



Proceedings from the Eight National Roundtable in Bulgaria

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POLICIES AND INVESTMENTS FOR A SUSTAINABLE, EFFICIENT AND SECURE ENERGY SYSTEM

National Roundtable on Sustainable Energy Investment Financing and Start of Public Consultations on the Integrated National Energy and Climate Plan

27 November 2023

Sofia, Hemus hotel and online

<i>139 stakeholder representatives</i>	<i>13 speakers</i>
	<i>64 delegates</i>
	<i>62 on-line participants</i>

Discussion topics:

- Monitoring and evaluation tools for smart and efficient buildings
- Clean energy transition skills: existing market gaps and emerging best practices

Plenary session:

The National Round Table on "Policies and Investments for a Sustainable, Efficient and Secure Energy System" was opened by Mr. Dragomir Tzanev (EnEffect). He gave a presentation on the objective of the three-day event - improving the implementation of EE policies, with the first day dedicated to the Integrated Energy-Climate Plan. The role of local authorities is essential to achieve the national targets as they are a powerful tool for communication and interaction with local communities.

Mr. Zdravko Georgiev (SOFENA) presented the role of the Network of Energy Agencies in Bulgaria as a market catalyst over the last 20 years. Energy management, energy communities, combating energy poverty - all this is the focus of this three-day event.

Ms. Teodora Polimerova (Sofia Municipality) said that in 2021 Sofia adopted its first "Sustainable Energy and Climate Action Plan". She added that in 2023 a short-term programme was launched to promote the use of renewable energy, and 8,000 households have benefited from the programme and implemented a project to replace heating appliances that emit a large amount of emissions. The municipality will use the new Energy-Climate Plan as an incentive to update its climate and EE policies. Ms. Polimerova also mentioned that Sofia is part of the "100 Carbon Free Cities" initiative, which aims to achieve carbon neutrality by 2030. Work on this initiative was suspended at the beginning of 2023 and will now be resumed.

Mr. Krassimir Nenov (Ministry of Energy) said that the Integrated National Energy-Climate Plan was initially approved by the EU and the new updated version will address some comments from the Commission. He mentioned that we have a delay with the update, as it was supposed to be submitted in June 2023. An inter-ministerial working group of seven ministries and SEDA are working on the update and should reflect all views and opinions. Some of the participating parties in the working group have already submitted their suggestions. Mr. Nenov also mentioned that the climate prediction model will also need to be updated based on new assumptions. Initial modeling data is expected in January 2024 and final scenarios should be ready in March 2024. Inputs to the models should be transparent and accessible, and the MoEW will ensure that the professional ecosystem has access to them. Mr. Nenov added that an electricity consumption analysis has been prepared to feed the model with more accurate data. Assumptions have also been made about the evolution of the electricity system and they are used as part of the input data. Mr. Nenov said that the development of the Energy Strategy is currently accelerated but is aligned with the assumptions that will be used for the models of the Energy-Climate Plan. The two documents will be synchronized and EE will be considered a priority and is an ambitious key indicator.

Ms. Elena Petrova (Ministry of Environment and Water) said that their ministry carries out quality control in the field of greenhouse gas reduction. The update of the Energy-Climate Plan requires the MoEW to quantify targets and measures to achieve a 55% reduction. The Ministry also estimates GHG levels by sector, and assesses GHG reduction policies and measures proposed by all ministries. Ms. Petrova said that the updated Plan will be subjected to an environmental assessment by the Ministry of Environment.

Ms. Angelina Boneva (Ministry of Regional Development and Public Works) said that EE should be seen as a priority to strengthen the government's efforts to reduce greenhouse gases. The Bulgarian energy sector is currently in transition and needs a new approach to integrate low-carbon generation. The MRDPW focuses on EE, but the grant-based approach

is not feasible and should be changed. Ms. Boneva mentioned that market-based models should be introduced, highlighting the multiple benefits (and their monetary dimensions) of EE investments. The experience of many EU countries shows that commercial financial instruments can enhance public financing. The partnership between all institutions is essential to achieve Bulgaria's decarbonization goals. Ms. Boneva added that innovative solutions should be explored in the construction and transport sectors. Currently, the Ministry of Regional Development is finalizing the phase of the EE program for multi-family buildings, which provides 100% grant support and this is delaying the transition to market-based financial instruments.

