



सत्यमेव जयते

ACCELERATING CLEAN ENERGY INNOVATION IN INDIA

ROLE OF THE MINISTRY OF NEW & RENEWABLE ENERGY

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JOINT SECRETARY, MNRE

mnre.nic.in

VISION OF THE MNRE

- To promote research, design, development, manufacture and deployment of new and renewable energy systems/devices for transportation, portable and stationary applications in rural, urban, industrial and commercial sectors
- Technology Mapping and Benchmarking
- To facilitate to lay down standards, specifications and performance parameters at par with international levels and facilitate industry in attaining the same

INSTITUTIONS UNDER THE MINISTRY

- NATIONAL INSTITUTE OF SOLAR ENERGY(NISE), GURGAON, HARYANA
- NATIONAL INSTITUTE OF WIND ENERGY(NIWE), CHENNAI
- NATIONAL INSTITUTE OF RENEWABLE ENERGY, KAPURTHALA
- INDIAN RENEWABLE ENERGY DEVELOPMENT AGENCY(IREDA)
- SOLAR ENERGY CORPORATION OF INDIA (SECI)

Research & Development

Piloting & Demonstration

Deployment Assistance

Policy & Regulations

Testing, Standards, Facilitation

RESEARCH & DEVELOPMENT

NATIONAL INSTITUTE OF SOLAR ENERGY AND IIT BOMBAY-

Identified major climatic zones- arid, humid, composite- within the country and assessed the degradation levels for each kind of solar PV technology

IIT BOMBAY-

Efficiency of over 12% in perovskites

BANARAS HINDU UNIVERSITY-

Development of solid state materials such as metal hydrides hydrogen storage for various thermal, mechanical & transport applications

IIT DELHI AND MAHINDRA & MAHINDRA-

Development & demonstration of hydrogen fuelled three wheelers

IISc BANGALORE-

Development of biomass gasifiers for decentralised power generation & hydrogen production

PILOTING & DEMONSTRATION

PROPOSED LIGNOCELLULOSIC ETHANOL VGF BIDDING SCHEME

Viability Gap Funding for projects of 150 million L per annum production capacity

Global bidding at three different plant sizes depending on how commercially ready the technology is (Commercial Plant, Demonstration Plant, Pilot Plant)

Supporting Policy Framework

ENERGY STORAGE BIDDING SCHEME

Shelf of projects prepared by inviting an Expression of Interest

Bidding for energy storage component agnostic to technology

ENTREPRENEURSHIP DEVELOPMENT THROUGH CIIE

The Centre for Innovation, Incubation & Entrepreneurship (CIIE) at IIM Ahmedabad has supported over 20 new business ideas which have been converted into functioning companies in the field of renewable energy

DEPLOYMENT ASSISTANCE

VIABILITY GAP FUNDING

In Solar PV, water heaters, etc, market self sufficiency has been achieved to the level of subsidies being reduced or stopped

GENERATION BASED INCENTIVE

In wind power, the generation based incentive has ensured better technology and performance leading to higher production

CONCESSIONAL LOANS

In solar rooftops, soft loans through multilateral lending institutions are set to prime the market in a high capex retail environment

CONSOLIDATED TENDERS FOR LOWER PRICES AND QUICK DEPLOYMENT

Solar Energy Corporation of India has tendered 4500 MW solar PV to date and will tender 5000 MW solar PV, rooftop, and wind this year

POLICY & REGULATIONS

FEED IN TARIFFS

Where the technology is commercialised but still needs some support, feed in tariffs ensure derisking of the projects

RENEWABLE PURCHASE OBLIGATIONS

The purchase obligations have recently been revised upwards in consonance with 175 GW target

SOLAR WIND HYBRID POLICY

Draft policy based on superposition of wind and solar data which shows a huge potential for developing both in the same regions and often at the same location, optimising land use, transmission, and grid stability

TESTING, STANDARDS, FACILITATION

NATIONAL INSTITUTE OF SOLAR ENERGY

State of the art testing facilities and research activities including assistance to industry

NATIONAL INSTITUTE OF WIND ENERGY

Solar & Wind potential assessment through ground equipment & satellite data, forecasting, quality assessment, industry consultation

NATIONAL INSTITUTE OF BIO ENERGY

Testing facilities for cookstoves and other biomass based technologies and an extensive R&D programme

THANK YOU