NS-50 - Replacement and Construction of a New Natural Gas Cogeneration Plant CHP Novi Sad

Serbia

NAMA Seeking Support for Implementation

A Overview

A.1 Party	Serbia
A.2 Title of Mitigation Action	Replacement and Construction of a New Natural Gas Cogeneration Plant CHP Novi Sad
A.3 Description of mitigation action	Construction of a new, energy efficient natural gas-fired cogeneration plant that will entirely replace the existing inefficient cogeneration plant, which is also fueled by natural gas and heavy oil. The existing cogeneration plant will be decommissioned when the new plant starts operation. The new cogeneration plant will generate 450MWe of electricity, which will be supplied to the national grid of Serbia, while the plant will also generate 300MWth of heat, which will be supplied to district heating plants of Novi Sad municipality through a pumping station.
A.4 Sector	[X] Energy supply [ ] Residential and Commercial buildings [ ] Agriculture [ ] Waste management [ ] Transport and its Infrastructure [ ] Industry [ ] Forestry [ ] Other
A.5 Technology	[ ] Bioenergy [X] Energy Efficiency [ ] Hydropower [ ] Wind energy [ ] Carbon Capture and Storage [ ] Land fill gas collection [ ] Cleaner Fuels [ ] Geothermal energy [ ] Solar energy [ ] Ocean energy [ ] Low till / No till [ ] Other
A.6 Type of action	[X] National/ Sectoral goal [X] Strategy [X] National/Sectoral policy or program [ ] Project: Investment in machinery [X] Project: Investment in infrastructure [ ] Project: Other [ ] Other
A.7 Greenhouse gases covered by the action	[X] CO2 [ ] N2O [ ] PFCs [ ] CH4 [ ] HFCs [ ] SF6 [ ] Other

B National Implementing Entity

B.1.0	Name	
B.1.1	Contact Person 1	Aleksandar Obradovic, General Manager, A.I.
B.1.2	Address	Aleksandar Obradovic, General Manager, A.I.
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B.1.5	Contact Person 2	
B.1.6	Address	
B.1.7	Phone	
B.1.8	Email	
B.1.9	Contact Person 3	
B.1.10	Address	
B.1.11	Phone	
B.1.12	Email	
B.1.13	Comments	

C Expected timeframe for the implementation of the mitigation action

C.1	Number of years for completion	2
C.2	Expected start year of implementation	2014

D Currency

D.1	Used Currency	AED Conversion to USD: 1

E Cost

E.1.1	Estimated full cost of implementation	250000000
E.1.2	Comments on full cost of implementation	
E.2.1	Estimated incremental cost of implementation	
E.2.2	Comments on estimated incremental cost of implementation	

F Support required for the implementation the mitigation action

F.1.1 Amount of Financial support	127500000
F.1.2 Type of required Financial support	[X] Grant [ ] Loan (sovereign) [ ] Loan (Private) [X] Concessional loan [ ] Guarantee [X] Equity [X] Carbon finance [ ] Other
F.1.3 Comments on Financial support	EPS is open for various solutions regarding the finance of the project as stated in F.1.2.
F.2.1 Amount of Technological support	127500000
F.2.2 Comments on Technological support	Amount of the Technology support will be determined during 2013, after finalisation of the Feasibility Study.
F.3.1 Amount of capacity building support	
F.3.2 Type of required capacity building support	[X] Individual level [ ] Institutional level [ ] Systemic level [ ] Other
F.3.3 Comments on Capacity Building support	Amount of the Technology support will be determined during 2013, after finalisation of the Feasibility Study.
F.4 Financial support for implementation required	[ ]

F.5	Technological support for implementation required	☐
F.6	Capacity Building support for implementation required	☐

G Estimated emission reductions

G.1	Amount	36.00
G.2	Unit	MtCO2e
G.3	Additional imformation (e.g. if available, information on the methodological approach followed)	Estimation is calculated based on 35 years of technical life time of instalation

H Other indicators

H.1	Other indicators of implementation	Pre-Feasibility Study is completed.

