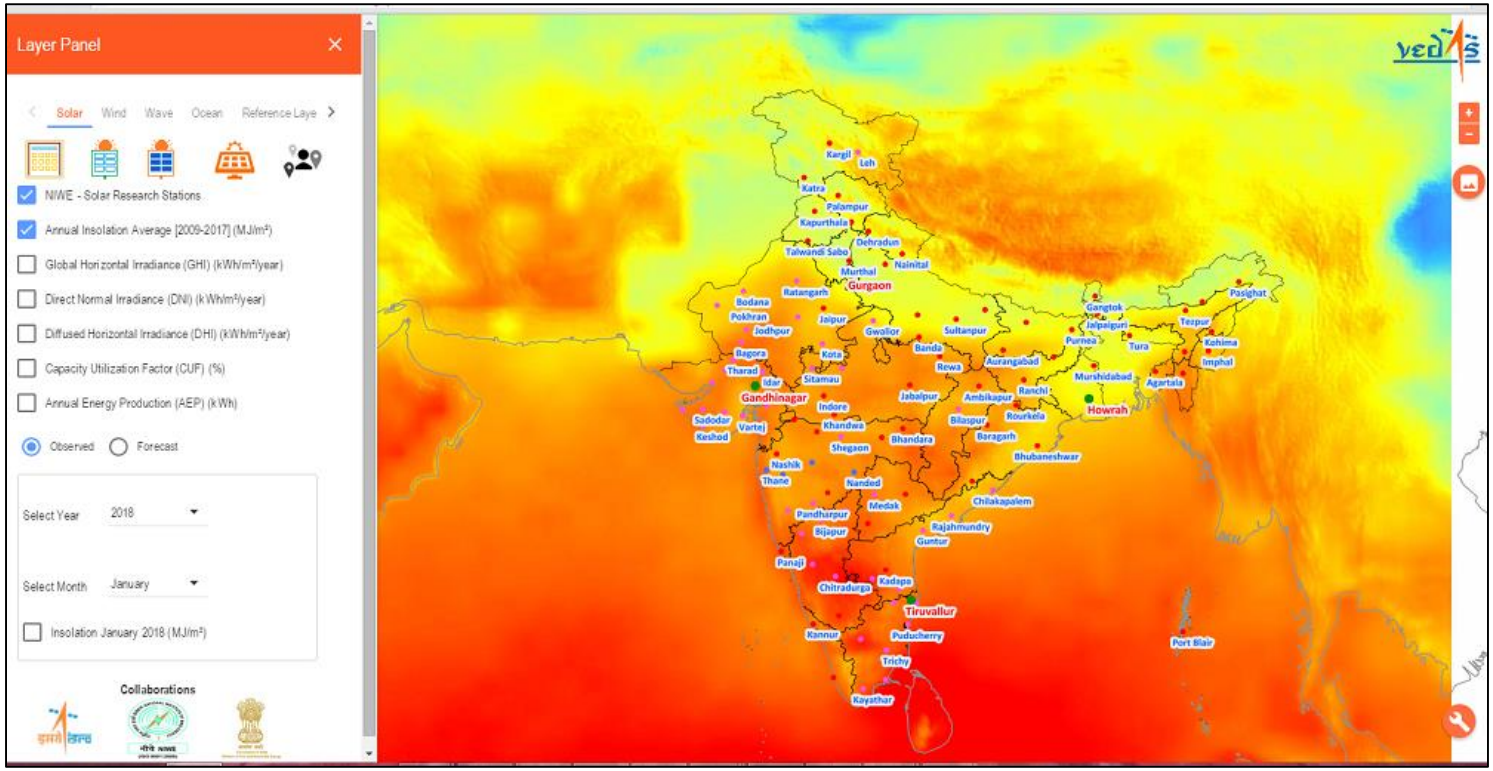
New and Renewable Energy

(Solar Energy)

A step to preserve Earth by

New and Renewable Energy

New and Renewable Energy application gives information on monthly solar, wind, wave and ocean power potential. Reference layers such as locations of smart cities, solar cities, airports, railway stations, network of railway lines, highways Cartosat-I Mosaic(2.5m), DEM, RISAT(18m),LISS III(24m), AWIFS(56m) and administrative boundaries of India are also available.

