

# RE Development in Tamil Nadu



# Renewable Energy installed capacity in Tamil Nadu

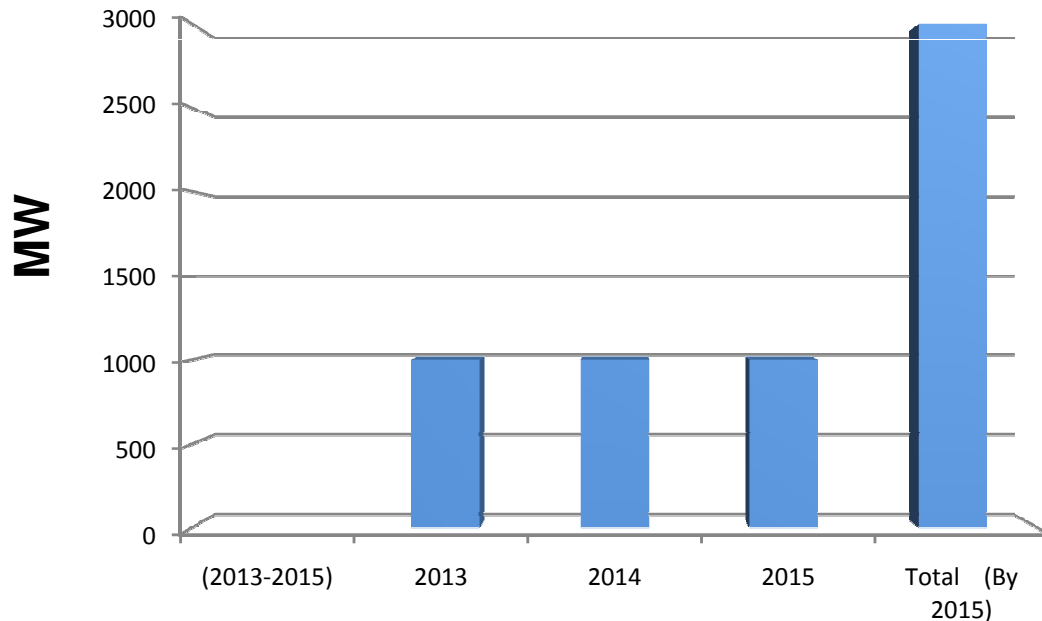
As on 31.08.2013

| Sl.No        | Source               | Tamil Nadu<br>(MW) |
|--------------|----------------------|--------------------|
| 1            | Wind Power           | 7214.00            |
| 2            | Biomass power        | 203.00             |
| 3            | Bagasse cogeneration | 659.00             |
| 4            | Waste to Energy      | 7.00               |
| 5            | Solar Power          | 21.00              |
| <b>Total</b> |                      | <b>8104.00</b>     |

# Solar Energy Policy

Vision of developing Tamil Nadu as a world leader in solar energy by establishing 3000MW by 2015

## Capacity addition Targeted (MW)



| PHASE<br>(2013-2015) | Target<br>(MW) |
|----------------------|----------------|
| 2013                 | 1000           |
| 2014                 | 1000           |
| 2015                 | 1000           |
| Total(By 2015)       | 3000           |

# TN Solar Energy Policy

- To Generate 3000 MW of Solar Energy by 2015
- 6% Solar Purchase Obligation for HT Consumers and LT Commercial Consumers
- Capital Subsidy or Generation Based Incentive for Domestic Solar Roof Tops
- All new Government Buildings to necessarily install rooftops.
- All existing Government buildings, all Street lights and water supply installations to be on solar in phases
- Net Metering facility to promote Solar rooftops.

# Funding for 3000 MW

- 1000 MW by Solar Purchase Obligation (SPO) on HT and LT Commercial consumers
- 500 MW funded by the Government
- 350 MW by promoting Solar Rooftops
  - Special scheme for Domestic rooftops
  - All new Government Buildings to have rooftops
  - All existing Government buildings to install in phases
  - All Street Lights & Water supply installation with solar
- 1150 MW by encouraging REC (Renewable Energy Certificate) mechanism

# Target Achievements

- Bid called for 1000 MW
- Orders issued for 701 MW
- Price – Rs 6.48 with 5% escalation for first 10 years and then flat rate for next 10 years.

