

Alternative Energy

Initiatives have been taken in the green and alternative energy areas, which include Bio-fuels, Hydrogen/H-CNG, Synthetic Fuels, Shale Oil, etc. Development of technologies for green diesel (from non edible oil) and Compact Reforming process for H-CNG are some of the important achievements in this area. Work has been initiated in the area of Gasification and Shale Oil to tap alternative energy sources such as coal, biomass, petcoke and oil shale in India.

Alternative Energy - Technology Basket:

- Bio-Diesel Production Technology
- Process for de-metallation of vegetable oils
- Compact single step Steam Methane Reforming for Production of HCNG mixture for direct dispensing to vehicles
- Biodiesel production
- Co-processing of non edible vegetable oil in DHDT unit

Capabilities:

- Pilot plant data bank & evaluation facilities
- Feed/product/catalyst characterisation facilities
- Process Development and Process Scale-up

Solar Energy:

IndianOil's R&D activities in the solar space encompass areas such as Solar Hydrogen, Solar Thermal & Solar Photo-voltaics. A three-pronged R&D approach of infrastructure creation & expertise development; product development & technology evaluation and basic research is in place.

Solar Demo-cum-Research Projects within R&D Campus

- Solar Water Heating Systems
- Rooftop, Mini-grid Connected Solar PV Test Bed (80KW)
- Battery Cycle Life Tester

MAJOR FACILITIES:

- Gasification Pilot Plant (Feed rate 1-2kg/hr.)
- High Pressure TGA with QMS
- Proximate Analyzer, as Fusion Determinator, Elemental Analyzer
- Micro Flow Reactor Unit for Hydroprocessing Applications
- HCNG Demonstration Unit with Dispenser
- HCNG Dispensing Station at Dwarka, New Delhi
- Retorting Pilot Plant for Oil Shale