SMAFIN expanded
Smart Financing Implementation

NATIONAL ROUNDTABLES
Bulgaria

17 March 2026
9:00 – 17:00h

The project is co-funded by the European Union's Programme for Environment and Climate Action (LIFE) under Grant Agreement No. 101120412

3RD NATIONAL ROUNDTABLE IN BULGARIA

On March 17, 2026, EnEffect Consult and the Municipal Network for Energy Efficiency EcoEnergy organized the third SMAFIN Expanded National Roundtable at the Grand Hotel Sofia. Titled “Financing Energy Efficiency: The National Renovation Plan and the Role of Local Authorities,” the event marked an important moment in expanding the SMAFIN initiative's objectives in Bulgaria.

There were 113 participants, including 20 expert speakers, 3 moderators, and 90 attendees, representing a broad spectrum of national institutions, municipalities, financial bodies, industry organizations and expert networks. The presence of European Commission representatives and leading national policymakers underscored the high-level nature of the dialogue.

Building on the foundation of previous roundtables, the discussion focused on the strategic implementation of the National Building Renovation Plan (NBRP or the Plan). Participants emphasized that achieving Bulgaria’s long-term energy targets depends on moving beyond policy ambition toward the creation of stable, well-structured, and scalable financing solutions. By bridging the gap between public policy and the financial sector, the event solidified the implementation frameworks necessary for the future of building renovation in Bulgaria.

The roundtable focused on three interconnected pillars shaping the future of the renovation ecosystem through the development and implementation of the Plan:

- Reforms and new Instruments to stimulate building renovation
- The Net Zero Cities Initiative and the EU Mission on climate adaptation
- The modernisation of district heating systems and local heating and cooling plans

A recurring theme throughout the discussions was the need to address the fragmentation and unpredictability of existing funding schemes, which continue to hinder long-term planning and investment. Stakeholders emphasised that irregular funding cycles, reliance on 100% grant schemes, and limited coordination between institutions and financial actors create significant barriers to scaling up renovation efforts.

In this context, the event highlighted the urgency of establishing a more predictable, integrated and finance-driven framework, where policy, technical support and financial instruments operate in a coordinated manner to unlock investment and accelerate implementation.

BACKGROUND

The transition towards a climate-neutral building stock represents one of the most significant challenges for Bulgaria in the coming decades. In line with the revised European policy framework – particularly the Energy Performance of Buildings Directive

(EPBD) and the Energy Efficiency Directive (EED) – the country is required to accelerate the rate and depth of building renovation across both residential and non-residential sectors.

This transformation requires not only substantial financial resources, but also coordinated action across institutions, clear strategic planning and strong engagement of local authorities, which play a central role in implementation. At the same time, the current model, largely based on grant financing, has proven insufficient to achieve the necessary scale of renovation.

In this context, the development of the NBRP is a key step towards establishing a long-term, structured and sustainable approach. The Plan aims to define clear priorities, targets and investment pathways, while also aligning national efforts with European requirements and opportunities.

AGENDA

09:00 - 09:30	**Registration**
9:30 - 9:40	**OFFICIAL OPENING** *Tanya Hristova, Mayor of Gabrovo* *Dragomir Tzanev, EnEffect*
09:40 - 10:40	**THE NATIONAL BUILDING RENOVATION PLAN** **Moderator: Dragomir Tzanev, EnEffect**
09:40 - 10:00	**EUROPEAN POLICIES AND TARGETS FOR ENERGY EFFICIENCY IN BUILDINGS** *Silvia Rezessy, DG Energy, EC*
10:00 - 10:20	**VISION FOR THE FUTURE OF PROGRAMMES FOR THE RENOVATION OF THE EXISTING BUILDING STOCK** *Dora Yankova, Deputy Minister of Regional Development and Public Works*
10:20 - 10:40	**THE ROLE OF THE NATIONAL DECARBONISATION FUND** *Nikolay Nalbantov, Director of the Directorate “Energy Strategies and Policies for Sustainable Energy Development”, Ministry of Energy* *Dimitar Ganev, Chair of the Management Board of the National Decarbonization Fund*
10:40- 11:00	**NEED FOR STRENGTHENED INTERINSTITUTIONAL COORDINATION OF POLICIES IN THE FIELD OF CLIMATE, ENERGY, AND THE ENVIRONMENT** *Malina Krumova, Deputy Minister of Environment and Waters*
11:00- 11:20	*Coffee break*

