

Aide-Memoire
Scaling-up Renewable Energy Programs in Low Income Countries (SREP)
Cambodia SREP Scoping Mission
21 – 22 January 2015

I. INTRODUCTION

1. The \$816 million Scaling Up Renewable Energy in Low Income Countries Program (SREP) is a funding window of more than \$8 billion Climate Investment Funds (CIF). SREP was established to scale up the deployment of renewable energy (RE) solutions in the world's poorest countries to increase energy access and economic opportunities. Channeled through five multilateral development banks (MDBs) including the Asian Development Bank (ADB), SREP financing aims to pilot and demonstrate the economic, social, and environmental viability of low emissions development pathways building on national policies and existing energy initiatives.

2. A joint Mission of the ADB (the Mission¹) and CIF Administration Unit visited Cambodia from 21 – 22 January 2015 to discuss the proposed scope, schedule, and other aspects of preparing an Investment Plan (IP) for the SREP program. The SREP Sub-Committee approved Cambodia's Expression of Interest for support in 2014 and on 4 November 2014, the Government confirmed its interest to start the preparation of the SREP IP and assigned its national focal point (see Appendix 1). The scoping mission was fielded accordingly.

3. The Government sees that the high cost and inadequate supply of electricity significantly limit economic growth and discourage investments. In its National Strategic Development Plan (NSDP) 2009-2013, the Government recognized the importance of energy sector development to ensure socioeconomic growth and poverty reduction, and needs continued support for energy sector development. Threatened with high cost of petroleum imports and other implications for the country's energy security, the government is exploring new sources of alternative energy. Renewable energy (RE) potential is high but resources remained untapped²:

- **Hydropower:** potential than 10,000 MW; only 684 MW has been developed, with many projects under construction.
- **Solar:** high potential with average of 5 kWh/day and average sunshine duration of 6-9 hours per day.
- **Wind:** potential is estimated at 3,665 GWh/year, but only a small percentage of it is being tapped. The southern part of the Tonle Sap lake, mountainous districts in the southwest, and coastal regions such as Sihanoukville, Kampot, Kep and Koh Kong have annual average wind speed of 5m/s or greater.
- **Biofuel:** Jatropa plantations cover about 200 hectare (ha); palm oil about 4,000 ha with possible expansion to 10, 000 ha; and sugar cane with 20,000 ha.

¹ The Mission comprised: Asian Development Bank (i) Rehan Kausar (Project Administration Unit Head, Southeast Asia Energy Division); (ii) Jiwan Acharya (Senior Climate Change Specialist [Clean Energy]); (iii) Shuji Hashizume (Investment Specialist, ADB Private Sector Operations Department); (iv) Climate Investment Funds Administration Unit – Zhihong Zhang (Coordinator, Clean Technology Fund and Scaling Up Renewable Energy Program); and (v) Dan Millison (ADB Consultant).

² Source: Sovanna (2010): The Current Status of Renewable Energy, Energy Efficiency Development in Cambodia, MIME October 2010, Lao PDR

- **Biomass:** Generation potential was estimated to be 18,852 GWh per year (approximately 35 times EDC generation in 2002). Significant sources are rice husk, sugar cane bagasse, cassava stems, etc.
- **Biogas:** Effectiveness of small scale biogas has been demonstrated by a number of different projects. The use of animal wastes to generate high quality gas for cooking has significant economic, health, social and environment benefits for poor rural households.

4. Electricity is expensive in Cambodia and prices are much higher in the countryside than in towns and cities. In 2011, Phnom Penh had the cheapest electricity for households, \$0.15 per kWh, while in the most expensive concession area in the country (in the Seam Reap province) one kWh cost one dollar in the peak months. Overall, prices for households typically ranged from \$0.30 to 0.80 per kWh, but in the countryside prices often varied between \$0.65 and \$0.90 per kWh. Several factors explain the higher prices in the countryside. Most of REEs are using in-efficient diesel generation; load factors are low as consumers cannot afford high tariffs and consuming minimal load, supply losses and fuel transportation costs high. Furthermore, elevated costs of capital and financing and high risk premiums against rural customers' low capacity to pay their bills increase the end-user price.

II. MISSION FINDINGS

5. The Mission briefed the Ministry of Mines and Energy (MME, the SREP focal point), other key government agencies, development partners, civil society, financial institutions, and private sector stakeholders on the SREP background, objectives, investment criteria, and procedures. A list of persons met is presented in Appendix 2. MME noted that there will be a wet-season surplus in the grid in the near term (2017-19), after which hydropower and coal are expected to provide the bulk of new capacity additions. The Government has set two key goals for rural electrification: (i) all villages have access to electricity of some type by 2020; and (ii) at least 70% of all households have access to grid-supplied electricity by 2030. At present, Cambodia's development of RE sources is very slow in comparison with its neighboring countries. The status of RE resource development and technology deployment is mainly in initial demonstration stages. Support is needed to overcome barriers, including financing of physical investments and assistance for policy evolution.

