Technology Fact Sheet

Technology Name	**CHP on Fuel Cells**[i] ЭНЕРГЕТИЧЕСКИЕ УСТАНОВКИ НА БАЗЕ ТОПЛИВНЫХ ЭЛЕМЕНТОВ. http://www.newchemistry.ru/letter.php?n_id=6721
Subsector GHG emission (megatons CO2-eq)	GHG emissions accounted for 5.067 mil. t CO_2 in thermal power sector in 2010
Background/Notes, Short description of the technology option	Fuel cells - electrochemical generators are expected to become widely used due to certain advantages over other power and heat generating technologies: lower emissions, more compact, have no moving parts, so they have a longer life (assumingly 30 years), produce less noise. High temperature plants (700 ... 1000 0C), which are currently being developed and tested have an electrical efficiency of up to 50%. These can serve as basis for combined fuel cell- steam turbine plants which will increase electric efficiency to 60 ... 70% and overall efficiency - to 85 ... 90%.
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.	It is expected that the total installed power in the Republic of Moldova by 2030 will be about 200 MWt (400 MWe).
Implementation barriers	- Increased investment - Higher fuel requirements - Lack of service experience - Lack of commercial proposals.
Reduction in GHG emissions (megatons CO2-eq)	It is expected to reduce about 0.380 mil. t CO_2eq./year by 2030
Impact Statements - Impact of this option on the country's development priorities	
Country **social** development priorities	Additional jobs
Country **economic** development priorities – economic benefits	By 2030 reduce fuel consumption by more than 160 thousand tone coal equivalent (t.c.e) per year
Country **environmental** development priorities	Reduce harmful emissions
Other considerations and priorities such as market potential	-
Costs	
Capital costs	Investments in thermal part of cca 320 mil.USD
Operational and Maintenance costs	Maintenance costs – 25 USD/GJ
Cost of GHG reduction	42 USD/t CO_2eq
Lifetime.	Lifetime –20 years
Other	-

[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/**