



In the frame of the project TRECE:  
Training for Energy Consumers  
Empowerment



# European Conference

## Energy poverty in the EU: Status, Policies, Consumers Empowerment

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### Energy Poverty in Bulgaria

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# Energy poverty in BULGARIA



## Statistics and facts 2020

Population: 6.920.000

Urbanization: 75% (2019)

GDP: 69.21 billion USD

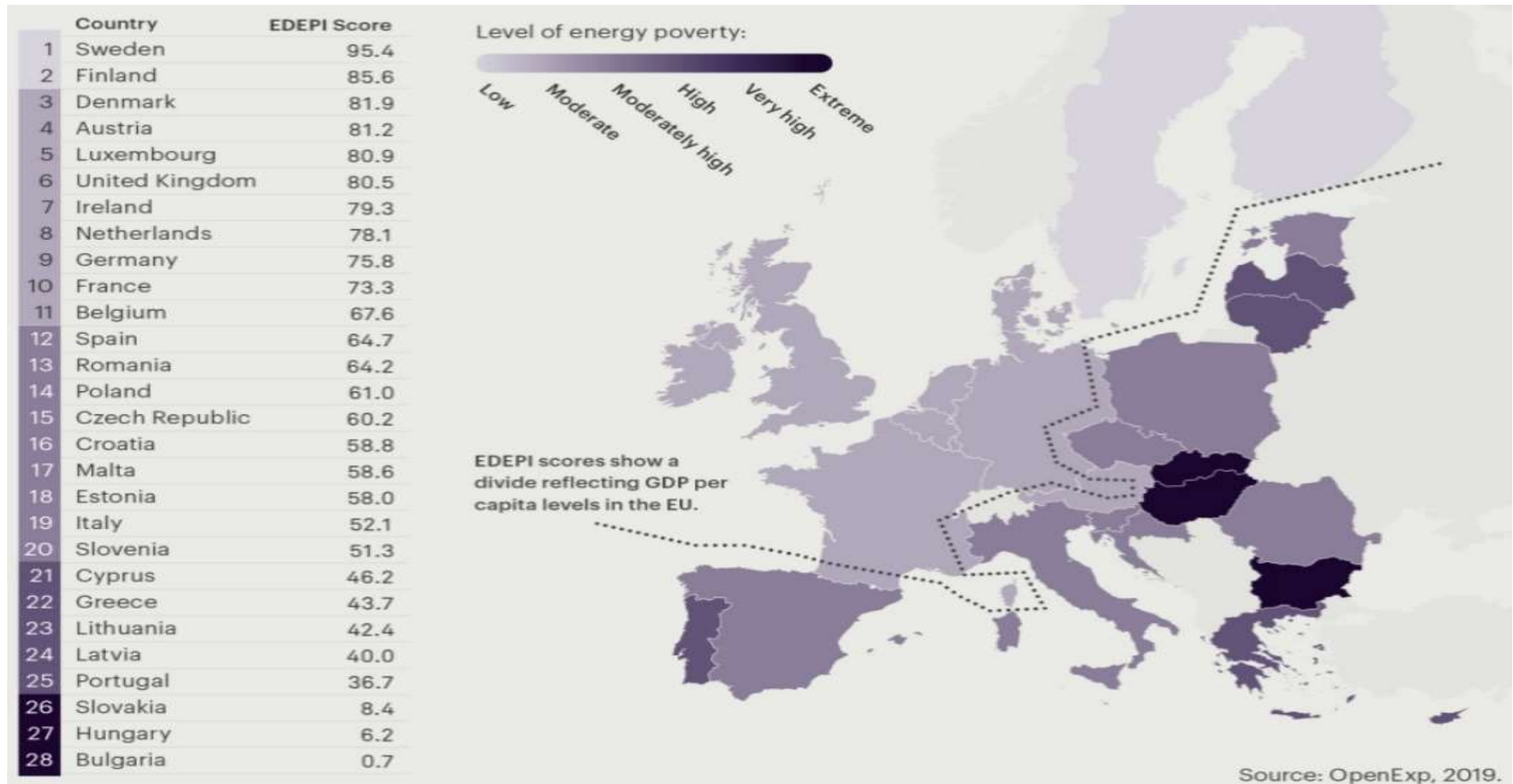
GDP growth: 4.6%

GDP per capita: 10 006 USD

Unemployment rate: 5.7%

Poverty ratio: 22% (2017)

