

# NS-37 - Revitalization of the Existing Small Hydropower Plants and Construction of New Small Hydropower Plants (SHPPs)

## Serbia

### NAMA Seeking Support for Implementation

#### A Overview

A.1 Party	Serbia
A.2 Title of Mitigation Action	Revitalization of the Existing Small Hydropower Plants and Construction of New Small Hydropower Plants (SHPPs)
A.3 Description of mitigation action	<p>The NAMA involves construction of 9 new small hydropower plants (HPP) throughout Serbia. The total capacity of 9HPP is 30.40 MW with possible electricity production of 108.3 GWh/year. All of the electricity generated will be supplied to the Serbian electricity grid, which is currently composed mostly of carbon-intensive lignite-fired thermal power plants. The NAMA will contribute to climate change mitigation as the hydro power as renewable energy source does not emit any greenhouse gases (GHGs) during operation, and reduces GHGs that would otherwise be emitted from grid-connected power plants in the absence of the mitigation action. The project consists of two phases: Phase I: Construction of 6 small scale hydropower plants in the area of existing hydro facilities Phase II: Construction of 3 small scale hydropower plants in the new locations.</p>
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 type="checkbox"/> Energy Efficiency <input checked="" 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 type="checkbox"/> CO2	<input type="checkbox"/> CH4
	<input type="checkbox"/> N2O	<input type="checkbox"/> HFCs
	<input type="checkbox"/> PFCs	<input type="checkbox"/> SF6
	<input type="checkbox"/> Other <input type="text"/>	

**B National Implementing Entity**

B.1.0 Name	Public Enterprise Electric Power Industry of Serbia
B.1.1 Contact Person 1	Vladimir Djordjevic, Exe. Dir. for Renewables
B.1.2 Address	Balkanska 13, Belgrade
B.1.3 Phone	+381 11 2024 600
B.1.4 Email	vladimir.djordjevic@eps.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	4
C.2	Expected start year of implementation	2013

**D Currency**

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

**E Cost**

E.1.1	Estimated full cost of implementation	55000000
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	55000000
F.1.2	Type of required Financial support	<input checked="" type="checkbox"/> Grant <input type="checkbox"/> Loan (sovereign) <input type="checkbox"/> Loan (Private) <input checked="" type="checkbox"/> Concessional loan <input type="checkbox"/> Guarantee <input type="checkbox"/> Equity <input checked="" type="checkbox"/> Carbon finance <input type="checkbox"/> Other <input 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	<input type="checkbox"/> Individual level <input type="checkbox"/> Institutional level <input type="checkbox"/> Systemic level

Other

F.3.3 Comments on Capacity Building support

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 4.10

G.2 Unit

G.3 Additional information (e.g. if available, information on the methodological approach followed) Estimation is calculated based on 40 years of technical life time of installation

### H Other indicators

H.1 Other indicators of implementation Pre-Feasibility Study is completed for the I Phase of the Project (two of them already have Main design and Construction licence). II Phase of the Project is in phase of Technical documentation preparation.

### I Other relevant information

I.1 Other relevant information including co-benefits for local sustainable development "Energy Sector Development Strategy Of the Republic of Serbia by 2015" lists in its priority activity, the program of selective use of New Renewable Energy Sources, including small and mini hydropower plants – facilities of up to 10 MW. The NAMA is expected to contribute to sustainable development of Serbia and co-benefit in the following manners. - Utilization of renewable energy sources - Reduction of impact on environment - Creation of local employment opportunities - Awareness raising among general public about clean energy - Mitigation of CO2 emissions

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

J.1 Relevant National Policies <http://www.merz.gov.rs/en> ; <http://192.168.16.144/Eng/Article.aspx?lista=Sitemap&id=14>

J.2 Link to other NAMAs .

### K Attachments

K Attachments

Title	Description
SD SHPPs.pdf	

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
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