

## **TNPL WINDFARMS**

TNPL, in order to prove its commitment in preserving nature's ecosystem and reducing the carbon footprint, had ventured into generation of green energy through Renewable Energy Sources and accordingly had installed 15 MW Wind Farms at Devarkulam and Perungudi in Tirunelveli District in the year 1993-94.

Subsequently, capacity additions were carried out in four phases in Devarkulam raising the total capacity to 35.5 MW as tabulated below:

<b>Phase</b>	<b>Site</b>	<b>Year of Installation</b>	<b>Nos. x Capacity</b>	<b>Total Capacity</b>
Phase-I	Devarkulam	Sep' 93	28 Nos X 250 KW	7.00 MW
	Perungudi	Mar' 94	32 Nos X 250 KW	8.00 MW
Phase-II	Devarkulam	Mar' 01	4 Nos X 750 KW	3.00 MW
Phase-III	Devarkulam	Mar' 04	3 Nos X 1250 KW	3.75 MW
Phase-IV	Devarkulam	Feb' 06	5 Nos X 1250 KW	6.25 MW
Phase-V	Devarkulam	Mar' 07	6 Nos X 1250 KW	7.50 MW
		TOTAL	78 Nos	35.5 MW

### **Salient features of TNPL Windfarms:**

Devarkulam Windfarm is located in Shenkottah Pass which receives seasonal wind during South West Monsoon from May to September.

Perungudi Windfarm is located in Muppandal Pass which receives wind during both South West Monsoon (May - September) and North East Monsoon (December & January).

TNPL has 905 acres of land in Devarkulam windfarm and 217 acres in Perungudi windfarm which includes 77 Acres of Govt. Poromboke lands under lease.

**Specifications of our WEGs:**

<b>Make</b>	<b>Capacity</b>	<b>No. of WEGs</b>	<b>Hub Height</b>	<b>Rotor Dia</b>
NEPC-Micon	250 Kw	60	30 mtr	26 mtr
NEG-Micon (presently Vestas Wind Technologies)	750 Kw	4	55 mtr	48.2 mtr
Suzlon	1250 Kw	3	65 mtr	64 mtr
Suzlon	1250 Kw	5	74.5 mtr	66 mtr
Suzlon	1250 Kw	6	74.5 mtr	66 mtr
		<b>78 Nos.</b>		

**Utilisation of Energy Generated:**

On an average, TNPL could generate 4.16 crore Units per annum through the present capacity of wind farms.

Energy generated from 0.75 MW of Phase-II Windfarm (out of 3 MW), is adjusted against the consumption at Corporate Office, Chennai and energy generated from 1.25 MW of Phase IV Windfarm (out of 6.25 MW) is adjusted against the consumption of Perugamani Water head works, Trichy .

Energy generated from Phase-I, II, III & IV is being sold to TNEB at the rate of Rs.2.75 and for Phase-V TNEB offers Rs.2.90 based on its date of commissioning.

**Clean Development Mechanism (CDM) :**

1,90,920 CERs has been realized for the production of energy without emitting carbon under CDM from the Windfarms.

**LT Rooftop Solar Power Plants at Windfarms:-**

In pursuit of technological developments in the Renewable Energy industry, each 3KW LT Solar Power Plant was installed during Nov'2015 in both Devarkulam and Perungudi Windfarm , in order to reduce the LT consumption bills and the above plants are working satisfactorily.

**Value Addition:**

In order to utilize the unused lands available between the erected WEGs, in Devarkulam, Plantation Dept. has taken up planting of Eucalyptus in 275 acres lands and about 2300 tonnes of EH pulp wood transported to Unit I from the above captive plantation so far.