Important Submission Deadlines

Abstract: 15 June
Full Paper: 30 June
Presentation: 8 July

FEST 2023

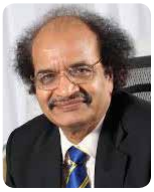
Future of Energy

2nd International Conference on **"Future of Energy with Science and Technology"**

Rendezvous for Business Opportunity,
Industry - Academia Technology Exchange & Learning Latest in Energy

Date: 18-19 July 2023, Venue: University of Delhi Conference Centre, Delhi

Patrons



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Former Vice Chancellor, ICT, Mumbai

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Delhi University

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Organizer

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Publication of Peer Reviewed Papers in Journals Supported by NCBTA (List of journals is given on the last page)

Welcome to FEST 2023

The climate and climate change were fringe issues in global meets and conferences during the last two-three decades of 20th century, but have become priority issues, especially during the last decade. Climate change, global warming, pollution, dwindling non-renewable energy resources, geopolitics of energy, macroeconomics, supply and demand, and need for energy independence are the forces driving to the search for viable and renewable sources of energy. When the UK's Conference of the Parties (COP) Presidency was confirmed in 2019, the science was clear that a path to limiting warming to 1.5°C would soon be out of reach without urgent action to reduce emissions. According to the World Bank Group Flagship Report, January 2023, "Global Economic Prospects", the losses due to Climate Change / Global Warming are making a significant chunk of GDP of the countries, especially South Asia Region. The situation can be stalled / reversed by collaboration and sharing. This heightened the necessity for dependable mix of **renewable** and **clean energy**. Every country, including India, committed for progressively greater contribution towards renewable and clean energy. India has announced 500 GW of installed electricity capacity from non-fossil sources by 2030. So far, a total of 172.72 GW of capacity from non-fossil fuel sources has been installed in the country as on 31.10. 2022.

Over the coming decades, the world will need a lot more energy to meet increasing demand from rising population and developing world. Energy is reinventing itself and energy transition is accelerating. The fossil fuel age of hunting for finite fossil stocks is giving way to the renewable age of farming infinite renewable flows. Superior renewable technology is winning the battle for the future of energy, and it is time to recognize this key turning point. Countries, companies, and investors that accept and embrace the energy transition will prosper, while those that deny and resist will struggle and eventually fall. There are mega-scale and mini-scale renewable energy options that are already available or are in development stage. **Solar** and **wind energy** have come forward in a big way to share load of this challenge. **Hydroelectricity, nuclear energy, bioenergy, biofuels, waste-to-energy** offer some of the direct options of enhancing availability of renewable / green energy. The key for the future is to use all formats to reduce fossil fuel consumption and enhance renewable energy usage. **Hydrogen** and **EV ecosystems** are fast growing in this race. Energy Storage Batteries and Fuel Cells are key to efficient delivery of electricity from different energy options. Elements like Graphite, Cobalt, Zirconium, Nickel, Lithium, Antimony, tellurium etc. are designated as high-impact metals in renewable energy business. **Bioethanol** and **Biodiesel** are already making contribution towards renewable energy. The two strongest pillars of renewable energy targets are solar and wind. The **sustainability** of these renewable energy resources is intrinsically connected with electricity storage, whatever way it may be. Green hydrogen, fuel cell, electric vehicle, storage batteries etc. fall in the line of renewable and clean energy efforts and targets. Efficiency is another driver in the transition. Improving energy efficiency, whether fossil fuels or renewable energy, for every application and at every stage is a subject of great interest towards curtailing global warming.

The stone age did not end for want of stones, nor the horse age for lack of horses. In the decades to come, local as well as global energy mix will gradually decline from coal, oil and gas and advance towards renewables. Though, the share of conventional fuels will continue to dominate for a decade or so, the efforts are also going on to convert them into greener category. For example, options of bio-conversion of highly polluting fuels like coal and crude oil to gas are yielding good results.

Chemistry, Chemical Engineering, Bioengineering and **Biotechnology**, by virtue of diversity of their inherent traits, are particularly well suited to the task of discovering and exploiting the many opportunities available in this array of alternative energy sources. Chemistry and Chemical Engineering are playing a role in development of all types of new energy options – energy supply, energy storage, efficient use of energy and energy efficient production processes. Biotechnology can **help to speed up the selection of varieties that are more suited to biofuel production** – with increased biomass per hectare, increased content of oils (biodiesel crops) or fermentable sugars (ethanol crops), or improved processing characteristics that facilitate their conversion to biofuels.

