



Bulgarian National Decarbonisation Fund

Final Completion Report

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Lot 3 - Financial Instruments (FI) and Investment Platforms (IP)

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1. Executive Summary

In October 2020, the Ministry of Finance of Bulgaria (BG) submitted a request for support to the Directorate General for Structural Reform Support (DG REFORM) of the European Commission (EC), seeking assistance in the design of a National Decarbonisation Fund (NDF) umbrella concept and a number of underlying sector specific funds/financial instruments. The latter aim at supporting more energy efficiency (EE) and renewable energy (RE) investment in the residential housing, as well as SMEs and public buildings sectors.

As a result, the European Investment Bank (EIB) together with the consultant team of PricewaterhouseCoopers (PwC) and Ecorys was engaged by EC DG REFORM to conduct the expert work on the establishment of the National Decarbonisation Fund (NDF).

The new National Decarbonisation Fund shall be one of the main financial schemes in support of the Bulgarian Long-Term Renovation Strategy (LTRS) and shall provide a decisive contribution to achieving the national targets in terms of decarbonising the economy in accordance with the National Energy and Climate Plan. This NDF may also be a key instrument to deliver the low carbon priority of the Bulgarian Resilience and Recovery Plan (RRP), and thereby possibly be used to channel current and future EU funding programmes, including Cohesion and Recovery and Resilience Facility (RRF) funds.

This request for support in creating this financial instrument occurred at a point in time when, according to the European Commission's 2020 Country Report for Bulgaria, the country was not sufficiently progressing towards its energy efficiency indicative targets and the gap between the current and target levels of energy consumption had been widening. The Bulgarian LTRS had identified several obstacles to building renovation. In this regard, the intensity of grants (100%) constituted a key barrier to the development and implementation of market mechanisms, creating unrealistic expectations at project promoter level. The future NDF is expected to comprise several sub-funds that would support energy efficiency investments in specific sectors i.e. residential housing, industrial and public buildings.

Thus, the overall objective of this Assignment was to support the design and the establishment of an umbrella National Decarbonisation Fund consisting of underlying specific funds supporting differentiated energy efficiency investment types and/or final beneficiaries.

The main sections of this Report are:

- Executive Summary and Overview of the project
- Main achievements,
- Deliverables overview:
 - Market Assessment
 - Investment Strategy
 - Design of the NDF
 - o Human Resources Plan
 - Manual of Procedures
 - o Roadmap
 - Final Technical Report









2. Main Project Achievements

The main project achievements that were reached during the project duration and development are:

- Development of a **Comprehensive Market Assessment**, identifying financial and non-financial market barriers for EE investments as well as quantifying demand for financing. This detailed analysis was also used by other entities and stakeholders as a citation material. Governmental bodies now have an updated picture on the state of the energy efficiency investments in the public, commercial/industrial and residential building sectors, an overview of the issues to address in order to accelerate the rate of EE retrofit as well as an assessment of the financing needs.
- Proposal of an **Investment Strategy.** Based on the market assessment, the latter develops models of blended financial products and identifies targets, delivery modes as well as possible sources of funding and capitalisation of the future financial instrument(s). Potential overlaps with other existing instruments are reviewed to recommend an appropriate deployment timeline. Best practices from other EU Member States in establishing similar Decarbonisation Funds are also analysed in this report.
- Recommendations about the **Design of the NDF**. The latter details three main structuring options, i.e. the set-up of a coordination umbrella Fund at Government level mandating implementing bodies (Holding Fund(s) and financial intermediaries), the creation of a new separate Fund and the transformation of an existing structure into the NDF. The detailed features, advantages and limits of each solution are analysed. A detailed project development assistance scheme is also elaborated, including options regarding the nature of the support to be provided, delivery mechanisms as well as an assessment of the costs and identification of available funding sources.
- Human Resources Plan, Manual of Procedures and the Roadmap supporting the establishment and functioning of the NDF have been designed in a way to cover various NDF structuring options. The documents provide the Bulgarian authorities with sufficient flexibility to adapt to various types of structures, that could in practice be combined to address all sectors targeted by NDF.
- Over the course of the assignment, which started on 13 December 2021, 6 Steering Committee Meetings as well as a series of Ideation and Validation Workshops with market stakeholders have been organised. Numerous bilateral meetings have also taken place with professional associations, project promoters, energy agencies, financial institutions, public development banks and funds to gather feedback on recommendations.
- Despite political instability, which led to some delays in providing feedback, all deliverables were finalized before the end of 2022 and presented to the Steering Committee Meeting in December 2022.
- During project duration there was an extensive multinational cooperation between four PwC offices (Luxembourg, Czech Republic, Poland, and Bulgaria), Bulgarian Ecorys office, EIB experts and Bulgarian beneficiaries and stakeholders.