# Energy poverty in Bulgaria



The European Energy Poverty Index (EEPI) is a composite indicator which scores and ranks MS' progress in alleviating domestic and transport energy poverty as well as their nexus. The EEPI is composed of two sub-indexes, the European Domestic Energy Poverty sub-Index (EDEPI) and the European Transport Energy Poverty sub-index (ETEPI).

# Energy poverty definition in Bulgaria

The term “energy poverty” is not defined in the Bulgarian legislation. It is tackled as part of a broader set of social policies, making no distinction with income poverty; in Bulgaria only the concept of “vulnerable consumers” is used.

The **Energy Act** defines the term “**vulnerable consumers**” as  
*“household customers in whose property, supplied with electricity, live persons who for reasons of old age, health or income are exposed to the risk of social exclusion about the supply and consumption of electricity and who benefit from social assistance measures to ensure the necessary electricity supplies”*

# Energy poverty definition

Experts suggest for the specific Bulgarian conditions to use the following working definition:

**“energy poor are those households that after covering the costs for providing adequate thermal comfort, remain with disposable income below the average monthly cost of other consumer goods and services”.**

The definition of energy poverty is also affected by the competition between different energy suppliers and the facilitated entry of individual RES installations, thus introducing another indicator according to which

**“energy-poor are those households that do not have access to modern energy services”.**

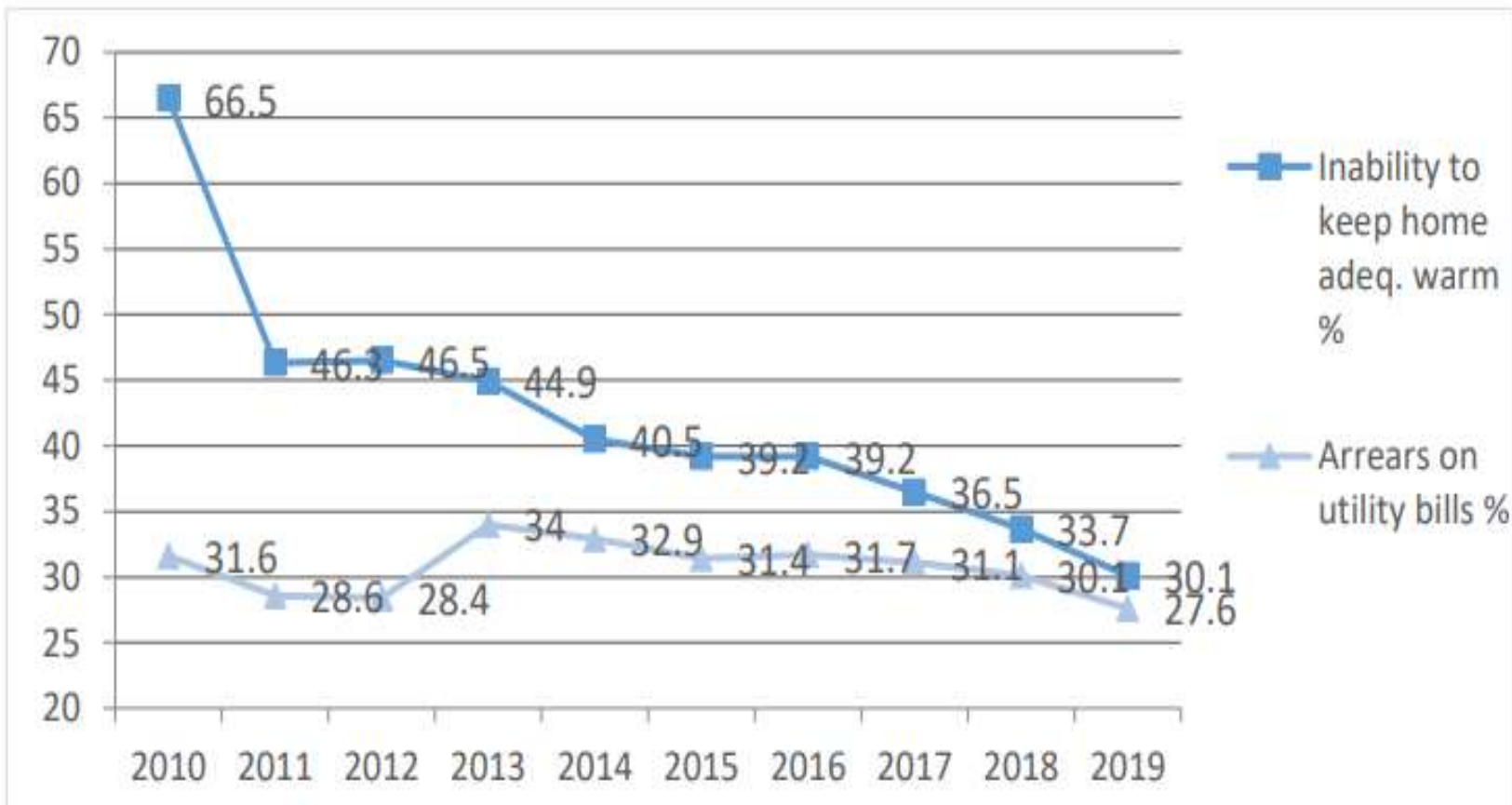
According to experts, the energy poverty in Bulgaria is also influenced by the energy poverty awareness and culture of citizens that determine their behaviour and ability to optimise energy costs.

