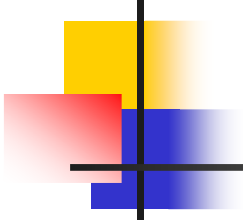


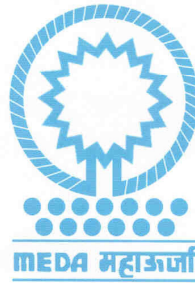
MEDA

महाऊर्जा

Maharashtra Energy Development Agency



RE Policy 2015 – Emphasis on Solar



Presented by
Mr. S A Patil

Maharashtra Energy Development Agency (MEDA)

MEDA

महाऊर्जा

Maharashtra Energy Development Agency



About MEDA

- Registered as a society under Societies Registration Act, 1860 (In 1985) and Bombay Public Trusts Act, 1950 (In 1987).
- Working as the State Nodal Agency in renewable energy sector and as the State Designated Agency in the energy conservation sector.
- Assisting the State and Central government in promotion of new and renewable sources of energy and technologies; and in promotion and implementation of energy conservation programs.
- Committed to explore the resources such as Wind, Solar, Hydro, Biomass, Geothermal, Wave; which are clean and eco-friendly in nature.

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Highlights

1. Maharashtra has installed capacity of 6959.76 MW renewable energy projects. (as on 31st March, 2016). Retains its second position in the country.
2. The largest wind resource monitoring programme in the country (409 sites)
3. The first state in the country to initiate solar resource assessment. (07 sites)
4. The largest installation of Solar Water Heating Systems – Achievement of 12.24 lakh sq.m. collector area
5. The largest Solar Cooking Systems in the Country (17000 meals) at Shirdi.

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Achievement

- As per recommendation of 13th finance commission Maharashtra State received Rs. 961 crores for best achievement in Renewable Energy capacity addition during 2010-11 to 2013-14.
- National Award for Outstanding performance in the promotion of Renewable Energy during 1st April 2010 to 31st March 2014
- National Award as the Best State Designated Agency for energy conservation activities for the years 2011-12, 2012-13 and 2013-14.
- National Awards for excellence in the field of Renewable Energy in various 12 categories from AREAS.
- National Excellence Award 2016 for Rooftop Solar Power Projects in the Innovations in Solar Energy Category
- National Excellence Award for highest number of CST installations in the state of Maharashtra- 2016



National Objective

- Sustainable economic growth by energy security.
- Minimize dependency on fossil fuels.
- Reduce carbon emissions.
- Develop alternative energy sources that are clean, reliable and sustainable.
- Access to energy for all.

