

ENERGY POVERTY IN LIGHT OF THE LOCAL ELECTIONS:

What can the State and
Municipalities do to solve the
problem with high energy bills

Typical energy poverty measures, such as targeted heating subsidies, which act as an important source of income for about 250,000 Bulgarian households, are ineffective because they address the consequences of the problem rather than its cause.

Furthermore, they have an adverse effect on air quality by stimulating the use of polluting sources of energy. The solution, which can eliminate the causes and lead to long-lasting effects, is the deep energy-efficient renovation and maintenance of the residential buildings. This directly reduces energy costs and the need for energy subsidies, while at the same time allows for the modernization of heating systems and limits air pollution. Public authorities' commitment to energy-efficient renovation of residential buildings should continue with improved policies, innovative financial instruments and increased involvement of local authorities.

Sofia, October 2019

HOW MUCH WILL ELECTRICITY AND HEATING COST THIS WINTER? WILL WE BE ABLE TO AFFORD NORMAL LIVING CONDITIONS IN OUR OWN HOMES?

With the heating season approaching, all of us - the candidates in the upcoming local elections included - will be hearing these questions more and more often. Unfortunately, it is impossible to receive optimistic answers. A large proportion of Bulgarian citizens cannot afford the costs of heating their homes to comfortable temperatures. 39.2% of the population are unable to keep their homes sufficiently warm (with all the adverse health effects this causes) – the highest rate in the EU. The same applies to the share of households that cannot afford cooling in the summer – 49.5%. Greece has the highest share of the population with overdue energy bills, but Bulgaria firmly holds second place at 31.7%.

All factors that determine the level of energy poverty - low incomes, high energy prices (compared to the purchasing power of the population), and poor energy performance of buildings - are at play. Although progress has been made in recent years, especially through the National Program for Energy Efficiency in Multi-Family Residential Buildings, the energy poverty in Bulgaria remains the most severe and the Bulgarian residential buildings - the most inefficient in Europe. A quick overview of the NSI data for the population's incomes and consumption figures for 2018, shows that **nearly 50% of the Bulgarian population are at risk of energy poverty.**



Figure 1. Share of population unable to keep their homes sufficiently warm



Figure 2. Disparity between the average monthly income and the average total monthly expenditure considering comfortable heating of 65 m² dwelling (by decile group in relation to the size of household income) before renovation

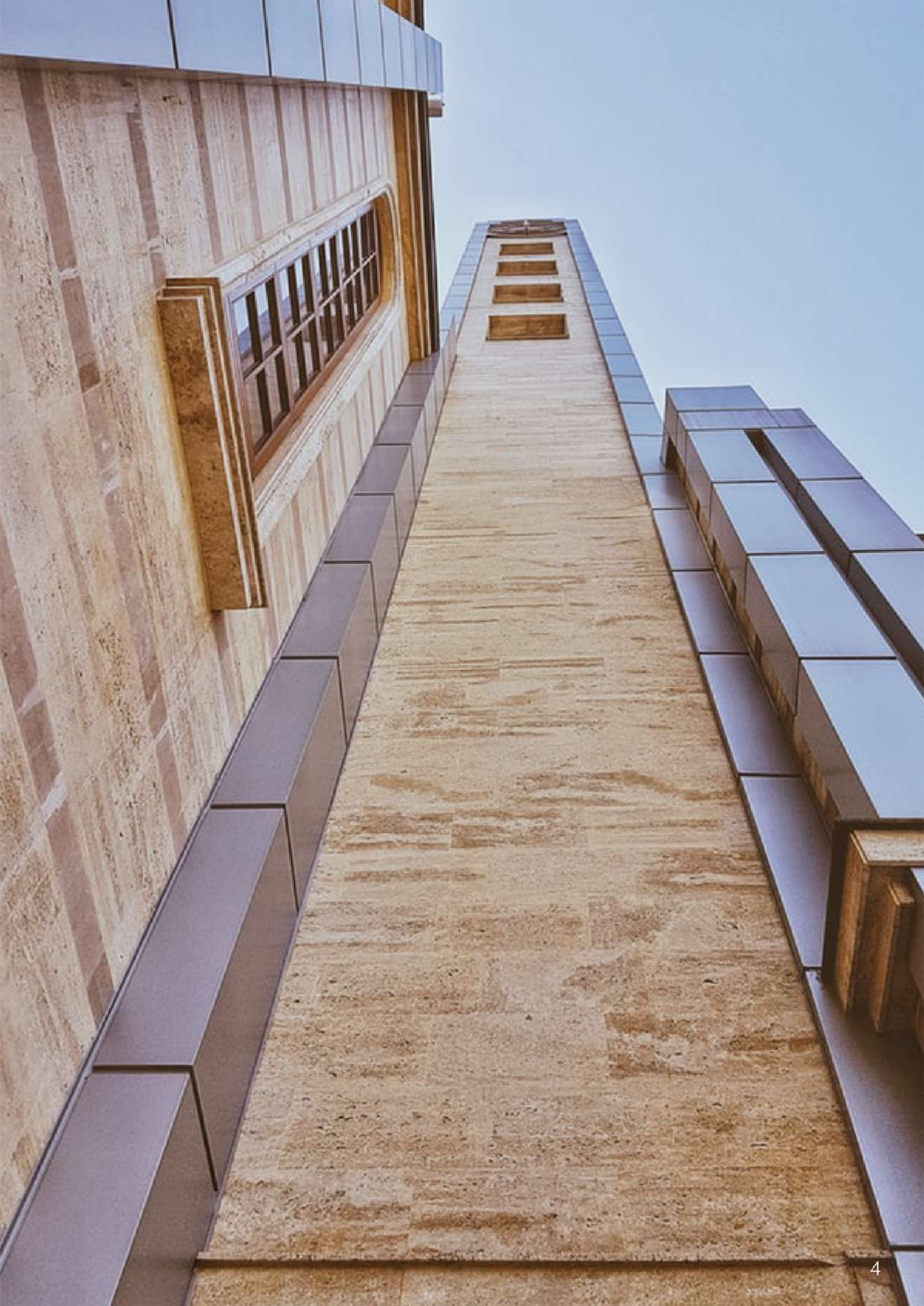
It is not a coincidence that some of the European cities with the poorest air quality are in Bulgaria, where the use of wood and coal as a source of heating is a direct result of energy poverty and, in many cases, of the limited access to modern energy services. At present

