

## Wind Power Profile of Tamilnadu State

Tamilnadu is bordered on the north by the states of Andhra Pradesh and Karnataka and on the west by the state of Kerala. Tamilnadu is situated at the south eastern end of the Indian peninsula between Latitude 8° 5' N and 13° 35' N and between Longitudes 76° 15' E and 80° 20'E. Tamilnadu has a tropical climate with only slight seasonal variations. Temperature and humidity remain relatively high throughout the year. Tamilnadu gets its rainfall from the South West Monsoon (June to September) and the North East Monsoon (October to December). The normal annual rainfall is 911.6 mm. The temperature in the plains varies between 38° C and 20° C.

Tamil Nadu is one of the most industrialised states in India with a high Human Development index. The State has emerged as the front-runner in attracting new investments in manufacturing sector. Within the manufacturing sector, sun-rise industries like Electronic Hardware, Automobiles and components, apart from traditionally strong industries like Textiles & Garments, Leather products, etc, are the prime-movers of the manufacturing sector in Tamil Nadu. The vision of the Government is to make Tamil Nadu as the hub for Global Manufacturing, which will need the large amount of electricity.

### Renewable Energy Installed capacity as on 21 June 2019 (MW) (Source: SLDC)

Wind	Solar	Biomass	Co-generation	Total
8468.11	2724.55	265.59	721.40	12179.65

### TNEB Grid (Other than Renewable Energy) as on 21<sup>st</sup> June 2019 (MW)

Hydro	Thermal	Gas	IPPs	Captive	CGS (TN Share)	Power Purchase	Total
2314.9	4320.0	516.1	746.5	986.18	5836.0	3580.0	18299.66

### Wind Power Installable Potential as per Wind Atlas 2015 by NIWE

Wind Potential @100m Hub Height	Rank I	Rank II	Rank III	Total
Type of Land 	Waste Land	Cultivable Land	Forest Land	
Potential in MW	11251	22153	395	33799

Rank I	Waste Land	NRSC Level –II Classification Values	12, 13, 15, 19
Rank II	Cultivable Land	NRSC Level –II Classification Values	2, 3, 4, 5, 6, 10, 18
Rank III	Forest Land	NRSC Level –II Classification Values	7, 8, 9

Installable Potential assessed by NIWE earlier was 5374MW at 50m Hub Height and 14152MW at 80m Hub Height.

## Wind Monitoring Stations Established in the State as on 31.03.2017: 93

Number of Stations having  $WPD \geq 200 \text{ W/m}^2$ : 49

The highest  $WPD \geq$  of  $597 \text{ W/m}^2$  is at Muppandal.

The first Wind Power Project from the Private sector was set up by M/s Pandian Chemicals. This 0.500 MW project comprised of two machines of 250 KW rating (NEPC MICON make) and was commissioned at Kattadimalai (T.N.), near Kanyakumari on 28 March 1990.

## Demonstration Wind power Projects Funded by the Government in the State as on 31.03.2017

Number of Wind Turbines: 120

Capacity installed: 19.355MW

### Major Wind Farms in Tamilnadu

Name of the Wind farm	Place	Installation by	MW Capacity (Approx).
TANGEDCO	Various	TANGEDCO	17.5
Poolavadi Chettinad	Poolavadi	Chettinad Cement Corp Ltd	10
Muppandal Madras	Muppandal	Madras Cements Ltd.	10
Kethanur Wind Farm	<a href="#">Kethanur</a>	Kethanur Wind Farm	11
Perungudi Newam	<a href="#">Perungudi</a>	Newam Power Company	12
Chennai Mohan	Chennai	Mohan Breweries & Dist.	15
Shalivahana Wind	<a href="#">Tirupur</a>	Shalivahana Green Energy. Ltd.	20.4
Gudimangalam	Gudimangalam	Gudimangalam Wind Farm	21
Kayathar Subhash	<a href="#">Kayathar</a>	Subhash Ltd.	30
Cape Comorin	<a href="#">Kanyakumari</a>	Aban Loyd Chiles Offshore	33
Muppandal windfarm	<a href="#">Kanyakumari</a>	Muppandal Wind	1500

## Key Policy Parameters

Policy Parameters	Tamil Nadu 03.06.2019
Tariff Order Date & Link	13th April 2018
Capital Cost (in lacs/MW)	525
Capacity Utilization Factor (CUF)	29.15%
Feed in Tariff	2.86 as FIT and 3.42-3.45 as competitive Bidding price for Tranche I
competitive Bidding	
in Rs./kWh	
Tariff if AD Aailed	2.8
Tarif Period (in years)	25
APPC Rs./kWh	3.73