The first edition of FEST was held in 2022 with an excellent response from 70-plus organizations. The 2nd edition of conference **FEST 2023** is being organised to bring the various stake holders together who are associated with different future energy options. The conference will provide a platform for valuable face time for researchers, energy producers, energy users from across the energy spectrum.

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Topics of the Conference

The following is a broad list of topics, but not limited to, that will be covered in this conference:

- **Bioenergy:** Bio-Ethanol/Biodiesel Production/Bio Conversion of Coal/Lignite and Oil to as/2nd Generation Biofuels/Bio conversion of unrecovered oil reserves to methane gas/Up gradation of Biogas Production Technologies from Municipal Solid Waste/Microbial processes for enhancement of gas in CBM/New technologies and production enhancement of alcohols for energy delivery from different raw materials
- **Waste Utilization:** Waste to Chemicals/Waste to Energy/Waste to Ethanol
- **Fuel cells:** Hydrogen, Methanol, Ethanol and Hydrocarbon
- **Photo-electrochemical water splitting / Photo-catalysts** for solar driven overall water splitting
- **Electrodes and Electrolytes for Hydrogen Production** and Fuel Cells/Electrolyser Improvement for Green Hydrogen/Improved Components of Electrolyser/Closed Loop Chemical Processes for Hydrogen Production/ Hydrogen separation and storage, Efficient Transportation
- **Solar Energy:** Developments in PV cells, efficiency improvement, Materials for PV collectors, new options like floating solar, success stories
- **Wind Energy:** Latest trends and developments, case histories
- **Batteries:** Developments in battery options for energy storage, like Zinc-manganese oxide, Organosilicon electrolyte, Gold nano-wire gel electrolyte, sodium ion, Li-S, Vanadium Redox Flow battery, Recycling of battery materials
- **Energy storage** options/Novel Components of Storage Batteries/**Molten salt energy storage**
- **Net Zero through Carbon capture, utilization and storage (CCUS) Technologies**
- **Sustainability** and Energy/**Alternative energy** efficient chemical processes
- **Material selection and corrosion issues** in energy production and storage
- **Role of IT and digitization** in energy options/Digital intervention, Data Analytics and IIoT
- High impact elements like Graphite, Cobalt, Zirconium, Nickel, Lithium, Antimony, Tellurium etc. in renewable energy business
- **Nano tubes and Nano material applications**
- **Energy Efficiency/Energy Conservation/Energy Audit**
- **Blue Sky Ideas and Research for Sustainable Energy**
- **Case Studies and success stories of renewable energy applications**
- **Latest National Policies on renewable energy**

All other topics related to the application of **Chemistry, Chemical Engineering, Bioengineering** and **Biotechnology** for **Future Energy Options** are also invited.

FEST 2023 will provide an ideal platform for end users, industry, researchers, manufacturers and academic experts to share experiences in managing the challenges that can be handled by chemistry, chemical engineering, biotechnology and allied and connecting sciences and technologies. This two-day event will create immense opportunities for discussing and sharing new experiences in all aspects of Future Energy Options and is designed for industry professionals involved or interested in solutions for various challenges production, storage, cost reduction, strategy formulation and value addition through these sciences and technologies.

Abstract Submission

Scientists, engineers, chemists, bio-engineers, bio-technologist, energy and power professionals and all other relevant technical persons involved in one or other way in uses and application are encouraged for technical presentation during the conference. Abstracts will be evaluated based on relevance, uniqueness/originality, technical content and clarity. Authors are requested to submit abstracts in 300-500 words as per the guidelines through emails: **technical@futureofenergy.in/ conference@futureofenergy.in.**
You may submit your abstract online at:
www.futureofenergy.in/abstract-submission

Abstract Submission Guidelines: Title: **Times New Roman; 14 Font, Bold;** Author: **Times New Roman; 12 Font, Bold**
Affiliations: **Times New Roman; 11 Font, Bold, Italic;** Abstract: **Times New Roman; 12 Font, 300 – 500 words**
Keywords: **Times New Roman; 11 Font, Bold, Italic, 3-4 max. Number of keywords**

Poster Submission:

It will be a special attraction of the event. Upcoming researchers and brilliant minds will be given opportunity for display of their research work for extended duration. The poster session will present an opportunity for authors as well as delegates for deep discussions. Above all, the **best five posters** will be awarded. Authors are requested to mention their preference for the poster paper presentation at the time of abstract submission.