6. Feedback from the various stakeholders indicates that there is potential value-addition to be created with SREP support for larger scale RE development, exploitation of the full spectrum of RE resources, application of a variety of RE technologies for various end-users, and opportunities to employ new financing and business models for RE development. For example, SREP might be utilized to assist Rural Electricity Enterprises with RE systems to reduce diesel generation; this assistance might be delivered with support from existing micro-finance institutions. During preparation of the SREP IP, off-grid and on-grid opportunities with public and private sector financing from ADB will be considered. The indicative SREP allocation for Cambodia is \$30 million. The Mission emphasized that the actual availability of funds is subject to competition among the 14 new pilot countries with EOIs approved in 2014. The ratio of SREP grant to loan will be determined going forward; the Government expressed its desire to maximize the grant contribution.

7. Following the Scoping Mission, several steps are needed to prepare the Programming Mission. These are outlined below.

8. **Pre-SREP Programming Mission:** A \$300,000 SREP grant has been allocated to support the IP preparation. The Government and the Mission agreed that the grant will be

administered by ADB in the form of a capacity development technical assistance (CDTA), as per normal ADB procedures. The Government through MME will submit a formal request to ADB for the IP preparation grant and for proceeding with the CDTA. The CDTA will finance consulting services, stakeholder workshops, and other activities required to develop the IP. The draft request for the SREP IP preparation grant is presented in Appendix 3.

9. Advanced planning for stakeholder consultations need to be carried out, similar to that done for the Scoping Mission. Terms of Reference (TOR) for the Mission need to be prepared and agreed by Government, ADB, and among SREP partners. The TOR must be posted on the CIF website in advance of the Mission, to allow all interested stakeholders to be informed of the SREP programming plans and to participate in consultations and other aspects of the Mission as appropriate. A formal request to the ADB for the fielding the Mission will need to be prepared and transmitted to the CIF Administration Unit and ADB. The CDTA must be initiated, with adequate work carried out to enable the Mission to proceed effectively.

10. ***SREP Programming Mission:*** Development partners, including SREP and other bilateral donors will be invited to participate in the Mission. Government and ADB priorities, links between SREP and other initiatives, and the strategic role of candidate SREP investments will be identified and agreed among the Government and development partners. This exercise will be carried out in a participatory and consultative manner, so that key stakeholders have an opportunity to share views on how to optimize use of SREP resources. The main outputs of the Programming mission will be (i) an initial draft of the SREP IP, which will be used for further consultations and stakeholder inputs, and (ii) agreement on next steps and schedule to complete the IP.

11. ***Post-SREP Programming Mission:*** The draft IP will be reviewed by the Government and ADB and revised as necessary with additional stakeholder consultation and inputs from the ADB project team(s). The draft IP will be published on the MME website for public disclosure as required by SREP. ADB will consult with CIF and Government SREP focal points to organize any necessary follow-up actions, e.g., consultation mission to further refine and finalize the IP.

12. The initial outline TOR for the Mission and timeline are presented in Appendix 4. A summary of SREP background and investment criteria is presented in Appendix 5.

III. CONCLUSIONS AND NEXT STEPS

13. The Government agreed to pursue preparation of the Investment Plan with ADB's support. The next step will be for the Government to submit an official request for the \$300,000 IP preparation grant, along with a request for ADB to process the CDTA. The proposed schedule going forward is as follows:

- (i) The Government will provide comments, if needed, on the Aide Memoire by 9 February 2015.
- (ii) The Government will submit a letter requesting that ADB submit the request for the IP preparation grant to SREP, and to administer the grant for the CDTA to facilitate IP preparation. The grant is expected to be approved by the SREP Sub-committee within 2 weeks from receipt of Cambodia's submission.
- (iii) The Government will also make a formal request to ADB to process the CDTA. The target date for internal ADB approval of the CDTA is March 2015.
- (iv) The target date for IP endorsement by the SREP Sub-committee in November 2015. A detailed schedule for further action will be agreed subsequent to receiving approval of the IP preparation grant.

14. The agreements reached by the Mission may require approval from the higher authorities of the Government and ADB.

Appendix 1

Government Reconfirmation of Interest and Assignment of SREP Focal Point



ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ
Kingdom of Cambodia
Nation Religion King

ក្រសួងរ៉ែ និងថាមពល
Ministry of Mines and Energy
លេខ: ០១៣២.០១១.០១១

Phnom Penh, 04., November., 2014

To: Ms. MAFALDA DUARTE
Program Manager
Climate Investment Funds Administrative Unit
The World Bank
Washington DC, USA

Subject: SREP National Focal Person

Dear Ms. Duarte:

The Royal Government of Cambodia would like to reconfirm its interest in participating in the Scaling Up Renewable Energy Programme for Low Income Countries (SREP). It is our honor to be selected as one of the new countries to implement this Programme as this will give us opportunity to significantly improve our renewable energy sector and support our rural electrification strategy.

