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Report

# Institution Innovation Council, Pt. Ravishankar Shukla University

Conducted

**Interaction Meet** 

On

**Geothermal Energy Targeting Tattapani** 

On

Occasion

Of

"One Week One Theme"

**Energy and Energy Devices (EED)** 

On

27<sup>th</sup> June 2024















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## Poster



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**Dr.KavitaThakur PresidentIIC** Pt.RavishankarShuklaUniversity, Raipur, Chhattisgarh- 492010





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### **Details of Event**

Name of Program Type	Interaction Meet on Geothermal Energy Targeting
	Tattapani (Activity under IIC-PRSU)
Name of Program Theme	"1 Week 1 Theme"
	Energy and Energy Devices (EED)
Objective	The main objective was of the interaction meet ,to
	showcase the promising CSIR technologies and
	knowledgebase to the stake holders and academic
	institutions working in similar areas.
Benefit	Inspiring students towards Geothermal Energy
<b>Duration of Activity</b>	12 hours
Mode of Event	Offline
No. of Students Participants	212
No. of Faculty Participants	11
No. of External Participants	10
Expenditure Amount	11200

#### **Social Media Links:**

Facebook-https://www.facebook.com/share/p/oaV8dmHxNWPnghp9/

#### Instagram-

https://www.instagram.com/p/C\_P8MOJylxs/?utm\_source=ig\_web\_copy\_link&igsh=MzRIODBiNWFIZ <u>A==</u>





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#### **About the Speakers**

Prof. N. V. Ramana Rao, Director, NIT Raipur, and Dr. P. B. Sarolkar, retired Deputy Director General of the Geological Survey of India (GSI), graced the occasion as Guests of Honor.

Dr. Prakash Kumar, Director, CSIR-NGRI, highlighted the significance of geothermal energy. He emphasized its clean and sustainable nature, positioning it as a crucial resource for India's goal of achieving net-zero emissions by 2070. He informed that the interaction meet is a part of One Week One Theme (OWOT) celebrations under the Energy and Energy Devices (EED) theme. He also discussed that the inaugural function of the OWOT took place in New Delhi on June 24, 2024, graced by Dr. Jitendra Singh, Honorable Minister for Science and Technology, and Dr. Kalaiselvi, Director General of CSIR. The event featured insightful technical presentations by leading scientists, exploring various aspects of geothermal energy.

Dr. Sudip Bhattachharya from the Geological Survey of India (GSI) provided an indepth overview of the geothermal exploration initiatives underway in Peninsular India. His presentation highlighted the strategic importance of identifying and harnessing geothermal resources in this region, emphasizing the geological complexities and the potential energy reserves that could be tapped into with advanced exploration techniques. He discussed the ongoing efforts by GSI to map geothermal hotspots and the progress made in understanding the region's geothermal potential.

Sanjay Mukherjee from ONGC, Dehradun, then outlined ONGC's significant endeavors in the field of geothermal energy development. Mukherjee detailed the organization's comprehensive approach, including exploration, feasibility studies, and the technological advancements that have been integrated into their geothermal projects. He also shared insights into the challenges faced in the development phase and how ONGC is working to overcome them, aiming to establish a reliable geothermal energy source as part of India's broader energy mix.

Dr. P. K. Naik from the Central Ground Water Board (CGWB), Jaipur, explored the potential for geothermal resources in and around the Tamnar area of Chhattisgarh.





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His findings revealed promising geothermal activity in this region, making it a potential site for future geothermal energy projects. Dr. Naik discussed the geological surveys conducted, which indicate substantial heat flow and favorable subsurface conditions for geothermal energy extraction.

Dr. B. P. K. Patro from the National Geophysical Research Institute (NGRI), Hyderabad, focused on the application of magneto telluric in geothermal resource mapping. He explained how this geophysical method, which measures the Earth's natural electromagnetic fields, is crucial for identifying subsurface geothermal reservoirs. Dr. Patro's presentation underscored the importance of magneto telluric surveys in accurately mapping geothermal resources, which is essential for the successful development of geothermal power projects. His discussion also highlighted the advancements in magneto telluric technology and its increasing role in geothermal exploration, particularly in complex geological terrains like those found in India.

Dr. Labani Ray, Principal Scientist at CSIR-NGRI, presented significant research findings from CSIR-NGRI, shedding light on geothermal energy potential in India. Dr. P. B. Sarolkar, DDG (Retd) from GSI, discussed the feasibility of developing geothermal energy at the Tattapani Geothermal Field, emphasizing the region's potential for sustainable energy. Dr. Rajeev Gyani from CREDA highlighted ongoing efforts to establish a geothermal power project in Chhattisgarh, detailing the progress and challenges faced. Together, these presentations underscored the critical role of geothermal energy in India's future energy landscape.

These presentations showcased the results of nearly four decades of dedicated research at the Tattapani Geothermal Province, emphasizing the need for further subsurface geophysical mapping to assess the sustainability of the heat source. The event also featured poster exhibitions and model displays. Over 120 delegates attended, including representatives from central and state government organizations such as CREDA, DGM, ONGC, GSI, CGWB, RGWTRI, along with students from various colleges, universities, and institutes. Interactive sessions between scientists and delegates fostered a deeper understanding of geothermal energy research.













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#### **Photos of the Event**







#### सीएसआईआर-एनजीआरआई ने तत्तापानी पर ध्यान देते हुए भूतापीय ऊर्जा पर परस्पर संवाद बैठक आयोजित







वश्धेव कृदुम्बकम् **ONE EARTH • ONE FAMILY • ONE FUTURE** 



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#### **Conclusion/Outcome**

A significant outcome of the event was the signing of a Memorandum of Understanding (MoU) between CSIR-NGRI and Pandit Ravishankar Shukla University. This MoU paves the way for collaborative research and training in advanced areas of geophysics and geology. Both institutions will work together on research programs funded by external agencies (SERB/DST, Ministry of Earth Sciences, Department of Space, etc.) and facilitate the exchange of knowledge and expertise through faculty and student visits.

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