Discussion session 1	**REFORMS AND NEW INSTRUMENTS TO STIMULATE BUILDING RENOVATION** **Moderator: Dragomir Tzanev**
11:20 - 11:35	**CHALLENGES FOR BUILDING RENOVATION IN THE CONTEXT OF THE NATIONAL RENOVATION PLAN** *Ivaylo Aleksiev, Executive Director of SEDA*
11:35 - 11:50	**REFORMS IN THE RENOVATION OF THE RESIDENTIAL BUILDING STOCK** *Tzveta Naniova, BACC*
11:50 - 12:00	**REFORMS IN THE RENOVATION OF NON-RESIDENTIAL BUILDINGS** *Kamen Simeonov, EnEffect*
12:00 - 12:45	**PANEL DISCUSSION: CATALYZING THE BUILDING STOCK RENOVATION: REFORM AGENDAS AND EMERGING INSTRUMENTS** ***Invited Participants:*** • Dora Yankova, Deputy Minister of Regional Development and Public Works • Ivaylo Aleksiev, Executive Director of SEDA • Kamen Simeonov, EnEffect *Moderator: Dragomir Tzanev*
12:45 - 13:30	*Lunch*
Discussion session 2	**THE NET ZERO CITIES INITIATIVE AND THE EU MISSION ON CLIMATE ADAPTATION** **Moderator: Kamelia Georgieva, NTEF**
13:30 - 13:45	**EUROPEAN POLICIES ON CLIMATE CHANGE ADAPTATION** *Svetlana Zhekova, Member of the Board of the EU Mission on Climate Adaptation (invited)*
13:45 - 14:00	**THE ADAPTATION HUBS INITIATIVE AS A TOOL FOR COORDINATING POLICIES AND FINANCIAL INSTRUMENTS IN SUPPORT OF LOCAL AUTHORITIES** *Dragomir Tzanev, EnEffect*
14:00 - 14:15	**ENERGY MANAGEMENT SYSTEMS** *Gregor Tenius, Austrian Energy Agency*
14:15 - 14:30	**NET ZERO CITIES: OPPORTUNITIES FOR THE INVOLVEMENT OF NEW BULGARIAN MUNICIPALITIES** *Maria Minkova, NTEF*
14:30 - 14:45	**BETTER FUNDING DIALOGUES: AN INITIATIVE LED BY NET ZERO CITIES FOR MORE EFFECTIVE STRUCTURING OF FINANCIAL INSTRUMENTS** *Jayashiree Elango, Frankfurt School of Finance and Management*
14:45 - 15:30	**PANEL DISCUSSION: INTER-INSTITUTIONAL COORDINATION, FINANCING AND IMPLEMENTATION OF MUNICIPAL PROJECTS** ***Participants: The panel speakers.*** *Moderator: Kamelia Georgieva*
Discussion session 3	**TRANSNATIONAL WORKSHOP: THE MODERNISATION AND DECARBONISATION OF DISTRICT HEATING SYSTEMS Moderator: Antoniya Novakova, EnEffect**

13:30 - 13:45	**REHEATEAST: LOCAL PARTNERSHIP FOR REDUCING ENRGY DEMAND OF DISTRICT HEATINS SYSTEMS** *Antonia Novakova, EnEffect*
13:45 - 14:15	**EXAMPLES FROM ROMANIA** *Assoc. Prof. Dr. Eng. Paula Unguresan, Technical University of Cluj-Napoca*
14:15 - 14:30	**GOOD PRACTICES AND OPPORTUNITIES IN BULGARIA** *Eng. Dimitar Kuyumdjiev, Bulgarian Energy and Mining Forum*
14:30 - 14:45	**APPLICATION OF GEOTHERMAL ENERGY IN DISTRICT HEATING** *Eng. Nikola Sechkaryov, Geothermal Energy Association*
14:45 - 15:00	**MUNICIPAL PROJECTS FOR LOCAL HEATING NETWORKS** *Todor Popov, Municipality of Gabrovo*
15:00 - 16:00	**PANEL DISCUSSION: SUSTAINABLE FINANCING FOR DISTRICT HEATING PROJECTS** ***Participants: The panel speakers, energy agencies and energy centres representatives*** *Moderator: Antonia Novakova*
16:00	**CLOSING OF THE ROUNDTABLE**

WELCOME AND OPENING PLENARY

Dragomir Tzanev, Executive Director of Center for Energy Efficiency EnEffect

Opening the event, Dragomir Tzanev emphasized the importance of creating a space for dialogue that delivers relevant insights both for local authorities and for society as a whole.

He said the discussion would cover building renovation from multiple angles, including strategy, financing, implementation tools, local energy management, and coordination between national and municipal levels. He stressed that the greatest immediate potential lies at the local level, if coordination improves and resources are better used.

He also pointed to the strong presence of national authorities and European Commission representatives, highlighting the importance of multi-level cooperation. And, in closing, underlined that energy efficiency is not just about saving energy or costs, but a strategic investment in resilience, economic stability, crisis protection, and local competitiveness, calling for stronger efforts to unlock its full benefits.

Tanya Hristova, Mayor of Gabrovo

In her opening remarks, Tanya Hristova framed the discussion as a strategic conversation about Bulgaria's future, emphasizing that energy efficiency must deliver tangible benefits for people, businesses, and communities. She highlighted municipalities as key drivers of implementation, drawing on Gabrovo's experience to stress the value of strong partnerships and innovative financing solutions beyond reliance on grants. She also underlined that energy efficiency is a powerful tool for social and economic transformation, with direct impacts on quality of life, energy poverty, and regional competitiveness, while warning that delays in investment come at a high cost.

