INDIA-AUSTRALIA ENERGY & MINERALS FORUM

JUNE 7 – 11, 2010

National Solar Mission

PRESENTATION BY

NTPC

Mission Objectives

National Solar Mission by the name of the Visionary 1st Prime Minister of India, Pt.Jawahar Lal Nehru was launched on 19.11.2009 As “Jawahar Lal Nehru National Solar Mission”.

Jawaharlal Nehru National Solar Mission has been launched under the National action Plan on Climate Change with an objective:

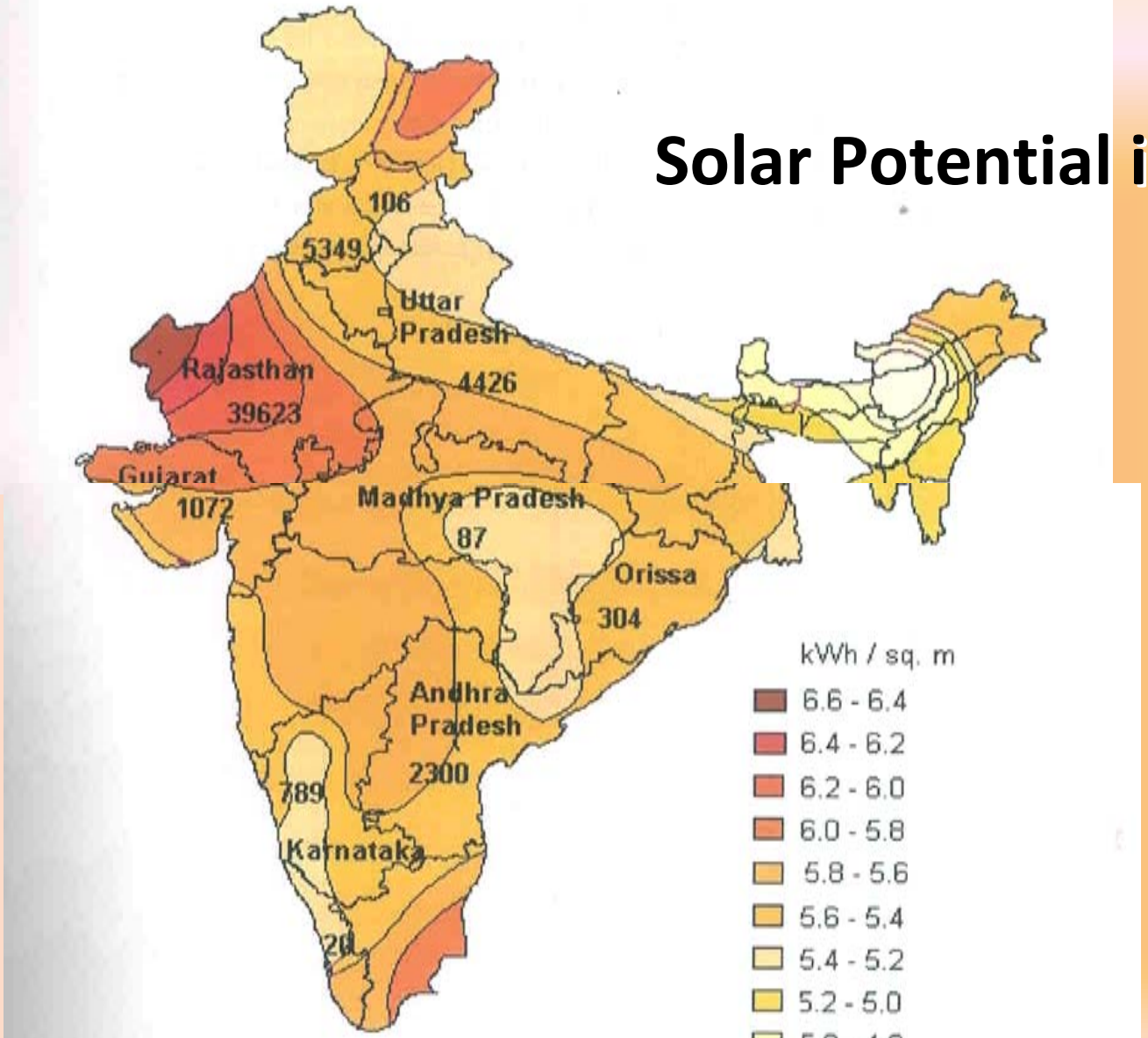
To establish India as a global leader in solar energy, by creating the policy conditions for its diffusion across the country.