in Bulgaria, the policy measures aimed at tackling energy poverty and air pollution are in an undeniable conflict,

which is caused, to a great extent, by the poor coordination between institutions engaged with different measures targeted at the problem.

For the 2019-2020 heating season, the funds allocated by the state in support of its social policy amount to nearly BGN 120 million for end-use energy subsidies and are used mainly for purchasing bad-quality wood and coal. At the same time, the municipal funding programs for improving the air quality aggravated by the same coal and wood are worth over BGN 100 million for the period 2014-2020. In parallel, 1 billion Euro were invested in renovation of multifamily residential buildings since 2015 in a 100% grant scheme, without any prioritization of beneficiaries addressing energy poverty or air quality issues. The approach of the social support policies targeted to vulnerable citizens additionally contributes to the air pollution, and it is also well known that solid fuels, traditionally used as a source of heating, provide a primitive comfort of living, resulting in negative health effects.

¹ We define comfortable heating as the heating which ensures that one feels well without needing additional winter outer-wear, without having to limit the space in which one normally lives, and where there are no major temperature differences between the rooms. Although the feeling of comfort is individual and depends on various factors, temperatures of 20-21°C are most commonly used for calculation purposes.



Although some might argue that heating subsidies mitigate the direct adverse effects of poverty, they are temporary and unsustainable, as they obviously address the consequences rather than the causes of the problem.

The solution, which can lead to eliminating the causes and producing long-lasting effects, is deep energy-efficient renovation and proper maintenance of residential buildings: it directly reduces both the energy costs and the need for heating subsidies, while at the same time limiting air pollution and CO2 emissions and enabling the modernization of heating systems.