Looking ahead, she called for stable yet flexible policy and financing frameworks, stronger institutional cooperation, and recognition of municipalities as equal partners rather than just implementers, positioning cities like Gabrovo as testing grounds for innovative solutions that can be scaled at national level.

OPENING PLENARY SESSION: THE NATIONAL BUILDING RENOVATION PLAN

The opening plenary brought together a diverse panel of speakers representing European institutions, national authorities, and sectoral stakeholders. Their statements provided complementary perspectives on the strategic, institutional and financial dimensions of building renovation in Bulgaria. The main points from the presentations are summarised below.

Moderator: Dragomir Tzanev, Executive Director of Center for Energy Efficiency EnEffect

Introducing the session, Dragomir Tzanev outlined three key elements forming the financing ecosystem for building renovation in Bulgaria, which would be at the core of the discussion.

First, he referred to the National Building Renovation Plan, noting that its preliminary version has been submitted to the European Commission and is now entering a phase of broader consultation, with the need to ensure it reflects national realities and serves as a practical implementation framework. Second, he highlighted the National Decarbonisation Fund as a central instrument for delivering the plan’s objectives, acknowledging that its current resources may not yet match its ambition but stressing the importance of having a functioning and scalable financial mechanism. Third, he pointed to the Social Climate Fund as essential for engaging vulnerable households, emphasizing that they should be seen not as a barrier but as an opportunity, given the significant benefits they stand to gain. Mr. Tzanev stressed that the interaction between these three elements will be critical for ensuring an effective and inclusive financing framework. The session, therefore, aimed to provide local authorities with relevant and up-to-date information, while also fostering discussion on how to improve coordination and maximise the impact of available resources.

He concluded by outlining the structure of the conference, with the morning session focused on policy and financing frameworks, and the afternoon sessions addressing:

- sustainable energy management and climate adaptation at municipal level;
- heating and cooling systems as a key component of future energy policies.

Silvia Rezessy, DG Energy, European Commission

Silvia Rezessy provided an overview of the revised EPBD, with its main priorities and implications for Member States.

She highlighted four key areas in the directive:

- Renovation, including Minimum Energy Performance Standards (MEPS) and national trajectories for improving the building stock;
- Decarbonisation, with the introduction of zero-emission buildings as the future standard;
- Modernisation and system integration, including smart technologies, data exchange and infrastructure for sustainable mobility;
- Supporting measures, such as improved energy performance certificates, renovation passports, one-stop shops, and targeted actions to address energy poverty.

Mrs. Rezessy reminded that the deadline for transposing the directive into national legislation is May 2026, underlining the urgency of aligning national frameworks with EU requirements.

A central focus of her presentation was the NBRP, which she described as a key instrument for guiding long-term transformation of the building stock. She welcomed the fact that Bulgaria was among the first Member States to submit its draft plan, noting its broad scope, level of ambition, and inclusion of key reform areas.

At the same time, she pointed out that further work is needed, particularly in relation to the financial framework of the plan, the scale and structure of required investments, and the stakeholder engagement and public consultations. Importantly, she emphasized that the investment needs outlined in the plan exceed the capacity of public funding alone, making it essential to mobilise private capital and diversify financial instruments. She also noted that similar challenges are shared across many Member States, particularly in improving the availability and quality of building stock data, ensuring the cost-effectiveness of renovation measures, and developing strong pipelines of bankable projects.

In conclusion, Mrs. Rezessy stressed that the NBRP should not be seen as an administrative exercise, but as a strategic roadmap for investment, providing direction to the market, increasing predictability, and strengthening confidence among stakeholders, adding that building renovation is not only a climate policy, but also a key driver of energy security, economic competitiveness and housing affordability, with direct benefits for citizens and local economies.

Dora Yankova, Deputy Minister of Regional Development and Public Works

Dora Yankova presented the draft NBRP as the result of joint work by an interministerial group involving the ministries responsible for regional development, environment, energy and finance, with input from external experts, among which also EnEffect, with the first working version of the plan submitted to the European Commission on 30 December 2025.

She stressed that the plan is fully aligned with the revised EPBD and should be seen as a 25-year policy framework, not as a short-term programme. In her view, its ambition may appear challenging, but it reflects the scale of transformation required for Bulgaria's building stock. To illustrate the scale, she pointed to directive targets requiring Bulgaria to renovate 56 million m^2 of residential space by 2030, rising to 79 million m^2 by 2035, alongside 15.4 million m^2 of non-residential buildings by 2030 and 19.6 million m^2 by 2035, with public buildings renovated at a minimum annual rate of 3%. She also highlighted the substantial investment needs this entails around €11 billion for the residential sector and €8 billion for non-residential buildings by 2035.

