



# ONGC ENERGY CENTRE

## SHAPING THE SUSTAINABLE FUTURE

ONGC Energy Centre (OEC) functions under the aegis of the ONGC Energy Centre Trust (OECT), which was set up by Oil and Natural Gas Corporation Ltd (ONGC), with a mandate to undertake and/or assist/collaborate in research for developing and/or improving the technology options, applications, viable energy mediums and sources, especially in clean and renewable energy options which have the potential to make an impact on India's energy scene.

**Vision:** "Harness science and technology to meet national energy needs of tomorrow, in a clean and sustainable manner..."

OEC is engaged in In-house research, through own scientists/research teams as well as collaborative projects jointly taken up with some of the leading national academic and research institutions since 2007. In addition, OEC is also working with some international academic institutions/companies to develop some technology options to harness renewable energy. The current broad areas of research pursued by OEC include (i) **Sub-surface Uranium exploration and recovery by in-situ leaching process**, (ii) **Hydrogen Energy**, (iii) **Biotechnology for Energy**, (iv) **Solar Energy**, (v) **Geothermal Energy** and (vi) **Kinetic Hydro Energy**.



Cu-Cl Closed Loop setup for Hydrogen generation – ICT, Mumbai



Surface Cores



CBM well Stimulation

### Highlights:

- Development of Indigenous Process and Integrated facility /Equipment for Closed Loop Cu-Cl Cycle for Hydrogen generation.
- Design and Development of Indigenous process and equipment for I-S cycle for Hydrogen generation.
- Development of Polymeric Membranes
- Microbial bio-conversion process developed for Lignite to Methane and Humic Acid
- Development and Demonstration of Microbial Process to enhance Gas Production in CBM wells
- Development of a Microbial Process at laboratory scale to reduce SRBs in oil wells/pipelines

### Highlights:

- Development of self-cleaning coatings for solar panel applications
- Development of Molten Salt Heat Storage Materials (120 °C – 750 °C)
- 2 Mwe Concentrating Solar Thermal Power Plant based on Beam Down Technology
- Geothermal potential assessment in sedimentary regions
- R&D facilities for Hydrogen, Uranium and Biotechnology
- Total 12 Patents, including 3 International Patents, filed relating to Hydrogen, Biotechnology and Solar Thermal.

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