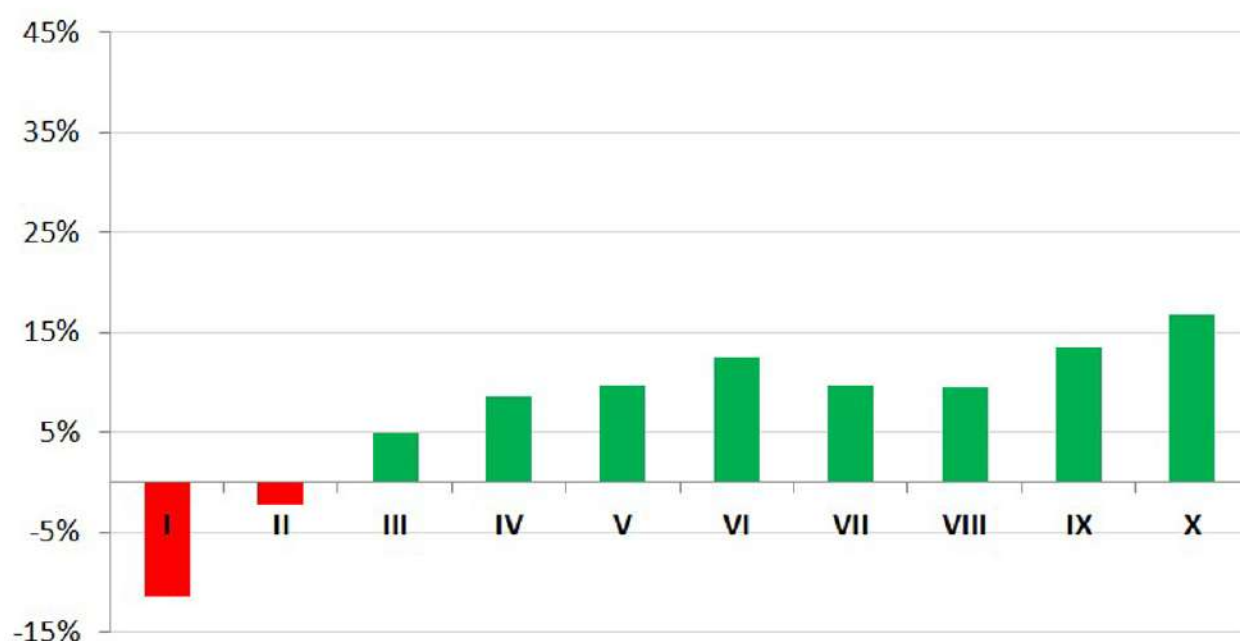


Figure 3. Disparity between the average monthly income and the average total monthly expenditure considering comfortable heating of 65 m² dwelling (by decile group in relation to the size of household income) after a deep energy efficient building renovation

WHAT ARE THE FACTORS FOR THE SUCCESS OF THE ENERGY EFFICIENCY PROGRAMS

The implementation of the National Energy Efficiency Program for Multifamily Residential Buildings has already shown that the energy renovation of buildings has a direct and traceable effect on the comfort and healthy living conditions, as well as on the real and sustainable reduction of energy costs for heating and cooling. In doing so, it helps permanently remove people from the risk of energy poverty and releases new financial resources through saving energy costs, which can generate additional growth for the local economies.

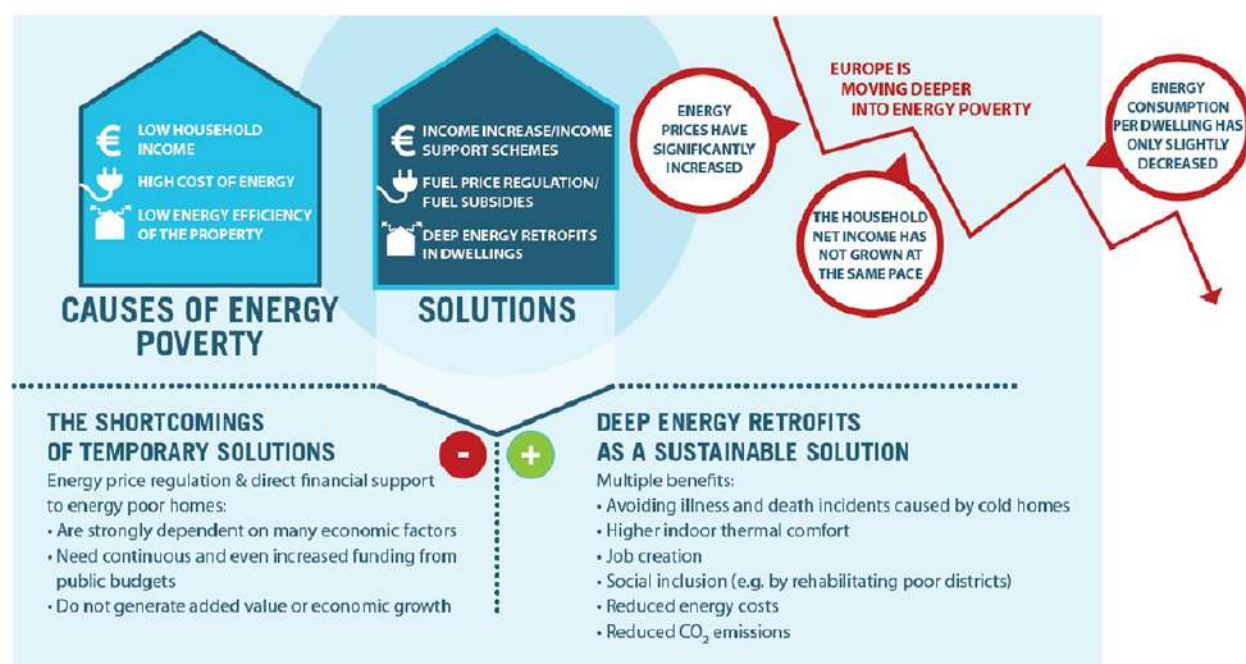


Figure 4: Energy poverty causes and solutions for dealing with the problem: the benefits of energy efficiency. Source: BPIE: Reducing energy poverty with national renovation strategies: a unique opportunity

The grants provided by the state for the energy renovation of buildings so far have fostered unrealistic expectations that the state will continue to be solely responsible for all further improvements in the energy performance of buildings. This, however, is objectively impossible. A recent World Bank study found that 41,858 multifamily buildings are still in need of renovation, which would cost the taxpayer, in case the current prices and renovation methods remain unchanged, at least BGN 21 billion (EUR 10.74 billion). Furthermore, if the pace of implementation remains the same, and ambition levels regarding the quality of the energy saving measures remain low, buildings participating in the first stages of renovation programme will need additional renovation long before the renovation of the rest of the buildings is complete.

What needs to be added to these figures are the single-family buildings, providing home to nearly 50% of the population, a significant part of whom also suffer from energy poverty. These buildings are also in need of improvement, as currently no specific measures are targeted to this segment.