To support SREP implementation, we has assigned our national focal person:

Focal Person: Mr. Toch Sovanna
Title: Director of New and Renewable Energy
Agency Address: #79-89, Pasteur Street (51), Sangkat Phsa Thmey 3, Khan Daun Penh, Phnom Penh.
Email address: tsovanna@hotmail.com
Contact numbers: (855) 17 856 927
Contact numbers: (855) 23 219 574
Fax number: (855) 23 219 584

Towards this end, we are looking forward for a productive relationship and to receiving instructions on the next steps in the development our SREP Country Investment Plan.

Yours sincerely,



SUY SEM
MINISTER

CC: ADB's Cambodia Resident Mission

Appendix 2

List of Persons Met

Government Agencies

Name/Title	Institution	Contacts
H.E. Hem Vanndy Undersecretary of State	Ministry of Economic and Finance (MEF)	023 427 798 hemvanndy@hotmail.com
Mr. Yi Sokthearith Chief, Multilateral Cooperation 1		
Mr. Ohan Sopanhavorn		
Mr. Nop Rannavuth Deputy Director General	Ministry of Planning (MOP)	
Mr. Toch Sovanna Director of Energy Technique	Ministry of Mines and Energy (MME)	017- 85 69 27 tsovanna@hotmail.com
Mr. Dok Doma Deputy Director of Water Supply	Ministry of Rural Development (MRD)	dokdoma@gmail.com
Mr. Kim Rithy Deputy Director, M&E	Rural Electrification Fund (REF)	089 267 071
Mr. Rann Sihakkiry Deputy Director of Coporate Planning and Projects	EDC	012 533 570 rs_kiry@hotmail.com
Mr. Nong Sovanneth Assistance Project Manager		sovannethnong@yahoo.com
Mr. Chea Socheat	MME Petroleum Department	
Mr. Chuop Paris Deputy Secretary General	Ministry of Environment	

List of Development Partners

Name/Title	Institution	Contacts
Mr. Takashi Ito Senior Representative	JICA	Uchida.Togo@jica.go.jp
Mr Togo Uchida, Project Formulation Advisor		
Mr. Taesang Kim Climate Change Policy Analyst	UNDP	023 216 167 taesang.kim@undp.org
Mr. Narin Sok Head	UNIDO	n.sok@unido.org
Mr. Ngov Veng		N.CHHENG@unido.org
Mr. Erik van Waveren Country Director	SNV - Netherlands Development Organisation (Attend on behalf of GIZ)	012 267 099 023 994 562 JSteele@snvworld.org evanwaveren@snvworld.org
Mr. Jason Steele Sector Leader Renewable Energy Cambodia		
Ms. Manon Plouchart Project Officer Banking sector, Urban Development and partnership with NGO	AFD	012 213 753 plouchartm@afd.fr

Appendix 2 -- List of Persons Met (continued)

Private Sector

Name/Title	Institution	Contacts
Mr. Jim Gramberg CEO	Solar Partners Asia Cambodia Ltd	info@solarpartners.asia jim@solarpartners.asia 017661500, 023 99 03 00
Mr. Sun Mao Director	EcoSun Energy Cambodia	023 6664666 016 958 035/ 855 12 635 865 077 776 818, 097 8381525 ecosuncam@gmail.com
Mr. Ford Thai President	Khmer Solar Ltd	012 78 78 36 / 011 911 922 / 016 83 00 38 / 010 32 33 28 info@khmersolar.com
Mr. Mean Channarith Official	Foreign Trade Bank of Cambodia	023 724 466 / 722 466 narith@ftbbank.com
Mr. Thul Kosal Legal and Compliance Manager Mr. Sok Samnang, Deputy Marketing Manager	Chief (Cambodia) Specialized Bank Plc.	023 430 888 thulkosal@yahoo.com, samnang.sok@chiefholdings.com.kh tola.vann@chiefholdings.com.kh
Russell J. deLucia President Elizabeth Friend	The Small-Scale Sustainable Infrastructure Development Fund, Inc.	delucia@s3idf.org Elizabeth@s3idf.org
Miss Ou Sarinda Credit Officer	Rural Development Bank (RDB)	023 220 810/811 admin@rdb.com.kh
Keo Moly Business Development Manager	Comin Khmer Co., Ltd	023 885 640-8 011 967 679 / 12 652 698 ckadmin@comin.com.kh keomoly@comin.com.kh
Mr. Tes Bunheang Sale Manager	Energy Saving Supply Co.; Ltd	012 222 515; 023 33 80 20 tes.bunheang@ess.com.kh
Ms. Ponn Dalyn Deputy Director, Economics Research Dept Ms. Sun Chhavivann	National Bank of Cambodia	023 722 563/722 221 012 882 973 info@nbc.org.kh 012 211 422

Civil Society Organizations

Name/Title	Institution	Contacts
Mr. Silas Everett Country Representative	The Asia Foundation	023 210-431 cambodia.general@asiafoundation.org
Mr. Jon Exel SNV Senior Renewable Energy Advisor Jason Steele Sector Leader Renewable Energy	SNV Cambodia	012 267 099; 023 994 562 cambodia@snvworld.org JSteele@snvworld.org JExel@snvworld.org
Heang Sarim Executive Director	Cambodian NTFP Development Organization (CANDO)	023 630 2237 / 75 645 1000 092 286 383 candodevelopment@gmail.com
Mr. Tep Chansothea Program Officer-Climate Change Mr. John Week Communication Officer	Forum Syd	023 221 147 012 70 50 72 chansothea.tep@forumsyd.org

