



SAARC Energy Centre,
Islamabad

THE REPORT

**SAARC Dissemination Webinar on “Study to Investigate the Difficulties
for Household Solar Systems in SAARC Region”**



**SAARC Dissemination Webinar on “Study to Investigate the
Difficulties for Household Solar Systems in SAARC Region”**



6 March, 2018, Islamabad

Organized by
SAARC Energy Centre, Islamabad

06 March, 2018

SAARC Energy Centre
697, Street 43, Sector E-11/4, NPF,
Islamabad, Pakistan
www.saarcenergy.org



Introduction

SAARC Energy Centre, Islamabad under its approved programme activity for FY 2018, successfully conducted a Dissemination Webinar on “Study to Investigate the Difficulties for Household Solar Systems in SAARC Region” on 6th March 2018. Webinar Agenda is available at Annexure I.

2. SEC, during FY 2017, had completed a comprehensive study for reviewing the already concluded off-grid household Solar Home System (SHS) programmes and projects implemented by the SAARC Member States. The study had helped to identify challenges and suggested measures/recommendations for the promotion and development of off-grid Solar Home Systems in the SAARC Region. The aim of conducting this webinar was to disseminate the outcomes, findings and recommendations of the study report among the Member States.

Participation

3. The Webinar was attended by a total of 69 professionals that included delegates from Member States, Representatives of Regional/International organizations, Academia and private sector. The Resource Persons from Bangladesh, India, Pakistan and UNESCAP Thailand delivered detailed presentations on different aspects of off-grid SHS and also gave short talks during knowledge sharing session of the webinar. Participants list is available at Annexure II.

Description

4. The webinar was conducted with an aim to discuss the difficulties and problems which broadly include technical, financial, organizational and social issues faced by the SHS programmes in South Asia. The contents of the Webinar included detailed presentations on

the present conditions of the SHS, the degree of satisfaction experienced by the users of SHS, constraints in SHS, and measures to overcome the constraints for further promotion and success of the solar energy in Member States of SAARC.

5. The webinar started with opening remarks by Dr. Shoaib Ahmad, Acting Director, SAARC Energy Centre, followed by three presentations which were delivered by resource persons from M/s PricewaterhouseCoopers, India, which was the contracted party that conducted the study on SHS for SAARC Energy Centre. All the presentations were followed by a brief Q & A session. After the break, four presentations were delivered by experts from Bangladesh, India and Pakistan. In the knowledge sharing session, representative of UNESCAP gave a brief talk on the initiatives and achievements of the Australian market to the participants. The programme coordinator read out Conclusions and Recommendations which were gathered during the course of the webinar. Afterwards, the webinar was closed with remarks of appreciation and thanks from SAARC Energy Centre for all the participants and resource persons.

Opening Remarks

6. Dr. Shoaib Ahmad welcomed all the delegates and participants from around the globe for attending the webinar and showing keen interest. He also acknowledged the commitment and contribution of resource persons in materializing the conduct of webinar.

7. He started with brief introduction of the SEC and its annual program activities with specific emphasis on Renewable Energy (RE). He informed the participants that SEC conducts programme activities supervised by the Governing Board (GB); the GB comprises representation from all Member States of SAARC region. The programme activities of SEC includes policy based research studies, knowledge sharing events i.e., workshops, seminars, webinars, trainings, and pilot projects in all fields of Energy.

8. He apprised the participants that the Member States in SAARC region have huge and abundant resources of RE which have not been harnessed to their actual potential. A few Member States have adopted various policies and implemented national programmes /projects of rural electrification through off-grid Solar Home Systems in their respective countries. He hoped that the dissemination webinar may be helpful for all the stakeholders who are working in the off-grid Solar Home Systems sector through a better understanding of key challenges faced during implementation of such programmes. He remarked that this webinar is just a first step, and SEC shall in future; continue conducting such knowledge sharing events. At the end, he again thanked all the participants and resource persons for taking out time to attend the webinar.

Technical Proceedings

9. All the presentations delivered during the webinar are available at SEC's website www.saarcenergy.org. A brief information on the content of the delivered presentations is as follows:

Overview of SHS Programmes in South Asia

10. Mr. Amit Kumar gave an overview starting with the objectives and limitation of the study report. He then gave a detailed account of overall SHS implementation structure which includes administrative structure, technical issues, financing mechanism, and installation status of each country. He summarized his findings by stating that Member States have varied amount of success in SHS implementation and Bangladesh has emerged as a role model for other countries in this region.

