

NS-10 - First introduction of Photovoltaic Solar Energy in the national electrical grid

Uruguay

NAMA Seeking Support for Implementation

A Overview

A.1 Party

Uruguay

A.2 Title of Mitigation Action

First introduction of Photovoltaic Solar Energy in the national electrical grid

A.3 Description of mitigation action

Since 2005, Uruguay has been developing an aggressive introduction of Non-Conventional Renewable Energies. The first steps have been focused on specific measures for the introduction of wind power and biomass to the national grid, as well as solar thermal for domestic hot water production in commercial-services sectors, industry, public sector and more recently in residential sector. This process will allow reach the goal of have at least 50% of the national energy supply mix based on renewable sources and that at least 90% of the electrical grid supported by renewable sources, according to the Energy Policy 2005-2030. The mix of non-conventional renewable energy in Uruguay produces not only environmental and social externalities, but also favorable economic externalities for the country. Recent studies of technology foresight, developed by the Secretary of Energy (Ministry of Industry, Energy and Mining), show that in the short term Photovoltaic Solar Energy will be a source that meet conditions stated above. In this context, the Government of Uruguay has defined actions in order to incorporate in 2013 approximately 1% of the average power demand of Uruguay using solar source with photovoltaic technology. In this sense, the Secretary of Energy is working on the creation of conditions for holding a competitive process for the incorporation of new plants by private companies, ensuring the introduction of all the solar energy that can be generated in these ventures, through the signing of PPA contract with the Public Electric Utility (UTE). In addition, it has been guided the international cooperation for the purpose of building the first two solar farms (pilots) connected to the grid in order to test the technologies and their performance. After this initial goal, and considering that Uruguay would have achieved enough knowledge and local capacities at that time, the objective is to lead a continuous expansion of this technologies, willing to achieve de goal of 200 MW in 2020. For all these reasons, it is essential to support this process with actions to achieve local capacity building in order to incorporate this technology in the legal and technical regulatory framework, while generating knowledge and expertise for the sustainable future incorporation of photovoltaic energy power in the national energy mix.

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 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 checked="" type="checkbox"/> National/Sectoral policy or program <input type="checkbox"/> Project: Investment in machinery <input 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	Secretary of Energy; Ministry of Industry, Energy and Mining
B.1.1 Contact Person 1	Dr. Ramón Méndez
B.1.2 Address	Mercedes 1041 - 2nd floor, Montevideo, CP: 11.100
B.1.3 Phone	+598 2900 6919
B.1.4 Email	director@dne.miem.gub.uy
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	2015

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
- E.1.2 Comments on full cost of implementation Expected costs are USD 2.000 per kW of installed capacity
- 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 2000000
- F.1.2 Type of required Financial support
- | | |
|---|---|
| <input checked="" type="checkbox"/> Grant | <input type="checkbox"/> Guarantee |
| <input type="checkbox"/> Loan (sovereign) | <input type="checkbox"/> Equity |
| <input type="checkbox"/> Loan (Private) | <input type="checkbox"/> Carbon finance |
| <input type="checkbox"/> Concessional loan | |
| <input type="checkbox"/> Other <input style="width: 150px;" type="text"/> | |
- F.1.3 Comments on Financial support
- The financial support requested will be used in capacity building activities, as well as for the creation of infrastructures, in particular: - Strengthen the assembly and maintenance of the national solar network; - Creation of testing laboratories; - Capacity building support in the regulator organism and the Public Electric Utility (UTE); - Creation of specific technical regulatory framework for this resource; - Training professionals in the areas of engineering and architecture as well as technicians who will work in the development and maintenance of facilities. Financial support will be managed similarly to previously executed projects: "Introduction of Wind Energy in Uruguay" and "Electricity production from biomass". For this, it is necessary to identify the barriers to technology development and define specific measures.
- 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 |
| <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
- F.5 Technological support for implementation required
- F.6 Capacity Building support for implementation required

G Estimated emission reductions

- G.1 Amount 4.58
- G.2 Unit
- G.3 Additional information (e.g. if available, information on the methodological approach followed)
- In order to estimate GHG reduction, it was considered that all the energy that would be produced by photovoltaic plants during the hole period of operation (from 2015 until 25 year beyond 2020), would have been produced considering the use of fuel oil. The purpose of the requested financial support is to strengthen the initial steps of implementation of this technology and promote its replication in the future.

H Other indicators

H.1	Other indicators of implementation
-----	------------------------------------

I Other relevant information

I.1 Other relevant information including co-benefits for local sustainable development	The decentralized feature of this activity makes a positive impact on local development.
--	--

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

J.1 Relevant National Policies	Energy Policy: http://www.miem.gub.uy/gxpsites/hgxpp001?5,6,584,O,S,0, "Solar Energy Program in Uruguay": http://www.energiasolar.gub.uy/cms/
--------------------------------	---

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
------------------	-------------	--------	---------	------