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Preface

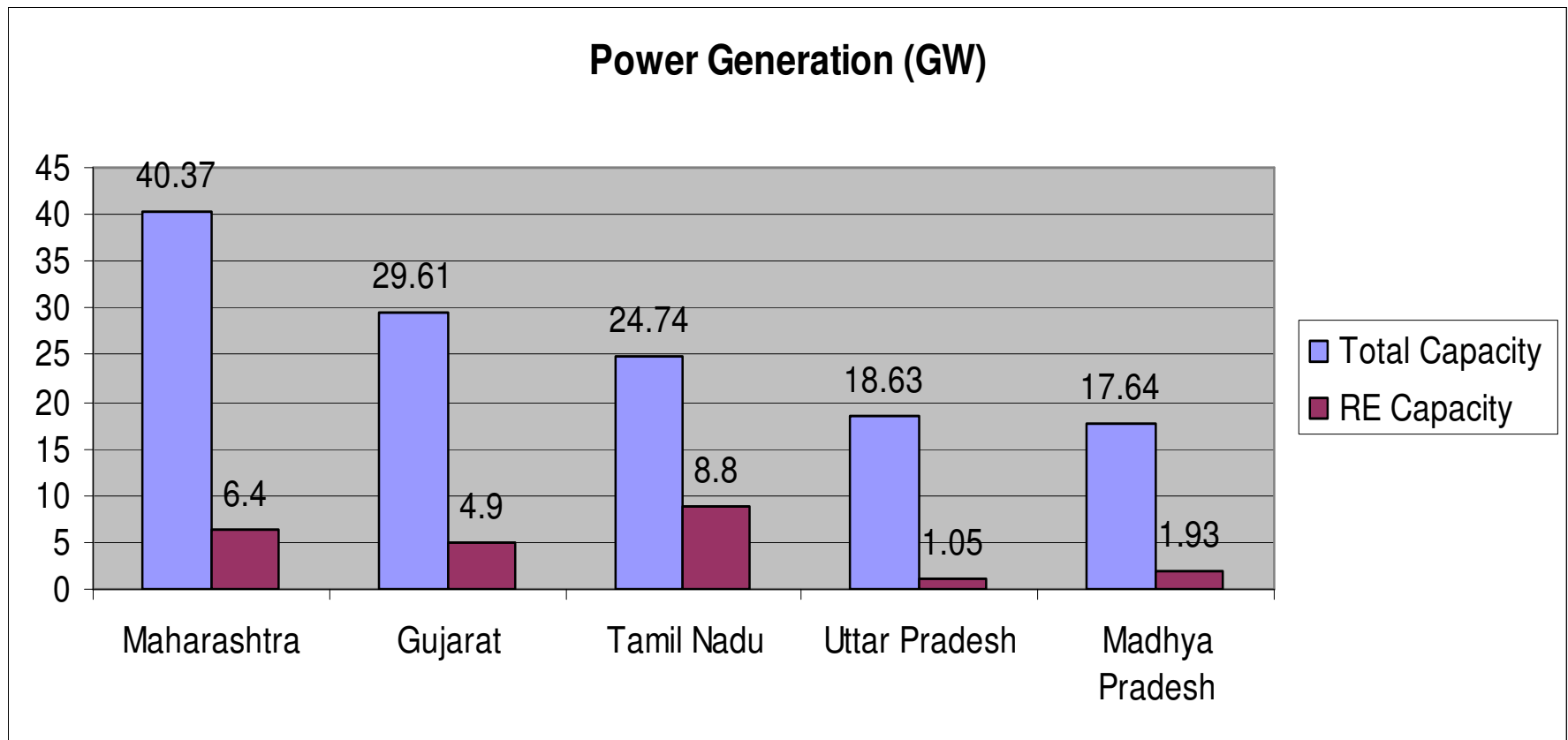
- National target : Establishment of Renewable Energy Projects of 175 GW capacity, including 100 GW of solar power.
- Total capacity installation of RE projects in Maharashtra : 6705 MW as of March 2015.
- Composite policy for six renewable energy sources.
- Factors considered : Renewable Purchase Obligation; potential identified; availability of resources; past experience; concerns of utilities

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Preface

- Capacity addition of 14,400 MW (14.4 GW) of RE projects, over a period of five years, to take the tally to more than 20 GW – to ensure ambitious share in the ambitious national target of 175 GW.
- Envisages ramping up capacities of grid-connected renewable power projects based on Wind, Bagasse based cogeneration, Biomass, Small Hydro, Solar and Industrial Waste
- Increase share of Renewables in total energy mix.

Power Generation ~ Top 5 state in India (data as on 30.03.16)



Source: CEA

Renewable Energy Scenario ~ Maharashtra

Sr. No.	RE Source	Potential (MW)	Capacity Installation (MW) (As on 31.03.2016)
1	Wind	9400	4661.91
2	Small Hydro	732	284.30
3	Bagasse based Co-gen.	2200	1414.75
4	Biomass Power Projects	781	200
5	MSW & Liquid Waste	287	3.00
6	Industrial Waste	350	33.55
7	Solar Power Projects	49 / Sq km 35 / Sq km	362.25
	Total	13750	6959.76

RE Policy ~ 2015

- Target ~ Wind (5000 MW), Bagasse-based Cogen (1000 MW), Biomass (300 MW), Small Hydro (400 MW), Solar (7500 MW), and Industrial Waste (200 MW) ~ Total target 14,400 MW.
- Features like deemed NA; option for industrial status; exemption from Pollution Board NOC / Consent for Solar and Wind Power Projects.
- Incentives for promotion of Biomass; Small Hydro; Industrial Waste based power projects

Contd.