Challenges/constraints affecting growth of SHS in SAARC Region

11. Mr. Vibhash Garg started his presentation by broadly classifying the challenges into four categories, namely, Institutional & Organizational, Technical & Implementation, Financial, and Social & Market. In his presentation, he gave details of issues and problems relevant to each country that are responsible for hampering growth of off-grid SHS. In the presentation, he mentioned following key challenges identified in the study report which are faced by varying levels in Member States:

- a) Overlapping of on-grid and off-grid electrification plans
- b) Institutional weakness
- c) Available conventional fuel subsidies
- d) Technical Quality issues
- e) Lack of capacity building
- f) Last Mile distribution problems
- g) Battery recycling issues
- h) Lack of Micro Financing Institutes (MFI) setup
- i) Non-availability of innovative models such as Pay As You GO (PAYG)
- j) Lack of Awareness of SHS

Key findings and Recommendations

12. Mr. Sandeep Mohanty offered solutions (depicted in the form of recommendations) in response to already identified challenges in earlier presentation. He highlighted three critical factors i.e., Affordability, Availability and Awareness which are essential for future

success of any off-grid SHS programme. He identified and explained in detail the following recommendations which were mentioned in the study report:

- a) Active role of Government through engagement with active stakeholders and preparation of an integrated planning
- b) Clarity & transparency on national/state/province electrification plans
- c) Subsidy on fossil fuel (kerosene) to be removed gradually
- d) Quality standards of SHS (equipment and installation) need to be implemented and enforced
- e) Authorized testing centres to be established for certification/labeling
- f) Last Mile distribution issues to be resolved through community level distribution model and/or Franchisee model
- g) Establishing mechanisms for proper disposal or recycling of used batteries
- h) Commercial business models (MFIs, Local community and Private sector) should replace subsidy models
- i) Use of Innovative financing Models such as PAYG which is affordable and convenient
- j) Development of supportive tax and customs framework
- k) Awareness of technology through more effective engagement channels i.e., Women
- l) A robust and efficient After sales service mechanism

Expanding Role of Private sector in SHS

13. Mr. Nisar A. Latif informed the audience on the available big market of off-grid electrification through SHS in the SAARC region. It is a billion dollar industry for all Member States where private sector with the support of Government can develop and implement business models of rural electrification through SHS. He also briefed the audience on the difficulties being faced by those firms from private sectors which are complying with the regulations/standards of SHS issued by the Government. Since, there is no quality control on sub-standard products of SHS being imported in the country; therefore, consumers purchase the low quality equipment which is easily available in market on cheaper price. Thus, the low quality equipment often fails and reputation of the Solar PV technology is affected.

Sharing Indian experience in SHS programme

14. Mr. Simran Grover identified the issues of end-user financing and low quality products as one of the key challenges in the remotest areas of India. He stated that the villagers in those areas are very poor and can't afford to pay high upfront cost of SHS. The economic condition of the villagers also poses a high risk to the interested banks/companies who wish to invest in these systems. He informed that the financial barrier can be

overcome by building long term relationship with Financial Institutes and partnerships with Community organizations. He also emphasized the need for customized and tailored solutions for each cluster of villages.

Financing mechanisms for SHS Programmes

15. Mr. Pulkit Agrawal gave presentation on financing mechanisms (PAYG) developed and implemented by Simpa Networks in India. He informed that the systems are metered with an in-built IP (GSM) based technology and the payments are made by customers through Pre-paid recharge. The customer interacts with Simpa networks but the contract is between bank and the consumer. The bank offers direct loans to end consumer who then uses loan amount to purchase SHS. Simpa Networks offers services on behalf of the bank for offering loan, providing SHS, electronic collection of charges and after-sales services for 2-3 years. The Simpa networks disconnect the system through GSM based technology for any non-payment customers. This provides higher flexibility to the bank and Simpa networks (SHS provider) because the mechanism is decoupled from geography location of the bank branches.