Understandably, there is an urgent need of continuing and expanding the energy-efficient renovation programs for residential buildings in Bulgaria, but that should be pursued on the basis of a more sustainable financing model with increasing citizen participation and investment from the private sector. So far, the transition from a 100% grant mechanism to more financially viable schemes poses a serious political, economic and social problem that has not yet been solved. This is due to several reasons:

Economic and social poverty.

Broad segments of the population are below the poverty line or at risk of poverty, which inevitably leads to limited or no capacity for maintenance of the building stock and covering the costs or implementing energy efficiency projects on their own. Obviously, they cannot be expected to provide direct financial contribution to the cost for renovating their property. An opportunity to overcome this problem lies in redirecting heating subsidies towards implementing energy efficiency measures, without directly affecting consumers. At the same time, low-income households, excluded from the scope of the support system (not eligible for heating subsidies), may be provided with long-term interest-free loans or with the possibility of paying minimum self-contribution through the tax system or electricity bills.

Lack of long-term perspective.

Despite the encouraging results of previous energy efficiency programs for residential buildings, there is no clarity yet whether the current programs will continue and in what form. The model of citizens' participation in the renovation process is also obscure, which encourages citizens to passively wait for possible future grant programs to be launched and blocks entrepreneurship in the area. In this context, local authorities are also not motivated to formulate and implement their own policies to promote building renovation in the residential sector.

Access to and awareness of energy services:

Access to modern energy services for the general public in Bulgaria is very limited, and information about the benefits of renovation, provided to the end consumer, is insufficient and often inappropriate. There is also a lack of awareness about opportunities for implementing a wide range of energy efficiency measures, which do not require significant investment. Additionally, competent advice on a case-by-case basis is not easily accessible.



Inefficient communication:

While local authorities were required to carry out energy efficiency information campaigns in the frame of the National Energy Efficiency Programme, they have not been provided with either adequate guidelines or sufficient financial resources for this purpose. On the other hand, due to the relatively high levels of public trust, the municipalities are undoubtedly the best suited facilitators for active communication with end users, and therefore they must be provided with the necessary resources and capacity.

The need for continued public support for the renovation of the building stock obliges us to find a solution to overcome these barriers. While objective economic factors imply the need to develop flexible financial schemes accessible to low-income citizens, all other barriers are of political, organizational and communicational nature. Previous actions towards renovating residential buildings have proven that, albeit difficult, the self-organization of homeowners' associations is not impossible if favourable conditions are ensured.

The key to overcoming the challenges listed above is ensuring the coherence of policies on social support, energy efficiency, environmental protection and air quality, as well as the improvement of coordination between central and local authorities.

Gasifying homes, despite having certain advantages, is, in most cases, an inappropriate solution for overcoming energy poverty because:

- The price of gas for heating is higher compared to the price of solid fuels most commonly used at present by the energy poor
- The amount of energy needed for heating is not reduced, it is but a way of replacing one energy source with another
- It further aggravates the dependence on the import of energy sources in the long run.

THE ROLE OF LOCAL AUTHORITIES

With their role in implementing National Energy Efficiency Programme, local authorities proved that they are the real driving force behind the increased interest of citizens in the renovation measures. They are also most interested in retaining the public funding for renovation programmes. In the last few years, public funding for renovation programmes has been the only means of improving citizens' living conditions whilst helping ensure a better urban environment, stimulating local businesses and increasing employment rates in the construction sector. It also has a positive impact on the purchasing power of the population as a result of lower energy bills.

