

## **Wind Power Generation 2.1MW**

### **1. Name of the Project:**

Wind Power Generation 2.1MW

**2. Vision:** To promote green energy and clean energy, to mitigate the effects of climate change and shouldering National Energy Security.

### **3. Background:**

Surat city's growth is phenomenal over last couple decades. In the decade of 1991 to 2001 City population increased to 24,33,835 from 14,99,560. It means decadal population growth is more than 62%. Present population of city has reached at 5 million. Due to increased population and consequent increase in industrial & business growth service volume like water supply, sewage disposal, street lighting etc. is also increased considerably.

Consequently, electricity bill is increased by 245% to Rs. 39.54 crores in 2000-01 from Rs. 11.46 crores in 1996-97. Services of water supply, sewage disposal & street lighting accounting for more than 92% of total bill of SMC.

### **4. Need for Wind Power Plant:**

Electrical energy is the prime factor for providing the basic services of water supply, drainage and street lighting. Provide these services at optimum cost is the big challenge for SMC, as the sources of income are limited and rate of electricity are increasing every year.

Electricity bill increased to almost 3½ times during the period from 1996-97 to 2000-01 and continual increment in the electricity bill, SMC realized that the Energy Efficiency is the key factor to meet this challenge.

The rate of rise was enormous due to increase in service volume and lesser operational efficiency of the various electrical machineries/ equipments used to run the basic services.

Realising all this factors a cell was established in Oct-2001 to monitor and manage energy known by "Energy efficiency cell". After the analysis and report submitted by the cell 1st Wind power plant was established at Adodar of Porbandar district of Gujarat on . 02.11.2010 of 3 MW capacity. Later looking at the results of this Power Plant Surat had installed another 03 Wind Power Plants located at various locations of Porbandar, Jamnagar and Kutch Districts where a total of 30.3MW is generated without using any fossil fuel. This generated power is used to run various Treatment Plants of Water works and Drainage/Sewage system. The study and experience of Surat's Energy efficiency cell states that 7500 Sq.Mtr of land is required to

generate 1MW Wind Power. Surat city has proposed to have another 2.1MW Wind Power plant apart from existing Wind power plants.

## 5. Sector: Renewable Energy

## 6. Cost and financing:

- SCP Cost – Rs. 19.00 Cr
- DPR Cost – Rs. 00.00 Cr (Not Applicable)
- Tender Estimated Cost - Rs. 00.00 Cr (Not Applicable at this stage)
- Tender Sanctioned Cost - Rs. 00.00 Cr (Not Applicable at this stage)
- Convergence Scheme/PPP/SMC- At this stage with SJMMSVY
- Convergence/PPP/SMC Costing- Rs. 00.00 Cr At this stage 100%, i.e 19.00 Cr.

## 7. Current status of the project implementation: -

DPR Prepared and Submitted for approval

## 8. Impact/ Envisaged Impact of the project:

This project will give an indirect benefit to the Citizens of Surat by transmitting the generated electricity to various upcoming Drainage/Water treatment plant. The transmitted energy serves as a guiding force to move the mechanisms and pumps of the STP/WTP. This will reduce the overall energy demand received at Grid, resulting in economical benefit to City Corporation of Surat which in turn would reduce the burden on Tax payers of the city. With this particular 2.1MW Wind Power plant Surat would generate 54,00,000 KWh/annum, resulting in saving of around Rs. 3.2Cr/annum in electricity bill with reduction in emission of 38,000 tonnes CO<sub>2</sub> / annum.