Operation and Maintenance of SHS: Case Study of Bangladesh

16. Ms. Mafruda Rahman gave an overview of Infrastructure Development Company Limited (IDCOL). She informed that the company provides concessionary financing, grant supports, technical assistance, quality assurance, and capacity development in field of RE. The company has been able to finance a total of 4.1 million SHS in Bangladesh. The company works under a structure including Donors, Partner Organizations (Project implementer), SHS suppliers, technical and operational committees, and households. The company has a dedicated customer care centre for the warranty period i.e., 3 years of operation of SHS. Afterwards, the customers can sign annual maintenance agreement with Partner Organizations. The customers are provided incentives by IDCOL if they replace old batteries through Partner Organizations; this ensures safe disposal of used batteries by the suppliers.

Knowledge sharing session

17. The participants of the webinar provided their feedback on the quality and content of the event. Generally, they pointed it out as a very useful and timely intervention by SEC. Mr. Michael Williamson from Energy Division of UNESCAP also gave a short talk on the initiatives and achievements of Australia in the off-grid and on-grid solar PV technology. He mentioned the importance of reputed brands of Solar PV equipment and on trainings of installers/technicians. He also mentioned that most of the new houses in Australia have a

Solar PV installed at the roof-top. At the end, on behalf of his organization, he offered full support and facilitation to SAARC Energy Centre in its future programmes.

Conclusions and Recommendations

18. Mr. Ahsan Javed, Research Fellow (RE) read out the recommendations which were gathered during the course of the webinar and from the outcome of the previously conducted study report. They are as follows:

- a) An integrated planning at federal level with coordination of the provincial/state departments
- b) Mandatory after sales service and warranties for government and all commercial parties
- c) To develop a policy to buyback SHS if the concerned area is electrified within 3 years
- d) Set up dedicated training centres for capacity building of installers/technicians in concern areas
- e) Community level distribution channel should be present which promotes, follow up sales activities and monitors dealer/agent networks
- f) Better processes should be in place to ensure safe recycling of batteries and/or other equipment
- g) Structure of grant subsidy mechanism in the form of output based aid
- h) Government should look to create an enabling environment and encourage commercial partnerships between MFIs and private SHS vendors
- i) Players should offer consumer centric and customizable models using mobile payments
- j) Increasing the product knowledge and trust among customers
- k) Innovative approaches to widen channels for promotion and implementation

Closing of Webinar

19. Mr. Ahsan Javed, Research Fellow (RE) informed all the participants that the presentations will be available on SAARC Energy Centre's website (www.saarcenergy.org). He requested the participants to submit suggestions and comments to SEC for any further improvement, plus they may suggest and submit any topics of their interest to SEC for arranging future webinars. He closed the webinar with a thank you note to everyone for attending the Webinar.



SAARC Energy Centre
Islamabad

Webinar Agenda

Dissemination Webinar on “Study to Investigate the Difficulties for Household Solar Home System (SHS) in SAARC Region”

Tuesday, 6 March 2018

1000 – 1005	Introduction
1005 – 1015	Opening remarks <i>Dr. Shoaib Ahmad, Acting Director, SAARC Energy Centre</i>
1015 – 1050	Overview of SHS Programmes in South Asia <i>Mr. Amit Kumar, Partner, M/s PricewaterhouseCoopers (Pvt.) Ltd.</i>
1050 – 1100	Q & A session
1100 – 1130	Challenges/constraints affecting growth of SHS in SAARC Region <i>Mr. Vibhash Garg, Director, M/s PricewaterhouseCoopers (Pvt.) Ltd.</i>
1130 – 1150	Q & A session
1150 – 1210	Key findings and Recommendations <i>Mr. Sandeep Mohanty, Associate Director, M/s PricewaterhouseCoopers (Pvt.) Ltd.</i>
1210 – 1230	Q & A session
1230 – 1300	Lunch Break
1300 – 1320	Expanding Role of Private sector in SHS <i>Mr. Nisar A. Latif, CEO, Solar Sigma Ltd., Pakistan</i>
1320 – 1350	Sharing Indian experience in SHS programme <i>Mr. Simran Grover, CEO, Bask Research Foundation, India</i>
1350 – 1400	Q & A session
1400 – 1420	Financing mechanisms for SHS Programmes <i>Mr. Pulkit Agrawal, AVP (Finance), Simpa Networks, India</i>
1420 – 1430	Q & A session
1430 – 1450	Operation and Maintenance of SHS: Case Study <i>Ms. Mafruda Rahman, Assistant Manager (GCF), IDCOL, Bangladesh</i>
1450 – 1545	Knowledge sharing session
1545 – 1555	Conclusions and Recommendations
1555 – 1600	Closing of Webinar

