

Brief Note on GERMI's Rooftop Solar Activities

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GERMI has been a pioneer in rooftop solar PV in India with wide experience in the capacities of advisor, implementing agency, project management consultant (PMC) and third-party engineer/inspector (TPE/ TPI). Some of the benchmark projects undertaken by GERMI in rooftop solar PV are the following:

- 1. 5 MW Gandhinagar Rooftop Solar Programme** is India's first megawatt-scale rooftop programme, which was successfully executed end-to-end by GERMI. GERMI's scope of work included developing the concept and structuring the public private partnership (PPP), obtaining necessary government and regulatory approvals; stakeholder consultation meetings; bid-process coordination and selection of developers; negotiating power purchase agreement (PPA) with distribution company and enabling its signing; project implementation/ handholding support to developers; inspection and commissioning of individual PV systems. This programme is globally recognized through selection among the top 10 deals of Asia-Pacific for 2012 and the Earth Care Award-2015. This programme is also being replicated in other cities of India.
- 2. National Certification Programme for Rooftop Solar Photovoltaic Installer** is being implemented by GERMI with an objective of developing capacities in 100 training institutes throughout India to in-turn train 10,000 rooftop solar PV technicians per year. Under this framework, GERMI trains trainers; develops and regularly updates course syllabus and training content; certifies training infrastructure for conducting courses; conducts certification examinations for technicians; and connects successful technicians with potential employer companies.
- 3. Micro-grid for CMPDI (A Coal India Ltd. Subsidiary)** was developed and implemented by GERMI to holistically tackle the power issues at CMPDI Campus at Ranchi while ensuring economic viability and reducing its carbon footprint. The project includes establishing rooftop PV installations on various buildings; retrofitting of diesel generators with governors; voltage stabilizers for entire campus; battery back-up for entire campus; micro-grid controller with hardware; re-wiring the entire campus substation with auto-changeover to intelligently select the power source and automatically shed loads based on given priority. GERMI's scope of work was to conceptualize and design the micro-grid; procure solution providers by inviting tenders; supervise the installation; commission; and monitor the entire micro-grid system.
- 4. Best Practices Manual for Implementation of State-Level Rooftop Solar Photovoltaic Programmes in India** is funded by the Ministry of New and Renewable Energy (MNRE), Government of India to serve as a guide to various administrative stakeholders. The manual is a comprehensive resource for developing and implementing business models, policies, regulations, administrative processes, technical standards and financial processes.
- 5. Advisory to administrative stakeholders:** GERMI has been actively involved in drafting solar policies and regulations for the State of Gujarat. It also provides formal and informal support to various other states. One such example is where GERMI is on the Technical and Process Committees for BESCOM's rooftop PV programme, where it advises on technical matters such as inverter specifications to administrative matters such as installer empanelment and approval processes.
- 6. Third Party Inspection:** GERMI has undertaken over 20 MW of third party inspections for rooftop solar projects. This gives GERMI tremendous insights on actual situation on the ground, quality and process issues, needs for skill development, etc. This experience adds tremendous value and relevance to GERMI's training.

In addition to the above, GERMI also undertakes extensive project management consultancy (PMC) for megawatt-scale ground-mounted PV projects and solar parks for government and private organizations alike. Such assignments involve feasibility study of the project; detailed project report (DPR); development of specifications; tender development with bid process coordination; site management and quality control; commissioning; and performance verification of the plants.