

RENEWABLE ENERGY TECHNOLOGIES (RET)

The Renewable Energy Technologies (RET) Division aims to provide clean (environmentally benign), cost-effective and sustainable RE-based technological solutions for diverse user-groups in the industrial, commercial and rural communities—in India and in other countries. The Division envisages a very rapid expansion of its work in the solar and biomass fields through research partnerships and consultancy projects with industry, academia and corporates at national as well as international level. Other activities include policy and regulatory analysis to provide crucial inputs to industry and governments to enhance penetration of renewables.

FOCUS AREAS/ SUB-THEMES

- **Research:** Solar thermal and PV, thermo-chemical and bio-chemical treatment processes, Applied and industrial research through development of prototypes and product industrialization
- **Technology Transfer:** dissemination and transfer of design to industry for production and market purposes
- **Project management Consultancy Services:** Renewable energy assessment studies, Policy research, Setting up projects including roof top solar systems, developing renewable energy transition plans for States, market research and business models.
- Certification and developmental testing :
- Training and capacity building: activities aimed at human training, knowledge and awareness creation
- Knowledge partner of ISA, and development of solar road maps for ISA countries.

SOME REPRESENTATIVE PROJECTS

- Design and Development of biomass solar electricity and cooling solutions for Rural India
- Solar dryer based self-employment model for rural tribal communities, women and differently abled persons.
- Development & Demonstration of a Unique low cost scalable PV Technology
- Development and field demonstration of paddy straw based briquetting plant for decentralized applications in State of Punjab
- Studies on thermal degradation of crop residues for kinetics, bio-polymeric transitions and value added products
- CORES: Collaboration to Optimise Renewable Energy Systems: Introducing affordable, reliable, portable energy solutions to remote communities in India and Africa
- Decentralized solar PV near the rural user end so as to minimize distribution losses
- Technical assistance to the selected Discoms for implementation of Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan (PM KUSUM) Scheme.
- Integration study for the grid operation in Andaman and Nicobar islands for proposed solar capacity
- Potential Assessment of Floating Solar PV (FSPV) in India
- Project titled "Multi-Stakeholder Partnership on De-Risking Investment in Solar Energy in India"
- Study for Measuring Biofuels Potential in India
- To Study and Evaluate Price of Fuel to be used in Biomass and Bagasse based Power Plants in Maharashtra

- Third party inspection of 350kWp Grid-Connected Rooftop SPV Plant with High Power Evacuation on HT side at Outer Parking Area of MJC, Buraill and Govt. Schools in Raipur Kalan
- Third party quality assurance for four biogas plant in South Delhi Municipal corporation

SOME OF OUR CLIENTS

- Ministry of New and Renewable Energy
- Ministry of External Affairs
- Ministry of Science and Technology
- Maharashtra Electricity Regulatory Commission
- International Energy Agency (IEA)
- The World Bank
- IFC
- Children's Investment Fund Foundation (CIFF)
- MacArthur Foundation
- United Nations Development Program
- Shakti Sustainable Energy Foundation
- Tata Steel
- Swedish Environment Protection Agency
- Global Methane Initiative
- Abt Associates, US
- Tetra Tech

Mission:

Aims to promote renewable energy-based technological solutions that will enable India & other developing countries to achieve their developmental goals along low-carbon pathways

Vision:

To facilitate Clean Energy transitions and to enable moving towards zero carbon pathways

Renewable Energy Technology Division

