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MOLDOVA: MODERN AND ENERGY EFFICIENT PUBLIC HEATING SYSTEM

CASE STUDY/INSIGHT

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Moldova is a landlocked country in Eastern Europe. Agriculture and wine manufacturing are the major economic activities in the country. Due to its location in the northern hemisphere, the average temperature in summer is around 20°C and the winter temperature fall as low as –4°C. To accommodate this low-temperature condition, the buildings are installed with heating systems for room heating.

The traditional room heating practices involved the installation of a dedicated low-pressure boiler using coal as fuel. Most of the building heating systems in the country were built in the 1980s. As they are around 25 years old, they have become very inefficient and highly GHG emissive. The systems also faced frequent breakdown and offered less room heating inside the building due to heat losses in the steam distribution system – leading to higher coal consumption. The coal handling inside the boiler room also created an unsafe working environment for the labourers.

To improve the lifestyle of the people and the energy efficiency of the heating system, the Government of Moldova decided to replace the old and inefficient individual heating systems with the modern and energy-efficient centralised heating system. The new heating system was powered by natural gas instead of coal which also offered better automation and advanced control of fuel burning.

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The buildings included a kindergarten, schools, libraries, public institutions and also residential apartments. A central heating system would supply steam generated to a nearby school, library and residential buildings. Around 300 such modern public heating systems were installed by the programme across different regions of the country. Energy meters were installed at each public heating system to monitor and report the natural gas consumption. To improve energy efficiency, the project also helped in improved insulation of the rooms and prevented heat loss from windows, roofs, etc.

The project received funds from international development organisations such as the EU and the World Bank. The project generated significant GHG emission reductions every year and also helped Moldova achieve its SDG targets. It is one of the successful projects for climate finance investment in Europe and the first carbon credit project in the country.