Registration Fee

Indian Delegates / Speakers	Rs. 15,000/- +GST	**Academia & Educational Institutes**	Rs. 10,000/- + GST
Overseas Delegates / Speakers	USD 300	**Student (Indian)**	Rs. 6,000/- +GST

Corporate Discount | **10% discount if 3 or more delegates participate from the same organization.**
Early bird Discount | **10% additional discount if delegates register by 31st May 2023.**

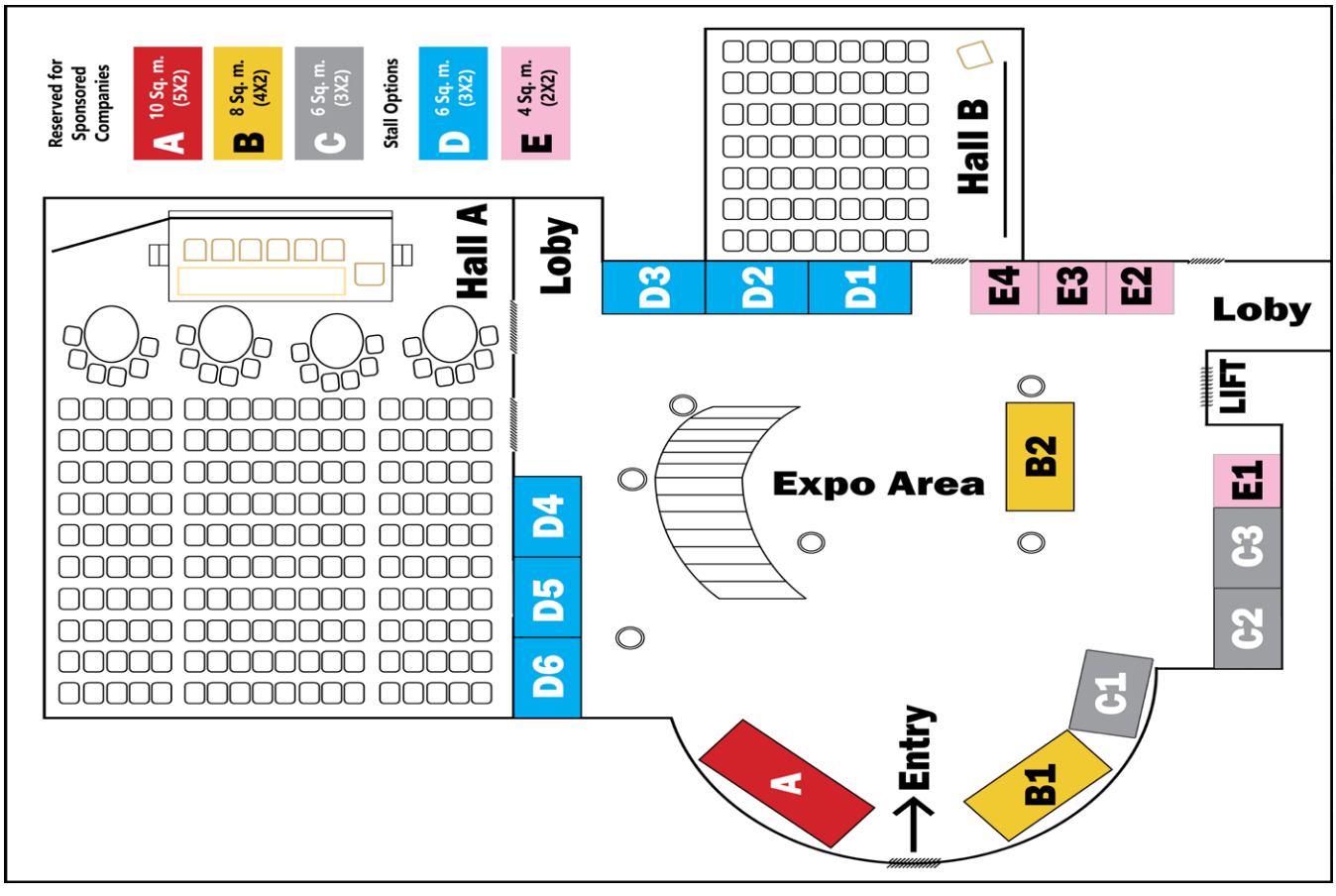
Exhibition

The organizers will provide a well-furnished modern exhibition facility at the venue which can easily be accessed by the participants. This exhibition will be open to all the delegates and invitees from industry, research and academic institutions during the conference. The exhibitors will be entitled for the below facilities:

Stall Options	**6 sq. m (3 x 2)**	**4 sq. m (2x2)**	**Table Top**
Contribution / Benefits at a Glance	Rs. 90,000/- (USD 1800)	Rs. 60,000/- (USD 1200)	Rs. 35,000/- (USD 700)
Complimentary Delegates	3 Nos.	2 Nos.	1 No.
Company Advertisement in Souvenir	1 Page	1 Page	-
Logo in Back Stage Banner	Yes	Yes	Yes
Company logo Display in Website	Yes	Yes	Yes
Memento will be presented	Yes	Yes	Yes

18% GST will be applicable in case of INR Fees.

Floor Plan:



Branding Options & Complimentary Facilities:

Branding Options	Platinum	Gold	Silver
Benefits at a Glance / Contribution	Rs. 3,50,000/- (USD 7000)	Rs. 2,50,000/- (USD 5000)	Rs. 1,50,000/- (USD 3000)
Complimentary Exhibition Stall	10 Sq.m(5 x 2)	8 Sq.m(4 x 2)	6 Sq.m(3 x 2)
Complimentary No. of Delegates	8	6	4
Preferential Stall Location	Yes	Yes	Yes
Sharing of Participant Contacts	Yes	Yes	-
Company Advertisement & Profile in Souvenir	2 Page	2 Page	2 Page
Wide Publicity of Logo & Banner	Yes	Yes	Yes
Memento Presentation	Yes	Yes	Yes