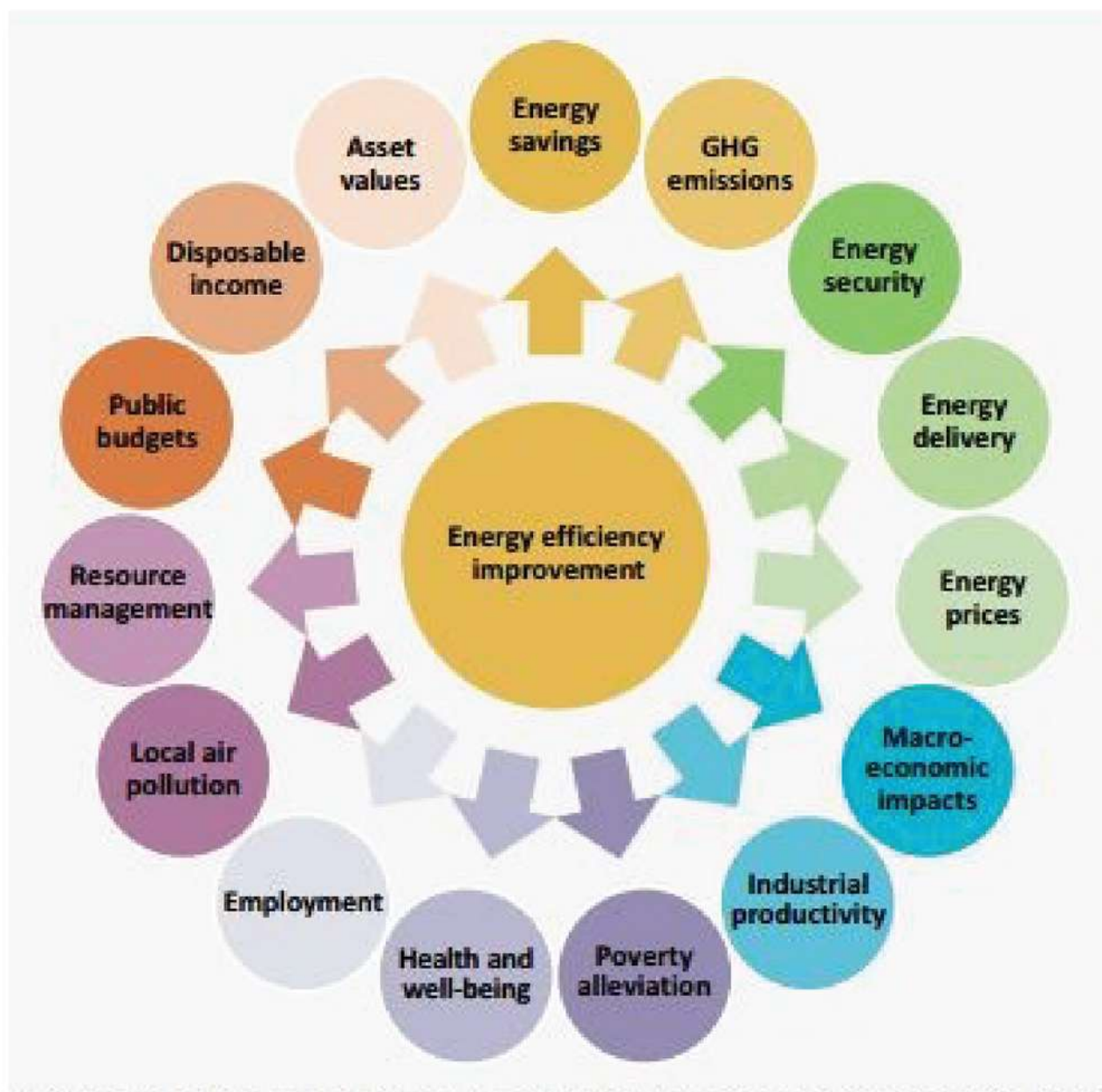


Figure 5: The multiple benefits of energy efficiency. Source: IEE

With the local elections approaching, the public interest will inevitably focus on the positions of mayoral and municipality councillors candidates on the need to continue national policies regarding improving energy efficiency of buildings, as well as on local authorities' actions to consistently overcome the difficulties of implementing these policies. In this respect, it is appropriate to focus primarily on the following three groups of responsibilities and tasks for municipalities:

A. LONG-TERM VISION, MANAGEMENT AND CONTINUOUS MONITORING

In relation to the implementation of national energy efficiency policies in the building sector at local level, it is crucial to evaluate the capacity of municipalities:

- To adopt medium-term plans for the renovation of residential buildings with clear and measurable energy efficiency targets and specific activities, which have to be presented and justified to the state authorities;
- To identify and actively work with vulnerable groups in order to integrate them into energy efficiency programs;
- To provide consumers with easy access to energy advice and services, as well as to more efficient and non-polluting heating sources, with increased control over the solid fuels' market;
- To support the combination of measures concerning the building envelope and the replacement of heating installations in order to reduce air pollution;
- To monitor compliance with the Condominium Ownership Management Act.

B. FINANCING

In relation to the anticipated changes in the financing schemes supporting energy efficient renovation of residential buildings and the need for increased citizen participation, municipalities should declare their interest and evaluate their capacity to provide the necessary services to:

- Coordinate the various funding options in order to combine resources as effectively as possible
- Develop their own mechanisms for financing in the form of specialized municipal funds
- Participate in public-private partnerships and use modern financing instruments such as ESCO schemes and energy cooperatives.

C. CAPACITY AND COMMUNICATION

In order to ensure the effective management and control of local energy efficiency policies and the active participation of citizens in future building renovation programs, municipalities must build their own capacity to:

- Provide both standard projects and guidance for preparing and implementing energy efficiency projects in the residential building sector;
- Provide assistance for the establishment and functioning of homeowners' associations;
- Conduct public procurement procedures with criteria for actually achieved energy savings and requirements for specialist qualification of contractors;
- Perform quality assurance at all stages of the building renovation process and monitor the achieved results;
- Control the quality of commercially available solid fuels;
- Conduct communication campaigns to promote the benefits of energy efficiency in raising the disposable income of citizens and in ensuring healthy living conditions in the dwellings;
- Perform targeted actions to inform and support energy efficiency measures in single-family buildings, using available support programs such as credit lines from the Urban Development Fund, national and local air quality improvement programs, the REECL financial instrument, the Bulgarian Energy Efficiency and Renewable Sources Fund.