# Level of energy poverty -dimensions

- Households unable to keep their homes adequately warm;
- Households having overdue utility bills and at risk of supply disconnection;
- Consumer total household expenditure for housing, water, electricity, gas and other fuels as a share of household income;
- Energy prices;
- State of dwellings - age, construction, ownership, technical systems, etc.



# Level of energy poverty -dimensions



Performance over time (Eurostat EU-SILC: survey 2020)

# Level of energy poverty - dimensions

Indicators	Bulgaria	EU average
Households unable to keep their homes adequately warm	30.1%	6.9%
Households with overdue utility bills and at risk of supply disconnections	27.6%	6.2%

Eurostat 2019

According to the national statistics, in 2019

- the consumer total household expenditure for housing, water, electricity, gas and other fuels is **16.5%** while the share of households that spend an unusually high share of their income on energy expenditure is **11.5%** .

These households live in dwellings with poor thermal and energy efficiency and gradually deteriorating living conditions.



# Level of energy poverty - dimensions



Research reveals that, depending on the methodology used, energy poverty affects:

- **11.9% of the population with the method “low income - high expenditure”,**
- **34.6% of the population with the method “poverty after energy consumption”,**
- **54.6% of the population using the “ten percent rule” method.**

# Energy prices in Bulgaria

The household energy costs gradually increase over the past decade and from 01.07.2021 the prices for household consumers are **10.61 €ct/kWh** for electricity and **10.80 €ct/kWh** for natural gas for the period Jan. - June 2021.



Figure 3: Price of electricity for medium-sized households Euro cents/KWh  
Source: Bulgaria: Eurostat: 2010 to 2020. Statista 2021

# Building stock efficiency in Bulgaria

The total number of residential buildings in the country is 2,060,745. About 76% of all residential buildings are inhabited. The incidence of vacancy is 43% in rural areas, and 25% in urban areas (Data from 2011).

As of 2015, 66% of the housing stock and 73% of the population is located in the cities. The remaining 34% of the dwellings and 27% of the population are in the villages.