Appendix 3

Draft Request for Investment Plan Preparation Grant

SREP PROGRAM			
Summary - Preparation Grant Proposal for Development of the Investment Plan³			
1. Country/Region:	Cambodia / Asia	2. CIF Project ID#:	(Trustee will assign ID)
3. Date of the Scoping Mission:	20-22 January 2015		
4. Date of the First Joint Mission:	N/A		
5. Funding Request (in USD):	\$300,000	MDB: Asian Development Bank	
6. Type of Request	Advance preparation grant: No		
6. Type of Request	Full preparation grant: Yes		
6. Type of Request	If yes, please indicate the amount and date of the previous requests for the preparation grant: N/A		
7. MDB SREP Focal Point and Project/Program Task Team Leader (TTL):	Headquarters-SREP Focal Point: Jiwan Acharya, jacharya@adb.org	TTL: Mr. Rehan Kausar 632-632-4444, rkausar@adb.org	
8. National Implementing Agency:	Ministry of Mines and Energy, Department of New and Renewable Energy		
9. Description of activities covered by the preparation grant:	<p>The SREP Sub-Committee approved Cambodia's Expression of Interest in 2014. The scoping mission fielded in January 2015 confirmed that there are prospective investment opportunities and policy development needs that warrant the use of grants and concessional finance to develop renewable energy (RE) in the country.</p> <p>The Preparation Grant will be utilized to hire a group of consultants to conduct sector analysis, stakeholder consultations, preliminary identification of candidate investments and financing alternatives, and other preparatory work to assist the Government to develop the SREP investment plan. The key activities of the consultants will be to:</p> <ul style="list-style-type: none"> • Compile data and reports on renewable resources, pilot programs and projects, funding sources, and prospective RE investments to establish the "knowledge base" of RE policy, project experience, and current development trajectory. • Summarize the policy and regulatory framework and identify constraints to RE resource development and technology deployment including policy and regulatory, financing, institutional, procurement, investor protection, etc., that could be addressed under the SREP Program. • Identify the market potential for RE resources, technologies, and applications which could be supported by both public and private investments in the context of Government priorities over the next 5 years. • Review past experience on renewable energy development, access to energy, and productive end-use of energy that could be applied and draw lessons for future interventions in the country. • Develop a long list of candidate interventions and implementing mechanisms -- comprising physical investments and policy evolution -- for RE development during the next 2-3 years that meet SREP investment criteria. 		

³ A separate template needs to be presented for each project and program preparation grant request listed in the Investment Plan.

- Assist the Government in carrying out consultation workshops with all stakeholders including private sector, financial institutions, and civil society organizations as needed to inform and seek feedback to further develop the list of candidate interventions to be included in the investment plan.
- Identify necessary institutional structure and implementing agencies for such interventions and indicate their specific roles for SREP supported project implementation
- Identify opportunities for private sector programs and projects either through a PPP, advisory services, and private sector investments.
- Assess availability of other co-financing prospects to maximize leveraging of SREP funds
- Provide initial recommendations on safeguard issues measures to be followed for projects under SREP.
- With inputs from the foregoing, rank candidate investments in a qualitative or semi-quantitative manner for consideration under the IP. Based on the financing requirements, prepare a short concept note (following SREP format) for the most attractive candidate investments, noting sources of project preparation grants (e.g., SREP, ADB, or other grant sources).
- Assist the Government in finalizing the SREP IP for presentation to the SREP Sub-committee, and suitable for use by the Government as a national planning document.

10. Expected outcomes:

The expected outcome of the activities identified above would include

- Assessment of key barriers for renewable energy development and the market potential for public and private interventions.
- Assessment of potential private sector interventions supported with SREP funds.
- Recommendation on appropriate regulatory, technical, and financial interventions and implementation mechanisms for encouraging public and private sector renewable energy projects to address current barriers.
- Draft Investment Plan prepared following SREP guidance, ready for final review by the Government for endorsement by the Sub-committee.

11. Deliverables and timeframe:

- Consultants mobilized by April 2015
- Inception report by May 2015
- Preliminary Draft IP by consultants by July 2015
- Draft IP delivered for public consultations and external reviewers by August 2015
- SREP IP finalized by 30 September 2015 for endorsement by November 2015

12. Budget (indicative):

Expenditures ⁴	Amount (USD) – estimates
Consultants	\$185,000
Equipment	\$5,000
Workshops/seminars	\$20,000
Travel/transportation	\$50,000
Others (admin costs/operational costs)	\$10,000
Contingencies (max. 10%)	\$30,000
Total Cost	\$300,000
Other contributions:	
• Government	Staff and logistical support (in-kind)
• MDB	Professional and administrative staff
• Private Sector	[no direct inputs during preparation]
• Others (please specify)	

⁴ These expenditure categories may be adjusted during project preparation according to emerging needs.

