Completion Report

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Technical Assistance Number: 7613
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Knowledge Platform Development for the Asia Solar Energy Initiative

Asian Development Bank

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TA Number, Country, and Name:			Amount Approved: $2,000,000.00	
TA 7613-REG: Knowledge Platform Development for the Asia Solar Energy Initiative			Revised Amount: N/A	
Executing Agency: ADB		Source of Funding: Asia Clean Energy Fund	Amount Undisbursed: $673,013.00	Amount Utilized: $1,326,987.00
TA Approval Date: 1 Oct 2010	TA Signing Date: N/A	Fielding of First Consultants: 8 Nov 2010	TA Completion Date Original: 31 Jan 2012	Actual: 31 Dec 2014
			Account Closing Date Original: 31 Jan 2012	Actual: 31 May 2015

Description

At the 43rd Annual Meeting in Uzbekistan in May 2010, the Asian Development Bank (ADB) announced Asia Solar Energy Initiative as part of its endeavor to transfer innovative technologies through knowledge solution together with the private technology providers for inclusive and low-carbon growth in this region. In order to develop and operationalize knowledge community linking the solar energy development public sector of developing member countries (DMCs) to the private sector, the Regional Technical Assistance (the TA) was approved on 1 October 2010 for US$2 million.

Expected Impact, Outcome, and Outputs

The expected impact was inclusive and low-carbon growth in Asia and the Pacific through increasing environmentally sound energy security with solar energy and stable grid development. The expected outcome will be the promotion and use of solar energy and stable grid development in Asia and the Pacific. The expected outputs were (i) preparation, creation and operation of Asia Solar Energy Forum (ASEF), (ii) organization of the second meeting of ASEF held in Tokyo, Japan in 2010, and (iii) identification and structuring of pilot solar projects.

Delivery of Inputs and Conduct of Activities

ADB was the executing agency (EA) of the TA. The Energy Community of Practice (currently Energy Sector Group) led the implementation of TA activities. The TA was expected to fund 7 individual consultant packages e.g., chief executive officer (CEO) of ASEF, forum producer, operation and administration specialist, and 3 logistics coordinators. Consultants except CEO of ASEF were separately recruited as individual consultants during different stages of the TA implementation in accordance with ADB's *Guidelines on the Use of Consultants* (2010, as amended from time to time). The terms of references of those assignments were processed corresponding to the TA's objectives and scope, and the profile of the consultants was well suited to the expected outputs. The performance of the consultants was satisfactory. The consultants performed well in accordance with their terms of references. The consultants and ADB had extensive dialogue with the public sector and private sector agencies on the needs and structure of ASEF. The productivity of the inputs (conversion into outputs) can be considered to be high since (i) the ASEF was successfully created, (ii) the second ASEF meeting was conducted with satisfaction of participants, and (iii) the ASEF activities contributed to ADB financing several solar energy development related loans.

The TA was economically efficient with cost saving of $673,013 since ASEF member agencies were fully committed to operationalization by their self-financing without depending on the TA resources. In particular, the initial human resource costs of CEO of ASEF was originally supposed to be shouldered by the TA but with ASEF member agencies commitment and financial contribution, all the human resource costs as well as administration costs were funded by ASEF itself. These commitments together with the fact that the wide range and number of assignments were undertaken in collaboration with ADB as EA proved client satisfaction of the public service recipient agencies and the private knowledge partners.

ADB's performance as EA was satisfactory as it supported the consultancy work as well as operations and administration of ASEF including the second ASEF meeting which was successfully completed. Results of the TA were continuously shared with operation departments and DMCs to develop solar energy related projects.

Through implementation of this TA, grid integration with smartgrid technologies has been recognized as a critical challenge for DMCs to mainstream solar energy. The TA was to be implemented over 16 months, however, completion of this TA was extended 3 times for an additional period of 23 months since (i) another full-fledged knowledge platform the Regional Task Force (RTF) was created for supporting DMCs to develop smartgrid to mainstream renewable energy, and (ii) the East Japan Earthquake in March 2011 prevented timely start-up of ASEF and RTF incorporated in Japan. To maximize synergies, an MOU was signed between ASEF and RTF, under the MOU, ASEF, and RTF jointly conducted institutional capacity development on variable speed pumped storage

hydropower technology deployment in Indonesia and Viet Nam to mainstream renewable energy.

Evaluation of Outputs and Achievement of Outcome

The outcome of the TA was successfully achieved. The TA effectively (i) raised an understanding for sustainable solar energy and smart grid development by various stakeholders, e.g., DMC agencies, technology providers, developers, financiers, and donors, (ii) led to several ADB financing solar development projects among others Gujarat Solar Power Transmission Project, India and (iii) contributed to commercialization of solar power generation in DMCs and development of solar energy industry.

The output quality was high and relevant. Through implementation of the TA since 2010, RTF and ASEF were successfully incorporated and operationalized as non-profit organizations (NPOs) in Tokyo, Japan in 2012. In addition, consensus on needs for investment of smart grid was raised to promote large scale investment of renewable energy based power generation and institutional capacity of the relevant power sector agencies in DMCs were successfully enhanced.

At the second ASEF meeting held in Tokyo, Japan from 1 to 2 December 2010 jointly hosted with the Government of Japan, over 300 delegates from 38 countries attended. The Meeting showcased selected, projects being implemented for solar energy development. The Meeting witnessed enthusiastic networking among peers, and intense engagement between project developers, equipment manufacturers, lenders and government officials. The meeting successfully progressed from the introductory themes of the first meeting in Manila, Philippines in June 2010 on the potential for solar energy in the region and an overview of solar photovoltaic and concentrated solar power technologies. Followed by the second meeting, ASEF regularly conducted meetings e.g., (i) Bangkok, Thailand on 30–31 May 2011 hosted by the Government of Thailand, (ii) Jodhpur, India on 24–25 April 2012, (iii) Tashkent, Uzbekistan on 20–23 November 2013 attended by Mr. Islam Karimov, President of Uzbekistan and Mr. Takehiko Nakao, President of ADB, and (iv) Seoul, Republic of Korea on 16–17 October 2014 hosted by the Government of the Republic of Korea.

Overall Assessment and Rating

Overall, the TA is considered successful. The TA was relevant since it was closely aligned with the DMCs' objectives to mitigate climate change through mainstreaming solar energy. The TA was efficient, effective and likely sustainable with strong commitments of DMCs and sound governance mechanism of ASEF and RTF as NGOs. The TA promoted knowledge collaboration by focusing on technology solutions for innovations in ADB's DMC not only introducing cutting-edge technologies but also 'good'-fit' and adequate technologies to meet the current demand and capacity in DMCs.

Major Lessons

A consensus on all the implementation arrangements should be reached between ADB, DMCs and the member agencies of RTF and ASEF before the TA is approved. This would minimize delays in the TA completion and smoothen project implementation.

Furthermore, when a TA is part of the global efforts to mainstream renewable energy development, there are greater synergies between the TA and non-regional program being conducted by other agencies.

Recommendations and Follow-Up Actions

ADB will continue to conduct knowledge work with ASEF and RTF to further mainstream renewable energy and smart grid development in DMCs through (i) identifying knowledge partners from center of excellence (COEs), the private sector, developing countries' government agencies in terms of south-south collaboration, (ii) conducting Knowledge Partnership Forum, and (iii) development of joint knowledge work plan with its partners.

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