	Total dwellings	Uninhabited or “vacant” dwellings	% Uninhabited or “vacant” dwellings
<b>Total</b>	<b>3 887 149</b>	<b>1 220 416</b>	<b>31.4%</b>
Urban	2 566 601	653 105	25.4%
Rural	1 320 548	567 311	43.0%
Sofia district	176 842	85 277	48.2%
Sofia municipality	607 473	142 608	23.5%

*Vacant dwelling units in Bulgaria, Source: 2011 Census, National Statistical Institute*

# Building stock efficiency in Bulgaria

The age profile of the housing stock in Bulgaria is comparable to that of most CEE countries. 65% of existing housing is built in the period 1950-1990. The largest share 39.8% of the housing stock is built in the 70s and 80s during the period of industrial construction. Panel dwellings have a share of 18.1% (710,972 dwellings in 21,718 buildings), located almost entirely in cities. Every sixth dwelling in the cities is in a reinforced concrete building.

Type of buildings according to building structure	Total	In cities	In villages
Wild buildings	8.8%	2.4%	21.5%
Massive buildings (brick with concrete slab)	61.5%	54.6%	75.3%
Reinforced concrete buildings	11.6%	16.4%	2.3%
Prefabricated buildings	18.1%	26.7%	0.9%

*Structure of the housing stock by construction in 2015, Source: National Statistical Institute*

# Building stock efficiency in Bulgaria

- According to the analyses and evaluations of the age of the housing stock combined with the insufficient maintenance, the existing housing stock in Bulgaria is depreciated.

Expressed in indicative figures, the depreciation estimate includes about **9%** for demolition (approx. 340,000 dwellings) and **70%** for renovation, including energy rehabilitation (approx. 2,750,000).

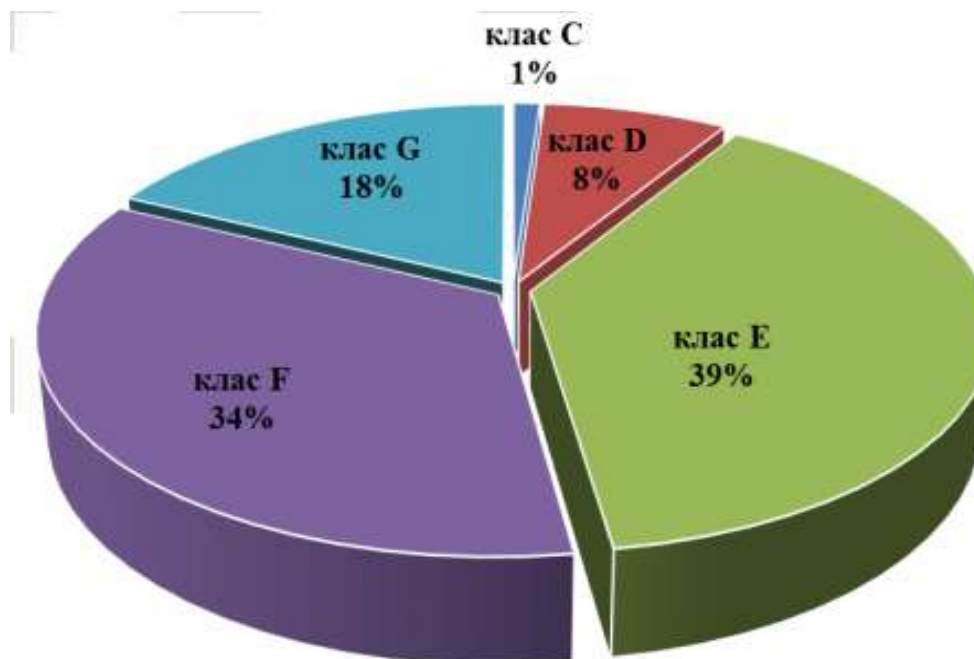
- **97.6%** of the existing residential buildings are privately owned, as **96.5%** are owned by individuals and **1.1%** by legal entities.

Only **2.4%** of the buildings are owned by state or municipal authorities.

This is a specific feature of the country, which gives a significant imprint in the existing barriers in organizational, legal and behavioural terms to the process of energy renovation of the housing stock.