<p>13. Timeframe (tentative)⁵ Scoping Mission: 20 – 22 January 2015 Programming Mission: May 2015 Second Programming Mission (if necessary): August 2015 Investment Plan submission for SREP Sub-Committee Endorsement: October 2015</p>
<p>14. Other Partners involved in investment plan design and implementation⁶: Ministry of Mines and Energy is taking the lead in Investment Plan preparation, as well as identification and preliminary design of candidate programs and projects. A broad spectrum of stakeholders including other relevant ministries has been involved in SREP scoping discussions.</p>
<p>15. If applicable, explanation for why the grant is MDB executed: Standard ADB Procedure - ADB executes all such grants to its developing member countries.</p>
<p>16. Implementation Arrangements (incl. procurement of goods and services): Ministry of Mines and Energy (MME) is the Government focal point for SREP. ADB's procurement guidelines will be following to engage consultants and for procurement of any other goods and services required for the Investment Plan preparation.</p>

⁵ In some cases activities will not require MDB Board approval.

⁶ Other local, national and international partners expected to be involved in design and implementation of the project.

Appendix 4

Outline Terms of Reference for the Programming Mission

I. Executive Summary

Cambodia is a new pilot country under Scaling up Renewable Energy in Low Income Countries (SREP), which is a targeted program of the Strategic Climate Fund (SCF), one of the two funds under the Climate Investment Funds (CIF). In 2014, the SREP sub-committee agreed to support investment plan (IP) preparation for Cambodia with up to \$300,000 in grant funding, to be administered by Asian Development Bank (ADB). In January 2015, the SREP Sub-committee confirmed an indicative allocation of US\$30 million for Cambodia's SREP IP. SREP supports developing countries in their efforts to expand energy access and stimulate economic growth through the scaled-up deployment of renewable energy (RE) solutions; and it provides a trigger for transformation of the renewables market in each target country through a programmatic approach that involves government support for market creation, private sector implementation, and productive energy use. SREP is implemented by Multilateral Development Banks (MDBs), in close collaboration with other development partners including the UN and bilateral agencies.

After the SREP scoping mission fielded in January 2015, a Programming Mission will be undertaken to assist Government of Cambodia (GoC) in facilitating the Investment Plan preparation and eventual endorsement. GoC has appointed the Ministry of Mines and Energy as the focal points for SREP engagement. The first Programming Mission is tentatively scheduled for May 2015. The exact date and TOR for the Mission will be finalized considering the status of preparatory activities and discussions with the GoC, ADB, and other development partners.

II. Mission Objectives, Outputs and Process

The main objective of the Programming Mission(s) is to collaborate with Government of Cambodia in developing its investment plan. The main outputs of the Programming Mission will be (i) completion of a consultation process engaging key stakeholders in the design of SREP support to Cambodia; (ii) a draft SREP Investment Plan document; and (iii) a brief report documenting next steps for SREP in Cambodia.

The Programming Mission is a process of multiple consultations with government representatives and stakeholders to identify a pipeline of public and private sector investments and their associated cost. During this process, the Programming Mission will explore synergies and mobilize complementary resources. The Programming Mission is expected to include two Missions which will be conducted at the beginning and final phase of the preparation of the investment plan.

III. Introduction/Background

The Kingdom of Cambodia is located in Southeast Asia bordered by Vietnam, Laos and Thailand. The population is 14.86 million and population density is 83 people per square kilometer. Cambodia is an agrarian economy, with approximately 85% of the population living in rural areas. As a post-conflict country, Cambodia faces an array of development challenges. The country has scored low on the human development index, ranking 138th out of 187 countries⁷. Of the poorest countries, IMF ranked Cambodia 142 out of 184 countries⁸. As of

⁷ Source: <http://hdr.undp.org/sites/default/files/Country-Profiles/KHM.pdf>

2010, 20.5% of the country's population is living in poverty.⁹ Per capita gross national income (GNI) is \$880 and per capita gross domestic product is \$944. The population grew very rapidly in the 1980s and 1990s and continues to grow by around 1.5% (200 000 people) per year. More than half of the population is under age 25 and almost one-third is under 15. The country is urbanizing gradually, but from a very low level. In 2011, 79% of the population still lived in rural areas, down from 84% in 2002.

About 35% of the country's population has access to electricity, one of the lowest in Southeast Asia. While urban areas enjoy 100% electrification, the rural population suffers from "energy poverty" with only 14% having access to the grid and about 50% having access to alternative off-grid electricity sources.¹⁰ In 2011, the per capita electricity consumption is 190 kWh per year. Around 10 million people have no access to grid-supplied electricity and around 12 million rely mostly on wood and other traditional fuels for energy. Those who do have access to electricity in the country's rural areas have to pay extremely high prices for it. In 2012, 50% of villages and around 30% of households were connected to grid-quality (available 24 hrs a day) electricity.

