First Circular

National Seminar on Conventional, Renewable Energy Sources and Climate Change Perspective

3rd Week of June 2023

Organized by

Gondwana Geological Society, Nagpur

The Gondwana Geological Society (GGS), established in 1981, is one of the pioneering earth science societies in our country, promoting advanced geoscientific study and research since four decades. The Society provides a common platform to the geoscientists all over India to interact with each other, exchanging the findings of research, recent developments in science and publication of research activity. The Society organizes scientific talks on topics of national importance, as well as Seminars on various themes of societal importance. GGS has organized seminars on Coal Geology, Deccan Basalts, Micro-palaeontology, Quaternaries of India, Precambrians of Central India, Non-Marine Cretaceous of India, Sedimentary Basins, Energy Scenario, Challenges in Mineral Exploration, Ground water and surface water resources in India, Kotri Belt mainly for its atomic mineral and REE resources and a few more. The proceedings of these seminars are published as Special Volumes of GGS, for the benefit of the public. The bi-annual Journal of Geosciences Research (ISSN 2455-1953) is the flagship biannual publication of GGS, which is recognized by UGC as reference journal. The Society has nearly 700 members spread all over India. National institutions such as GSI, AMD, IBM, HCL, MECL, MOIL, WCL, NGRI, NIT, DMGs and other state government departments as well as and several IIT's and universities have always supported scientific activities of GGS.

The GGS as a part of “Aazadi ka Amrut Mahotsava” celebrations is organizing a National Seminar on “Conventional, non-conventional & Renewable Energy Scenario and Climate Change Perspective in India” in June 2023, at Nagpur. The present installed capacity of power generation is nearly 3,29,000 MW of which 2,20,000 MW is thermal, 44,000 MW is hydropower, 6,780 is nuclear power and 58,303 is renewable energy. The demand is almost 2,10,660 MW in 2022. Considering the need to achieve zero dependency on internal combustion engine (ICE) vehicles by the end of 2030's, and complete replacement of fossil fuels in power sector by 2050, it is necessary to review the present energy scenario with possible improvement in generation of renewable energy sources in future. Thus, to achieve targets of reduction in green house gas emission, complete replacement of fossil fuels by renewable energy is imperative in power and transport sector. This Seminar proposes to have brain storming sessions to achieve the targets of energy transition to renewable sources, the emerging technology and impact on climate change.

Climate change is a very important issue our globe is going through. Climate change basically means the long term shifts in weather patterns and temperature changes. Earlier these shifts were natural and were because of variations in the solar cycle. Since, the advent of industrialization after 1800s these shifts are rapid with short period of times which are primarily due to burning of fossil fuels like coal, oil and gas to meet energy demands. Burning fossil fuels generates greenhouse gases and concentrations of green house gases are at their highest levels in 2 million years than it was in the late 1800s. The last decade (2011-2020) was the warmest on record. The consequences of climate change include, intense droughts, water scarcity, severe fires, rising sea levels, flooding, melting polar ice, catastrophic storms and declining biodiversity. Since, the climate change is directly related to emission of green house gases which in turn is outcome of industrialization and energy demands, the energy resources and climate change should be studied together. Hence the present conference is taken up to bring the climate scientists and energy experts on one platform to discuss pros-cons and solutions, that can help policy makers to make some important amendments in this regard.

The National Seminar is planned for two days, covering the role of fossil fuels, hydroelectric and non-conventional sources like nuclear energy, wind power, solar power, besides discussing the renewable energy sources like coal bed methane, biomass energy, geothermal and new technology, electric vehicles, hydrogen cells etc. Scientists and technocrats from government departments like GSI, AMD, DOE, CEA, MNRE, MoES, MoM, DGM, IBM, PSUs like WCL, Coal India, NPC, NHPC, NTPC, GAIL, ONGC, MOIL, MRSAC (a state government undertaking) research institutions like SERB, CSIR, UGC, NGRI, PRL, NEERI, NIT, IIT and private entrepreneurs are expected to participate in this Seminar. The experts from fields of exploration, energy resource exploitation and generation will enlighten the participants about the Future Energy Scenario in India in view of the climate change and environmental implications.

Themes and subthemes

1. Petroleum and Natural Gas

a. Petroleum resources: Exploration for petroleum onshore and off shore.
b. Petroleum source rocks in lacustrine records
c. Potential assessments, target areas for future exploration.

2. Coal sector

a. Coal resources in India, exploration and production
b. Quality and quantity wise assessment of coal resources in India – future perspective.
c. Coal bed methane –present status and future perspective.
d. Exploration for hydrates.

3. Nuclear sector

a. Nuclear energy trend in India
b. Exploration for nuclear energy resources.
c. National policy in energy resource in India

4. Hydel energy sector

a. Hydel energy scenario and production status,
b. Geological and environmental challenges and mitigation measures

5. Non- conventional energy resources

a. Wind, Solar & Tidal energy
b. New technology fuels (bio- fuels and hydrates)
c. Geothermal energy
d. New technology, Electric vehicles etc.

