

NS-135 - Strategizing for Grid Strengthening / Improvement for evacuation of power from Solar Power Projects

Pakistan

NAMA Seeking Support for Preparation

A Overview

A.1 Party	Pakistan
A.2 Title of Mitigation Action 	Strategizing for Grid Strengthening / Improvement for evacuation of power from Solar Power Projects
A.3 Description of mitigation action 	<p>The Government of Pakistan envisages mainstreaming of alternative and renewable energy (ARE) in the development plans of the country. The RE policy of government of Pakistan invites investment from private sector for: i) Independent Power Projects (IPPs) for sale of power to the grid only; ii) Grid Spill-over Power for self-use and sale to utility; iii) Captive Power Projects for self or dedicated use; and iv) Isolated Grid Power Projects (small, stand-alone). The Government of (GoP) has targeted to include a large share of AREs in the energy mix to meet the increasing energy demand through Renewable Energy technologies in the country. GoP had previously planned to produce at least 5% of the total power generation of the country (i.e. 9700 MW) through renewable energy and more significantly solar energy sources by 2030.</p> <p>This NAMA Support project is designed to develop a master plan for development of solar power and prepare a strategy for developing national grid to evacuate power. This NAMA Support project will also help in addressing the issues related to financing and capacity lackings. Exploiting solar energy is deemed to be very beneficial for Pakistan considering the facts that:</p> <ul style="list-style-type: none"> • reducing Green House Gases (GHGs). It is estimated that the planned solar power projects will have a potential of reducing emissions of GHGs to the tune of 1.26 million tCO₂ on annual basis. • Currently planned solar power projects are dispersedly located, however, major part of the projects are concentrated in Cholistan, Punjab. This would enable the grid operator to meet the electricity needs of the central part of the country through solar power projects. This would reduce the line losses. • Availability of power would result in meeting electricity demand. This would add to the economic benefit of the country. • Availability of power would also enable social uplift of the people residing in remote parts of the country • Availability of power would also enable social uplift of the people residing in remote parts of the country • The development of 1.5 GW through solar power can help in reducing fossil fuel import bill approximately US \$ 0.5 billion per year. • The master planning undertaken and strategies being developed under this NAMA Support project will help in triggering more than US \$ 2.8 billion private investment in the country. <p>The project will result in establishing a financing instrument for development of solar power with the focus of addressing concerns of lenders and developers. The outcomes of this NAMA Support Project will be made part of the NAMA Implementation Program in the long run.</p> <p>Project goal and scope of the NAMA Support Project</p> <p>Establish master planning for development of solar power in potential areas of Pakistan, create enabling environment and develop the grid infrastructure to 1,500 MW solar power in next five years. Following related objectives would also be achieved through this proposed NAMA:</p> <ul style="list-style-type: none"> • A master plan will be developed for development of solar power in the country. • A strategy document will be prepared that would facilitate in evacuation of power supply of 1,500 MW in the national grid could be achieved • A financing instrument will be created to promote solar power in the country • A solar power support fund will be established for support development of solar power in Pakistan • Capacity of the stakeholders will be enhanced to handle solar power infrastructure. • Pakistan supply and demand deficit in the electricity sector will be This will lead towards establishing a strong footing towards significantly reduce greenhouse gases of approximately 1.26 million tCO₂ annually Contribution towards improved and sustainable economy by providing relatively cheaper electricity <p>Project Outcome</p> <p>The NAMA Support Project would result in mitigating the risks involved in diversion from Business As Usual (BAU) growth trajectories. This will be done through technical, technological and financial barriers and improving the systems in vogue. This NAMA Support project is expected to play an important role in overall Grid Strengthening and Green Growth as is envisaged in Pakistan National Climate Change Policy of Government of Pakistan. Development of solar power as envisaged under this NAMA Support project with a vision to encourage private sector investment coming to the development. This NAMA Support project is expected to leverage the private sector investment and create an enabling environment for trigger development of solar power in the country. This NAMA Support project targets developing this as a new venue in Pakistan to level that 1.5 GW solar power may be installed by 2020. This NAMA would enable the country to proficiently develop solar sector in the country and contribute in mitigating GHG emissions.</p> <p>Project Output:</p> <p>This NAMA Support project will result in developing a detailed documentation that could be used as a development framework for promotion and development of solar power in the country. The mechanism created under this NAMA will act as a catalyst for addressing the risk perceptions of customers and the public stakeholders. Human resource development, its capacity building and orientation towards latest models, techniques and trends is one of the components of this project. The country would benefit from the experience of developed human resource in implementing similar projects in other parts of the country. The NAMA would result in improved energy mix of the country.</p> <p>Financial Ambition</p> <p>The estimated cost of this NAMA Support project is around €14.27 Million. The host country will not only facilitate the implementation of NAMA activities but will also contribute financially by various policy and strategic initiatives in the form of duty exemptions on renewable/energy efficiency equipment. This NAMA Support project will create mechanisms for the lenders and the financiers and will enable them to lend these projects with relatively lower interest rates, accessing Clean Technology and Green Climate Fund as and when this will be established will be sought out at later stage. The successful implementation of proposed actions in the NAMA will spur private sector investment.</p>
A.4 Sector	<input checked="" type="checkbox"/> Energy supply <input type="checkbox"/> Residential and Commercial buildings <input type="checkbox"/> Agriculture <input type="checkbox"/> Transport and its Infrastructure <input type="checkbox"/> Industry <input type="checkbox"/> Forestry