Imported petroleum products are the main source of commercial energy for power generation, industry, transport, and the residential and commercial sectors. The country's energy needs are projected will more than double to 11 million tons oil equivalent (Mtoe) by 2035. Hydropower is projected to account for 86% of domestically produced energy by 2035, but this will only cover 10% of total energy needs. Fossil fuels are projected to become the largest energy source, and demand for petroleum products will be driven mainly by demand for diesel and gasoline, as the country becomes more motorized and passenger cars more common. Cambodia has an estimated 1.8 million registered vehicles, of which most are motorcycles, with only about 300,000 passenger cars. The passenger car motorization rate is about 20 per 1,000 people versus around 500 per 1,000 in the developed countries.

In 2011, 45% of the total national electricity demand was covered by imports from Thailand, Vietnam and Lao PDR. Other energy sources include: 52.2% heavy fuel oil, 2.4% hydropower, 0.5% coal and others. The total installed capacity is 635.5 megawatts (MW) and electricity supply of 2,674 gigawatt-hours (GWh) per year. From 2002 to 2011, the annual electricity demand growth averaged 16.3% at the national level and 17% in Phnom Penh. In the projections prepared by KEPCO of South Korea and EGAT of Thailand, Cambodia's power demand would reach 9 terawatt-hours (TWh) per year by 2020 -- more than triple from 2011. These projections assume an 11% annual increase in demand which is well below the 16% annual increases over the past 10 years.

The national utility, Electricité du Cambodge (EDC) mainly supplies the capital city, Phnom Penh, while many rural areas are supplied by rural electricity enterprises (REEs). The bulk of generation output is from fossil fuels, particularly heavy fuel oil, resulting in high electricity prices. Although electricity imports from neighboring countries have been on the rise, the supply of electricity still suffers shortage and reliability. The country has no national grid, only a large

⁸ Source: <http://www.gfmag.com/component/content/article/119-economic-data/12537-the-poorest-countries-in-the-world.html#axzz2xjC1KpdN> 2013 Ranking of Countries, from Richest to Poorest, According to Gross Domestic Product Based on Purchasing-Power-Parity (PPP) Per Capita Under Creative Commons License: Attribution Share Alike

⁹ Source: <http://www.worldbank.org/en/country/cambodia/overview>

¹⁰ Source: DRAFT National Policy, Strategy and Action Plan on Energy Efficiency in Cambodia, 2013

number of isolated grids using in efficient diesel generators. System losses average 10.40%; with 25% losses in rural areas¹¹.

IV. Scope of Work

a) Pre-mission activities

The main outputs of the pre-mission period will be (i) preparation and approval of the TOR for the Mission, including provisions for MDB costs, (ii) a GOC request for the Mission's conduct to the MDBs as partners, (iii) inception of work financed through the preparation grant, (iv) detailed planning and scheduling of formal consultations, and (v) the completion of sufficient preparation of background materials through the grant and other means to enable effective conduct of the Mission.

b) Preparatory work for Programming Mission

The experts engaged through the preparatory TA should carry out adequate work to enable the Mission to proceed effectively. Advance planning for stakeholder consultations will need to be carried out, including the preparation of materials, lists of participants, designation of the timing and venues.

c) Coordination among other development partners

The Mission will coordinate with other development partners including bilateral and UN agencies to explore synergies and mobilize complementary resources. This will also serve as a follow up to the earlier interactions during the scoping mission.

d) Consultations with other stakeholders

Besides further in depth discussions with SREP focal points, the Mission will have detailed interactions with various government agencies, development partners, local financial institutions, private sector and other civil society organizations,

e) Mission composition (team members, assignments and experts outputs)

The Mission will comprise of experts from ADB. It is also expected that UN agencies and bilateral agencies will also participate in the mission. The final list of team members, their assignments and outputs will be prepared after further consultations with the Government, other development partners, and ADB.

f) Mission agenda/schedule

The Mission is tentatively scheduled for about 1 week in May 2015. The Mission activities will include interactions with government agencies, private sector, NGOs, banks as well as a field visit. A workshop with the key stakeholders will be organized to have structured discussions on key issues and areas for SREP interventions. Final Mission agenda/schedule will be developed in consultation with GoC before the actual Mission.

g) Contacts (MDBs and Government)

Government:

Mr. Toch Sovanna, Director
Department of New and Renewable Energy, General Department of Energy
Ministry of Mines and Energy
tsovanna@hotmail.com

MDBs

ADB: Jivan Acharya (jacharya@adb.org), Rehan Kausar (rkausar@adb.org)

¹¹ Source: Cambodia's Electricity Sector in the Context of Regional Electricity Market Integration 2012