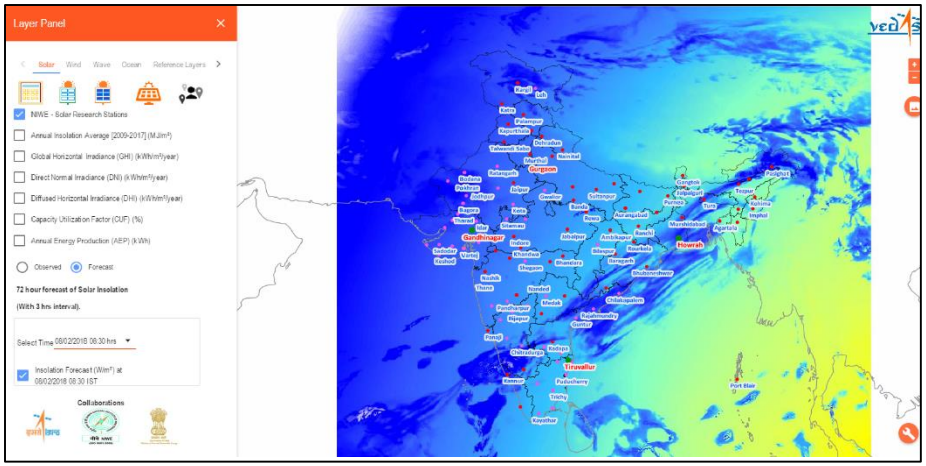


Solar Energy

Solar Power is calculated using insolation product of India's Geostationary Satellites namely, Kaplana and INSAT 3D from imager payload. Under solar power menu, locations of Ministry of New and Renewable Energy (MNRE) research stations are made available. Spatial maps of Average insolation (monthly and annual) during 2009 to 2017 is available. Also available are Global Horizontal Irradiance (GHI), Direct Normal Irradiance (DNI), Diffuse Horizontal Irradiance (DHI) and Capacity Utilisation Factor (CUF) of a location. A 72 hour forecast of Solar Insolation (With 3 hrs interval) can also be seen along with observed solar Insolation annually and monthly.

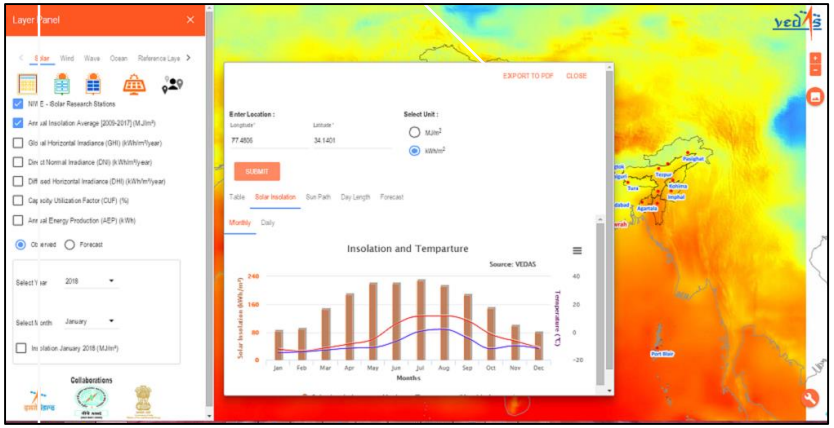
There are five sub-menus under Solar Energy:

- Solar Calculator
- Smart Cities
- Solar Cities
- Site Selection Tool
- User Analysis



Solar Calculator

For any Desired location within India, Solar calculator gives a summary table of suggested solar Tilt angle, Annual Global (minimum, average, maximum and previous year) Insolation, Energy Potential, CUF, DNI, DHI and GHI at that location. Monthly Average Minimum and Maximum temperature is provided. The data of Insolation and temperature are available in Tabular and Graphical form, Graphical representation of sun path (which depends on topography) on shortest day (Dec 21), longest day (June 21), equal day and night (Mar and Sep 21) and current day are provided. Graph of day length and chart of 72 hour forecast at 3 hourly intervals is made available.