Display of Standee	2 Nos.	1 No.	1 No.
Inclusion of the Company Brochure in the Delegate Kit	Yes	Yes	-
LCD Display with Stand	1 No.	-	-

18% GST will be applicable in case of INR Fees.

Other Branding Options:

Category	Dinner	Lunch	Delegate Kit
Benefits at a Glance / Contribution	Rs. 3,50,000/- (USD 7000)	Rs. 2,00,000/- (USD 4000)	Rs. 1,00,000/- (USD 2000)
Complimentary Exhibition Stall	8 Sq.m(4 x 2)	6 Sq.m(3 x 2)	Note 1
Complimentary No. of Delegates	6	4	3
Sharing of Participant Contact List	Yes	Yes	-
Display of Corporate/product videos/presentation	Yes	Yes	-
Company Advertisement & Profile in Souvenir	2 Page	2 Page	2 Page
Wide Publicity of Logo & Banner	Yes	Yes	Yes
Memento Presentation	Yes	Yes	Yes
Display of Standee	2 Nos.	1 No.	1 No.
Special Acknowledgment & Presence	At Dinner	At Lunch	Logo Printing in Delegate Kit (Bag, Note Pad, Pen)
Inclusion of the Company Brochure in the Delegate Kit	Yes	Yes	Yes
Video Advertisement Display in LCD in Food Court	During Dinner	During Lunch	-

18% GST will be applicable in case of INR Fees.

Note 1: Discounted Price for Stall

Branding Opportunities

Tea/Coffee Partner – Rs. 60,000/- (USD 1200)
Session Partner – Rs. 80,000/- (USD 1600)
Lanyard for Badges – Rs. 50,000/- (USD 1000)
Product Promotion during Tea Breaks – Rs. 20,000/- (USD 400)
Display of Standee – Rs. 20,000/- (USD 400)
Conference Souvenir Partner – Rs. 80,000/- (USD 1600)

Conference Souvenir

Advertisement	Charges
Outside Back Cover Page	Rs. 15,000/- (USD 300)
Inside Front/ Back Cover Page	Rs. 12,000/- (USD 240)
Double Spread Ad (2 page)	Rs. 12,000/- (USD 240)
Full Page (Colour)	Rs. 8,000/- (USD 160)
Half Page (Colour)	Rs. 5,000/- (USD 100)

Fees mentioned in dollar (USD) are applicable for Overseas Companies.
18% GST will be applicable in case of INR Fees.

