

# Karnataka State Wind Power Profile

## Karnataka State – A Brief Profile

Karnataka is situated in the south western region of India formed on 1<sup>st</sup> November 1956 when the States Reorganisation Act came into effect. At that time Karnataka was known as the State of Mysore. It was renamed Karnataka in the year 1973.

Karnataka is located 11°30' North and 18°30' North latitudes and 74° East and 78°30' East longitude. It is situated on a tableland where the Western and Eastern Ghat ranges converge into the complex, in the western part of the Deccan Peninsular region of India.

The average day temperature is 29 degrees Celsius in the monsoon season. During winter temperatures range from 32 degrees Celsius to below 20 degrees Celsius. It is the seventh largest state in India with 191791 sq. Km area divided in to 30 districts. Karnataka is bounded by the Arabian Sea and the Laccadive Sea on the west, Goa on the north-west, Maharashtra on the north, Telangana on the north-east, Andhra Pradesh on the east, Tamil Nadu on the south-east and Kerala on the south-west. The major rivers flowing through Karnataka are Cauvery, Kabini, Krishna and Tungabhadra. There are three distinct geographical regions in Karnataka: the Coastal Plains, the Western Ghats and the Deccan Plateau. Karnataka covers about 750 km from North to South and about 400 km from East to West. The coastline of Karnataka stretches for about 320 km.

## Power Sector at a Glance as on 31<sup>st</sup> March 2019

| SN | Installed Capacity                  | Figures        |
|----|-------------------------------------|----------------|
| 1  | <b><i>KPC Hydro and Thermal</i></b> | 8842.00 MW     |
| 2  | <b><i>CGS (Karnataka Share)</i></b> | 3693.00 MW     |
| 3  | <b><i>NCE, IPPs and Others</i></b>  | 12119.44 MW    |
| 4  | <b>Total Installed Capacity</b>     | 24654.4 MW     |
| 5  | <b>*No. of Consumers</b>            | 2.555 Crs.     |
| 6  | <b>Length of Tr.Lines</b>           | 46886.608 CKms |
| 7  | <b>No. of Stations</b>              | 1542           |
| 8  | <b>No. of DTCs</b>                  | 8,67,618       |
| 9  | <b>HT Lines (length in CKMs)</b>    | 352558.07      |
| 10 | <b>LT Lines (Length in CKMs)</b>    | 562551.653     |

## Renewable Energy May 2019

| Renewable Energy Progress Report up to May 2019 (Source KREDL) |              |                         |                             |                          |
|--|--------------|-------------------------|-----------------------------|--------------------------|
| Sl. No   | RE Sources   | Allotted Capacity in MW | Commissioned Capacity in MW | Cancelled Capacity in MW |
| 1  | Wind         | 18282.97                | 4779.14                     | 7927.88                  |
| 2  | Hydro        | 3010.05                 | 877.46                      | 737.51                   |
| 3  | Co-gen       | 2177.65                 | 1731.16                     | 0.00                     |
| 4  | Biomass      | 391.18                  | 134.03                      | 0.00                     |
| 5  | Solid Waste  | 25.50                   | 0.00                        | 0.00                     |
| 6  | Solar        | 9339.23                 | 6134.90                     | 366.00                   |
|  | <b>Total</b> | <b>33226.58</b>         | <b>13656.69</b>             | <b>9031.39</b>           |

|   |        |
|---|--------|
| % of Renewable Energy capacity among all energy sources | 55.39% |
|---|--------|

### Electricity Availability in Karnataka

#### State Wind Power Capacity Addition Target:

2019-20 - 500 MW

|                              |  |
|------------------------------|--|
| Wind belts in Karnataka      | Sogi, Kappathgudda, Jogimatti, BB Hills  |
| Windy Districts in Karnataka | Tumkur, Bellary, Davangare, Gadag, Shimoga, Belgaum, Hassan, Madkari, Raichur, Chitardurga |

### Renewable Energy Policy

| Policy Parameters 03.06.2019      | Karnataka State                               |
|-----------------------------------|---|
| Tariff Order Date & Link          | 27th February 2019                            |
| Capital Cost (in lacs/MW)         | 600   |
| Capacity Utilization Factor (CUF) | 31.00%  |
| Feed in Tariff                    | 3.26 as ceiling price for competitive bidding |
| competitive Bidding               |   |
| in Rs./kWh                        |   |
| Tariff Period (in years)          | 25  |
| Valid up to                       | 31st March 2020                               |
| APPC Rs./kWh                      | 3.5   |

To establish a dynamic renewable sector, Government has notified Renewable Energy Policy. [Click Here to Download.](#)

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

| Wind Potential | Rank I                               | Rank II | Rank III              | Total |
|----------------|--------------------------------------|---------|-----------------------|-------|
| In MW          | 15202                                | 39803   | 852                   | 55857 |
| Rank I         | NRSC Level –II Classification Values |         | 12, 13, 15, 19        |       |
| Rank II        | NRSC Level –II Classification Values |         | 2, 3, 4, 5, 6, 10, 18 |       |
| Rank III       | NRSC Level –II Classification Values |         | 7, 8, 9               |       |

Installable Potential assessed by NIWE earlier was 8591 MW at @ 50m HH and 13593 MW @ 80m HH.