Appendix 5

SREP Background and Investment Criteria



Scaling-Up Renewable Energy in Low Income Countries Program

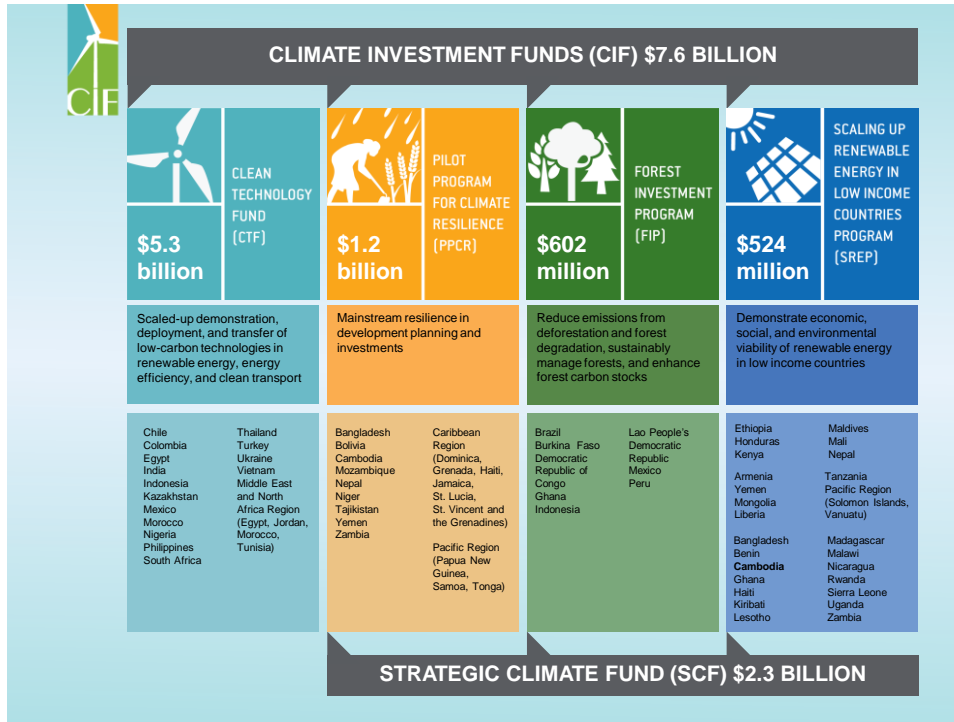
Scoping Mission to Cambodia
January 2015



CIF - BACKGROUND

- The Climate Investment Funds (CIF) were established in 2008 to **provide scaled-up climate financing to developing countries** to initiate transformational change towards climate resilient, low carbon development.
- The CIF has benefitted from **14 donor countries** including: Australia, Canada, Denmark, France, Germany, Japan, Korea, Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom and the United States of America.
- Donor countries have pledged **US\$ 7.6 billion to fund investments** in 48 countries and three regions.
- CIF support is channeled through **five multilateral development banks** (MDBs): African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank and The World Bank Group.





SCALING UP RENEWABLE ENERGY IN LOW INCOME COUNTRIES PROGRAM (SREP)

PURPOSE
To expand energy access and stimulate economic growth in low income countries by working with governments to build renewable energy markets, engage the private sector, and remove barriers that might otherwise inhibit investments in renewable energy technologies

FUNDING \$524 million	GOVERNANCE SREP Sub-Committee of representatives from six contributor and six eligible recipient countries	COUNTRY ELIGIBILITY Countries eligible for official low income countries eligible for MDB concessional financing and engaged in an active MDB country program with priority given to countries expressing an interest to participate
FINANCIAL LEVERAGE 1:6.3		
DONORS Australia, Denmark, Japan, Korea, Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom, United States	FINANCING Concessional financing, such as grants and concessional loans	PILOTS Ethiopia, Honduras, Kenya, Liberia, Maldives, Mali, Nepal, and Tanzania
IMPLEMENTATION AfDB, ADB, IDB, and WBG, including IFC	OBSERVERS MDBs, Trustee, GEF, UNDP, UNEP, and self-selected representatives of CSOs, Indigenous Peoples, and the private sector	Armenia, Mongolia, Yemen, and Pacific Region (Solomon Islands and Vanuatu)
		Bangladesh, Benin, Cambodia , Ghana, Haiti, Kiribati, Lesotho, Madagascar, Malawi, Nicaragua, Rwanda, Sierra Leone, Uganda, Zambia



SCALING UP RENEWABLE ENERGY IN LOW INCOME COUNTRIES PROGRAM (SREP)

Types of Activities

SREP investment plans should be designed to support a country-level programmatic approach to scaling up renewable energy. An emphasis needs to be placed on the long term transformative outcomes and successful market transformation rather than individual investments or activities.