3. Deliverables' overview and conclusions

Deliverable Name	Description	Main conclusions
Market Assessment (Deliverable 1)	The aim of the First Report of the Assignment is to identify market barriers and quantify the financing needs in terms of energy efficiency renovation in residential, public and industrial buildings that are not covered by public and private sources of financing. This Market Assessment is essential to design an NDF fitting the Bulgarian market needs and to create the basis for the next phases of the Assignment. The report focuses on the analysis of financial and non- financial barriers for energy efficiency and renewable energy sources (RES). This part of the report summarises barriers for energy efficiency and RES utilisation, barriers for demand and supply for financing in all three building sectors (residential, commercial, and public). It also deals with quantification of building sector decarbonisation investment needs in the Republic of Bulgaria, investment gaps and key lessons learnt from other EU countries.	 The main barriers identified in this report are as follows: Key barriers to demand of financing: High availability and intensity of investment grants for EE projects over the last 5-10 years, Insufficient awareness among the project owners of the advantages of EE building retrofit, High upfront project development costs, High cost of ESCO contracts due to VAT treatment, Shortage of qualified and experienced EE project designers and installers, Shortage of construction workers and specialists. Key barriers to supply of financing: Issues of financial intermediaries in assessing the investment risk and creditworthiness of final recipients/projects, Limited long-term visibility and coordination of public policies and interventions, Insufficient collateral coverage in the context of high requirements by financial intermediaries, Limited financial institutions' willingness to invest into long-term EE projects, Relatively low value of individual EE projects accompanied with high administration costs identified in the LTRS and ex-ante assessment for FI for 2021-2027 PDR and confirmed by interviews with financial institutions.
	It also offers high-level recommendations on identified barriers, addressing general existing challenges mainly from the financial and regulatory point of view. It also deals with	Annual investment gaps (i.e. investment needs not covered by public and private funding sources) have been assessed according to four scenarios based on the LTRS as follows: - The residential sector reports the largest investment gaps, which range from EUR 3.3bn











		 Amendments in Energy and tax legislation to allow for set up of on-bill/on-tax financing schemes for EE measures.
Investment Strategy (Deliverable 2)	This Report is the second in a series of deliverables supporting the design and the establishment of the NDF.	The NDF is expected to become the main financial scheme in support of Bulgaria's Long Term Renovation Strategy and to contribute to reaching national targets in terms of decarbonization of the economy.
	Following the conclusions drawn in the Market Assessment Report, it analyses best practices from other EU member states, analyses and advises on financing models, discusses selected financial products,	To address all the segments and provide proper incentives, the NDF will need to take an active role in the three pillars of awareness raising and capacity building, technical assistance, and financial products to achieve a maximum social and environmental impact.
	and identifies potential State and EU funding sources. It also closely looks at the potential overlaps with other EE support schemes to be implemented in the short to medium-term.	Bulgaria has managed to secure significant grant budgets for EE, with BGN 2.7bn of funding coming from public sources. From now until 2026/27, the market in the public sector and multi-family residential sector will mainly be dominated by grants. Initially, the NDF should focus on technical assistance and supply of financing to sectors, which are receiving only moderate public support up to 2026/27, primarily, to single-family houses. As far as commercial and industrial buildings are concerned, the NDF should in priority support an enhanced coordination of existing financial instruments and grant schemes and potentially provide additional financing in case of persisting financing gaps by 2026/27. However, from 2026/27, the need for NDF- offered funding and technical assistance will step into the foreground across all building sectors.
		The NDF needs to provide specific financial products to accelerate the renovation rate of buildings in Bulgaria. Innovative models have been considered, notably energy performance contracting implemented by energy service companies (ESCOs) and on-bill financing schemes (OBS) implemented by energy utilities. These models require dedicated technical assistance to project promoters, quality assurance schemes as well as legislative and









		regulatory amendments combined with awareness raising campaign.
		More traditional but effective financial products include portfolio guarantees to financial intermediaries, such as the Sustainability Guarantee implemented by EIF under Invest EU. To have a material impact on the market, guarantees should be structured to provide capital relief to financial intermediaries, which may require the longer-term involvement of a strong partner whose credit quality enables such high-risk coverage. It may therefore be advisable to use domestic and/or internationally well- renowned and experienced guarantee providers for this purpose. To increase impact, a closer coordination with grants may be needed, especially from the NRRP and the PDR 2021–27. In the long term, the NDF should contribute to blended financial instruments, in the form of loans combined with investment grants/capital rebates/interest subsidies for instance.
		In terms of funding sources, the key option identified in the report for a possible funding scenario is the Modernisation Fund. ETS revenues that are managed by Bulgarian Government and Energy Efficiency Obligation Schemes are also available under condition of amending the law. In a longer term perspective, the Social Climate Fund may also be a suitable funding option.
NDF Design (Deliverable 3)	The main objective of this third Report is to propose options for the design of an umbrella National Decarbonisation Fund consisting of underlying specific funds supporting energy efficiency investment types and/or final beneficiaries, especially in residential housing and buildings, commercial and public buildings.	 Three most feasible options on how to structure the umbrella NDF have been analysed: NDF – as a new legal entity: A new entity can be registered as a specialised fund pursuant to provisions of special law or as a commercial entity under the provisions of the Commercial Code. Though possibly offering higher flexibility in terms of design, creating a new entity may lead to higher incremental costs, duplication with existing institutions, delays in setting up the NDF and lower capital raising capacity due to the absence of track record.
pwc	Recommendations for the scope of technical assistance to be provided by the NDF in the form of a one-stop-shop	 NDF – as transformed unit of the existing fund: Some existing institutions may be transformed into the NDF. The latter include specialised Funds such as the Bulgarian Energy Efficiency and Renewable