# Energy efficiency of the existing housing stock

At present, only 7% of the area of inhabited buildings (built after 2010 or already renovated) is in line with current regulatory requirements for EE in accordance with the requirement of EPBD 2018/844 amending Directive 2010/31/EU and the Directive 2012/27/EU on energy efficiency.



**Share distribution by class of energy consumption of non-renovated residential buildings put into operation before 2010**



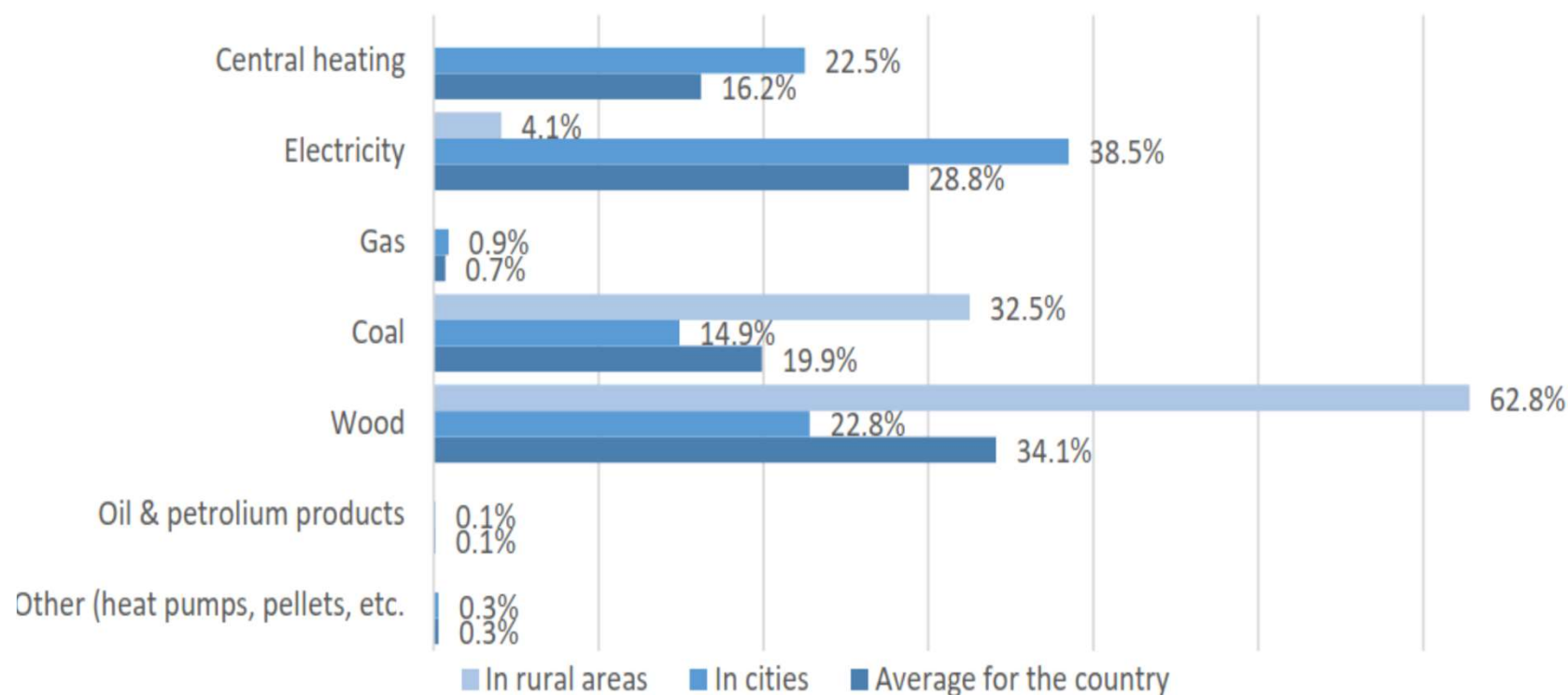
# Energy efficiency of the existing housing stock - technical systems and energy sources

The main energy consumption in residential buildings is that of heating - almost **80%** of the energy determined at the baseline and **64%** of the actual energy consumed.

