



## **TERMS OF REFERENCE**

### **Scaling-up Renewable Energy Program (SREP)**

#### **Joint Mission**

**August 28 – September 3, 2013**

#### **Armenia**



### **Scope of the Technical Mission**

1. The mission comprised of representatives of Multilateral Development Banks (MDBs) will: (i) review the progress with preparation of the SREP investment plan (IP), (ii) discuss and agree with the Government on specific priority renewable energy projects to be supported under the SREP if the IP is approved, and (iii) discuss the next steps to finalize the IP to be submitted to SREP sub-committee approval.

### **Dates of the Mission**

2. The proposed dates for the Joint Mission are August 28 – September 3, 2013.

### **Activities undertaken before the Joint Mission**

3. Since March 2012, various activities were conducted by the Government with support from the MDBs including:

- a. A Scoping Mission was conducted by the joint MDB team<sup>1</sup> from July 2-12, 2012 to identify the key development partners, undertake stock taking of existing activities and documentation available on a range of analytical, strategic and programming activities related to renewable energy in Armenia.
- b. An advance preparation grant request of \$300,000 for SREP Phase I (IP Preparation) activities was submitted and approved by the MDB Committee.
- c. The Grant Agreement for SREP advance preparation grant was signed between the IBRD and R2E2 Fund, the recipient and the implementing agency for SREP IP preparation grant, and declared effective.
- d. The process of hiring of Consultant to support the Government with preparation of the Investment Plan was completed and a contract was signed with the DH Infrastructure (USA) on May 19, 2013.
- e. Technical Mission was conducted by the joint MDB team from June 3-6, 2013 to review the draft inception report prepared by the consultant, discuss priorities in the renewable energy sector, and to agree on the next steps for the Armenia IP preparation.

### **Expected results and outcomes**

4. The main deliverables to be expected at the completion of the Joint Mission are:

- a. Detailed comments on the first draft of the investment plan;

---

<sup>1</sup> The Technical Mission will include representatives from World Bank (WB), International Finance Corporation (IFC), Asian Development Bank (ADB), and the European Bank for Reconstruction and Development (EBRD).

- b. Agreed list of priority renewable energy projects that the Government would implement with the support of SREP financing.
- c. Agreed timetable for the next steps for finalization of Armenia SREP IP and submission to SREP sub-committee.

## ***CONTEXT OF THE MISSION***

5. The Climate Investment Funds (CIF) was established in 2008 with the goal of promoting international cooperation on climate change issues, and supporting the mitigation and adaptation efforts of low income countries. SREP was developed under the CIF umbrella that was approved in 2009 to demonstrate the social, economic, and environmental viability of low carbon development pathways in the energy sector. It seeks to create new economic opportunities and increase energy access through the production and use of renewable energy.

6. Armenia was selected by the SREP Expert Group, set up by the SREP sub-committee, to be among 6 reserve countries under the program primarily due to the past efforts made by the Government to promote renewable energy projects and a carbon neutral economy, vulnerability of the country to the effects of climate change, the scale of impact achievable by moderate funding, and strong private sector participation in the energy sector among others.

7. In March 2012 the SREP sub-committee ranked Armenia fourth in the list of priority countries (after Tanzania, Liberia and Yemen) and agreed that, should additional resources be made available, Armenia would qualify for concessionary financing. The SREP sub-committee agreed on an indicative allocation of up to \$40 million for Armenia. The Government confirmed its interest in SREP participation to the SREP Sub-committee in August 2012.

8. SREP will support investments to scale-up renewable energy generation in Armenia, and facilitate the development of the country's sustainable energy agenda. Armenia engagement in SREP activities is expected to result in:

- Development of a clean energy IP for the first five years that would help Armenia to scale up RE and move towards low carbon development;
- Improved investment climate for private sector participation in the renewable energy sector;
- Enhanced legal and regulatory frameworks in the renewable energy sector.

9. Increase in renewable energy generation will help the country address two of the key challenges facing the energy sector – adequacy of energy supply and energy security.

- a. Armenia remains vulnerable to energy supply shortages in the long run. By 2022, Armenia is estimated to need at least 850 megawatts of new power generation capacity to meet the increasing demand and make up for power supply shortfall, when old thermal power units are discontinued and the existing nuclear power plant is decommissioned. The investments needs for new generation capacity are large, will have substantial fiscal implications, and require tariff

increases, which would adversely affect the affordability of energy for residential customers and the overall economic competitiveness. The Bank Group and other development partners are supporting the Government through selected sector investments and AAA to help address these challenges.