	are also considered in the Report, reflecting best practices from other EU Member states.	 market knowledge and some experience in providing repayable financing to EE projects. Its transformation into NDF would require a deep evolution in terms of management, financial standing (level of capitalization, State support), expertise (notably in residential sector), financial products' offer as well as capacity to mandate implementing bodies to increase its outreach. These conditions are detailed in the report. NDF – as a Unit at Government level; Under this option, it is proposed to split the NDF tasks between: (i) an umbrella NDF with a central EE financing and policy coordination role at Central Government level and (ii) an implementation structure mobilizing existing external expertise and co-financing consisting of underlying sub-funds, the activities of which may be coordinated by one or several Holding Funds selected by the umbrella NDF.
		already existing internal procedures and institutional structure at Government level. It may also enhance close policy coordination among Ministries and public institutions in EE matters. It would also rely on the technical and financial skills of the Holding Fund manager(s) as well as the experience and infrastructure of the selected financial institutions to deploy financing for EE investments throughout the country.
		 Project Development Assistance scheme (PDA) Setting up a network of PDA One-Stop-Shops (OSS) that is offering comprehensive support to different types of sectors needs sufficient time. It is necessary to start the setting up of the umbrella OSS and the local OSS sufficiently in advance to generate a solid investment pipeline for the NDF. It is important to develop a holistic concept that covers the whole country and a wide range of sectors. It is also advisable to start with smaller steps,
pwc		for example working with existing providers such as







Sofia or Gabrovo and replicate the concept across the country.
Technical Assistance should be understood as a business model and not as a "free lunch". Experience shows that free support leads to free riding and a lower conversion rate. Additionally, it is important to generate revenues that allow for the OSS to continue their operation with a lower operational subsidy rate.
Additional funding sources should be considered. One possible source is the ELENA facility. Alternatively, utilities could be considered as providers of funding for the OSS as a part of their Energy Efficiency Obligations under Art. 7 of the Energy Efficiency Directive. This is for example done in Ireland where selected utilities operate successful OSS to fulfil their obligations.
The NDF needs to set up a centralised in-house Technical Assistance Unit, which will operate as an Umbrella One-Stop-Shop. It will have both co- ordination/supervision functions and direct client support functions via a helpline and web platform. A network of local OSS needs to be developed gradually by way of the NDF tendering this service such as through open calls for proposals. The network will grow in a bottom-up fashion through local initiative, which is expected to be mostly from the private sector; some local OSS may emerge as a public-private partnerships with the municipality if the circumstances are favourable.
Local OSS need to offer integrated TA services which means covering all stages of the customer journey from project screening to implements, and for all customer segments (residential and commercial). The recommended business model is the 'Co- ordination' one, which seems most suitable for the Bulgarian context in terms of trust, responsibility, and cost.
The NDF needs to subsidise the newly formed local OSS at least during the first few years of their operation since they will not be profitable, thus







long-

		term. However, local OSS need to find the right formula and pricing model to charge clients for their services (the concept of a 'shop').
Human Resources Plan (Deliverable 4)	The Fourth Report elaborated on the setting up of the best approach towards Human Resources planning for the National Decarbonisation Fund.	 Three levels for the human resourcing were discussed, whereas each proposed level approaches the matter in a different way: 1. Umbrella Fund – Coordination Unit This Unit shall ensure links between the State budget and Holding Funds' accounts, but it is not expected to manage the accounts itself. This Unit should be ideally made up of up to ten employees (Executive Director, Programme Coordinators and Manager). 2. Holding Fund This level of Fund shall rely on existing Holding Fund managers' capacities and infrastructure (e.g. IFIs, national institutions) who have a proven track record in terms of managing large scale financial instruments for energy efficiency investments in buildings. Therefore, no new structure is expected to be created to perform this role in the context of the NDF. This report however provides an example of a typical n HF structure and organisation.
		3. Financial Intermediary(ies) / Sub-fund(s) This level of Fund shall aim at leveraging public and private institutions active in the energy efficiency financing field in the Republic of Bulgaria and to include them as financial intermediaries in the whole NDF set up. It is not recommended to create a new specific financial intermediary structure but to better align and support existing ones for a higher impact on the ground. However, should a new Fund be created or result from the transformation of an existing one, this report provides guidance regarding the key staff roles and qualifications that would be required.









