United Nations
Framework Convention on
Climate Change

NAMA Seeking Support for Implementation

A.1 Party	The Republic of 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

- ☒ Energy supply
- ☐ Residential and Commercial buildings
- ☐ Agriculture
- ☐ Waste management
- ☐ Transport and its Infrastructure
- ☐ Industry
- ☐ Forestry

A.5 Technology

- ☐ Bioenergy
- ☒ Energy Efficiency
- ☐ Hydropower
- ☐ Wind energy
- ☐ Carbon Capture and Storage
- ☒ Cleaner Fuels
- ☐ Geothermal energy
- ☐ Solar energy
- ☐ Ocean energy
- ☐ Other <Pls enter Other text here>

A.6 Type of action

- ☒ National/ Sectoral goal
- ☒ Strategy
- ☒ National/Sectoral policy orprogram
- ☐ Project: Investment in machinery
- ☒ Project: Investment in infrastructure
- ☐ Other: <Pls enter Other text here>

B National Implementing Entity

B.1 Name	Public Enterprise Electric Power Industry of Serbia
B.2.1 Contact Person	Aleksandar Obradovic, General Manager, A.I.
B.2.2 Address	Balkanska 13, Belgrade
B.2.3 Phone	+381 11 2024 600
B.2.4 Email	aleksandar.obradovic@eps.rs
B.3.1 Contact Person (alternative Contact Person 1)	Mihajlo Gavric
B.3.2 Address	Vojvode Stepe 412, Belgrade

B.3.3 Phone	+381 11 3952 316
B.3.4 Email	mihajlo.gavric@eps.rs
B.4.1 Contact Person (alternative Contact Person 2)	Dragan Vukotic
B.4.2 Address	Vojvode Stepe 412, Belgrade
B.4.3 Phone	+381 11 3952 349
B.4.4 Email	dragan.vukotic@eps.rs

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.1 Used Currency	EURO

E Cost

E.1 Estimated full cost of implementation	250,000,000.00
E.2 Estimated incremental cost of implementation	n/a

F Support required for the implementation of the mitigation action

F.1.1 Amount of financial support 127,500,000

F.1.2 Type of required financial support

☐ Loan (sovereign)	☐ Loan (Private)
☒ Concessional loan	☐ Debt Swap
☒ Grant	☒ Equity
☐ Guarantee	☒ Carbon finance
☐ FDI	☐ Others:<Pls enter Other text here>

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 127,500,000

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 0.00 ☒ $ (Dollars) ☐ man/hours

F.3.2Type of required capacity building support
☐ Institutional development
☒ Human capital
☐ Systemic (policies, legislative, regularatory,etc)

F.3.3 Comments on Capacity Building Support Estimated amount for capacity building is 2% of the total investment (such as training of stuff in the countru of technology origin, et c…)

G Estimated emission reductions

G.1 Amount 36.00

G.2 Unit MtCO2e

G.3 Comments Estimation is calculated based on 35 years of technical life time of instalation

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

I.1 Other relevant information including 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 Links to National Policies and other NAMAs

J.1 Relevant National Policies http://www.merz.gov.rs/en