- b. Increased reliance on indigenous energy resources will enable Armenia to reduce dependence on imported fuel to meet energy demand. Currently, Armenia imports gas and nuclear fuel required for 70% of annual electricity generation.

10. The World Bank is supporting the Government to address a number of challenges in the energy sector through investment lending and informs the Government thinking on power sector challenges and potential solutions through analytical sector work. Specifically, the World Bank is currently supporting rehabilitation of a 230 km backbone section of power transmission network, which will help to improve the reliability of power transmission network.

11. ADB is working with the Government to help improve power supply reliability through rehabilitation of key high-voltage substations.

12. EBRD is helping the Government to improve energy security and economic competitiveness by investing in energy efficiency. Specifically, Armenia Sustainable Energy Financing Facility of EBRD supports private enterprises' access to energy efficiency investment funds through line of credit to local commercial banks.

13. IFC Sustainable Energy Finance Project supports establishment of a sustainable market for energy efficiency and renewable energy investments. For energy efficiency, IFC project primarily supports financial institutions to develop energy efficiency lending and awareness raising on sustainable energy finance.

## ***PREPARATORY ACTIVITIES***

14. Since Armenia was selected as a pilot country for the SREP, the Government supported by the MDBs has undertaken a number of preparatory activities including: (i) Joint MDB team dialogue with the Government on SREP commencement, (ii) engagement of MENR and R2E2 Fund for preparation of SREP IP, (iii) a stocktaking exercise, (iv) a Scoping Mission including a technical workshop and consultations with national stakeholders, and (v) a Technical Mission to review the draft inception report and discuss the priority areas in the renewable energy sector.

15. Initial discussions among the MDBs and the Government in July 2012 focused on identifying the SREP team and the proposed timeline for completion of the SREP Phase I activities.

16. From July 2-12, 2012 ADB, the World Bank Group, and the EBRD participated in a Scoping Mission led by the Government. The objectives of the Scoping Mission were to:

- Identify relevant government counterparts, development partners and stakeholders for the proposed SREP activities;
- Hold discussions about the objectives of the SREP programme, its benefits and the modalities of its implementation in Armenia to ensure a common understanding by all stakeholders;
- Initiate discussions and consultations with the identified stakeholders and development partners;
- Undertake a stocktaking of existing activities and documentation available on a range of analytical, strategic and programming activities related to renewable energy, which are considered important aspects of preparing the investment plan;
- Agree on the scope and outline of the investment plan;
- Agree on the timeline as well as financial and human resources required to prepare the investment plan;
- Finalize the TOR for the selection of the consultant to support the Government with the preparation of the SREP investment plan; and
- Agree on the terms of reference for the next MDB Joint Mission.

17. During the Scoping Mission preliminary consultations were held with government agencies, private sector, and local lending institutions to explore the barriers to renewable energy development in Armenia, and approaches for leveraging SREP funds to address these barriers.

18. A consultative workshop was also held and attended by 60 participants from the Government, private sector, donors, and the academe. In addition, the MDB team also conducted site visits to two small hydro power plants, a biogas power plant, and a solar water heating installation.

19. The findings during the Scoping Mission underscored that the existing legal and regulatory framework in Armenia supports renewable energy. The Energy Law and the Law on Renewable Energy and Energy Efficiency clearly articulate the importance of renewable resources and provided a framework for facilitating their development. Among others, the legal framework provides for 15 years off-take of electricity produced for all small renewable power plants at the tariffs set by the regulator, Public Services Regulatory Commission (PSRC). Amendments have been initiated to eliminate a number of bottlenecks in the legal framework and reduce the legal/regulatory risks of private investors in the sector.

20. Following the completion of the Scoping mission, the Government and the MDBs agreed on the following key activities to proceed with preparation and approval of the investment plan for Armenia:

- The stocktaking exercise will be continued and completed during the Technical Mission to provide basis for the development of the IP, and to finalize the Terms of Reference (TOR) for preparing the IP;
- Preliminary identification and characterization of a set of priority investments and technical assistance to be considered in the IP by the Government;
- Initiate selection of the Consultant to assist the Government with development of the SREP IP;
- Submission of a preparatory grant request for SREP Phase I activities. It was agreed that the funds will be channeled through the World Bank and the IBRD will provide the grant to the R2E2 Fund.

21. The Government indicated its intention to formally submit its SREP IP for approval at the SREP sub-committee meeting in November 2013.

22. From June 3-6, 2013 a joint World Bank/IFC, EBRD and ADB Technical Mission visited Armenia to conduct further discussions with Government on the investment plan preparation process. The objectives of the Technical Mission were to:

- Review the inception report prepared by the Consultant supporting the Government with preparation of the SREP IP;
- Discuss into more depth the priorities in the renewable energy sector; and
- Agree on the next steps and the timeline for preparation and submission of the IP for SREP Sub-Committee approval.

