

Aide-Memoire
for
Scaling-up Renewable Energy Program in Low Income Countries (SREP)
Joint MDB Technical Mission to Armenia
June 3-6, 2013

I. Introduction

1. A Joint World Bank/IFC, European Bank for Reconstruction and Development (EBRD), Asian Development Bank (ADB), and team¹ visited Armenia on June 3-6, 2013 to conduct the technical mission to discuss with the new Government: (a) the inception report prepared by the Consultant supporting the Government with preparation of the SREP Investment Plan (IP); (b) priorities in the renewable energy sector; and (c) agree on the next steps and time-line for preparation and submission of the IP for the SREP sub-committee approval.

II. Mission Activities and Status of the Project

2. The MDB team held discussions with the Ministry of Energy and Natural Resources, the Renewable Resources and Energy Efficiency Fund (R2E2 Fund), the Ministry of Finance. A detailed list of stakeholders met by the MDB team is provided in Annex 1.

3. **Status of the Project:** The grant agreement for US\$300,000 SREP IP preparation grant was signed by the IBRD and the R2E2 Fund and became effective on May 7, 2013. The selection of the Consultant to support the Government with preparation of the IP is completed. Following the QCBS selection, the evaluation committee of the R2E2 Fund recommended a contract award to DH Infrastructure (USA) and the contract was signed on May 19, 2013.

III. Summary of Mission Findings and Agreements:

4. **Inception report:** The inception report submitted by the Consultant provided comprehensive discussion of the methodology and work-plan for preparation of the SREP IP, including: (a) identification of prospective renewable energy technologies and projects; (b) prioritization of the projects based on the SREP IP criteria and the criteria to be agreed with the Government; (c) addressing of the environmental and social safeguards requirements of the TOR; and (d) time-line for delivery of the SREP IP.

5. **Long-list of renewable energy projects:** The Government informed the MDB team that given the increase in the cost of electricity supply due to gas price increase, the Government is interested in updated assessment of the costs of some renewable energy technologies potentially applicable in Armenia, which previously were not seen as prospective given high levelized energy costs, such as solar PV and concentrated solar plants. The MDB team discussed and

¹ The team comprised: **World Bank** – Mr. Gevorg Sargsyan, SREP Program Coordinator and Mr. Artur Kochnakyan, Energy Economist; **EBRD** – Ms. Angel Sax, Associate Banker; **ADB** - Areg Barseghyan, Senior Country Coordination Officer. Mr. Remon Zakaria, Energy Efficiency and Climate Change Business Development Manager at EBRD, supported the mission remotely.

agreed with the Government on the long list of renewable energy technologies and projects that will be comprehensively assessed to identify priority technologies and projects based on the prioritization criteria suggested by the Government. Those technologies include: geothermal power generation, geothermal heat pumps, solar PV, concentrated solar plants, solar water heaters, wind, waste-to-energy (landfill gas and/or municipal solid waste), and small hydropower. The R2E2 Fund will facilitate collection of the required data and information from previously completed technical studies and resource assessments related to the above technologies.

6. **Prioritization of renewable energy projects in the SREP IP:** The MDB team discussed with the Government the need to have a clear set of criteria to prioritize renewable energy technologies and projects. The MDB team also advised the Government to ensure that proposed renewable energy technologies and projects are clearly shown to be consistent with expected SREP Program Level (support low-carbon growth pathways through transformative impacts) and SREP country level outcomes (increased supply of renewable energy, GHG emission reduction). The Bank team discussed and agreed with the Government on the following preliminary set of criteria to prioritize technologies and projects: (a) levelized energy cost; (b) potential for scale-up, i.e. the size of financially viable market for a particular technology; (c) contribution to job creation and industrial development through bolstering of local manufacturing or services; this was prioritized by the Government given the job-creation focus of Armenia Development Strategy for 2012-2025; (d) contribution to power system reliability (e.g. ability to meet peak demand, ability to operate as base-load; risks of grid instability due to dispatch of sizeable intermittent renewables). The proposal should also ensure compliance with other relevant SREP criteria. The Government might add or remove criteria as the preparation of the SREP IP progresses based on the discussions with broader stakeholders and the MDB team.

IV. Time-table for completion of SREP IP and next steps

7. The Government confirmed its intention to submit the SREP IP to CIF Administrative Unit by September 30, 2013 to be included in the agenda for the next SREP Sub-committee meeting to be held on October 28 - November 1, 2013. The MDB team agreed with the Government that the next joint MDB mission will be held when the preparation of the SREP IP is an advanced stage with the list of priority technologies and projects identified, estimated at late August 2013. The Government and the MDB team agreed on the following time-table for completion of the SREP IP and submission for approval. The MDB team noted that the below time-table is quite tight and should the Government not have a solid Investment Plan, which was consulted with key stakeholders, ready by the specified deadline, it should consider submitting it in the next round by March, 2014.

Actions	By whom	By when
Complete analysis of costs and benefits of renewable energy technologies/projects	R2E2 Fund/MENR	July 20, 2013
Produce the draft list of priority renewable energy technologies/projects	R2E2 Fund/MENR	August 20, 2013
Joint MDB mission to finalize the SREP IP	MBD team	August 20-30, 2013
Disclosure of investment plan for public consultations (2-weeks for review and provision of comments)	R2E2 Fund/MENR	September 1, 2013
Independent expert review of the SREP IP (as required by the SREP)	R2E2 Fund/MENR	September 1-15, 2013
MDB internal quality review of the SREP IP	MDBs	September 1-15, 2013
Finalization of the SREP IP	R2E2 Fund/MENR	September 20, 2013
Government approval of the SREP IP	MENR	September 25, 2013
Formal submission to SREP Sub-committee approval	MENR	September 30, 2013

ANNEX 1: STAKEHOLDERS MET

Mr. Areg Galstyan, Deputy Minister of Energy and Natural Resource

Mr. Vardan Aramyan, Deputy Minister of Finance

Mr. Hrach Tsughunyan, Head of Development Department, Ministry of Energy and Natural Resources

Ms. Tamara Babayan, Director, Renewable Energy and Energy Efficiency Fund