Mr. Mariano Gonzalez (World Bank) said that climate targets depend on EE and EE depends on the building sector. Financing is needed to achieve the targets. The financing gap is huge and Bulgaria needs financial instruments that are beyond public sector money. There is a need for an implementation plan for a long-term strategy and homogeneous eligibility criteria for the different programmes. Mr. Gonzalez mentioned that large grants are the wrong approach to develop the EE market. There is a need to provide a better understanding of the financial benefits of EE investments. The World Bank is training energy auditors, supporting the MRDPW to develop financial instruments to mobilize private funds, and providing capacity to local governments and energy agencies.

Mr. Asen Gasharov (European Investment Bank) said that the deployment of financial instruments needs an enabling local environment and a good understanding of all market stakeholders. The EIB has not yet allocated programs or direct funding for large-scale EE projects in Bulgaria. So far, they have only provided technical assistance and guarantees. Mr. Gasharov also said that the expected investment gap of around BGN 3.3-4.5 billion will not be covered without a strong mobilization of funds from the private sector and a change in the overall thinking of the market. Mr. Gasharov added that the first ELENA project has been signed, which will aim to increase investments in the decarbonization of buildings in Plovdiv region to the value of about EUR 38 million.

Key quotes from the plenary session:

„Some of our strategic documents in this area are late. Along with this, we are trying to solve an equation with many unknowns by looking at them each for themselves, i.e. a document being developed by one ministry. Several ministries, institutions, and partners have to be involved in the development and synchronization of the different strategic documents.“

Angelina Boneva, Ministry of Regional Development and Public Works

„When there are grants - the market blooms, if there are not - it is frozen. This is an unhealthy way to develop the market. There needs to be consistency, and to get that consistency there needs to be financial instruments with long-term visibility for the sector.“

Mariano Gonzalez, World Bank

„There is no magic solution and complex solutions need to be sought. This is also the approach of the EIB. Our targets are very high, and the right climate in each country should be in place to take on the financial instruments. The truth is that in Bulgaria, until now, we have no EE projects financed.“

Asen Gasharov, EIB

Technical working groups on the dimensions of the Integrated National Energy and Climate Plan

The sessions took the form of a round table and participants were free to discuss the topics.

Technical Working Group 1: Decarbonisation Dimension

Moderator: Borislav Sandov

The Energy-Climate Plan was drafted in 2018-2019, and underwent public review in 2020. Changes in European legislation are to be reflected in the updated Plan, with the 2030 decarbonisation target changed from 40% to 55%. The main three indicators required by the EC are the level of final energy consumption from RES, the level of EE, and the connectivity of systems. The third indicator has been exceeded by Bulgaria by 6-7%. The models to be applied to the updated Plan and the resulting changes were discussed. The interim targets and measures to achieve them were also discussed, noting that in the Energy sector they are very concrete, while for the other sectors they are challenging. It was stressed that a good information campaign should accompany all strategic documents. Participants also discussed what needs to be updated in the Plan, besides the set models and changes resulting from those in European legislation. Other topics that were discussed were the lack of social capacity, the decentralization of policies, the definition of fuel poverty, and data collection systems to be the basis for policy decisions.