RE Policy ~ 2015

- Allow hybrid power projects, with solar power.
- Methodology for availment of policy benefits.
- Matter relating to tariff, cross-subsidy and banking / wheeling charges will be as per MERC order.
- Mid-term review of policy target to be made by a committee under chairmanship of Chief Secretary, GoM.

Policy for Solar Power

- Target ~ 7500 MW
 - MAHAGENCO ~ 2500 MW with PPP mode
 - Private Developers ~ 5000 MW
- Project capacity ~ Min. 1 MW
- Sale of Power
 - PPP mode ~ Sale to MSEDCL at preferential tariff for RPO compliance.
 - To develop 10% of PPP target on places viz. lakes, canals, local self Govt. land.
 - Developer ~ Sale to DISCOMs at competitive bidding with consent from MERC, Captive & 3rd Party Sale within / outside state & REC route.
- Electricity Duty – exempted for captive consumption upto 10 years from DoC.

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MAHAGENCO ~ 2500 MW

- Development Plan ~
 - Competitive Bidding ~ 1000 MW
 - Agriculture Feeder ~ 250 MW
 - EPC ~ 500 MW
 - Innovative ~ 250 MW
 - Solar Park ~ 500 MW

Source: 62th Board Meeting of MSEB Holding Company

Policy for Solar Power

- Solar Park
 - Capacity 1 MW and above
 - Clubbing of 250 kW capacity upto 1 MW is allowed for captive consumption
- Project Land
 - To get deemed non-agricultural status
 - Projects upto 2 MW capacity to approach respective District Collector for government waste land upto 4 Ha. at concessional rate. Private land can also be taken on lease
 - Government waste land, if available, to be allotted for solar module and related equipment manufacturing on lease at concessional rate.
- Equipment to meet the standards approved by Central Government.

Policy for Solar Power

- Eligible categories : Industrial Estates, Townships, Ware Houses, Water Resource Department, Metro Rail, Public Transport units, Public Undertakings, Private Developers.
- Exemption from obtaining NOC / Consent from Pollution Control Board.
- Evacuation arrangement as per MERC regulations / orders. Exemption from supervision charges.
- Option to developer to register as industrial unit.
- Solar projects required to be registered with MEDA.

RPO targets for Renewable Energy

Year	Quantum of purchase (in %) from Renewable Energy sources (in terms of energy equivalent in kWh)		
	Solar	Non-Solar (other RE)	Total
	(a)	(b)	(c)
2016-17	1.00%	10.00%	11.00%
2017-18	2.00%	10.50%	12.50%
2018-19	2.75%	11.00%	13.75%
2019-20	3.50%	11.50%	15.00%

