

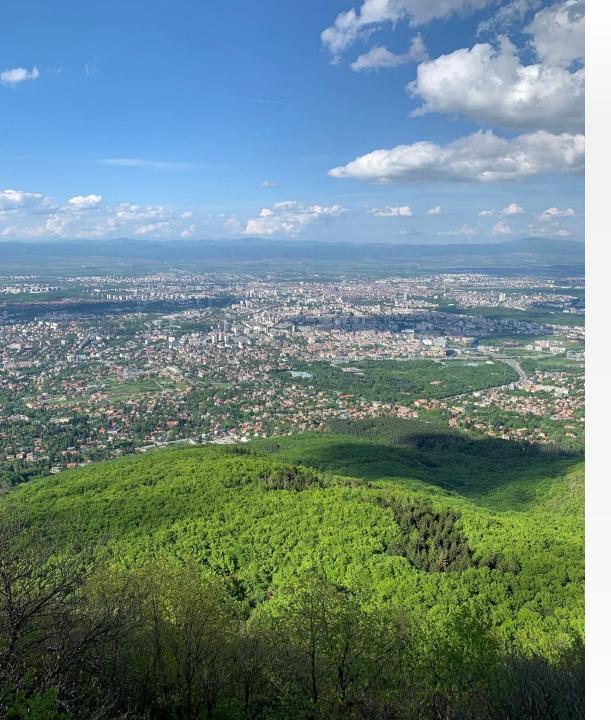
SOFIA MUNICIPALITY



PROJECT "ODYSSEE-MURE, MONITORING EU ENERGY EFFICIENCY FIRST PRINCIPLE AND POLICY IMPLEMENTATION"

2nd MEETING

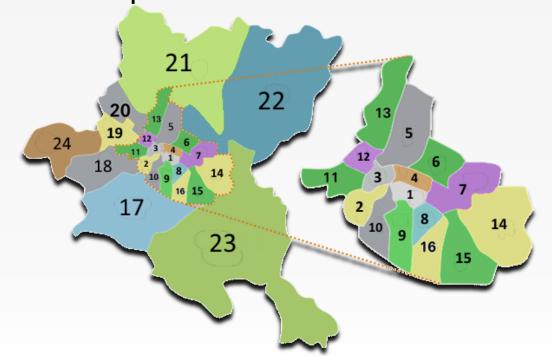
Thu 12, November 2020



About Sofia Municipality

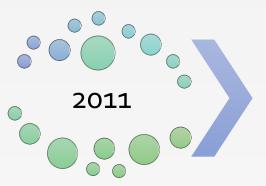


- Sofia is the capital of Bulgaria
- 24 districts
- More than 1.3 mln. inhabitants
- About 40% of national GDP



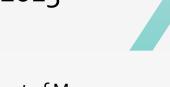
Strategic development





- Covenant of Mayors of EU
- Sustainable **Energy Action** Plan (mitigation)
- 22 % GHG emission reduction to 2020; 2007 base year





- Compact of Mayors of UN
- Risk & Vulnerability Assessment (adaptation)
- Climate Change Adaptation Strategy



2019

- Global Covenant of Mayors for Climate and Energy
- Trees in Cities initiative







• Green City Action Plan with support of EBRD

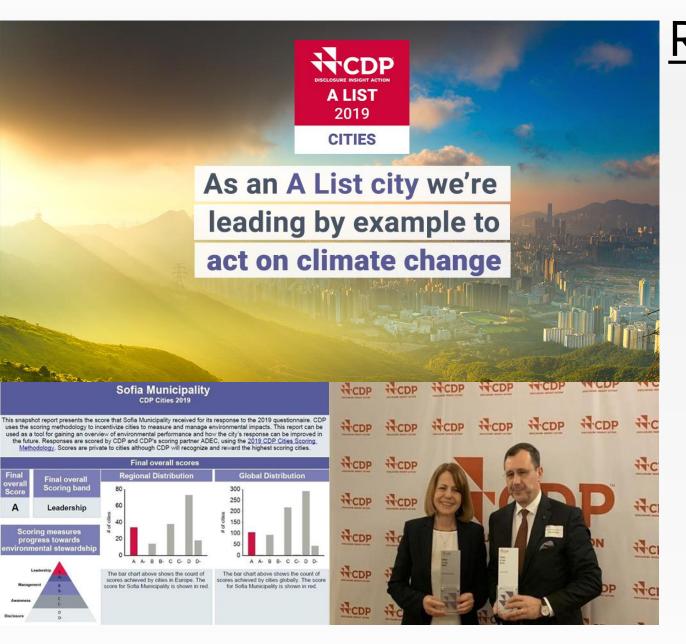
- Sustainable **Energy and** Climate Action Plan
- 40 % GHG emission reduction to 2030
- National EE, RES and biofuels



Main priorities



- Improving Air Quality
- CO2 Reduction with 40% by 2030
- Improve energy efficiency within buildings
- Increase the percentage of renewable energy used
- Integration of green infrastructure throughout the city



Recent achievements



 A List on the 2019 CDP for demonstrating leadership in transparency, adapting to and preparing for the worsening impacts of the climate crisis.

https://www.cdp.net/en/cities/cities-scores

- 18,2 % CO2 reduction in 2018 according to 2007 GHG inventory (achieved 82,7 % of 2020 target).
- Successful implementation of European projects to improve air quality and mitigate climate change.

