behaviours and favour the achievement of efficiency objectives. The Decree also provides that the Regulatory Authority formulate

[24] ISEE is a criterion to evaluate the family economic situation. It gives you the opportunity to take advantages of social benefits depending on the family economic situation.
[25] https://www.arera.it/it/inglese/press_releases/14/140623.htm

proposals for the definition of new criteria to determine cost compensations to be granted to economically disadvantaged groups.

In February 2015, the Regulatory Authority envisaged some hypotheses of corrective action to the rules, which would add to the suggestions already made by the Regulatory Authority in a report made to the Government and Parliament in June of the previous year. The different hypotheses have the purpose of increasing the range of beneficiaries, the saving rate for owners, breaking down the bonuses and the saving rate based on the customer's consumption profile and household size and reducing the tax or general expenses components based on the increase in costs related to the reform of electricity tariffs.

With the **Report 287/2015/I/com of 22 June 2015** to Parliament and Government, the Regulatory Authority made further proposals, complementing those presented above for the following aspects:

- raising the percentage of annual expenditure reduction, in order to neutralize the negative economic impacts of the tariff reform. In the absence of corrective action, the introduction of tariff reform would entail an increase in overall spending for the vast majority of customers eligible for the economic hardship bonus, particularly for smaller nuclei;
- introducing a supplementary amount to the electricity bonus, equal to the difference of the additional average annual electricity consumption compared to the average annual consumption of all customers, for those who do not use the gas bonus;
- eliminating the current constraint by which only the supply active at the registered address of the person who is eligible for the bonus can be subsidised, also in the interest of simplification.

As end of 2015 the families that made use of the subsidy at least once were 2.4 million. The families with active bonus were 622,151 in 2015, 33% less than the previous year. The beneficiaries in 2015 were 28,267, up 8% over the previous year.

The fees connected to the distribution of the electricity bonus for economic and physical limitations are included among the components of the general charges pertinent to the electricity system and are covered by a specific tariff component, which is paid by all the customers who do not benefit from the electricity bonus.

With **Resolution 271/2015/R/com of 4 June 2015**, the Regulatory Authority initiated a process to define a roadmap to review existing price protection mechanisms. According to ARERA, for the price protection mechanism to finalize, a plan is required which clearly defines actions, their impact and timeline for the actions and also consist of topics in terms of empowering of smaller customers.

With **Consultation Document 421/2015/R/eel of 6 August 2015**, ARERA set out the guidelines for defining the reform process in detail and identifying approaches differentiated by final customer type and sector. A possible area of initial implementation was seen as the supply of electricity to small businesses (LV) with the possible exception of extremely small customers with power used up to 1.5 kW. In addition, a new stage was envisaged with the evolution of standard offer and voluntary customer processes to make the service more consistent with the role of last resort (universal service).

With **Consultation Document 75/2016/R/eel of 25 February 2016**, further guidelines were established for household customers and small businesses, so that by 1 January 2018 getting past the standard offer service[26] will consist solely in the termination of price protection and not in the cancellation of the customers' right to have assured service continuity.

Pending the complete revision of regulations, the Regulatory Authority approved some transitional provisions, under which in 2016 the calculation of the valid bonuses for customers suffering financial hardship should be made without recognising compensation amounts lower than already guaranteed or a worsening of economic conditions due to the electricity expense.

With **1/2017/R/eel[27],** ARERA increased the electricity bonus for households in need. In 2017, the bonus went from the 20% calculated on the net expenditure to the 30% off the average expenditure before tax. The reduction of the expenditure net of taxes has been 32% on average. The adjustment was also for the maximum ISEE level for subsidy eligibility. Hence, for households with fewer than 4 dependent children, the 29 December Decree provided the update for 2017 as €8,107.5 (it was 7,500 euro from 2008 to 2016), thereby increasing the number of potential beneficiaries. Thereafter, it will be updated every 3 years by the Regulatory Authority based on the performance of consumer prices.

Later, as a result of the new compensation calculation rule, the electricity bonus allows low-consumption resident customers who are entitled to completely offset also the possible effects of the tariff reform for household customers.

In 2017, the **National Energy Strategy** was published defining energy poverty as *"the difficulty of purchasing a minimum set of energy goods and services or access to energy services that implies a diversion of resources, in terms of expenditure or income, higher than a normal value."*

In 2018, there were 771,566 families who obtained the bonus for economic hardship, an increase of 9.1% compared to the previous year; to which the 23,600 beneficiaries of the bonus distributed to owners of purchase cards are added, which decreased by 7.4% compared to 2017. There were 33,282 beneficiaries of the bonus for physical limitation on 31/12/2018, an increase of 2% compared to 12 months before.[28]

Recently, according to the **Law 28 March 2019, n. 26**, the holders of the income of citizenship have the right to access the electricity, gas and water bonus even if the ISEE threshold is higher than €8,265.

From the 1st of January, 2021 the recognition of bonuses to those entitled will be automatically, without the need for the families concerned to submit an application procedure on the basis of the provisions **of Decree-Law no. 124 of October 26, 2019,** converted with amendments by Law no. 157 of December 19, 2019, on the proposal made by the Authority with the Report of June 25, 2019, 280/2019/I/com. This will bridge the gap between potential beneficiaries and actual recipients of bonuses (about 2.6 million households).

In particular, the new automatic recognition system of benefits to those entitled will be based on the exchange of the necessary information contained in the databases of the INPS (Italian Social Security Administration) and in the Sistema Informativo Integrato managed by the Acquirente Unico, in compliance with the regulations on the

[26] Standard offer service will be explained in more detail within the scope of Task 6 of this project.
[27] https://www.arera.it/it/inglese/press_releases/17/170113.htm
[28] Arera, 31 July 2019, Annual Report to the Agency for Cooperation between European Energy Regulators and the EC on the business carried out and the Tasks of the Italian Regulatory Authority for Energy, Networks and the Environment,

protection of personal data. The definition of the implementation modalities of the new system is left to the Regulator.

#### 2.1.3.2 *Financial Measures*

The main incentive applied regarding vulnerable consumers is the electric bonus, a discount on the bill. The bonus ensures savings on electricity expenditure for families in conditions of economic and physical hardship and for large families.

There are two different implementation areas for electric bonus, the first one being economic hardship and the other one being serious health conditions. The spending ability of the family is tested by using a synthetic indicator called ISEE (Indicatore di Situazione Economica Equivalente, Equivalent Economic Conditions Indicator), which combines information about income, real and financial assets, family composition and occupational status of household members. Given that the benefits are paid in the form of lump-sum discounts on the electricity and gas bills, a necessary eligibility condition is that the household must be a domestic customer in its primary residence.

##### 2.1.3.2.1 Economic hardship[29]

The bonus is foreseen for:

- Families with ISEE (Equivalent Economic Conditions Indicator) not exceeding € 8,265
- Large families (with more than 3 dependent children) with ISEE not exceeding € 20,000
- to a family unit withholding a Citizenship Income or Citizenship Pension

Each household that meets the requirements referred to in the first two items may request the bonus due to economic inconvenience for the electricity supply.

In order to get the bonus, applications shall be submitted to the municipality of residence or to another body designated by the Municipality (CAF, Mountain Communities) using the appropriate forms. In addition, the holders of Citizenship Income or Citizenship Pension, shall submit the application by going to Municipalities or CAF, in the same way as the other subjects.

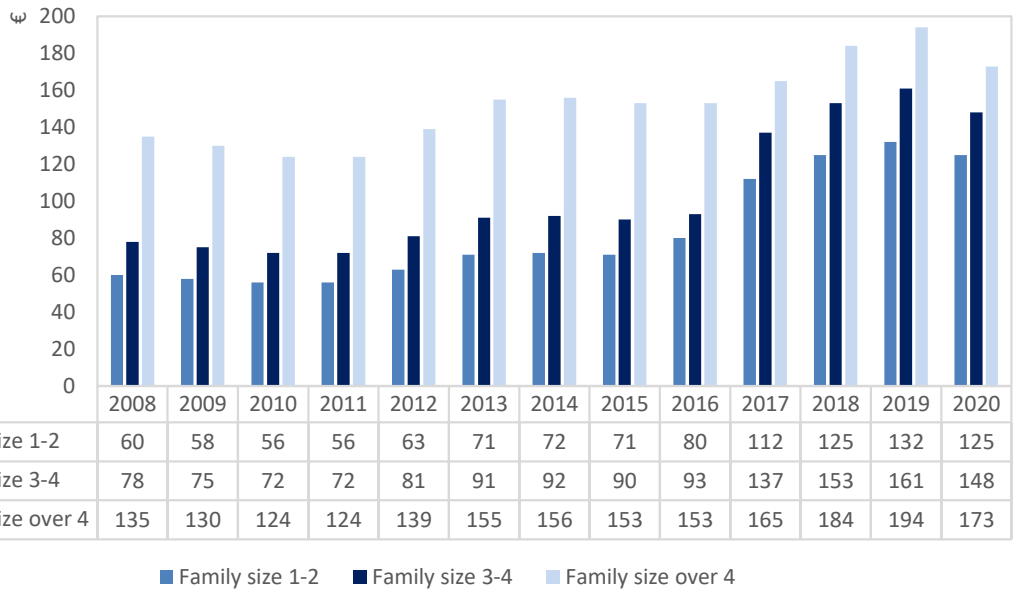
The documents required during application are:

- Identity document
- Any delegated attachment D (if the request is submitted by a delegate and not by the supply holder)
- Form A completed (with POD code (identification of the energy delivery point) and the committed or available power of the supply available on the bill or in the supply contract)
- Valid ISEE certificate
- Annex CF with the members of the ISEE nucleus
- Attachment FN for the recognition of large families, if the ISEE is greater than 8,265 euros (but within 20,000) (only for large families)

[29] https://www.arera.it/it/bonus_sociale.htm

The holders of citizen's income or citizenship board should also disclose protocol number assigned to the Income / Citizenship Pension or certificate useful to document the ownership of the applicant for the Rreddito / Citizenship Pension. Forms are documents that constitute an act of notoriety; therefore, their content must be truthful.

The value of the bonus depends on the number of members of the registry family and is updated annually by the Authority. The bonus value (in €) between 2008-2020 are shown in the figure:




| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Family size 1-2 | 60 | 58 | 56 | 56 | 63 | 71 | 72 | 71 | 80 | 112 | 125 | 132 | 125 |
| Family size 3-4 | 78 | 75 | 72 | 72 | 81 | 91 | 92 | 90 | 93 | 137 | 153 | 161 | 148 |
| Family size over 4 | 135 | 130 | 124 | 124 | 139 | 155 | 156 | 153 | 153 | 165 | 184 | 194 | 173 |

*Figure 5: Bonus Values Between 2008-2020 (€)*

Application for the bonus must pass a series of verification steps that are carried out by the municipality and SGATE (System of Ganagement Agevolazioni on Tariffe and Energetiche) before being translated into the discount on the bill. SGATE is the online information system which manages the entire process necessary to activate the bonus for citizens in possession of the requirements.

The bonus value is discounted directly on the electricity bill, being divided into the different bills corresponding to the consumption of the 12 months following the submission of the application. Each bill reports a part of the bonus proportional to the period to which the bill refers. Bonus is available for 12 months and the citizen shall renew the application at the end of this period by submitting a specific application. Renewal application is submitted one month before the expiry of the current concession and is approved only if the conditions for admission still exist (ISEE, residence, etc.). Application is made to the municipal offices or CAF.

When the bonus is granted, a specific communication is inserted in the bill. When the bonus is being paid out, both the admission to the compensation and the details of the amount relating to the application of the bonus are highlighted in the "total network services - fixed portion" section.

In case there is a change in conditions (e.g. the number of family members or the income and property situation of the citizen changes) at the time of the renewal, changes can be communicated to SGATE system.

If the seller or the type of contract (for example, switching from a contract from the protected market to one in the free market) changes, the bonus continues to be paid without interruption until the end of the validity of the right.

#### 2.1.3.2.2 Serious health conditions - physical discomfort[30]

All domestic customers suffering from serious illness or domestic customers with electrical supply from whom a person suffering from serious illness, forced to use electromedical equipment necessary for the maintenance of life, can get the bonus. The bonus for physical inconvenience can be combined with that for economic inconvenience (both electricity and gas) if the respective eligibility requirements are met.

Similar to economic hardship, the application is submitted to the municipality of residence of the owner of the electricity supply (even if different from the patient) using the appropriate forms or to another body designated by the municipality (CAF, mountain communities)

To have access to the bonus, the customer must be in possession of:

- an ASL certificate certifying:
  - the situation of serious health condition
  - the need to use electro-medical equipment for life support
  - the type of equipment used and the hours of daily use
  - the address where the equipment is installed
- the identity document and tax code of the applicant and of the patient if different from the applicant
- the module B filled

it is also necessary to have some information available on the bill or in the supply contract:

- POD code (identification of the energy delivery point). The POD code is a code made up of letters and numbers, which begins with IT and identifies in a certain way the physical point where the energy is delivered by the supplier and taken by the end customer. The code does not change even if you change supplier
- the committed or available power of the supply.

It is not necessary to present the ISEE to get the bonus for serious health conditions. The value of the bonus for physical discomfort is divided into 3 levels which depend on contractual power, life-saving electro-medical equipment used and daily time of use.

[30] https://www.arera.it/it/bonus_sociale.htm

*Table 14: €/year per Withdrawal Point (for the year 2020)*

| 2020 | Minimum Band | Medium Range | Maximum Range |
|---|---|---|---|
| Extra consumption compared to typical user (2700/kWh/year) | Up to 600 kWh/year | Between 600 and 1200 kWh/year | Over 1200 kWh/year |
| Up to 3 kW | € 185 | € 305 | € 440 |
| Over 3 KW (from 4.5 kW up) | € 433 | € 548 | € 663 |

There are three levels of support, which is calculated by the computer system that manages the facilities based on what is certified by the ASL. The bonus amount is discounted directly on the electricity bill, being divided into the different bills corresponding to the consumption of the 12 months following the submission of the application.

When the bonus is granted, a specific communication is inserted in the bill. When the bonus is being paid out, both the admission to the compensation and the details of the amount relating to the application of the bonus are highlighted in the "total network services - fixed portion" section.

A series of verification steps of the requirements is performed by the Municipality, SGATE and communication between them and the competent operators.

The physical discomfort bonus is paid without interruption as long as the equipment is used. Therefore, the bonus for physical discomfort does not have to be renewed.

An adjustment can be requested both in the case in which new equipment is installed, and in the case in which it is necessary to use those already present for a greater number of hours per day. If the customer no longer uses the equipment, then the customer is required to promptly inform his electricity seller. If the customer does not inform his seller of the cessation of use of the equipment and continues to receive the bonus without being entitled to it, the refund of the sums unduly received may be requested.

#### 2.1.3.2.3 Other non-financial measures

There are other non-financial measures applied such as warning prior to disconnection and prohibition of disconnection for activities relating Public Service like hospitals, nursing homes, household consumers that require electricity powered life support equipment with severe health problems, prisons, schools. [31]

#### 2.1.3.2.4 Financing and Costs

The electrical social bonus is financed by the *account for the compensation of tariff benefits to customers in the electricity sector in a state of distress* established at *Cassa Conguaglio* per il Settore Elettrico (CCSE), fed by the ASrim tariff component, collected through the electricity bill and charged to all electricity customers with the sole exception of those facilitated. The account is also fed by a share of the Sanctions Fund of the Italian Competition and Market Authority (AGICOM) (DM 18/12/2006).

[31] Medreg, 2016, Vulnerable Consumers Report

The following table shows the value of the *AS* fee (cents of €/kWh) applied since 2016. Since the 1st of January 2018 the component has been named *ASrim* and is included in the bill in the *ARIM* component (resolution December 27, 2017 923/2017/R/com).

In the first years of the electricity bonus, more funds were collected than those actually used to pay out the benefit; from 2011 and until the third quarter of 2016, the provisions have made it possible to reduce the burden on final customers by reducing the value of the *AS* fees applied. From the fourth quarter of 2016, considering the progressive reduction of the accumulated surplus on the Account, the AS component has been repaired to ensure adequate coverage to cover the volume of bonuses paid. For the third and fourth quarters of 2018, the *ASrim* component, like the other *ARIM* components, was set at zero for all domestic and non-domestic customers, as a "shield" intervention to reduce the increase in expenditure in the face of rising energy prices due to tensions in the raw materials and wholesale markets. Already in the first quarter of 2019, revenue recovery was achieved, with an increase in the *ASrim* component.

Since the 1st of January 2019, with the resolution of 27 December 2017, 711/2018/R/com, the tariff components, that cover general charges and additional components of the electricity and gas sector, including ASrim, have been updated.

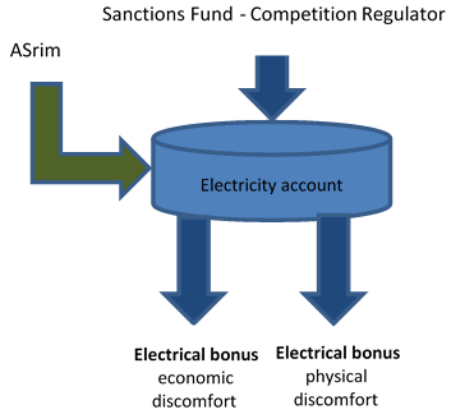
*Table 15: Asrim Component (2016-2019)*

| Tariff Component | 2016 | | 2017 | 2018 | | 2019 |
|---|---|---|---|---|---|---|
| AS / ASRIM | Jan - Sept | Oct - Dec | Jan - Dec | Jan - Jun | Jul - Dec | Jan - Dec |
| Domestic customers (euro cent/kWh) | 0.007 | 0.035 | 0.035 | 0.035 | 0.000 | 0.0458 * up to kWh 1800 0.0931 ** above kWh 1800 |
| Not domestic customers in LT (euro cent/kWh) | 0.007 | 0.035 | 0.035 | 0.0135 | 0.000 | |
| Not domestic customers in LT (euro cent for PD/year) | - | - | - | 38.52 – 39.36 | 43.80 | |
| Not domestic customers in LT (Eurocent kW/year) | - | - | - | 45.12 – 50.16 | 0.015 | |

In 2019 for the financing of the electric bonus, a typical domestic customer incurred an annual expenditure between 1.19 - 2.22 €/year.

Overall, in 2019, the disbursement of the electric bonus for economic and physical discomfort led to an expense of € 137,450,474, compared to a revenue of the *ASRim* component of € 210,600,517, with a surplus of € 73,150,043.

The increase in the charge for the payment of the electricity bonus in 2019 (15% more than in the 2018) is the result, on the one hand, of the increase in the number of subsidized households and, on the other hand, of the provisions adopted with the Ministerial Decree of 29 December 2016 which resulted in a unitary increase in the value of the bonus.




AS- tariff component ex art. 66 of the Integrated Text for the Transmission, Distribution and Measurement of Electricity (TIT) - 2012-15

The following resource scheme shows the components that exists in electricity bonus:

The electricity bonus is financed through the resources of the Special Account for the compensation of tariff benefits to customers in the electricity sector in a state of distress, set up at the CSEA and fed by the ASrim tariff component, collected through the electricity bill and charged to all electricity customers, with the exclusion of those facilitated.

The Account, in the first years of operation, was also fed by a share of the Sanctions Fund of the Competition and Market Regulator (DM 18/12/2006).

*Table 16: Bonuses Disbursed (2015-2019)*

| Year | Electric Bonus | | | Gas Bonus | Total |
|---|---|---|---|---|---|
| | Economic Hardship | Intended for holders of Purchasing Card | Physical Discomfort | | |
| **2015** | 622,151 | 22,520 | 28,267 | 448,496 | 1,121,434 |
| **2016** | 622,410 | 27,624 | 30,373 | 448,707 | 1,129,114 |
| **2017** | 706,969 | 25,473 | 32,643 | 499,808 | 1,264,893 |
| **2018** | 771,566 | 23,589 | 35,903 | 519,375 | 1,582,994 |
| **2019** | **829,209** | **8,389** | **41,068** | **558,514** | 1,884,393 |
| Variation 2019/2018 | +7.4% | -64.4% | +14.3% | +7.5% | |

#### 2.1.3.2.5 Other Selected Initiatives and Projects

**Lotta alla Povertà Energetica (LPE):** The project parties are Leroy Merlin Italy, Politecnico di Torino, Università di Torino and S-Nodi as a project developer in contact with Caritas representing large institutions. The project was funded by Leroy Merlin under its Corporate Social Responsibility activities. Although the initial funding included sponsoring of energy saving devices and the support of some months of research assistants' work, the project was later extended to national level. The aim of the project has been to provide low income households with energy saving devices and make them aware of the meaning and cost of 1 kWh of energy, in order to encourage them to save energy. They also want to provide charities with an assistance protocol for energy poverty that includes notions and operational measures to detect and alleviate most vulnerable situations. The beneficiaries of this project were recipients of the Energy Bonus but it was difficult to find households to engage with in the long-term. The challenges of the project have been finding families with housing stability, since there is a very high housing mobility among low income people. Together with the project, energy poverty was addressed at the local level[32].

**Smart Metering Programme:** Although it is recognized in Italy that fuel poverty is, in some ways, related to technical aspects such as energy losses and efficiencies, there is a substantial inability to monitor the energy performances and the minimum energy requirements in a reliable way, and with a sufficient geographical coverage, at the household level.

In the country, between 2000 and 2005 there was a huge deployment of electric smart meters with almost a complete coverage (95%) of the customers. The presence of smart meters may allow the policy makers to reconsider the design of the measures in order to guarantee a minimum level of consumption (compatible with the welfare requirements) to all the households. Minimum standards may be defined by type of dwelling and by areas monitored making use of the meters.[33]

[32] N. Creutzfeldt, C. Gill, R. McPherson, M. Cornelis, 11 January 2020, The Social and Local Dimensions of Governance of Energy Poverty: Adaptive Responses to State Remoteness

[33] Insight E-Policy Report, May 2015, Energy poverty and vulnerable consumers in the energy sector across the EU: analysis of policies and measures

**Assist 2gether Project** is a 36-months European market activation and policy orientation project to tackle fuel poverty and support vulnerable consumers. Its aim is to both actively engage consumers with the energy market, helping them to positively change their behavior in relation to energy consumption as well as influence the design of policy relating to energy poverty.

Within the scope of the project, surveys were made and it was confirmed that financial support is not common between Italian consumers: only 1.7% of the vulnerable consumers surveyed could enjoy the energy bonus. According to the answers, it is mostly because of too tight income thresholds (55%), but also for lack of knowledge of the bonus (18.6%). Vulnerable consumers are slightly more interested in professional advice (90% vs 82%), for the majority in order to reduce the cost of energy bills (59.3%), an issue much more relevant for vulnerable group (14% higher than other consumers). At the same time, they don't seem to care about increasing the level of health (15%) and comfort within home (16%), thus confirming somehow that they can trade-off energy consumption for more available income. However, the idea of reducing the energy consumption without reducing the level of comfort is still interesting for vulnerable consumers (37.3%), also when compared with optimising the energy consumption without the need for complicated and sophisticated technologies (23.7%)[34].

On the other hand, there are projects that aim to support vulnerable consumers in order to get the social bonus: information, requirements, procedures, so that consumers within the reach of this instrument are able to benefit from it. A stakeholder has undertaken a project - **Diritti a Viva Voce** - together with another association, to create a network of energy helpdesk (sportelli). By this way, information and support to domestic consumers nationwide could be provided. Another stakeholder has carried on a project on **energy saving for social housing**, with several problems on engaging consumers. A supplier has **established a non-profit organization**, with the aim of creating full recovery paths, including the distribution of essential goods and the payment of urgent expenses such as energy bills (of any supplier) [35].

Moreover, in a paper published in 2015, the number of indicators to headcount energy poor families were presented.

- A first group of indicators (relative measures) estimate the number of households whose share of energy expenditure exceeds a specific benchmark (such as 10% of income or twice the average/median).

- Another group (subjective) relies on households' personal assessment of their situation, such as whether their home is not adequately warm.

- Third a class of composite measures were considered, which classifies households as energy poor when they have high energy costs and, at the same time, after these costs are deducted from their budget they are left with a residual amount of resources (income or expenditure) below the official poverty line (so called "Low income High Costs" – LIHC – indicator adopted in England since 2012.

Eventually, an LIHC indicator, that fits into the Italian context and define as energy poor those households with a share of energy costs more than twice the average share of energy expenditure and with an household budget,

[34] Assist 2Gether, European Market Survey on Vulnerable Consumer Needs, www.assist2gether.eu
[35] Assist 2Gether, European Market Survey on Vulnerable Consumer Needs, www.assist2gether.eu

after energy costs are deducted, that is below the national (relative) poverty line were proposed. To these ones those families without heating purchases and total expenditure below the median (so called “hidden energy poor households”) were added; the rationale for including this group is that these households are likely to be materially disadvantaged and might not even be able to afford to have a heating device in their dwelling. Following this approach between 2004 and 2015 energy poverty in Italy was forecasted to be around 8% (or 2.1 million) of Italian households, far below the recent evaluations of the European Commission (17%), based on a set of survey-based subjective measures.

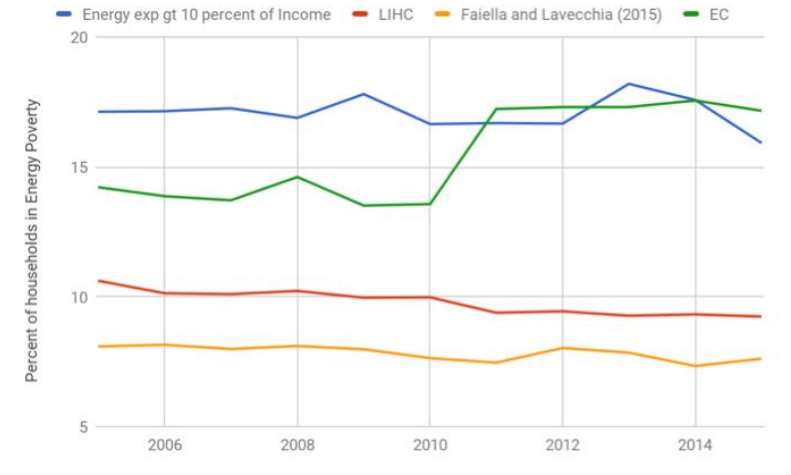



*Figure 6: The Picture of Energy Poverty in Italy According to Different Measures*[36]

### 2.1.3.3 *Stakeholder Analysis*

There are various stakeholders regarding financial measures and regulations related to vulnerable consumers in Italy. Bonus scheme is provided under the Italian legislation in harmonization with the European Directives. The Government (Ministries such as the Ministers of Economic Development, Economy and Finance, Labour and Social Policy) develop strategies, prepare and publish policy documents, evaluates the recommendations prepared by the Regulatory Authority and introduces incentive mechanism such as electric bonus.

Energy Regulatory Authority (ARERA) is responsible from making the incentive operational defined by the Government, with the collaboration of the Municipalities, to ensure savings on electricity expenditure for families in conditions of economic and physical hardship and for large families. The Authority determine the most effective procedures of implementation, taking into account the need to maintain the economic equilibrium of companies.

Within its area of responsibility, the Authority has initiated proceedings to take additional measures for the protection of economically disadvantaged clients that could add to the electric and/or gas bonus for example to enable the holders of bonuses to choose the cheapest offer, so as to further reduce the expenditure for example, through the automatic application, for the holders of the bonus, of the best offer conditions in circulation, in cases

[36] https://www.energypoverty.eu/news/energy-poverty-italy

where the offer previously activated by the customer is not already the best. In addition, to facilitate the arrangements for payment of supplies and prevent any arrears of customers who use the electric and/or gas bonus, the Authority wants to introduce the possibility of resorting to the instalment payments in an easier manner compared to current conditions.

ARERA works in cooperation with the Municipalities during the application and evaluation process to benefit from the electric bonus. In this regard, Municipality of residence receives application for bonus related to economic hardship and physical disabilities and evaluates it with its system.

As explained before vulnerable consumers who gets electric bonus are the families in conditions of economic and physical hardship.

ASL (Local Health Authority) is the Authority that certifies the customer related to compensation bands envisaged.

In 2019, a national observatory on energy poverty, Osservatorio Italiano sulla Povertà Energetica (OIPE), was established to carry out research, information and dissemination activities on the issues of energy poverty, at national and international level.

Until the end of 2020, the actors of the bonus are summarized in the following table, from the 2021 ARERA will introduce a new modality that will involve a further automatism in the management of the practices by entrusting the Integrated Information System, a system already used for other procedures, such as switching between a supplier and another or the management of gas and electrical POD master data.

Those entitled due to their economic conditions will no longer have to submit applications but will automatically be able to take advantage of this facility. This automatism will be made possible thanks to the work of the Data Protection Regulator that has allowed the interoperability of SGAte and Acquirente unico databases.

*Table 17: Stakeholders*

| Stakeholder | Role |
|---|---|
| Municipality | They are in charge of managing the bureaucratic procedures necessary for the application of the compensation scheme for energy expenditure incurred by disadvantaged domestic customers. They<br>• receive the requests for compensation submitted by those entitled in the form of a self-declaration.<br>• evaluate and admit the applications by verifying the personal data and that the level of ISEE is within the allowed limits.<br>• issue the client, also through *SGATE*, a certificate that recognizes the right to access compensation as a citizen in conditions of economic and/or physical vulnerability. |
| ARERA | It is a member of the Italian Energy Poverty Observatory.<br>It establishes the application modalities of the compensation scheme defined by the Decree of the Ministry of Economic Development of 28/12/2007 and by the anti-crisis Decree n.185 of 29/11/2008, by virtue of which it is recognized to economically disadvantaged domestic customers and (only for the Electric Bonus) in serious health conditions, the possibility to benefit from a compensation scheme for the costs incurred for the supply of electricity and gas. |

| | |
|---|---|
| CAF | The *Fiscal Assistance Centres* (CAF) perform the function of support to Municipalities, which may decide to avail themselves of their support for the collection and management of the facilitation requests by those entitled. |
| ASL | Issues certificates attesting the serious health conditions that require the use of life-saving electromedical machinery and the presence of such machinery. |
| ANCI | The National Association of Italian Municipalities has always been committed to supporting, simplifying and flanking the territorial policies of the Municipalities. It is a point of reference for Italian Municipalities and for citizens who find in the Municipalities the answers to their needs, the facilitated access to educational, social and welfare services in the territory but also the recognition of rights or simply listening. ANCI has made available innovative technological solutions to meet the requirements of the law, so that the economic benefits of families can be offset directly in the energy and gas bills, with savings in economic terms and a streamlining of bureaucracy with a view to increasing efficiency and effectiveness of public administration at the service of citizens. |
| SGATe – in charge by ANCI | This is an internet portal that:<br>• manages applications for facilitation and allows the transfer of information collected by the Municipalities to the distributors for verification by the latter<br>• provides assistance to municipalities, distributors for accreditations and applications in progress<br>• transfers the information to CSEA and Poste Italiane for the supply of transfers to indirect gas customers[37]<br>• transfers to the person responsible for mailing (currently always Poste Italiane) the information necessary to send communications to bonus holders. |
| DSO - Distributor | It verifies the presence of an active electricity and/or gas supply and with the required requirements, returning an outcome to the SGATE system. It provides the compensatory component to the sellers for each redelivery point in the name of the entitled parties. |
| Seller | It transfers the compensatory tariff component, received from the distributor, to the final customer, through the bill. |
| Cassa Conguaglio (CSEA) | The *Cassa per i Servizi Energetici e Ambientali* (CSEA), an entity established by Inter-ministerial Committee for Economic Planning (CIPE) measure no. 34/1974, carries out its activities in the energy sector with competences in the field of collection, management and provision of financial services defined by the Italian Rgulator (ARERA) and other competent administrations, in order to ensure the functioning of the system in competitive conditions, to subsidise disadvantaged enterprises in the period of the start of liberalization and to cover the general system costs.<br>It mainly manages the income statement established to cover the compensation of expenses. It proceeds to the recovery of sums unduly received by the final clients. It provides for the payment of the home transfers. In the SGATE context, the role of CSEA is twofold: on the one hand, it uses the data provided by the SGATE system to monitor the disbursement of the energy bonus to those entitled; on the other hand, it has the task of authorizing Poste Italiane to issue the domiciled cheque for the gas bonus. |
| Poste Italiane | Provide the bonus to indirect domestic customers, with the issuance of home transfers. Sends notices of admission (or rejection) and renewal of compensation to those entitled. |
| SICA | Computer system that manages Purchasing Card[38], integrated with the SGATE system for the automatic recognition of bonuses to cardholders. |

[37] The indirect domestic customer is the customer who does not directly hold a contract for the supply of natural gas for the house of residence but uses a condominium-type natural gas system (centralized supply) for its domestic use. In this case the applicant for the bonus does not necessarily have to be the holder of the centralized supply. The holder of the centralized supply contract can be either a natural person or even a legal entity (the condominium).

[38] The *Purchase Card* is an electronic payment card granted to citizens who are in economic distress. The card is credited bimonthly a sum of money that can be used for grocery shopping in affiliated businesses and for the payment of gas and electricity bills at post offices. However, the card is not authorized to withdraw cash.

| | |
|---|---|
| Sportello per il consumatore di energia e ambiente (Helpdesk for the energy and environment consumer) | Provides answers to the information requests from citizens on the bonus procedure and the progress of their practices and handles energy bonus complaints with a special procedure. |

Below is a diagram that summarizes the flow of information and activities carried out by the various players in the management of electricity and gas bonuses.

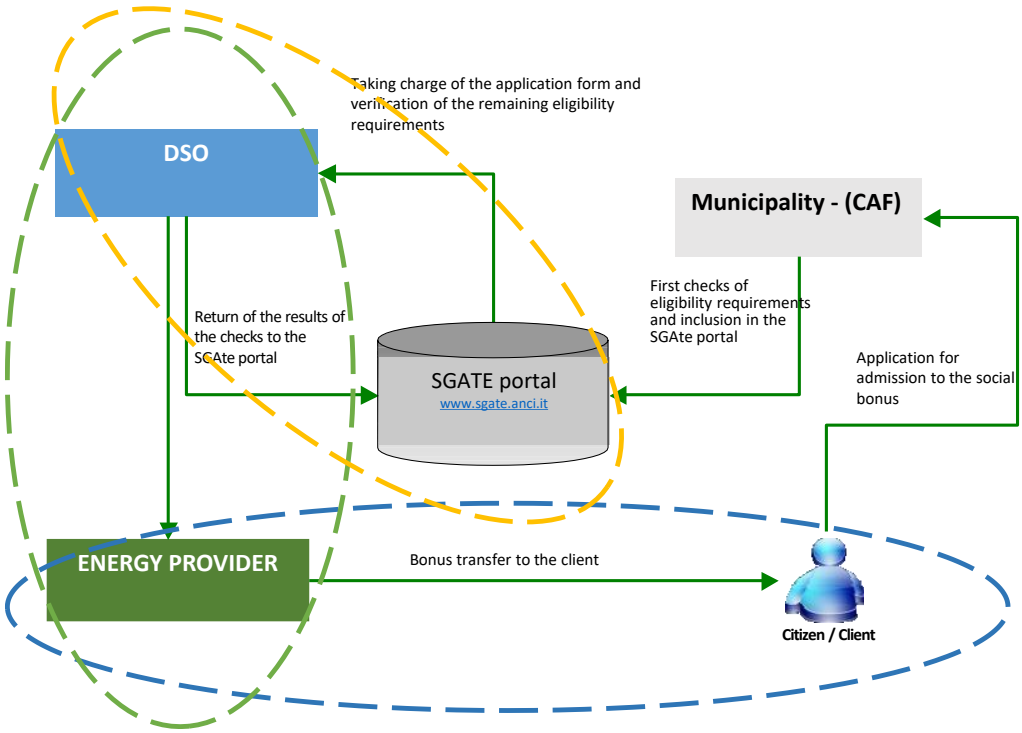



*Figure 7: Flow of Information between Stakeholders*

### 2.1.3.4 *Risk Assessment*[39] [40]

In terms of energy poverty, despite the measures designed to reduce the energy bill (energy bonuses for electricity and gas), it is though that the enforcement of energy poverty mitigation measures is lagging at the national level. The electricity bonus impact bill payments and have little influence on energy poverty levels. On the other hand, energy prices for domestic consumers are already high due to the high level of energy imports and dependency on foreign sources, and the cost for renewables support schemes (€ 12.1 bn in 2018 or 0.7 pp of GDP). Extra costs,

[39] N. Creutzfeldt, C. Gill, R. McPherson, M. Cornelis, 11 January 2020, The Social and Local Dimensions of Governance of Energy Poverty: Adaptive Responses to State Remoteness

[40] Assist 2Gether, European Market Survey on Vulnerable Consumer Needs, www.assist2gether.eu

such as the tax on public television, are applied to bills, creating misunderstandings, confusion, and mistrust in the market, and a massive disengagement of energy consumers.