POLICY RECOMMENDATIONS AT NATIONAL AND LOCAL LEVEL

A. LONG-TERM VISION

It is necessary to:

Develop a LONG-TERM VISION for continuous support of the energy efficient renovation of buildings under the National Long-Term Renovation Strategy to 2050, which is to be adopted by March 2020, setting up the following priorities:

- (a) Deep energy renovation of the entire building stock, carried out once or in stages (step by step), and the establishment of mandatory procedures for the maintenance of the renovated buildings;
- (b) Transition of larger groups of residents above the energy poverty line and outside the poverty risk zone as a result of the program;
- (c) Significant reductions in CO₂ and fine particulate matter emissions as a result of reduced energy consumption in renovated buildings and the replacement of heating systems;
- (d) Introduction of mandatory monitoring of the quality of construction activities and the materials used for the retrofitting, the maintenance of renovated buildings, and the end results of the implementation of energy efficiency projects and programs in terms of energy and financial savings.

B. PUBLIC EXPENSES AND FINANCING

It is necessary:

- a) To develop and implement a sustainable financing scheme ensuring the continuation of investments in deep renovation of the building stock. The scheme should create opportunities for:
 - combining resources from various financial sources and public support programs, such as targeted heating subsidies and air quality programs;
 - differentiated financial contribution of homeowners;
 - raising funds from private financial sources and energy traders and distributors who have a legal obligation to provide energy services to end-users;
 - participation of municipalities in new funding models.

b) To develop a methodology for determining the degree of vulnerability of different groups of energy-poor citizens / households, and to introduced differentiated financial support scheme in order to shift an increasing number of people outside of the energy poverty risk zone;

c) To review existing heating subsidy schemes for low-income population groups and convert them into building renovation schemes, by:

- transferring a significant part of the financing into investments in energy saving measures (see Figure 6);
- conducting information campaigns for efficient energy use and developing incentives for purposefully avoiding the use of polluting fuels as a source of heating;
- developing tools for encouraging the participation of energy renovation for owners of residential buildings through implementing low-cost energy saving measures.

This measure has the potential to significantly expand the volume and scope of the current social support programmes.

(d) To develop a comprehensive system for monitoring, control and penalizing violators of established schemes and rules.