click on icon for solar calculator

Smart cities and Solar cities

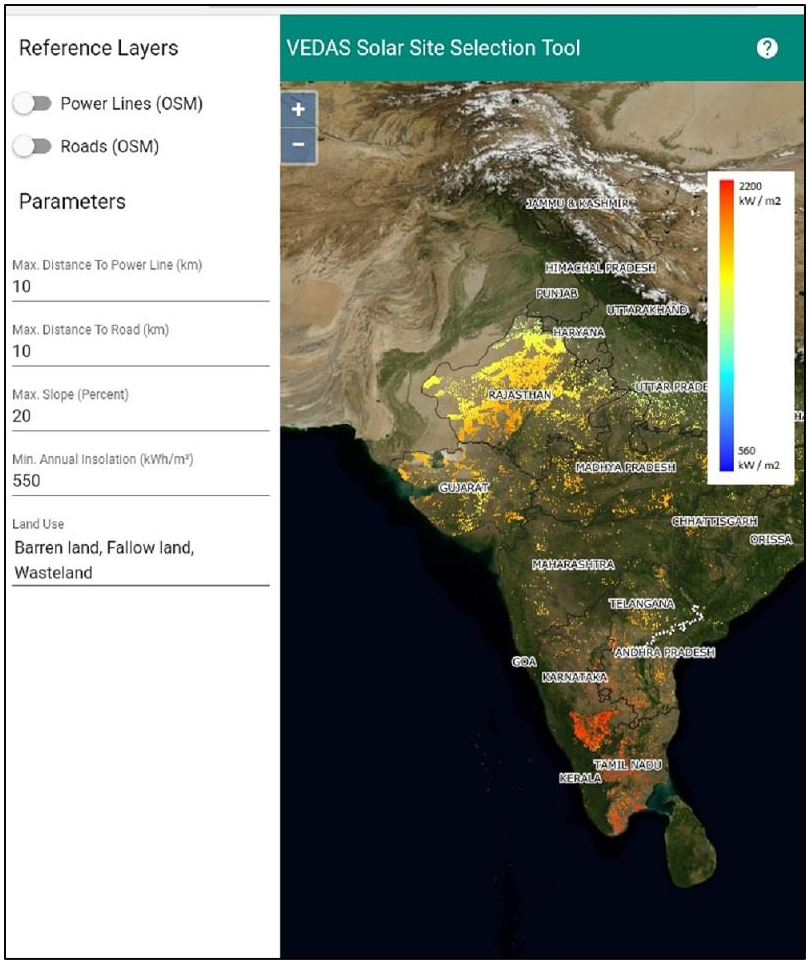
Smart Cities and Solar Cities Annual power generation, Potential and peak power generation potential are calculated and provided. Information regarding the same is been represented in graphical and tabular forms.

click on icon for smart cities

click on icon for solar cities

Solar Site Selection Tool

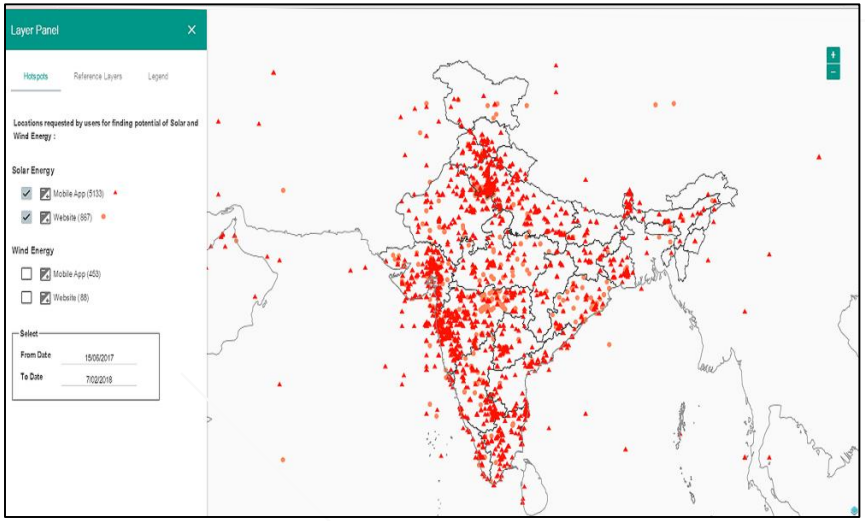
Solar Site Selection tool is an interactive visualisation tool which shows area satisfying user criteria based on multi-criteria such as minimum insolation, landuse, slope, and distance from road and grid network.



click on icon for Solar Site Selection Tool

User Analysis

User Analysis displays the overall users using the solar calculator Mobile App and wind calculator Mobile App along with solar and wind calculator on webpage for finding potential of Solar and Wind Energy.
It displays the different users using the App and viewing the webpage from different part of the country.



click on icon for User Analysis