SOFIA MUNICIPALITY

SUSTAINABLE ENERGY AND CLIMATE ACTION PLAN 2021-2030

Including: Energy Efficiency Program of Sofia Municipality, 2021-2030

Long-term program of Sofia Municipality to promote the use of energy from renewable sources and biofuels , 2021-2030

ANNEX 2 :

SWOT ANALYSIS IN RELATION TO THE SECTORS INCLUDED IN THE BASELINE EMISSIONS INVENTORY

August 2021

ANNEX 2: SWOT ANALYSIS IN RELATION TO THE SECTORS INCLUDED IN THE SCOPE OF THE BASELINE EMISSIONS INVENTORY

Sector	Strengths (S)	Weaknesses (W)
Residential Buildings Sector	• Sofia Municipality can influence the cessation of the use of some fuels through administrative measures • Sofia Municipality can facilitate the implementation of projects in the next stages of the *National Program for Energy Efficiency of Multifamily Residential Buildings (NPEEMRB)* through administrative and technical assistance to owners' associations • The local administrations have the potential to work directly with property owners / owners' associations • Sofia Municipality participates in international projects for organizing trainings and communication campaigns in support of building renovation in the housing sector	• Insufficient activity in working with the population in the implementation of the *NPEEMRB*, as a result of which the share of renovated buildings is small against the background of the potential in the municipality. • Insufficient technical capacity of local administrations • Uncertainty about the conditions for a possible extension of the *NPEEMRB*
"Tertiary buildings"	• Sofia Municipality can influence the cessation of the use of some fuels through administrative measures	• Sofia Municipality cannot directly influence the implementation of measures to reduce emissions in the sector, while the share of GHG emissions from this sector is large compared to the overall level of emissions.
Municipal Buildings Sector	• The development of the sector and the implementation of projects and measures to reduce emissions is entirely under the control of the Sofia Municipality. • In municipal buildings, despite the measures implemented so far, there is still significant potential for increasing energy efficiency.	• Many buildings have so far been renovated to not very high levels of energy efficiency, which may make the implementation of additional measures in these buildings financially unprofitable, as some of the potential energy savings have already been realized. • There is no practice of requiring consideration of different packages of measures and determining the most cost-effective solution throughout the life cycle when commissioning energy efficiency audits. • No conditions have been created for monitoring the energy consumption in the renovated buildings, including with regard to the energy produced by RES.

Sector	Strengths (S)	Weaknesses (W)
Transport Sector	• Sofia Municipality exercises direct control over the development of the public and municipal transport; • Although indirectly, Sofia Municipality can also influence the development of private transport through administrative measures. • The approved *Sustainable Urban Mobility Plan* envisages the implementation of a number of activities that will reduce GHG emissions.	• Despite a number of projects in the public transport sector, greenhouse gas emissions are still rising, albeit at a slower pace than in other transport sub-sectors. • The increase in the share of electricity use in transport leads to an increase in greenhouse gas emissions in the national electricity mix during the SECAP period.
Waste sectors *	• Sofia Municipality has implemented many activities in the field of waste management since 2007, which lead to a reduction in the number of landfills. This will lead to a reduction in GHG emissions in 2030.	• No information is collected on the amount of methane caught and flared, which does not allow to take into account the effect on the reduction of GHG emissions.
External Public Lighting Sector	• The development of the sector and the implementation of projects and measures to reduce emissions is entirely under the control of the Sofia Municipality. • At this stage, there is significant potential in the system for outdoor public lighting of the Municipality to increase energy efficiency.	• The inevitable construction of new sections of the outdoor public lighting system will be associated with the generation of new amounts of GHG emissions, which will reduce the effect of measures to modernize existing lighting.
Industry and Construction Sector	• By 2018, the sector has already achieved a reduction in emissions of nearly 40%.	• Sofia Municipality cannot directly influence the implementation of measures to reduce emissions in the sector, and at the same time the share of GHG emissions from this sector is large compared to the overall level of emissions.