Recent achievements-Air Quality & Climate Change





With the completion of the third metro line in 2020, Sofia will have 52 km of metro, which will serve 500,000 passengers daily and will save 90,000 tons of harmful emissions per year.



In 2019 we planted 4,195 trees.



In recent years, we purchased 398 buses with the highest EURO 6 eco-standard, 35 zero-emission electric buses and 38 trams.





We are implementing two projects to replace old and inefficient heating appliances with environmentally friendly alternatives. The projects are funded by the Operational Program Environment and Life.

OP Environment – Replacing Domestic Heating Appliances with new alternatives



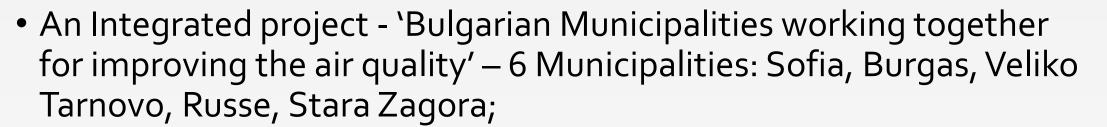
• Decreasing PM10 emissions through replacement of old domestic heating appliances -apx. 10 000 households;



- Overall budget of the project 44 000 000 BGN;
- Additional initiatives within the project:
 - Specialized surveys among households using old domestic heating;
 - Additional ecological, economical and social analysis;
 - Infrastructural and in-house observation and analysis.

<u>Life Programme Project – 5000 Domestic Heating</u> <u>Appliances will be replaced with new alternatives</u>







- Overall budget of the project 16 600 000 EUR;
- Additional initiatives within the project:
 - Implementation of an overall air quality monitoring and control;
 - Air quality analysis and surveys in different municipalities;
 - Expert capacity improvement.

SHEERenov project – Seamless services for Housing Energy Efficiency Renovation





- Developing and testing a model for the provision of integrated residential renovation services on the territory of Sofia in Bulgaria
 Transition to a market oriented model.
- Participation of relevant market stakeholders and players in the process of energy efficiency renovation in the residential sector: homeowners, business, financial sector.
- The emphasis will be on the sector of commercial banks and the development of suitable products for lending to condominiums as a whole, and not on the individual household, which is the innovation for Bulgaria from this project.

SHEERenov project – Seamless services for Housing Energy Efficiency Renovation



Expected results:

- Creation of sustainable mechanism for renovation of multi-family housing units and support for the transition from an administrative to a market-oriented model of renovation;
- opportunity / tool to accelerate the process of renovation of the housing stock on a completely voluntary basis;
- The integrated renewal model has the potential to serve as a platform for attracting funding from the Structural Funds and International Financial Institutions in the future;
- The renovation of 30 buildings in 5 regions will be supported directly by the implementation of the project by conducting energy audits.

What is next?







Green, clean municipality, full of life.



EBRD Green City Action Implementation

- Total investment volume 840 m EUR.
- Main benefits energy savings 384 100 MWh/a; reducing PM 2,5 emissions with 21 200 kg/a, 322 700 kg/a NO2, CO₂ savings 213 800 t/a.
- Air quality improvement and greenhouse gas emissions reduction.
- Health benefits from improved physical activity and mental wellbeing of Sofia Municipality's residents.
- Ecosystems restoration from restored green spaces, corridors and riverbanks.
- Improved quality of urban space, bringing opportunities for higher land value and tourism growth.

Main challenges

- ✓ Residential heating. Sofia Municipality has large number of households using solid fuels and low-efficient heating systems, which lead to poor air quality during the winter.
- ✓ Housing and communities. Sofia Municipality has an advanced solid waste management system with a mechanical and biological treatment plant and production of solid recovered fuel from residual waste. However, waste generation is high and therefore awareness campaigns promoting reduction of material consumption and increase in recycling are required.
- ✓ Land use and planning. Sofia Municipality has extensive open green space. However, the share of green space in some regions is lower or is not evenly distributed, especially in residential estates in northern city parts.
- ✓ Green-blue infrastructure. The water supply network needs to be upgraded and not all areas are currently connected to the wastewater sewage network. Expected extreme weather events due to climate changes, such as flash and surface floods will put extra pressure on the water system.
- ✓ Transport. Sofia Municipality currently has a large share of private vehicles with high emissions, contributing to air pollution. We need to continue enhancing walking and cycling paths in order to encourage more people to undertake active modes of transport.

 11

