

NS-39 - Thermal Power Project with Capacity and Efficiency Increase I - TTP Nikola Tesla – Unit B2

Serbia

NAMA Seeking Support for Implementation

A Overview

A.1 Party	<input checked="" type="checkbox"/> Serbia
A.2 Title of Mitigation Action	Thermal Power Project with Capacity and Efficiency Increase I - TTP Nikola Tesla – Unit B2
A.3 Description of mitigation action	Restoration and modernization of a lignite thermal power plant with capacity increase of 47 MW. Adopted technologies include rehabilitation and modernization of the steam turbine, condensing plant and cooling system unit, boiler and auxiliary equipment (e.g., low/high pressure feed water heaters), as well as revitalization and improvement of the firing system and the combustion process by introducing "Low NOx" burners and increasing the efficiency of the old thermal units. The Project will be implemented in two phases - 1st in 2015 and 2nd in 2019. Each phase will take 6 months.
A.4 Sector	<input checked="" type="checkbox"/> Energy supply <input type="checkbox"/> Residential and Commercial buildings <input type="checkbox"/> Agriculture <input type="checkbox"/> Waste management <input type="checkbox"/> Transport and its Infrastructure <input type="checkbox"/> Industry <input type="checkbox"/> Forestry <input type="checkbox"/> Other <input type="text"/>
A.5 Technology	<input type="checkbox"/> Bioenergy <input checked="" type="checkbox"/> Energy Efficiency <input type="checkbox"/> Hydropower <input type="checkbox"/> Wind energy <input type="checkbox"/> Carbon Capture and Storage <input type="checkbox"/> Land fill gas collection <input type="checkbox"/> Cleaner Fuels <input type="checkbox"/> Geothermal energy <input type="checkbox"/> Solar energy <input type="checkbox"/> Ocean energy <input type="checkbox"/> Low till / No till <input type="checkbox"/> Other <input type="text"/>
A.6 Type of action	<input checked="" type="checkbox"/> National/ Sectoral goal <input checked="" type="checkbox"/> Strategy <input checked="" type="checkbox"/> National/Sectoral policy or program <input type="checkbox"/> Project: Investment in machinery <input checked="" type="checkbox"/> Project: Investment in infrastructure <input type="checkbox"/> Project: Other <input type="checkbox"/> Other <input type="text"/>
A.7 Greenhouse gases covered by the action	<input checked="" type="checkbox"/> CO2 <input type="checkbox"/> N2O <input type="checkbox"/> PFCs <input type="checkbox"/> CH4 <input type="checkbox"/> HFCs <input type="checkbox"/> SF6 <input type="checkbox"/> Other <input type="text"/>

B National Implementing Entity

B.1.0	Name	
B.1.1	Contact Person 1	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	4
C.2	Expected start year of implementation	2015

D Currency

D.1	Used Currency	<input type="text" value="AED"/> Conversion to USD: 1
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E Cost

E.1.1	Estimated full cost of implementation	111000000
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	111000000										
F.1.2 Type of required Financial support	<table style="width: 100%; border: none;"> <tr> <td><input checked="" type="checkbox"/> Grant</td> <td><input type="checkbox"/> Guarantee</td> </tr> <tr> <td><input type="checkbox"/> Loan (sovereign)</td> <td><input type="checkbox"/> Equity</td> </tr> <tr> <td><input type="checkbox"/> Loan (Private)</td> <td><input checked="" type="checkbox"/> Carbon finance</td> </tr> <tr> <td><input checked="" type="checkbox"/> Concessional loan</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other <input style="width: 150px;" type="text"/></td> <td></td> </tr> </table>	<input checked="" type="checkbox"/> Grant	<input type="checkbox"/> Guarantee	<input type="checkbox"/> Loan (sovereign)	<input type="checkbox"/> Equity	<input type="checkbox"/> Loan (Private)	<input checked="" type="checkbox"/> Carbon finance	<input checked="" type="checkbox"/> Concessional loan		<input type="checkbox"/> Other <input style="width: 150px;" type="text"/>	
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<input checked="" type="checkbox"/> Concessional loan											
<input type="checkbox"/> Other <input style="width: 150px;" type="text"/>											
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											
F.2.2 Comments on Technological support											
F.3.1 Amount of capacity building support											
F.3.2 Type of required capacity building support	<table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Individual level</td> </tr> <tr> <td><input type="checkbox"/> Institutional level</td> </tr> <tr> <td><input type="checkbox"/> Systemic level</td> </tr> <tr> <td><input type="checkbox"/> Other <input style="width: 150px;" type="text"/></td> </tr> </table>	<input type="checkbox"/> Individual level	<input type="checkbox"/> Institutional level	<input type="checkbox"/> Systemic level	<input type="checkbox"/> Other <input style="width: 150px;" type="text"/>						
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<input type="checkbox"/> Other <input style="width: 150px;" type="text"/>											
F.3.3 Comments on Capacity Building support											
F.4 Financial support for implementation required	<input type="checkbox"/>										
F.5 Technological support for implementation required	<input type="checkbox"/>										

F.6 Capacity Building support for implementation
required

G Estimated emission reductions

G.1 Amount	5.30
G.2 Unit	<input type="text" value="MtCO2e"/>
G.3 Additional information (e.g. if available, information on the methodological approach followed)	Estimation is calculated based on 15 years of technical life time of instalation after the reconstruction.

H Other indicators

H.1 Other indicators of implementation	Idea Design and Feasibility Study is under development
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I Other relevant information

I.1 Other relevant information including co-benefits for local sustainable development	<p>Implementation of the NAMA is meeting majority of the Sustainable Development Indicators in accordance with tree criterion indicated in appendix of the Serbian DNA Rules of procedure. According to the economic criterion, it satisfies following fields: 1. Economic development of the region - Reconstruction of the TPP Nikola Tesla B2 will improve ehisting 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. 2. Employment - Reconstruction of the TPP Nikola Tesla B2 will provide work for many domestic companies. 3. Priorities of the sector - Power generation at the TPP Nikola Tesla B2 will contribute to the power system stability and supply security, which represent one of the priorities in the energy sector. 4. Consumption and generation - Power generation at the reconstructed power plant will reduce need for electricity import, and its modern concept will reduce waste production per unit of generated energy as well as waste management in ecology acceptable manner. According to the social criterion, it satisfies following fields: 1. 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. 2. 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 TPP Nikola Tesla B2 will, due to the higher energy efficiency of the plant, reduce coal 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 reduced emission levels of CO₂, SO_x and NO_x, comparing to the existing thermo power plants in Serbia. TENT_B2 4 / 4 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. 6. Natural recourses - Modern concept of the unit TPP Nikola Tesla B2 will significantly contribute to the sustainable use of mineral recourses, because energy efficiency of primary energy transformation (≈ 34%) will be significantly higher than existing</p>
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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
J.2	Link to other NAMAs

K Attachments

K	Attachments	Title Description
K.1	Attachment description	
K.2	File	<input type="text"/> <input type="button" value="Browse..."/>

L Support received

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