She noted that, while substantial, these investments could be partly achieved through a clear roadmap, targeted programmes, and effective use of resources. Mrs. Yankova outlined a vision based on an integrated approach to renovation, long-term and predictable programmes, targeted support for vulnerable households, innovative blended financing mechanisms, stronger digitalisation and transparency, and a more active role for local authorities. She placed particular emphasis on financing, stressing the need to move beyond grant-based schemes toward a stable mix of public, private, and financial instruments, with the National Decarbonisation Fund playing a central role, marking a shift to a more systemic and predictable model.

She also highlighted the importance of ongoing public consultations, describing 2026 as a key year for refining the plan together with municipalities, financial institutions, and other stakeholders, and concluded that its success will depend on sustained cooperation across all levels to ensure it becomes a practical, living framework for implementation.

Nikolay Nalbantov, Directorate "Energy Strategies and Policies for Sustainable Energy Development", Ministry of Energy

Nikolay Nalbantov presented the National Decarbonisation Fund as a key instrument for financing building renovation and the energy transition. He noted that it was first envisaged in Bulgaria's Long-Term Renovation Strategy and later included as a reform under the Recovery and Resilience Plan. Established through amendments to the Energy Efficiency Act in November 2025, the fund builds on the existing model of the Energy Efficiency and Renewable Sources Fund, while expanding its scope and introducing a broader range of financial instruments.

He stressed the need to move beyond fully grant-based schemes, which are insufficient for the scale of investment required. The Fund is therefore designed to support a blended financing model that combines public resources with private capital, aiming to create a multiplier effect. Its main functions include developing financial instruments, financing projects, and attracting additional resources. At the same time, he pointed to a key challenge: limited initial funding and the lack of guaranteed long-term financial sources.

The Fund will also establish a one-stop-shop structure to provide technical assistance and guidance to beneficiaries through both central and local contact points. Overall, it is intended to support the transition toward a stable and sustainable financing framework for large-scale building renovation in Bulgaria.

Dimitar Ganev, Chairman of the Management Board at the National Decarbonisation Fund

Dimitar Ganev outlined the current progress in operationalising the NDF, focusing on two key elements under development.

The first is the preparation of the operational rules, which will define the fund's investment strategy, financial products, and the combination of financial instruments, as well as its interaction with one-stop-shop structures supporting final beneficiaries. These rules are in an advanced stage and are being coordinated with the European Commission.

The second key step is the selection of a fund manager, seen not simply as an administrator but as a strategic partner responsible for structuring financial instruments, attracting additional resources and managing the fund's portfolio.

Mr. Ganev highlighted three main groups of final beneficiaries:

- households, with a strong focus on single-family buildings, which have so far been largely excluded from support schemes;
- public buildings, with significant untapped potential;
- private-sector buildings, including investments in renovation and renewable energy.

As the central focus of the fund is the transition towards sustainable, revolving financing mechanisms, the planned instruments will include guarantees, loans and blended financial products, complemented by targeted grant components such as capital rebates, interest rate subsidies and technical assistance, depending on the beneficiary group.

He concluded by marking the immediate next steps: finalising the operational rules, launching the procedure for selecting a fund manager, and developing the first financial instruments, with the ambition to have initial instruments operational within the year.

Malina Krumova, Deputy Minister of Environment and Water

Malina Krumova also pointed out the complex, cross-sectoral nature of building renovation, which goes beyond energy efficiency and has social, economic, environmental, and technological dimensions. She noted that this complexity calls for strong coordination between institutions at both national and local level.

She then underlined that the NBRP should not be seen as a simple renovation programme, but as a long-term, integrated policy framework treating buildings as complex systems. Its successful implementation will require sustained effort over time, along with the integration of innovation, new technologies, and coordinated governance.

A key message was the importance of aligning multiple financing instruments. She highlighted that no single fund can deliver the required transformation and pointed to several key mechanisms that must work together, including the National Decarbonisation Fund, the Social Climate Fund, EU and national programmes supporting innovation and structural investments, and additional financial instruments under development at EU level.

Ms. Krumova highlighted the need for coordinated and complementary instruments to avoid fragmentation in the renovation process. She stressed the key role of municipalities in implementation and resource mobilisation, underlining the importance of decentralisation and stronger local support. She also emphasised the importance of digitalisation, data availability, and public engagement, concluding that long-term policy continuity and consistency are essential to achieve the renovation targets.

Panel Discussion 1: Reforms and new instruments to stimulate building renovation

Moderator: Dragomir Tzanev, Center for Energy Efficiency EnEffect

The panel included three key speakers and four panellists. The main content of the presentations/speeches is presented hereafter.

Ivaylo Aleksiev, Sustainable Energy Development Agency

Ivaylo Aleksiev outlined the key challenges for building renovation in the context of the NBRP, with a strong focus on the regulatory and policy framework required for its implementation.