Source: MERC RPO/REC Regulation 2016

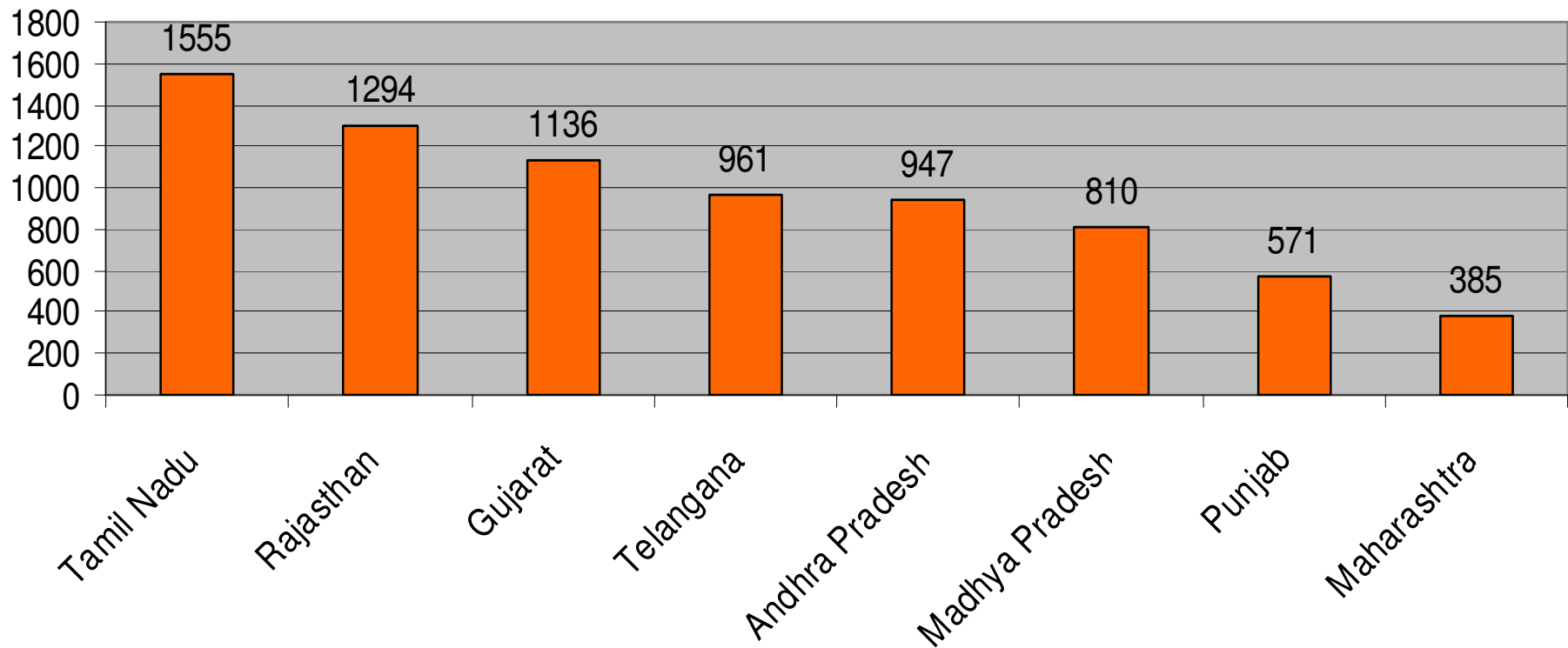
Tentative RPO Target

Distribution Company	Gross Energy Consumption (MUs)	RPO target (%)	Capacity Required in MW	Achievement in MW	Shortfall in MW
FY 2015-16					
MSEDCL	111789.49	0.50	335.83	252	83.83
BEST	5058.14	0.50	15.20	20	+4.80
TATA	5999.13	0.50	18.02	28	+9.98
RELIANCE	9156.35	0.50	27.51	40	+12.49
FY 2016-17					
MSEDCL	118116.78	1	709.67	335.83	373.84
BEST	5100.53	1	30.64	15.20	15.45
TATA	7909.25	1	47.52	18.02	29.50
RELIANCE	9809.01	1	58.93	27.51	31.43

Note: Positive (+) means excess energy

Leading States ~ Solar Sector

Total Installed Capacity (In MW) as on 30.9.16



Hurdles

- Executing EPA with Discoms has become difficult.
- GoM vide GR dated 8.8.16 has charged (not exceeding) Rs. 1.50 per unit for captive user, Power from Cogeneration, Stand by generation, Power from RE.
- Delay in issuing Open Access permission for captive and third party.
- No directives from concerned departments viz. Revenue, Environment and Industry for extending policy benefits.
- Cross Subsidy Surcharge (CSS) has been raised and made at par with conventional power.
- Investor/developer need to make evacuation arrangement from project switchyard to sub-station.

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Proposed Action

- Support from concerned govt. departments viz. Revenue, Environment, Industry & Energy by issuing orders for availing policy benefits.
- Increase in Solar-RPO from 3.5% to 8% upto the FY 2022.
- Allow In-discriminatory Open Access for RE as per the EA 2003.
- Take Regulatory action for increasing the deployment of RE in state.