Sector	Opportunities (O)	Threats (T)
Residential Buildings Sector	• *The National Long-Term Strategy to Support the Renovation of the National Building Fund from Residential and Non-Residential Buildings by 2050* envisages the renovation of over 60% of residential buildings to high levels of efficiency and the provision of financial instruments for the renovation. • The already conducted *NPEEMRB* has created greater public interest and understanding regarding the importance of building renovation. • Within the framework of the draft *Plan for Reconstruction and Sustainability of Bulgaria* , the government announced that BGN 4.5 billion will be allocated for energy efficiency projects, of which over BGN 1.6 billion will be directed to the renovation of residential buildings. • A number of studies have been carried out in connection with the continuation of the *NPEEMRB,* which gives reason to expect that there will be such a continuation. • With the adoption of the *Green Deal* and *the Renovation Wave communication,* the European Commission is setting new and higher targets for reducing GHG emissions and promoting energy efficiency and the use of energy from renewable sources, which will be reflected in the amendment of European regulations and directives, and hence in the national legislation in the field. Higher regulatory requirements for the energy efficiency of buildings will gradually affect the efficiency of the building stock as a whole. • *The EC 's " Renovation Wave "* communication envisages changes to the EPBD to introduce minimum energy performance requirements for building renovations. In the draft *Recovery and Resilience Plan of Bulgaria*, the minimum class of renovation is " B " • Obligatory certification of all buildings is expected in 2022, and the certificate of energy performance, along with the prescribed measures for implementation, will be an integral part of the building passport	• 100% grant for all households, as promoted by the *National Program for Energy Efficiency of Multifamily Residential Buildings,* created unrealistic attitudes among the population that the state should renovate residential buildings without financial participation of the owners. • In case of potential introduction of a requirement for co-financing, given the fragmented ownership of multifamily residential buildings and the occupancy by people with different social status, for owners with small purchasing power it is necessary to offer an individual solution to support the renovation of residential buildings. • The requirement for the mandatory construction of new buildings that meet the national definition of buildings with nearly zero-energy consumption, deriving from the text of the Energy Performance of Buildings Directive (EPBD), which is currently set in the National Plan for Nearly Zero-Energy Buildings, has not yet been introduced in the regulations. • There are still no financial mechanisms in place to provide good conditions for obtaining loans in order to meet the potential requirement for co-financing by owners, especially in multi-family residential buildings

Sector	Opportunities (O)	Threats (T)
"Tertiary buildings"	• With the adoption of the *Green Deal* and the Renovation Wave communication, the European Commission is setting new and higher targets for reducing GHG emissions and promoting energy efficiency and the use of energy from renewable sources, which will be reflected in the amendment of European regulations and directives, and hence in the national legislation in the field. Higher regulatory requirements for the energy efficiency of buildings will gradually affect the efficiency of the building stock as a whole. • Obligatory certification of all buildings is expected in 2022, and the certificate of energy performance, along with the prescribed measures for implementation, will be an integral part of the building passport • Within the Decarbonisation Fund, provided in the *National Long-Term Strategy to support the renovation of the national building stock of residential and non-residential buildings until 2050* and explicitly mentioned in the *Recovery and Resilience Plan of Bulgaria*, a special component for renovation of public buildings is envisaged	• So far, there are no targeted communication campaigns aimed at increasing energy efficiency and the use of renewable energy for the sector. • The requirement for energy efficiency audit for buildings with an area of over 250 sq.m. and the implementation of the prescribed measures within the statutory deadlines is not strictly controlled • The requirement for the mandatory construction of new buildings that meet the national definition of buildings with nearly zero-energy consumption, deriving from the text of the Energy Performance of Buildings Directive (EPBD), which is currently set in the National Plan for Nearly Zero-Energy Buildings, has not yet been introduced in the regulations. • The *National Long-Term Strategy to Support the Renovation of the National Building Stock of Residential and Non-Residential Buildings by 2050* envisages the renovation of just over 16% of public buildings - public and private property, which is extremely insufficient
Municipal Buildings Sector	• Given the policies imposed by the EC, as explicitly stated in the Green Deal communication, it is expected that significant financial resources will be available to municipalities for "deep renovation" of municipal buildings during the period of operation of the SECAP. • Higher regulatory requirements regarding the energy efficiency of buildings are expected to be taken into account in the renovation of municipal buildings. • The launch of a procedure for submitting project proposals for energy efficiency of buildings within the EEA Financial Mechanism is expected, in which projects for energy efficient renovation of municipal buildings will be exclusively funded. • Within the Decarbonisation Fund, planned in the *National Long-Term Strategy to support the renovation of the national building stock of residential and non-residential buildings until 2050* and explicitly mentioned in the *Recovery and*	• At this stage, there is still no clarity on the distribution of funds under the "Green Deal" • The requirement for the mandatory construction of new buildings that meet the national definition of buildings with nearly zero-energy consumption, deriving from the text of the Energy Performance of Buildings Directive (EPBD), which is currently set in the National Plan for Nearly Zero-Energy Buildings, has not yet been introduced in the regulations. • The *National Long-Term Strategy to Support the Renovation of the National Building Stock of Residential and Non-Residential Buildings by 2050* envisages the renovation of just over 16% of public buildings - public and private property, which is extremely insufficient