23. During the Technical Mission the MDB team held discussions with the Ministry of Energy and Natural Resources, the Renewable Resources and Energy Efficiency Fund (R2E2 Fund), and the Ministry of Finance. The inception report prepared by the Consultant provided the bases for a comprehensive discussion on the methodology and work plan. The report allowed, through discussion, to identify the prospective renewable energy technologies and projects, and to prioritize them based on the SREP IP criteria and criteria to be agreed with the Government.

24. The MDB discussed and agreed with the Government on the long list of renewable energy technologies and projects that were to 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 agreed to facilitate collection of the required data and resource assessment related to the mentioned technologies.

25. The MDB team discussed and agreed with the Government on the preliminary set of criteria to prioritize project and technologies: (a) levelized energy costs, (b) potential for scale up, (c) contribution to job creation and industrial development through bolstering local manufacture; and (d) contribution to power system reliability.

26. 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.

## COMPOSITION OF THE MISSION

27. The Technical Mission will be coordinated by the Government through the R2E2 Fund, which is the implementing entity for SREP in Armenia.
28. The SREP mission team will include Gevorg Sargsyan (SREP Program Coordinator, World Bank); Artur Kochnakyan (Energy Economist, Task Team Leader for Preparation of SREP IP, World Bank), Tigran Parvanyan (Operations Officer, IFC), Remon Zakaria (Energy Efficiency and Climate Change Business Development Manager, EBRD), Areg Barseghyan (Sr. Project Coordinator, ADB) and Cindy Tiangco (Energy Specialist, ADB).
29. The MDBs focal points for SREP are:
- WB: Gevorg Sargsyan (gsargsyan@worldbank.org)
  - IFC: Joita M. Mukherjee (jmukherjee1@ifc.org)
  - EBRD: Andreas Biermann (BiermanA@ebrd.com)
  - ADB: Jiwan Acharya (jacharya@adb.org)
30. The Government focal point is: Ms. Tamara Babayan (Director of Renewable Resources and Energy Efficiency Fund, [director@r2e2.am](mailto:director@r2e2.am)).
31. Table I presents a tentative agenda and timetable for the activities for the Scoping Mission.

Table I: Tentative Agenda and Timetable

<i>Date</i>	<i>Morning</i>	<i>Afternoon</i>
<b>Aug. 28, 2013</b>	Internal MDB team meeting	Kick-Off Meeting with Deputy Minister of Energy and Natural Resources. Technical discussions with the R2E2 Fund and the Consultant supporting the Government with preparation of SREP IP
<b>Aug. 29, 2013</b>	Technical meeting with R2E2 Fund and the Government's Consultant	Technical meeting with R2E2 Fund and the Government's Consultant
<b>Aug. 30, 2013</b>	Technical meeting with R2E2 Fund and the Government's Consultant	Technical meeting with R2E2 Fund and the Government's Consultant
<b>Sep. 2, 2013</b>	Round-table to discuss the priority renewable energy areas and projects with key stakeholders	Round-table to discuss the priority renewable energy areas and projects with key stakeholders
<b>Sep. 3, 2013</b>	MDB drafting of Aide Memoire	Wrap-up meeting with Minister of Energy and Natural Resources



## **MAIN CONTACTS (MDB and Government)**

### **Government**

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

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

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

### **Multilateral Development Banks**

#### **The World Bank**

Mr. Gevorg Sargsyan

Program Coordinator, CTF/SREP

e-mail: [gsargsyan@worldbank.org](mailto:gsargsyan@worldbank.org)

Phone: +1 202 458 1919

Mr. Arthur Kochnakyan

Energy Economist/ SREP country focal point

e-mail : [akochnakyan@worldbank.org](mailto:akochnakyan@worldbank.org)

Phone : 374-10-523-992

#### **Asian Development Bank**

Mr. Jiwan Acharya

SREP Coordinator/ Climate Change Specialist

e-mail: [jacharya@adb.org](mailto:jacharya@adb.org)

Phone: +63 2 632 6207

#### **European Bank for Reconstruction and Development**

Mr. Andreas Biermann,

Senior Policy Manager, Energy Efficiency and Climate Change team, CTF/ SREP,

e-mail: [biermana@ebrd.com](mailto:biermana@ebrd.com)

#### **International Finance Corporation**

Ms. Joyita Mukherjee

Senior Operations Officer/ CIF Coordinator

E-mail: [JMukherjee1@ifc.org](mailto:JMukherjee1@ifc.org)

Phone: +1 202 473-0652