

NS-33 - Use of Solar energy for domestic hot water production in Heat plant “Cerak” in Belgrade

Serbia

NAMA Seeking Support for Implementation

A Overview

A.1 Party	<input checked="" type="checkbox"/> Serbia
A.2 Title of Mitigation Action	Use of Solar energy for domestic hot water production in Heat plant “Cerak” in Belgrade
A.3 Description of mitigation action	Heating plant Cerak currently uses natural gas to produce and deliver heat for space heating and domestic hot water to residential and non-residential customers in Belgrade municipalities: Cukarica and Rakovica. The NAMA involves installation of solar collectors to replace a part of the hot water generation, amounting for around 2,700 MWh which is supplied to 7,000 households. The action will introduce approximately 5,000 m2 of solar collectors, hot water storage tank, heat exchanger, expansion vessel, pumps, valves, automatic control, and connect a new solar plant with the existing heat plant.
A.4 Sector	<input checked="" type="checkbox"/> Energy supply <input checked="" 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 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 checked="" 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 type="checkbox"/> National/ Sectoral goal <input type="checkbox"/> Strategy <input 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 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	Public Utility Company District Heating Plants of Belgrade and Business Association "Heating Serbia"
B.1.1 Contact Person 1	Mr. Petar Vasiljevic
B.1.2 Address	Savski nasip 11, Belgrade, Serbia
B.1.3 Phone	+381-11-20-93-392
B.1.4 Email	p.vasiljevic@beoelektrane.rs
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	2013

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	1050000
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	1050000										
F.1.2	Type of required Financial support	<table style="width: 100%; border-collapse: collapse;"> <tr> <td><input checked="" type="checkbox"/> Grant</td> <td><input type="checkbox"/> Guarantee</td> </tr> <tr> <td><input checked="" 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 type="checkbox"/> Concessional loan</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Other</td> <td><input style="width: 100%;" type="text"/></td> </tr> </table>	<input checked="" type="checkbox"/> Grant	<input type="checkbox"/> Guarantee	<input checked="" type="checkbox"/> Loan (sovereign)	<input type="checkbox"/> Equity	<input type="checkbox"/> Loan (Private)	<input checked="" type="checkbox"/> Carbon finance	<input type="checkbox"/> Concessional loan		<input type="checkbox"/> Other	<input style="width: 100%;" type="text"/>
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<input type="checkbox"/> Concessional loan												
<input type="checkbox"/> Other	<input style="width: 100%;" type="text"/>											
F.1.3	Comments on Financial support											
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-collapse: collapse;"> <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</td> </tr> <tr> <td><input style="width: 100%;" 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: 100%;" type="text"/>					
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<input type="checkbox"/> Systemic level												
<input type="checkbox"/> Other												
<input style="width: 100%;" 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 0.000611
G.2 Unit
G.3 Additional information (e.g. if available, information on the methodological approach followed) 12,220 tCO2e (20 years) Methodology applied for estimation: General calculation method used in IPCC Guidelines

H Other indicators

H.1 Other indicators of implementation The Feasibility study completed in 2008

I Other relevant information

I.1 Other relevant information including co-benefits for local sustainable development Saving fossil fuel consumption Creation of local employment opportunities Similar activities could be implemented on the other locations in Belgrade and Serbia.

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

J.1 Relevant National Policies Energy sector development strategy of the Republic of Serbia by 2015

J.2 Link to other NAMAs .

K Attachments

K Attachments

K.1 Attachment description

K.2 File

L Support received

L.1 Outside the Registry

L.2 Within the Registry

Support provided	SupportType	Amount	Comment	Date
ODA for Climate Change Measures building	Capacity	0		11/6/2014 12:00:00 AM