# TN Budget Announcements 2013-2014

|              |   |               |           |
|--------------|---|---------------|-----------|
| 1            | 70,000 Green houses   | 6.48          | MW        |
| 2            | 20,000 Street lights through Solar Power                                | 0.81          | MW        |
| 3            | 2000 Solar Pumps  | 10.00         | MW        |
| 4            | 10,000 Domestic SPV Roof Tops with State subsidy of Rs.20,000/- per KWp | 10.00         | MW        |
| 5            | 9 Commercial Tax Office Buildings                                       | 0.225         | MW        |
| 6            | 68 BC Hostels   | 0.068         | MW        |
| 7            | Central Prisons   | 1.75          | MW        |
| 8            | 500 Police Stations   | 0.75          | MW        |
| 9            | 50 Panchayat Union & 500 Village Panchayat Office Buildings             | 0.60          | MW        |
| 10           | 118 Co-Operative buildings  | 0.13          | MW        |
| <b>TOTAL</b> |   | <b>29.813</b> | <b>MW</b> |

# RE Targets for 12<sup>th</sup> Plan & year 2013-14

| Government |  |           |   |
|------------|--|-----------|---|
| Sl.No      | Schemes  | 2013-2014 | 12 <sup>th</sup> Five year plan<br>(2012-13 to 2016-17) |
| 1          | Home Lighting Systems  | 6.5 MW    | 30MW  |
| 2          | Solar Street Lighting Systems  | 1MW       | 5MW   |
| 3          | Rooftop Solar power plants for BC/MBC/DNC and other minority college hostels | 1MW       | 5MW   |
| 4          | Solar pumps  | 10MW      | 40MW  |
| 5          | Solar rooftops in various Government buildings                               | 21.5MW    | 100MW   |
|            | Total  | 40MW      | 180MW   |



# Net Metering & Grid Connected Solar Rooftops

- Battery the weakest link in solar rooftops
  - High Capital Cost
  - High Maintenance & Replacement Cost
  - Wastes 15-20% energy in storage and retrieval
- Promoting only grid connected systems on govt buildings
- Policy on Net Metering. 8 Pilots working successfully
- TNERC draft order issued
- State Subsidy Scheme only for grid connected domestic rooftops

# Chief Minister' Solar Powered Green House Scheme



- 3,00,000 Houses with solar energy @ 60,000 every year
- 100 W system energising 45 W CFL or 50W system with 27W LED
- 6 Hours battery back up – No Autonomy
- Grid Back-up, charging 10am-6pm only
- PDI, TPI, Call Centre, 5 Years CMC

# Solar Street Lights



- 1,00,000 street lights over a period of 5 years @ 20,000/year
- 20 W LED lights replacing existing 40 W tubelights/bulbs
- Auto Dimming to 6W from 10.00 pm to 5.00 am
- Centralised 600 W Solar Plant energising a cluster of 15 street lights
- Remote Monitoring Unit

# Solar Powered Irrigation Pumps



- 4800 wp solar powered pumps for agriculture
- 20 % beneficiary Contribution
- Procurement by state govt with 5 year maintenance
- 530 pumps scheme under implementation
- 2000 SPV pumps sanctioned during 2013-14

# Roof Top Solar PV in Government Buildings



- Mandatory for all new buildings
- Existing Buildings in a phased manner
- Standard specifications for grid connected rooftops provided to all departments



– a look back

- International Conference cum Exhibition on Renewable Energy
- 1400 Conference Delegates
- 65 Expert Speakers
- 105 Companies at the exhibition
- Over 8000 Exhibition Visitors





– a look back

- India's most successful and largest Conference cum Exhibition on Renewable Energy
- 2000 Conference Delegates
- 100 Experts at the conference
- 185 Companies at the exhibition
- 15000 Exhibition Visitors





DO JOIN US AT

**REENERGY** 2014

12 – 14 June 2014, Chennai Trade Centre

**Thank You!**