Analysis shows that the value of the actually used energy for heating is approx. twice lower than the one needed to reach the normative parameters of the microclimate in the existing condition of the buildings (before renovation). The main reasons for this are:

- the presence of unoccupied dwellings,
- the unheated common areas of residential buildings, and
- the maintained low average temperatures of air-conditioned spaces.

# Energy efficiency of the existing housing stock - technical systems and energy sources



Type of fuels and energy used for heating homes, Source: 2011 Census, National Statistical Institute

# Energy efficiency of the existing housing stock - technical systems and energy sources

	Bulgaria in 2018	EU average 2018
Total energy consumption per dwelling	0.78 toe/dw	1.34 toe/dw
Consumption per dwelling for lighting & electrical appliances	1,617 kW/dw	2,398 kWh/dw
Consumption per dwelling for space heating	0.52 toe/dw	0.88 toe/dw
Share of heating consumption from the final energy consumption in the residential sector %	52.8%	63.6%

Average energy consumption per dwelling, Sources: ODYSSEE-MURE, 2021 & Eurostat, 2020

# National policies including energy poverty targets

Policy	Targets / goals
<b>Integrated Energy and Climate Plan of the Republic of Bulgaria</b>	<p>To ensure the protection of energy vulnerable customers in the process of liberalisation of the electricity market by:</p> <ul style="list-style-type: none"> <li>➤ Ensuring adequate protection of people at risk of EP by providing target heating allowances;</li> <li>➤ Implementation of a mechanism for vulnerable consumers protection following electricity prices full liberalisation.</li> <li>➤ Building stock renovation.</li> <li>➤ Improving EE by complementing the national target under Art. 7 of EED through a requirement for the implementation of measures to improve EE for the benefit of vulnerable consumers, incl. those affected by EP.</li> </ul>
<b>Recovery and Resilience Plan of Republic of Bulgaria</b>	<p>Pillar 2: Green Bulgaria, Policy Area: Circular and Low Carbon Economy, Programme for Energy Efficiency. Within the first component of the Programme it is intended to finance measures to increase the energy efficiency of the existing housing stock in the country.</p>

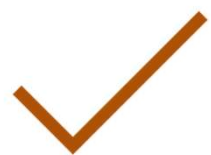
# National policies including energy poverty targets

Policy	Targets / goals
<b>Long-term National Strategy to Support the Renovation of the National Building Stock of Residential and Non residential Buildings until 2050</b>	<p>The Strategy envisages that by 2050, 60% of the housing stock and nearly 17% of the non-housing stock will be renovated, thus saving 7,329 GWh of energy per year, and reducing greenhouse gas emissions by 3,274,453 tonnes of CO<sub>2</sub>.</p> <p>The implementation of the Strategy will also lead to the creation of 17,600 new jobs and additional annual GDP growth of BGN 557 million by 2030 for 2021-2030.</p>
<b>National Strategy to Reduce Poverty and Promote Social Inclusion 2030</b>	<p>The Strategy aims to improve the quality of life of vulnerable groups in Bulgarian society and to create conditions for their full realization through adequate income support, including the labour market and access to quality services.</p>

# Programmes and tools addressing energy poverty

Programme	Targets / goals
<b>Winter Supplement Programme “Targeted Heating Aid”</b>	The Programme is regulated by the Social Assistance Act and Ordinance defining the terms and conditions (income, property and health status, marital status, age, training and job employment, etc.) for granting target heating allowances during winter season.
<b>OP “Regions in Growth”</b>	100% grant support to homeowners’ associations for the energy renovation of multi-family residential buildings
<b>EE of Multi-Family Residential Buildings National Programme</b>	100% grant support to homeowners’ associations for the energy renovation of multi-family residential buildings
<b>Microfinance and Community support</b>	Credit line operated jointly by Microfund and Habitat for Humanity Bulgaria to provide access to financial solutions - Interest free loans for low income families to improve their housing conditions and reduce their energy costs.





Thank you for  
your attention !