Technical Working Group 2: Energy Efficiency Dimension

Moderator: Dragomir Tzanev, EnEffect

Participants began the discussion by saying that the modeling assumptions for the EE dimensions in the original Plan were too ambitious, requiring an update of the Plan with accurate and reliable data. Participants commented that the lack of homogeneous information in Bulgaria, especially outside the buildings sector, is a problem that hinders the development of strategic documents and the effective implementation of decarbonization policies and needs to be addressed. The old version of the Plan lacks financial solutions and alignment with the National Recovery and Sustainability Plan. The updated Energy-Climate Plan will be well aligned with the NRSP and its investment priorities, and will include transparent procedures. Participants said that the National Decarbonization Fund (NDF) is one of the NRSP reforms for which the Ministry of Energy is making legislative changes to enable the existing BEEF to be transformed. The NDF aims at comprehensive investments in energy conservation and decarbonization by mobilizing private resources and moving from grants to market-based instruments. Technical assistance, reducing transaction costs, and offering financial instruments for structural improvements alongside the EE that the NDF will provide are crucial. Participants added that national programs, strategies, and initiatives need to be well aligned and synchronized to have effective long-term planning and enable strategic decision-making.

Technical Working Group 3: Energy Security Dimension

Moderator: Martin Vladimirov, Center for the Study of Democracy

Energy security is of key importance for any country, especially in the context of a geopolitical situation. The 2020 energy-climate plan is inadequate after COVID-19 and the conflicts in Ukraine and the Middle East, and the EU's guidelines for its update are to lead it on a bottom-up basis and strategies should come from all market actors. Participants discussed two pillars of energy - electricity and natural gas. The group highlighted as urgent measures the

improvement of electricity grid infrastructure and the stimulation of investments in renewable energy projects. Bulgaria's electricity export target and the resulting need to develop large projects with long payback periods were also discussed. Measures for energy storage were also discussed, which are crucial for energy security and they need to be decentralized and to allow energy storage in various forms. Participants said that regional gas grid connectivity should be improved, and exploration of indigenous fields and hydrogen-compatible technologies should be pursued. It was suggested that small-scale exploration projects should be undertaken and those proven over time should be scaled up. Attention should be paid to the interconnection and convergence of all energy sources.

Participants agreed on the need to develop a roadmap that articulates the strategic documents and provides an indicative timeline that will be useful for public deliberations.

Technical Working Group 4: Internal Energy Market Dimension

Moderator: Kaloyan Staykov, Center for the Study of Democracy

Participants commented that the internal energy market and energy security are interlinked. A roadmap for carbon neutrality has been adopted and will be followed by an update of the Energy-Climate Plan. Participants explained that the shortcomings of the original Plan were due to the market disruption caused by COVID-19 and the conflicts in Ukraine and the Middle East. Slow liberalization and pricing that do not reflect the true costs of generation and transmission are damaging the EE market. The group stressed that phasing out inefficient energy facilities requires intensive communication, and that the Just Transition Funds will play a key role in mitigating the impact of coal phase-out in the most vulnerable regions. Improving the electricity grid is essential for the energy transition. Participants commented that the slow pace of liberalization is the result of a lack of political will, making a strong communication campaign an important tool to achieve the goals. Regarding the design of effective financing programs, the group added that there is a need to clearly differentiate the definition of energy poverty in terms of social status and vulnerable stakeholders in the EE investment process. The professional community should be more involved in the development of national plans and strategies, and the process of setting national targets should be transparent, distinguishing between mandatory and voluntary targets.

Technical Working Group 5: Research, Innovation and Competitiveness Dimension

Moderator: Martin Vladimirov, Center for the Study of Democracy

From the discussion, it became clear that we do not have policies in the field of innovation and there is no real vision for support, and the strategic documents borrow from each other, with no in-depth analysis in the field of low-emission technologies. Discussions revolved around future technologies in electricity, heating, and mobility. The group commented on concrete proposals for innovative technologies in energy production and storage that are relevant to the specificities of Bulgaria. The Ministry of Transport and Communications mentioned specific projects they are working on to stimulate the use of innovative technologies in transport. Participants mentioned that market and economic pressures are driving innovation and there is a need to have a system to monitor innovations that are changing dynamically. Research work needs to focus on a few areas that are important to our economy and that can add value to our products. Participants agreed that to transfer, develop, and sustain innovative technologies, we need to build human capacity, which starts from basic education and it is crucial to prepare the relevant personnel according to the goals and measures set to achieve them.