The lack of a proper definition for vulnerable consumers and energy poverty create a complicated scenario for the stakeholders. There is some evidence that these instruments are not completely effective. Even if there are academic papers and studies, they can't replace a nationally adopted definition. This issue is important because different usage and meaning of energy poverty requires different actions.

ARERA estimates that, only about a third of potential beneficiaries have asked for the energy bonus and it is thought that there is a lack of awareness of the measure itself and the administrative complexity of the requirements. In this regard, ARERA pushes to remove bureaucratic barriers and introduce automated tools for granting financial support to reach all potential beneficiaries. However, a possible automatic attribution might cause extra burden on other consumers.

Despite the national observatory on energy poverty, Osservatorio Italiano sulla Povertà Energetica (OIPE), launched in February 2019, there does not appear to be any coordination of the actors on the ground.

Some other challenges to help energy poor consumers in Italy are the vast geographical and climatic disparities, lack of relevant information, significant decentralization and the general lack of investment in the issue of the state and the regulator.

Another issue to fight with energy poverty is the availability of a single instrument to fight energy poverty, which is the social bonus for electricity (that targeted at consumers with specific features). Connected to the lack of definition, there is complexity in measuring the impact too since it is hard to understand if this instrument is really tackling energy poverty.

There is also the issue of building consumer trust which results in problems in engaging consumers directly in the initiatives, and maintaining frequent contact with them, so as to help vulnerable consumers to understand the possibility of apply for a social bonus.

Energy efficiency measures are expensive and out of reach for vulnerable consumers, thus again leaving them out of the real target for most of the actions.

It is stated that policy improvement is required to put clear targets on energy poverty. In addition, this strategy shall be specific to the country and its needs.

Municipalities and their agents shall be engaged and specifically trained. Stakeholders would like to share experiences and define best practices, to overcome some difficulties, they have found in the past. Some organizations would like to have some of their personnel trained to support vulnerable consumers.[41]

[41] Assist 2gether, Vulnerable Consumers and Fuel Poverty Report

#### 2.1.3.5 *Monitoring of Vulnerability*

In line with European Commission's request in 2017, like other Member States, Italy was required to define a set of criteria to measure and monitor energy poverty and report every two years on the progress in contrasting energy poverty within the Integrated National Energy and Climate Progress Reports. The Italian Government has integrated these indications in its 2017 National Energy Strategy dedicating a specific paragraph to the topic of Energy Poverty and confirming that the Italian Government is committed to[42]:

- adopt an official definition and a national measure of energy poverty
- perform a thorough review of the existing policies
- create an Italian Energy Poverty Observatory (IPOV) which will work in coordination with the European Energy Poverty Observatory (EPOV).

In Italy, the entities delegated to the control of the social vulnerability with different purposes are:

- ISTAT (Italian Statistical Institute): role statistical analysis
- INPS (National Previdential Institute): information on citizens' income
- ARERA (Energy Regulator) responsible for the enactment and rules for the bonus and their adoption by the subjects of the electricity and gas supply chain
- Municipalities: for the territorial, social and welfare role
- ENEA (National Energy Institute) - research and studies role in energy use
- CNR (National Reseach Center) - research and studies role in social aspects
- Ministry of Economic Development - Government body responsible for issuing specific regulations.
- Bank of Italy - database

All these bodies, listed above, collaborate directly or indirectly with the Italian Poverty Observatory (Osservatorio Italiano sulla Povertà Energetica - OIPE), which was launched in February 2019. It is a network of researchers from universities, public and private entities and institutions interested in the subject of energy poverty. OIPE is hosted by the Interdepartmental Centre of the University of Padova "Giorgio Levi Cases" for Energy Economics and Technology and researchers The researchers come from the Bank of Italy, ENEA, University of Padua, University of Palermo, University of Florence, University of Brescia and RSE. The Observatory carries out research, information and dissemination activities on the issues of energy poverty, at national and international level.

As it was defined in previous sections, the monitoring of energy poverty (gas and electricity) is essentially based on monitoring the value of the Economic Equivalent Situation Indicator (ISEE), that is a value that INPS, national social presidential institute calculates for each citizen on the basis of tax returns. It is based on the declared income of citizens and the balance sheet. To it they come deducted the expenses for the rent of the houses and the cost of the subjects to load (children or other family components) of the holder of the family.

[42] https://www.energypoverty.eu/news/energy-poverty-italy

Although not monitored continuously, in some cases, when the municipality or the competent distributor detects the absence or variation of one of the indispensable conditions for being entitled to the concession. If for example:

- The personal data declared are incorrect
- The ISEE declaration is not true or does not comply with the established limits
- The electricity contract from "resident use" becomes "non-resident"
- The electricity contract is made out to another person (transfer or takeover)
- The "home use" rate becomes "non-home use"

the customer receives a communication from SGATE informing him of the interruption (or revocation) of the compensation and the reasons why this is done. Similar conditions apply for vulnerable consumers with serious health conditions. For example if the electricity supply has ceased for the transfer of the customer or if the equipment is no longer used, than the customer receives a communication from SGATE in which he is informed of the interruption (or revocation) of the compensation and of the reasons[43].

#### 2.1.3.6 *Expectations for the future*

In Italy, strategy and policy documents have been published recently, that defines expectations regarding vulnerability and energy poverty.

n 2017, Italy's National Energy Strategy was published. The strategy is ten-year plan that aims to anticipate and manage the change of the national energy system and is a document looking beyond 2030. Within the scope of the strategy energy poverty related topics were also underlined. Strengthening measures to fight energy poverty and reforming the current scheme of discounts on energy bills for low-income or large households and for the disabled was stated as one of the actions related to energy segment.

Moreover, in 2019, Ministry of Economic Development Ministry of the Environment and Protection of Natural Resources and the Sea Ministry of Infrastructure and Transport published Integrated National Energy and Climate Plan. According to the plan, measures have to be taken to protect consumers, especially vulnerable and, where applicable, energy poor consumers, and to improve the competitiveness and contestability of the retail energy market. The measures involve exploring the option of launching a large-scale programme for making social housing more energy efficient. Such an initiative is expected to follow a variety of objectives that are:

- making the use of energy resources taken up by the residential sector more efficient (thus having positive effects on both comfort and emission levels),
- bringing down energy bills for the most vulnerable families who will be using this service,
- and increasing the value of the public housing assets.

In this regard, actions need to be taken to promote timely local initiatives that aims at reducing energy consumption, the creation of energy communities and self-consumption systems.

[43] https://www.arera.it/it/bonus_sociale.htm

According to the Decree-Law No 124 of 2019, converted into Law No 157 of 19 December 2019 (Tax Law for 2020) it is expected that from 1 January 2021, persons whose ISEE score is within predefined limits will have automatic access to the social bonus for electricity, natural gas and integrated water system supply.[44]

## 2.2 Turkey Case

### 2.2.1 Current Regulatory Structure

In Turkey, social tariff mechanism and vulnerable consumer approach shows progress under Last Resort Tariff Regulation as addressed in Tariff Regulation. In Tariff Regulation, it is stated that "*The Board (of EMRA) may determine a separate last resort fee for consumers who consume electricity below an amount to be determined by considering social and economic conditions; The Board may change the amount of consumption in question when it deems necessary in line with the developments in the market*[45]." Therefore, EMRA is the responsible party to determine the threshold consumption value for low consumption consumers, and low consumption consumers are specifically defined to be incentivized under last resort tariff regime. Last resort tariff structure is addressed to be managed via separate regulation.

The last resource supply tariff includes the price, terms, and conditions regarding the supply of electricity to the consumers who do not provide electricity through bilateral agreements although they have the qualification of being eligible consumer. In most up-to-date Last Resort Tariff Regulation, aforementioned low consumption consumer definition is restated, and the scope of last resort tariff structure is declared as combination of low consumption and high consumption consumer profiles. It is stated that last resort tariff will be applicable for two consumer profiles differentiated with a consumption value from each other. Additionally, this threshold value separating the low consumption consumers and high consumption consumers is determined by the board of EMRA. High consumption consumers contribute to the consumers that could not fulfill the requirements of bilateral energy contract and lost their suppliers, whereas low consumption consumers contribute to the consumers that has just had eligible consumer rights in the market. The last resource supply tariff for high consumption consumers is determined by the Board of EMRA, not to be lower than the approved retail tariff for consumers who are not eligible for the relevant period. As the last resource supply tariff for low consumption consumers, the approved retail tariff is applied for consumers who do not qualify as eligible consumers in the relevant period. Approved retail tariff price is determined by taking into account all costs and services within the scope of carrying out the retail sales activity, such as energy procurement cost, invoicing and customer service cost, retail service cost, to the extent that the efficiency target determined for the incumbent supplier is reached and to allow a reasonable return to be able to continue the activity. Therefore, the last resource supply tariff for high consumption consumers is determined to encourage the transition to the competitive market. On the other hand, low consumption consumer profile is thought to be defined for the consumers who do not enter the vulnerable consumer scope but still need to be incentivized and for the consumers who are not ready for relatively higher prices in a liberalized market, even the eligible consumer limit is zero.

Meanwhile, a special and low-price tariff for immediate families of martyr & disabled veterans group (under LV & single term tariff group) is currently valid in the scope of the approved retail tariff quarterly announced by EMRA. This regulation corresponds to the existing social tariff practice in Turkey in line with the public service responsibility of being social state. In the Tariff Procedures and Principles, this consumer profile is defined as residential sub-subscribers. It is stated that martyr families are those who are determined to be martyred by the relevant institutions in cases specified in Laws 2330, 3713 and the Statutory Decree numbered 667 and the relevant articles

[44] Ministry of Economic Development Ministry of the Environment and Protection of Natural Resources and the Sea Ministry of Infrastructure and Transport, December 2019, INTEGRATED NATIONAL ENERGY AND CLIMATE PLAN
[45] Tariff Regulation for Electricity Market, Published on 19.06.2020

of the Law no 5434, who are given martyr salary by the General Directorate of Pension Fund or the General Directorate of Social Security Institution. Also, combatant/disabled veterans are veterans defined in the Repeating Article 1 of the Law No. 2847 and Article 14 of the Decree Law No. 675.It is stated that the electrical energy consumed in the residences of the immediate families of martyrs and disabled veterans and widows are within the scope of this sub-subscriber group, provided that it is documented by the General Directorate of Retirement Fund or the General Directorate of Social Security Institution that they have been paid with a martyr or combatant/disabled veteran salary. Also, consumers in this group benefit from the relevant subscription right for only one residence in which they permanently reside.

Moreover, in accordance with the Consumer Services Regulation, DSOs are obliged to register the retail sales contracts and bilateral agreements of the consumers who are dependent on electrically powered dialysis support units, respirators and similar life support devices and have supporting documents. It is stated that the meters of the consumers, whom submit the valid health report to the DSO, could not be disconnected from the unpaid electricity bills, and in case of demand for installment payments for the payment of the debt, the installments are formed by the suppliers. The installment period is set to be maximum four months.

Consequently, criteria for being vulnerable consumer is currently related with being from immediate families of martyr & disabled veterans group and is expected to be incentivized same as low consumption consumer profile defined under last resort tariff by national tariff approved and announced by EMRA.

### 2.2.2 Financial Measures

In Turkey, except extra-ordinary situations, tariff tables that consumers are subject to are announced quarterly. Under the existing tariff design, social tariff implementation for immediate families of martyr & disabled veterans group is realized as a separate discounted tariff item. It is positioned under low voltage (LV) and single term cluster within the entire tariff table and defined as residential sub-subscribers.

Progress of social tariff for immediate families of martyr & disabled veterans could be graphed as follows in comparison with the households consumer fees.

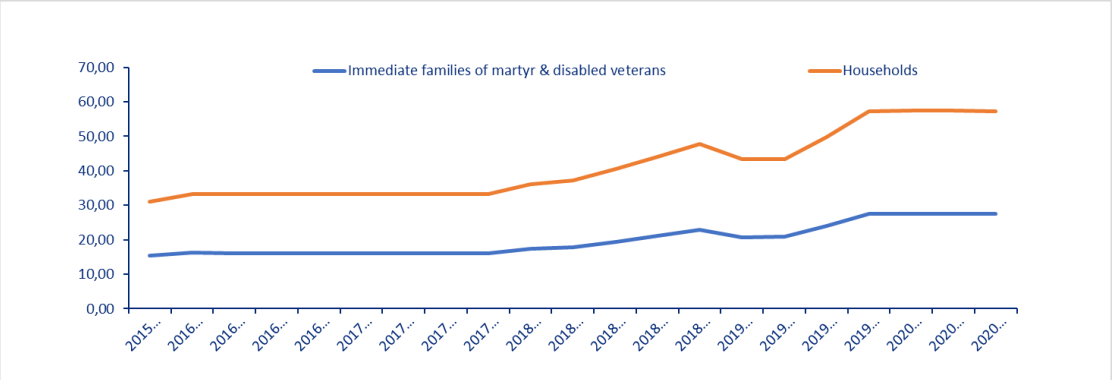



*Figure 8: Immediate families of martyr & disabled veterans vs Households Tariff Fee Progress*

### 2.2.3 Analysis of Questionnaire Results

Under Task 5.1, a one-day workshop was held for the 'Preparation of Vulnerable Consumers Action Plan and Social Tariff Methodology in Electricity and Natural Gas Market' for both electricity and natural gas sectors. The objectives of the workshop could be summarized as:

- Gathering information on current implementation regarding vulnerable consumers
- Analysis and evaluation of current vulnerable consumer groups and social tariffs implementations of Turkish tariff system
- Receiving the expectations and insights of stakeholders about the progress of vulnerable consumer action plan and social tariff methodology in electricity and natural gas market of Turkey
- Sharing the digital questionnaire results on vulnerable consumer action plan and social tariff methodology in electricity and natural gas market conducted prior to workshop
- Discussion of the questionnaire results with participants and gathering additional comments

This one-day workshop with the participation of EMRA, consumer organizations, distribution companies, retail companies and other related stakeholders such as Ministry of Family and Social Policies in order to gather information on current implementation regarding vulnerable consumers and to analyse and evaluate current vulnerable consumer groups and social tariff implementations of Turkish tariff system. Prior to the workshop a questionnaire prepared and shared via digital platform to obtain the insights of the stakeholders. In accordance with the questionnaire results, the following outputs have been analysed.

- 82% of the participants supported the social tariff & vulnerable consumer approach, and 58% of participants replied as supports should be application-based whereas 42% answered as ex-officio.
- The benefits of the individuals entering the social tariff system should be available and re-evaluated annually.
- Determining the individuals who will benefit from social tariff mechanism should be based on both income and owned assets. Also, following groups got the highest rate to be included in the vulnerable consumer concept.
    - Immediate families of martyr & disabled veterans
    - Individuals with severe disabilities or Turkish citizens who document that they are 40% or more with disabilities by a medical board report
    - Unemployed individuals
    - Orphan and widows
- Social Security Institution database was found the most reliable resource to be used for determining the vulnerable consumer scope.
- Approximately 90% of the participants found the scope of the existing incentivizing framework as inadequate and the hit rate of reaching the entire vulnerable consumers was assessed as considerably low. The lack of awareness of the consumers was highlighted as the main reason behind this situation.
- In the existing framework, eligibility criteria of the vulnerable consumers were the highest rated issue to be improved.

- Social tariff mechanism and discount in the electricity bills were highlighted as the solution for incentivizing.

- Reaching the real needers was rated as the riskiest point in the vulnerable consumer supporting mechanisms and contribution of local authorities was highlighted to mitigate the risks.

- Gradual tariff implementation was recommended as an alternative solution to make electricity more affordable for low-income consumer. It was stated that the reporting of the social tariff scope should be detailed and be involved in the regular EMRA market reports. Also, termination of tax charges was emphasized as additional application for assisting vulnerable consumers.

- Municipalities were rated as the most effective stakeholder to have active participation in the supporting processes of vulnerable consumers. Also, it was remarked that NGOs should take active role and should have action plan in line with their internal policies.

- Ministry of Family, Labor and Social Services and EMRA were addressed as the responsible stakeholder for monitoring processes.

- It was noted that a new digital system should be developed specific for managing the support processes and for verification of the collected data.

Due to the existence of a social tariff implementation sample for immediate families of martyr & disabled veterans subgroup (under residential consumer group) in electricity market of Turkey, the presentation and workshop questionnaire results are oriented to the current progress and the expectations. As seen from the questionnaire results, vast majority of the stakeholders are advocating the social tariff approach in supporting the vulnerable consumer concept. Regardless from the social tariff or direct support, it is noted that the costs of supporting vulnerable consumers was expected to be borne by the use of taxes. Thus, the impact of such subsidy mechanism was told to be discussed in tariff perspective instead of overall economy. At the end, vulnerable consumers will be afforded by the revenue of government directly or indirectly based on approach.

The possibility of non-payment risk and increase in bad payers with encouraging consumers to avoid regular paying in social tariff mechanism was discussed in workshop, and this topic was stated as the most influential disadvantage of supporting vulnerable consumers in tariff mechanism. In contrast, validity of such possibility under the existing situation and potential for advanced audit opportunities in tariff mechanism were cited.

As pro of direct supporting mechanism instead of tariff, it was stated that the current structure should be accepted as a magnificent achievement since the market has just been reached the level planned in the Electricity Market Law enacted in 2003. In Electricity Law it was targeted that the cross-subsidy would be terminated at the end of 2015 (then postponed to the end of 2020). Therefore, market dynamics are yet to be ready for such a termination and incentivizing vulnerable consumers via tariff might create complexity in tariff design and price forecasts again. Also, it was mentioned that the database of Ministry of Family, Labour and Social Services were well-prepared to determine the threshold consumption value for being vulnerable even for non-tariff solutions. On the other hand, monitoring the incentivizing vulnerable consumers via tariff was stated to be more manageable and benefitting from database of Ministry of Family, Labour and Social Services would be an important leverage for social tariff approach. Furthermore, whether the student houses would be in the scope of such social tariff with respect to the accepted consumption value for vulnerable consumers was stated as another point to be clarified.

As a result, majority of the stakeholders attended questionnaire and workshop have declared their tendency to continuity of current social tariff implementation under approved tariff tables by enhancing it. Nevertheless, the

risks to be mitigated were highlighted with respect to the different incentivizing approaches dealt with. Workshop and questionnaire results have been used as essential inputs to underly risks and unclear the opportunities for the solution methods of vulnerable consumer action plans.

### 2.2.4 Stakeholder Analysis

Existing regulatory scheme and roles & responsibilities could be summarized as follows.

*Ministry of Energy and Natural Resources (MENR):* MENR has the authority to determine the strategy and necessary policies about the electricity market development including all stakeholders - i.e. DNOs, incumbent suppliers, retailers, wholesale companies - under the regulatory framework set by Electricity Market Law enacted in 2003.

*General Directorate of Social Security Institution:* In the existing social tariff methodology which currently includes only immediate families of martyr & disabled veterans, beneficiaries are certificated by General Directorate of Social Security Institution with the martyr or combatant/disabled veteran salary.

*Ministry of Family, Labour and Social Services:* Although the beneficiaries are currently determined by the fact that they have been paid by General Directorate of Social Security Institution with the martyr or combatant/disabled veteran salary, Department of Relatives of Veterans and Relatives of Martyrs of Ministry of Family, Labour and Social Services has the original database for determining the citizens having the right of being vulnerable. In addition, the eligibility data of citizens who need social aids and currently gather direct supports from the public institutions is kept and controlled by Ministry of Family, Labour and Social Services. Thus, in both as-is situation and the case of expansion of the scope of vulnerable consumer action plan, required database for determining vulnerable consumer eligibility could be managed and monitored by Ministry of Family, Labour and Social Services.

*Energy Market Regulatory Authority (EMRA):* EMRA has the responsibility for determining the approved tariff and related fees per tariff groups quarterly. In accordance with the Electricity Market Law, the procedures and principles regarding the tariff determination and implementation are regulated by necessary regulations issued by EMRA. Therefore, approved tariff fee for immediate families of martyr & disabled veterans is determined by EMRA under the regulated tariff tables announced regularly in quarter base. In addition, distribution fee required for the execution of electricity distribution market activities and retail sale service fee required for the execution of retail services for regulated tariff consumers are determined and announced by EMRA within regular tariff tables. In case of side benefits like being exempt from distribution fee or retail sale service fee could be managed by EMRA.

*Distribution System Operators (DSOs):* Distribution activity is carried out by the DSO in the region specified in its license. The Distribution System Operator is responsible for the reading, maintenance, and operation of meters in the region specified in its license. The procedures and principles regarding the execution of a non-market activity that will increase efficiency with the distribution activity are regulated by EMRA. Procurement of electrical energy for general lighting, to cover technical and non-technical losses of the distribution system and sales of excess energy due to realizations which is contracted to cover the system technical and non-technical losses, are additional responsibilities of DSOs. There exist 21 DSOs licenced in electricity distribution market of Turkey. In case of side benefits within distribution activities - e.g. being exempted from disconnection from unpaid bills and theft operations – could be managed and controlled by DSOs.

*Incumbent Suppliers:* Incumbent suppliers sells electricity to non-eligible consumers in the relevant distribution region over the retail sale tariffs approved by the Board of EMRA in line with the Electricity Market Law. Social tariff implementation for immediate families of martyr & disabled veterans is included in the approved retail sale tariffs. With the unbundling framework, incumbent suppliers have been unbundled from distribution system operators with their operation licenses for regulated tariff consumers. There exist 21 incumbent suppliers unbundled from

DSOs licenced in electricity retail market of Turkey. Therefore, collection of payments via approved retail sale tariffs is the responsibility of incumbent suppliers. Also, DSOs are notified by incumbent suppliers for disconnection operations from unpaid bills of regulated tariff consumers. In case of being exempted from disconnection from unpaid bills, incumbent suppliers should avoid creating work order for related premises.

*Municipalities and local institutions:* Currently, low income citizens are supported with direct support mechanisms and social aids by municipalities and related public institutions. Therefore, municipalities also have the necessary data for determining the scope of vulnerable consumers and ability of monitoring.

*Non-governmental organizations (NGOs):* Non-governmental organizations are collecting the feedbacks from the society and market with their organizational structure and operating nature to enhance the current system. Feedbacks about the methodology might consist of both cost-related and eligibility of being vulnerable. Consequently, NGOs are playing important role for sustainability and enlargement of the system.

*Vulnerable consumers:* Consumers that are incentivized in payment of their electricity bills. This is currently achieved by determining a separate discounted fee in tariff and limited with the immediate families of martyr & disabled veterans. In case of enlargement of the scope, vulnerable consumers are expected to be determined by income level or need for social aids.

### 2.2.5 Risk Assessment & Monitoring of Vulnerability

In terms of social tariff implementation, the most essential risk is the possibility of burden on tariff structure. Although all incentivizing methods create an additional cost for overall economy, in case of social tariff other consumers are directly be impacted with an increase in active energy fee of their electricity bills. This fact has also potential for boost in complexity of tariff calculations and cost reflectiveness.

As an advantage of the social tariff implementation, incentivizing the vulnerable consumers via tariff will have its own solution within tariff dynamics and controllability will be easier. In the existing stakeholder environment, roles and responsibilities are well-defined to manage the monitoring and management of the scope. In addition, stakeholders will be enabled to calculate the electricity market costs considering the subsidies for vulnerable consumers and revenue requirements will initially be covering the economic impact. Thus, the cost risks will be pre-determined and will cause no upcoming surprises. Cost-benefit analysis required for estimating the economic impact will also be easier to conduct.

On the other hand, incentivizing vulnerable consumers via direct support mechanism will cause additional costs on taxes and consequently on overall economy instead of tariff. This will ease tariff calculation methodology and the cluster compensating the charges will be relatively larger. Therefore, impact on individuals will be relatively lower. However, monitoring the vulnerable consumer group and managing the variations within the scope will considerably be difficult, since the electricity market stakeholders will no longer have to undertake the responsibilities. Hit rate in reaching the adequate beneficiaries will be another issue to be figured out under the monitoring role.

Since the current social tariff implementation depends on the immediate families of martyr & disabled veterans and the beneficiaries are automatically targeted with the help of martyr or combatant/disabled veteran salary, public awareness is not a problem in the existing framework. However, in case of the expansion of the scope, awareness for being beneficiary will be another parameter to be monitored in line with the eligibility criteria to be decided.

Finally, determining the vulnerable consumer scope and eligibility issue will cause similar difficulties in both cases, since the same databases will be used. The hit rate of vulnerable consumer subsidies will be managed under the monitoring responsibility.

### 2.2.6 Other Support Mechanisms

In addition to the existing social tariff framework, consumers with serious health conditions and having related documents are protected via Consumer Services Regulation against disconnection and outage obligations.

DSOs are obliged to register the retail sales contracts and bilateral agreements of the consumers who are dependent on electrically powered dialysis support units, respirators and similar life support devices and have supporting documents. It is stated that the meters of the consumers, whom submit the valid health report to the DSO, could not be disconnected from the unpaid electricity bills, and in case of demand for installment payments for the payment of the debt, the installments are formed by the suppliers. The installment period is set to be maximum four months.

The relevant DSO is obliged to inform the supplier of the consumer within 3 working days from the date of submission of the report in order not to disconnect the electricity of the consumer. Monitoring of the validity of the health report is also the responsibility of DSOs. The DSO informs the consumer that the medical report will expire at least 20 days before the expiration date of the health report. On the other hand, the consumer is obliged to notify the current report to the DSO within 30 days from the expiration date of the health report submitted. These consumers are primarily informed by the DSOs via the communication channel determined by the consumer in case of planned outages. In case of unplanned outages, these consumers are informed about the situation and the progress of the actions by DSOs via the communication channel determined by the consumer.

### 2.2.7 Expectations for the Future

In Turkey, existing framework for immediate families of martyr or combatant/disabled veterans is expected to be enlarged within the expansion of social tariff implementation or enhancement of direct support mechanism. Even if the full liberalized market conditions come true, national tariff will most probably be announced for low-consumption consumers, last resort tariff consumers and social tariff consumers. In line with the market development, limits and subscribers of each group may change, however the aforementioned concepts will remain due to the instructions referred in Electricity Market Law and social state characteristics of national government.

As seen from the questionnaire results, insights of the stakeholders underly the enhancement of the existing social tariff implementation for low-income consumers. For this purpose, a cost-benefit analysis for estimating the economic impact of vulnerable consumer action plan should initially be performed. In addition, new legislations are needed to be prepared and approved for eligibility criteria, roles and responsibilities of stakeholders, and monitoring principles respectively in the upcoming regulatory period (2021-2025).

## 2.3 Gap Analysis and Recommendations

In terms of social tariff practices, EU samples and Turkey case could be compared, and related recommendations could be summarized as below.

*Table 18: Gap Analysis & Recommendations for Electricity Market*

| | EU Practices | Turkey Practice | Recommendation |
|---|---|---|---|

| | | | |
|---|---|---|---|
| **Current Implementation** | - Great Britain<br>  ○ Mental health<br>  ○ Age-related vulnerabilities<br>  ○ Disability<br>  ○ Low income<br>- Spain<br>  ○ Social bonus and discounted tariff<br>- Italy<br>  ○ Economic hardship and the electric bonus-i.e. a discount on the bill<br>  ○ Serious health conditions - physical discomfort | - Social tariff is defined for only immediate families of martyr & disabled veterans within the approved tariff tables.<br>- Obligations not to disconnect the electricity of consumers having serious health conditions directly depending on electricity supply. | - Cost-benefit analysis (CBA) is needed to be conducted to estimate the economic impact. The CBA study may consist of both qualitative and quantitative approaches.<br>- Specific Vulnerable Consumer Action Plan in line with the cost-benefit analysis results is needed to be prepared and declared. |
| **Legislation and Regulation for The Vulnerable Consumers** | - Strategy papers and specific legislations are declared<br>- Great Britain<br>  ○ SLC 0 (Standard Licence Conditions) Standards of Conduct<br>  ○ SLC 26 Priority Services Register<br>  ○ SLC 32 Reporting on performance (Social Obligations Reporting)<br>  ○ SLC 35/41 Smart metering installation and installation code of practice – domestic consumers<br>- Spain<br>  ○ Royal Decree 897/2017<br>  ○ Royal Decree-Law 15/2018<br>  ○ Royal Decree-Law 7/2016<br>- Italy<br>  ○ Legislative Decree no. 93/11<br>  ○ Public Service Requirements and Consumer Protection<br>  ○ The Law 205 of 23 December 2005<br>  ○ The Decree of the Ministry of Health of 13 January 2011<br>  ○ The Decree of the President of the Council of Ministers no. 159<br>  ○ Report 273/2014/I/com<br>  ○ Consultation Documents<br>  ○ National Energy Strategy<br>  ○ Decree-Law no. 124 of October 26, 2019 | - Electricity Market Law<br>- Last Resort Tariff Regulation<br>- Tariff Regulation<br>- Tariff Procedures and Principles<br>- Consumer Services Regulation | - Specific legislations should be prepared and announced for social tariff mechanism including entire support and protection cautions in line with CBA results and Vulnerable Consumer Action Plan. |
| **Monitoring of Vulnerability** | - Vulnerability monitored and EU-wide comparisons made, including progress over the years | - Vulnerability is currently based on being from immediate families of martyr & disabled veterans<br>- Consumers with serious health conditions are protected against disconnection and outage obligations. | - Vulnerability criteria should be redefined, and the entire supporting mechanism should be monitored under the specific role. |
| **Financial Measures** | - Direct supports, social tariffs, home isolation supports are applied. | - Discounted and separate tariff is | - Financial measures are needed to be assessed via |

| | | | |
|---|---|---|---|
| | | defined for immediate families of martyr & disabled veterans | cost-benefit analysis studies for enhanced scope. |
| **Stakeholder Cooperation** | - Distribution and delegation of duties among stakeholders | - EMRA is responsible for announcing the discounted tariff<br>- General Directorate of Social Security Institution is certificating the beneficiaries with the martyr or combatant/disabled veteran salary. | - Detailed stakeholder action plan is needed to be performed for enhanced scope. |

## 2.4 Vulnerable Consumer Action Plan

Both benchmark results and stakeholder feedbacks have shown that incentivizing the vulnerable consumers could be performed mainly by tariff structure and off-tariff methods in the preceding sections. Possible two scenarios are discussed within the scope of vulnerable consumer action plan – i.e. direct support mechanism (off-tariff) and enhanced social tariff methodology. Since the current framework in electricity market could be described as a sample for separate social tariff implementation, the second scenario will be handled as an enhanced version of business as usual approach.

### 2.4.1 Direct Support Mechanism

In direct support mechanism, tariff design will not consider the financial support of vulnerable consumers. Instead, the payment of electricity bills of the vulnerable consumers is realized by MENR as in the case of street lighting. In case of Direct Support Mechanism, MENR is the prime owner of national program, releases the subsidies and performs the regular monitoring of program and approving structural/ framework modifications if necessary. MENR ensures stakeholders with cost-benefit analysis results to clarify the vulnerable consumer action plan scope. Eligibility criteria with respect to the income and asset data of candidates is also determined by MENR in line with cost-benefit analysis results.

For Direct Support Mechanism, stakeholder actions and framework design are estimated as follows.

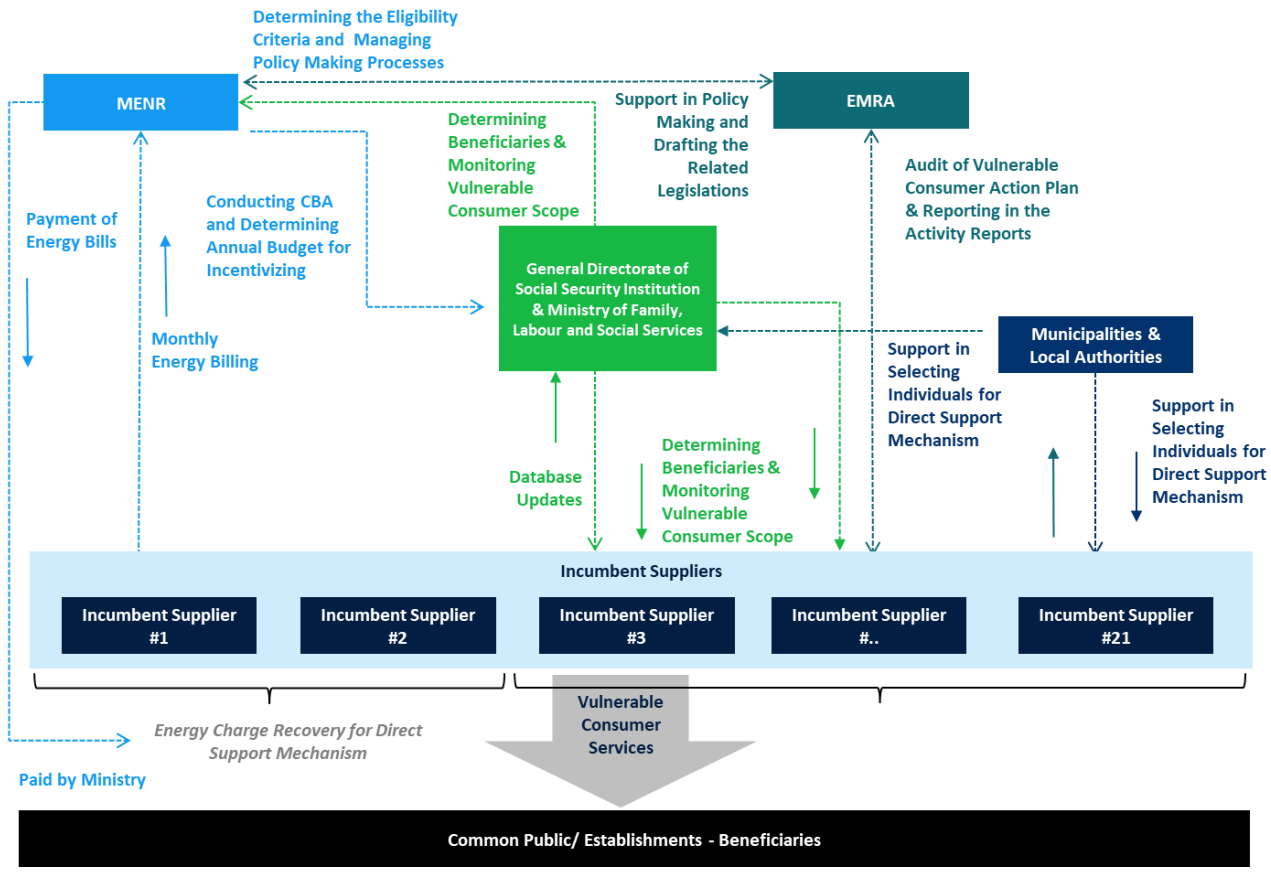



*Figure 9: Overview & Structure of Direct Support Mechanism*

### 2.4.1.1 *Direct Support Mechanism Responsibility Matrix*

**Ministry of Energy and Natural Resources (MENR):**

- Prime owner and sponsor of Direct Support Mechanism
- Launch of program along with guidelines on broad framework and incentivizing mechanism.
- Conducting cost-benefit analysis studies to determine the overall budget for incentivizing.
- Determining the eligibility criteria for vulnerable consumer concept and providing the related policies.
- Decision regarding key aspects of program such as capital subsidy support, and policy making.
- Payment monthly energy bills created by Incumbent Suppliers.