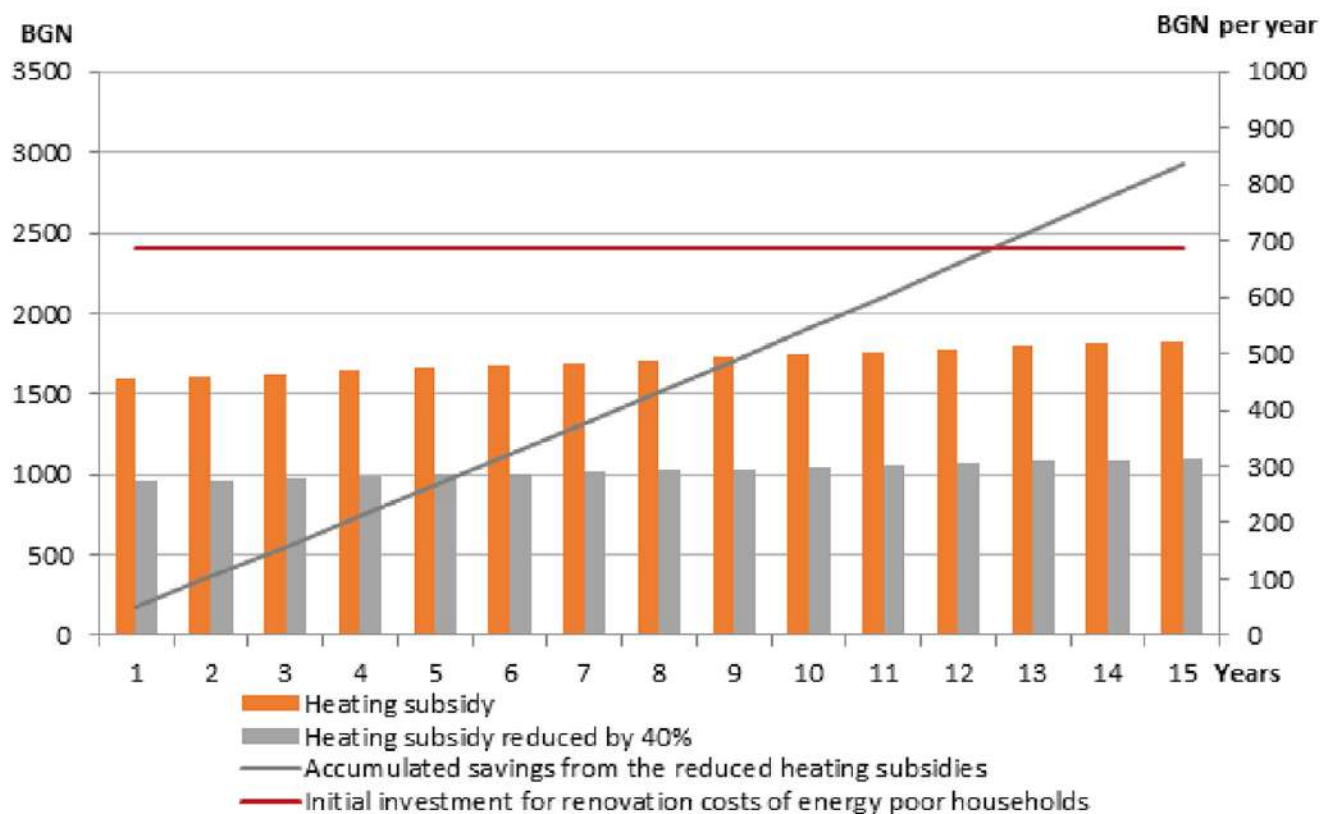


Figure 6: Expected effect of the redirection of 40% of the heating subsidies towards financing the self-participation of energy-poor households in renovation programs with 80% of the grant component and 40% of realized savings.

C. LOCAL CAPACITY BUILDING

Building the knowledge and skills of key players in the process for developing and implementing energy efficiency policies for residential buildings with a focus on energy poverty mitigation is a key prerequisite for long-term sustainable results. Three main target groups need to build knowledge and skills: local (municipal) authorities, construction sector professionals and residents.

a) Local (municipal) authorities are a leading player in the implementation of energy renovation policies for buildings. Improving their knowledge and skills should allow them to:

- Develop long and medium-term plans and short-term programs and projects for the renovation of buildings, with a focus on alleviating energy poverty and improving the air quality in urban areas;
- Manage, supervise (monitor, analyse and evaluate) and control the implementation of adopted plans and programs for renovation, periodically publishing the results achieved;

- In cooperation with Regional Inspectorates for Environment and Waters, to monitor the use of unregulated burning of waste materials and of low-quality heating products;
- Provide organizational and technical support to owners and owners' associations for participation in national and local funding programs;
- Develop their own financing mechanisms with a view to the new opportunities related to the liberalization of the electricity market, production of energy from RES, and the available European financial instruments.

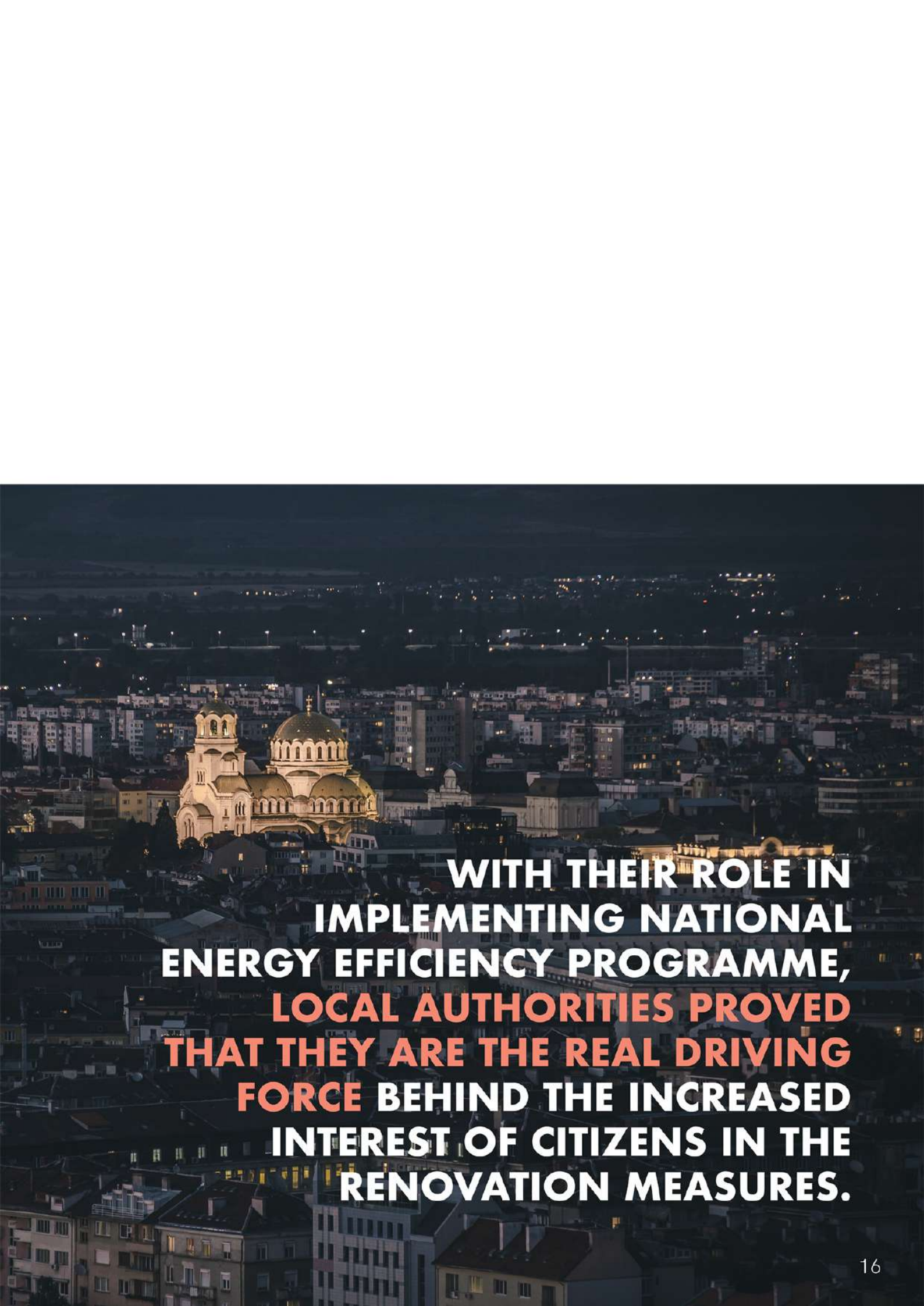
b) Bulgaria is experiencing an increasing shortage of appropriately qualified personnel in the construction sector. The entire spectrum of construction professionals - investors, supervisors, energy auditors, designers, builders - need additional on-site training in order to be able to provide quality deep renovation, optimize household energy consumption and drive investment to heating systems with minimal impact on the environment. For this purpose, it is necessary to:

