

## TECHNICAL ASSISTANCE COMPLETION REPORT

Division: Sustainable Infrastructure Division, RSDD

<b>TA No., Country and Name</b>			<b>Amount Approved:</b> \$ 1,000,000.00	
TA 7510-REG: Needs Assessment and Development of the Solar Energy Program			<b>Revised Amount:</b> N/A	
<b>Executing Agency:</b> Asian Development Bank		<b>Source of Funding:</b> Asian Clean Energy Fund under the Clean Energy Financing Partnership Facility	<b>Amount Undisbursed:</b> \$ 234,428.34	<b>Amount Utilized:</b> \$ 765,571.66
<b>TA Approval Date:</b>  17 March 2010	<b>TA Signing Date:</b>  N/A	<b>Fielding of First Consultant:</b>  27 April 2010	<b>TA Completion Date</b> Original: 31 March 2011 <b>Account Closing Date</b> Original: 31 March 2011	<b>Actual:</b> 31 March 2012  <b>Actual:</b> 31 December 2012
<b>Description</b> The regional capacity development technical assistance (TA) aimed to promote solar energy and stable grid development in Asia and the Pacific. The TA was designed to contribute to an understanding by all stakeholders of the potential for solar energy in the region, the key actions required to accelerate solar energy development, the institutional and business models for development and deployment, and the mechanisms to promote technology transfer to developing countries and to enhance the scope for cooperation on research and development (R&D).  The TA covered (i) large scale solar photovoltaic (SPV) and solar thermal projects, (ii) grid-connected distributed SPV projects, (iii) off-grid solar power generation projects, (iv) stable grid development projects using batteries and two-way meters, and (v) associated technologies, e.g., lithium-ion batteries, plug-in electric vehicles.  <b>Expected Impact, Outcome and Outputs</b> The TA conducted a comprehensive needs assessment for a knowledge platform and pilot programs for solar energy and stable grid management in Asia and the Pacific for inclusive and low-carbon economic growth.  The impact of the knowledge management platform was maximized by (i) the participation of a large number of global stakeholders; (ii) regular international workshops and capacity development programs in the region, with collaboration from other development partners; and (iii) establishment of an institutional knowledge network connecting the region to the rest of the world, adding value through investment, optimizing implementation arrangements, achieving economies of scale, and developing unified approaches.  The expected outputs included (i) prefeasibility study of the knowledge management platform; (ii) international workshop – solar energy forum; (iii) regional capacity development programs; (iv) network building for solar project development and knowledge management; and (v) outreach program.  <b>Delivery of Inputs and Conduct of Activities</b> The TA provided assistance for undertaking the knowledge management program where DMC governments were able to: (i) promote private sector participation to ADB's loan projects in DMCs among others, in India, Maldives, and Thailand; (ii) mobilize concessional fund for structuring projects including clean technology fund (CTF) in India and Thailand; and (iii) capacity development for policy, technology and financing with support of development partners including.  In parallel, through information sharing and financial structuring, ADB and development partners together with the private sector companies were able to: (i) obtain clarity on applicable policy and regulatory framework; (ii) assess DMC market opportunities; (iii) develop consortium with foreign and domestic players; and (iv) obtain assistance from development partners to structure and develop projects.  Activities included assistance to the following knowledge sharing and capacity development programs: (i) first meeting of the Asia Solar Energy Forum (ASEF) held in Manila in July 2010; (ii) second meeting of the ASEF held in				

Tokyo in December 2010; (iii) the program related to the third meeting in Bangkok in March 2012 for preparation of setting up two international apparatus, ASEF and the Regional Task Force (RTF) originated by the private sector and some government officials of Maldives.

International individual consultants were engaged to carry out the activities as envisaged, and assisted the ADB project officers (the solar technology team under the Energy Community of Practice) in undertaking the outputs of the TA. National individual consultants were engaged to work as ASEF secretariat and as coordinators between international consultants and ADB during project implementation. The consultants coordinated with other TA projects including capacity development TA (TA 7473-REG: Solar Energy Development in South Asia) and project preparatory TA for development of solar energy projects. All consultants were engaged in accordance with ADB's *Guidelines on the Use of Consultants*.

The original closing date was extended by one year due to the need for continued consulting services support for the registration of the ASEF as a not-for-profit organization and the implementation of its increased work program.

The consultants performed their tasks in accordance with the terms of reference, and their performance was considered satisfactory.

The performance of ADB was satisfactory as it provided adequate supervision to the TA activities and the consultants.

#### **Evaluation of Outputs and Achievement of Outcome**

The TA successfully supported the conduct of several ASEF meetings; regional capacity development programs were conducted with high level recognition by both the public and the private sectors. The TA was properly designed in terms of inputs and outputs and the TA paved a way for setting up two international knowledge platforms, i.e., ASEF and RTF. Through ASEF and RTF, the TA strengthened the network of the stakeholders for solar project development and knowledge management.

#### **Overall Assessment and Rating**

The TA was successful in achieving the above outcome by promoting solar energy and stable grid development in Asia and the Pacific. While the TA was completed with an undisbursed balance of \$234,428.34, several solar energy sector lending programs were developed by the regional department and PSOD and the knowledge platform (ASEF and RTF) was successfully set up. Therefore, TA's overall implementation is rated as successful.

#### **Major Lessons**

Continued support for needs assessment and project development for sustainable solar energy and stable grid development in Asia and the Pacific is important to effectively manage the knowledge platform, i.e., Asia Solar Energy Forum. The Asia Solar Energy Platform will be beneficial for ADB and its development partners in structuring financially viable solar energy projects in the region. Extensive consultation with stakeholders, and the public and private sectors were important ingredients in raising consensus on the way forward for solar energy development in DMCs.

#### **Recommendations and Follow-Up Actions**

Efforts should continue to build capacity and outreach programs, through ASEF, among DMC governments, the private sector companies, ADB, and development partners. Another TA was approved in October 2010, TA 7613-REG: Knowledge Platform Development for the Asia Solar Energy Initiative aimed at identifying and structuring pilot solar energy projects through ASEF in consultation with ADB, DMC governments, and project developers.

Prepared by: Naoki Sakai

Designation: Senior Climate Change Specialist, RSID

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.