

## Sectoral

### Renewable Energy

#### 1. How many states are classified under solar city development programme?

Under the 'Development of Solar Cities Programme', there are in total 60 solar cities identified. For more information, [click here](#).

#### 2. What is a solar city?

The Solar City aims at minimum 10% reduction in projected demand of conventional energy at the end of five years, through a combination of enhancing supply from renewable energy sources in the city and energy efficiency measures. The basic aim is to motivate the local Governments for adopting renewable energy technologies and energy efficiency measures. For more information, [click here](#).

#### 3. What are the new technologies undertaken by the government in this sector?

The Ministry of New and Renewable Energy (MNRE) has taken up various programmes on new technologies. As part of these programmes, various projects pertinent to research, development and demonstration have been initiated. These initiatives have been at various research, scientific and educational institutes, universities, national laboratories, industry, etc. These projects are helping in the development of indigenous research and industrial base, expertise, trained manpower and prototypes/devices/systems in the country a. Hydrogen Energy b. Chemical Sources of Energy (Fuel Cells) c. Battery Operated Vehicles d. Geo Thermal Energy e. Ocean Energy f. Biofuels

#### 4. What is strategy related to R&D?

R&D for technology development in industry -driven and goal oriented. 1. Involvement of industry and scientific establishment. 2. Access technological development elsewhere avoiding 'Reinventing the wheel'. 3. Indigenous R&D for new and emerging technologies and improvement of available technologies. 4. Time bound specific tasks for identified R&D activities to be assigned to recognized / identified industry and institutions with clear understanding on the achievement of results.

## 5. What is the state-wise electricity generation capacity?

The electricity generation capacity is listed state wise, which can be accessed from the link.

## 6. What is marine renewable energy?

Ocean renewable energy or marine renewable energy are terms used to describe all forms of renewable energy derived from the sea including wave energy, tidal energy, ocean current energy, salinity gradient energy and ocean thermal gradient energy. For more information, click here.

## 7. What is Ocean Thermal Energy Conversion?

Ocean thermal energy conversion, or OTEC, uses ocean temperature differences from the surface to depths lower than 1,000 meters, to extract energy. A temperature difference of only 20 ° C can yield usable energy. For more information, click here.

## 8. What is the expected Potential of Ocean Thermal Energy Conversion (OTEC) in India?

OTEC has a theoretical potential of 180,000 MW in India subject to suitable technological evolution. For more information, click here.

## 9. Where lies the focus of renewable energy sector?

Research, design and development efforts should invariably lead to manufacture of complete systems, even if these efforts are required to be shared among different institutions. Thus, there would be a need for system integration broadly covering the following areas: - 1. Alternate Fuels (hydrogen, biosynthetic) 2. Green Initiative for Future Transport (GIFT) 3. Green Initiative for Power Generation (GIPS) 4. Standalone new and renewable energy products 5. Distributed new and renewable energy systems 6. New and renewable energy products 7. MW scale grid interactive renewable electricity systems For more information, click here.

## 10. What are the plans related to research and development?

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### **11. What is the government's contribution for new technology under this sector?**

The Ministry of New and Renewable Energy (MNRE) has taken up the following programmes on various New Technologies: Hydrogen Energy Chemical Sources of Energy (Fuel Cells) Battery Operated Vehicles Geo Thermal Energy Ocean Energy Biofuels For more information, click here.