He emphasised that the plan is not linked to a single directive, but is part of a broader EU legislative framework, including the EPBD, the EED and the Renewable Energy Directive (RED). Their combined implementation requires significant updates to national legislation, including amendments to the Energy Efficiency Act.

Mr. Aleksiev highlighted several major policy and technical challenges:

- the transition towards zero-emission buildings, which go beyond nearly zero-energy standards and require the integration of renewable energy, efficient systems and low-carbon energy sources;
- the introduction of building renovation passports, enabling step-by-step renovation planning, particularly important in the context of limited financial capacity and the need for phased investments;
- the development of smart-ready buildings, capable of interacting with energy networks and optimising energy use;
- increased requirements for solar energy integration and infrastructure for electric mobility;
- the expansion of data systems and digitalisation, including national and EU-level databases to support monitoring, planning and access to information.

Mr. Aleksiev stressed the need for coordinated and complementary financing conditions, improved access to funding, and stronger support mechanisms. He highlighted one-stop shops as key structures for guiding beneficiaries through the renovation process and underlined that achieving the renovation targets requires integrated long-term policy, financing, and support systems.

Tzveta Naniova, BACC

Tzveta Naniova highlighted the structural differences between residential and non-residential building renovation, stressing that while non-residential buildings are subject to clear regulatory requirements and timelines, the residential sector requires a fundamentally different approach based on enabling conditions rather than strict obligations.

She emphasised that renovation policies for residential buildings must take into account the financial capacity, organisational complexity and limited technical expertise of homeowners, which makes market-driven solutions alone insufficient.

A key message was the significant gap between renovation needs and available funding. While the scale of required renovation is substantial, currently secured financing covers only a limited share, demonstrating the need for new, scalable financing models.

Mrs. Naniova pointed out that previous programmes, particularly those based on 100% grant financing, have played an important role in raising awareness and initiating the market, but have proven insufficient to ensure long-term impact and scale. The campaign-based approach has also created uncertainty for both beneficiaries and the construction sector.

She underlined the need for permanent and predictable programmes, tailored financing schemes, step-by-step renovation approaches, and greater use of blended financing instruments. She also highlighted the importance of one-stop shops in supporting homeowners through the renovation process, especially under co-financing models. Finally, Mrs. Naniova stressed the growing role of local authorities in supporting citizens and coordinating increasingly complex renovation schemes.

Kamen Simeonov, EnEffect

Kamen Simeonov focused on the non-residential building stock, outlining the scale of the sector, the regulatory requirements arising from the EPBD, and the implications for financing and implementation.

He explained that the estimates in the plan are based on analytical work using data from the National Cadastre, the National Statistical Institute and energy consumption statistics, as there is still no complete and consolidated database on the building stock. According to these estimates, the non-residential sector covered by the plan includes over 350,000 buildings with a total floor area of around 94 million m^2.

A central issue in his presentation was the limited coverage of energy certificates. Even when expired certificates are included, coverage remains below 2% by number of buildings and around 21% by floor area, which makes it difficult to precisely identify the buildings that should be targeted first.

Mr. Simeonov highlighted two main regulatory drivers for non-residential buildings: the EPBD requirement to introduce minimum energy performance standards for the worst-performing non-residential buildings, and the obligation to renovate 3% annually of public buildings.

Based on the available data, the plan proposes indicative thresholds for minimum performance standards, with the first target broadly corresponding to class E by 2030 and the second to class D by 2033. However, he stressed that applying these standards in practice will require a better monitoring tool, as current certification data are not sufficient for full implementation.

He also outlined the quantitative renovation targets and related investment needs. According to the estimates presented by 2030, around €2 billion will be needed for public non-residential buildings and slightly over €2 billion for privately owned non-residential buildings, while by 2035, a similar level of additional investment will again be required.

STAKEHOLDERS VIEWS

- There was a shared understanding that current programme-based support is insufficient, and that citizens need continuous and predictable access to financing, rather than waiting for periodic schemes.
- Participants highlighted significant data gaps, especially regarding public buildings and already renovated building stock, which limit effective planning, prioritisation and reporting.
- It was noted that a substantial number of buildings with completed energy audits remain unused, pointing to a missing link between assessment and implementation.
- Stakeholders drew attention to an overlooked group of proactive homeowners, who could achieve strong results with limited support and serve as a model for wider uptake.
- There was consensus that despite having a robust certification system, its limited coverage and high cost hinder both policy implementation and access to financing.
- One-Stop Shops were again identified as a critical enabling mechanism, particularly in a transition towards co-financing and more complex renovation models.
- The National Decarbonisation Fund was seen as a key instrument, but concerns were raised about its insufficient scale and the lack of sustainable capitalisation.
- Stakeholders agreed that the absence of a clear financial framework remains a major barrier, and that coordinated political decisions on long-term funding are urgently needed.