Total Number of established Wind Monitoring Stations with MAWS & MAWPD (MNRE) as on 30.06.2018): 72

### Some Wind farms in Karnataka

1. Tuppadahalli Wind Farm, Chitradurga District by Acciona
2. Bannur Wind farm, Bijapur District by Acciona
3. Shah Gajendragarh Wind Farm at Gadag by MMTCL and Sanjay D. Ghodawat
4. Jogmatti BSES Wind farm, Chitradurga District by BSES Limited
5. Bijapur Wind farm by Gamesa Renewable Energy Pvt Ltd...
6. Naragund Wind farm, Gadag
7. Gadag Wind farm, Gadag
8. Energon Mangoli Wind Farm, Hegadihal, Karnataka
9. Chitradurga Wind Project by The Carbon Neutral Company
10. Tata Power Wind Project at Gadag
11. CLP Wind Farm at Saundatti, Dist- Belgaum, Karnataka.
12. Vyshali Energy Private Limited, Karnataka
13. VSL Mining Company, Bellary
14. Vivek Agro Foods, Karnataka

### Electricity Supply Corporations in Karnataka

(Please click on the ESCOM for more details)

1. Karnataka Power Transmission Corporation Ltd (KPTCL)
2. Bangalore Electricity Supply Company Limited (BESCOM)
3. Mangalore Electricity Supply Company Limited (MESCOM)
4. Hubli Electricity Supply Company Limited (HESCOM)
5. Gulbarga Electricity Supply Company Limited (GESCOM)
6. Chamudeshwari Electricity Supply Corporation (CESC)
7. The Hukkeri Rural Electric Co-Operative Society Ltd (HRECS):  
The First Rural Electric Co-operative Society to be registered in India

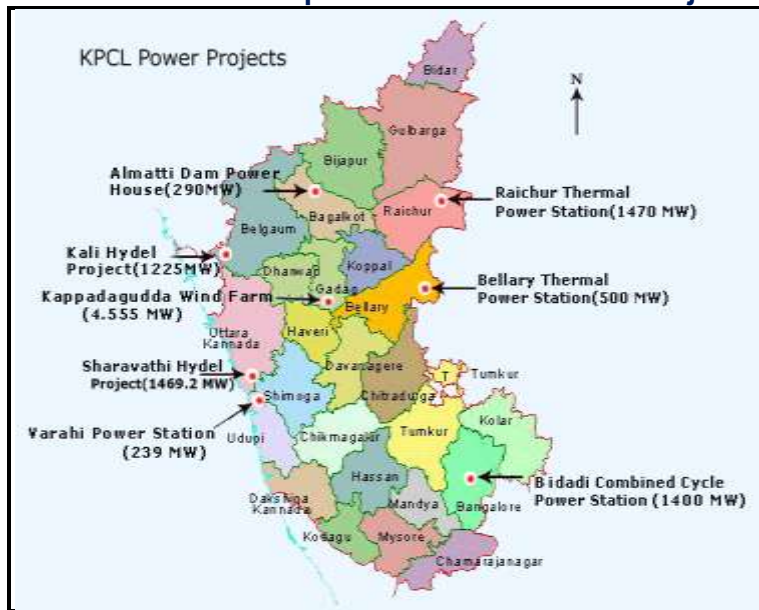
### State Energy Agencies and Address

1. **Energy Department, Government of Karnataka,**  
Additional Chief Secretary, Energy  
Room No. 236, 2nd floor, Vikasa Soudha, Bengaluru-560001  
Website: <http://www.gokenergy.gov.in>
2. **Karnataka Electricity Regulatory Commission (KERC)**  
No. 9/2, Mahalaxmi Chambers, 6th & 7th Floor, M. G. Road,  
Bangalore- 560001.  
Phone. 25320213, 25320214, 25320339,  
Email : [kerc-ka@nic.in](mailto:kerc-ka@nic.in), Webiste : [karnataka.gov.in/kerc](http://karnataka.gov.in/kerc)
3. **Karnataka Renewable Energy Development Limited**  
KREDL, Head Office Bangalore  
#39, "Shanthigruha" Bharath Scouts & Guides Building,  
Palace Road, Bangalore-560001.  
Email : [kredlmd@gmail.com](mailto:kredlmd@gmail.com)
4. **Karnataka Power Transmission Corporation Limited**  
Kaveri Bhavan, K.G.Road, Bangalore-560 009  
Website :<http://www.kptcl.com>
5. **Karnataka Power Corporation Limited**  
Shakti Bhavan, 82,Race Course Road,Bengaluru-560001 Karnataka  
Website :<http://karnatakapower.com/>
6. **Karnatka State Load Dispatch Centre**  
Anandarao Circle, Bengaluru 560009  
Website: <http://kptclsldc.com>

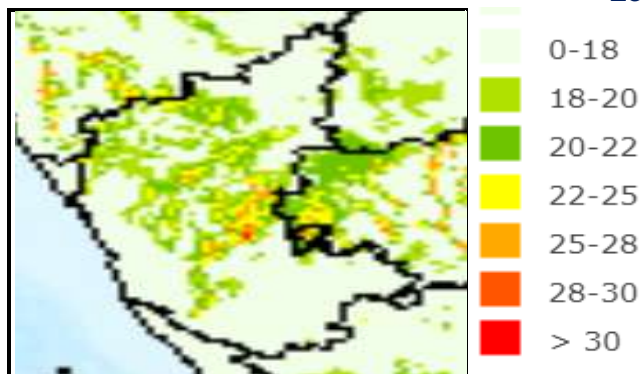
### Wind Power Project Commencement Year

The first wind Power Project from the Private sector was commissioned in Karnataka on 28 March 1996 by Victory Glass & Industry. This 1.350 MW project comprised of six machines of 225 KW rating (NEPC MICON make).

### Karnataka Power Corporation Limited Power Projects



### Wind Power Potential Map of Karnataka at 100 agl Legends



Source: NIWE

20.06.2019