Investments:

- Solar, wind, bio-energy, geothermal, hydro
- Electricity and thermal
- On-grid, off-grid, mini-grid

Capacity Building and Advisory Services:

- Development of energy policies and legislation
- Assessment of technology resources potential
- Strengthening governance and institutional capacity
- Creation of incentive scheme to improve financial viability of RETs



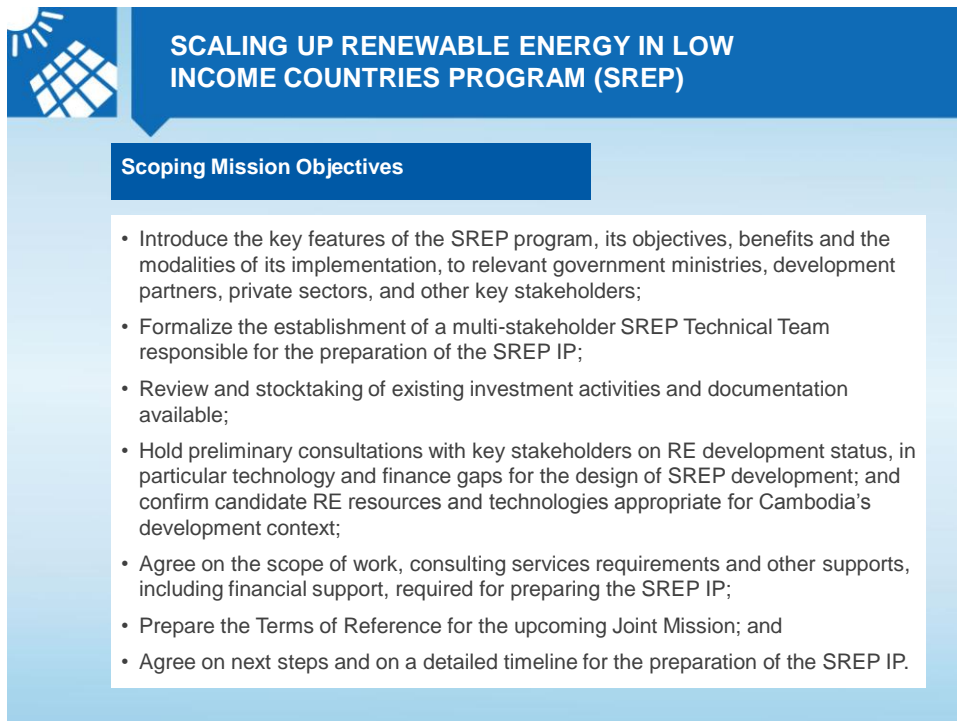
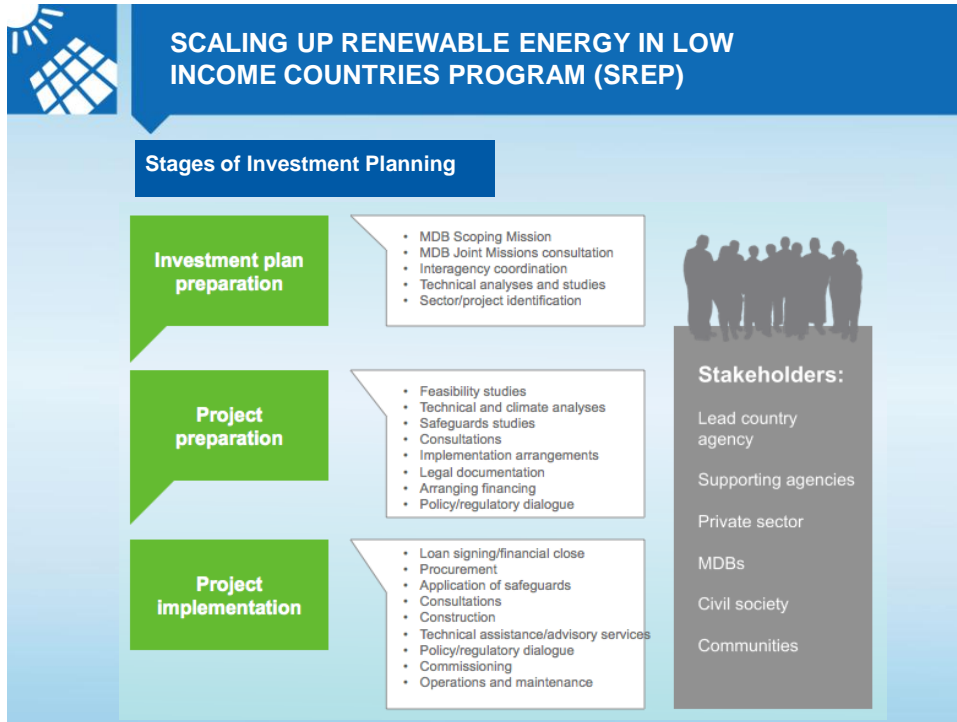
SCALING UP RENEWABLE ENERGY IN LOW INCOME COUNTRIES PROGRAM (SREP)

SREP Investments Criteria

- Increased installed capacity from renewable energy sources
- Increased access to energy through renewable energy sources
- Low Emission Development
- Affordability and competitiveness of renewable sources
- Productive use of energy
- Economic, social and environmental development impact
- Economic and financial viability
- Leveraging of additional resources
- Gender
- Co-benefits of renewable energy scale-up

More information:

https://www.climateinvestmentfunds.org/cif/Scaling_Up_Renewable_Energy_Program_in_Low_Income_Countries





SCALING UP RENEWABLE ENERGY IN LOW INCOME COUNTRIES PROGRAM (SREP)

SREP Country Allocation

- Indicative proposed allocation for Cambodia is USD 30 million