

CAPACITY BUILDING AND AWARENESS GENERATION



With the aim to facilitate the transfer of German experience and skills developed in the solar sector to the various stakeholders in Indian market, ComSolar organizes training programmes in partnership with various Institutes. The project has also initiated awareness raising campaigns to promote the use of solar technologies in the relevant sectors.

- **SoPro-India** is initiated to raise awareness and build confidence in solar thermal technologies for low-mid temperature process heat applications in Industries

🌐 www.soproindia.in



- **Pilot training programmes** developed for large scale PV plants, solar thermal process heat and operation of CSP plants



- **Awareness building workshops** with local industrial clusters and associations

- **Pre-feasibility studies** for industries to identify techno-economic feasible interventions of solar thermal systems



- **Study tours to Germany** to transfer experience to relevant Indian stakeholders for promotion of solar energy technologies



ABOUT GIZ

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is an enterprise owned by the German Government. GIZ implements sustainable development through international cooperation, on behalf of Germany and other partners. With a global footprint in over 130 countries, GIZ leverages its regional and technical expertise for local innovation.

GIZ India has a team of over 300 staff. To address India's need for sustainable and inclusive growth, in partnership with stakeholders, GIZ's key focal areas are:

- Energy (renewable energy and energy efficiency), Mitigation of greenhouse gas emissions
- Environment (sustainable urban and industrial development, natural resource management, climate change adaptation, biodiversity)
- Sustainable economic development (rural finance, social security systems, small and medium enterprises)
- Skill development



This project is part of the International Climate Initiative. The Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety supports this initiative on the basis of a decision adopted by the German Bundestag.

ComSolar

Commercialisation of Solar Energy
in the Urban and Industrial Areas

Indo-German Energy Programme (IGEN) –
Renewable Energy
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

B-5/2 Safdarjung Enclave
New Delhi, 110029 India
T +91 11 4949 5353
F +91 11 4949 5391
E comsolar@giz.de
I www.giz.de/en; www.comsolar.in



CONTEXT

In 2010, the Government of India under the National Action Plan for Climate Change announced the Jawaharlal Nehru National Solar Mission (JNNSM). An ambitious target of 22 GW of solar energy capacity is envisaged to be installed under the mission. Various applications in the Urban and industrial areas provide a good opportunity for scaling-up solar energy on a commercial basis. However there are challenges such as the initial high investment costs of solar energy, lack of conducive policy framework, low awareness levels and the shortage of trained manpower. The ComSolar project implemented by GIZ in cooperation with Ministry of New and Renewable Energy, Govt. of India, is making efforts to address these issues.

COMSOLAR'S MULTI-PRONGED STRATEGY



DEMONSTRATION PROJECTS

- > Rooftop PV
- > CSP Dish power plant with storage
- > Solar Air heating



POLICY ADVISORY

- > National bodies
- > Selected States
- > Studies



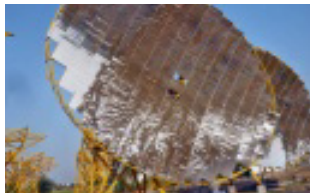
CAPACITY BUILDING

- > Trainings and workshops
- > Web based tools
- > Sector campaigns

TECHNOLOGY FOCUS



- > Rooftop Solar photovoltaic
- > Distributed generation



- > SHIP systems
- > Solar air heating systems
- > Concentrating solar with storage

POLICY ADVISORY



ComSolar is actively supporting the Ministry of New and Renewable Energy, Government of India and State agencies on policy and regulatory level for promotion of solar energy. In select states/Union territory, ComSolar is advising to develop conducive implementation framework for rooftop solar photovoltaic plants. These states/UT are Chandigarh, Uttar Pradesh, Madhya Pradesh and Chhattisgarh.



Solar Guidelines – A Pathway to Project Finance and Implementation

After the successful implementation of pilot phase of Solar Guidelines, ComSolar is supporting Solar Energy Corporation of India in implementing the second phase.



DEMONSTRATION PROJECTS



ComSolar is piloting innovative solar technologies and business models in order to test and assess the technical and economic feasibility of these energy solutions and then developing strategies for replication and dissemination.

Rooftop solar photovoltaic projects at Delhi Metro Rail Corporation buildings

- 500 kW on Dwarka Sector-21 Metro Station commissioned in July 2014
- Replication of more than 20 MW announced



Green wicket – Cricket meets resource efficiency

- Techno-commercial feasibility proven for 400 kW rooftop PV plant on M.Chinnaswamy stadium
- Potential of expansion up to 1.3 MW at the same site



Low cost solar space heating, Ladakh

- First demo projects already set-up, optimized systems planned for next phase
- Support in setting up rotating-fund and schemes for scaling up the technology



Solar power 24 x 7 – 1 MWe solar thermal plant at Mount Abu, Rajasthan

- 1 MWe (3.5 MWth) concentrating solar power plant with storage under installation in partnership with World Renewal Spiritual Trust and MNRE