**General Directorate of Social Security Institution & Ministry of Family, Labour and Social Services:**

- Managing the database of beneficiaries with the updates derived from Incumbent Suppliers, Municipalities, and local authorities.
- Determining the beneficiaries with respect to the eligibility criteria determined by MENR.
- Monitoring the scope of vulnerable consumer action plan and providing necessary recommendations for reliable process.

- Undertaking overall program management role at national level and ensuring smooth coordination between stakeholders.
- Increasing the awareness of possible beneficiaries and common public, providing publications related to scheme for public information.
- Capturing of learnings, recording of data regarding program outcomes, etc.

**Energy Market Regulatory Authority (EMRA):**

- Overall guidance for propagating vulnerable consumer action plan and incentivizing method.
- Supporting MENR in policy making processes and drafting the necessary legislations
- Audit of vulnerable consumer action plan
- Reporting the progress and outcomes of the vulnerable consumer action plan, and inserting the related information in the regular sector activity reports.

**Incumbent Suppliers:**

- Performing billing and invoicing activities within Vulnerable Consumer Action Plan with direct contact to consumers and DSOs.
- Collecting the payments from MENR with respect to the energy bills of vulnerable consumers.
- Ensuring the stakeholders not to create disconnection work orders to consumers with serious health conditions.
- Providing updates for contact and premise information of vulnerable consumers, and gathering necessary feedbacks from both market and consumers.

#### 2.4.1.2 *Advantages & Disadvantages of Direct Support Mechanism*

**Advantages:**

- Simpler tariff design and incentivizing method
- Tariff impact is not foreseen, instead impact on overall economy becomes crucial
- Consistency with national action plans for social state responsibility

**Disadvantages**

- Possible risks in reflecting market dynamics and feedbacks
- Possible difficulties in monitoring activities due to non-market framework
- Possible difficulties in data management
- Need for strong contribution between stakeholders
- Complexity in forecasting scenarios due to non-existence of discounted tariff

### 2.4.2 Social Tariff Mechanism

In social tariff mechanism, a discounted separate tariff is recommended for enlarged scope which corresponds to the enhanced version of business as usual scenario. Scope of vulnerable consumers will no longer be limited with immediate families of martyr or combatant/disabled veterans. Instead, beneficiaries will be determined with respect to income and asset data of consumers. Unlike Direct Support Mechanism, EMRA is is the prime owner of national program and arranges the necessary tariff parameters.

For Social Tariff Mechanism, stakeholder actions and framework design are estimated as follows.

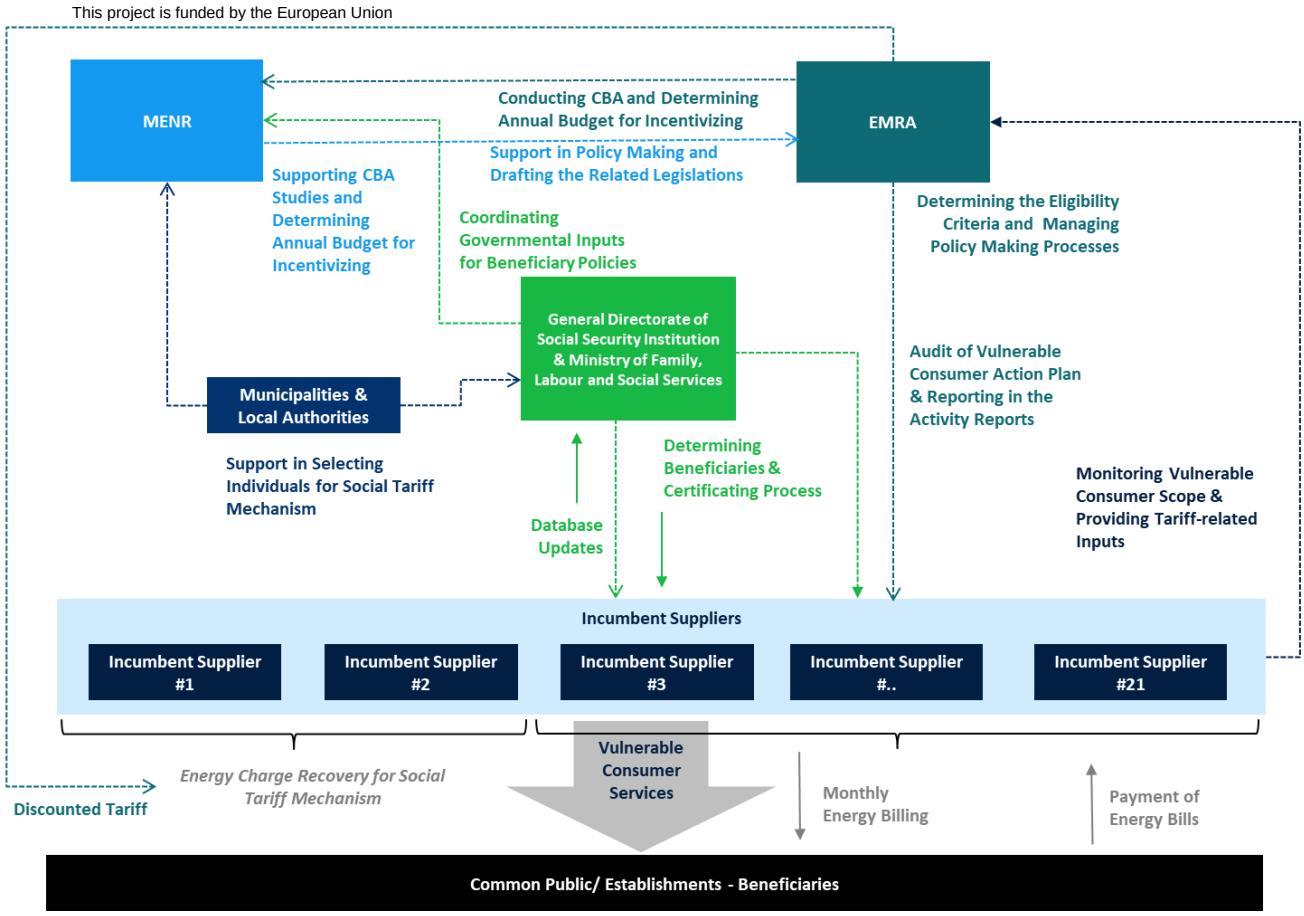



*Figure 10: Overview & Structure of Social Tariff Mechanism*

### 2.4.2.1 *Social Tariff Mechanism Responsibility Matrix*

**Ministry of Energy and Natural Resources (MENR):**

- Supporting EMRA in policy making processes.
- Contribution with EMRA in determining the eligibility criteria
- Contribution with General Directorate of Social Security Institution & Ministry of Family, Labour and Social Services in determination of beneficiaries.

**General Directorate of Social Security Institution & Ministry of Family, Labour and Social Services:**

- Managing the database of beneficiaries with the updates derived from Incumbent Suppliers, Municipalities, and local authorities.
- Determining the beneficiaries with respect to the eligibility criteria determined by EMRA.
- Monitoring the scope of vulnerable consumer action plan and providing necessary recommendations for reliable process.
- Undertaking overall program management role at national level and ensuring smooth coordination between stakeholders.

- Increasing the awareness of possible beneficiaries and common public, providing publications related to scheme for public information.
- Capturing of learnings, recording of data regarding program outcomes, etc.

**Energy Market Regulatory Authority (EMRA):**

- Prime owner and sponsor of Direct Support Mechanism
- Launch of program along with guidelines on broad framework and incentivizing mechanism.
- Decision regarding key aspects of program such as capital subsidy support, and policy making.
- Conducting cost-benefit analysis studies to determine the overall budget for incentivizing.
- Drafting the necessary legislations with the contribution of MENR.
- Overall guidance for propagating vulnerable consumer action plan and incentivizing method.
- Audit of vulnerable consumer action plan
- Determining the eligibility criteria for vulnerable consumer concept and providing the related policies.
- Reporting the progress and outcomes of the vulnerable consumer action plan, and inserting the related information in the regular sector activity reports.

**Incumbent Suppliers:**

- Monitoring the scope of vulnerable consumer action plan and providing necessary recommendations for reliable process.
- Performing billing and invoicing activities within Vulnerable Consumer Action Plan with direct contact to consumers and DSOs.
- Collecting the payments from vulnerable consumers with respect to the energy bills under Social Tariff.
- Ensuring the stakeholders not to create disconnection work orders to consumers with serious health conditions.
- Providing updates for contact and premise information of vulnerable consumers, and gathering necessary feedbacks from both market and consumers.

#### 2.4.2.2 *Advantages & Disadvantages of Direct Support Mechanism*

**Advantages:**

- Economic impact will be controllable due to tariff-related solution.
- Direct customer satisfaction
- Enhanced data management
- Uncomplicated monitoring activities due to the market involved framework
- Leverage of market dynamics to develop reliable framework
- Consistency with national action plans for social state responsibility
- Enhanced energy efficiency with enhanced ability in forecasting scenarios.
- Limited adaption problems due to being enhanced version of as-is scenario

**Disadvantages**

- More complex tariff design and incentivizing method
- Possible risks in establishing consistency with national action plans for social state responsibility
- Possible tariff impact for the remaining consumers

### 2.4.3 Timeline Recommendations & Milestone Analysis of Each Scenario

In according to Directive 2009/72/EC, Member States are expected to;

- take necessary measures to protect vulnerable consumers,
- satisfy the common minimum standards of the public service requirements, for all consumers, especially for vulnerable ones,
- ensure the necessary energy supply for vulnerable customers,
- allow national policies in favour of vulnerable consumers
- ensure that there are adequate safeguards to protect vulnerable customers,
- define the the rights and obligations linked to vulnerable customers.

In addition, contributing to the protection of vulnerable consumers is defined as general objectives of the regulatory authorities.

In line with the recommendations provided, necessary milestones to be implemented could be listed as below per scenarios.

#### 2.4.3.1 *Direct Support Mechanism*

*Table 19: Vulnerable Consumer Action Plan for Direct Support Mechanism*

| Action | Responsible | Supporter | Start Date | End Date |
|---|---|---|---|---|
| Preparation of Vulnerable Consumer Strategy Paper | MENR | EMRA | 2021 January | 2021 June |
| Separate legislation for Vulnerable Consumers | EMRA | MENR | 2021 June | 2021 December |
| Conducting CBA studies to estimate economic impact | MENR | - | 2021 June | 2021 December |
| Redefining eligibility criteria | MENR | General Directorate of Social Security Institution & Ministry of Family, Labour and Social Services | 2021 June | 2021 December |
| Determining beneficiaries | General Directorate of Social Security Institution & Ministry of Family, Labour and Social Services | MENR | 2022 January | 2022 March |
| Increasing the awareness of possible beneficiaries and common public | General Directorate of Social Security Institution & Ministry of Family, Labour and Social Services | MENR<br>EMRA | 2022 January | - |
| Running Vulnerable Consumer services (including billing & invoicing activities and being exempt from disconnections) | Incumbent Suppliers | - | 2022 March | - |
| Energy payments | MENR | Incumbent Suppliers | 2022 March | - |

| | | | | |
|---|---|---|---|---|
| Monitoring the entire scheme | General Directorate of Social Security Institution & Ministry of Family, Labour and Social Services | - | 2022 March | - |
| Audit of the entire scheme | EMRA | - | 2022 March | - |
| Data Management | General Directorate of Social Security Institution & Ministry of Family, Labour and Social Services | Incumbent Suppliers | 2022 January | - |
| Reporting the progress | EMRA | Incumbent Suppliers | 2022 March | - |

#### 2.4.3.2 *Social Tariff Mechanism*

*Table 20: Vulnerable Consumer Action Plan for Social Tariff Mechanism*

| Action | Responsible | Supporter | Start Date | End Date |
|---|---|---|---|---|
| Preparation of Vulnerable Consumer Strategy Paper | MENR | EMRA | 2021 January | 2021 June |
| Separate legislation for Vulnerable Consumers | EMRA | MENR | 2021 June | 2021 December |
| Conducting CBA studies to estimate economic impact | EMRA | - | 2021 June | 2021 December |
| Redefining eligibility criteria | EMRA | MENR<br>General Directorate of Social Security Institution & Ministry of Family, Labour and Social Services | 2021 June | 2021 December |
| Determining the tariff components and recalculating discounted fee for Vulnerable Consumers | EMRA | MENR | 2022 January | 2022 March |
| Determining beneficiaries | General Directorate of Social Security Institution & Ministry of Family, Labour and Social Services | MENR<br>EMRA | 2022 January | 2022 March |
| Increasing the awareness of possible beneficiaries and common public | General Directorate of Social Security Institution & Ministry of Family, Labour and Social Services | MENR<br>EMRA | 2022 January | - |
| Running Vulnerable Consumer services (including billing & invoicing activities and being exempt from disconnections) | Incumbent Suppliers | - | 2022 March | - |

| | | | | |
|---|---|---|---|---|
| Energy payments | Vulnerable Consumers | Incumbent Suppliers | 2022 March | - |
| Monitoring the entire scheme | Incumbent Suppliers | EMRA | 2022 March | - |
| Audit of the entire scheme | EMRA | - | 2022 March | - |
| Data Management | General Directorate of Social Security Institution & Ministry of Family, Labour and Social Services | Incumbent Suppliers | 2022 January | - |
| Reporting the progress | EMRA | Incumbent Suppliers | 2022 March | - |

# 3 Natural Gas Sector Report

## 3.1 International Benchmarks

### 3.1.1 EU wise definition of vulnerability and energy poverty, criteria to become vulnerable

DIRECTIVE 2009/73/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC (the Directive) has got following content about vulnerable customers.

At the Article 33 of the Prologue, powers of energy regulators are defined: *"Energy regulators should also be granted the powers to contribute to ensuring high standards of public service in compliance with market opening, **to the protection of vulnerable customers**, and to the full effectiveness of consumer protection measures."*

The Article 47 of the Prologue is on the public service requirements: *"The public service requirements and the common minimum standards that follow from them need to be further strengthened to make sure that all consumers, **especially vulnerable ones**, can benefit from competition and fair prices. The public service requirements should be defined at national level, taking into account national circumstances; Community law should, however, be respected by the Member States. The citizens of the Union and, where Member States deem it to be appropriate, small enterprises, should be able to enjoy public service obligations, in particular with regard to security of supply and reasonable tariffs. A key aspect in supplying customers is access to objective and transparent consumption data. Thus, consumers should have access to their consumption data and associated prices and services costs so that they can invite competitors to make an offer based on those data. Consumers should also have the right to be properly informed about their energy consumption. Prepayments should reflect the likely consumption of natural gas and different payment systems should be non-discriminatory. Information on energy costs provided to consumers frequently enough will create incentives for energy savings because it will give customers direct feedback on the effects of investment in energy efficiency and change of behaviour."*

The Article 50 of the Prologue is on energy poverty, ensuring energy supply for vulnerable customers and measures for supporting vulnerable customers: *Energy poverty is a growing problem in the Community. Member States which are affected and which have not yet done so should, therefore, develop national action plans or other appropriate frameworks to tackle energy poverty, aiming at decreasing the number of people suffering such situation. In any event, Member States should ensure the necessary energy supply for **vulnerable customers**. In doing so, an integrated approach, such as in the framework of social policy, could be used and measures could include social policies or energy efficiency improvements for housing. At the very least, this Directive should allow national policies in favour of **vulnerable customers.***

The Article 3 (Public service obligations and customer protection) of the Directive, includes the following provisions on customer protection: *"3. 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 gas to such customers in critical times. Member States shall ensure that rights and obligation slinked to **vulnerable customers** are applied. In particular, they shall take appropriate measures to protect final customers in remote areas who are connected to the gas system…" "4. Member States shall take appropriate measures, such as formulating national energy action plans, providing social security benefits to ensure the necessary gas supply to **vulnerable customers**, or providing for support for energy efficiency improvements, to address energy poverty where identified, including in the broader context of poverty. Such measures shall not impede the effective opening of the market set out in Article 37 and market functioning and shall be notified to the Commission, where relevant, in accordance with paragraph 11 of this Article. Such notification shall not include measures taken within the general social security system."*

The Article 40 of the Directive (General objectives of the regulatory authority) includes the following among objectives of the regulatory authority: *"h helping to achieve high standards of public service for natural gas, contributing to the protection of* ***vulnerable customers*** *and contributing to the compatibility of necessary data exchange processes for customer switching."*

The basic principles on the vulnerable customers stated in the Directive are as follows:

1. Energy regulators should be granted the powers to contribute to the protection of vulnerable customers. In carrying out their tasks of contributing to the protection of vulnerable customers, they should be in close consultation with other relevant national authorities.
2. The public service requirements and the common minimum standards that follow from them need to be further strengthened to make sure that all consumers, especially vulnerable ones, can benefit from competition and fair prices.
3. Member States should develop national action plans or other appropriate frameworks to tackle energy poverty, aiming at decreasing the number of people suffering energy poverty.
4. In any event, Member States should ensure the necessary energy supply for vulnerable customers.
5. In the combat against energy poverty, an integrated approach should be followed. In that manner, social policy or energy efficiency improvements for housing should be combined within the overall policy.
6. At the very least, the Directive should allow national policies in favour of vulnerable customers.
7. Member States should take appropriate measures to protect vulnerable customers. Definition of the concept of vulnerable customers is a critical part of this process. Definition may be related to energy poverty and may lead to the prohibition of disconnection of gas to such customers in critical times, among other aspects. Therefore, the Directive does not define vulnerable customer concept, but it requires Member States to do so as part of protection of vulnerable customers.
8. Rights and obligations linked to vulnerable customers should be observed. The Directive specially mentions the measures to protect final customers in remote areas who are connected to the gas system in that context.
9. The Directive requires measures such as "national energy action plans", "providing social security benefits to ensure the necessary natural gas supply to vulnerable customers", or "providing support for energy efficiency improvements", in a manner to not impede the effective opening of the natural gas market. Also, notification of such measures to the Commission excluding the measures taken within the general social security system.

To fulfill the requirement of the Third Package, implicit definitions for both sectors exist in Austria, Czechia, Germany, Finland and Luxembourg. In other Member States, definitions of the concept of vulnerable consumers are only available in electricity or gas or not at all (e.g. Denmark).[46]

When receiving information and data from national regulatory authorities by ACER/CEER, definitions of energy poverty for natural gas have been reported only for France, Great Britain and Romania in 2017. [47]

[46] ACER/CEER - Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2017 – Consumer Empowerment Volume

[47] ACER/CEER - Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2017 – Consumer Empowerment Volume

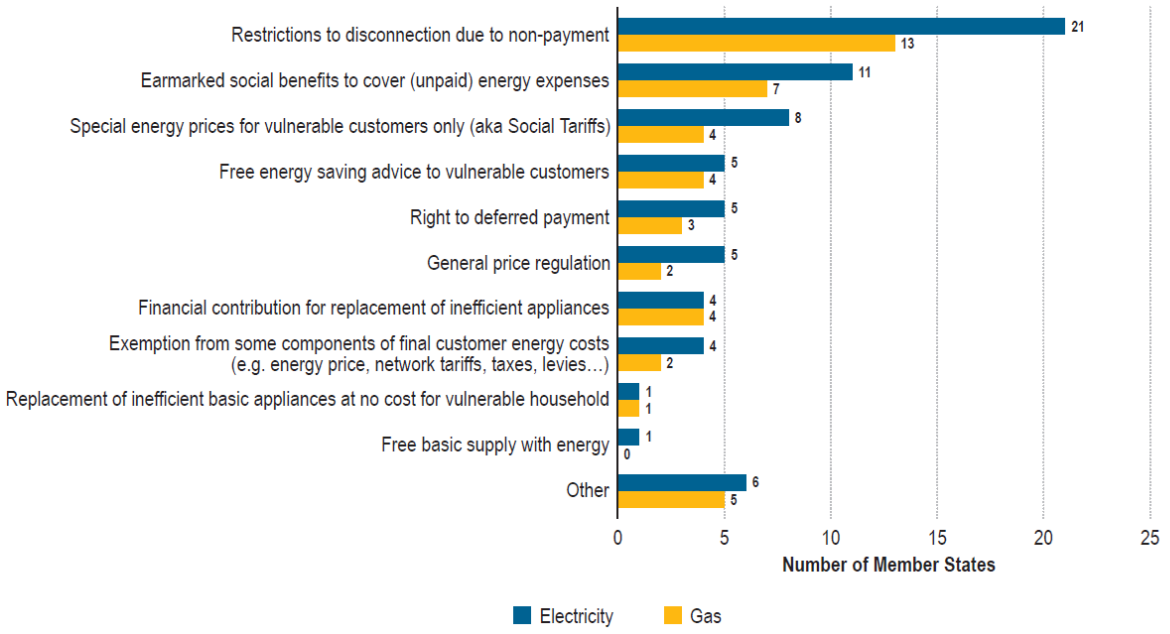



*Figure 11: Measures taken by Member States for the protection of vulnerable customers*[48]

From the figure, it is seen that many different measures have been implemented across Europe. Restrictions to disconnection due to non-payment to protect vulnerable consumers is a common measure taken by Member States. Another common measure is special energy pricing for such vulnerable groups (social tariffs) while some Member States regard regulated prices as a specific protection mechanism for vulnerable consumers. Social benefits to cover energy costs, exemptions from parts of the energy costs, supports for replacing old appliances with more energy efficient ones are applied by a few countries.[49]

### 3.1.2 Great Britain

#### 3.1.2.1 *Current Regulatory Structure*

Energy UK members have agreed a definition customers' potential vulnerability. It is defined that, "A customer is vulnerable if for reasons of age, health, disability or severe financial insecurity, they are unable to safeguard their personal welfare or the personal welfare of other members of the household". Suppliers are finally responsible for deciding if a customer is vulnerable and where a supplier determines that a customer is, for reasons of age, health, disability or severe financial insecurity, unable to safeguard their personal welfare or the personal welfare of other members of the household, the customer will not be disconnected. In order to provide that really vulnerable customers are not excluded from the definition Energy UK has ensured guidance on identifying vulnerability. For example, if suppliers identify households in the following circumstances, then they will consider whether the customer is vulnerable, according to the definition above:

[48]Source: ACER/CEER - Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2017 – Consumer Empowerment Volume

[49] ACER/CEER - Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2017 – Consumer Empowerment Volume

- A customer is caring for an elderly person in the household,
- A customer is of Pensionable Age
- A member of the household is disabled or has a long-term medical condition (i.e. chronic illness) and is therefore unable to support themselves,
- An informed third party, such as a carer, social worker, health visitor or physician has indicated that a member of the household may be vulnerable,
- The age of any children living in the household,
- A customer dependent on medical equipment that is operated by electricity. For example, stair lifts, electric wheelchairs, defibrillators, or dialysis machines.

This list is just an illustrative guide. Suppliers may also work with charities and support agencies when they identify signs of vulnerability in a household. [50]

Vulnerable consumer is defined as one who is:

- Significantly less able than a typical consumer to protect or represent their own interests; and/or
- Significantly more likely to experience detriment, or for that detriment to be more substantial. [51]

Vulnerable customers are defined in the Fuel Poverty Strategy which is required to be published under the Warm Homes and Energy Conservation Act 2000 (for England and Wales) and the Housing (Scotland) Act 2001. Measures in place to increase the income of vulnerable households in GB include the Winter Fuel Payment (set up by the Social Fund Winter Fuel Payments Regulations 1998) and the Cold Weather Payments (introduced by the Social Fund Cold Weather Payments (General) Regulations 1988). In addition, Section 4AA (3) of the Gas Act 1986 (the Gas Act) provides that the Authority must carry out its functions in a manner best calculated to further its principal objective, having regard to, amongst other things, the interests of people who are chronically sick, pensioners, those on low incomes and people living in rural areas.

The gas suppliers also have a number of obligations in their licences (Conditions 26, 27 and 29 of the Supply Licence) to protect consumers who are of pensionable age, disabled and chronically sick, irrespective of whether they are also fuel poor.

GB has some measures in order to increase the energy efficiency and income of households with particular focus on those who are vulnerable. Key measures to increase the energy efficiency of households include the Warm Front programme (set up by the Home Energy Efficiency Scheme (England) Regulations 2005) and the equivalent programmes in Wales and Scotland; the Decent Homes Standard (a Public Service Agreement following the publication in April 2000 of the Housing Green Paper “Quality and Choice: a Decent Home for All”); the Carbon Emissions Reduction Target (CERT) and the Community Energy Savings Programme (CESP) both introduced through secondary legislation under the Gas Act. CERT requires gas suppliers to achieve goals for a reduction in carbon emissions generated by the domestic sector ; CESP requires gas suppliers to deliver energy efficiency saving measures to domestic consumers in low income areas of GB. Finally, the Energy Act 2011, includes a provision for a new “Green Deal”. This will establish a framework to enable private companies to offer consumers energy efficiency improvements to their homes, community spaces and businesses at no upfront cost, and recoup payments through a charge in instalments on the energy bill. The UK Government has announced proposals to mandate smart meters. Under powers in the Energy Act 2008, the Secretary of State has powers to make license

[50] The Energy UK Safety Net Protecting Vulnerable Customers from Disconnection February 2016
[51] Consumer Vulnerability Strategy-October 2019

modifications requiring the industry to put these in place. Other mechanisms are also in place under powers in the Climate Change Act 2008. The Carbon Reduction Commitment Energy Efficiency Scheme is a cap and trade mechanism for large organisations designed to reduce energy use through imposing a price on carbon emissions. Except in a limited number of circumstances (where an exemption under the Gas Act applies), gas suppliers must hold a licence granted by the Authority, which is the means by which the trading and balancing rules are imposed in GB.[52]

Since 2009, Citizens Advice has delivered a programme – 'Energy Best Deal' – to encourage and support switching in the energy market. However this programme has had some success in engaging people in the market, it also highlights the ongoing reality that some consumers remain highly unlikely to ever switch supplier. The energy market in which these groups of consumers operate therefore lacks competitive pressure and prices remain higher than average.[53]

The evolution of the energy market into its present form began in the 1980s with the privatization of Great Britain's gas and electricity industry. This moved control of the market out of the hands of Government and into the private sector. The Office of Gas and Electricity Markets (Ofgem) was established and entrusted with the role of regulating the market in order to ensure competition and protect consumer interests. At first, price controls were in place to encourage innovation and keep costs down. In 2002, Ofgem removed these price controls completely and the fully liberated market, as it remains today, was launched. Over the last couple of decades, a number of interventions and measures have been made in an attempt to protect the most vulnerable customers from unaffordable energy bills and the harmful effects of living in cold homes. Fuel poverty levels showed some evidence of decline between 1996 and 2003,[54]during which time Great Britain's energy market was undergoing change to a liberalized, open market. However, this trend has since reversed; rises in wholesale costs have continued to push up domestic retail prices and successive Governments have remained reluctant to intervene, maintaining a belief that a competitive, open market will deliver the best value for consumers. When the energy market was fully liberalized in 2002, it was hoped that a competitive market would emerge; one in which customers frequently shopped around for the best deal and changed supplier in reaction to price signals. In response, energy companies would be under pressure to provide the best service at the lowest cost in order to both retain and gain customers. However, 12 years on from liberalization, approximately 92 per cent of customers are supplied by one of the 'Big 6' energy suppliers, [55] and it remains very difficult for new suppliers to break into the market. This has led to the Big 6 being described as an "oligopoly with a veneer of competition"[56] , with a market dominance that enables them to make pricing decisions with little concern about threat to their stronghold. While opportunity does exist to 'play the market' and search out the best energy deals, many customers remain reticent to engage. In 2013, the number of customers switching supplier stood at 13 per cent for both electricity and gas, bringing the total proportion of households who have ever switched to 42 per cent for gas and 39 per cent for electricity. [57]

Social tariffs, The introduction of 'social price supports' for vulnerable customers represented an attempt by Government to protect the poorest consumers from fuel price rises without the need to interfere in the market or invest excessive amounts of public money. [58] Previously, tariffs have been offered at a rate at least as good as the supplier's standard direct debit offer, thereby aiming to protect customers such as those on prepayment meters from unfair price differentials. The Warm Homes and Conservation Act of 2000 introduced the obligation on

[52] EU THIRD PACKAGE – TRANSPOSITION NOTE – GREAT BRITAIN DIRECTIVE – GAS DIRECTIVE (2009/73/EC)
[53] Energy tariff options for consumers in vulnerable situations Final report to Citizens Advice, May 2015
[54] Baker (2006), 'Social Tariffs – A Solution To Fuel Poverty?'. Report to Unison.
[55] Ofgem (2014), 'Incumbency In The Retail Energy Market'. Submission to the CMA.
[56] Baker (2006), 'Social Tariffs – A Solution To Fuel Poverty?'. Report to Unison.
[57] Ipsos MORI (2014), 'Customer Engagement With The Energy Market: Tracking Survey'. Report for Ofgem. Available at: https://www.ofgem.gov.uk/publications-and-updates/customer-engagement-energy-markettracking-survey-2014
[58] Baker (2006), 'Social Tariffs – A Solution To Fuel Poverty?

suppliers to offer social tariffs to those in fuel poverty. By the end of March 2008, just over 200,000 customers were on social tariffs for electricity and just over 250,000 for gas.[59] The success of social price supports was, however, limited and by 2011, such schemes had been largely replaced by the Warm Home Discount (WHD). Social tariffs were found to be poorly targeted, with the implementation method left to the individual supplier's discretion. An impact assessment by CSE found that, while social tariffs generally resulted in beneficiaries being better off, many customers on the tariff were still paying more than direct debit customers with the same company. It also found that many would have been better off switching to the standard tariff provided by other companies. Table sets out how policies and programmes will assist specific groups in society.

*Table 21: How policies and programmes will assist specific groups in society[60]*

**Table 3.1 How policies and programmes will assist spesific groups in society**

| | Older People | Families with Children | People who are disabled or have a long-term illness | Adult unemployed without children |
|---|---|---|---|---|
| Energy efficiency schemes | ✓ | ✓ | ✓ | ✓ |
| Social housing investment | ✓ | ✓ | ✓ | ✓ |
| Private sector renewal grants | ✓ | ✓ | ✓ | ✓ |
| Regeneration schemes | ✓ | ✓ | ✓ | ✓ |
| Downward pressure on fuel prices | ✓ | ✓ | ✓ | ✓ |
| Social Action Plan | ✓ | ✓ | ✓ | ✓ |
| Energy company initiatives | ✓ | ✓ | ✓ | ✓ |
| Winter Fuel Payments | ✓ | | | |
| Cold Weather Payments | ✓ | ✓ | ✓ | |
| Minimum Income Guarantee | ✓ | (where child <5) | | |
| Welfare to Work | | ✓ | ✓ | ✓ |
| Working Families Tax Credit (WFTC) | | ✓ | | |
| Disabled Persons Tax Credit (DPTC) | | | ✓ | |
| Increased child allowances in income-related benefits and WFTC/DPTC | | ✓ | ✓ | |
| Increaseas to Child Benefit | | ✓ | | |
| Children's Tax Credit from 2001 | | ✓ | | |

[59] 4 House of Commons Library (2009), 'Fuel Poverty Bill: Bill 11 of 2008-09'
[60] The UK Fuel Poverty Strategy

| | | | |
|---|---|---|---|
| Child Support Reforms from 2002 | | ✓ | |
| An integrated child credit from 2003 | | ✓ | |
| Development of Disability Income Guarantee for implementation in 2001 | | | ✓ |
| An employment tax credit from 2003 | | ✓ | |
| Pension credit | ✓ | | |

### 3.1.2.2 *Financial Measures*

#### 3.1.2.2.1 Cold Weather Payments

Cold Weather Payments are one-off payments to help customers pay for extra heating costs when it is very cold. Customers will get a payment if the average temperature in their area is recorded as, or forecast to be, zero degrees Celsius or below over 7 consecutive days. Customers 'll get £25 for each 7-day period of very cold weather between 1 November and 31 March. After each period of very cold weather in their area, customers should get a payment within 14 working days. Cold Weather Payments are determined by The Department for Work and Pensions and are added automatically to the benefits of people who are eligible. It's paid into the same bank or building society account as their benefit payments. Cold Weather Payments do not affect customers other benefits.

If customers already get Pension Credit, Income Support, income-based Jobseeker's Allowance or have any of a disability or pensioner premium, a child who is disabled, Child Tax Credit that includes a disability or severe disability element, a child under 5 living with them, income-related Employment and Support Allowance or , Universal Credit, customers will be eligible for Cold Weather Payments.

#### 3.1.2.2.2 Winter Fuel Payment

The Winter Fuel Payment is an annual one-off payment to help customers pay for heating during the winter. If customers were born on or before 5 October 1954 they could get between £100 and £300 to help them pay their heating bills. This is known as a 'Winter Fuel Payment'.

If customers were born on or before 5 October 1954 and lived in the UK for at least one day during the week of 21 to 27 September 2020 this is called the 'qualifying week' , customers will be eligible.

If customers did not live in the UK during the qualifying week, they might still get the payment if both the following apply:

- Customers live in Switzerland or a European Economic Area (EEA) country
- Customers have a genuine and sufficient link to the UK - this can include having lived or worked in the UK, and having family in the UK

They cannot get the payment if customers live in Cyprus, France, Gibraltar, Greece, Malta, Portugal or Spain because the average winter temperature is higher than the warmest region of the UK.

Customers may still be able to get Cold Weather Payment or the Warm Home Discount Scheme, even if they do not qualify for Winter Fuel Payment.

Customers usually get a Winter Fuel Payment automatically if they are eligible and they get the State Pension or another social security benefit (not Housing Benefit, Council Tax Reduction, Child Benefit or Universal Credit). If customers are eligible but do not get paid automatically, they will need to make a claim. Most payments are made automatically between November and December. If customers get any other benefit, they will get their Winter Fuel Payment at the same time as their regular payments.[61]

*Table 22: Winter Fuel Payment Conditions[62]*

| Circumstance | Born between 21 September 1940 and 5 October 1954 | Born on or before 20 September 1940 |
|---|---|---|
| You qualify and live alone (or none of the people you live with qualify) | £200 | £300 |
| You qualify and live with someone under 80 who also qualifies | £100 | £200 |
| You qualify and live with someone 80 or over who also qualifies | £100 | £150 |
| You qualify, live in a care home and do not get certain benefits | £100 | £150 |

If customers get certain benefits**,** payment may be different if they or their partner get one of the following benefits:

- Pension Credit
- income-based Jobseeker's Allowance (JSA)
- income-related Employment and Support Allowance (ESA)
- Income Support

*Table 23: Winter Fuel Payment Conditions[63]*

| Circumstance | Born between 21 September 1940 and 5 October 1954 | Born on or before 20 September 1940 |
|---|---|---|
| You qualify, get one of the benefits and live alone (or none of the people you live with qualify) | £200 | £300 |
| You qualify and live with someone who also gets one of the benefits | £200 - only one of you will get the payment | £300 - only one of you will get the payment |
| You qualify, live in a care home and get one of the benefits | Nil | Nil |

[61] https://www.citizensadvice.org.uk/
[62] https://www.citizensadvice.org.uk/
[63] Source: https://www.citizensadvice.org.uk/

#### 3.1.2.2.3 Warm Home Discount

The Warm Home Discount (WHD) scheme is made up of three elements:

1. The Core Group – provides £140 to help less well-off pensioners through a direct rebate of £140 to their electricity or gas account. Customers in receipt of Pension Credit Guarantee Credit are eligible.