## RPO Compliance Report of the State for FY 2017-18 -1

Total Energy Consumed , (MU)	Solar RPO Obligation, (%)	Solar RPO Obligation, (MU)	Non Solar RPO Obligation, (%)	Non Solar RPO Obligation (Mu)	Total Obligation, (%)	Total Obligation, (MU)
1	2	3	4	5	6	7
105676	4.75	5019.6	9.5	10039.2	14.25	15058.8

## State RPO Compliance Report for FY 2017-18 -Continued

Actual Compliance Of Solar RPO, (%)	Actual Compliance Of Solar RPO, (MU)	Actual Compliance Of Non Solar RPO (%)	Actual Compliance Of Non Solar RPO, (MU)	Total Compliance, (%)	Total Compliance, (MU)	Category
8	9	10	11	12	13	14
2.75	2906	12.56	13273.9	15.31	16179.9	(above 100%)

## **Offshore Wind Power Project in Tamilnadu**

Facilitating Offshore Wind in India (FOWIND) project, financed largely by the European Union (with supporting contributions from the Gujarat Power Corporation Ltd and Renew Power) focused on developing a road map for the development of offshore wind in the states of Gujarat and Tamil Nadu, the project was executed by Global Wind Energy Council (GWEC) along with partners DNV-GL, the Center for Science, Technology & Policy, and World Institute of Sustainable Energy (WISE); supported by the National Institute for Wind Energy (NIWE) and in close cooperation with the Ministry of New and Renewable Energy (MNRE).

The process for procuring the initial projects was done with a call for expressions of interest in developing up to 1000 MW of offshore wind off Gujarat. The FOWIND project was followed up by pre-feasibility studies for wind farms in Gujarat and Tamil Nadu. In December 2017 roadmap to 2030 was published followed by the full feasibility reports for the two states.

The further work is being done by First Offshore Wind Project of India (FOWPI) in this regard.

All FOWIND reports are available [here](#).

## **State Energy Agencies and Addresses**

### **Tamil Nadu Electricity Regulatory Commission (TNERC)**

19-A, Rukhmani Lakshmi pathy Salai (Marshalls Road), Egmore, Chennai – 600 008.  
Phone. 91-044-28411378 / 28411379, Email : [tnerc@nic.in](mailto:tnerc@nic.in), Website: [www.tnerc.org](http://www.tnerc.org)

### **Tamil Nadu Energy Development Agency**

E.V.K Sampath Maaligai, 5<sup>th</sup> floor, No.68, College Road,  
Nungambakkam, Chennai-600 006

Ph: 044 2822 4830, 044 2823 6592, Email: [info@teda.in](mailto:info@teda.in)

### **The Principal Secretary, Government of Tamil Nadu**

Energy Department, Room No. 27, 5<sup>th</sup> Floor,  
Secretariat, Fort Saint George, Chennai 600 009.

Website: <http://www.tn.gov.in/department/7>

Phone: 044- 25671496, Email: [enersec@tn.gov.in](mailto:enersec@tn.gov.in)

### **Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO)**

Chairman and Managing Director, **NPKRR Maaligai**,

**144, Anna Salai, Chennai - 600 002.**

Website: <http://www.tangedco.gov.in/>

Phone: 044-28521300, Email: [chairman@tnebnnet.org](mailto:chairman@tnebnnet.org)

**Tamil Nadu Transmission Corporation Ltd (TANTRANSCO)**

Chairman and Managing Director, **NPKRR Maaligai,**

**144, Anna Salai, Chennai - 600 002.**

**Phone : 044-28520131, 044-28521300, Email: [chairman@tnebnnet.org](mailto:chairman@tnebnnet.org)**

Website: <http://www.tantransco.gov.in/>

**Southern Regional Load Despatch Center**

29, Race Course Cross Road, Bangalore-560009, Fax: 080-22259219,22252612, Tel.:080-22254525,22351146,22352850

**Tamil Nadu State Load Despatch Center**

Office address: 144 Anna Salai, **Chennai- 600002**

Website: <http://tneblcdc.org/>

Phone: 044- 28520131, Email: [ceoch@tnebnnet.org](mailto:ceoch@tnebnnet.org)

# Grid Map of Tamil Nadu