Roadmap	assignment shall serve as a high-level general guide to NDF's governance and processes for the internal and external stakeholders, summarising key provisions of NDF's defining documents and the relevant law, and the main internal operating policies and procedures. Once in operation, NDF shall develop more detailed procedures in several areas. Separate protocols shall be developed under the responsibility of the management. The manual shall be regularly reviewed and amended to reflect new requirements and best practices. This Manual of Procedures also deal with structure and main responsibilities within the Fund. The Manual contains an annex listing other procedures applicable to the creation of the new Fund or upgrading of the existing one.	 regards to the structuring recommendations made in the report 3 <i>Design of the NDF</i>, which overall seeks to achieve a stronger coordination of public policies and funding streams for EE investment in buildings in Bulgaria. It also aims at operational level to leverage the experience, skills and distribution networks of existing public and private financial intermediaries to facilitate project promoters' customer journey and accelerate the pace of EE retrofit investments in Bulgaria. Procedures can be distributed as follows between the three levels of the structure: Investment policy definition and sources of funding identification Designing of capacity building and project development assistance Entrustment and establishment of Holding Funds Selection of financial intermediaries Awarding and contracting selected financial intermediaries Monitoring and Reporting These tasks may however be grouped and taken over by a single entity in case Bulgarian authorities decide to support this latter option. It however comes with several challenges and conditions to be met that are extensively described and analysed in the report 3 – <i>Design of the NDF</i>. In addition, In recognition of the initial feedback provided by the Steering Committee, additional more generic procedures have been developed, to provide guidance to Bulgarian authorities if a single delivery entity is taken forward as the preferred option .
(Deliverable 5)	presenting the roadmap of the establishment of the NDF. The roadmap was designed in a dual way to provide the Bulgarian authorities with sufficient flexibility regardless of the NDF structure option (NDF design structure) they decide to select. Two possible directions are described in	separate Chapter of this Report.
pwc	ECORYS 🛬	

the dual roadmap – road towards the Umbrella option (Coordination Unit)/Holding Fund (HF); and the road
towards transformation of an existing Fund. It should be
noted that thew two options
can be combined with the BEERSF acting as an
enhanced financial intermediary

*Internal presentations and presentations to the Steering Committee are not listed in the table above.









4. Roadmap

The following dual roadmap was designed in a way to provide Bulgarian authorities with sufficient flexibility regardless of the NDF structure option (NDF design structure) they decide to select.

Legend Road towards establishment the National Decarbonisation Fund (NDF) Road towards the Umbrella option (Coordination Unit) / Holding Fund (HF) Road towards transformation of an existing Fund Common road Q1 2023 Step 1 (a): The Umbrella NDF option is adopted Following the analysis of various options for the establishment of NDF, its potential structure, legal, technical and financial aspects, ownership and governance, including Holding fund(s), sub-funds, intermediaries and Technical Assistance, is recognised as the optimal option for NDF. Step 1 (b): The transformation of existing entity option is selected Q1 2023 Step 2 (a): A Government body/Ministry hosting the **Coordination unit is selected** The Government body/Ministry already has a mandate to intervene in decarbonisation and/or is involved in structuring and managing financial instruments).

Step 2 (b): The Government decides which of the existing entities to be transformed into NDF



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Q1-Q2 2023

Step 3 (a): The governance model is adopted

This governance model consists of two main levels i.e. a Steering Committee at Government level and an Executive Director. It ensures that the government retains full control over the NDF, while enabling efficient management. The governance structure will have to be endorsed through legislative amendment or a whole new Law on NDF in which the new structure, its overall mandate and key objectives are outlined.

Step 3 (b): The governance model is adopted

Regardless of the option - amendments to existing or drafting of a new Law will be required to set up NDF.

Q2 2023

Step 4 (a) : The Council of Ministries approves a regulation that modifies the Statute of the relevant Ministry/Governmental body chosen to host the umbrella NDF as its unit

The structure, staffing, operations, and decision-making process is defined in a ministerial order.

Step 4 (b)

This step is not necessary in the case of the Transformation of existing entity.









Q2-Q3 2023

Step 5 (a): Holding Fund manager(s) is/are entrusted/selected

Holding Fund manager(s) may be selected by the umbrella NDF/Coordination unit.

The HF manager(s) may then - once the funding agreement has been signed with the umbrella NDF - select through Calls of Expression of Interest financial intermediaries to deliver financing to investment projects.