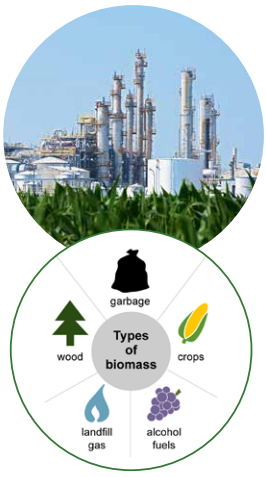
Publication of Peer Reviewed Papers in Journals Supported by **NCBTA**

Paper Publication with: Material Today Proceedings (IF 1.8 Scopus), Materials Science for Energy Technologies (Scopus), Journal of Alloys and Compounds (SCI, IF 6.37)

Payment Details:

In favour of: Institute For Technological Excellence; Bank Name: HDFC Bank (Bhikaji Cama Place)
A/c No. 50200077511725; IFSC Code: HDFC0000678

Benefits of Attending



The conference will:
- Enable surpass conventional wisdom by leveraging new technologies
- Inspire by sharing ideas while connecting people across the industry
- Transform new entrants in the field into valuable researchers and technologists by sharing ideas

The other benefits that will accrue from this conference for the individuals and companies are:
- Enhancement of knowledge through interaction with industry experts
- Understand field experiences through case studies
- Updating with the new ideas, developments and applications
- Extension of learning through invaluable facetime
- Learning about new generation of solutions
- Selection of optimum solutions
- Overview of Ground-Breaking Technologies and Solutions

The conference will also provide a platform for the manufacturers and solution providers to display their innovative products and skills to a large number of participants. The participants will be able to get in front of the market's most sought-after solution providers and market-shaking technologies in energy manufacturing, storage, digitalisation, and more at our Innovation Showcase, to build new partnerships and accelerate your sustainability strategy.

There is a demand for new chemical reaction technologies and associated engineering aspects due to on-going transition in energy and chemistry associated to moving out progressively from the use of fossil fuels. The participants can make the most of this exclusive opportunity to secure face-time with key prospects, build new relationships with industry-leading executives.

About ITEx Institute

The Institute for Technological Excellence (ITEx) is the premier organization for the dissemination of knowledge and innovative ideas relating to industrial technologies. It is run by industry technocrats, volunteers from business and academia who relentlessly provides their support, energy and resources to prosper in today's challenging global marketplace.

Members and stakeholders can discuss the diverse dimensions of technology management, from incremental innovation, integration of design and manufacture to technological innovation and creation of hybrid technologies. It's a platform to explore new-age technologies; focus on operational excellence, continuous improvement/ optimization techniques and think lean. This forum has been created to exchange best practices in the industry and network for career enhancement and improve the competitiveness and overall value of their organizations.

ITEx have conducted many technical forums on Clean Energy, Renewable Energy, Energy Efficiency, Smart Manufacturing Technologies, Global Manufacturing 4.0, Artificial Intelligence & Data Analytics, Industrial Process Optimization, Industrial Sustainability & Safety, Pipeline Technology, Upstream Technology, NXT- Gen Tech Webinar series etc.

Organizer

Institute for Technological Excellence

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E-mail.: technical@futureofenergy.in
conference@futureofenergy.in
Website: www.futureofenergy.in

Terms & Conditions:
- All bookings carry a 20% cancellation charges.
- Substitutions of delegates prior to the event date may be allowed subject to management's discretion.
- For any reason, if Organizers decides to cancel or postpone this event; Organizers will not be responsible for any loss incurred by Client/ Participant.
- The conference fee will not be refunded and shall be adjusted with future event fee.
- Hotel Location of the event may be changed depends on the no of participants without any intimation.
- Content of the event program can be changed without any intimation.