2. Broader Group – also provides a £140 energy bill rebate to customers who are in or at risk of energy poverty, but obligated suppliers have some discretion to vary the eligibility criteria to address their specific customer base.

3. Industry Initiatives – this scheme allows energy suppliers help energy-poor customers through third parties. It can include advice on energy saving, and help with reducing energy debts.

#### 3.1.2.2.4 Vulnerable customer safeguard tariff (or price cap)

The retail market is not working for consumers who remain on their supplier's default deal. OFGEM's work, and the Competition and Markets Authority's investigation, has shown there is little competitive constraint on the prices suppliers charge these customers. As a result, millions of consumers are paying more than they should be. These consumers are more likely to find themselves on a default deal, and because of their circumstances, can suffer more harm as a result. The primary measure was implemented on 7 December 2017, when Ofgem modified the standard conditions of the electricity and gas supply licences by inserting a new standard condition, 28AA, to regulate charges for domestic customers who receive the Warm Home Discount (WHD). The main effect of this change was to extend the scope of the existing prepayment meter (PPM) safeguard tariff to protect around one million consumers who received WHD, who were also on their suppliers' default tariff. The protections from the changes to the safeguard tariff began being rolled out after 2 February 2018. On 6 November 2018 OFGEM decided that WHD customers' current protection will be replaced by the default tariff cap, a change that came into force on 1 January 2019.

The prepayment price cap (safeguard tariff) limits how much a supplier can charge you per kWH of electricity or gas. This is the 'unit' measure which your bill is calculated from. Suppliers cannot set their prices above the tariff cap and must set their prices at the level or below it. The level which set reflects an estimate of the costs to supply your energy, and so it protects you from being overcharged. It currently applies if you pay for your gas or electricity in advance using a prepayment meter open key term pop-up (including through a token-operated meter)It does not apply if your prepayment smart meter is 'fully interoperable', meaning your meter can continue to fully work its smart functionality if you switch supplier. In general, suppliers set prices based on differences in network charges. This means that the price you pay reflects how much it costs to transport energy to the region you live in. Cost reflective charges are a reasonable way to allocate the costs to run and maintain the energy network between customers. It encourages energy companies to be more efficient, for example by incentivizing energy generators to set up nearer towns and cities to cut transportation costs. These efficiencies can then be passed on to customers through cheaper tariff offers.

The Competition and Markets Authority (CMA) introduced the prepayment price cap to cover over 4 million households on prepayment meters in April 2017, and it is administered by OFGEM. The CMA found that if you are a prepaid customer you have fewer tariff choices and pay disproportionately more than customers who pay in other ways, like direct debit or credit. They also found prepayment customers to be more likely in vulnerable circumstances and in debt, and so further disadvantaged in the market. On 2 February 2018, OFGEM extended the price protection of the prepayment price cap to cover vulnerable customers on a poor value standard variable or default tariff open key term pop-up who receive the Warm Home Discount. It will protect around one million more households.

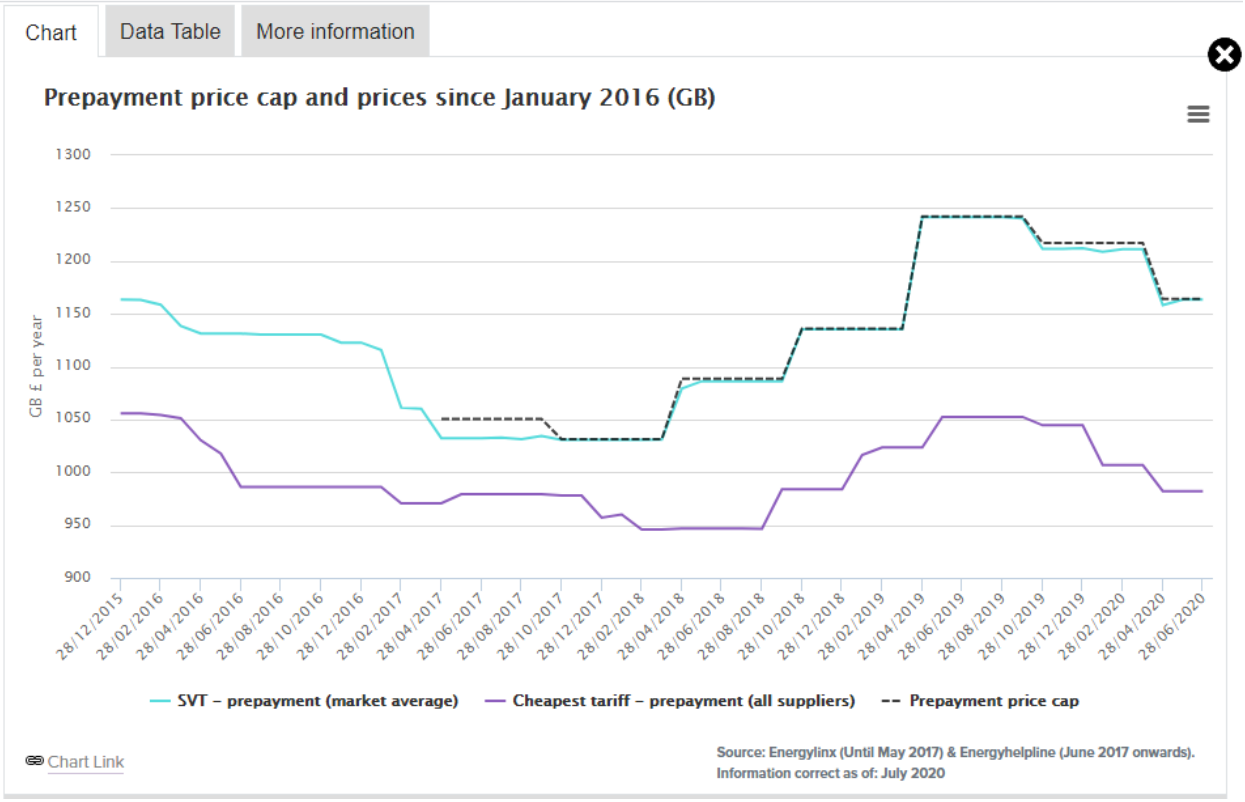



*Figure 12: Warm Home Discount households on the prepayment price cap moved to the government's 'default tariff' price cap when it started on 1 January 2019.*[64]

This chart compares trends in prices since 2016 for a dual fuel customer paying prepayment. It shows the market cheapest tariff, the average standard variable tariffs (SVT) and the price cap for this payment method. The values are calculated for a customer with typical energy use. From April 2020, the prices shown in the chart are calculated using the latest Typical Domestic Consumption Values (TDCV) that entered into effect from 1 April 2020. In practical terms, this means that the tariffs shown from April 2020 are likely to appear slightly lower than those before April 2020.Before April 2020, the prices shown in the chart were calculated using the Typical Domestic Consumption Values (TDCV) applicable at each date.

Research on energy poverty in Europe began in the United Kingdom, where it is often referred to as 'fuel poverty'. After the term was first used in the 1980's, Boardman's publication 'Fuel Poverty: from cold homes to affordable warmth' is considered the seminal publication on the topic. Research on energy poverty has continued to develop and expand in the United Kingdom, evidenced by the almost 200 publications on the EPOV website linked to the United Kingdom. National policy on energy poverty was formulated in the UK Fuel Poverty Strategy in 2001. Important elements of the policy include Winter Fuel Payment, Cold Weather Payment and Warm Home Discount (WHD), which covers energy bills of certain vulnerable households in the winter. The Winter Fuel Payment reached roughly 12 million people (2015/2016), the Cold Weather Payment issued around 130,000 payments (2016/2017), and the WHD provided rebates to nearly 2.2 million vulnerable consumers (2015/2016). In January 2019 an Energy Price Cap was introduced which protects 11 million households from the highest tariffs. Various energy efficiency

[64] OFGEM web site: https://www.ofgem.gov.uk/data-portal/retail-market-indicators#thumbchart-c7770745751913637-n114567

programmes are implemented in the UK. In the Energy Company Obligation, started in January 2013, energy suppliers support the delivery of energy efficiency measures amongst low income and vulnerable households. Approximately 500,0000 insulation measures were taken per year since the scheme's inception. The Decent Homes Programme aims to ensure that social housing achieves a minimum standard including a reasonable degree of thermal comfort. One of the newest measures, initiated in 2019, is the Energy Price Cap, aimed at protecting 11 million households from the highest energy tariffs Regional governments have also implemented additional policies and their own framework of measurement to address energy poverty. Many civil society organizations are active in the field of energy poverty in the United Kingdom, including advocacy organizations and NGOs. For instance, the Community Financial Inclusion Project started in 2010, run by an NGO, aims to establish ongoing engagement with households having low participation in neighborhood groups or existing structures. The United Kingdom reports its own energy poverty statistics on England that might use other metrics and partly present different results from the EPOV indicators. In England the Low-Income High Costs indicator is used to measure energy poverty. A household is considered energy poor if it has required fuel costs that are higher than average and if they a were to spend that amount, they would be left with a residual income below the official poverty line. The proportion of households in England in fuel poverty was estimated to be 11.1% in 2016. These statistics are gathered by National Department for Business, Energy and Industrial Strategy.[65]

*Table 24: Measures from EU Energy Poverty Observatory[66]*

| Selected Measures | Type of Measure | Organisation | Target Groups | Start Year | Result |
|---|---|---|---|---|---|
| **Warm Homes Nest Scheme** | Building insulation, Energy audits, Heating system, Household appliances | Regional government | Low-income households, Vulnerable households | 2011 | 98.000 household in Wales have benefited from free advice and support |
| **Energy Company Obligation** | Building insulation, Heating system | National government, Energy suppliers | Low-income households, Vulnerable households | 2013 | 500.000 insulation measures taken per year since scheme inception |
| **Decent Homes Programme** | Building insulation, Heating system | National government | Social housing | 2000 | Over million social homes improved in first 10 years |
| **Scotland's Energy Efficiency Programme** | Building insulation, Heating system, Energy audits, Energy bill support, information, and awareness | Regional government | Vulnerable households | 2016 | - |
| **Winter Fuel Payment** | Energy bill support | National government | Pensioners | 1997 | 12.21 m GB residents received payment for winter 2015/2016. 42.000 claimants resident in the EEA or Switzerland received payment. |
| **Cold Weather Payment** | Energy bill support | National government | Households on social benefit, Low-income households | - | 131.000 payments in winter 2016-2017, total expenditure of GBP 3.3 |
| **Warm Home Discount** | Energy bill support, information and awareness | National government, Energy suppliers | Households on social benefit, Low-income households | 2011 | GBP 320 m support provided to vulnerable consumers between April 2015 and March 2016 |

[65] EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

[66] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

| | | | | | |
|---|---|---|---|---|---|
| **Energy Price Cap** | Social tariff | National government | Vulnerable households | 2019 | - |
| **Minimum Energy Efficiency Standards** | Building insulation, Heating system | National government | Private rented housing | 2018 | - |

#### 3.1.2.2.5 After the COVID-19 Pandemic

If customers are struggling with bills because of coronavirus (COVID-19) , help is available in this period. The Government has agreed emergency measures with suppliers to support customers using prepayment meters or who may be struggling with money problems. Options may include on a case by case basis:

- reviewing bill payment plans, including debt repayment plans
- payment breaks or reductions in how much customers pay
- giving customers greater time to pay
- in some cases, access to hardship funds

An agreement reached between the Department for Business, Energy and Industrial Strategy and domestic energy supply companies setting out principles to support energy customers impacted by COVID-19. Department for Business, Energy and Industrial Strategy will seek to identify and prioritize customers who may need additional support and consider the needs of customers considering that:

- Any Customer can suddenly become vulnerable even if they are not classed as such already.
- Priority Service Register customers may need extra advice and support
- Prepayment meter customers, both smart and legacy will need specific support
- Customers with health conditions or who are or are vulnerable to a cold home, may need to maintain a constant supply of energy

### 3.1.2.3 *Stakeholder Analysis*

The breakdown of responsibilities as it related to tariff setting is summarized in the table below. The regulatory process adopted to setting distribution tariffs is that DSOs set charges using a methodology approved by the regulator.

*Table 25: Responsibilities of Actors*

| Actor | Allowed Revenues (tariff level) | Tariffs (tariff structure) | Connection Charges |
|---|---|---|---|

| | | | |
|---|---|---|---|
| **DSO** | Not involved | Proposes the tariff structure | Proposes methodology to calculate the charges |
| **Government** | Not involved | Not involved | - |
| **NRA** | Full responsibility for setting allowed revenues | Consults with stakeholders on the DSO's proposed structure. Takes final decision | Consults with stakeholders assesses the methodology. Takes a final decision on the methodology principles (not responsible for approving the actual connection charges) |

X = main responsibility; other options to fill the table: sets rules; monitors ex-post; defines main principles; calculates for NRA approval; also involved;

Source: Study on tariff design for distribution systems-Final Report

Many organisations have a role in supporting vulnerable consumers, within and across the regulated sectors. Public oversight comes from government departments, regulators and statutory complaints services which are sponsored by government. Government also provides grant funding to some charities and consumer bodies that provide support. Companies provide much of the direct support to their customers, and trade associations can help by sharing good practice.[67]

Citizens Advice gives independent advice and support for any issue or problem with energy bills and the energy supplier. It also provides knowledge and information on a wide range of topics such as energy meter related questions, new suppliers in a new home and getting the best energy deal possible.

Committee on Fuel Poverty (CFP) advises on effectiveness of policies aimed at reducing fuel poverty, and encourages greater coordination across organisations working towards reducing fuel poverty. This is an advisory non-departmental public body sponsored by the Department for Business, Energy and Industrial Strategy.

#### 3.1.2.4 *Risk Assessment*

A number of factors may put certain consumers at greater risk of detriment than others, or mean that they are less able to be active in the market. These can for example be factors related to the individual, such as cognitive impairment or not speaking English as a first language. Or circumstances such as being a full-time carer or not having access to an internet connection. The impact of any detriment can also be greater for certain consumers, for example due to the way a supply company engages with its customers. While OFGEM recognises that any consumer can face detriment in a market, OFGEM focus on those most in need of protection or support. Risk factors can stem from individual circumstances or characteristics and the market itself, and how they interact. The range of risk factors means that vulnerability can often be multidimensional. Vulnerability can be transitory as circumstances change or permanent. The definition is intentionally wide and requires energy companies to invest time and effort to understand their customer context, customer needs and to provide appropriate support.[68]

[67] Vulnerable consumers in regulated industries -2017
[68] Consumer Vulnerability strategy October 2019

### 3.1.2.5 *Monitoring Vulnerability*

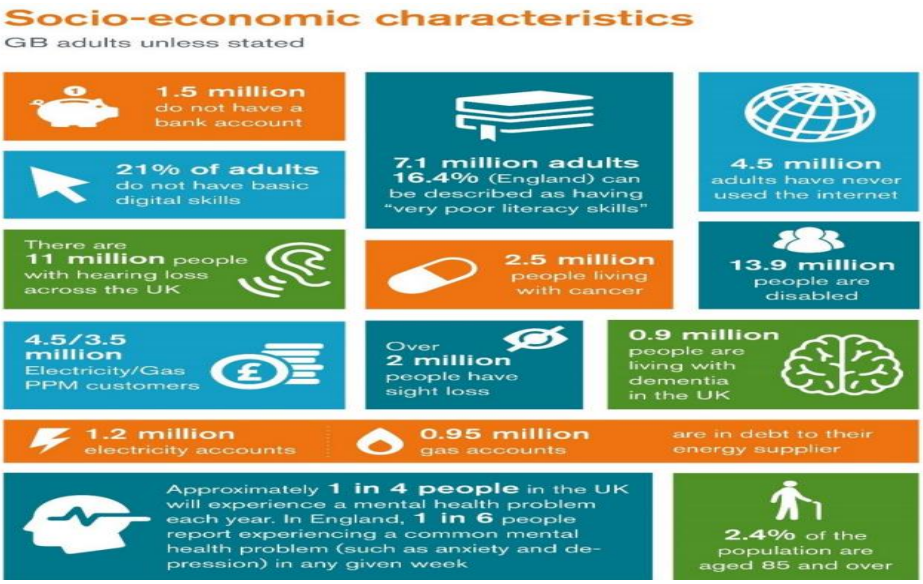



*Figure 13: Socio-economic Characteristics*[69]

OFGEM has pushed energy companies to keep reducing disconnections. It is now extremely rare that anyone is disconnected from his or her energy supply because they are in debt. There were only 6 disconnections for debt in 2018, compared to 640 in 2013. [70] This is a continuing downward trend from just under 30,000 disconnection in 1998.[71] Warm Home Discount (WHD) and Energy Company Obligation (ECO), which have delivered significant benefits to consumers. In 2018, for example, WHD delivered £140 rebates to nearly 2.2m consumers.[72] Gas distribution companies have connected over 64,000 households to the gas grid, giving them access to cheaper fuel for heating (during the first five years of RIIO-GD1).[73] For energy suppliers, OFGEM has introduced a vulnerability principle, which makes delivering fair outcomes for vulnerable consumers an enforceable obligation. OFGEM has protected the most vulnerable from excessive warrant costs, which we expect will save indebted consumers £18m.[74] OFGEM has also put in place protections to make sure suppliers are not allowed to charge consumers for energy used over 12 months ago which they have failed to bill for. This helps to decrease shock bills and strongly benefits the most financially vulnerable.[75] OFGEM has implemented price protections for consumers on default tariffs and prepayment tariffs.[7677] OFGEM expects this to deliver consumers a direct benefit of £2,269m.[78] These are likely to benefit vulnerable groups proportionally more as they are more likely to be on these tariffs.[79] OFGEM

[69] Source: Financial Inclusion Commission - The Facts- Figure 2: Socio-economic characteristics
[70] Ofgem (2019) Monitoring social obligations: 2018 annual data report
[71] Ofgem (2008) Domestic suppliers' social obligations: 2008 Annual report
[72] Ofgem (2018) Warm Home Discount Annual Report: Scheme Year 6
[73] See Network regulation – the 'RIIO' model
[74] Ofgem (2017) Decision to modify gas and electricity supply licences for installation of prepayment meters under warrant
[75] Ofgem (2018) Decision: Modification of the electricity and gas supply licences to introduce rules on backbilling to improve customer outcomes
[76] The default tariffs price cap also includes the previous price cap, which covered consumers in receipt of the Warm Home Discount.
[77] Ofgem (2018) Default tariff cap: decision - overview; Consumers and Markets Authority (2016) The Energy Market Investigation (Prepayment Charge Restriction) order 2016
[78] Ofgem (2018) Consumer Impact report 2017-18
[79] Ofgem (2018) Consumer Engagement Survey

has continued to build on our insight into how consumers in vulnerable situations are experiencing outcomes in the energy market, including by publishing data through the annual Vulnerability Report, working closely with charities and consumer organizations across GB and through publishing research, such as the Consumer Engagement survey.[80] Through this research OFGEM provided high quality information on consumers experience. [81]

The United Kingdom has a higher performance than the EU average on the population-reported indicators. In 2018, 5.4% of the population reported that they were unable to keep the home efficiently warm while the corresponding EU average is 7.3%. Similarly, for 2018, 5.4% were unable to pay their utility bills on time due to financial difficulties, while the respective EU average is 6.6%. The United Kingdom's performance in the expenditure-based indicators is mixed compared to the EU average. The share of households that spend a high share of their income on energy expenditure is 18.8% which is higher than the EU average. These households are likely to live in a dwelling with poor thermal and energy efficiency in nonurban areas where there is more heat dissipation. Contrarily, at 9.2% the United Kingdom has a lower number of households spending a low share of their income on energy expenditure than the EU average. These households might restrict their energy spending below what is necessary to meet their needs.

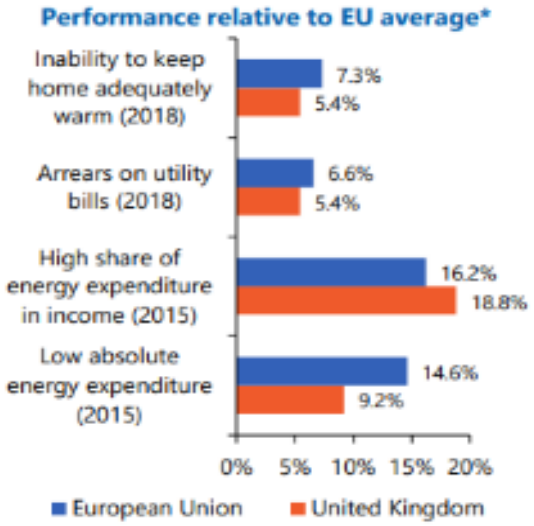



*Figure 14: EU & UK Performance Comparison*[82]

The percentage of the population unable to keep the home adequately warm gradually increased from 5% in 2006 to 11% in 2013. The notable increase between 2010 and 2013 may be attributed to the financial crisis. It slowly decreased to the level of 6% in 2017 and 2018. Meanwhile, the percentage of population on arrears on utility bill follows a similar trajectory and increased notably between 2011 and 2012 from 5% to 9%. By the year 2017, the arrears on utility bills decreased to 5%, the same value observed in 2005. In 2013 the Energy Company Obligation was introduced to tackle energy efficiency in households. This may have contributed to a gradual improvement of indicators from 2013 onwards.

[80] See Consumer research
[81] Ofgem (2019) Record numbers of people save money after taking part in Ofgem's latest collective switch trial
[82] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

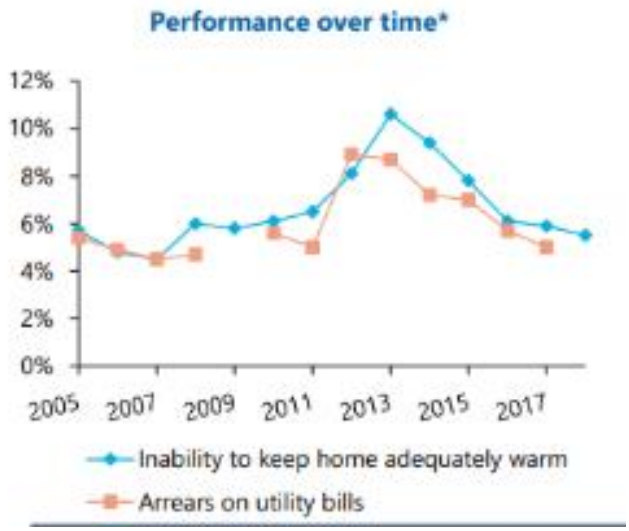



*Figure 15: Time Chart*[83]

The disaggregated data of the population reported indicators suggest that energy poverty in the United Kingdom is highest for the social housing sector in 2017, at 13.4% for inability to keep the house warm and 14.6% for arrears on utility bills. The social housing sector, which is the most vulnerable tenure type, accounts for 18% of the population in the United Kingdom. The data also indicates that apartment type dwelling as the most vulnerable to these indicators, noting that 15% of the population live in this dwelling type.

[83] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

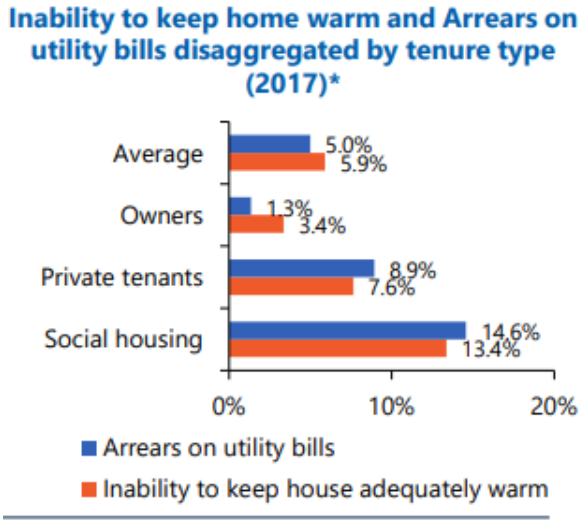



*Figure 16: Keeping home ability ratio*[84]

The household energy cost over time in the United Kingdom has gradually increased to reach a peak in 2015 with electricity at 21.5 €ct/kWh and gas at 6.52 €ct/kWh. There is a sharp increase in electricity price between 2011 and 2012. This corresponds to the poorer performance of household indicators between these two years, as observed earlier. There is a notable reduction in price per unit between 2015 and 2017 but 2018 has again seen a small increase in prices.

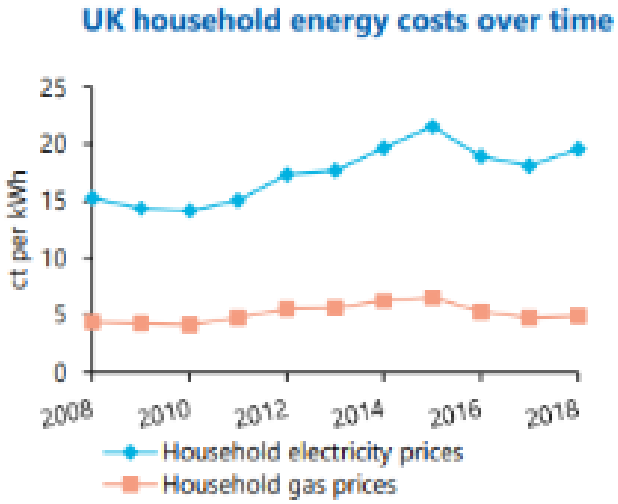



*Figure 17: Energy Costs Chart*[85]

[84] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

[85] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

### 3.1.2.6 *Expectations for the Future*

OFGEM's Forward Work Programme, OFGEM committed to update its Consumer Vulnerability Strategy, which sets out its priorities until 2025 and the outcomes OFGEM wants to see. Based on extensive stakeholder engagement across Wales, Scotland and England, OFGEM have decided to focus on five areas where OFGEM can drive strong improvements for consumers in vulnerable situations:

- Improving identification of vulnerability and smart use of data.
- Supporting those struggling with their bills.
- Driving significant improvements in customer service for vulnerable groups.
- Encouraging positive and inclusive innovation.

Working with partners to tackle issues that cut across multiple sectors.

Each of the five themes are underpinned by the outcomes OFGEM wants to see realized during the lifespan of the strategy. For example, to support those struggling with their bills, OFGEM wants to see better support for consumers who are at risk of self-disconnecting and a decrease in self disconnections. To drive a step change in customer service for vulnerable groups, OFGEM wants industry to tailor their customer service to consumers with specific needs. OFGEM will look to work closer with government on policy areas that affect our role as a regulator, such as fuel poverty policy or social security.

In the first year of the strategy, OFGEM will focus on:

- Creating an analytical framework to consistently assess the impact of its policies on particular groups of consumers in vulnerable situations. This will enable its to assess consumer groups at risk in a more targeted way and propose tailored mitigations in changing policy contexts.
- OFGEM will strengthen rules to protect consumers in vulnerable situations from self-disconnecting their pre-payment meters.
- Consult on its proposals for the future energy retail market review.
- Update the Ability to Pay principles and include them in the license conditions to provide targeted support to consumers facing payment difficulty.
- Propose a requirement on gas network companies to adhere to a vulnerability principle, similar to the obligation that OFGEM has placed on gas and electricity suppliers. [86]

There is widespread recognition that the energy market is going through great change with the impact of digitalization, decarbonization and decentralization. These changes will create new costs and benefits. It will change the way consumers interact with their energy provider, new business models, data portability and the impacts of moving towards decarbonization. Fundamental changes to the retail market are already underway. The rollout of smart meters is essential for the smart energy system. More and more people now have smart meters in their home and OFGEM will continue to work with BEIS on roll-out of smart meters across GB.[87]

OFGEM is also already progressing structural change programmes to improve the functioning of the energy market. These include:

[86] Consumer Vulnerability strategy October 2019 -Decision on Consumer Vulnerability Strategy 2025
[87] See Department of Business, Energy and Industrial Strategy, Smart Meters statistics

- Particularly related to decentralization, the Future Charging and Access Review will ensure that network charges are shared, and consumers have fair access to the network.
- OFGEM is designing the next price controls for RIIO-2, through which OFGEM want to continue to improve the service provided by distribution network companies to consumers in vulnerable situations including fuel poor.[88]
- Through a joint review with the Department for Business, Energy and Industrial Strategy (BEIS), we are exploring reforms to retail energy market to ensure it works well for all consumers.[89] It will promote competition and drive innovation by allowing innovative business models to capture system benefits, including flexibility in consumers' demand, while ensuring that all consumers (including those in a vulnerable situation) receive energy at a reasonable price, with an appropriate level of service.
- Settlement reform will use data from smart meters to ensure suppliers are charged for the actual cost of their consumers' energy use. This will encourage them to reward their consumers for moving their electricity use to times when it is cheaper to generate and transport, which will help create a more flexible, cost-effective and lower carbon electricity system.

In Strategic Narrative for 2019-2023, OFGEM has set out that its position regarding affordability - that actions primarily intended to redistribute substantial costs are a matter for government.[90] OFGEM is already looking at alleviating affordability pressures by implementing the default price cap and conducting a review of self-disconnection in the prepayment meter market. After consulting with stakeholders who provided broad support for its existing position, OFGEM has decided to maintain the position that substantial redistribution is a matter for government. OFGEM will continue to work with government as part of the Consumer Forum to clarify the boundaries between regulatory and social policy. [9192].

As markets change, it also raises the question of which regulated entity is better placed to provide protections for the most vulnerable consumers. Network companies have played a crucial role in supporting vulnerable consumers in a variety of ways. One of these is the Fuel Poor Network Extension Scheme (FPNES), which connects fuel poor households to the gas grid and very significantly reduces heating costs for households previously reliant on electric or oil heating. Looking forward, however, increasing the number of homes heated by gas may conflict with Government policy on fossil fuels, and RIIO2 might be the last price control period in which the FPNES is funded.

### 3.1.3 Italy

#### 3.1.3.1 *Overview and Regulatory Framework*

In Italy, there is not an official definition of vulnerable consumers or energy poverty. However, some measures have been in place to address the issue for years and there is awareness in the country. The law, concerning public service obligations and consumer protection, specified that all domestic consumers and small businesses (with fewer than 50 employees and a turnover of less than €10 million) who do not choose their supplier on the free market are served under the protected-tariff regime.

[88] See Network price controls from 2021 (RIIO-2)
[89] BEIS (2019) Future Energy Retail Market Review
[90] See Ofgem, Our strategic narrative for 2019 - 2013
[91] Department for Business, Energy & Industrial Strategy (BEIS) Consumer Forum
[92] National Audit Office (2017) Vulnerable Consumers in Regulated Industries

In the country, in 2008 and 2009, as a result of specific legislative interventions, with the aim of ensuring households access to essential services, economic incentives for the supply of electricity, natural gas and water service (hereinafter also: *national social bonuses*) were introduced to compensate the expenditure incurred by households.

At the beginning of the introduction of the regulation in support of fuel poverty, just over 2 million households have at least once obtained the bonus for electricity and/or gas, but many of these households have decided not to renew the bonus claim. In addition, initially the balance between new entries and non-renewal has gradually thinned out. After the start-up year, the new entrants in the system progressively decreased[93].

In the face of a difficult economic situation for an increasing number of families, these trends have led the ARERA to have some insights, first of all, highlighted the existence of specific groups of customers who have not requested the bonus, although they are eligible.

Therefore, over the years, ARERA has undertaken a progressive minimization of information and "bureaucratic" barriers to access such as:

- a general promotion of bonus information
- a simplification and automation of access procedures
- punctual actions against specific categories of clients

In 2019, as has already happened in recent years, there has been a slow but steady growth in the total number of bonus recipients, i.e. compensation for the expenditure incurred for the supply of electricity, gas and water for households in conditions of economic vulnerability or serious health.

In particular, in 2019;

- 837,598 households were recipients of the electricity bonus for economic discomfort
- 558,514 for the gas bonus

To summarize, at present, there exist several measures to protect customers including vulnerable household customers, utilities, activities relating to public service such as hospitals, nursing homes and rest, prisons, schools and other public and private facilities that perform an activity recognized of public service. Social bonus mechanism is applied for the electricity customers whose annual income does not exceed a certain threshold, where the mechanism is set up by the law and certified by equivalent economic situation indicator, that takes into account income, assets, the characteristics of a family by number and type. The social bonus is a discount of the electricity bill each year, dependent upon the use, number of people in the family, and climate zone.[94] The vulnerable consumers are mainly identified through the welfare system and the SIA initiative, which is an organised programme to help households for addressing the reasons behind their state of poverty.

Legislative Decree no. 93/11 has defined the following as so-called “vulnerable”: domestic customers, non-domestic customers with consumption below 50,000 S(m3)/year and end customers that own utilities related to public

[93] Report on the outcome of the fact-finding survey on the state of implementation of the electricity and gas bonus regulation of 27 February Resolution ARERA 72/2014

[94] Thomson H. and Bouzarovski S., August 2018, Addressing Energy Poverty in the European Union: State of Play and Action

service activities, i.e. utilities owned by a public or private structure that carries out a recognised assistance activity.[95]

Recently, according to the **Law 28 March 2019, n. 26**, the holders of the income of citizenship have the right to access the electricity, gas and water bonus even if the Equivalent Economic Status Indicator (ISEE) threshold is higher than €8,265.

From the 1st of January, 2021 the recognition of bonuses to those entitled will be automatically, without the need for the families concerned to submit an application procedure on the basis of the provisions **of Decree-Law no. 124 of October 26, 2019,** converted with amendments by Law no. 157 of December 19, 2019, on the proposal made by the Authority with the Report of June 25, 2019, 280/2019/I/com. This will bridge the gap between potential beneficiaries and actual recipients of bonuses (about 2.6 million households).

In particular, the new automatic recognition system of benefits to those entitled will be based on the exchange of the necessary information contained in the databases of the INPS (Italian Social Security Administration) and in the Sistema Informativo Integrato managed by the Acquirente Unico, in compliance with the regulations on the protection of personal data. The definition of the implementation modalities of the new system is left to the Regulator.

#### 3.1.3.2 *Financial Measures*

In 2018, 14.1% of households reported that they were unable to keep the home adequately warm which is significantly higher than the corresponding EU average at 7.3%. Conversely, for 2018, 4.5% were unable to pay their utility bills on time due to financial difficulties, while the respective EU average is 6.6%.96 Italy is implementing various policies to support vulnerable customers, such as electricity and gas bonuses, tax deductions, etc.