The selected (public and private) financial institutions/debt funds will be vested with the mission of channelling the public funds coordinated by NDF to final beneficiaries directly to investment projects. Selected financial institutions may also use their own resources combined with public funds and/or under a publicly funded guarantee and are expected to have strong delivery capacities and excellent market knowledge and track record.

Step 5 (b): NDF bodies are established

Management/Supervisory board established by the Ministry in charge of the transformative entity, based on the provisions of the Law referred to in Step 4(b). This Law will be enlisting the members of these Management/Supervisory boards. Unlike the Step 7(a), the alternative scenario Step 6(b) will not include appointment of an Executive director.









Q4 2023

Step 6 (a): NDF bodies are established

There are three bodies that need to be established for effective governance of the NDF: Steering Committee, Executive Director, Investment Committee.

Sub-step 6.1 (a): Steering Committee (Consultative Council) is established

It consists of representatives from the Ministries that have responsibility for the decarbonisation of the building stock or energy/environmental effects: Ministry of Energy, Ministry of Environment and Water, Ministry of Regional Development and Public Works, Ministry of Growth and Innovation and Ministry of Finance, with the aim to facilitate coordination of strategic decisions with Government priorities in different policy areas.

To ensure high performance of the institution a professional manager is appointed as an **Executive Director**, following a competitive process and approval of the Steering Committee. The Executive Director is appointed by the hosting Government body/Ministry.

The **Investment committee** may be set up once the HF manager is entrusted.

Step 6 (b): Fund Manager is selected

Fund Manager is selected and appointed by the Management/Supervisory board. This will be done upon completion of a transparent procedure, conditions for which are prepared in Step 3(b). The Fund Manager will appoint the Executive Director.



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Q1-Q2 2024

Step 7: Process of obtaining the sources of funding is started

NDF maps currently available and prospective sources of funding, develops a strategy for getting access to these funds and executes it. This action point contains several additional sub-steps:

- The Ministry of Energy applies to Modernisation Fund for the benefit of the NDF
- NDF applies to obtain a part of revenues from EU ETS auctions that are assigned to Bulgaria
- NDF can apply to obtain contributions from Shared Management Funds
- NDF can become an instrument for obliged parties under the Energy Efficiency Law to make instalments into, in fulfilment of their obligations
- NDF applies for other energy-related budgetary revenues

The government may consider earmarking some energy-related budgetary revenues to the NDF.

Q3 2024

Step 8: NDF fulfils conditions to be appointed as a body managing funds

This includes undergoing audits, adjusting internal procedures and complying with the specific financial and legal requirements of a given donor.

Q3 2024

Step 9: Practical and unified approach is negotiated with sponsors if applicable

It is essential to have a set of core terms that are common for all sources.

Q3 2024

Step 10: NDF procures the services of implementing project development assistance local providers

This step concerns local project development assistance providers and includes defining their mandates and performance indicators, endorsing the operational procedures and assigning responsibilities, and coordinating and supervising their activities.

Step 11: NDF starts to operate

It covers several areas: raising funds, programming and developing financial schemes, selecting and contracting financial intermediaries and TA providers, disbursement, monitoring, reporting and cash management. As the most important action point, additional sub-steps have to be taken into account:

• Financial and TA programs are designed, tailored to each sub-sector When designing financial and TA programs, NDF will need to define the objectives and eligibility criteria of each program. Based on the analysis mentioned in sub-step 10. it should include objectives, a budget and implementation timeframe, eligible projects and beneficiaries, types of financial instruments / grants, terms of financing, monitoring, and reporting requirements, types of intermediaries that will implement. It should also include a technical assistance component.

• Standards and scope of technical assistance are defined Sustainable Energy Development Agency (SEDA) may for instance define the scope and standards of technical assistance services to be deployed and

scope and standards of technical assistance services to be deployed and funded by the NDF.

• Steady liquidity and accurate financial information are ensured In light of the existing and future commitment of the NDF vis-a-vis third parties this step is key. It is necessary to balance the need for sufficient short-term liquidity to meet all reasonable cash requirements in full and on schedule, and maintain the security and yield potential of investments. Units need to prepare accurate cash forecasting, which allows for effective cash-flow monitoring.

• Shifting operating focus of the NDF over time

In the first years, the NDF should focus on technical assistance and enhance the supply of combined financing to sectors which are receiving low public support or those receiving repayable public support and the impact of which could be significantly enhanced through the provision of TA and grants. This may primarily take the form of enhanced coordination of existing financial instruments and grant programmes. From 2026/27, the NDF should provide technical assistance and financial schemes to all sectors through financial intermediaries, still engaging in awareness and capacity building programs, where needed.

Q4 2024

Step 12: A broad communication campaign is carried out by NDF to raise overall awareness among all stakeholder groups

The NDF should work with all sectors to raise awareness (to a lesser extent in the public sector, which is already very engaged). All sectors should be offered capacity building programs. Prospective beneficiaries need to learn about an opportunity, acknowledge that it is profitable and doable, engage in obtaining financing, and implement a measure. To some extent, the NDF should operate like a commercial business that places a new product on the market.