A.5 Technology

Waste management

Other

Bioenergy

Cleaner fuels

Energy Efficiency

Geothermal Energy

Hydropower

Solar Energy

Wind Energy

Ocean Energy

Carbon Capture and Storage

Low till / No till

Land fill gas collection

Other

A.6 Type of action

National/ Sectoral goal

Project: Investment in machinery

Strategy

Project: Investment in infrastructure

National/Sectoral policy or program

Project : other

Other

A.7 Greenhouse gases covered by the action

CO2

CH4

N2O

HFCs

PFCs

SF6

Other

B National Implementing Entity

C Expected timeframe for the preparation of the mitigation action

C.1 Number of months for completion

D Currency

E Cost

F Support required to prepare the mitigation action

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

G.1 Relevant National Policies National Climate Change Policy approved in 2012 outlines goals and strategies to achieve targets in the Adaptation and Mitigation sectors. It guides the implementing agencies to explore energy sources (i.e. alternative and renewable energy resources) to generate electricity, improve efficiency of currently installed thermal power plants, improve efficiency of the national system and deploy AREs for domestic uses.

Moreover, Policy of Development of Renewable Energy for Power Generation, 2006 has been announced by the Government of Pakistan to attract private sector investment in developing clean ARE power projects with objectives of sustainable development, energy security, environmental protection and socio-economic uplift. The Power Policy 2006 Government of Pakistan (GoP) emphasises development of AREs for providing inexpensive and clean electricity to every household in Pakistan with deep interest of reducing emissions. Please describe the national and international climate policy context: Describe the current framework for addressing climate change in the target country. Please include a description of the country's mitigation strategy and plans to address climate change. Specify whether/how national targets relate to international agreements, especially to emission reduction pledges.

Pakistan is currently categorized as non-Annex-I country that does not have any binding to reduce GHG emissions. However, as a commitment to play a role in the global emission reduction initiatives, GoP in its plans has keen interest to set up ARE power projects. The GoP, in its long term plans i.e. upto 2030, is targeting to set up around 15 GW power through different applications in different parts of the country. This will result in increasing share of AREs in the energy mix from zero to around 12%.

This NAMA is designed for supporting development of solar power projects in Pakistan. Solar energy, with its 106 MW installed capacity is currently at nascent stage in the country. Ambitious plans to bring installed capacity of solar power to a level of more than 3,200 MW in next five years. GoP is seeking private sector investment to meet this target.

G.2 Link to other NAMAs

H Attachments

I Support received

I1	Outside the Registry	Nil				
I2	Within the Registry	Support provided	SupportType	Amount	Comment	Date
No records to display.						