



Forum on Regional Cooperation: Developing Quality Infrastructure for Photovoltaic Energy Generation

Proposal of Action Plan for PV Energy

Imilce Zuta,
September 2017

**PTB – IRENA –
Renewable
Energies Team**

JOINTLY ORGANIZED BY

QUALITY INFRASTRUCTURE FOR ENERGY EFFICIENCY & RENEWABLE ENERGY IN LATIN AMERICA AND THE CARIBBEAN



AND



WITH THE CONTRIBUTION FROM:





Policy, Financing & Industry

Action Plan considering prioritized activities

Need	Activity	Interested Stakeholders	Responsible Institution	Timeframe	Contributions (e.g: expert hours, documents, hosting/facilities)
<p>Insufficient awareness, knowledge about existing QI-solution (regulations, institutions) in the countries (e.g. among policy makers)</p> <p>Insufficient capacities on policy level in terms for QI understanding.</p>	<p>Webinars/Training (with the invitation from IRENA/OLADE using IRENA’s material and convening power; keep in mind key actors/ invite champions for QI) – directed especially at policy makers!</p>	<p>CL, JAM, AR, UY, ECU, ELS, RDOM, BRA, CR, CUB</p>	<p>Project</p>	<p>6 months</p>	<p>University of the West Indies (Accommodation, Facilities, ...); Chile National Congress (ensure participation from Parliament/Senate Energy Commission), Universidad de la Habana (include this topic in their annual PV event)</p>

Action Plan considering prioritized activities

Need	Activity	Interested Stakeholders	Responsible Institution	Timeframe	Contributions (e.g: expert hours, documents, hosting/facilities)
<p>Insufficient awareness, knowledge about existing QI-solution (regulations, institutions) in the countries (e.g. among policy makers)</p> <p>Insufficient capacities on policy level in terms for QI understanding.</p>	<p>Have the national representative at OLADE advocate for quality assurance as a topic at OLADE meetings</p>	<p>ECU, RDOM</p>		<p>continuous</p>	
	<p>Draft a policy paper that can be used for information purposes with policy makers (make use of existing papers from IRENA and Jamaica)</p>	<p>National Congress (CL), MEM (AR), MIEM (UY)</p>	<p>Chilean National Congress (Boris Lopicich)</p>	<p>Draft by the end of 2017</p>	<p>(make use of existing papers from IRENA and Jamaica)</p>



Standards & Regulation Working Group

Action Plan considering prioritized activities

Need	Activity	Interested Stakeholders	Responsible Institution	Timeframe	Contributions (e.g: expert hours, documents, hosting/facilities)
Preparation to adopt standards in regulation	Support elaboration and dissemination of methodology of regulatory impact analysis , based on existing experiences, for example Brazil, among others.	Regulators and all stakeholders in PV markets	PTB, IRENA, OLADE, INMETRO, Bureau of Standards of Jamaica	Before the end of the PTB project	<p><u>Inmetro (Brazil)</u> can share best practices and current analysis regarding regulatory impact.</p> <p><u>PTB</u> could provide expert hours, assistance with developing the methodology and the drafting of the document.</p>
	Creation of a capacity building program targeted to regulators, regarding regional best practices and cooperate with international organizations. Having trainings such as webinar, on site training and e-learning, e.g: a method similar to Coursera. (Based on the actions selected above)	Regulators and all stakeholders in PV markets	PTB, IRENA, OLADE	Before the end of the PTB project	<p><u>OLADE</u> can cooperate in the elaboration of the capacity building program, <u>OLADE</u> could bring assistance through their platform of capacity building. Use the train the trainer approach.</p> <p><u>PTB and IRENA</u> to support OLADE in organizing and implementing capacity building programs.</p>

Action Plan considering prioritized activities

Need	Activity	Interested Stakeholders	Responsible Institution	Timeframe	Contributions (e.g: expert hours, documents, hosting/facilities)
<p>Developing regulation based on consensus and standards (E.g: Regulating different type of PV systems)</p>	<p>To develop a model regulation document for PV for LAC.</p>	<p>Regulators and all stakeholders in PV markets</p>	<p>PTB, IRENA, OLADE, Inmetro, other regulatory bodies from countries might contribute</p>	<p>Before the end of the PTB project</p>	<p><u>PTB</u> could provide expert hours, assistance with developing the model and the drafting of the document.</p> <p><u>Jamaica (CROSQ)</u> can share best practices regarding this topic based on their previous experience.</p>