I Other relevant information

I.1	Other relevant information including co-benefits for local sustainable development	Implementation of the project Construction CHP Novi Sad is meeting majority of the indicator in accordance with tree criterion indicated in appendix of the DNA Rules of procedure. According to the economic criterion, it satisfies following fields: 1. Investing conditions - Construction of the new CHP plant will be carried out through strategic partnership of EPS and power utility that will be selected on the international tender. According to the tender, EPS would participate with 20-49% of the capital, while the strategic partner would provide the rest of investments amounting 250 millions EUR. 2. Sustainable technology transfer - Technological solution foresee implementation of high efficient combine cycle technology (CCGT) , which represent the best available technology at this point. 3. Economic development of the region - Construction of the CHP Novi Sad will bring construction of new infrastructure; it also contributes to the power system stability and supply security, which consequently have effect on the stability of the prices for electric energy. In addition, it would provide secure and stable supply for district heating system of Novi Sad municipality. 4. Employment - Construction of the CHP Novi Sad will provide work for many domestic companies. After commissioning and connection to the network, new work places will be available at the power plant and following facilities, as well as the chance for engagement of the companies from the sector of services and maintenance on long-term basis. 5. Priorities of the sector - Power generation at the CHP Novi Sad will contribute to the power system stability and supply security, which represent one of the priorities in the energy sector. This project provides wide district heating system of Novi Sad municipality. 6. Consumption and generation - Power generation at the new power plant will reduce need for electricity import, and its modern concept using natural gas will reduce waste production per unit of generated energy. According to the social criterion, it satisfies following fields: 1. Participation of the interested parties - Project CHP Novi Sad will be implemented with strategic partner on mutual benefit. Strategic partner will provide technology and financing, while EPS will provide existing infrastructure, and part of the funds. Implementation of this project includes participation of every governmental structure from the state to the local level, which supporting project due to its many advantages. 2. Life conditions improvement - Project implementation of such scope,

	lead up to the employment increase, as well as income increase, on the local and regional level. It contributes to public health because of sulfur oxide absence. 3. Capacity increase - According to the work needs and modern equipment maintenance, strategic partner will provide training for the employees, as well as expertise and tools for local companies engaged on this implementation of the project during its operational life. According to the environment and natural resources criterions, it satisfies following fields: 1. Energy resources – Generation of CHP Novi Sad will, due to the higher energy efficiency of the plant, reduce fuel consumption for power generation, and significantly reduce need for electricity import. 2. Air - Due to the application of the modern technology and higher energy efficiency of the plant, project will result in significantly reduced emission levels of CO2, SOx (practically there is no any) and NOx, comparing to the existing thermo power plants in Serbia. 3. Water - Contribution to the sustainable water use would be the application of measures for water treatment of all water quantities used in the technological process of electricity generation. 4. Soil - New thermo power plant will be constructed on the location of old CHP Novi Sad, where already exist land for this purpose, as well as joint systems, so it would not be necessary to change the purpose of the land.. 5. Biodiversity – This project do not have significant influence on biodiversity. 6. Natural recourses - Modern concept of the unit CHP Novi Sad will significantly contribute to the sustainable use of recourses, because energy efficiency of primary energy transformation (around 57%) will be significantly higher than it is at existing thermal power plants in Serbia. Exploitation life of domestic lignite deposits is extended that way.

J Relevant National Policies strategies, plans and programmes and/or other mitigation action

J.1	Relevant National Policies	http://www.merz.gov.rs/en
J.2	Link to other NAMAs	

K Attachments

K	Attachments	**Title Description**
K.1	Attachment description	
K.2	File	Browse...

L Support received

L.1 Outside the Registry	
L.2 Within the Registry	**Support provided SupportType Amount Comment Date**