EAGE

6-8 DEC 2022

MUSCAT | OMAN | ONLINE

REMEA22

2ND EAGE CONFERENCE ON

RENEWABLE ENERGY

IN THE MIDDLE EAST & AFRICA

TOWARDS ATTAINMENT OF AN ENVIRONMENTALLY SUSTAINABLE AND CLIMATE RESILIENT ENERGIES

FIRST ANNOUNCEMENT

AND CALL FOR ABSTRACTS

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WELCOME TO OMAN

Event Overview

Following the success of the first edition of the EAGE Conference on Renewable Energy in the Middle East and Africa, EAGE and members of the technical committee invite you to the second edition of the event, scheduled to take place in Muscat, Oman on 6-8 December 2022.

In contrast to the previous event that was mainly dedicated to Geothermal Energy and Hydropower, the second edition of the conference will include 4 main themes in Climate Change, Technology, Resources and Energy Security, allowing contributions from the great variety of fields.

The intention is to provide a platform to share developments, ideas, case studies, successes and lessons learned, in all aspects of renewable energy, particularly in the Middle East and Africa regions.

It further hopes to bring together experts from scientific fields related to current practices and approaches to predict future practices, innovations, and solutions.

The 3-day conference will consist of technical presentations, oral and posters discussing the latest developments and achievements in the field of renewable energy.

Technical Committee

This event is organized with the essential support of the technical committee members. The Technical Committee is composed of industry specialists within the event topic's area.

Mary Nyasimi	Inclusive Climate Change Adaptation For A Sustainable Africa (ICCASA)
Alexander Petrovic	King Abdullah University of Science and Technology
Mohammed Al Lawati	Petroleum Development Oman
Hanifa Abdullahi	Geothermal Development Company
Philipp Wolpert	GeoThermal Engineering GmbH
Nabila Bounceur	King Abdullah University of Science and Technology
Sindi Maduhu	Tanzania Petroleum Development Corporation
Asier Ukar	PI Berlin
Abdelkader Ait Ouali	Renewable Energies Development Center
Tarek Drias	Batna 2 University
David Mwangi	East Africa Power Programme
Essam Aboud	King Abdulaziz University
Hakim Saibi	United Arab Emirates University

Who should attend

The second conference aims to bring together government officials, decision and policy makers, technical experts, academia, private sector, financiers, and renewable industry players.

Call for abstracts

The technical committee invites you to submit an abstract of 2-4 pages for the Second EAGE Workshop on Renewable Energy in the Middle East & Africa. Abstracts should be submitted via the EAGE website using the downloadable template. Abstracts will be accepted for both oral and poster presentations.
*Abstracts that do not meet the submission guidelines and instructions will not be considered.

Conference Submission Themes

Climate Change

1. Energy Consumption & Efficiency

Energy efficiency and sustainable production is vital to achieving environmentally sustainable and climate resilient economies. Efforts of working towards attaining decarbonised economies greatly contribute to the achievement of the Paris Agreement and the Sustainable Development Goal 7.

- Comparison of Policies and legislatives on Energy efficiency and conservation in Middle East and Africa
- Adoption of Energy efficiency Technologies and innovation
- Case studies and Analysis of energy consumption
- Smart grid development

2. Assessing the impact of climate change on Water-Energy

Analyzing the impacts of emissions on water availability and criticality as well as water is the direct primary impactful factor.

- Temperature
- Strategies towards mitigating but also integrating variations of carbon emissions in more adequate scenarios

Technology

1. Quality Control, O&M and long term durability of components

Quality control, equipment durability and an accurate simulation of the production of large-scale PV plants are key elements to ensure the confidence and bankability of the sector. The increase in the size of the plants, as well as a great technological dynamism in modules, inverters and cleaning systems are factors that offer new possibilities for improvement but also entail risks that must be known.

- Automatic cleaning system solutions and their impact in terms of Levelized Cost of Electricity
- Anti-reflective coatings for arid regions
- Enhanced thermal behavior of inverters for hot and arid regions
- Levelized Cost of Electricity comparison of fixed versus tracked solutions considering both monofacial and bifacial modules
- Most common pitfalls during O&M in hot and arid regions

2. Integration, innovation, and new technologies

Innovative solutions and new technologies is a key driver for the energy transformation and can provide pathways towards a renewable powered future. Innovative solutions and new technologies can make energy production, transmission, and consumption more flexible, allowing for cost-effective use of renewables and empowering a new generation of energy consumers.