Information for the participants:

1. All times mentioned in agenda are according to Pakistan Standard Time (PKT). The participants from other Member States may attend Webinar by following their own national time. The time conversion for all Member States is given below for reference:

Country	Afghanistan	Bangladesh	Bhutan	India	Maldives	Nepal	Sri Lanka
Local time	(PKT-00:30)	(PKT+01:00)	(PKT+01:00)	(PKT+00:30)	PKT	(PKT+00:45)	(PKT+00:30)

2. The participants can ask questions to presenters by typing questions or clicking to the raised hand option into the Attendees pane of the main window of GotoWebinar software. You may send in your questions at any time during the presentations; we will collect these and address them during the Q&A session at the end of each presentation.
3. All participants can also submit comments/views and/or observations on the draft study report to SAARC Energy Centre through email to Mr. Ahsan Javed, Research Fellow (RE) (ahsan@saarcenergy.org) before 20th March, 2018.

List of Participants, Resource Persons & SEC Team Members**List of Participants**

S.No.	First Name	Last Name	Email
1.	saachi	singla	saachi.singla@pwc.com
2.	Khurram	Shabbir	khurram.shabbir@live.com
3.	Suresh	Shrestha	saudakur@gmail.com
4.	Muhammad Qaseem Uddin	Ghori	qaseem_ghori@yahoo.com
5.	Khawaja	Awais	admin.asstt@saarcenergy.org
6.	Saeed	Ul Riaz	librarian@saarcenergy.org
7.	Abdul	Wahab	abdulwahab2334@outlook.com
8.	Muhammad	Tayyab	tayyabawan60@yahoo.com
9.	majid	ali	majid.ali@sharif.edu.pk
10.	Aneel	bandjade	Aneel.bandjade@gmail.com
11.	Farhan	Shah	naqvifarhan84@gmail.com
12.	Shoaib	Ahmad	ddcoord@saarcenergy.org
13.	Ahsan	Javed	ahsan.javed@gmail.com
14.	Malik	Wahab	wahab.saarc@gmail.com
15.	Muhammad	Saeed	saeed.saarc@gmail.com
16.	Numan	Hussain	sfo@saarcenergy.org
17.	Farman	Khan	farman.saarcenergy@gmail.com
18.	Khawaja	Awais	awais.saarc@gmail.com

19.	jahanzeb	Hassan	adminofficer@saarcenergy.org
20.	jahanzeb	Hassan	jahanzeb.saarc@gmail.com
21.	Arshad	Munir	arshad.munir@saarcenergy.org
22.	Ihsan	Marwat	rfee@saarcenergy.org
23.	Baskhar	Pardhan	plet@saarcenergy.org
24.	Ijaz	UI Haq	ijazhaq83@gmail.com
25.	Nikhil	Singh	nikhilsu30@gmail.com
26.	Nawaz	Ahmad	virk_dgpc@hotmail.com
27.	Rohit	Shaw	rohit.x.shaw@pwc.com
28.	Michael	Williamson	williamson@un.org
29.	Abrar	Ahmad	abahmad@usaid.gov
30.	Mahfuzur	Rahman	mmr.idcol@gmail.com
31.	Abdul	Wahab	deo@saarcenergy.org
32.	Muhammad Umar	Mukhtar	rfete@saarcenergy.org
33.	Tarikua Mekashaw	Zenebe	tarikuamekashaw@gmail.com
34.	Kshitij	Goyal	kshitijgoyal1990@gmail.com
35.	Ruma	Akhter	ruma.akhtermist@gmail.com
36.	Abdallah	Baba	aes@planet.tn
37.	Zack	Obega	obega14@gmail.com
38.	Mahesh	Kumar	mahesh.malviya6@gmail.com
39.	Sayed Mohammad Amin	Kazimi	kazimi8613@gmail.com
40.	Muhammad Nadeem	Zakir	nadeemzakir2000@yahoo.com