Discussions in the specialised sessions:

Discussion Session 1: Monitoring and Evaluation Tools for Smart and Efficient Buildings

Moderator: Stanislav Andreev, EnEffect

Mr. Andreev started the afternoon discussion session by talking about the role of energy certificates and more sustainable financing in the EE sector. The certificates are an instrument for building owners and users, as well as financial institutions and policymakers. Certificates need to include accessible information. Financial institutions have difficulty in channeling their financial instruments for energy efficient buildings as this stems from the lack of a large database. On the other hand, green certificates can provide important information on which to base policies and strategies. Roadmaps for carbon-neutral buildings accompanying energy certificates would give concrete measures and milestones for achieving carbon neutral buildings. Another tool mentioned by Mr. Andreev is digital building passports, which would facilitate users, energy auditors as well EE contractors.

Ms. Antonia Novakova (EnEffect) explained what the Smart Building Readiness Indicator (SRI) is. This indicator combines a tool and methodology developed by the EU to assess smart building readiness. The indicator aims to assess a building's ability to effectively use new technologies and services that improve its EE, comfort and overall performance. There are two methods for certification under this indicator - a method similar to the classical audit and a method for new buildings that have digital counterparts or building passports. Now, the first method gives more accurate information and is better accepted. Energy certificates and the SRI have the same objective. Ms. Novakova gave an example of heating and the different levels of functionality. She has also presented two platforms that provide more information on the indicator.

Participants discussed that our methodology for producing certificates is complicated, compared to other European countries, involving a time-consuming data collection process and this does not guarantee quality. There is a need to simplify the methodology and ensure quality by using the experience of other countries. The affordability of the certification for single family dwellings and rental dwellings was discussed. Participants discussed the possibility of using the data from the audits done so far to help banks identify EE projects in buildings. It was mentioned that when selling a property the energy class of the building should be emphasized to create demand.

Discussion session 2: Clean energy transition skills: existing market gaps and emerging best practices

Moderator: Zdravko Georgiev, SOFENA

Mr. Zdravko Georgiev introduced the participants to the discussion topic, stressing that increasing the capacity of all institutions and stakeholders is an important element for achieving an energy transition.

Ms. Angelina Stoykova (Energy Center Sofia) presented a project in partnership of institutions from Bulgaria, Albania, Turkey, Georgia, Armenia and Ukraine for vocational training and education for green and smart electricity buildings. New buildings require new skills for professionals responsible for building construction, design and maintenance. In order to have a greater reach, the project relies on training instructors to pass on these skills to the professionals. The training is flexible and the certificate issued is according to the requirements of the country in which it takes place. The project started with a survey of needs, best practices in training, and information on new technical solutions in buildings. According

to the analysis, the shortage of qualified professionals is due to unclear educational pathways, a poor image of technical education, and a lack of information. According to the research they have done the skills gap is due to a lack of up-to-date training, reluctance of companies to upskill, and lack of tools. The next stage of the project is to create a platform to work on. The training will contain five modules with training materials and tools.

Ms. Stoykova presented another EC Life project on new skills for nearly zero-energy buildings. The main objectives are to increase the number of building professionals in the fields of photovoltaics, smart electrical systems, heat pumps, and energy storage. This project is oriented to all professionals to be able to work as a team and to get good solutions. The training is on-line with virtual labs for hands-on training. The training materials will be developed in small modules to allow the training to offer flexibility according to the different qualification levels of the professionals and the certificates will be recognized in Europe. The consortium working on the project consists of seven institutions from six countries.