CONCLUSIONS – MAIN OUTCOMES

- The session confirmed that achieving renovation targets will require a shift from programme-based support to a stable, long-term framework combining regulatory measures, financing tools and institutional coordination.
- Data availability and quality are fundamental prerequisites for effective policy implementation, particularly for prioritising buildings and tracking progress.
- Current financing levels are far below actual needs, making the development of scalable and sustainable funding mechanisms a high priority. It is important to activate both public and private investment, with public funding acting as a catalyst rather than the sole source of support.
- Improving the accessibility and coverage of certification and data tools is critical for unlocking financing and enabling better decision-making.

Panel Discussion 2: The Net Zero Cities initiative and the EU Mission on Climate Adaptation

Moderator: Kamelia Georgieva, NTEF

The session included five keynote speakers and a panel discussion. The main content of the presentations and interventions is presented hereafter.

Svetlana Zhekova, EU Mission on Climate Adaptation

Svetlana Zhekova stressed that climate adaptation has become a central policy priority linked to security, economic resilience and public investment protection. She noted that Europe is the fastest-warming continent, already facing major climate impacts, and emphasised that adaptation and mitigation must go hand in hand. Highlighting rising economic losses from climate events, she called for a shift from reactive measures to proactive risk management.

She then outlined the evolution of EU policy, from the first adaptation strategy in 2013 to the updated 2021 framework, and the upcoming transition towards an integrated climate resilience framework, expected to introduce new legislative requirements, harmonised risk assessments and digital tools for better decision-making.

A key concept presented was "resilience by design", meaning that climate resilience should be embedded in all investments from the planning stage, rather than addressed after damage occurs. In this context, she noted that future EU funding will increasingly require compliance with climate resilience criteria and a stronger integration of adaptation across all sectors.

Finally, she stressed the importance of multi-level governance and coordination, highlighting the role of EU Missions and related initiatives in supporting local authorities through technical assistance, knowledge exchange and access to funding opportunities.

Dragomir Tzanev, EnEffect

Dragomir Tzanev emphasised that effective climate action requires strong integration between adaptation and mitigation measures, including energy efficiency and renewable energy, as both are implemented at local level and depend on coordinated policies and financing.

He stressed that the key challenge lies in the lack of effective coordination mechanisms, both horizontally between institutions and vertically between national and local levels. Existing structures have proven insufficient, largely due to limited capacity, lack of continuity and absence of feedback mechanisms from practitioners on the ground.

Mr. Tzanev highlighted the need to establish a functioning coordination framework, supported by a dedicated structure or secretariat, capable of connecting policy design with real implementation needs at municipal level. He pointed out that such a mechanism requires not only institutional commitment but also clear political will and adequate resources.

He stressed the need for greater municipal flexibility in allocating resources based on local priorities and integrated approaches. He also highlighted the importance of involving local authorities in the upcoming EU budget framework to ensure more predictable and needs-based funding. Finally, Mr. Tzanev emphasised the need for better tools to monitor and communicate investment impacts, including energy management systems and European initiatives.

Gregor Tenius, Austrian Energy Agency

Gregor Tenius explained how municipalities can improve planning and delivery of energy and climate actions through structured energy management systems, highlighting the European Energy Award (eea) as a key tool.

He noted that growing EU and national requirements increase pressure on municipalities, making clear frameworks and support essential. The eea, used by about 1,900 municipalities in 19 countries, provides a structured cycle of assessment, target-setting, implementation, monitoring and continuous improvement, with regular external audits.

The system includes a catalogue of measures across areas such as buildings, energy use and public lighting, helping municipalities prioritise actions and track progress. It also strengthens data collection, energy accounting and investment planning.

Mr. Tenius emphasised that the eea improves implementation quality, accelerates progress and ensures long-term stability by embedding structured processes. He also highlighted the LEEAN-CET project, which supports adoption of the eea approach in Central and Southeast Europe, including Bulgaria.

Maria Minkova and Elena Kamenova, National Trust EcoFund

Maria Minkova presented the Net Zero Cities initiative as part of the EU Mission for Climate-Neutral and Smart Cities, which aims both to support 100 climate-neutral cities by 2030 and to position them as innovation hubs and examples for other municipalities across Europe.

She explained that in Bulgaria the initiative is coordinated by the National Trust EcoFund (NTEF), drawing on its long-standing experience in working with municipalities on energy efficiency, public buildings and local energy management. She stressed that this experience is directly relevant to the current debate on building renovation, particularly through:

- support for public building renovation and energy-efficient public lighting;
- the use of blended financing and financial instruments;
- complementary programmes such as ESCO-based models and behavioural measures aimed at improving the use of renovated buildings.

A central message in her intervention was that combined financing approaches are essential for sustainable renovation and climate-neutrality efforts, and that municipal experience from public sector projects can serve as a basis for testing and scaling broader policy solutions.

