

Integrated Action Plan to Make Gandhinagar a Solar City

Executive summary

In India, it is seen that every year there is an increase of 20%–30% in the energy requirement in the residential sector and 8%–10% increase in the commercial sector. This leads to a situation where there are both energy as well as peak deficits. In case of Gujarat, as per the Central Electricity Authority (CEA) data, during April 2005–January 2006, there was an energy deficit of 12.6% and peak deficit of 30.2%. Taking these facts into account, it became obvious to the Government of Gujarat that this trend is not sustainable in the long run. It felt that measures such as reducing energy demands and switching from fossil fuel to renewable energy technologies in its cities would go a long way in addressing these concerns.

As has been the case with the wide-scale introduction of renewable energy technologies for a variety of applications in the country, once again the Government of Gujarat took the bold initiative to develop the state capital Gandhinagar, as a solar city. The Gujarat Energy Development Agency (GEDA) had been given the mandate to prepare and implement the plan to achieve this objective. In essence, the Solar City programme strives to integrate:

- energy conservation measures to reduce the energy demand; and
- utilize locally available resources such as solar and other renewable energy resources to meet these reduced energy demands.

This Integrated Development Plan (IDP) for Solar City is a dynamic document meant to change with time, experience, and need. The development of IDP has benefited from the active participation of GEDA, Public Works Department, Gandhinagar Notified Area Authority, Municipal Water Supply Department, Forest Department, Gandhinagar Circle; Torrent Power Ltd; private businesses; and other agencies with energy-related responsibilities.

The whole exercise of developing an IDP for making Gandhinagar a solar city has been a collaborative endeavour along with all the major stakeholders in the city. Developing the city as a solar city requires an integrated urban planning approach, which simultaneously involves reducing reliance on fossil fuels by the application of energy conservation and efficiency measures and by replacing/complementing the conventional energy generation

with the renewable energy. As decided in the beginning, this exercise did not include the industrial and transportation sectors. The key components of the study comprised:

- base line determination;
- energy planning; and
- developing an action plan.

The action plan has been developed on the basis of different energy saving and renewable energy options, along with those technological options that are feasible only in the long term.