Mr. Mihael Deliyski (Chamber of Installers) presented their project on the integration of non-energy benefits in energy audits. The audits are currently limited to energy savings, while other benefits are not assessed and are not included in these projects. Such benefits could be - improved product quality, occupant comfort, productivity, reduced morbidity, reduced downtime costs, and extended repair and maintenance periods. The consortium working on this project consists of nine partners from different countries. The main objective is to develop a systematic approach to complement existing energy audits. 45 pilot audits will be carried out, mainly in the food industry but also in other sectors. 180 external consultants are expected to be trained. Country-specific guidance will be developed in existing or future regulations. Mr. Deliyski shared observations from the project work to date and the surveys conducted. The main incentives to develop EE measures in Bulgaria, besides reducing energy consumption, are derived from mandatory audits as well as from large grants that are awarded. Increased prices are another incentive that is changing attitudes towards energy audits. Mr. Deliyski also pointed out the negative experiences of respondents from developing EE measures such as unforeseen additional costs, the need for additional space for new technologies, longer payback periods, and the need to interrupt production.

Mr. Zdravko Georgiev (SOFENA) spoke about skills and education to support the energy transition. The needs for new skills from building owners and users are in the areas of energy management, tracking the measures that are implemented, monitoring the quality of the construction process, communication of these processes, financing, etc. They are currently working in two areas, one to raise awareness of energy transition and EE among students, and the other to increase the capacity of teachers with new integrated approaches and measures.

Ms. Eleonora Gaydarova (NBU) presented the INCEPT project "Introducing the principles of sustainability and energy efficiency in architectural education". Its main idea is to move towards designing carbon-neutral buildings. There is a need to reformat some of the core courses of architectural education. The project aims to support sustainability and EE concepts within a future-oriented architecture curriculum and to provide holistic approaches to building design. The expected outcomes of the project are a compendium and associated lecture course on green transition, sustainable cities and communities, and climate resilience, as well as the creation of an online short course for learning sustainable architecture and a studio for designing climate-neutral buildings.

Mr. Martin Ivanov (Center for Sustainability and Economic Development - Pazardzhik) presented two of their projects. The first project is an Erasmus+ project aimed at piloting

actions to prevent, manage, and reduce food waste, targeting students from three schools in Bulgaria, Greece, and North Macedonia. The project developed two intellectual products - policy recommendations on food waste management for NGOs and stakeholders, and the development of training courses and a toolkit for secondary school teachers. The other project is also an Erasmus+ project, Young Eco Inspectors, aimed at developing, implementing, and promoting an educational concept based on activities to tackle environmental challenges. The project targets secondary schools in Bulgaria, Greece, and North Macedonia. This project will develop a teacher's manual, software for visualizing data collected from measurement points, recommendations for updating local policies and strategies, and documents for international cooperation between socio-economic institutions.

Mr. Dragomir Tzanev (EnEffect) spoke about training needs for construction professionals to achieve zero-emission buildings. He mentioned that there are many tools, but we should try to integrate them. There is a need for better cooperation in education. In 2011, together with NAVET, EnEffect made a strategy to increase professional skills and knowledge in construction. According to an analysis they did, 60,000 professionals were needed to meet the current targets, but nearly 20,000 professionals have been trained between 2011 and now. A survey of 100 construction firms was done and only 10% of them have invested in EE training, interviewees mentioned some of the barriers being a lack of sufficient practical components and benefits for firms, and delays in legislation. The interest is in several areas but not the whole palette of skills needed due to a lack of information coordination to guide market interest. A framework is needed to define what knowledge and skills are needed for the energy transition. Mr. Tzanev spoke about a project that has developed such a framework that breaks down the investment process into tasks and defines the knowledge and skills for each task. This framework can serve as a basis for developing a system of continuing professional education and refreshing the existing qualification framework as well as certification programs. Mr. Tzanev shared that they are currently developing a roadmap detailing qualification needs and gaps. The ultimate goal is a continuing professional education system that offers flexibility and quality.

Closing session:

The main objective of the updated Energy-Climate plan is to set new up-to-date objectives and adjust the relevant policies and measures accordingly to reflect the changing geopolitical realities. The professional community should remain engaged in the planning process. The input data should be kept publicly accessible to allow for quality professional feedback, which is a prerequisite for a high-quality updated version of the Plan.