Elena Kamenova presented the Net Zero Cities online platform as a practical tool for municipalities, offering support for planning, financing, capacity building and peer exchange. She highlighted its resources, training opportunities, study visits, and access to partnership opportunities, positioning the platform as a gateway for Bulgarian municipalities to connect with European expertise and support mechanisms.

Jayashiree Elango, Frankfurt School of Finance and Management

Jayashiree Elango presented the Better Funding Dialogues under Net Zero Cities as a structured approach to improving coordination between municipalities, national authorities and financial actors for climate investments. She highlighted the lack of practical mechanisms for ongoing financing dialogue and explained that the initiative creates recurring exchanges where municipalities can express needs and align with stakeholders across sectors.

The dialogues are designed as a continuous process and will expand in Bulgaria over the next 12–15 months. Based on preliminary analysis and consultations with Bulgarian municipalities, several systemic challenges were identified, including:

- strong dependence on central government transfers;
- limited municipal financial autonomy and borrowing capacity;
- heavy reliance on EU funding, with limited private investment;
- capacity constraints, particularly in smaller municipalities.

The initiative will involve institutions like the EIB and EBRD to address these barriers and co-develop solutions, with results feeding into EU-level improvements of financial instruments.

STAKEHOLDERS VIEWS

- Stakeholders emphasised that coordination between institutions remains a central challenge, particularly when linking climate adaptation and mitigation measures, which were widely recognised as part of a single, integrated process.
- It was highlighted that financing mechanisms can actively shape policy implementation, with calls to incorporate adaptation criteria into funding schemes to ensure the long-term resilience and effectiveness of investments.
- Participants encouraged municipalities to actively engage in upcoming consultation processes, including the Better Funding Dialogues, as these inputs can influence EU-level discussions and improve how financial barriers are addressed.

- A strong message emerged around the need for integrated financing approaches, combining adaptation and mitigation measures to reduce investment risks and attract private capital.
- Municipal representatives confirmed that access to financing remains a daily challenge, while also valuing opportunities for dialogue, peer exchange and cooperation with funding institutions.
- Concerns were raised regarding the lack of national-level financial support and delays in implementing key instruments, including the need for more stable and predictable funding frameworks.
- Smaller municipalities stressed that capacity building, training and knowledge exchange are critical, particularly through practical cooperation and peer learning.
- A strong concluding message highlighted that partnerships are as important as funding, and that collaboration between municipalities, institutions and stakeholders is essential for achieving meaningful progress.
- Participants agreed that continued dialogue and structured cooperation formats are necessary to translate discussions into concrete actions and long-term solutions.

CONCLUSIONS – MAIN OUTCOMES

- There is a need for stronger mechanisms to align national policies, financial instruments and local implementation.
- Municipalities must play a more active role in shaping financing mechanisms, including through structured dialogue formats and participation in EU-level processes.
- Resources for capacity building and knowledge is crucial, particularly for smaller municipalities that face structural and administrative limitations.
- EU initiatives and platforms can serve as enablers for access to expertise, partnerships and funding opportunities, even beyond formally selected mission cities.
- There need to be continued efforts to translate strategic frameworks into practical, measurable results at local level so that the move from discussions to action can be made.
- Ongoing dialogue and structured cooperation formats are essential to maintain momentum and support the implementation of sustainable energy and climate policies.

PANEL DISCUSSION 3: THE MODERNISATION AND DECARBONISATION OF DISTRICT HEATING SYSTEMS

Moderator: Antoniya Novakova, EnEffect

The session brought together speakers from Romania, Bulgaria and the wider European context to examine the modernisation challenges facing district heating systems in the Eastern Danube Region, with a particular focus on financing pathways, regulatory frameworks and cross-country knowledge exchange. Antoniya Novakova also presented the REHEATEAST project, an Interreg Danube Region initiative connecting partners from eight countries around shared challenges in district heating decarbonisation. She identified three forces driving change: climate commitments, consumer expectations and economic pressures, noting that most systems were designed decades ago with heat losses in some networks exceeding 25 – 40%.

The project includes 12 pilot activities across the partner countries. For Bulgaria, the pilot focuses on a systemic problem characteristic for district-heated multifamily residential buildings relevant for many countries in the Danube Region: the coexistence of partially renovated building envelopes with outdated and inefficient internal heating and DHW systems. She emphasised the replication potential of this approach, including low investment costs for building system interventions and the possibility of combining financing sources and integrating renewables.

Paula Unguresan and Mugur Balan, Technical University of Cluj-Napoca

The presenters offered three Romanian case studies illustrating different modernisation scales and financing approaches.

The Bucharest system – one of the EU's largest – has undergone a €254 million EU-funded pipeline rehabilitation, a €321 million plant modernisation through the Modernisation Fund, and a €200 million geothermal project expected to cover about 13% of the city's heat demand. The Beiuș geothermal system, serving around 10,000 inhabitants, demonstrated how smaller cities can achieve low-cost heating from local geothermal resources, with expansion supported by EEA/Norwegian grants and Icelandic expertise. The Oradea system was highlighted as a model of sustained, multi-source investment – combining EU cohesion funds, EEA grants, national programmes and local budgets to achieve over 80% production efficiency and a 10% reduction in transport losses.

