

ISA Program 5 : ' Scaling Solar eE-Mobility & Storage'

(To be Launched during WFES Abu Dhabi, 17-19 January 2018 nor during the ISA Solar Summit 11 March in early 2018)

Program Code: ISA/05/2018

Objective: To promote, assess potential, harmonize demand and pool resources for rapid deployment of and scaling up solar e-Mobility & associated Storage infrastructure(in urban and rural areas) in pursuit of the objectives of the Paris Declaration, 2015 and towards fulfillment of its obligations under Article II and III (2) of Framework Agreement.

Context : In pursuit of the above objective, implementation of the ambitious goal outlined in the Paris Agreement to keep the increase in global average temperature below 2°C, significant changes in the transport sector are required as it contributes almost one-quarter (23 percent) of the current global energy-related greenhouse gas (GHG) emissions and is growing faster than any other energy end-use sector. GHG emissions from transport are anticipated to rise from today's levels by nearly 20 percent by 2030 and close to 50 percent by year 2050 unless major action is not undertaken. Limiting the global temperature increase to below 2 degrees Celsius requires changing this transport emissions trajectory, which involves the development of an integrated electromobility ecosystem encompassing various transport modes, coupled with the low-carbon production of electricity such as solar energy for the charging infrastructure and storage systems, implemented in conjunction with broader sustainable transport and smart city principles.

Coverage & Scope: The Program of five (5) years duration, from the date of launch or till year 2023, covers the following:

- i. Scaling Solar e-Mobility & Storage in 121 Prospective Member Countries with the support of ISA Member Countries, Partner Countries and Other Countries; Countries ;
- ii. All types of solar transportation, either private or public or Joint Sector, road, rail, air or naval transportation;
- iii. All kinds of existing or future technologies in the field of solar powered charging infrastructures; on-grid and off-grid storage devices, etc. subject to their meeting the relevant IEC Codes and/or other Codes or Standards or regulations as specified by the Member Country, Partner Country, ISA or the Appropriate Authority;
- iv. All types of sustainable urban/rural transport policies program or smart city / solar city programs.

Action Plan and Activities for Successful Implementation of the Program:

1. Commissioning Study and Benchmarking of the various existing types of solar e-mobility, solar powered charging infrastructure, storage systems; assessment of solar e-mobility potential and demand aggregation and implementation plan settings / sustainable transport policies in the Member Countries or Partner Countries or Other Countries by adopting various survey tools, methods, procedures, questionnaires and processes.
2. Development and adoption of Common Methodologies for
 - i. Progressive and sustainable solar e-mobility policies & regulations including urban, semi-urban and rural planning, charging infrastructure regulations including tariff , access, financial and other support mechanism regulations, building codes, storage codes;
 - ii. Model Bidding Documents and Model Power Purchase or Procurement Agreements;
 - iii. Standards, Certifications and Quality Assurance Plan, Inspection and Testing of the various types of solar transportation, solar powered charging infrastructure, storage systems, etc.;
 - iv. Installation and O & M Practices, Safety Measures, Remote Monitoring Systems, etc.
 - v. Any other incidental activity
3. Promotion of solar e-mobility by organizing awareness raising program, capacity building program, sharing of best practices and successful business models for entrepreneurs (micro, small and medium enterprises), large industry including automobile industry, Cities, Towns and Municipalities, Utilities and Institutions, project developers, utility engineers, financial institutions, banks, etc.; Also, organization of

international, regional and national conferences, seminars, workshops, roundtables, exhibitions, etc. to sensitize various stakeholders including public at large in association with Partner Organizations, think tanks, vendors, suppliers, OEMs, industry and trade associations, etc. for rapid market development and penetration.

4. Development and dissemination of e-learning program, training/ skill development program and certification courses through various e-platforms, videos, training literatures, documentation etc. in association with educational and technical training Institutions, development agencies, international transportation associations (IATA, IRU, UITP, IRF, etc.), NGOs, etc. to build a skilled and trained workforce in the solar e-mobility sector.
5. Facilitation of technical and financial assistance to plan and design solar e-mobility program, prepare techno-economic feasibility reports and detail project reports; to draw finance and invest plan; to prepare and float Expression of Interests (EoI), Request for Proposal (RfP), to finalize, award and manage domestic and international competitive bidding through e-platforms, post-award contract management, project installation, operation and maintenance and project monitoring during implementation, operation & maintenance stage through ICT, e-platforms or remote monitoring systems in association with Member Countries, Partner Countries, other Countries, technical and knowledge partners, think tanks, civil society and consultants to enhance local institutional capacity among Member/ Partner Countries.
6. Integration of solar powered charging infrastructure with the with the grid and creation of the necessary infrastructure to enable the creation of a market for solar e-mobility and to supplement smart city program / sustainable transportation planning and in the Member Countries in association with Member Countries, Partner Countries, Partner Organizations, think tanks, civil society, consultants, advocacy groups, forums, vendors, suppliers, OEMs, and industry /trade associations.
7. Enforcement of Quality and Reliability Parameters of solar e-vehicles, solar powered charging infrastructures and storage systems.

The Plan and Program may undergo change, modification or amendment, either in part or in full or may include new Plan and Program in consultation with ISA or as decided by the Member Country or Countries.

Approach & Methodology:

- i. The Program is through voluntary participation only. All decisions about the planning and implementation of the Program shall be taken by the Member Countries.
- ii. Member Country is to designate a Country Representative responsible for the Program within one month of the launch of the Program.
- iii. The Country Representative shall extend all necessary cooperation towards implementation of the program and communicate with ISA through an appropriate digital platform. The Country Representative shall provide inputs required from the Member Country from time to time to the ISA Program Director keeping National Focal Point informed.
- iv. The Program shall be designed based on the information shared by the Member Country and implemented through digital circulation and open consultation. Member Country shall carry out assessment of e-mobility and storage potential, rooftop solar potential, carry out and facilitate aggregation of demand, set targets, and formulate plans for implementation of the Program. ISA or its authorized agency may assist the member country in such matters to achieve economy of scale, reduction in costs, sharing of knowledge, capacity building and speedy implementation of the program.
- v. The Country Representative shall submit quarterly reports in a standard ISA format as designed in consultation with Member Countries to enable ISA to submit periodic reports to the Assembly.

It is proposed that the process be continued under our collective leadership until the objective of bringing affordable and reliable solar applications for scaling solar rooftopSolar e-mobility and Storage within the reach of all ISA Member Countries, Island States and other Partner Countries is reached.

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