5. Recommendations for improvements of regulatory frameworks related to NDF operations

5.1. Scope of the Review

The present review focuses on the Bulgarian legislation that has a direct impact on the intended NDF business model and modus operandi. Current energy efficiency legal and regulatory framework related to the public, commercial, and residential market segments are considered to be of major importance for structuring of a successful NDF market strategy. In that reference, the provisions of the following laws and bylaws have been reviewed:

- Energy Efficiency Act (EE Act);
- Spatial Development Act (SD Act);
- Condominium Management act (CM Act);
- Public Finance Act;
- Public Procurement Act;
- Ordinance 16-347/02.04.2009;
- Ordinance № Е-РД-04-1 of 03.01.2018;
- Ordinance № Е-РД-04-1 of 22.01.2016;
- Ordinance № Е-РД-04-2 of 22.01.2016;
- Ordinance No. Е-РД-04-3 of 04.05.2016;
- Ordinance № 7 of 2004;
- Ordinance No.PД-16-347 of 02.04.2009.

Finally, a list of recommendations for improvements in national regulations is suggested with the objective of supporting a quicker and smoother operationalization of the NDF.

5.2. General Regulations

There are several regulations that are rather comprehensive and are covering all market segments to be targeted by NDF (public, private and residential buildings). These regulations are of paramount importance to the overall structure of the EE market ecosystem in Bulgaria, e.g., defining the roles and responsibilities of key stakeholders, imposing obligations on market participants, defining the forms of interactions between regulators and market stakeholders, as well as between energy efficiency service providers and consumers, etc.

5.2.1. Energy Efficiency Obligation Scheme

An active Energy Efficiency Obligation Scheme (EEOS) is designed as means to support the achievement of the national targets. The EEOS is stipulated in art. 14a of the EE Act as a tool intended to be kept in force over the 2021-2030 period. It defines individual energy saving targets and respective obligated parties. Obligated parties under the EEOS are various market participants such as:

- end suppliers, suppliers of last resort, traders licensed for the activity "electricity trading", that are selling electricity to end customers in quantities exceeding 20 GWh per year;
- heat transmission companies and heat suppliers that are selling heat to end customers for over 20 GWh per year;

- end suppliers and natural gas traders selling to end customers more than 1 million cubic meters per year;
- liquid fuel traders selling to end customers more than 6.5 thousand tons of liquid fuel per year, except for transport fuels;
- solid fuel dealers who sell to end customers more than 13 thousand tons of solid fuels per year.

The methodologies for determining the national energy efficiency target and the overall cumulative energy savings target, the modalities for implementing the energy savings obligation scheme, including the assignment of individual energy savings targets to the obliged parties, and taking into account the effects of the energy savings targets achieved through implemented alternative measures are set out in a designated Regulation act.

In order to meet their individual energy saving targets, obliged parties may:

- offer energy efficient services to end users at competitive prices through an energy service provider;
- make contributions to the Energy Efficiency and Renewable Sources Fund or other financial intermediaries to finance energy efficiency activities and energy efficiency measures to the amount of the investments necessary for achieving their individual targets;
- enter into agreements with providers of energy efficiency services or other parties to acquire Energy Savings Certificates.

5.2.2. Energy Savings Certificates and Verification of Energy Savings

Energy Savings Certificates are intended to prove the contribution of their holder to the implementation of energy efficiency improvement measures. Energy Savings Certificates are issued by the Sustainable Energy Development Agency (SEDA) following a procedure detailed in Ordinance No. E-P₄-04-3 / 04.05.2016 on the eligible measures for realizing energy savings at end-user consumption level and the ways for verification of the achieved energy savings.

Energy savings certificates can be transferred from:

- obliged party to another obliged party under art. 14, par. 4 of the EE Act when the first obliged party has exceeded its individual energy saving target;
- a non-obliged party to an obliged party under art. 14, par. 4 of the EE Act.

Same Ordinance / Ordinance № Е-РД-04-3 of 04.05.2016 / determines also:

- eligible measures for achieving energy savings in final energy consumption;
- the ways and means of verifying the achieved energy savings;
- the methodology for estimating energy savings.

Verification of achieved energy savings shall be carried out after the implementation of energy saving measures / activities at end consumer level in two alternative ways:

• energy efficiency audit of buildings, carried out in accordance with Ordinance № E-PД-04-1 of 22.01.2016, not earlier than one year after the implementation of the energy saving measure(s), or through

• application of methodologies developed under the conditions and rules of Chapter Four of Ordinance No. E-PД-04-3 of 04.05.2016.

The verification of the achieved energy savings is carried out by certified entities (companies or individuals) enlisted in the register under art. 44, par.1 and/or under art. 60, par.1 of the EE Act, i.e. by entities qualified to perform energy efficiency audits.