Metrology and Conformity Assessment

Action Plan considering prioritized activities

Need	Activity	Sub-Activities	Interested Stakeholders	Responsible Institution	Timeframe	Contributions (e.g: expert hours, documents, hosting/facilities)
Inspection Bodies (Inspectors) and Installers						
Improving the Technical Competence in Key Conformity Assessment Activities (Inspection & Certification)	Training	Training of Trainers for Inspectors (Inspection Bodies)	CROSQ, BR, MX, CL, UY, CO	¿IAAC? ¿OLADE? ¿Nn?	2018	<u>Jamaica</u> : 02 experts
		ToT of Installers	CROSQ, BR	¿IAAC? ¿OLADE? ¿Nn?	2018	<u>LABE (UNAL)</u> : 02 experts

Action Plan considering prioritized activities

Need	Activity	Sub-Activities	Interested Stakeholders	Responsible Institution	Timeframe	Contributions (e.g: expert hours, documents, hosting/facilities)
	Certification Bodies for Products					
Improving the Technical Competence in Key Conformity Assessment Activities (Inspection & Certification)	Exchange of experiences in certification schemes	Training/Workshop for Certification Bodies for Products	CO, BR, UY, MX	¿IAAC? TBD	2019	<u>PTB Expert</u> TBD

Action Plan considering prioritized activities

Need	Activity	Sub-Activities	Interested Stakeholders	Responsible Institution	Timeframe	Contributions (e.g: expert hours, documents, hosting/facilities)
	Testing & Metrology					
Improving the Technical Competence of NMIs and DIs, aimed to assure metrological traceability in PV measurements	Training	Training Program for calibrating reference solar cells (combined with practice)	BR, CL, MX, ¿AR? ¿UY?	CENAM Including IEC	2018 to 2020 (see below)	<u>PTB Experts</u> <u>Location:</u> CENAM
		– Development of a program		CENAM / PTB	2018 – I Quarter	idem
		– Implementation		CENAM / PTB	2018 – IV Quarter to 2020 – IV Quarter	idem
	Mutual Visits of NMIs and DIs		BR, CL, MX, ¿AR? ¿UY?			

Action Plan considering prioritized activities

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	Testing & Metrology					
Improving Technical Competence for Testing Laboratories	Training	Training and internships in testing methods (two levels: basic; advanced) (Combined with practice)	CO, CL, MX, BR, CR, UR, AR	TBD, including IEC	2018 to 2020 (see below)	<u>PTB Experts</u> <u>Location: TBD</u>
		– Development of a program		TBD / PTB	2018 – I Quarter	idem
		– Implementation		TBD / PTB	2018 – IV Quarter to 2020 – IV Quarter	idem

Action Plan considering prioritized activities

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	Testing & Metrology					
Improving the Technical Competence of NMIs and DIs, aimed to assure metrological traceability in PV measurements	Traceability chain for reference cells	Workshop on Regional Networking in PV		SIM, IAAC? , PTB	To define (2018?)	<u>PTB Experts</u> <u>Location: INMETRO</u>
	Intercomparisons for NMIs and DIs	Regional: Calibration of pyranometers	CROSQ, BR, MX, CL, UY, CO, AR, CR	CENAM / PMOD	2018	PTB Experts (including PMOD)
		Europe & LAC Region: Pyranometers	MX, BR, CL, CO, UY, AR, CR	TBD / PMOD	2018	PTB Experts (incl. NMIs of Europe)
		Europe & LAC Region: Spectroradiometers	MX, BR, CL, CO, UY, AR, CR	TBD / PTB	2019	PTB (incl. NMIs of Europe)

Action Plan considering prioritized activities

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	Testing & Metrology					
Improving the Technical Competence of the Testing Laboratories	Intercomparisons for Testing Laboratories	Energy Efficiency in PV	¿CROSQ?, BR, MX, CL, UY, CO, AR, CR	TBD / PTB	2018	<u>PTB Experts</u> TBD



Thank you

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