They also introduced a REHEATEAST pilot laboratory in Cluj-Napoca for demand-side digitalisation, showing 10–15% energy savings through advanced control strategies. The key message was that modernisation is achievable at different scales when financing is diversified and knowledge is shared across borders.

Dimitar Kuyumdjiev, Bulgarian Energy and Mining Forum (BEMF)

Dimitar Kuyumdzhiev framed the Bulgarian situation within EU requirements – particularly the Energy Efficiency Directive and Renewable Energy Directive – which mandate local heating and cooling plans for municipalities above 45,000 inhabitants and set progressive decarbonisation milestones toward 2050. He noted that Bulgaria is not well prepared: municipalities lack obligations, incentives, data access and capacity for strategic heating planning.

The sector faces severe challenges: deteriorating finances, rising gas and CO_2 costs, shrinking demand, and ageing networks (over 55-60% exceeding 30 years). However, private companies have invested significantly – EVN (Plovdiv) saved over 930,000 tonnes of CO_2 through cogeneration; Veolia (Varna) achieved 100% substation automation; plants in Ruse, Pernik, Sliven and others are transitioning from coal to gas.

In contrast, Toplofikatsiya Sofia remains at its pre-2000 level with debts of approximately €1.215 billion, outdated equipment and a sufficient network losses. Mr. Kuyumdzhiev placed Bulgaria at the second-generation level globally while fourth-generation systems – with low-temperature distribution, renewables and smart technologies – represent current best practice.

Nikola Sechkaryov, Bulgarian Association Geothermal Energy

Nikola Sechkaryov presented geothermal energy as Bulgaria's most significant untapped heating resource. Europe has 409 operating geothermal plants with 6 GWth capacity, yet Bulgaria has zero – despite being among the top EU countries in geothermal potential, with two geological provinces offering gradients of 30–99 °C/km.

A conservative estimate for 2032 includes 3,000 MWt for centralised heating and 200–300 MWe for electricity, potentially serving over 2.5 million customers. Legislative progress in 2023 established legal definitions for geothermal resources across four Bulgarian laws, but Mr. Sechkaryov stressed that financing mechanisms, risk mitigation and institutional support are now needed to move from potential to projects. He cited Munich, Paris and Poznań as evidence of economic viability.

Todor Popov, Municipality of Gabrovo

Todor Popov presented a pilot project for a small, decentralised heating plant serving a cluster of multi-family buildings, developed under the NetZeroHero initiative. The distinctive feature is the involvement of building owners, creating a form of energy community for heating. The municipality is developing technical and pre-investment studies, aiming to demonstrate a replicable model for cities where centralised district heating has ceased to operate or never existed. The financial model – combining municipal resources, EU funding and owner co-investment – was highlighted as requiring further development.

STAKEHOLDERS VIEWS

- The financing gap between EU policy ambitions and the financial reality of Bulgarian heating companies was identified as the central challenge, with Toplofikatsiya Sofia's situation requiring particular attention.

- Cross-country knowledge exchange through REHEATEAST and the Romanian case studies was seen as directly transferable, particularly the diversity of financing approaches combining EU, national, local and private sources.
- The REHEATEAST pilot on vertical-to-horizontal installation conversion was recognised as having strong replication potential across Bulgarian multi-family buildings.
- Geothermal energy requires moving beyond legislative definitions toward dedicated financing instruments, geological risk insurance and technical partnerships with more mature geothermal countries.
- The Gabrovo energy community model was welcomed as an innovative approach for municipalities without centralised heating systems.
- The absence of a national framework for local heating and cooling plans leaves municipalities unable to participate effectively in EU financing opportunities.
- The EU's progressive decarbonisation milestones toward 2050 demand immediate planning and investment action by heating companies, municipalities and national authorities.

CONCLUSIONS – MAIN OUTCOMES

- Cross-country knowledge exchange is essential for accelerating district heating modernisation. The Romanian experience offers directly transferable lessons in financing, geothermal integration and digitalisation.
- The financing challenge requires diversified approaches –EU funds, national programmes, local budgets, private investment, ESCO models and risk mitigation – as well as debt restructuring for the most distressed companies.
- Demand-side interventions, particularly vertical-to-horizontal installation conversion, should be systematically integrated into building renovation programmes.
- Bulgaria's geothermal potential must be translated into project pipelines through targeted financing, technical partnerships and institutional support.
- EU requirements for local heating and cooling plans must be transposed urgently, with adequate resources and capacity-building for municipalities.
- Decentralised solutions such as the Gabrovo energy community pilot offer a promising complementary pathway and should be supported through appropriate regulatory and financing frameworks.
- Continued transnational cooperation formats are necessary to translate knowledge into concrete investment and reform actions.