5.2.3. Energy Efficiency Audit Framework

According to item 19, paragraph 1 of the additional provisions of the EE Act, the energy efficiency audit (EEA) is a process based on a systematic method for determining and evaluating the energy flows and costs in buildings, enterprises, industrial systems, and external artificial lighting systems, defining the scope of techno - economic parameters of energy efficiency improvement measures. Therefore, the energy audit is the basis on which the energy efficiency improvement measures applicable to the specific contract are defined, as well as the subsequent verification methodology of the energy savings is designed upon.

The legal framework setting forth the rules and procedures for conducting energy efficiency audit of a building, industrial system or public lighting system includes:

- the EEA stipulates that energy audits and verification activities in buildings are considered as EE improvement activities;
- Ordinance № E-PД-04-1 of 03.01.2018 defines the range of data subject to recording in the registers under the EE Act, the collection and use of information from these registers, the conditions and procedures for energy efficiency consultants qualification, verification of buildings, preparation of conformity assessments of investment projects and preparation of energy savings evaluation reports;
- Ordinance № E-PД-04-1 of 22.01.2016 for energy efficiency audits, verification and evaluation of energy savings in buildings determines the conditions and procedures for:
 - issuance of certificates for energy performance of buildings;
 - conducting energy efficiency audits for buildings and parts of buildings in operation, including the preparation of audit reports;
 - issuance of certificates for energy performance of buildings and parts of buildings in operation;
 - evaluation of the achieved energy savings in buildings or parts thereof.

5.2.4. Energy Efficiency Audit Implementation

According to the provisions of the EE Act, following building types are subject to mandatory audits:

- Public buildings with a total built-up area of more than 250 square meters, and all private buildings in operation except for:
 - temples and prayer facilities of all legally recognized religious denominations;
 - temporary buildings with a planned use period of up to two years;
 - low energy use non-residential buildings used for agricultural activity;

- production buildings and parts of production buildings;
- residential buildings which are used as intended for up to 4 months per year, or alternatively for a limited period of time per year, and which have an estimated energy consumption of less than 25 per cent of that expected for year-round use;
- detached buildings with total built up area of up to 50 square meters.

5.2.5. Energy Performance of Buildings – standards & indicators

Ordinance № 7 of 2004 on the energy performance of buildings sets out the requirements for the energy efficiency level in buildings. These requirements apply to all investment projects for:

- construction of a new building;
- reconstruction of an existing building that changes its energy characteristics;
- reconstruction, major renovation or major overhaul of a building, when it covers more than 25 percent of the total building envelope area whereby its energy characteristics change.

This by-law regulates:

- the minimum energy efficiency requirements for residential and public buildings;
- the methodology for calculating energy consumption indicators and energy performance features of buildings;
- the reference limits of the integrated energy indicator "specific annual primary energy consumption" in kWh / m², determined by the scale of energy consumption classes;
- the reference values of the coefficient of thermal transmittance through the building envelope elements;
- the requirements for moisture resistance, air permeability, water resistance and sun protection during the summer period;
- the technical requirements regarding the efficiency of heat / cold generators in buildings, including decentralized renewable energy systems;
- the requirements for energy consumption assessment in investment projects.

Ordinance № E-PД-04-2 of 22.01.2016 on the indicators for energy consumption and energy characteristics of buildings regulates:

- the ways of determining energy consumption indicators and the energy performance of buildings;
- the methodology for calculating energy consumption indicators and energy performance of buildings;
- the parameters of the energy consumption class for different building categories;
- the limit values of the integrated energy indicator "specific annual primary energy consumption" in kWh / m² in reference to energy consumption classes for different categories of buildings.

5.2.6. Energy Performance Contracting

Energy Performance Contracting (EnPC) is considered an innovative business model for implementation and adaptive financing of energy saving measures. It presents an additional opportunity that can be seized and developed by the NDF.

Art. 72, par. 1 of the EE Act introduces the legal definition of an energy performance contract as a type of energy efficiency promotion scheme; whereas par. 2 stipulates eligible contractual parties, e.g., Energy Service Companies (ESCOs). Minimum content requirements of the EnPC can be found in art. 73: (i) the normalized energy consumption identified by an EE audit, (ii) a list of energy efficiency measures to be implemented, (iii) the guaranteed level of energy savings, etc.

5.3. Specific regulations

5.3.1. Public Segment

5.3.1.1. Government Buildings

Another provision in the EE Act that supports the achievement of national energy efficiency targets is found in art. 23. It sets forth the obligation that the EE characteristics of at least 5% of the gross floor area (GFA) in buildings, owned by the government, should be improved each year. Each building with GFA over 250 m² that is not fulfilling the minimum energy efficiency requirements should be considered by the central administration.