41.	faridullah	sharafmal	faridullah.sharafmal87@gmail.com
42.	Amit	Kumar	Amit2.Kumar@pwc.com
43.	Khuzaima	Aslam	khuzaima.aslam@hotmail.com
44.	Kinley	Drukpa	k.drukpa1606@drukgreen.bt
45.	Tenzin	Dorji	t.dorji226@gmail.com
46.	Bilal	Hussain	rftt@saarcenergy.org
47.	Thamara Lathika	Attanayaka	lathika.attanayaka@ceb.lk
48.	Safiullah	Ahmadzai	safiullah.ahmadzai2@dabs.af
49.	Mohammad	Oria	wali.oria@dabs.af
50.	Mohamed Musthaffa	Aliyar	musthaffaaliyar@gmail.com
51.	Raziq	Hussain	raz_umt@yahoo.com
52.	Asad	Mahmood	asadm_46@yahoo.com
53.	Nazrul	Islam	epnz2009@gmail.com
54.	Muhammad	Kamran Siddiqui	mkamran313@yahoo.com
55.	Milabh	Shrestha	milabhivanovic@gmail.com
56.	GHANSHYAM	PRASAD	ghanshyamprasad29@gmail.com
57.	Muhammad Farhan	Sohail	ferhansohail@gmail.com
58.	Sabahat	Alamgir	sabahatarif@hotmail.com
59.	Muhammad Mohsin	Jahangir	mohsin763@gmail.com
60.	SM Mohibur	Rahman	rftt@saarcenergy.org
61.	Sujit	Thakuri	sujit.thakuri@de.lahmeyer.com
62.	Ammar	Yasser	ammar312@gmail.com

63.	Naman	Hegde	naman.hegde@pwc.com
64.	Rachit	Gupta	gupta.rachit@pwc.com
65.	Ram Gopal	Lageju	rfet@saarcenergy.org
66.	Muhammad	Akhtar	pltt@saarcenergy.org
67.	Muhammad	Shehryar	shehryar@harnessenergy.pk
68.	Saad	Zaheer	saadzaheer@gmail.com
69.	Tahir Ayub	Alvi	tahir.alvi@skyelectric.com

List of Resource Persons & SEC Team Members

#	Name	Designation	Organization	Contact Details
1.	Mr. Amit Kumar	Partner	PricewaterhouseCoopers (Pvt.) Ltd., India	0091 997 895 5064 0091 989 945 2400
2.	Mr. Vibhash Garg	Director	PricewaterhouseCoopers (Pvt.) Ltd., India	0091 997 895 5064
3.	Mr. Sandeep Mohanty	Associate Director	PricewaterhouseCoopers (Pvt.) Ltd., India	0091 997 895 5064 0091 981 880 7769
4.	Mr. Nisar A. Latif	Chief Executive Officer	Solar Sigma Ltd., Pakistan	0092 301 535 6635 0092 51 542 1006
5.	Mr. Simran Grover	Chief Executive Officer	Bask research foundation, India	0091 702 330 2200
6.	Mr. Pulkit Agrawal	AVP (Finance)	Simpa Networks, India	0091 959 981 8989
7.	Ms. Mafruda Rahman	Assistant Manager (GCF)	IDCOL, Bangladesh	0088 02 910 2172 (Ext 261)
8.	Mr. Michael Williamson	Head of Office (OiC)	UNESCAP, Thailand	0066 2 288 1234
9.	Dr. Shoaib Ahmad	Deputy Director (Coord)	SAARC Energy Centre	0092 51 222 8802 (Ext 103)

#	Name	Designation	Organization	Contact Details
10.	Mr. Ahsan Javed	Research Fellow (RE)	SAARC Energy Centre	0092 51 222 8802 (Ext 108)
11.	Mr. Ihsanullah Marwat	Research Fellow (EE)	SAARC Energy Centre	0092 51 222 8802 (Ext 111)
12.	Mr. Umer Mukhtar	Research Fellow (ETE)	SAARC Energy Centre	0092 51 222 8802 (Ext 123)
13.	Mr. Arshad Munir	Computer Operation Officer	SAARC Energy Centre	0092 51 222 8802 (Ext 114)
14.	Mr. Abdul Wahab	Data Entry Operator	SAARC Energy Centre	0092 51 222 8802 (Ext 114)