*Table 26: Financial Measures[97]*

| Selected Measures | Type of Measure | Organisation | Target Groups | Stary Year | Result |
|---|---|---|---|---|---|

[95] ARERA 2019 Annual Report, page 141
[96] EU Energy Observatory, Member State Reports on Energy Poverty 2019, Page 59
[97] EU Energy Observatory, Member State Reports on Energy Poverty 2019, Page 61

| | | | | | |
|---|---|---|---|---|---|
| **Tax deductions for energy efficiency** | Building insulation, Heating system, Renewable energy | National government | No specific target group | 2007 | - |
| **Reduction of available power** | Disconnection protection | Regulator | Indebted households | - | - |
| **Financial assistance for heating costs** | Energy bill support | Local government | Low-income households | 2009 | - |
| **Gas Bonus** | Energy bill support | National government | Low-income households, | 2009 | - |
| **Electric Bonus** | Energy bill support | National government | Low-income households, Chronically/severely diseased | 2009 | - |
| **VAT reduction for renovation** | Building insulation, Cooling system, Household appliances, Heating system | National government | No specific target group | - | - |
| **Heat Account** | Building insulation, Heating system, Renewable energy | National government | No specific target group | 2012 | - |
| **Energy Social Housing Innovative Financing Tender (EnerSHIFT)** | Building insulation, Heating system, | European Union, Regional Government | No specific target group | 2016 | - |
| **Less Energy More Opportunities (LEMON)** | Building insulation, information and awareness | European Union | No specific target group | 2016 | - |

Gas bonus is the most effective element among all other support mechanisms since it brings a direct impact with bill support mechanism. There are two different implementation areas for gas bonus, the first one being economic hardship and the other one being serious health conditions. The spending ability of the family is tested by using a synthetic indicator called ISEE, which combines information about income, real and financial assets, family composition and occupational status of household members. Given that the benefits are paid in the form of lump-sum discounts on the electricity and gas bills, a necessary eligibility condition is that the household must be a domestic customer in its primary residence.

#### 3.1.3.2.1 Economic Hardship

The bonus is foreseen for:

- Families with ISEE (Equivalent Economic Conditions Indicator) not exceeding € 8,265
- Large families (with more than 3 dependent children) with ISEE not exceeding € 20,000

- to a family unit withholding a Citizenship Income or Citizenship Pension

#### 3.1.3.2.2 Serious Health Conditions - Physical Discomfort

The bonus for physical inconvenience can be combined with that for economic inconvenience (both electricity and gas) if the respective eligibility requirements are met. Similar to economic hardship, the application is submitted to the municipality of residence of the owner of the electricity supply (even if different from the patient) using the appropriate forms or to another body designated by the municipality (CAF, mountain communities). To have access to the bonus, the customer must be in possession of:

- an ASL certificate certifying:
    - the situation of serious health condition
    - the need to use electro-medical equipment for life support
    - the type of equipment used and the hours of daily use
    - the address where the equipment is installed

#### 3.1.3.2.3 Other Non-Financial Measures

There are other non-financial measures applied such as warning prior to disconnection and prohibition of disconnection for activities relating Public Service like hospitals, nursing homes, household consumers that require electricity powered life support equipment with severe health problems, prisons, schools. [98]

#### 3.1.3.2.4 Financing and Costs

Since 2009, a social protection mechanism specifically aimed at domestic customers who find themselves in situations of economic hardship, is active for natural gas supplies, similar to that in the electricity sector: the gas bonus. To cover the fees deriving from the application of the gas bonus, the Authority has created the GS component for non-domestic customers, within the compulsory tariff for the distribution services and natural gas metering. The value of the component is defined at the same time as the tariff update. The funds from the State Budget are added to the funds collected from the customers.[99]

558,514 customers had benefited from the gas bonus through economic hardship at 31 December 2019; after all the controls related to the eligibility requirements by the Municipalities, their requests for the subsidy were accepted after verification by the gas distribution companies. Over 1.7 million families benefited from the subsidy, at least once, since the activation of the mechanism.

*Table 27: Provided Gas Bonuses*

| Year | Gas Bonus |
|---|---|
| **2015** | 448,496 |
| **2016** | 448,707 |
| **2017** | 499,808 |
| **2018** | 519,375 |

[98] Medreg, 2016, Vulnerable Consumers Report
[99] ARERA Annual Report 2019, page 141

| | |
|---|---|
| **2019** | **558,514** |

### 3.1.3.3 *Stakeholder Analysis*

There are various stakeholders regarding financial measures and regulations related to vulnerable consumers in Italy. Bonus scheme is provided under the Italian legislation in harmonization with the European Directives. The Government (Ministries such as the Ministers of Economic Development, Economy and Finance, Labour and Social Policy) develop strategies, prepare and publish policy documents, evaluates the recommendations prepared by the Regulatory Authority and introduces incentive mechanism such as electric bonus.

Energy Regulatory Authority (ARERA) is responsible from making the incentive operational defined by the Government, with the collaboration of the Municipalities, to ensure savings on electricity expenditure for families in conditions of economic and physical hardship and for large families. The Authority determine the most effective procedures of implementation, taking into account the need to maintain the economic equilibrium of companies.

Within its area of responsibility, the Authority has initiated proceedings to take additional measures for the protection of economically disadvantaged clients that could add to the electric and/or gas bonus for example to enable the holders of bonuses to choose the cheapest offer, so as to further reduce the expenditure for example, through the automatic application, for the holders of the bonus, of the best offer conditions in circulation, in cases where the offer previously activated by the customer is not already the best. In addition, to facilitate the arrangements for payment of supplies and prevent any arrears of customers who use the electric and/or gas bonus, the Authority wants to introduce the possibility of resorting to the instalment payments in an easier manner compared to current conditions.

ARERA works in cooperation with the Municipalities during the application and evaluation process to benefit from the electric bonus. In this regard, Municipality of residence receives application for bonus related to economic hardship and physical disabilities and evaluates it with its system.

As explained before vulnerable consumers who gets electric bonus are the families in conditions of economic and physical hardship.

ASL (Local Health Authority) is the Authority that certifies the customer related to compensation bands envisaged.

In 2019, a national observatory on energy poverty, Osservatorio Italiano sulla Povertà Energetica (OIPE), was established to carry out research, information and dissemination activities on the issues of energy poverty, at national and international level.

Until the end of 2020, the actors of the bonus are summarized in the following table, from the 2021 ARERA will introduce a new modality that will involve a further automatism in the management of the practices by entrusting the Integrated Information System, a system already used for other procedures, such as switching between a supplier and another or the management of gas and electrical POD master data.

Those entitled due to their economic conditions will no longer have to submit applications but will automatically be able to take advantage of this facility. This automatism will be made possible thanks to the work of the Data Protection Regulator that has allowed the interoperability of SGAte and Acquirente unico databases.

*Table 28: Stakeholders*

| Stakeholder | Role |
|---|---|
| Municipality | They are in charge of managing the bureaucratic procedures necessary for the application of the compensation scheme for energy expenditure incurred by disadvantaged domestic customers. They<br>• receive the requests for compensation submitted by those entitled in the form of a self-declaration.<br>• evaluate and admit the applications by verifying the personal data and that the level of ISEE is within the allowed limits.<br>• issue the client, also through *SGATE*, a certificate that recognizes the right to access compensation as a citizen in conditions of economic and/or physical vulnerability. |
| ARERA | It is a member of the Italian Energy Poverty Observatory.<br>It establishes the application modalities of the compensation scheme defined by the Decree of the Ministry of Economic Development of 28/12/2007 and by the anti-crisis Decree n.185 of 29/11/2008, by virtue of which it is recognized to economically disadvantaged domestic customers and (only for the Electric Bonus) in serious health conditions, the possibility to benefit from a compensation scheme for the costs incurred for the supply of electricity and gas. |
| CAF | The *Fiscal Assistance Centres* (CAF) perform the function of support to Municipalities, which may decide to avail themselves of their support for the collection and management of the facilitation requests by those entitled. |
| ASL | Issues certificates attesting the serious health conditions that require the use of life-saving electromedical machinery and the presence of such machinery. |
| ANCI | The National Association of Italian Municipalities has always been committed to supporting, simplifying and flanking the territorial policies of the Municipalities. It is a point of reference for Italian Municipalities and for citizens who find in the Municipalities the answers to their needs, the facilitated access to educational, social and welfare services in the territory but also the recognition of rights or simply listening. ANCI has made available innovative technological solutions to meet the requirements of the law, so that the economic benefits of families can be offset directly in the energy and gas bills, with savings in economic terms and a streamlining of bureaucracy with a view to increasing efficiency and effectiveness of public administration at the service of citizens. |
| SGATe – in charge by ANCI | This is an internet portal that:<br>• manages applications for facilitation and allows the transfer of information collected by the Municipalities to the distributors for verification by the latter<br>• provides assistance to municipalities, distributors for accreditations and applications in progress<br>• transfers the information to CSEA and Poste Italiane for the supply of transfers to indirect gas customers[100]<br>• transfers to the person responsible for mailing (currently always Poste Italiane) the information necessary to send communications to bonus holders. |
| DSO - Distributor | It verifies the presence of an active electricity and/or gas supply and with the required requirements, returning an outcome to the SGATE system. It provides the compensatory |

[100] The indirect domestic customer is the customer who does not directly hold a contract for the supply of natural gas for the house of residence but uses a condominium-type natural gas system (centralized supply) for its domestic use. In this case the applicant for the bonus does not necessarily have to be the holder of the centralized supply. The holder of the centralized supply contract can be either a natural person or even a legal entity (the condominium).

| | |
|---|---|
| | component to the sellers for each redelivery point in the name of the entitled parties. |
| Seller | It transfers the compensatory tariff component, received from the distributor, to the final customer, through the bill. |
| Cassa Conguaglio (CSEA) | The *Cassa per i Servizi Energetici e Ambientali* (CSEA), an entity established by Inter-ministerial Committee for Economic Planning (CIPE) measure no. 34/1974, carries out its activities in the energy sector with competences in the field of collection, management and provision of financial services defined by the Italian Rgulator (ARERA) and other competent administrations, in order to ensure the functioning of the system in competitive conditions, to subsidise disadvantaged enterprises in the period of the start of liberalization and to cover the general system costs.<br>It mainly manages the income statement established to cover the compensation of expenses. It proceeds to the recovery of sums unduly received by the final clients. It provides for the payment of the home transfers. In the SGATE context, the role of CSEA is twofold: on the one hand, it uses the data provided by the SGATE system to monitor the disbursement of the energy bonus to those entitled; on the other hand, it has the task of authorizing Poste Italiane to issue the domiciled cheque for the gas bonus. |
| Poste Italiane | Provide the bonus to indirect domestic customers, with the issuance of home transfers. Sends notices of admission (or rejection) and renewal of compensation to those entitled. |
| SICA | Computer system that manages Purchasing Card[101], integrated with the SGATE system for the automatic recognition of bonuses to cardholders. |
| Sportello per il consumatore di energia e ambiente (Helpdesk for the energy and environment consumer) | Provides answers to the information requests from citizens on the bonus procedure and the progress of their practices and handles energy bonus complaints with a special procedure. |

#### 3.1.3.4 *Risk Assessment*

In terms of energy poverty, despite the measures designed to reduce the energy bill (energy bonuses for electricity and gas), it is though that the enforcement of energy poverty mitigation measures is lagging at the national level. On the other hand, energy prices for domestic consumers are already high due to the high level of energy imports and dependency on foreign sources.

The lack of a proper definition for vulnerable consumers and energy poverty create a complicated scenario for the stakeholders. There is some evidence that these instruments are not completely effective. Even if there are academic papers and studies, they can't replace a nationally adopted definition. This issue is important because different usage and meaning of energy poverty requires different actions.

ARERA estimates that, only about a third of potential beneficiaries have asked for the energy bonus and it is thought that there is a lack of awareness of the measure itself and the administrative complexity of the requirements. In this regard, ARERA pushes to remove bureaucratic barriers and introduce automated tools for granting financial support to reach all potential beneficiaries. However, a possible automatic attribution might cause extra burden on other consumers.

[101] The *Purchase Card* is an electronic payment card granted to citizens who are in economic distress. The card is credited bimonthly a sum of money that can be used for grocery shopping in affiliated businesses and for the payment of gas and electricity bills at post offices. However, the card is not authorized to withdraw cash.

Despite the national observatory on energy poverty, Osservatorio Italiano sulla Povertà Energetica (OIPE), launched in February 2019, there does not appear to be any coordination of the actors on the ground.

Some other challenges to help energy poor consumers in Italy are the vast geographical and climatic disparities, lack of relevant information, significant decentralization and the general lack of investment in the issue of the state and the regulator.

Energy efficiency measures are expensive and out of reach for vulnerable consumers, thus again leaving them out of the real target for most of the actions.

It is stated that policy improvement is required to put clear targets on energy poverty. In addition, this strategy shall be specific to the country and its needs.

Municipalities and their agents shall be engaged and specifically trained. Stakeholders would like to share experiences and define best practices, to overcome some difficulties, they have found in the past. Some organizations would like to have some of their personnel trained to support vulnerable consumers.[102]

#### 3.1.3.5 *Monitoring of Vulnerability*

In line with European Commission's request in 2017, like other Member States, Italy was required to define a set of criteria to measure and monitor energy poverty and report every two years on the progress in contrasting energy poverty within the Integrated National Energy and Climate Progress Reports. The Italian Government has integrated these indications in its 2017 National Energy Strategy dedicating a specific paragraph to the topic of Energy Poverty and confirming that the Italian Government is committed to[103]:

- adopt an official definition and a national measure of energy poverty
- perform a thorough review of the existing policies
- create an Italian Energy Poverty Observatory (IPOV) which will work in coordination with the European Energy Poverty Observatory (EPOV).

In Italy, the entities delegated to the control of the social vulnerability with different purposes are:

- ISTAT (Italian Statistical Institute) : role statistical analysis
- INPS (National Previdential Institute): information on citizens' income
- ARERA (Energy Regulator) responsible for the enactment and rules for the bonus and their adoption by the subjects of the electricity and gas supply chain
- Municipalities: for the territorial, social and welfare role
- ENEA (National Energy Institute) - research and studies role in energy use
- CNR (National Reseach Center) - research and studies role in social aspects
- Ministry of Economic Development - Government body responsible for issuing specific regulations;
- Bank of Italy - database

[102] Assist 2gether, Vulnerable Consumers and Fuel Poverty Report
[103] https://www.energypoverty.eu/news/energy-poverty-italy

All these bodies, listed above, collaborate directly or indirectly with the Italian Poverty Observatory (Osservatorio Italiano sulla Povertà Energetica - OIPE), which was launched in February 2019. It is a network of researchers from universities, public and private entities and institutions interested in the subject of energy poverty. OIPE is hosted by the Interdepartmental Centre of the University of Padova "Giorgio Levi Cases" for Energy Economics and Technology and researchers The researchers come from the Bank of Italy, ENEA, University of Padua, University of Palermo, University of Florence, University of Brescia and RSE. The Observatory carries out research, information and dissemination activities on the issues of energy poverty, at national and international level.

As it was defined in previous sections, the monitoring of energy poverty (gas and electricity) is essentially based on monitoring the value of the Economic Equivalent Situation Indicator (ISEE), that is a value that INPS, national social previdential institute calculates for each citizen on the basis of tax returns. It is based on the declared income of citizens and the balance sheet. To it they come deducted the expenses for the rent of the houses and the cost of the subjects to load (children or other family components) of the holder of the family.

Although not monitored continuously, in some cases, when the municipality or the competent distributor detects the absence or variation of one of the indispensable conditions for being entitled to the concession. If for example:

- The personal data declared are incorrect
- The ISEE declaration is not true or does not comply with the established limits
- The "home use" rate becomes "non-home use"

the customer receives a communication from SGATE informing him of the interruption (or revocation) of the compensation and the reasons why this is done. Similar conditions apply for vulnerable consumers with serious health conditions. For example if the electricity supply has ceased for the transfer of the customer or if the equipment is no longer used, than the customer receives a communication from SGATE in which he is informed of the interruption (or revocation) of the compensation and of the reasons[104].

#### 3.1.3.6 *Expectations for the Future*

In Italy, strategy and policy documents have been published recently, that defines expectations regarding vulnerability and energy poverty.

n 2017, Italy's National Energy Strategy was published. The strategy is ten-year plan that aims to anticipate and manage the change of the national energy system and is a document looking beyond 2030. Within the scope of the strategy energy poverty related topics were also underlined. Strengthening measures to fight energy poverty and reforming the current scheme of discounts on energy bills for low-income or large households and for the disabled was stated as one of the actions related to energy segment.

Moreover, in 2019, Ministry of Economic Development Ministry of the Environment and Protection of Natural Resources and the Sea Ministry of Infrastructure and Transport published Integrated National Energy and Climate Plan. According to the plan, measures have to be taken to protect consumers, especially vulnerable and, where applicable, energy poor consumers, and to improve the competitiveness and contestability of the retail energy market. The measures involve exploring the option of launching a large-scale programme for making social housing more energy efficient. Such an initiative is expected to follow a variety of objectives that are:

[104] https://www.arera.it/it/bonus_sociale.htm

- making the use of energy resources taken up by the residential sector more efficient (thus having positive effects on both comfort and emission levels),
- bringing down energy bills for the most vulnerable families who will be using this service,
- and increasing the value of the public housing assets.

In this regard, actions need to be taken to promote timely local initiatives that aims at reducing energy consumption, the creation of energy communities and self-consumption systems.

According to the Decree-Law No 124 of 2019, converted into Law No 157 of 19 December 2019 (Tax Law for 2020) it is expected that from 1 January 2021, persons whose ISEE score is within predefined limits will have automatic access to the social bonus for electricity, natural gas and integrated water system supply.[105]

### 3.1.4 Spain

#### 3.1.4.1 *Overview and Regulatory Framework*

In Spain, financial support mechanisms for natural gas customers at national level were not in place prior to 2019 when the thermal social bonus was launched.

Vulnerable customer definition was not defined for natural gas market until recently[106] while vulnerable customers protection measures have been defined for electricity customers since 2009. A large segment of the population was identified as vulnerable customers in electricity, while no vulnerable customer group was identified for natural gas market[107]. Spanish Regulator CNMC's National Report of 2018 to the European Commission clearly states that the concept of vulnerable customers had only been established for electricity customers[108]. Vulnerable customer concept in natural gas market is currently dealt within a heating and hot water support conceptualization.

The National Strategy against Energy Poverty provides a new definition of energy vulnerable customers. Vulnerable customers are defined as the consumer of electrical energy or thermal uses in a situation of energy poverty that may be beneficiaries from the support mechanism established by administrations.

In October 2018 Royal decree-law 15/2018 extended the scope of the social bonuses to other energy uses besides electricity. Apart from the existing electricity social bonus a new thermal social bonus was created to decrease all energy bills related to heating, sanitary water or kitchen uses. Thermal social bonus consists on a yearly payment of between 25-124 € to each vulnerable customer.

In Spain there exist a social electricity tariff (TUR) resulting on the application of 25-40% discounts on regulated retail tariff (PVPC) for low income consumers (and large families). There is not a similar match of tariff in natural gas market in Spain since there is no specific aid for natural gas bills.

The supporting program applicable for natural gas customers, the thermal social bonus, is designed to help meet heating, hot water and cooking expenses[109]. Thermal social bonus is not linked to any specific energy source but to

[105] Ministry of Economic Development Ministry of the Environment and Protection of Natural Resources and the Sea Ministry of Infrastructure and Transport, December 2019, INTEGRATED NATIONAL ENERGY AND CLIMATE PLAN
[106] MEDREG Vulnerable Customers Report, 2016
[107] Spain Country Report 2014, https://ec.europa.eu/energy/sites/ener/files/documents/2014_countryreports_spain.pdf.
[108] Spanish Energy Regulator's National Report To The European Commission, 2018
[109] https://www.endesa.com/en/discover-energy/blogs/last-resort-rate-for-gas

a final thermal energy use. Therefore, natural gas customers may benefit from this aid in a similar way those customers with electric heating or diesel boilers.

Compared to electricity, support mechanism for natural gas customers is very limited in Spain. Thermal social bonus is paid only to beneficiaries from the electricity social bonus[110]. Consequently, support mechanism for natural gas vulnerable customers must be analysed together with the regulatory framework for the electricity social bonus since eligibility criteria are the same.

Eligible criteria for the electricity social bonus (beneficiaries of both electricity and thermal social bonus) is based on household characteristics (members, pensioners, etc.) and available income. Besides benefiting from the electricity social bonus, it is mandatory to have a supply contract at regulated electricity tariffs (PVPC). The simplification of considering only electricity social bonus beneficiaries as beneficiaries of the thermal bonus was done to ease the implementation of the new thermal bonus. In 2019, first year of application, aids were issued automatically without any required action from customers.

Thermal social bonus is designed more as a transitional measure rather than a comprehensive support mechanism to last over the years. In fact, according to the National Strategy for Energy Poverty (2019 – 2024) both the electricity and thermal social bonus are expected to be replaced by a new universal energy social bonus.

In the following sections the key elements of the thermal social bonus (applicable for natural gas customers) are presented in detail.

#### 3.1.4.2 *Stakeholders Analysis*

The implementation of thermal social bonus involves different actors. In this section we will summarise the roles of key stakeholders together with its interdependencies. Since being a beneficiary from the electricity social bonus is mandatory to receive thermal social payments there are important synergies with the electricity social bonus role and responsibilities matrix. Still, the settlement of the thermal bonus is considerable different since the cost is borne by the State Budget (electricity social bonus is financed by all suppliers).

*National Government (Ministry of Ecologic Transition, former Ministry of Energy).* Social thermal bonus is regulated by a high-level national law. The national government has the power to allocate public funds to specific purposes. The cost of the thermal social bonus is borne by the General State Budget. The national government transfer the fund to the regional administrations which are the entities issuing the final payments to customers.

The Ministry for Ecological Transition calculates the territorial distribution of the aids amounts and transfers the amounts to each regional administration, together with the information on the beneficiaries and the amounts corresponding to each.

In addition, Royal Decree Law 15/2018, entrusts the Government with the approval of a National Strategy against Energy Poverty. This Strategy was published in 2019 with different measures and objectives for the mitigation of energy poverty.

- *Regional Administrations.* The payment of the thermal social bonus (direct payments) is responsibility of the regional administrations. The payments must be issued on the first quarter of the year. Regional administrations are allowed to increase the amount of the aid with additional funds borne by the regional

[110] https://ajuntamentdeplanes.es/web_ajuplanes/html/noticies3.php?idioma=en

budget. The payment notification must clarify the amount borne by the state budget (social thermal bonus) and the amount of the additional aid borne by the regional administration.

Regional administration must submit bi-annually a report to the Ministry with all the details on the thermal social bonus application: beneficiaries, payments declined, degree of co-financing and the surplus amount if any.

- *National Regulatory Authority (CNMC).* Obligations of the CNMC related to the thermal bonus are quite limited (compared with the role on the electricity social bonus). Its obligations are only related to the monitoring and reporting of the electricity social bonus application. Since eligible customers are the same for both bonus, monitoring activities of the CNMC on the electricity social bonus are also relevant for the adequate implementation of the thermal social bonus.

- *Electricity reference suppliers (8 companies).* Reference suppliers are those companies offering regulated tariffs (PVPC) to small customers (below 10 kW of contracted capacity). Parent company must establish a different company (reference suppliers) for regulated supply (at PVPC) subject to unbundling requirements. Reference suppliers play an active role in the application of the social bonus since only customers under regulated tariffs can be beneficiaries from the electricity social bonus discounts and from the thermal social bonus.

  Each year electricity reference suppliers must inform to the Ministry on the data of electricity social bonus beneficiaries since they are also the beneficiaries of the thermal social bonus.

- *Eligible customers for the thermal social bonus (vulnerable customers).* Customers must not undertake any action to receive thermal social bonus payments. However, in order to receive thermal social bonus, they have to be beneficiaries of the electricity social bonus, so they have to comply with all the requirements for the concession. The application of the social bonus must be sent to the reference supplier by the eligible customers via telephone, internet or physical offices. Reference suppliers must provide to the customers the social bonus application form (harmonised regulated template). Applications mut fulfil the application form and send it to the reference supplier together with all the required information.

- *Other entities:* NGO and research institutes may contribute to the development of vulnerable customers regulation as advisory bodies. In addition, some NGO also manage internal support mechanisms for vulnerable customers to mitigate the impact of energy poverty.

*Table 29: Thermal Social Bonus: Roles and Responsibilities Matrix*

| Stakeholder | Spanish case | Role and responsibilities |
|---|---|---|
| Government | Ministry of Ecologic Transition | • Overall regulation and legislation<br>• Calculate the total amount of thermal social bonus payments and regional allocation.<br>• Finance social bonus via State Budget.<br>• Payment of the thermal social bonus to each regional administration.<br>• Overall monitoring.<br>• National Strategy against Energy Poverty |

| | | |
|---|---|---|
| Regional administrations | 19 regional administrations in Spain issuing thermal social bonus payments | • Pay thermal social bonus to vulnerable customers.<br>• Reporting obligations with the Ministry.<br>• Implement additional support mechanism for energy poverty mitigation. |
| NRA | CNMC | • Monitoring. |
| Electricity Reference Suppliers | 8 reference suppliers | • Manage electricity social bonus applications.<br>• Review social bonus applications (cross check with public administrations data bases).<br>• Inform yearly to the Ministry. |
| Natural gas suppliers | | • No role on thermal social bonus application. |
| Vulnerable customers | 1.2-1.3 million beneficiaries | • Fill application form and send required documents for the application for the social bonus.<br>• Information obligations: update any relevant information for the electricity social bonus.<br>• No actions are required (apart from the above mentioned for the electricity bonus) to receive thermal social bonus. Only if no bank account if available customers may inform the Government on the bank account data to receive the payment. |
| Other entities | NGOs, research institutes, sectorial organisations. | • Advisory role: participation on public consultations.<br>• Customer protection, media campaigns, etc. |

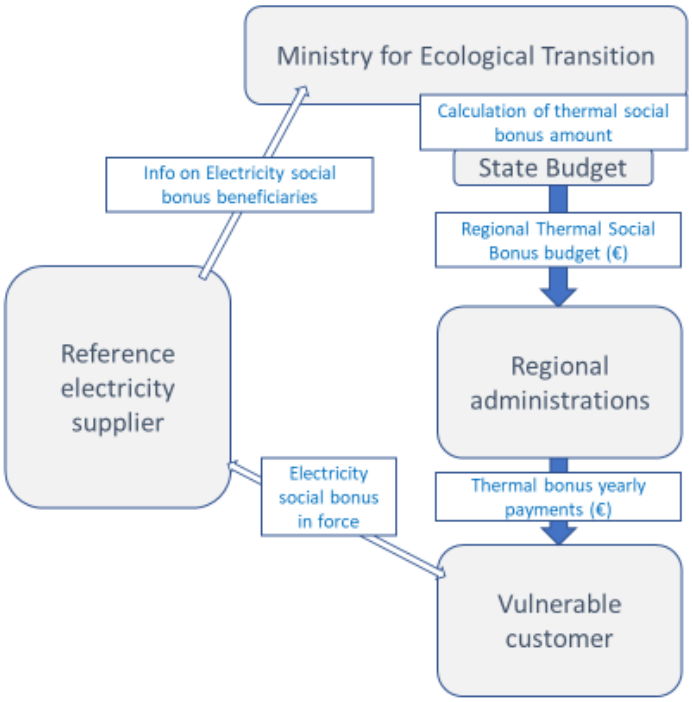



*Figure 18: Overview of Thermal Social Bonus Mechanism*

### 3.1.4.3 *Support Mechanisms*

Currently, there are no specific support mechanisms at national level for natural gas customers apart from the thermal social bonus that comprises all thermal uses. In addition to the thermal social bonus, natural gas customers may benefit from other support measures for energy bills managed by regional or local administrations.

In this section we present the key elements of the thermal social bonus together with an overview of selected regional support mechanisms for natural gas bills. [111]

*Table 30: Key elements of the thermal social bonus*

| Selected Measures | Type of Measure | Organisation | Target Groups | Start Year | Result |
|---|---|---|---|---|---|
| **Social bonus for electricity** | Energy bill support | National government | Vulnerable households | 2009 | |
| **Law 8/13 on building renovation** | Building insulation | National government | No specific target group | 2013 | |

[111] EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

| | | | | | |
|---|---|---|---|---|---|
| **Program for the promotion of building renovations** | Building insulation, Heating system | National government | Apartment buildings | 2013 | |
| **Disconnection protection Catalonia (Law 24/2015)** | Disconnection protection | Regional government | Low-income households, Vulnerable households | 2015 | |
| **Housing renovation programme for vulnerable households** | Building insulation, Heating system | Local government | Low-income households, Vulnerable households | 2017 | |
| **Regional energy efficiency programmes** | Building insulation, Heating system, Renewable energy | Regional government | No specific target group | - | |
| **Energy Advice Points** | Disconnection protection, Information and Awareness | Local government | No specific target group | 2017 | In the first year of service, the energy advice points attended to 23.000 people and prevented services from being cut off in 5.000 cases |
| **Social Bonus for heating** | Energy bill support | National government | Vulnerable households | 2018 | In 2019, the bonus was granted to more than one million vulnerable customers. |

#### 3.1.4.3.1 Thermal Social Bonus

Following enforcement of the Royal Decree-law 15/2018, of 5 October, a direct payments program designed to help vulnerable consumers for heating and hot water needs was created. This program is called the Thermal Social Bonus. This direct payment program is compatible with other grants, allowances, income, or resources from other institutions targeting the same purpose and with the Electricity Social Bonus. Each year, consumers receiving Electricity Social Bonus on 31 December of the previous year will receive the Thermal Social Bonus.

The beneficiaries of thermal social bonus are all beneficiaries from the electricity social bonus[112] on 31 December of the previous year as well as those who, before that date, submitted the completed application form and was resolved favorably. These beneficiaries do not have to carry out any action to receive the thermal social bonus.

[112] Please see electricity report for a detailed presentation of electricity social bonus eligibility criteria.

The amount in the corresponding budget item will be distributed among all the beneficiaries according to the methodology established in Annex I of the royal decree-law 15/2018, in which consumers are split into climatic zones and bonus for a severely vulnerable consumer or at risk of social exclusion is calculated 60% higher than that assigned to a vulnerable consumer in their climate zone[113].

The Thermal Social Bonus is funded by the General State Budget and dependent on the existence of annual budget availability. The Ministry for the Ecological Transition is in charge of the program and payments are made by this Ministry to each regional administration. Each regional administration pays social bonus amount to customers during the first quarter of each year. The amount received by each beneficiary depends on the climate zone they live in and their degree of vulnerability, as shown in the following table:

*Table 31: Spanish Thermal Social Bonus Amounts[114]*

| CLIMATE ZONE | VULNERABLE (%25 SUBSIDY) | HIGHLY VULNERABLE (%40 SUBSIDY) |
|---|---|---|
| **Zone a** | 25,00 € | 40,00 € |
| **Zone A** | 29,00 € | 46,40 € |
| **Zone B** | 37,68 € | 60,29 € |
| **Zone C** | 49,84 € | 79,74 € |
| **Zone D** | 67,56 € | 108,10 € |
| **Zone E** | 77,46 € | 123,94 € |

Financial aid of electricity and the Thermal Social Bonus are different measures than regulated rates. In electricity, the regulated rate is called PVPC (Volunteer Price for the Small Consumer), in gas, the regulated rate is called Last Resort Tariff (TUR) in Spain. CNMC and the Ministry of Industry sets the rates. The rate is single and not dependent on where and in what conditions customer lives. In the TUR, the maximum and minimum prices that gas suppliers can charge is set. The rate for small consumers (TUR1) and the rate for higher gas consuming customers (TUR2) are differentiated as consumers of equal to or less than 5,000 kWh of natural gas, with a supply pressure equal to or lower than 4 bars (TUR1) and consumers of between 5,000 and 50,000 kWh of natural gas per year, with a supply pressure equal to or lower than 4 bars (TUR2). TUR1 has economical fixed component and higher variable component. TUR2 has higher fixed component and economical variable component. These rates are not only for vulnerable customers but for any customer qualifying the conditions.[115] The principles to be used in the calculation of last resort tariffs, have been determined by the Act 12/2007: Single tariff for the whole country, cost reflectivity, additive structure (energy costs, access tariffs and commercialization costs). The energy component is calculated

[113] STATE OFFICIAL NEWSLETTER, 6th October 2018.
[114] Source: https://www.curenergia.es/social-bonus/social-bonus
[115] https://www.endesa.com/en/discover-energy/blogs/last-resort-rate-for-gas

every 3 month, by using a formula that includes the crude oil quotation, the natural gas prices at the Title Transfer Facility (the Netherlands) and the National Balancing Point (the UK) markets, and a commercial margin.[116]

#### *3.1.4.3.1.1 Additional Financial Aids for Natural Gas Customers*

At national level, natural gas customers may only benefit from the thermal social bonus. However, most of regional public administrations have additional subsidies regime and some of them are applicable for natural gas customers. In the following bullets we will outline some of the key elements of selected regional subsidies regime.

#### *3.1.4.3.1.2 Madrid Region: Aid for Electricity and Natural Gas Bills[117]*

In 2017, the regional government established a subsidy scheme applicable to electricity and natural gas customers. The purpose of this aid is to support Madrid households to bear energy supplies bills, subsidizing the electricity and / or gas supply bills of vulnerable customers. The aids are financed by the public budget of Community of Madrid.

Regional social services will inform the regional administration on the which customers can be beneficiaries according to its economic situation. The support mechanism can only subsidies a maximum of 6 monthly bills, extendable to 9 months.

*Table 32: Subsidies for natural gas bills of Madrid regional administration[118]*

| Household members | Maximum subsidy (monthly) | Maximum subsidy (6 months) |
|---|---|---|
| | € | € |
| 1 member | 90.75 | 544.5 |
| 2 members | 106.48 | 638.88 |
| 3 members | 114.95 | 689.7 |
| 4 members | 123.42 | 740.52 |
| >4 members | +2.29 € for each additional member | +13.74 € for each additional member |

The regulation for the electricity subsidy is quite similar but the amounts of maximum subsidies are slightly higher.

### 3.1.4.3.2 Extremadura Region: financial support to guarantee basic supplies of main residence[119]

The regional government of Extremadura has developed its owned financial support mechanism to guarantee basic supplies. Eligible expenses include: electricity, natural gas, water, connection cost and butane.

Eligible customers are defined based on the Public Income Indicator of Multiple Effects (IPREM). This indicator is defined by yearly state budget as is commonly used in Spain for the application of public aids and subsidies.

[116] Spanish Energy Regulator's National Report to The European Commission, 2018
[117] http://www.madrid.org/wleg_pub/secure/normativas/contenidoNormativa.jsf?opcion=VerHtml&nmnorma=9975#no-back-button
[118] Madrid regional administration website
[119] http://www.juntaex.es/ddgg005/ayudas-para-garantizar-el-acceso-a-los-suministros-minimos-vitales-de-la-vivienda-habitual#GASTOS

*Table 33: Subsidies for energy bills of Extremadura regional administration*[120]

| Household members | Maximum yearly aid (€) |
|---|---|
| Until 2 members | 700 |
| 3-4 members | 800 |
| 5 or more members | 900 |

#### 3.1.4.4 *Monitoring of Vulnerability*

As explained above, the amount to be received by each beneficiary of Thermal Social Bonus is based on their vulnerability level along with the zone in which they live. The level of vulnerability is defined in the regulations of the Electricity Social Bonus. Therefore, monitoring activities on thermal social bonus application are directly related to the monitoring of the electricity social bonus concession mechanism.

As per the thermal social bonus, we have already explained the payment procedure and now we will focus on the communication exchange rules.

Before January 7 of 2019, electricity reference suppliers have to send to the Ministry the information on electricity social bonus beneficiaries, as of December 31, 2018. This data must comprise: name and citizenship ID of the beneficiary, full address, vulnerable customer category (vulnerable, severe vulnerable or at risk of social exclusion) and the bank account data.

Based on this information, the Ministry for Ecological Transition informs consumers of their status as potential beneficiaries of the Thermal Social Bonus, giving them a period of 10 days from receipt of the communication so that they can use the waiver option. Before January 31, 2019, the reference suppliers are to send the list of clients who, as a result of the processing of pending applications as of December 31, 2018, have been beneficiaries of the Electricity Social Bonus with effects prior to the date of January 1, 2019, to the General Directorate of Energy Policy and Mines.