5.3.1.2. Energy Performance Contracting in Public buildings

Another definition and potential application approach of the EnPC is also provided in Ordinance No.P.J.-16-347 of 02.04.2009 on the conditions and procedure for determining the amount and payment of the planned funds under EnPC - contracts leading to energy savings in buildings which are state and/or municipal property. The ordinance adds a number of requirements that have to be fulfilled in order financial resource from the central budget to be made available for repayment investments made through EnPC mechanism, e.g., maximum contract duration of 10 years, etc.

5.3.2. Commercial Segment

Art. 38 of the EE Act stipulates that owners of private buildings that provide public services are required to implement the energy efficiency measures prescribed in their EE audit reports not later than 3 years after obtaining the report.

5.3.3. Residential Segment

The CM Act regulates the relations related to the management of the common parts of multifamily residential buildings, as well as the rights and obligations of the owners, users and inhabitants of separate units or parts of them. According to this law, owners are obliged to pay the cost of repair, reconstruction, redesign, major overhaul and/or renovation of the common parts of the building. Additional obligations include payments for replacement of common installations or equipment. A dedicated Repair and Renovation Fund of the condominium should be established. Its financial resource is raised through regular installments paid from homeowners, commensurate with the ideal

parts of the building owned. The owners must keep the common parts of the building and their own property in a technical condition, fulfilling the requirements of art.169, par.1 of the SD Act.

According to the CM Act, the legally acceptable forms for condominium management are the general assembly of owners and/or the association of the owners. The management entities defined are (i) the General assembly (GA) and (ii) the Management Board (Manager).

In respect to the maintenance, reconstruction, and repair of the common parts of the building, the General assembly:

- adopts an annual budget and approves annual expenses to be made by the Manager;
- determines needed financial contributions for managing and maintaining the common parts of the building;
- determines the amount of the installments to the Repair and Renovation Fund;
- adopts a plan for carrying out repairs, reconstructions, redesign, and other activities in the common parts of the building;
- decides on major repair and/or renovation of the building;
- decides on assigning activities for the maintenance of the common parts of the building to a legal or natural person against remuneration;
- decides on receiving (i) loans for necessary or urgent repairs and (ii) grants and subsidies in reference to maintaining building's common parts;
- procures a certified entity to carry out an energy audit;
- takes other relevant decisions.

In all the above cases, a decision of the General assembly is required.

The CM Act sets out the rules for organizing the General assembly meeting (art. 12, 13, and 14). Compliance with these rules is essential for the validity of decisions of the General assembly, e.g., a quorum requirement, etc. Another important provision is that the owners have the right to vote corresponding to their share in the common parts of the building.

5.4. Recommendations for improvements in the legal/regulatory framework

There are a number of improvements that can be made in Bulgarian regulatory framework, leading to a quicker and sustainable green transformation of the national building stock. These can be grouped as follows:

- General Recommendations
 - minimum energy performance standards and indicators of buildings can be shifted to more ambitious levels in accordance with the "Fit for 55" package;
 - the ESCOs should be allowed to pay the required VAT in installments after completion of the energy efficiency measures implementation phase;
- Recommendations for Public Buildings

- the ability of the Municipalities to borrow long term loans for implementation of investment projects is currently restricted by the Public Finance Act (the annual debt instalments that a municipality can make cannot exceed 15% of the average (for the last 3 years) amount of its own revenues plus the compensatory subsidy received by the central government;
- the Municipal Debt Act currently limits the total amount of Energy Performance (ESCO) Contracts that a Municipality can enter into not more than 15% of the average (for the past 4 years) amount spent for capital expenditures;
- Ordinance 16-347 should be updated to reflect the recommendation of "A Guide to the Statistical Treatment of Energy Performance Contracts", developed by Eurostat and European Investment Bank;
- Public authorities should always check for the feasibility of implementing energy efficiency measures by means of EnPC in accordance with the "Fit for 55" package in order to achieve a higher leverage of the public resource;
- Recommendations for Commercial Buildings
 - no penalties are currently imposed for not fulfilling the requirements of the EE Act, e.g., obligations to conduct energy audits, to implement the prescribed energy saving measures not later than three years after the energy audit, etc.
 - no incentives are present in the cases of rented buildings (shopping malls, office centres, etc.);
- Recommendations for Residential Buildings
 - the CM Act does not sufficiently regulate the rights and obligations of apartment owners within a multifamily building and fails to create reliable mechanisms for enforcing decisions made by the General assembly (a legislative update is pending);
 - the CM Act does not allow condominiums to borrow from banks (a legislative update is pending);
 - a more stringent regulation and strengthening of the role of Professional building managers is needed (a legislative update is pending);
 - the right conditions should be set that enable for the enforcement of a mandatory building renovation fee for all owners;
 - adoption of an "energy poverty" definition that would allow a targeted support for homeowners unable to pay for renovation of their buildings;