- Create a system for continuing qualification of specialists and workers in the construction sector;
- Integrate relevant content into the curricula for vocational high schools and universities;
- Stimulate public procurement procedures providing guarantees for achieved energy performance of buildings and requiring specialized qualification of contractors.

c) Citizens' awareness. Even if all of the above conditions are fulfilled, without the active participation of citizens, the effect of policies will be partial and short-lived. In order to ensure sustainability and responsible behaviour for efficient energy management and maintenance of the buildings, it is necessary to:

- Conduct a large-scale national information campaign on the benefits of energy efficiency and professional building management;
- Provide financial resources for the development of guidelines for conducting communication campaigns at local level, including via meetings with citizens and public discussions and consultations;
- Use the resources of the non-government sector and local communities for building positive public opinion and encouraging active participation in the renovation programs.

These recommendations highlight the following

A nighttime aerial view of a city, featuring a large, ornate cathedral with multiple domes and spires, brightly lit and standing out against the dark sky. The surrounding urban area is visible with various buildings and streetlights.

**WITH THEIR ROLE IN
IMPLEMENTING NATIONAL
ENERGY EFFICIENCY PROGRAMME,
LOCAL AUTHORITIES PROVED
THAT THEY ARE THE REAL DRIVING
FORCE BEHIND THE INCREASED
INTEREST OF CITIZENS IN THE
RENOVATION MEASURES.**

QUESTIONS TO CANDIDATES IN THE UPCOMING LOCAL ELECTIONS,

the answers to which should demonstrate their intentions for the actual actions they would undertake:

- 1.** What is your working definition of energy poverty and how many energy poor citizens are there in your municipality?
- 2.** Are you considering energy poverty and air pollution reduction programs and how do you plan to link them to energy efficiency measures in multi-family and single-family buildings?
- 3.** In which areas does the current building renovation policy and the related programs need to evolve and change? What means will you use to insist on making these changes in front of the Government?
- 4.** What specific actions would you take to build up the capacity of the municipal administration:
 - a) to assist citizens in participating in renewal programs?
 - b) to exercise effective control over the projects, construction works and the input materials and products?
- 5.** In your opinion, what needs to be done to guarantee the quality of:
 - a) the projects for deep energy building retrofits?
 - b) the construction works?
 - c) the building materials and components used in the renovation works?

To what extent and in what form can the municipal administration contribute to the quality assurance process?
- 6.** Would you encourage projects aimed at achieving energy classes higher than the legally required C class (classes B, A and higher)? If so, how would you do it and what effect do you expect to achieve with it?

- 7.** If the state provides partial grant funding for energy renovation of buildings projects in the coming years, would you create your own municipal fund to support such projects by facilitating co-financing or by providing guarantees for renovation loans? How would you encourage citizens to increase their own financial contribution to the renovation of buildings?
- 8.** Would you provide financial and organisational support for the long-term monitoring of the results actually achieved through energy-efficient building renovation projects, in order to prove the benefits and to convince more citizens to invest their own funds in energy efficiency?
- 9.** What additional effects do you expect energy renovation of buildings to achieve, apart from increasing energy efficiency and reducing energy costs? What would you do to help the municipality make the most of these effects?
- 10.** Would you run your own communication campaign on the benefits of energy efficient building renovation? What amount of funds and what human resources do you need for such initiative and do you think the municipality can provide them?
- 11.** Do you think the municipality should expand and improve the social housing stock, and what measures would you take in this direction?
- 12.** Should the municipality develop and implement its own housing policy? If so, what goals would you set and what tools could you use to require support from the central government?

CENTER FOR ENERGY EFFICIENCY ENEFFECT

Mailing address:

1164 Sofia, P.O. Box 43

Office:

1164 Sofia

1, Hristo Smirnensky Blvd., fl. 3

Tel.: + 359 2 963 17 14; + 359 2 21 69; + 359 2 963 02 69

Fax: + 359 2 963 25 74

E-mail: eneffect@eneffect.bg