Regulatory framework of the thermal social bonus (RD 15/2018) do not include any detailed provision on the monitoring of the application of the new aid. The law only states that each regional administration must submit bi-annually a report to the Ministry with all the details on the thermal social bonus application: beneficiaries, payments declined, degree of co-financing and the surplus amount if any.

The CNMC does not have any specific monitoring duty on this support mechanisms. Still, beneficiaries of the thermal social bonus are the same as the electricity social bonus so all monitoring and enforcement activities related to the electricity bonus are relevant for the thermal bonus as well[121].

Giving the recent implementation of Thermal Social Bonus (2019 was the first year) there is little data available about the application of this aid. These are some of the key figures available on the application of this aid in 2019:

[120] Source: Extremadura regional administration website
[121] Please see monitoring section on electricity report for a comprehensive review of CNMC monitoring and enforcement activities on electricity social bonus application.

- As reported by the CNMC, in December 2018, 1,016,833 customers were beneficiaries from the electricity social bonus = beneficiaries of the thermal social bonus.

- State budget allocation for the thermal bonus in 2019 was 75 million €.

- Average support per customer = 73.76 €/year.

#### 3.1.4.4.1 Ministry of Ecologic Transition Monitoring indicators for Energy Poverty

In order to parameterize energy poverty situations, the official indicators of the European Observatory against Energy Poverty (EPOV):

- Disproportionate expenditure (2M): Percentage of households whose energy expenditure compared to their income is more than double the national median.
- Hidden energy poverty (HEP): Percentage of households whose absolute energy expenditure is less than half the national median.
- Inability to maintain the home at an adequate temperature: Percentage of the population that cannot keep their home at an adequate temperature.
- Late payment of invoices: Percentage of the population that has late payment of bills for housing supplies.

Information on the situation of the indicators in Spain, and the comparison with the variables of characterization is obtained from the statistical instruments of the National Institute of Statistics, specifically:

- Family Budget Survey (2017): Provides information on the indicator of disproportionate spending and hidden energy poverty.
- Living Conditions Survey (2017): Provides the indicator information inadequate temperature and late payment of bills.

Additionally, the analyzes of these indicators are complemented by other derivatives and cross with some variables of characterization of the population.

General result for Spain is that between 3,5 and 8,1 million people, depending on the indicator used, are in energy poverty situation in Spain.[122]

The graph below shows relative place of Spain compared to EU average according to various indicators. In “inability to keep home adequately warm” and “arrears on utility bills” Spain is worse than EU average (as of the year 2018), while in “high share of energy expenditure in income” and “low absolute energy expenditure”, Spain is better than EU average (as of the year 2015). From these figures, thermal social bonus targeting heating and hot water needs can be thought to be an appropriate measure for supporting vulnerable natural gas consumers in Spain as an immediate action.

[122] Estrategia Nacional Contra la Pobreza Energética 2019-2024

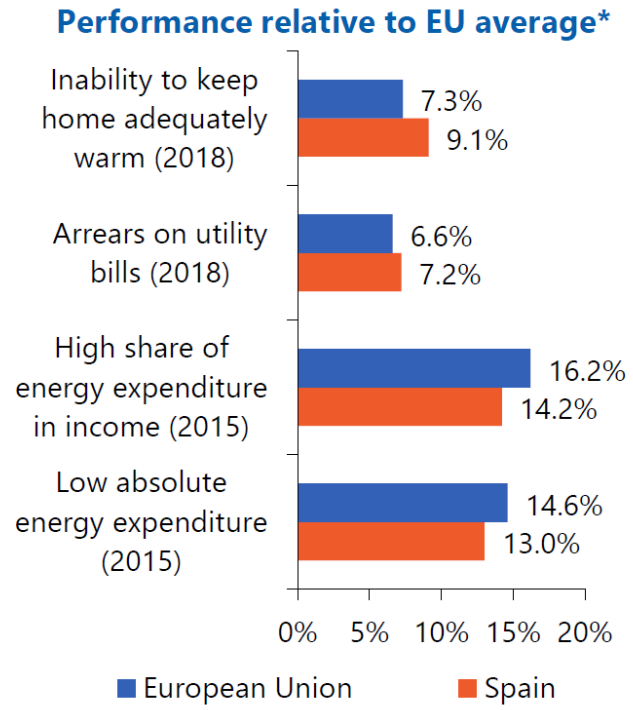



*Figure 19: Performance relative to EU average*[123]

For the performance of Spain over time, inability to keep home adequately warm and arrears on utility bills are fluctuating since 2005. In 2014, both indicators mark the peak point and then follows a generally decreasing path. For better improvement against energy poverty, more effective measures needed to be taken, according to the performance figures over time.

[123] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

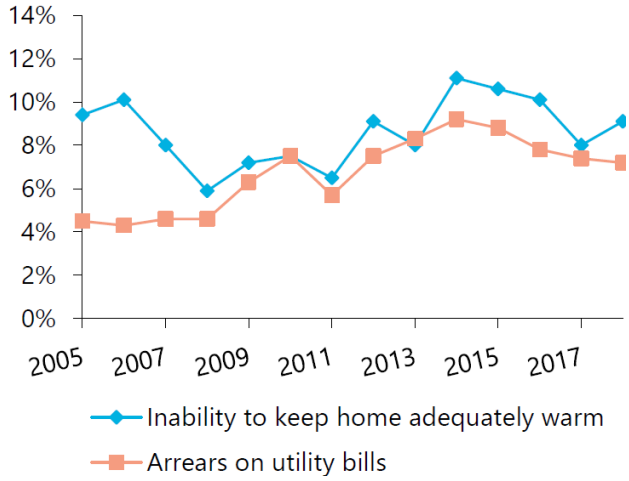



*Figure 20: Time Chart*

#### 3.1.4.5 *Risk Assessment*

Until recently, there was not any social program for supporting natural gas consumers in Spain. The thermal social bonus firstly implemented in 2019 aimed to relief all customers of part of thermal energy cost (including natural gas). Giving this short period of implementation it is difficult to carry out a detailed risk assessment of the implementation of this aid. In general, the limitations of this aid are related to the overall vulnerable customer regulatory framework, specially to the linkage of thermal bonus to electricity social bonus beneficiaries.

Only beneficiaries of the electricity social bonus receive thermal social payments. Therefore, most of the limitations and barriers identified during the assessment of the electricity social bonus are also relevant for the thermal bonus. These are the main risks and barriers presented in the electricity report[124]:

- **Inadequate eligibility criteria**: only customers served under regulated tariffs (around 50% of domestic customers) may apply for the social bonus; regional differences on the cost of living in different regions are not considered.
- **Problems during the application process**: excessive administrative burden for the customers and some malpractices of reference suppliers identified by the CNMC**.**
- **Lack of public awareness.** The public awareness on social bonus related issues is quite limited.

Focusing on the specific problematic of the thermal social bonus application the most relevant risk is the budget availably. **Payment of the thermal social Bonus is limited to budget availability** of the state budget. This puts a barrier on the vulnerable customer support mechanism, which may result in fluctuation of the number of beneficiaries from year to year as the capacity of the state budget can change depending on several factors.

The National Strategy against Energy Poverty carried out an extensive public consultation to evaluate the new thermal social bonus. Conclusions of this analysis are:

[124] Please see electricity report for additional information on these problems.

- The extension of the social bonus to thermal uses has obtained unanimous acceptance.
- Calculating the amount based on the climatic zone has been positively assess giving that it is the variable with larger influence on the thermal energy demand.
- Zones definition has been considered adequate.
- The aids could be calculated based on the annual energy expenditure required for thermal uses in each zone instead of only based on climate conditions. Energy expenditure calculation should take into consideration the type of housing, the air conditioning installation, the fuel used and the energy efficiency rate.

#### 3.1.4.6 *Action Plan*

The action plan for natural gas vulnerable customers protection may be found in the National Strategy against Energy Poverty. Based on the analysis of this plan we see three lines of action affecting vulnerable natural gas customers in the incoming years:

- **Update the regulation on natural gas supply interruptions to cover vulnerable customers**. Under current regulatory framework (Gas Law 34/1997 and RD 1434/2002) the interruption of canalised essential gas supplies is strictly forbidden even under payment defaults situations. Essential supplies are related to public and social buildings (hospitals, schools, etc,).

  Supply interruptions due to non-payment is also regulated by these laws. The minimum grace period for a supply interruption after the default notification is 2 months. This grace period is applicable to all customers without distinctions.

  - It is expected that supply interruption regulation will be modified to include additional protection measures for vulnerable gas customers (e.g. longer grace periods) as the ones applied for electricity supply.
  - The Strategy also recommends the application of a **minimum life-line supply**. For certain vulnerable customers identified by social services, the prohibition of supply interruption should be extended 4 months plus the regulated period. During these additional four months, the vulnerable consumer's supply will be adapted to the life-line supply. This supply level will be estimated in advance based on the characteristics of the household.
  - **Prohibition to interrupt supply in extreme climate conditions**. The application of this measure requires the definition of essential energy sources and a close collaboration between weather forecast agencies and utilities (suppliers and DSOs).

- **Unification of electricity and thermal social bonus into a single energy bonus**. In addition to the modifications on existing support mechanisms (thermal and electricity social bonus) the Strategy recommends defining a new integrated energy social bonus for all energy uses. The new social bonus should be defined following three principles:
  - **Harmonization of all energy sources**. The new financial support mechanism must be configured as an integral aid for all energy supplies both electrical and thermal. The latter will include uses for heating, air conditioning in certain climatic zones, domestic water and cooking. The joint approach allows addressing the problem from a broader perspective and closer to the reality of Spanish households. The plural nature of the new support mechanism should not lead to added difficulties in terms of actions and administrative burden for vulnerable customers.
  - **Automatization of procedures**. It is necessary improve the automatization of all procedures, avoiding the complexity of current procedure. In neighbouring countries such as Portugal or France the

eligibility assessment and aids concession is done automatically by the public administrations without any prior customer application. Income data should be cross check with other data bases (e.g. energy consumption, social services data base) to identify potential beneficiaries.

- **Coordination and collaboration** among public administrations involved.

Other important measures (not directly related to gas customers) of the Strategy are:

- Subsidies for housing rehabilitation (isolation, efficiency, renewal of heaters, etc). Up 100% subsidies for vulnerable customers.
- Special financial aids for social renting houses.
- Subsidies for household appliances renewal. Up 100% subsidies for vulnerable customers.
- Rehabilitation program for residential buildings.
- Public awareness program on Energy Poverty, smart meters, efficient consumption habits, etc.

## 3.2 Turkey Case

### 3.2.1 Current regulatory structure

The basic and fundamental legislation in Turkish natural gas market is Natural Gas Market Law No. 4646. All of the remaining secondary legislation (e.g. Natural Gas Market Licensing Regulation, Natural Gas Market Distribution and Customer Services Regulation, Natural Gas Market Tariffs Regulation, Regulatory Board Decisions and Individual Board Decisions for DSOs) are based on this law. Vulnerable customer, including its definition, is not covered within neither the law nor in the secondary legislation. As a result, MENR and EMRA do not have any legislative or regulatory position regarding the issue.

Other than energy legislation and energy institutions, general state policies of social aids are executed by Ministry of Family, Labor and Social Services irrespective of focusing on energy vulnerability. In that manner, social aids paid to those in need do not directly target energy vulnerability, however, aids in kind or aids in cash can contain fuel needs as well.

Turkish Statistics Institution (TÜİK) defines poverty, absolute poverty, relative poverty, however, there is not a definition available for vulnerability regarding energy consumption needs[125].

In conclusion, Turkish energy legislation does not include criteria to become vulnerable customer in natural gas market.

### 3.2.2 Analysis of Questionnaire Results

Since there is no vulnerable consumer and social tariff definition on gas in Turkey, before offering concrete policy recommendations, perception of public and private sector representatives was evaluated via an online questionnaire (survey). 72 people filled the survey in total. 46 of them are working at private sector and remaining 36 people are working for various public institutions, such as Energy Market Regulatory Authority, Ministry of Energy and Natural Resources etc. With this survey, not only comments of participants were taken, also asked their comments on possible implementation plan too.

[125] http://www.tuik.gov.tr/PreHaberBultenleri.do?id=18690

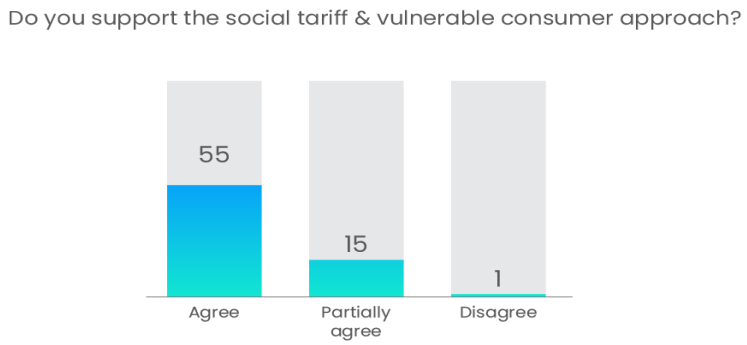



*Figure 21: Support level to social tariff & vulnerable consumer*

With the first question, it was aimed to understand support level of participants to vulnerable consumer approach. 55 out of 71 participants disclosed their direct support to a vulnerable consumer support mechanism. It's remarkable that only 1 participant expressed no support to social tariff & vulnerable consumer mechanism, therefore, we can say that both public and private sectors show strong back to implement vulnerable consumer support mechanism.

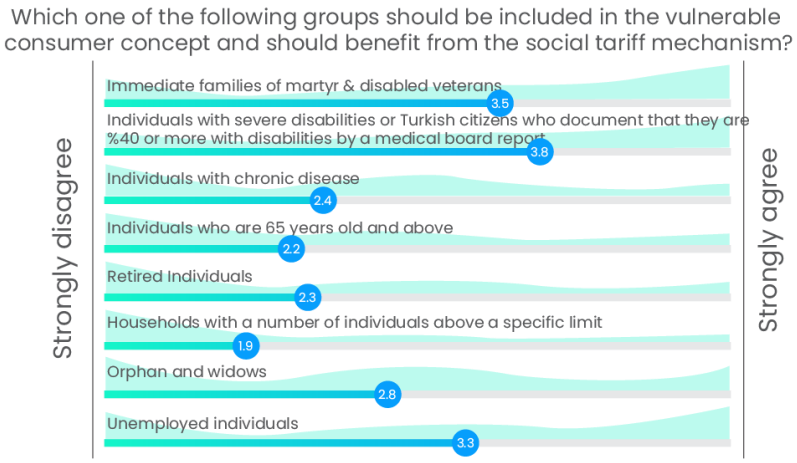



*Figure 22: Vulnerable customer groups*

When it comes to decide which groups should be included to vulnerable consumer mechanism, it's obvious that participants have heavily voted for unemployed people, families of martyr & disabled veterans (these groups are extremely important in Turkish culture) and disabled people.

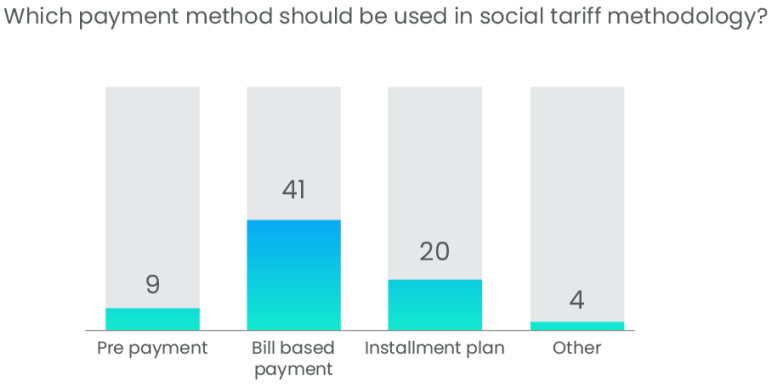



*Figure 23: Support methodology*

Participants are thinking that, bill based payment is the best solution for vulnerable consumer support mechanism. This seems as the logical choice since groups in need are having difficulties in payment of their bills. On the other hand, partial bill payment also offers as a natural measure to avoid possible abuses of the system.

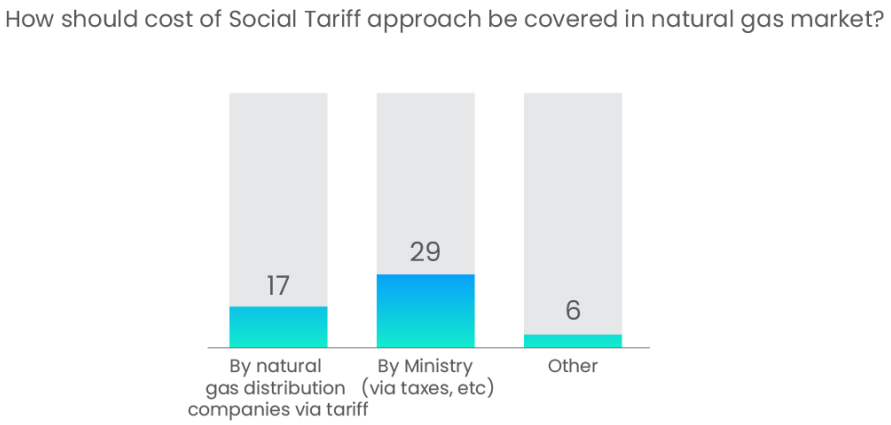



*Figure 24: Cost of social tariff*

When financial source of support mechanism is asked, majority of participants preferred direct support mechanism of Ministry rather than offering a social tariff mechanism. This is an interesting output indeed since participants did not consider social tariff mechanism as effective as the direct support mechanism. This also offers a logic since purchasing power as well as GDP per capita levels are not homogeneous in Turkey. Moreover, since all gas distribution companies have their own unique gas distribution tariffs, setting a social tariff for each company will be extremely difficult and ineffective. Based on this result, this report will offer two support scenarios as social tariff and direct support mechanisms.

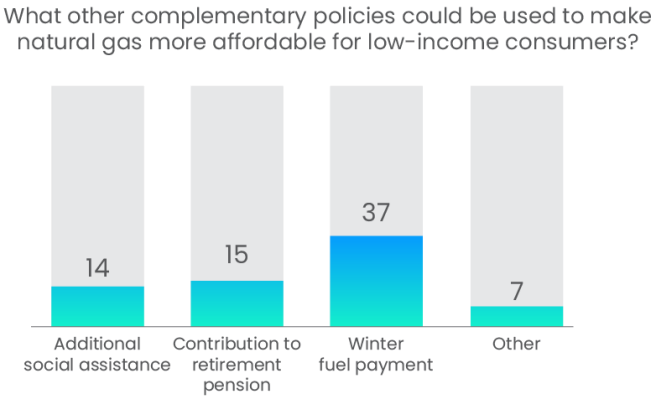



*Figure 25: Complementary policies*

It is also worthy to note that, participants are positive to finance vulnerable consumers with complementary policies, such as winter fuel payment, which is also quite common in European examples.

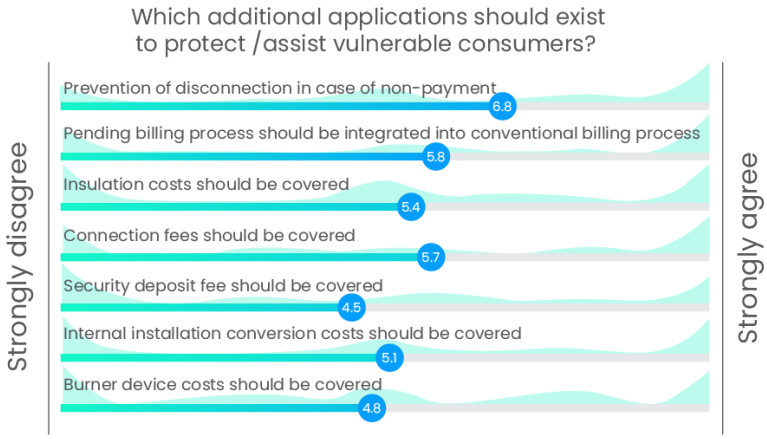



*Figure 26: Additional measures*

Non-financial support mechanisms are also being supported by the participants. Incentivizing methods to convert old systems (coal, wood burning etc.) to gas use in houses are also being supported.


*Figure 27: Stakeholders*

As it's observed in the European cases, strong cooperation of local authorities is essential in successful implementation of vulnerable consumer support mechanism. It seems that this principle is also considered by the participants. Majority of participants see that contributions of municipalities and district governorships are essential. However, reputable groups in country sides, such as religious officials and teachers have no or weak support in implementation of vulnerable consumer support mechanism.

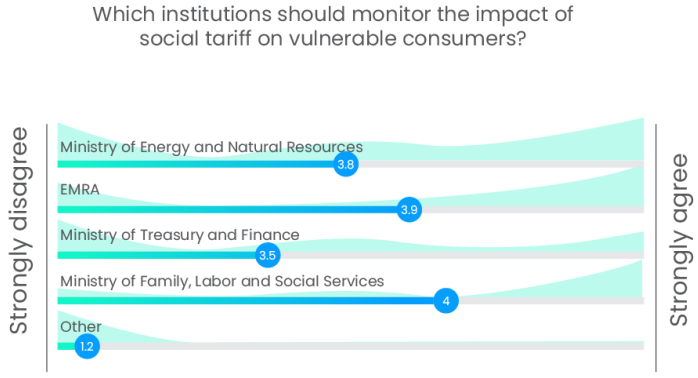



*Figure 28: Institutions*

Last but not least, participants think that monitoring is also very important. For this, Ministry of Family, Labour and Social Services, Energy Market Regulatory Authority (EMRA) and Ministry of Energy and Natural Resources are emerging as the most preferred state institutions for monitoring.

Results of the survey can be summarized as follows:

- Almost unanimous support to vulnerable consumer mechanism idea
- Direct financial and complementary non-financial support mechanism are preferred
- Winter fuel payment support is strongly recommended
- Strong cooperation with local authorities seems as crucial
- State institutions are preferred in implementation and monitoring rather than private entities, associations, or foundations

### 3.2.3 Financial Measures

At present, there is not a direct support dedicated to natural gas customers in Turkey. The existing natural gas pricing methodology does not include a social tariff approach, neither for natural gas price nor for the distribution fee, which constitutes final natural gas bill with the taxes.

### 3.2.4 Stakeholder Analysis

As there is not vulnerable customer supporting legislation and regulation in place, there is not actively working stakeholders as well regarding the issue. However, in case a mechanism is set up for supporting vulnerable customers, potential stakeholders are as follows:

- Ministry of Energy and Natural Resources, as the policy maker and actor in legislation making
- Energy Market Regulatory Authority, as the tariff setter, including social tariff
- Ministry of Family, Labor and Social Services, as the executor of general state policy on social aids
- DSOs, as the operator of the legislative or regulatory measures including social tariff and beneficiary of direct payments
- BOTAŞ, as the state-owned market leader in the natural gas market as the dominant supplier
- NGOs, such as Social Assistance and Solidarity Foundation (SYDV), as the facilitators of vulnerable customer support both in determination of beneficiaries and dedication of extra funds for vulnerable customers.

### 3.2.5 Risk Assessment

For duly use of funds dedicated for vulnerable customers, fraud risk is a significant one as the informal economy has a considerable share in Turkey. Paper works and detailed researches, along with deterrent legal measures against fraud can help mitigation of this risk. Currently, Ministry of Family, Labor and Social Services conduct auditory works as part of its operations, however, this is mostly dependent on electronic services provided by various institutions. Hence, this control mechanism can overlook informal incomes and assets of the prospected social aid beneficiaries.

Fund allocation for the vulnerable customer supports by the state budget will be limited to budget availability, which is another problem regarding the issue. Availability of the general state budget can change significantly from year to year depending on the conditions, which can make administration of the vulnerable customer support mechanism harder.

An effective vulnerable customer support program will call for so many experienced, educated and willing workers, which can be a shortage currently. Also, employing so many staff for this purpose can create higher costs than expected benefits. For that reason, combining electronic services and staff at an optimal mix can create highest value added for the whole society.

### 3.2.6 Monitoring of Vulnerability

Vulnerability monitoring is not in place for natural gas customers in Turkey. Only data that can be related to the issue is statistics on arrears on natural gas bills and service interruptions due to non-payment. However, these figures cannot be directly related to vulnerability, as late or none payment can be due to other reasons, use of natural gas can be zeroed due to vulnerability and in a broader perspective, vulnerable customers can be even without a natural gas connection, which means inadequate home heating. For that reason, a comprehensive vulnerability monitoring method is needed in Turkey.

Turkish Statistics Institution publishes statistics regarding poverty in general (One of them is the Poverty Study and the other is Income and Life Conditions Survey) and outcomes of the Households Consumption Survey[126]. These studies do not focus specifically on energy needs and share of energy consumption of households in their total consumption is displayed under the title "housing and rent" expenditures. As a result, TÜİK monitoring is limited to general economic situation of the households in regard to general life conditions. For further information of TÜİK studies on the topic since 1954 see the link: http://www.tuik.gov.tr/HbGetir.do?id=21580&tb_id=7.

There are some narrow-scoped studies regarding vulnerability in energy markets. One of the examples is published by MENR, which for instance display the table below to show how the share of natural gas consumption on minimum wage has varied over the years[127].

*Table 34: Shae of has cost in minimum wage*

| Year | Minimum Wage (Net, TRY) | Natural Gas Consumption of 125 m³ (TRY) | Share in Minimum Wage (%) |
|---|---|---|---|
| **2002** | 164,6 | 52,6 | 32,2 |
| **2003** | 226 | 48,4 | 21,4 |
| **2004** | 303,1 | 39,2 | 12,9 |
| **2005** | 350,2 | 51,2 | 14,6 |
| **2006** | 380,5 | 61,3 | 16,1 |
| **2007** | 403 | 76,9 | 19,1 |

[126] http://www.tuik.gov.tr/PreTablo.do?alt_id=1013
[127] MENR, "Energy and Natural Sources Outlook In the World and In Turkey", 2017.

| | | | |
|---|---|---|---|
| **2008** | 481,6 | 83,1 | 17,3 |
| **2009** | 527,1 | 136,3 | 25,8 |
| **2010** | 577 | 90,2 | 15,6 |
| **2011** | 630 | 90,2 | 14,3 |
| **2012** | 701,2 | 104,3 | 14,9 |
| **2013** | 773 | 134,9 | 17,4 |
| **2014** | 846 | 134,9 | 15,7 |
| **2015** | 949,1 | 146,9 | 15,5 |
| **2016** | 1.301,00 | 149,1 | 11,5 |
| **2017** | 1.404,06 | 137,2 | 9,8 |

The table shows that general situation of customers in terms of expenditure on natural gas consumption and minimum wage has shown significant progress in Turkey, however, this is not a stand-alone sufficient analysis for monitoring the vulnerability of customers as a whole.

### 3.2.7 Expectations for the future

An effective vulnerable customer supporting mechanism can be set up, including necessary legal and regulatory steps and efficient cooperation between all stakeholders.

The mechanism, either direct support or social tariff, should be effectively applied with periodical reviews of the beneficiaries changing conditions and within a fair, equitable and transparent way.

Households needing assistance for adequate home heating during cold seasons should be duly reached and consequently problems and risks related to inadequate heating (such as loss of health, welfare etc.) can be lowered.

Consequently, comprehensive monitoring of the vulnerable customers, progress of their life conditions over the years and results achieved by the prospected support mechanism can be achieved in the future.

## 3.3 Gap Analysis and Recommendations

*Table 35: Gap Analysis & Recommendations*

| | EU Practices | Turkey Practice | Recommendation |
|---|---|---|---|
| **Legislation and Regulation on The Vulnerable Customers** | - Legislative and regulatory actions taken | - Yet to be done | - Legislative and regulatory measures needed |
| **Vulnerability Monitoring** | - Vulnerability monitored and EU-wide comparisons made, including progress over the years | - Vulnerability is not systematically monitored and progress is not known over the years | - Vulnerability situation of households and progress over the years should be monitored |
| **Financial Measures** | - Direct supports, social tariffs, home isolation supports are applied. | - No dedicated measure for vulnerable natural gas customers | - Financial measures needed |
| **Stakeholder Cooperation** | - Distribution and delegation of duties among stakeholders | - Not available | - Effective and efficient cooperation between prospected stakeholders needed |

## 3.4 Vulnerable Consumer Action Plan

### 3.4.1 Possible Scenarios to be considered within action in line with recommendations

Two possible scenarios are considered in this section: Direct support scenario and social tariff scenario. Direct support scenario includes funding vulnerable households without involving with the tariffs (gas price plus distribution fee). In this method, funds dedicated mainly by the state budget is used for improving conditions in which vulnerable customers live. In the social tariff method, prices of natural gas to be paid by vulnerable households is specially designed to be lower than that of other customers. In this method, funds to support vulnerable customers are raised via extra payments by other customers.

### 3.4.2 Business models including Stakeholder roles and responsibilities with respect to scenarios

#### 3.4.2.1 *Direct support scenario*

First of all, after having defined of "vulnerable consumer", people in need should be identified under the leadership of the Ministry of Family, Labor and Social Services in cooperation with the relevant Municipalities and the Governorships. Vulnerable natural gas subscribers can be identified in the system if the list of people in need is shared with Distribution Companies. During the winter months, the amount determined in the state budget, can be paid monthly to the Distribution Companies for a period of 4 months, namely December, January, February and March, and the remaining amount can be invoiced to the customer based on the bill support mechanism of European countries reviewed above.

**The Ministry of Energy and Natural Resources:** It should play a central role as a policy maker.

**Ministry of Family, Labor and Social Services:** Currently, the General Directorate of Social Assistance runs the database, supervises system management, and provides hardware maintenance services. Social Assistance and Solidarity Foundations carry out household visits to verify the information of applicants and to evaluate their living conditions. 4,570 social investigators are employed in social assistance and solidarity foundations for household visits at least once a year. In 2009, Social Assistance Information System was developed with the aim of obtaining / determining the people in need and personal data of citizens applying for social assistance from central databases and ensuring data sharing between institutions in order to prevent duplicate benefits in a 6-month study conducted by the General Directorate of Social Assistance. Thus, the General Directorate of Social Assistance has acquired an informatics infrastructure that enables the collection of supporting documents by making 52 separate inquiries from 16 different institutions to be used in social assistance applications. Based on these studies, BSYS was developed in 2010, which integrates data from different institutions based on the Social Assistance Information System and provides additional services for the purpose of recording, tracking and reporting social assistance applications. When the application process of a citizen in the local Social Assistance and Solidarity Foundation office is completed, the citizen's own socioeconomic profile is created by combining the data sets obtained from different institutions through the identification number. The profile includes information on the financial status of the household, household income and employment status declared by the applicant, real estate, cattle, and vehicle ownership. At this stage, it is checked whether there is any missing profile or inconsistency with the data declared by the person during registration. If there is missing information in the application or inconsistencies are detected in the data, a warning appears in the system and the application process is frozen until the information is verified.

By making the necessary improvements in the existing system, work can be achieved in coordination with the Municipality and the Governorship.

Distribution Companies: The roles of distribution companies in the process should be defined as they will be important part of the direct support mechanism

BOTAS-EMRA: Roles of these institutions will be very limited in this scenario

#### 3.4.2.1.1 Heating Aid:

Since 2003, coal provided from Turkey Coal Enterprises, is distributed to the Social Assistance and Solidarity, including at least 500 kg of needy families as determined by foundations and free of charge by surrendering to the appropriate bagged house standards. The transportation of coal to the cities is done by the Ministry of Energy and Natural Resources. The distribution of coal to families in need is carried out by the Foundations under the responsibility of the Governorships. Transportation, porterage and so on. In 2016, **12,485,417 TL** was transferred from the Fund to Social Assistance and Solidarity Foundations for expenditures. In 2015, the number of beneficiaries who made coal aid was **2,139,667** and the total amount allocated to the program was **804,985,000 TL**.

The Number of Households Receiving Regular Social Aid in 2015 is 2,318,042.

**Average natural gas consumption:** Average natural gas consumption per household was 905 m3 in 2018. [128]

The total number of households in 2019 was 16,484,478, and consumers using natural gas for heating purposes in 2019 paid an average of 1,700 TL natural gas bills annually[129]. In 2019, households using natural gas for heating paid an average of 1,315 TL less than households heated with coal and 4,535 TL less than those heated by electricity.

[128] 2018 GAZBIR NATURAL GAS DISTRIBUTION SECTOR REPORT
[129] 2019 GAZBIR NATURAL GAS DISTRIBUTION SECTOR REPORT

#### 3.4.2.1.2 Budget requirement for direct support mechanism:

**Assumptions:**

- It has been assumed that the average annual cost of natural gas for heating is 1,700 TL and 50% (850 TL) of the total annual amount is covered by the planned budget.
- Minimum Vulnerable Consumer number: It has been assumed that 10% of 16.4 million natural gas subscribers are vulnerable consumers.
- Maximum Vulnerable Consumer number: Vulnerable consumers were assumed to be as many as the number of people receiving regular assistance in 2015.

Since there is no vulnerable consumer definition yet and there are no statistical data, acceptances have been made over a minimum and maximum band.

*Table 36: Required Budget for Social Support*

| | Number of Households (Million) | Annual Support (TL) | Required Budget (Billion TL) |
|---|---|---|---|
| **Min.** | 1,6 | 850 | 1.360 |
| **Max.** | 2,3 | 850 | 1.955 |

It is thought that a maximum budget of **2 billion TL** is needed for the direct support mechanism.

When the fuel aid provided to 2.1 million people stated in the 2015 report is evaluated with current coal prices, it is estimated that a budget of **2.1 billion TL** was allocated. In this direction, the resource here can be shifted to natural gas, the most environmentally friendly fuel, by considering the environmental impacts of coal.

#### 3.4.2.1.3 Non-financial support:

It is seen that non-financial support is given in the studies of European examples. In this context,

• Installation conversion support can be provided,

• Cheap loans can be given for insulation,

• The deposit may not be charged,

• Switching on-off fee may not be charged,

• It can be ensured that there is no gas cut in the winter months.

#### 3.4.2.1.4 Bursagaz Case:

Upon the increase in air pollution in Bursa, installation conversion and invoice payment support service was started with the cooperation of Gas Distribution Company BURSAGAZ, Municipality and Governorship. This service has been continuing for four years. First of all, the Governorship issued a board decision forbidding the use of coal in places where natural gas can is available, then BURSAGAZ and the municipality signed a joint protocol for cooperation.

20,000 household in need were identified in the social assistance list under the control of the municipality and this list was shared with BURSAGAZ. Company confirmed access to gas grid of %50 of the group. Natural gas installation conversion support was also provided. BURSAGAZ did not receive a project approval fee from the customers whose installation was transformed, paid 80% of the security deposit, established a VIP service team and enabled the transactions to be carried out faster with a separate team. At the beginning of the project, 1611 households were targeted, 1000 people were reached in this process, heating stoves and cookers were transformed in 652 households, bill payment support was provided. For the remaining households, only bill payment support ensured. In the first years, 50 TL invoice support was provided for 4 months in the winter season, in the months of December-January-February-March, while the monthly support amount was determined as 75 TL in the last year, and a total of 300 TL invoice support was provided per household per year. Invoices were issued monthly by the distribution company, the direct support amount that was pre-determined and covered from the budget was paid by the Municipality to the Distribution company and the remaining amount was billed to the subscriber. Installation conversion could be made only in the first year, in the following years only invoice support was provided for budget reasons. However, as the allocated budget was not sufficient, support was requested from the Governorship. Although this budget has not been provided yet, it is aimed to provide 600-800 TL annual direct support with the additional budget.

Based on this practical and working experience, direct support mechanism can be expanded through other gas distribution regions.