Mission anticipates achieving grid parity by 2022 and parity will coal based thermal power by 2030.

To adopt a 3-phase approach from 2010 to 2022.

Aim of the mission is to focus on setting up an enabling environment for solar technology both at centralized and decentralized level.

Solar Potential in India



Mission Targets

A 3- phase approach has been formulated

Application Segment	Phase - I	Phase-II	Phase- III
	2010-13	2013-17	2017-22
Utility grid power	1,100 MW	4000 MW	20,000 MW
Off- grid Applications	200 MW	1,000 MW	2,000 MW
Solar Thermal Collectors Area	7 million Sqm	15 million Sqm	20 million Sqm
Manufacturing Base	--	--	4,000-5,000 MW
Solar Lighting Systems	--	--	20 million
Solar RPO	0.25%	--	3%

Mission Strategy

To create necessary environment to attract industry and project developers for investment in power generation, manufacturing.

To work closely with State governments, regulators, power utilities and local self government bodies.

To attract banks and financial institutions to provide necessary finance for setting up solar power projects for grid/ off-grid.

To promote off-grid solar applications to meet light and power requirements of energy –poor by provision of low cost credit through re-finance facility from IREDA

Policy & Regulatory framework

Solar Power Obligation:

- The respective State Electricity Regulatory Commission to specify the Solar Power Obligation out of the Renewable Purchase Obligation
- To begin with the Solar Power Obligation to be 0.25% of the total energy purchased

Solar specific RE Certificates:

- Solar power purchasers at normal tariff to be issued RE Certificates.
- RE Certificates to be purchased by the utility not able to meet its Renewable Purchase Obligation
- Regulations governing the RECs already issued by the Central Electricity Regulatory Commission
- The RECs to be traded through Exchange

Grid Connected Solar Project

Incentivising through NTPC Vidyut Vypar Nigam (NVVN) for setting up of large Solar Power Plants:

- **NVVN designated as nodal agency for entering into PPA with Solar Power Developers connected with grid at 33KV and above**
- **MOP to allocate equivalent capacity of cheaper power from coal based stations of NTPC**
- **Rate for purchase of Solar power**
  - **Solar PV : US 41 cents/unit**
  - **Solar Thermal : US 30 cents/unit**
  - **The Utilisation factor of NTPC capacity is about 90% and that of solar Power plant is about 20%**
  - **Assuming the rate of cheaper thermal power to be about US 5 cents/unit, the combined rate to be about US 11 cents/unit, which is affordable**

Rooftop solar PV and other small power plants connected to LT/11kV grid with a remunerative feed in tariff & generation based incentive

Off - Grid Opportunity

- Promoting solar home lights and other power applications
- 30% subsidy for select applications
- 90% subsidy for niche applications in special category States and in other remote and difficult areas.
- 200 MW capacity solar applications in the first phase to focus on
  - solar lights
  - rural power supply
  - replacement of diesel
  - telecom towers
  - Solar water heaters
  - solar cooking for institutional use

Fiscal Incentives

Custom duties and excise duties concession/ exemptions on

- Specific capital equipment
- Critical materials components
- Project imports

Solar-Manufacturing

To establish low cost, high quality manufacturing facility for solar PV with the targets of 4-5 GW by 2020.

To provide incentives to establish SEZ for solar manufacturing parks.

To provide soft loans for technology up gradation and working capital through re-finance facility from IREDA.

- To provide budgetary support for the manufacturing
- To access International Funds under the UN Framework Convention on Climate Change (UNFCCC).

Research and Development

To set up a solar research council to guide the overall technology development strategy

To establish a national centre of excellence to implement the plans formulated by the council.

Main tasks will be testing and certification, developing standards and specifications, networking among different research institutions.

HRD Strategy

- 1000 young scientists and engineers to get trained on different solar energy technologies as a part of long-term R&D and HRD plan
- 100 fellowships to be offered every year to support research students /groups
- Short term course for existing engineers and M. Sc degree holders to make them certified solar installers
- MNRE is working with Ministry of Labour to introduce solar energy related course and teaching material for ITI students in the current academic session

Thank you