

## **Inaugural Ceremony of One Week Online Short Term Course (Self-Sponsored) On “Advances in Energy, Environment and Chemical Engineering” AEECE 2023 (May 19-23, 2023)**

Inaugural ceremony of One Week Online Short Term Course (Self-Sponsored) On “Advances in Energy, Environment and Chemical Engineering” AEECE 2023 (May 19-23, 2023) held on May 19, 2023 organized by Department of Chemical Engineering, Dr. B R Ambedkar National Institute of Technology Jalandhar, Punjab (India).

Hon’ble Director Prof. Binod Kumar Kanaujia, NIT Jalandhar was congratulated the team of AEECE 2023 for conducting the course.

Dr. Poonam Gera, Head Chemical Engineering Department & Convener of the course is highlighted the achievements of department and welcomed the audience.

Prof. Ajay Bansal, Registrar and Convener of the Course congratulated the team AEECE 2023.

The course was coordinated by Dr. JK Ratan, Dr. Deepak Sahu, Dr. Amit D Saran and Dr. Nitin Naresh Pandhare

Dr. Deepak Sahu welcomed the participants and highlighted the course objective and importance to participants.

This course is particularly designed in the fashion of the growing demands for Sustainable Engineering, Energy, and Environment, increase of process operation efficiency and safety. In near future, chemical engineers will be needed to develop synthetic replacement for those resources as well as materials that are low in supply. Energy and environmental issues will be at the forefront of consideration for engineers and the society at large.

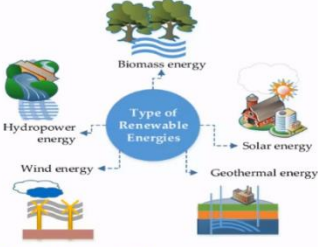
This five days online STC will be focused on the latest novel advances regarding the Renewable and sustainable energy, Process modeling and simulation, Process optimization Energy storage systems, Energy and environment issues, Green technologies for environmental sustainability, Waste water treatment.

Dr. Deepak Sahu introduced Prof. Manojkumar Ramteke, Professor, IIT Delhi, and Keynote Speaker of the day. Dr. Manojkumar Ramteke is currently Professor in the Department of Chemical Engineering, Indian Institute of Technology, New Delhi, India. Prof. Ramteke delivered the expert talks on “Multi-objective optimization of Hybrid Renewable Energy Systems”. The total 80 participants from different premier institutes participated in this course. Dr. Nitin Naresh Pandhare presented the vote of thanks at the end of the inaugural session.

Manojkumar Ramteke is presenting

## Renewable Energy

- 1) Energies that are obtained in a sustainable way and from natural resources, such as the sun, wind, water, etc. are referred as renewable energy.
- 2) Renewable energies are also known by the name of **alternative energies** to differentiate them from conventional non-renewable energies.
- 3) They **do not generate greenhouse gas emissions**.
- 4) The resources from which they come are considered **inexhaustible** because they are **practically renewed**.



Renewable energies (Ghandriz et al., 2021)

Ghandriz, Yeganeh Noorbakhsh, Seya meet.google.com is sharing your screen ASAK, Matheopot. (2021). Effect of wide observation of nature in renewable energy engineering education: 150-150-3161 Paper32C51727.2021.9559741 3

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Manojkumar Ramteke, Dr M K Jha, Dr Nitin Naresh Pandhare, Energy CH, Dr Shashikant Yadav, Head Chemical Enginee..., Gurdev Mann, sri himaja, 39 others, You

Manojkumar Ramteke is presenting

## Outline

- 1) Introduction to Renewable Energies
- 2) Hybrid Renewable Energy Systems (HRES)
- 3) Network of multiple HRESs and Power Trading using E-Auction
- 4) Renewables Integrated Energy System (RIES) for phasing out the coal power
- 5) Application of RIES to three Differentially Populated Cities in India
- 6) Conclusions

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