6. Environment impact assessment

a. Environment impact assessment due to exploration for fossil fuels.
b. EIA of thermal plants, oil well production, hydel power generation, nuclear radiation
c. Mitigation challeneges
d. Implications of power sector

7. Climate Change

a. Geodynamics and paleoclimate records.
b. Climate impact and geoarchaeology: geological and climate forcing on ancient civilizations
c. Quaternary palaeogeographic and paleoclimatic changes in marine systems
d. Reconstruct extreme climate changes of past
e. Response of biota to paleoclimatic and paleoenvironmental changes
f. Indian subcontinent post anthropocene
g. Lacustrine Archives of India and climate change studies
h. Human Traces in sedimentary records of the aquatic systems
i. Environmental parameters for sustainable energy resources development
j. Reconstruct regional and local Indian monsoon variability during Holocene through terrestrial proxy records
k. Unraveling climate and anthropogenic impacts using lacustrine proxies
l. Pre-historic Lake Basins
m. Climate changes on decadal to sub-millennial time scale

n. Past climate records in polar and high altitude regions
o. Sea-level changes and drivers
p. Future perspective in climate change
q. Archives of Quaternary paleoclimate
r. Modeling of past climate changes and its simulation for future scenarios
s. Impact of new energy generation/ policy on climate change
t. Recent advancements in quaternary dating techniques

The seminar will comprise key papers by eminent geoscientists who have vast experience in the above fields as well as a presentation by active workers in the field of conventional, renewable energy, and environmental impact studies. In addition, a poster session is being arranged for young researchers giving them opportunity to express their views and interact with experts. The seminar will conclude with a Panel Discussion of experts who will be summarising the deliberations and propose future exploration strategy and power production mix for sustainable development of power sector adhering to environmental norms.

Registration

Intending participants may register on or before 30st December 2022. The registration fee is as under:

General Delegates:	Rs. 5000/-
Life Members of Gondwana Geological Society:	Rs. 3000/-
Students:	Rs. 1500/-

The delegates may please send their registration fee in advance by Demand Draft drawn in favour of Gondwana Geological Society, or through online to the bank account given here. Bank account no. 04650100001896, Bank of Baroda, MICR 440012003, IFSC- BARB0DHARAM (0=zero), Dharampeth branch, Nagpur 440010.

Submission of Abstracts

Abstract of the paper, not exceeding 300 words may be submitted along with registration form in hard or soft copy, to the Organising Secretaries before 31st December 2022. The abstract should also be submitted through email in MS Word format for fast processing and communication. The format of paper submission is

available on the website of GGS, https:/gondwanags.org.in. Authors of selected abstracts will be informed before 20th January 2023 for the submission of the full paper. The abstract should include the title of the paper, names(s) of the author(s), organization and the address, including contact number and the e-mail ID.

Submission of Full Papers

The papers accepted for presentation in the seminar will be published as Special publication of JGSR with ISBN number, after peer-review and will be released during the inauguration of the seminar as per precedence of GGS. It is, therefore, requested to submit the full paper in hard copy as well as a soft copy by email on or before 28th February 2023, as per the format of the Journal of Geosciences Research. The proceedings volume of the Seminar will be published as a Special Publication of JGSR.

Weather

The weather at Nagpur will be warm and is expected to be pleasant. Occasional rains may be expected.

Accommodation

The delegates are requested to indicate their requirement and choice of accommodation well in advance. The State and Central Government guesthouses have limited accommodation available. Hotels of various tariffs including three stars and five stars are also available in Nagpur.

Travel aid

Travel aid for participation in the Seminar may be provided to a limited number of deserving participants, particularly students, based on fund position. The request for funding may be submitted to the Organising Secretary of the seminar.

CONVENOR

Dr. A.K. Chatterjee
President, Gondwana Geology Society,
C/o PG Department of Geology, RTM Nagpur University, Law College Campus,
Amravati Road, Nagpur 440001

ORGANISING SECRETARY

Mr. Milind Dhakate
Director, Geological Survey of India, Seminary Hills, Nagpur 440006

Dr. Mrs. Samaya Humane
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Law College Campus, Amravati Road, Nagpur 440001

e-mail: energy.climate2023@gmail.com

Registration Form

National Seminar on Conventional, Renewable Energy Sources and Climate Change Perspective

3rd Week of June 2023

Name in full : .....

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Designation: .....

Name of the Organisation: .....

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Full address for Correspondence: .....

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Tel/Mobile No.: .....

e-mail: .....

I intend to contribute a paper/poster presentation titled:

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Under theme : .....

.....

Accommodation Required : Yes/No
Details : Guest House / Hotel - Single Bed / Double Bed
Charges as per Guest House / Hotel Rates

Registration Fee (Payment details) :

NEFT/RTGS/DD No. ..... Date .....

Amount ..... Bank .....

Any Other Request .....

.....

Place :

Date : Signature

(To be submitted to the Organising Secretary)