- Leading renewable innovations and emerging trends that can unlock energy system flexibility for more renewables/ Innovative solutions of operating the energy system, allowing the integration of higher shares of variable renewable power generation
- Opportunities and challenges for utilizing renewables in cost reductions in energy technologies
- Emerging enabling digital energy technologies that can facilitate the integration of renewable energy (e.g., EV charging, blockchain, Internet of Things and AI and big data).
- Technological and non-technological barriers and drivers/ innovations in renewable energy

Resources

1. The role of O&G in the energy transition: synergies

The recent oil price crashes (2014 and 2020) and the increase of various international agreements aimed at reducing reliance on fossil fuel and tackling climate change, has rushed a refocus on their energy mix and continued reliance on conventional energy source. However, the effect of COVID 19 may probably rise the demand O&G towards the year 2030. The region is pointing to the low-carbon intensity of their oil as they seek to increase oil and gas production rates but the shift from oil & gas (O&G) to renewables, is not as simple due to the nature of dependence of most of the countries for the economic growth.

In the near future the region will harmonize and share policy, legal framework and other initiatives aimed at continually improving the enabling investment environment in the region. Most companies are looking to navigate the energy transition in order to reduce carbon emissions in the near future.

- Integration of geothermal energy as part of the oilfield lifecycle
- New opportunities from the same wells: harvesting additional by-products from the reservoir fluids (e.g. mineral-brine mining)
- Repurposing decommissioned O&G wells
- Subsurface knowledge, experience and data sharing
- Balancing the CO2 footprint by investing (and participating) in renewable energy projects

2. Case study and geothermal potential in the Middle East and Africa region

Geothermal potential in the Middle East and Africa region is substantial and offers a viable option for alternative energy. The Middle East regions mostly utilises geothermal energy for direct use and desalination applications among others, whilst, the East Africa Rift region mostly utilises geothermal energy for power generation as well as direct use application.

- Geothermal exploration and resource assessment
- Low enthalpy geothermal resources and direct utilization
- Reservoir management and monitoring
- Drilling technology in volcanic and sedimentary settings

3. Exploring for Energy: the role of the subsurface in the coming decade

The renewable energy potential of the subsurface plays a major role to achieve a low-carbon future. Especially the capability to store huge amounts of CO2 will make a significant impact, but also the opportunity to explore other subsurface resources in a smart and integrated context. This will diversify the petroleum-geoscience related skillsets and create new opportunities for the coming decades.

- Subsurface renewable energy potential of the region
- Conversion of hydrocarbon wells to geothermal/renewable energy sources
- Available data, geological risks and challenges for subsurface exploration
- New emerging technologies

Energy Security

1. Geopolitics of Renewable Energies

Towards exploring the geopolitical implications of new energy policies and investments in REs. Likely by investigating:

- Factors related to the energy security stability; Among others, factors to consider might be: the geopolitical risks of the geographical concentration of the different resources.
- Feasibility of energy transition under many challenges and constraints including limited, finite, depleting sources and climate change conditions.

Renewable energy will affect security and societal resilience in multiple ways. Besides their impacts vary depending on (1) selected/available energy resources, (2) system design and (3), the technology regulation. Therefore, solution might include analyzing future availability of substitutes for use in renewable technologies, analysis trade stability and geopolitical strategies of exporting countries.

2. Energy Security: FF and metals in the trade equation

The world is heading towards a new geopolitical energy security under the green transition/net zero emissions. This security will be highly constrained by the stability of trades around energy sources but also and more importantly metals necessary to the renewable technologies (Copper, Nickel, Lithium, Steel, REE,…).A sustainable future is not possible without assessing the feasibility of the transition within the limits/availability/trade policy of metals, in addition to fuels.

Members of the technical committee would also encourage submitters to share abstracts on wind, energy storage and energy management.

The deadline for submitting abstracts is 15 July 2022.

Important Dates

Call for Abstract Open	15 October 2021
Call for Abstract Close	15 July 2022
Early Registration Open	1 May 2022
Registration Closed	5 December 2022

Sponsorship Opportunities

Sponsorship opportunities are available to suit all budgets. Please visit our website using the QR Code below for further details.

Contact

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