#### 3.4.2.2 *Social tariff scenario*

Ministry of Energy and Natural Resources, as the policy maker and actor in legislation making party in preparation of law amendments to be submitted to the Parliament should first coordinate necessary legal documentation to allow social tariff within law no.4646. After that, Energy Market Regulatory Authority, as the tariff setter, will design special tariffs for designated households. BOTAŞ, as the state-owned market leader in the natural gas market as the dominant supplier may be required to take part in this scenario for cross-subsidizing the gas price to be sold. DSOs, as the operator of the legislative or regulatory measures including social tariff will actively participate in this scenario. Ministry of Family, Labor and Social Services, as the executor of Turkey's general policy on social aids and, NGOs, such as Social Assistance and Solidarity Foundation (SYDV), will assume a role of assisting other stakeholders in the vulnerability determination phase, including during the enactment of the law amendments.

In this scenario, funds can be either collected via cross-subsidization between customer groups of a DSO for vulnerable customers served by this DSO, or via cross-subsidization between customer groups of entire country for vulnerable customers living anywhere in Turkey. In the first option, funding can lead to some side effects, such as putting high burdens over other customers, as the income distribution within a DSO can be very different than that of another. To overcome this problem, the other option can be used, however existing tariff methodology of price cap may put some difficulties in this option as revenues collected by a DSO within a year is not subject to correction after year ends.


*Figure 29: Social tariff cooperation mechanism*

Impact of social tariff is displayed with a simple example. Assume that a DSO is set to earn 100.000.000 TRY/year. Related price, demand forecast and revenue levels are as shown at the table x.

*Table 37: Before Social Tariff Structure*

| Consumption Level | Price (TRY/Sm³) | Demand Forecast (Sm³) | Prospected Revenue (TRY) |
|---|---|---|---|
| 0-100.000 Sm³ | 0,200 | 400.000.000 | 80.000.000 |
| 100.001-1.000.000 Sm³ | 0,100 | 35.000.000 | 3.500.000 |

| | | | |
|---|---|---|---|
| 1.000.001-10.000.000 $Sm^3$ | 0,035 | 85.000.000 | 2.975.000 |
| 10.000.001-100.000.000 $Sm^3$ | 0,010 | 1.099.000.000 | 10.990.000 |
| 100.000.001 $Sm^3$ + | 0,003 | 845.000.000 | 2.535.000 |
| TOTAL | | | 100.000.000 |

As the revenue neutrality should be kept, this DSO should be set to earn the same revenue after social tariff. For simplicity, let's assume demand forecast and target price are as shown at the table. In this case, remaining customer groups each will pay 18,75% increased prices in order to support vulnerable customers (rate to increase prices of other customer groups can be differentiated). An extra amount of TRY 15.000.000 is paid by other customers in total, while vulnerable customers pays TRY 5.000.000 instead of TRY 20.000.000, in total.

*Table 38: After Social Tariff Structure*

| Consumption Level | Price (TRY/$Sm^3$) | Demand Forecast ($Sm^3$) | Prospected Revenue (TRY) |
|---|---|---|---|
| Social Tariff Group | 0,050 | 100.000.000 | 5.000.000 |
| 0-100.000 $Sm^3$ | 0,238 | 300.000.000 | 71.250.000 |
| 100.001-1.000.000 $Sm^3$ | 0,119 | 35.000.000 | 4.156.250 |
| 1.000.001-10.000.000 $Sm^3$ | 0,042 | 85.000.000 | 3.532.813 |
| 10.000.001-100.000.000 $Sm^3$ | 0,012 | 1.099.000.000 | 13.050.625 |
| 100.000.001 $Sm^3$ + | 0,004 | 845.000.000 | 3.010.313 |
| **TOTAL** | | | **100.000.000** |

Total burden by customer groups is shown at the table-xxx below, in the sample social tariff. In this example, most of the extra amount is borne by the households group. However, it can be differently designed to allocate extra payment to customer groups to lower households share. Another option is adding the voluntary support of the customers to the social tariff, which again can imply some challenges due to price cap methodology currently applied in Turkey, as revenue differentiation can be more complicated to be managed.

*Table 39: Total burden undertaken by customer groups in the sample social tariff*

| Consumption Level | Total Burden (TRY) |
|---|---|
| **Social Tariff Group** | -15.000.000 |
| **0-100.000 Sm³** | 11.250.000 |
| **100.001-1.000.000 Sm³** | 656.250 |
| **1.000.001-10.000.000 Sm³** | 557.813 |
| **10.000.001-100.000.000 Sm³** | 2.060.625 |
| **100.000.001 Sm³ +** | 475.313 |

Definitely, this example is too simplified, there are challenges to be faced in case social tariff is launched. Firstly, existing price cap methodology is based on earnings and losses left on the DSO caused by demand forecast deviations. However, if social tariff is launched as a nation-wide price (as in the case of price equalization of electricity tariffs), then calculations can get more and more complicated, as deviations caused from demand forecast will get mixed within equalized revenue deviation. As an alternative, cross-subsidization can be among customers groups within each DSO, instead of cross-subsidization of customers within the country as a whole. In this case, asymmetrical distribution of vulnerability, income levels, social and economic conditions among 72 DSOs will set limits on this practice. Even in the second case, negative demand forecast deviations can be claimable by DSOs caused by demand forecast of vulnerable customer groups.

Example is given based on the distribution fee, however it can be generalized to gas price component and/or to overall end price component as well. Complexity of social tariff calculation is inherent in decisions on;

- To what extent should vulnerable customer be supported (as simply exampled as %75 support in distribution fee, it is a critical issue to determine both considering current price levels and payment difficulties of the vulnerable customers),
- Demand forecasted for vulnerable customers (this is closely related to price elasticity of natural gas demand by vulnerable customers),
- How the extra burden will be distributed over other customer groups? DSO region or all country can be involved in the process. Price differentiation in lower income non-vulnerable customers due to social tariff is an economic and social concern, also increase in higher consuming groups' prices is a concern of competition especially in electricity generators and industrial users as the end user prices will affect their competitive position.

These complex issues needs further economic and social researches. In coordination of a stakeholder (MENR is the most probable), workshops can be conducted, with the participation of,

- EMRA,

- Ministry of Family, Labor and Social Services,
- Turkish Statistics Institution (TÜİK),
- BOTAŞ,
- DSOs, DSO umbrella associations,
- Customer associations,
- Social Assistance and Solidarity Foundation (SYDV),
- Related NGOs,
- Universities,
- Other relevant parties.

For further design of details regarding social tariff.

#### 3.4.2.3 *Timeline recommendations and milestone analysis of each scenario*

##### 3.4.2.3.1 Direct support scenario

By end of June 2021: Law amendment for vulnerable customer definition and mechanism for direct support for vulnerable customers,

By end of December 2021: Field works for determination of vulnerable customers according to enacted law and secondary legislation. Enactment of additional funds within budget law.

As of 1st of January 2022: Starting direct supports.

##### 3.4.2.3.2 Social tariff scenario

By end of June 2021: Law amendment for vulnerable customer definition and mechanism for social tariff for vulnerable customers,

By end of December 2021: Field works for determination of vulnerable customers according to enacted law and secondary legislation.

As of 1st of January 2022: Starting social tariff.

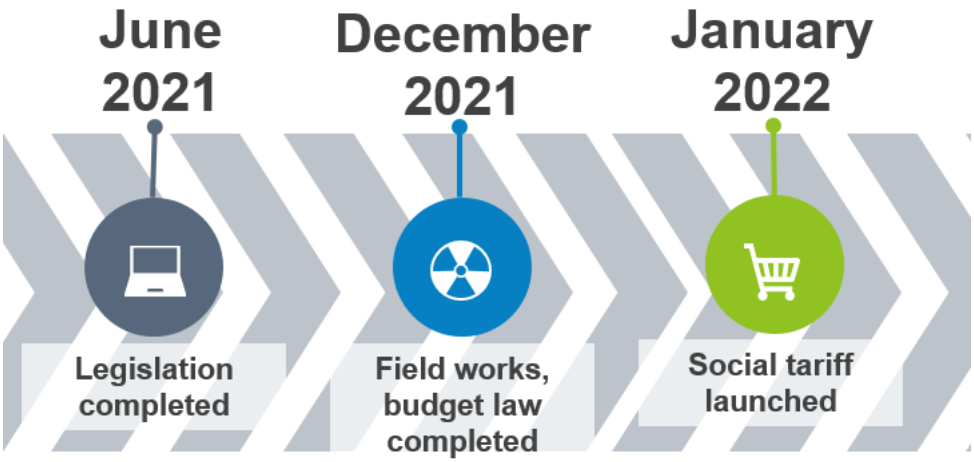



*Figure 30: Social Tariff Scenario Time-Plan*

### 3.4.2.4 *Advantages and disadvantages of the scenarios & business models*

#### 3.4.2.4.1 Direct support scenario:

**Pros:**

- It has no direct effect on other customers, the cost-based tariff structure is preserved,
- There is no need for a law, a mechanism can be established by decree,
- It will have a positive effect on distribution companies,
- It contributes positively to the environment and climates.

**Cons:**

- It can create pressure on the government budget
- Supervision mechanisms should be established well to prevent abuse.

#### 3.4.2.4.2 Social tariff scenario:

**Pros**

- No burden on state budget, no direct use of taxes on the purpose of vulnerable customer support.
- Administrative costs are expected to be relatively lower, as social tariff does not necessitate a payment process to the eligible beneficiaries.
- Beneficiaries will directly get the advantage of improved natural gas usage as the bills will be relatively lower without getting paid after paying the bills.
- As the mechanism is expected to switching from less environmental friendly fuels to natural gas, carbon emissions will be lowered. This can apply both for new customers gained by means of the social tariff and for those who is connected to the network however cannot consume adequate natural gas.

**Cons**

- Cost-based tariffs harmed, so it is an option not in harmony with the regulatory principles, rather it is a way of cross-subsidization between customer groups.
- Other customer groups negatively affected, to keep revenue neutrality with and without social tariff, EMRA will increase tariffs of other customers. This will raise questions on the redistribution of income whether it is economically efficient or not.
- Income distribution can be unfairly distorted because of the asymmetrical income levels between DSO regions.
- Price cap methodology can be more complex and inconsistent
- DSOs and BOTAŞ may be negatively affected due to distorted pricing of the tariff groups. Especially DSOs can lose some of natural gas demand after increased prices.
- Less social acceptance, as other customers will be directly negatively affected by the social tariff.
- Less compatibility with general social policies of Turkey, as the most of the bonuses are in the form of direct payment in Turkey, instead of cheapened prices.

*Table 40: Pros & Cons of Social Tariff Scenario*

| Pros | Cons |
|---|---|
| No burden on state budget | Cost-based tariffs harmed, cross-subsidization between customer groups |
| Administrative costs are expected to be relatively lower | Other customer groups negatively affected, redistribution of income can be inefficient |
| Beneficiaries will directly get the advantage of improved natural gas usage | Price cap methodology can be more complex and inconsistent |
| Carbon emissions will be lowered | DSOs and BOTAŞ may be negatively affected |
| | Less social acceptance |
| | Less compatibility with general state social policies |
| | Income distribution can be unfairly distorted |

## 3.5 Social Tariff Methodology and Recommendation of Other Complementary Regulatory Measures Needed to be Implemented by Other Stakeholders

### 3.5.1 Comprehensive conclusion including recommendations and scenario analysis

Direct support and social tariff scenarios has been analyzed in the previous subsections in order to present better option of vulnerable customer supporting mechanism for Turkish natural gas market. Based on the factors considered, direct support mechanism is the best alternative for Turkey. These are;

- Direct support is more compatible with regulatory principles,
- Direct support does not directly and negatively affect other customers,
- Direct support in more compatible with existing tariff methodology in Turkey,
- Negative impact on DSOs and BOTAŞ is lower in direct support option,
- Social acceptance is highly likely in direct support option,
- General state policy on social issues is more compatible with direct support option,
- Impact on income distribution is direct and negative in the social tariff option, which makes direct support more justified,
- Some of other factors do not make a difference in both options and positive aspects of social tariff (such as no burden on state budget) cannot justify enough a choice on social tariff.

*Table 41: Comparison of Scenarios*

| | **Direct Support** | **Social Tariff** |
|---|---|---|
| **Burden on state budget** | Yes | No |
| **Compatibility with regulatory principles (e.g. cost based tariffs)** | Yes | No |
| **Administrative costs** | Higher | Lower |
| **Direct impact on other customers** | No | Yes |
| **Compatibility with existing tariff methodology** | Yes | No |
| **Lowering carbon emissions** | Yes | Yes |
| **Negative impact on DSOs and BOTAŞ** | No | Yes |
| **Social acceptance** | Higher | Lower |
| **Compatibility with general social policies of Turkey** | Yes | No |
| **Impact on income distribution** | Lower | Higher |
| **Benefits of vulnerable customers** | Yes | Yes |
| **Fraud risk** | Yes | Yes |

### 3.5.2 Legislation recommendations per each scenario

#### 3.5.2.1 *Direct support scenario*

Without a law change, direct support mechanism can be set up by a presidential decree. However, as this option calls for new expense items to be added into the state budget, the budget law should be legislated accordingly. Most convenient addition can be to the budget of Ministry of Family, Labor and Social Services or to the budget of Ministry of Energy and Natural Sources.

By-laws and guidelines for practitioners can be issued in order to carry out the mechanism with best proper practices.

#### 3.5.2.2 *Social tariff scenario*

Law amendment in 4646 is needed in social tariff scenario to allow and power EMRA for setting social tariffs.

Amendment in tariff legislation of EMRA (by-laws, Board decisions, tariff decisions…) should follow for setting details of tariffs to be launched.

Again in this option, by-laws and guidelines for practitioners can be issued in order to carry out the mechanism with best proper practices, too.

*Table 42: Legislation Needed in Scenarios*

| | **Direct support** | **Social tariff** |
|---|---|---|
| **Law amendment** | Not needed | Compulsory |
| **Budget law involved** | Yes | No |
| **Amendment of secondary legislation of law n. 4646** | Not needed | Compulsory |
| **By-laws and guidelines for practitioners** | Recommended | Recommended |

# 4 ANNEXES

## 4.1 Definition of vulnerable customer concept by the Member States

Definition of vulnerable customer concept by the Member States is summarized by the table below[130]:

*Table 43: Definition of Vulnerable Customers in EU Countries*

| Member State | Cat.[9] | Definition of vulnerable consumers[10] |
|---|---|---|
| Austria | C | The concept of vulnerable customer is implemented through a series of protection mechanisms for clearly identified groups of people/households according to social security and energy laws. |
| Belgium | A,B | Flanders: Cf. national definition of "sociale maximumprijs". In Flanders, vulnerable customers are those customers that are entitled to get the social tariff. National legislation defines the preconditions to get the social tariff.<br>Brussels: The Brussels Region applies the definition of vulnerable customer such as defined in the Directive. The categories recognised by the national Government as vulnerable ones are also recognised in the Brussels Region. The Brussels Region recognises two extra categories of customers as vulnerable: 1) which are recognised as vulnerable customers by local public aid centres and 2) ones that meet certain criteria defined in the regional legislation in terms of revenues and number of persons composing the household and whom are on that basis recognised as vulnerable customers by the Brussels regional regulator. For the two additional categories recognised in the Brussels Region the 'statute' of vulnerable customers is linked to a limitation of power supply and is limited in time and ceases once the customer has paid off his debt to his supplier.<br>Federal: The definition of the concept of vulnerable customers is implicitly recognized by the energy law and/or social security system in my country; The energy law/legal framework explicitly states what groups of customers are regarded as "vulnerable" based on personal properties of customers (disability). |
| Bulgaria | C | Social Assistance Law through Ordinance No. RD-07-5 as of 16 May 2008 for provision of targeted benefits for heating is given once a year to Persons or families whose average monthly income in the last six months is lower or equal to differentiated minimum income; these citizens are eligible for heating benefits according to Art. 10 and 11.[11] From July 2012, vulnerable customers are defined in the Energy Act.* |
| Croatia | C | In its valid and effective wording, the Energy Act does not define 'vulnerable customer'; for consumers who can be regarded as 'socially disadvantaged', certain measures for their protection and support for their rights are provided for at the level of generally applicable legislation in the domain of social security law[12] |

[130] Energy poverty and vulnerable consumers in the energy sector across the EU: analysis of policies and measures, Policy Report.

| Member State | Cat. | Definition of vulnerable consumers |
|---|---|---|
| Cyprus | A,B,C | The definition of vulnerable customers is determined in a Ministerial decree (CEER 2013). Additional public assistance is provided to recipients to satisfy special needs, including "heating 170 euro per annum". Recipients include persons with disability and medically confirmed patients treated abroad for a period not exceeding six months; persons with disability studying in an educational institution in Cyprus or abroad (for a period not exceeding by more than one year the normal period of their course) to obtain qualifications that will help them become independent of public assistance; and persons under the care of the director of the Social Welfare Services (SWS) when they become 18 years old and enrol in an educational institution in Cyprus or abroad in order to obtain qualifications that will help them become independent of public assistance [13] |
| Czech Republic | | There is a legal term "protected customer" such as hospitals and ill people dependant on life-support equipment. |
| Denmark | C | There are no specific provisions regarding vulnerable consumers in energy law; instead this issue is dealt with in social legislation.* However the principal of universality exists where every citizen has a right to social assistance when affected by a specific event. Various schemes in existence for short and longer-term support to unemployed, social security for the non-working [14] |
| Estonia | C | A household customer to whom subsistence 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 subsistence 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. [15] |
| Finland | B,C | In the energy market act there are defined in connection to the disconnection of the electricity. Also in the constitution there is a concept of basic rights and social security legislation defines the target groups. |
| France | B | 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 (revenu fiscal de reference) lower than EUR 2,175. The number of households benefitting from the social tariff is expected to increase from 1.9 million to 4.2 million, equivalent to 8 million people.* |
| Germany | C | 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.* |

| Member State | Cat. | Definition of vulnerable consumers |
|---|---|---|
| Greece | A,B | Groups of customers defined under the Energy law:<br>(a) The financially weak customers suffering from energy poverty.<br>(b) Customers who themselves or their spouses or persons who live together, rely heavily on continuous and uninterrupted power supply, due to mechanical support.<br>(c) Elderly who are over seventy years old, provided they do not live together with another person who is younger than the above age limit.<br>(d) Customers with serious health problems, especially those with severe physical or mental disability with intellectual disabilities, severe audiovisual or locomotor problems, or with multiple disabilities or chronic illness who can not manage their contractual relationship with their Supplier.<br>(e) Customers in remote areas, especially those living at the Non Interconnected Islands. |
| Hungary | A,B,C | 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. |
| Ireland | A | A vulnerable customer is defined in legislation as a household customer who is:<br>a) critically dependent on electrically powered equipment, which shall include but is not limited to life protecting devices, assistive technologies to support independent living and medical equipment, or<br>b) particularly vulnerable to disconnection during winter months for reasons of advanced age or physical, sensory, intellectual or mental health. |
| Italy | A | Several measures aim to protect customers (vulnerable household customers, utilities, activities relating to 'public service', including hospitals, nursing homes and rest, prisons, schools and other public and private facilities that perform an activity recognized of public service as well as household customers that require electricity-powered life-support equipment with severe health problems). Italian decrees establish the "social bonus" (a social support program) defined by the Government for the benefit of electicity customers whose annual income does not exceed a certain threshold (set up by the law and certified by equivalent economic situation indicator, that takes into account income, assets, the characteristics of a family by number and type). The "social bonus" is a discount (annual amount fixed the same in the free market or in the enhanced protection regime) of the electricity bill each year, dependent upon the use, number of people in the family, and climate zone |
| Latvia | D | There is no clear definition of vulnerable consumers yet, but plans exist to introduce several measures to inform and support vulnerable consumers.* |
| Lithuania | D | 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 consumers is currently under discussion. |
| Luxembourg | C | All customers are de facto considered as potentially vulnerable in Luxembourg.* |
| Malta | C | Vulnerable consumers are supported through social policy. Recipients of social security are eligible for support |
| Netherlands | A | Legislation states that a household consumer for whom ending the transport or the supply of electricity or gas would result in very serious health risks for the domestic consumer or a member of the same household of the household customer is regarded as vulnerable, and thus disconnection is not permitted, unless a case of fraud has been proved |
| Poland | C | 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. |

| Member State | Cat. | Definition of vulnerable consumers |
|---|---|---|
| Portugal | C | 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 | A,C | Vulnerable customers are defined as household consumers with low income within the limits laid down in the Ordinance 27/2013* |
| Slovakia | D | The concept for the protection of consumers fulfilling conditions of the energy powerty was in preparation in 2013. Act on Energy Industry defines vulnerable household electricity customer as a strongly disabled person and whos vital functions are depending upon the offtake of electricity and uses electricity for heating. The DSO keeps records of vulnerable customers and can disrupt electricity distribution only after previous direct communication of these electricity customers with the DSO. |
| Slovenia | C | Social support is provided to households through a minimum income to households/individuals without an income or an income below the official level.[16] |
| Spain | A,B | The concept of vulnerable costumers has only been defined so far for electricity customers. Vulnerable customers should fulfil at least one of the following criteria: a large family or a family where all members are unemployed; be low voltage consumers (less than 1 kV) with contracted demand lower than or equal to 3 kW; or a pensioner older than 60 years with a minimum level pension. Vulnerable customers' electricity tariffs are reduced by means of a "social bonus", which sets their tariffs at the July 2009 level. As of December 2012, 2,544,170 customers were defined as vulnerable. |
| Sweden | E | Vulnerable customers are defined as persons who permanently lack ability to pay for the electricity or natural gas that is transfered or delivered to them for non-Commercial purposes. |
| United Kingdom | A,B | Ofgem have defined vulnerability as when a consumer's personal circumstances and characteristics combine with aspects of the market to create situations where he or she is:<br>-significantly less able than a typical consumer to protect or represent his or her interests in the energy market; and/or<br>-significantly more likely than a typical consumer to suffer detriment, or that detriment is likely to be more substantial |

A) The legal framework explicitly states what groups of customers are regarded as "vulnerable" based on personal properties of customers, e.g. their age, disability, health, etc.

B) The legal framework explicitly states in what situations customers are regarded as "vulnerable" based on non-personal or situational circumstances e.g. unemployment, single parenthood, etc.

C) The definition of the concept of vulnerable customers is implicitly recognized by the energy law and/or social security system in my country.

D) A definition of the concept of vulnerable customers does not exist in my country.

E) Other, please specify.

Definition of energy poverty by the Member States is summarized by the table below[131]:

[131] Energy poverty and vulnerable consumers in the energy sector across the EU: analysis of policies and measures, Policy Report.

*Table 44: Definition of Energy Poverty in EU Countries*

| Member State | Energy / fuel poverty definition | Definition metric | Status |
|---|---|---|---|
| Austria | Households are considered at risk of energy poverty if their income is below the at-risk-of-poverty threshold and they simultaneously have to spend an above-average percentage of their household income on energy. | Proposal to use multiple indicators: household income, housing expenses, energy costs; information about past due bills, disconnections, installations of pre-paid meters, etc.; subjective indicators, such as permanent household financial difficulties. | Unofficial definition under consideration |
| Cyprus | Energy poverty may relate to the situation of customers who may be in a difficult position because of their low income as indicated by their tax statements in conjunction with their professional status, marital status and specific health conditions and therefore, are unable to respond to the costs for the reasonable needs of the supply of electricity, as these costs represent a significant proportion of their disposable income. | Share of income spent on energy | Official definition |
| France | *Definition according to article 11 of the "Grenelle II" law from 12 July 2010:*<br>Is considered in a situation of energy poverty "a person who encounters in his/her accommodation particular difficulties to have enough energy supply to satisfy his/her elementary needs, this being due to the inadequacy of resources or housing conditions." | A quantitative threshold is missing. | As a result of no quanitative threshold, the definition is not sufficiently operational. |
| Ireland | Energy poverty is a situation whereby a household is unable to attain an acceptable level of energy services (including heating, lighting, etc) in the home due to an inability to meet these requirements at an affordable cost. | Spends more than 10% of its disposable income on energy services in the home. | Official national definition |
| Italy | A family is vulnerable when more than 5% of income is spent for electricity and 10% for gas. | As stated in the definition – spending 5% of income on electricity and 10% on gas | Unofficial definition proposed by regulator. |
| Malta | Energy poverty: inability to achieve a necessary level of energy services in a household. Fuel poverty: mainly linked to inability to achieve the necessary level of fuel use for heating homes (i.e., if the household were to spend on the necessary fuel, then it would fall below the poverty line). | Currently only using the EU-SILC indicator for share of population unable to keep the home adequately warm. Proposals to include subjective feedback from consumers through household budgetary surveys and compare energy consumption across sectors. | These are unofficial definitions proposed by NGO. |

| Member State | Energy / fuel poverty definition | Definition metric | Status |
|---|---|---|---|
| Slovakia | Energy poverty is defined as a condition when average monthly household expenditures for the consumption of electricity, gas and heat, represent a significant share of the average monthly household income. | According to the Concept for the protection of consumers fulfilling conditions of energy poverty, issued by the Regulatory Office, the Statistical Office provides information on average monthly household expenditure for energy consumption and household income. A household can be considered as energy poor if disposable monthly income is lower than the minimum monthly disposable household income threshold.<br>The threshold is published on the website of the Ministry of Labour, Social Affairs and Family of the Slovak Republic, the Regulatory Office for Network Industries and on message boards of labor, social affairs and families, municipalities and municipal authorities. | The threshold is currently a proposal. |
| UK (England) | A household to be fuel poor if i) their income is below the poverty line (taking into account energy costs); and ii) their energy costs are higher than is typical for their household type (DECC 2013). | Low income, high consumption (LIHC). Two criteria include i) fuel costs are above the median level, and ii) residual income net of fuel cost spend is below the official poverty line. This applies in England, while other constituent countries use the 10% threshold metric.<br>Note that England continues to report the 10% threshold metric for comparison, which is that *a fuel poor household is one which needs to spend more than 10% of its income on all fuel use to heat it home to an adequate standard of warmth (21℃ in living room, and 18℃ in other rooms as recommended by WHO.* | Official national definition. Proposed target *to ensure that as many fuel poor homes as is reasonably practicable achieve a minimum energy efficiency standard of Band C, by 2030* (DECC 2014b). |
| UK (Scotland) | A household is in fuel poverty if, in order to maintain a satisfactory heating regime, it would be required to spend more than 10% of its income (including Housing Benefit or Income Support for Mortgage Interest) on all household fuel use (Scottish Executive 2002). | The definition of a 'satisfactory heating regime' as per for Wales (below) | Official national definition. Target is that as far as reasonably practicable, fuel poverty will be eradicated by 2016. |

| Member State | Energy / fuel poverty definition | Definition metric | Status |
|---|---|---|---|
| UK (Wales) | Fuel poverty is defined as having to spend more than 10 per cent of income (including housing benefit) on all household fuel use to maintain a satisfactory heating regime. Where expenditure on all household fuel exceeds 20 per cent of income, households are defined as being in severe fuel poverty (Welsh Assemby Government 2010). | As stated. The definition of a 'satisfactory heating regime' recommended by the World Health Organisation is 23°C in the living room and 18°C in other rooms, to be achieved for 16 hours in every 24 for households with older people or people with disabilities or chromic illness and 21°C in the living room and 18°C in other rooms for a period of nine hours in every 24 (or 16 in 24 over the weekend) for other households. | Official national definition. Target is that as far as reasonably practicable, fuel poverty will be eradicated amongst vulnerable households by 2010, in social housing by 2012 and by 2018, there would be no-one in Wales living in fuel poverty. |
| UK (Northern Ireland) | A household is in fuel poverty if, in order to maintain an acceptable level of temperature throughout the home, the occupants would have to spend more than 10% of their income on all household fuel use (DSDNI 2011). | 'Acceptable' level as per WHO 'satisfactory heating regime' | Official national definition. |

## 4.2 Other Country Examples

### *4.2.1 Croatia*

In 2009, Croatia adopted the Energy Strategy (OG 130/09) and defining and status of vulnerable customer has been placed for the first time in the energy act (OG 120/12, 14/14,95/15,102/15) following by the Law on Electricity Market (OG 22/13,95/15,102/15) and the Law on Gas Market (OG 28/13, 14/14). Vulnerable customer is an final energy household customer whose energy supply is provided with specialized conditions because of its social status and/or health conditions. Minimum guaranteed social allowance and/or disability allowance is granted to vulnerable customers as of September 2015 by the decision of government.[132]

For the future, it is expected in Croatia that a widened definition of vulnerability from focusing only on electricity to gas, district heating and fuelwood can be provided, energy efficiency improvements can have more attention and definition and statistical monitoring of energy poverty can be in place.[133]

For clarifiying current situation of the customers in Croatia, certain social, demographic, and economic indicators and values, for some of them including progress over the years and for most of them including relative place of Croatia compared to those of the EU average, can be displayed and analysed at the following paragraphs. Also current measures against energy poverty in Czechia is summarized at the end of this sub-chapter.

In the indicator of "inability to keep home adequately warm", Croatia's performance is lower than the EU average. In 2018, 7,7% of the Croatian population were unable to keep the home adequately warm while the EU average of this year was 7,3%. In timely bill payment, 17,5% of the Croatian population had "arrears on utility bills" payment, while the EU average was 6,6% in 2018. For population indicators, Croatia performs worse than the EU.

[132] Lenz N.V. & Grgurev I. (2017), "Assessment of Energy Poverty in New European Union Member States: The Case of Bulgaria, Croatia and Romania", International Journal of Energy Economics and Policy, 7(2), 1-8.
[133] Energy Poverty in South East Europe: Surviving the Cold

"High share of energy expenditure in income" figures show that Croatian households with a high share of income on energy expenditure is 12,0% while the corresponding figure is 16,2% for the EU average, in 2015. This figure of Croatia may be related to better energy efficiency of buildings in Croatia. "Low absolute energy expenditure" figures show that 7,5% of the Croatian households spend a low share of income on energy and the respective EU average is 14,6% in 2015. This figure of Croatia implies that lower expenditure of households compared to their needs is less common in Croatia than in the EU. In expenditure indicators, Croatia performs better than the EU.

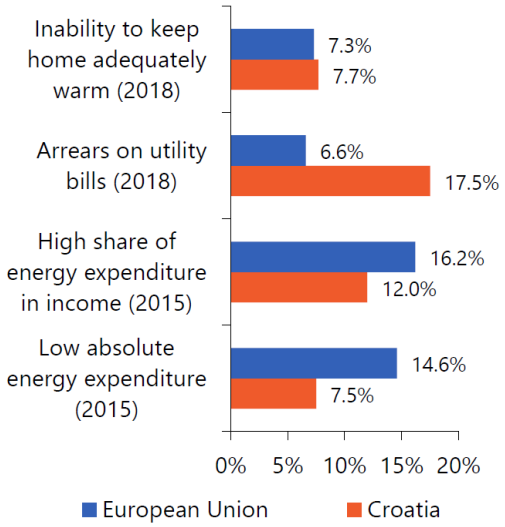



*Figure 31: EU & Croatia Comparison*[134]

Over the years, "inability to keep home adequately warm" has changed from 10% in 2010 to 7,7% in 2018. At the same period, "arrears on utility bills" has decreased to 17,5% from 28%. Vulnerable customer support mechanisms for utilility bills by the government in 2013 might have helped these figures to become better, together with home renovation subsidies started in 2014.

[134] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

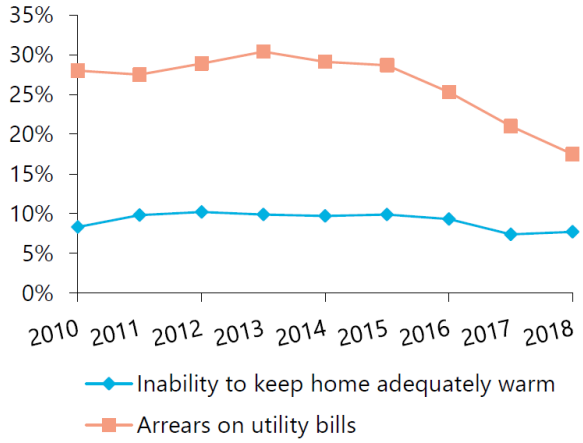



*Figure 32: EU & Croatia Comparison*[135]

On the population indicators of "inability to keep home adequately warm" and "arrears on utility bills", most vulnerable customer type is those live in social houses, as the highest percentages are in these group of people for the mentioned indicators (13,4% and 33,6% respectively). In this manner, second ranking group is private tenants (17,1% and 15,2%). As of 2017, 8% of the Croatian population lives in social houses and 2% of the population live in privately rented houses.

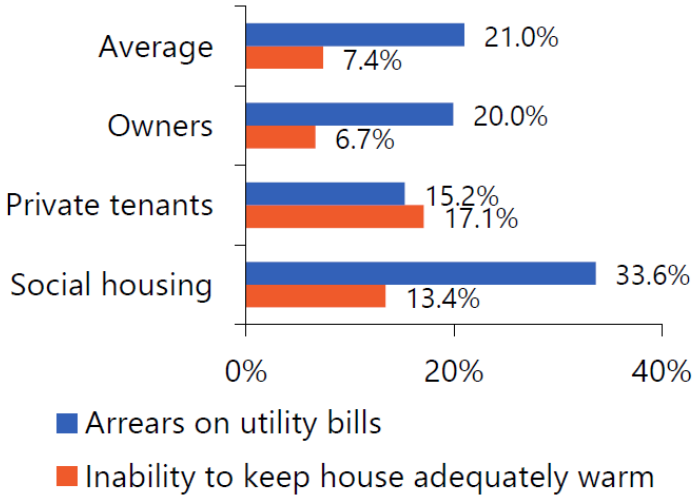



*Figure 33: Keeping Home Warm Ratio*[136]

In 2015, for each quintile of the Croatian population spent more of their income on energy compared to the same quintile of the EU average. For the poorest quintile, these figures are 12% of their income for Croatia and 7% for the EU average, while for the richest quintile, these figures are 7% for Croatia and 4% for the EU average. Compared to the EU average, Croatian population is more lilely to be energy poor. Combined with its cold climate leading high

[135] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019
[136] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

energy use for heating, Croatia has a median income level of less than half of the EU median (2015). Eventually, income spent on energy expenditure is higher in percentage for Croatia than the EU average.

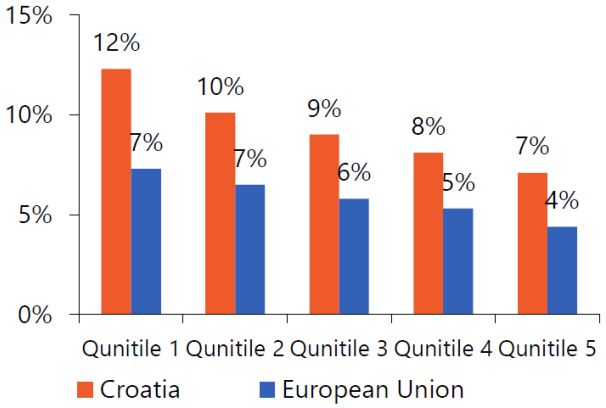



*Figure 34: Croatia & EU Comparison*[137]

In Croatia, electricity and natural gas prices are lower than the EU average. Household prices over time are shown at the graph below (13,2 €ct/kWh for electricity and 3,64 €ct/kWh for natural gas in 2018).

