

Technology Fact Sheet

Technology Name	Micro- and mini-CHP operating on natural gasⁱ www.dgc.eu/publications/pdf/jdw_mini_micro_cogen11.pdf
Subsector GHG emission (megatons CO ₂ -eq)	5.067 mln.t CO ₂ in thermal power sector in 2010
Background/Notes, Short description of the technology option Context / Notes. Short description of the technology option	Micro-and mini-CHP-s with electrical power from a few kW to several MW and heat index 1-2, using piston engines or micro-and mini-gas turbines are used by individual consumers and consumer groups, both in residential sector, as well as in industry. Co-generation installations can reduce fuel consumption on average by 25%, increase safety and ensure the independence of consumers.
Implementation assumptions. How the technology will be implemented and diffused across the subsector? Explain if the technology could have some improvements in the country environment.	High thermal efficiency of small installations and full automation of operation makes them more attractive to consumers. It is expected that by 2020 micro-and mini-CHPs could achieve a 10% share on the heat supply market for consumers in various sectors. By 2020 the installed capacity may reach 500 MWt which at 0.5 workload would produce about 7.8 PJ heat per year.
Implementation barriers	- Increased investments. - Relatively small price for the electric power bought from external sources.
Reduction in GHG emissions (megatons CO ₂ -eq)	1.25 mln.t CO ₂ can be reduced between 2010 – 2030.
Impact Statements – Impact of this option on the country development priorities	
Country social development priorities	Increases safety and ensures consumers' independence
Country economic development priorities – economic benefits	Reduced consumption and consequently, of natural gas import by 65 ml m ³ per year by 2030
Country environmental development priorities	Reduction in CO and NO _x emissions
Other considerations and priorities such as market potential	-
Costs	
Capital costs	Total investment of about 330 million USD in which the thermal part will account for 130 million USD.
Operational and Maintenance costs	Operational and maintenance costs will be 21.9 USD / GJ if the expected price of natural gas by 2030 is 1.0 USD per m ³
Cost of GHG reduction	141 USD/t
Lifetime.	Lifetime – 14 years

ⁱ This fact sheet has been extracted from TNA Report - Technology Needs Assessment for climate change mitigation - Republic of Moldova. You can access the complete report from the TNA project website <http://tech-action.org/>