Sector	Opportunities (O)	Threats (T)
	Resilience Plan of Bulgaria, a special component for renovation of public buildings is envisaged.	
Transport Sector	• The private car fleet is gradually being renewed with new, more efficient and environmentally friendly cars. • It is observed that more and more people use bicycle transport and individual electric vehicles • Pilot projects and initiatives for limiting car traffic in the central regions of Sofia in the summer months are being implemented • The change of public opinion in the direction of limiting polluting vehicles can be stimulated with the help of a number of active civil movements and NGOs • There are opportunities for implementation of projects for production of electricity from renewable energy sources for own consumption in order to utilize it in the public transport system.	• The main share of all GHG emissions in the Transport sector is due to the private transport. At the same time, at this stage, there is no access to reliable data on fuel and energy consumption in private transport, which could potentially be obtained from the database of annual roadworthiness tests. Therefore, the effect on the reduction of GHG emissions from measures affecting private transport cannot be taken into account at this stage. • The economic crisis caused by the global COVID-19 pandemic may delay the transition to greener vehicles
Waste sectors *	• Sofiyska Voda AD has installed an installation that utilizes methane from wastewater and provides the production of "green" electricity, which already covers 100% of the own needs of wastewater treatment plant Kubratovo. Investments are envisaged that will allow the installation to produce even more "green" electricity.	• Generation of more non-recyclable waste due to increased use of medical protective equipment and individual packaging of consumer goods due to the COVID-19 pandemic
External Public Lighting Sector	• Well-developed technologies allow the achievement of significant emission reductions; • Market price levels allow the implementation of large-scale projects; • It is possible to attract funds for the implementation of projects in the sector through the funds to the "Green Deal" of the EC. • The sector has been identified as a priority in *the Recovery and Resilience Plan of Bulgaria* ,	• The share of emissions from the sector in relation to the total level of GHG emissions is small and no particularly significant contribution to the overall emission reductions can be expected. • In street lighting, it is difficult to replace conventional electricity with electricity produced by renewable energy sources for own consumption, due to the specific mode of consumption and the still high costs of energy storage.
Industry and Construction Sector	• Technological modernization, related to increasing the competitiveness of enterprises, inevitably leads to increased energy efficiency and reduced GHG emissions.	• At this stage, it is still unclear about the distribution of funds under "Competitiveness" Operational Programme, which is the main driver for the modernization of industrial enterprises

Sector	Opportunities (O)	Threats (T)
	• The existence of clustered industrial zones favors the establishment of energy cooperatives for the production and shared consumption of energy from renewable sources. • Although the COVID-19 pandemic is a very negative factor for both human health and the economy, in terms of GHG emissions, this factor helps to reduce them. • The sector has been identified as a priority in *Bulgaria's Recovery and Resilience Plan.*	• There is still no appropriate legal framework for setting up energy cooperatives at national level. • So far, there are no targeted communication campaigns aimed at increasing energy efficiency and the use of renewable energy for the sector. • The economic crisis caused by the global COVID-19 pandemic may delay the modernization of industry and the transition to greener production technologies