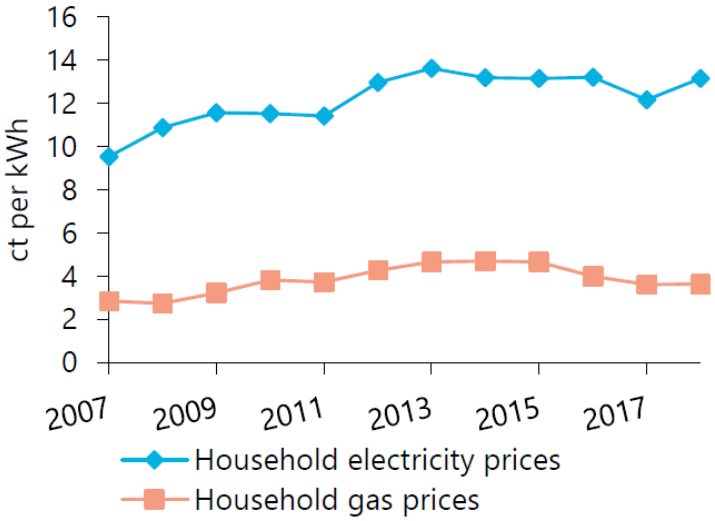



*Figure 35: Electricity & Gas Price Comparison*[138]

In Croatia, main energy poverty mitigation tools are direct financial measures. In 2013, The Guaranteed Minimal Support programme has been started to pay benefits to households for their basic needs. The Housing Cost Support includes costs for electricity, natural gas and heating. Moreover, one time support may be paid in exceptional circumstances such as for meeting winter heating costs and repair/replacement costs of heating equipment. Mostly

[137] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019
[138] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

introduced in 2014, Croatian national and local governments also help residents in their house renovations for more efficient energy use. Support mechanisms are summarized at the table below.

*Table 45: Support Mechanisms in Croatia*[139]

| Selected Measures | Type of Measure | Organisation | Target Groups | Start Year | Result |
|---|---|---|---|---|---|
| **Subsidy package for energy audits and integral restoration of residential apartment buildings** | Building insulation, energy audits and Awareness | National government, Local government | No specific target group | 2014 | Yearly energy savings are expected to be around 101 Gwh. Yearly avoided CO2 emissions are expected to be around 28,221 ton. |
| **Electricity allowance for vulnerable consumers** | Energy bill support | National government | Household on social benefits, disabled | 2015 | |
| **Firewood allowance** | Energy bill support | National government, Local government | Household on social benefits, low income households | 2013 | |
| **One-time support** | Social support | National government | Household on social benefits, low income households, vulnerable households | 2013 | |
| **Guaranteed Minimal Support (GMS)** | Social support | National government, Local government | Low income households | 2013 | |
| **Housing Cost Support** | Social support | National government, Local government | Household on social benefits, low income households, vulnerable households | 2013 | |
| **Subsidy for heating system replacement in family houses** | Heating system | National government, Local government | No specific target group | 2014 | Yearly energy savings are expected to be around 27 Gwh. Yearly avoided CO2 emissions are expected to be around 6,443 ton. |
| **Subsidy for outer envelope restoration in family houses** | Building insulation | National government, Local government | No specific target group | 2014 | Yearly energy savings are expected to be around 15 Gwh. Yearly avoided CO2 emissions are expected to be around 4,241 ton. |

[139] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

#### 4.2.1.1 *Czechia*

In Czechia, the Energy Act does not include a definition of the term 'vulnerable customer', however, the social security law has general provisions on the definition and protection of for disadvantaged consumers.[140] Moreover, there is a legal term of "protected customer" such as hospitals and ill people dependant on life-support equipment, inc Czech legislation.[141]

For clarifying current situation of the customers in Czechia, certain social, demographic, and economic indicators and values, for some of them including progress over the years and for most of them including relative place of Czechia compared to those of the EU average, can be displayed and analysed at the following paragraphs. Also current measures against energy poverty in Czechia is summarized at the end of this sub-chapter.

In "inability to keep home adequately warm", Czechia's performance is better than the EU average. In 2018, 2,7% of the Czech population were unable to keep the home adequately warm while the EU average of this year was 7,3%. In timely bill payment, 2,1% of the Czech population had "arrears on utility bills" payment, while the EU average was 6,6% in 2018. For population indicators, Czechia performs better than the EU.

"High share of energy expenditure in income" figures show that Czech households with a high share of income (more than twice the sahre of their income) on energy expenditure is 10,8% while the corrospending figure is 16,2% for the EU average, in 2015. "Low absolute energy expenditure" figures show that 9,2% of the Czech households spend a low share of income on energy and the respective EU average is 14,6% in 2015. This figure of Czechia implies that lower expenditure of households compared to their needs is less common in Czechia than in the EU. In expenditure indicators, Czechia performs better than the EU.

[140] National Report of the Energy Regulator Office on the Electricity and Gas Industries in the Czech Republic in 2014.
[141] Energy Poverty and Vulnerable Consumers in the Energy Sector Across the EU: Analysis of Policies and Measures

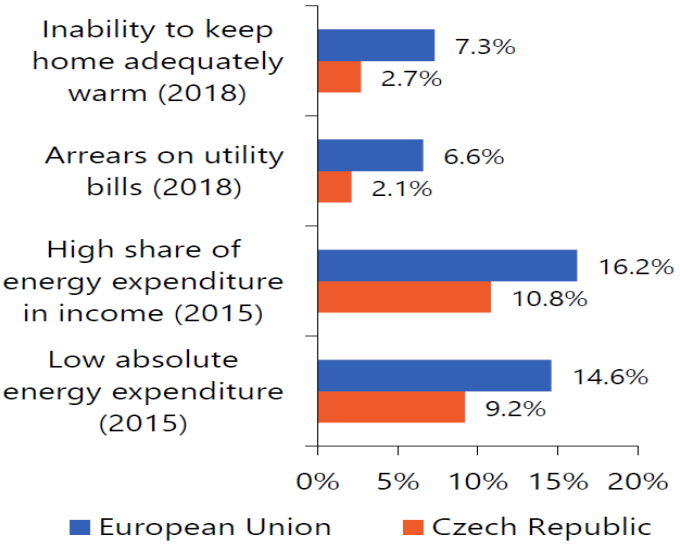



*Figure 36: EU & Czechia Comparison*[142]

Over the years, "inability to keep home adequately warm" has changed from 9% in 2005 to 3% in 2018. At the same period, "arrears on utility bills" has decreased to 2% from 7%.

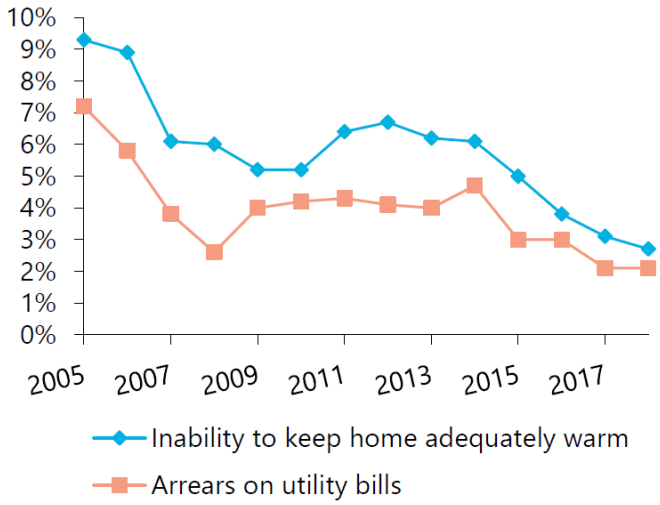


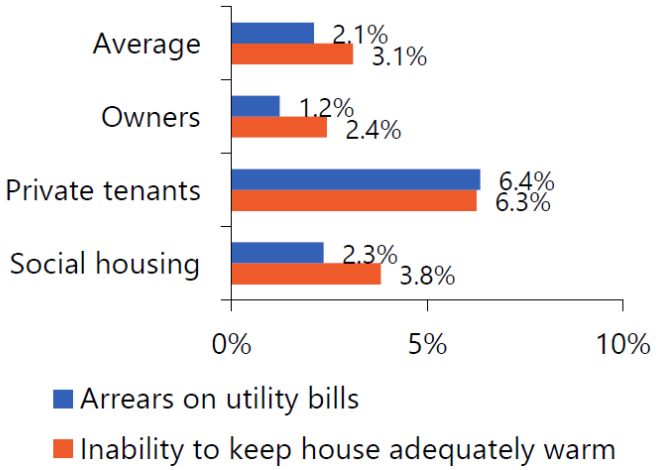

*Figure 37: Inability to Keep Home Warm Chart*[143]

On the population indicators of "inability to keep home adequately warm" and "arrears on utility bills", most vulnerable customer type is those live as private tenants, as the highest percentages are in these group of people for the mentioned indicators (6,3% and 6,4% respectively). In this manner, second ranking group is social housing (3,8% and 2,3%). 16% of the Czech population lives in privately rented houses.

[142] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

[143] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

*Figure 41: Inability to Keep Home Warm Chart as per Ownership* [144]




In "ability to keep the house adequately warm" and "having arrears on utility bills", urban areas and towns/suburbs which constitutes 65% of Czech population perform the worst in Czechia, however rural areas are not too far from their performance. Low performance of urban areas may be due to higher living costs and higher share of urban poor population.

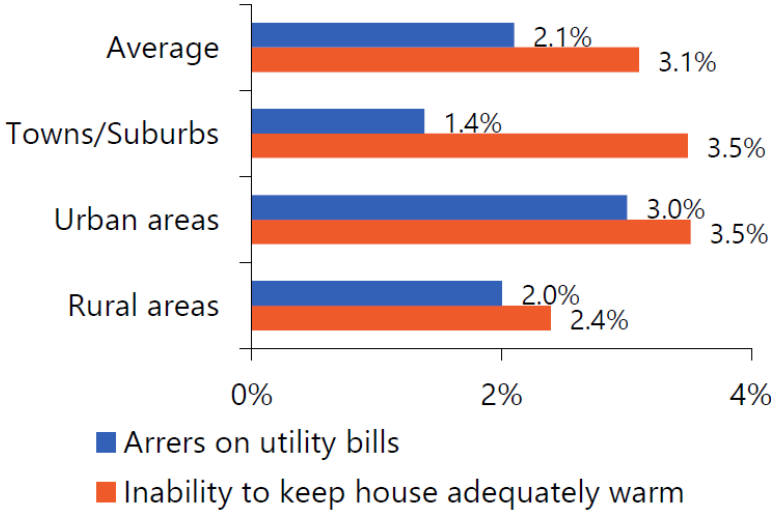



*Figure 38: Inability to Keep Home Warm Chart in Urban and Rural Areas*

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

Household prices over time are shown at the graph below (15,8 €ct/kWh for electricity and 5,72 €ct/kWh for natural gas in 2018). The peak year was 2012, in which the prices were 16,7 €ct/kWh and 6,60 €ct/kWh respectively.

[144] Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

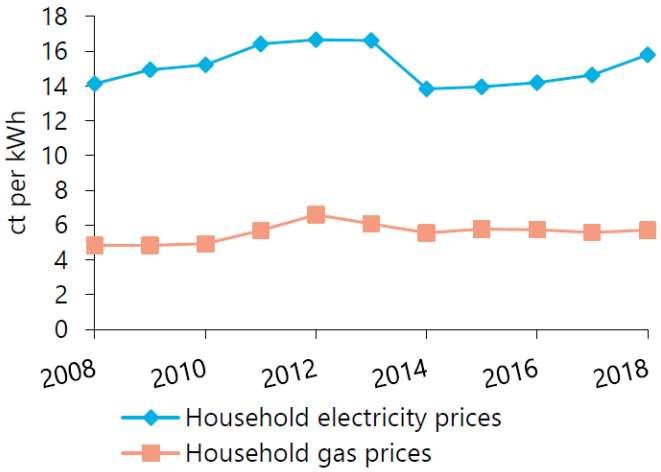



*Figure 39: Comparison of Electricity & Gas Prices*

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

Energy efficiency programmes are generally lon term and they target not only vulnerable customers but also all households instead of specific vulnerable houin Czechia. For energy savings, building renovations and heating system improvements, these programmes provide financial support. Examples are Integrated Regional Operational Programme, the New Green Savings, and the Operational Programme Environment, some of which are financed by the European Union.

Primary tool against energy poverty is social policies in Czechia. Low-income households receive sport from Live Allowance for living expenses, while they also get hosing supports including their energy and heating expenses from the Housing Allowance and the Housing Supplement. Other than these prgorammes, there are also educational programmes for raising awareness of energy savings, as in the EFEKT programme.

National Energy and Climate Plan of Czechia aims energy poverty reduction and Czechia plans targeting spesicifc vulnerable customer groups in the future. Measures for energy poverty reduction in Czechia is summarized at the table below:

*Table 46: Energy Poverty Reduction Measures in Czechia*

| Selected Measures | Type of Measure | Organisation | Target Groups | Start Year | Result |
|---|---|---|---|---|---|
| **New Green Savings** | Building insulation, heating system, renewable energy | National government | No specific target group | 2009 | Between 2014-2016, the programme approved 18,357 projects with a total amount of 4,16 billion CZK |

| | | | | | |
|---|---|---|---|---|---|
| **EFEKT** | Energy audits, information & awareness | National government | No specific target group | 2010 | This policy aims to promote energy efficiency in the Czechia mainly through raising awareness and providing education on energy savings. The first EFEKT program started in 2020. |
| **Operational Programme Environment** | Heating system, renewable energy | National government, regional government | No specific target group | 2015 | The goal is to exchange 100,000 solid fuel boilers until 2020. |
| **Housing Supplement** | Social Support | National government | Low income households, Households on social benefit, Vulnerable households | Unknown | This measure provides additional financial assistance to low income households to cover their housing expenses, including energy and heating expenses, which are not sufficiently covered under the basic Housing Allowance measure. |
| **Living Allowance** | Social Support | National government | Low income households | Unknown | This measure provides financial assistance to low income households to cover their living expenses. |
| **Housing Allowance** | Social Support | National government | Low income households | Unknown | This measure provides financial assistance to low-income households to cover their housing expenses, including energy and heating expenses. |

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

#### 4.2.1.2 *Hungary*

In Hungary, suppliers of vulnerable customer have extra responsibilities: Vulnerable costumers are household costumers that qualify the conditions set by various legislation. They are entitled more protection than other customers. Vulnerable customers are those in need or those tih disabilities. Customers qualifying the conditions apply supplier for being registered as a vulnerable costumer, and if they can certify their conditions are appropriate to the benefits guaranteed for vulnerable costumers, registration cannot be denied. Benefits provided by the suppliers are, installment/payment facilities, deferred payment, prepayment metering device. Customers with disabilities should be offered certain privileges relating to metering, reading and billing procedures, and payment terms, according to their needs.[145]

[145] ERRA Benchmark Analysis: Identifying Different Categories of Suppliers with Public Service Obligations

For clarifiying current situation of the customers in Hungary, certain social, demographic, and economic indicators and values, for some of them including progress over the years and for most of them including relative place of Hungary compared to those of the EU average, can be displayed and analysed at the following paragraphs. Also current measures against energy poverty in Hungary is summarized at the end of this sub-chapter.

In “inability to keep home adequately warm”, Hungary’s performance is better than the EU average. In 2018, 6,1% of the Hungariann population were unable to keep the home adequately warm while the EU average of this year was 7,3%. In timely bill payment, 11,1% of the Hungarian population had “arrears on utility bills” payment, while the EU average was 6,6% in 2018. For population indicators, Hungary’s performance is not higher or lower than the EU’s as a whole but partially higher and partially lower in two indicators.

“High share of energy expenditure in income” figures show that Hungarian households with a high share of income on energy expenditure is 9% while the corrospending figure is 16,2% for the EU average, in 2015. “Low absolute energy expenditure” figures show that 9,3% of the Hungarian households spend a low share of income on energy and the respective EU average is 14,6% in 2015. This figure of Hungary implies that lower expenditure of households compared to their needs is less common in Hungary than in the EU. In expenditure indicators, Hungary performs better than the EU.

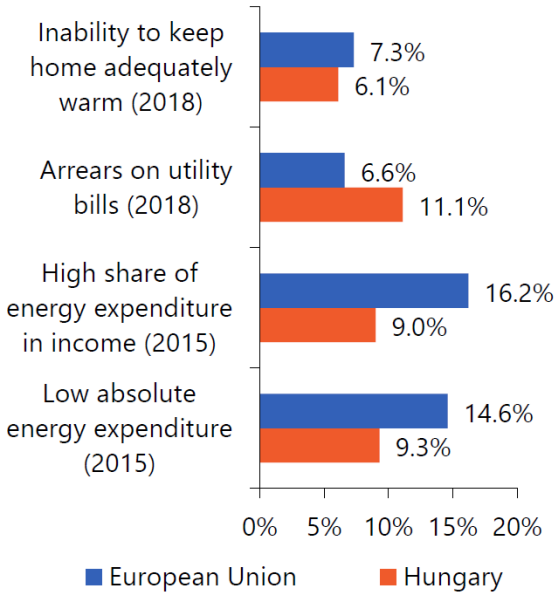



*Figure 40: EU & Hungary Comparison to Keep Homes Warm*

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

Over the years, “inability to keep home adequately warm” has changed from a peak in 2013 to 6,1% in 2018. “Arrears on utility bills” has decreased to 11,1% in 2018 from 2012 peak of 25%. Te peak values during 2009 to 2012 may be a result of financial crisis in Hungary.

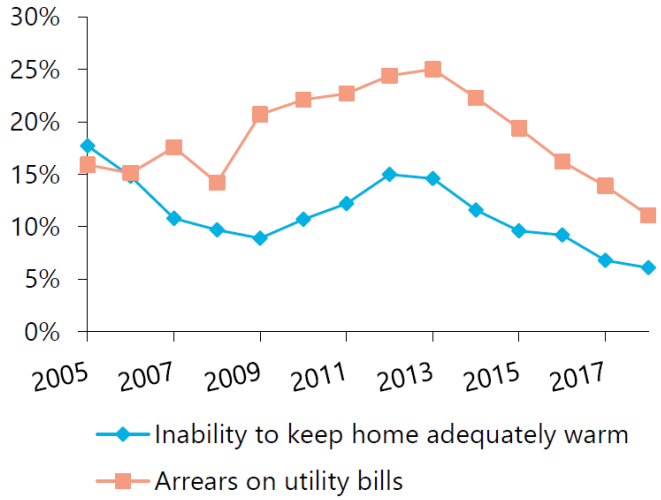



*Figure 41: Inability to keep home adequately warm & arrears on utility bills chart*

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

On the population indicators of "inability to keep home adequately warm" and "arrears on utility bills", most vulnerable customer type is those live in social houses, as the highest percentages are in these group of people for the mentioned indicators (8,9% and 21,6% respectively). In this manner, second ranking group is private tenants (6,1% and 11,6%). As of 2018, 9% of the Hungarian population lives in social houses and 5% of the population live in privately rented houses.

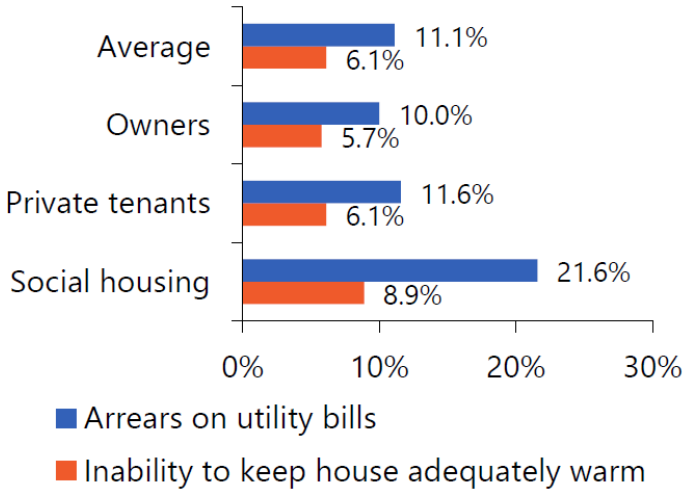



*Figure 42: Inability to keep home adequately warm & arrears on utility bills as per ownership*

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

In 2015, for each quintile of the Hungarian population spent more of their income on energy compared to the same quintile of the EU average. For the poorest quintile, these figures are 13% of their income for Hungary and 7% for the EU average, while for the richest quintile, these figures are 9% for Hungary and 4% for the EU average. Compared to the EU average, Hungarian population is more lilely to be energy poor. Combined with its cold climate leading high energy use for heating, Hungary has a median income level of less than half of the EU median (2015). Eventually, income spent on energy expenditure is higher in percentage for Hungary than the EU average.

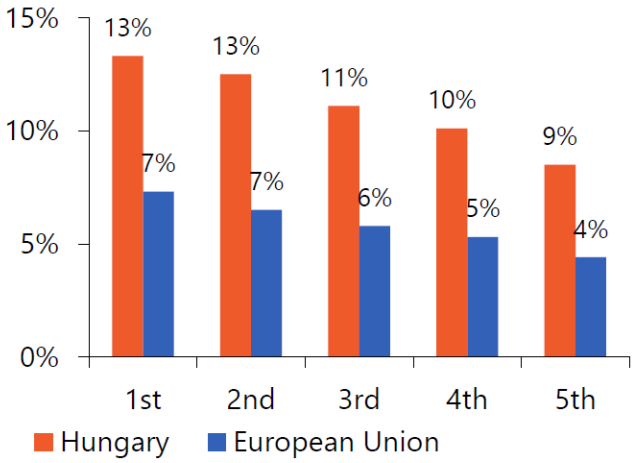



*Figure 43: EU & Hungary incomes pent on energy expenditure comparison*

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

In Hungary, electricity and natural gas prices are lower than the EU average. Household prices over time are shown at the graph below (11,2 €ct/kWh for electricity and 3.53 €ct/kWh for natural gas in 2018, both lower than the EU average). Prices seem to be a result of Hungarian low price policy.

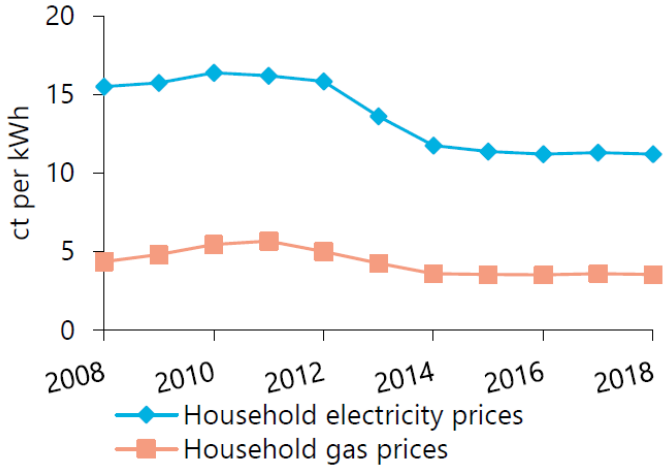



*Figure 44: Electricity & Gas Prices Comparison*

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

Hungarian government provides support for vulnerable customers. Additionally for disabled customers, there are protections against disconnection in case of late or non payment. Also in Hungary, building renovations including insulation and the renewal of heating systems are supported with favourable financial tools provided by the government. Moreover, there is a renewable support for energy procuced by the households.

*Table 47: Energy Poverty Reduction Measures in Hungary*

| Selected Measures | Type of Measure | Organisation | Target Groups | Start Year | Result |
|---|---|---|---|---|---|
| Financing options for energy efficiency | Building insulation, heating insulation | National government | No specific target group | - | - |
| Protection for disabled consumers | Disconnection protection | National government | Disabled | - | - |
| Protection for indigent consumers | Disconnection protection | National government | Households on social benefits | - | - |
| Rules on renewable production by households | Renewable energy | National government | No specific target group | - | - |

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

#### 4.2.1.3 *Romania*

In Romania, the Ordinance 27/2013 low income limits are set for defining household customers as vulnerable customers.[146] Vulnerable customer is defined in the Law on Electricity and Natural Gas (OG 123/12) and in the Emergency Regulation on Measures of Social Protection During the Winter (OG 70/11, 27/13).[147]. Vulnerable consumers are defined as household consumers who are in risk of social discrimination based on age, healthy or low incoming and who, in order to prevent this risk, are beneficiary of social protection measures, including financial aid. Final consumers with a monthly income under the minimum wage have special tariffs, who documents to the supplier of last resort. DSOs are obliged for granting nonfinancial measures for elderly people and to those with serious health problems.[148]

Romanian energy strategy adopted in 2011, states that the social tariffs for natural gas, electricity and heat must be replaced by direct social benefits. The Emergency Regulation on Measures of Social Protection During the Winter (OG 70/11, 27/13) defines social assistance for a household (individual/family) who cannot afford costs of heating and whose income is within the determined limits.[149]

[146] Energy Poverty and Vulnerable Consumers in the Energy Sector Across the EU: Analysis of Policies and Measures
[147] Lenz N.V. & Grgurev I. (2017), "Assessment of Energy Poverty in New European Union Member States: The Case of Bulgaria, Croatia and Romania", International Journal of Energy Economics and Policy, 7(2), 1-8.
[148] Benchmark Analysis: Different Practices in Identifying, Categorizing and Supporting Vulnerable Consumers in ERRA Member Countries
[149] Lenz N.V. & Grgurev I. (2017), "Assessment of Energy Poverty in New European Union Member States: The Case of Bulgaria, Croatia and Romania", International Journal of Energy Economics and Policy, 7(2), 1-8.

For clarifiying current situation of the customers in Romania, certain social, demographic, and economic indicators and values, for some of them including progress over the years and for most of them including relative place of Romania compared to those of the EU average, can be displayed and analysed at the following paragraphs. Also current measures against energy poverty in Romania is summarized at the end of this sub-chapter.

In “inability to keep home adequately warm”, Romania’s performance is lower than the EU average. In 2018, 9,6% of the Romanian population were unable to keep the home adequately warm while the EU average of this year was 7,3%. In timely bill payment, 14,4% of the Romanian population had “arrears on utility bills” payment, while the EU average was 6,6% in 2018. For population indicators, Romania performs worse than the EU.

“High share of energy expenditure in income” figures show that Romanian households with a high share of income on energy expenditure is 16,9% while the corrospending figure is 16,2% for the EU average, in 2015. This figure of Romania may be related to worse energy efficiency of buildings in Romania. “Low absolute energy expenditure” figures show that 16,8% of the Romanian households spend a low share of income on energy and the respective EU average is 14,6% in 2015. This figure of Romanina implies that lower expenditure of households compared to their needs is more common in Romanina than in the EU. In expenditure indicators, Romanina performs slightly worse than the EU.

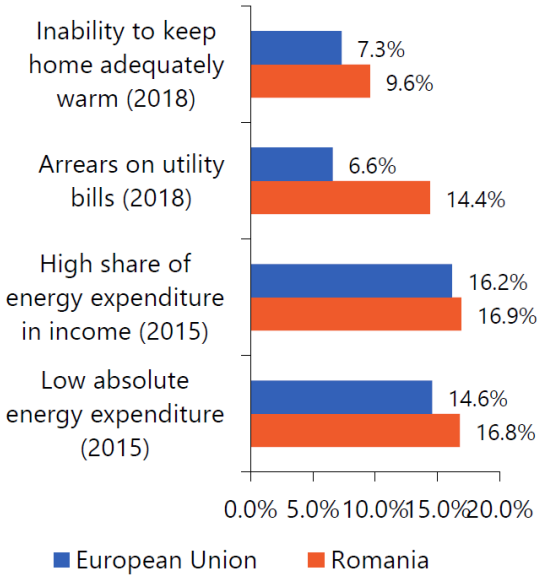



*Figure 45: EU & Romania Comparison to Keep Homes Warm*

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

Over the years, “inability to keep home adequately warm” has changed from 24,4% in 2008 to 9,6% in 2018, which is a notable improvement. At the same period, “arrears on utility bills” has reached a peak of 29,7% in 2013, decreased to 14,4% in 2018. Overall improvement in energy poverty reduction may be related to building renovation supports that patially funded by the EU.

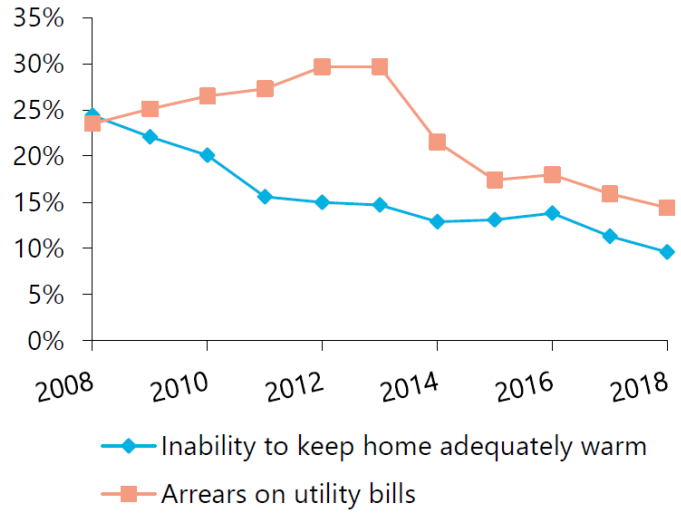



*Figure 46: Inability to keep home adequately warm & arrears on utility bills chart*

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

In "having arrears on utility bills", urban areas and towns/suburbs show the lowest performance, which may be attributed to high living costs and high share of poor urban population. In these areas, share of people with arrears are 17,2% and 17% respectively. In "inability to keep the house adequately warm", lowest performance is at the rural areas with 11,1%.

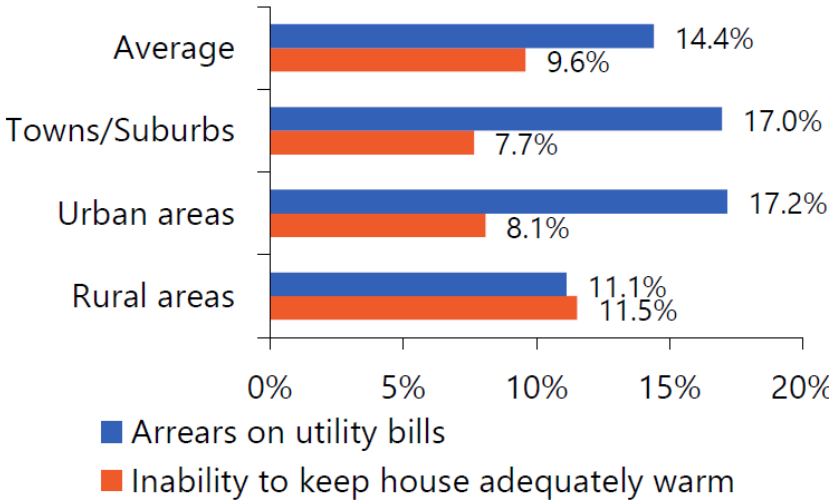



*Figure 47: Inability to Keep Home Warm Chart in Urban and Rural Areas*

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

In 2015, for each quintile of the Romanian population spent more of their income on energy compared to the same quintile of the EU average. For the poorest quintile, these figures are 13% of their income for Romania and 7% for

the EU average, while for the richest quintile, these figures are 9% for Romania and 4% for the EU average. Compared to the EU average, Romanian population is more lilely to be energy poor. Combined with its cold climate leading high energy use for heating, Romania has a median income level of less than half of the EU median (2015). Eventually, income spent on energy expenditure is higher in percentage for Romania than the EU average.

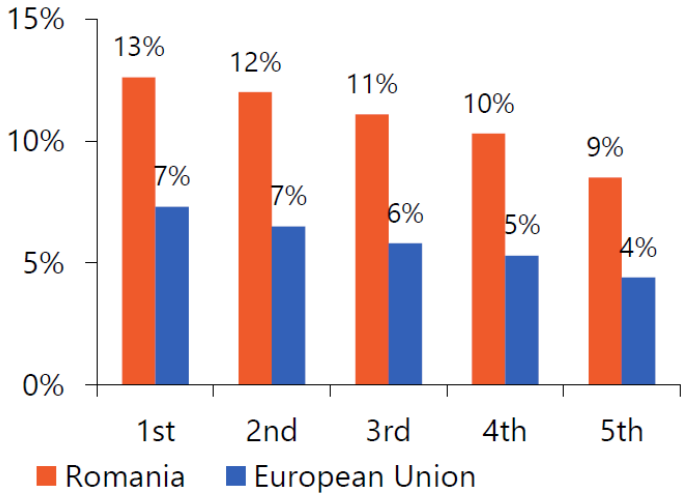



*Figure 48: Romania & Hungary incomes pent on energy expenditure comparison*

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

In Romaia, household electricity and natural gas prices are lower than the EU average. The household prices over time are shown at the graph below (13,3 €ct/kWh for electricity and 3,38 €ct/kWh for natural gas in 2018). The household electricity price was 10,8 €ct/kWh in 2008, which sharply increased in 2013. The household natural gas prices has moved in a broad interval during 10 years in Romania.

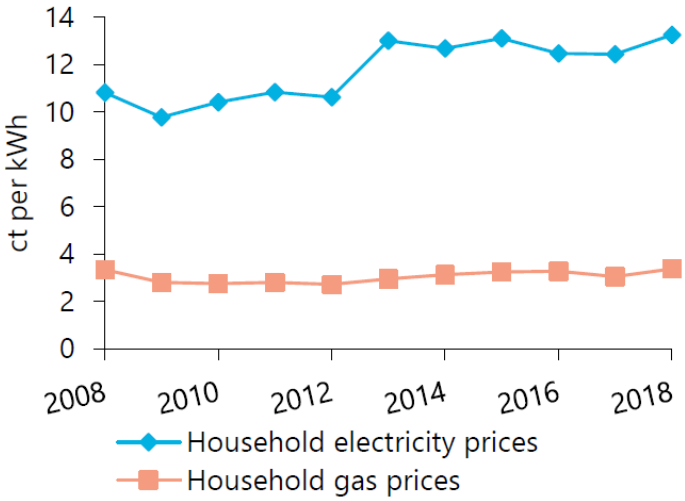



*Figure 49: Electricity & Gas Prices Comparison*

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019

Low income households in Romania receive financial support for living costs. There is also a social tariff in place for supporting their energy bills, beneficiaries of which is estimated to be 11% of the Romanian households in 2016. For the winter period of 1 November to 31 March, heating bills are supported by the heating aid. The programme of Improving Energy Efficiency in Households and Low-Income Communities in Romania, started in 2011 is desgined for energy efficiency improvement. Other programmes such as the Programme for Energy Efficiency Renovations in Apartment Buildings started in 2009, are not special to vulnerable customer groups. The EU organized a behavioral programme called The Students Achieving Valuable Energy Savings 2 (SAVES2) designed for 2017-2020 period, for helping energy poverty exposure of 219.000 university students in 7 countries. Measures for energy poverty reduction in Romania is summarized at the table below:

*Table 48: Energy Poverty Reduction Measures in Hungary*

| Selected Measures | Type of Measure | Organisation | Target Groups | Start Year | Result |
|---|---|---|---|---|---|
| **Programme for energy efficiency renovations in apartment buildings** | Building insulation, energy audits, Heating system | National government, local government | Apartment buildings | | |
| **Ordinance on energy efficiency improvements financed with loans** | Building insulation, Heating system | National government | No specific target group | | |
| **Improving energy efficiency in households and Low-Income** | Building insulation, information and awareness | National government | No specific target group | | |

| | | | | | |
|---|---|---|---|---|---|
| **Communities in Romania** | | | | | |
| **Disconnection protection vulnerable consumers** | Disconnection protection | National government | Vulnerable households | | |
| **Heating aid during winter** | Energy bill support | National government | Low income households, vulnerable households | | |
| **Minimum income** | Social support | National government | Low income households | | |
| **Social tariff** | Social tariff | National government | Low income households | | |
| **SAVES2** | Information and awareness | EU | No specific target group | | |

Source: EU Energy Poverty Observatory, Member State Reports on Energy Poverty, 2019