

The Annual  
**Environment**  
& **Energy**  
Conclave



an **International Forum** for **Climate Change**  
mitigation and business response

# Environment and Energy Conclave 2008

22nd and 23rd August 2008, ITC Sonar, Kolkata

For the first time ever, an Energy Conclave was presented by the Bengal Chamber of Commerce and Industry in the Eastern Region. Held over two days (22nd and 23rd August 2008) at the ITC Sonar, Kolkata, the Conclave discussed the avenues of addressing climate change, policy measures, increasing efficiency of energy consumption, financing new projects through the CDM route, benefits of energy management and energy audit in industries, the new options in energy, new technologies in mining, renewables, etc. Senior Government functionaries (Centre and State), well-known industry experts and consultants addressed the event.

Indeed, the event was presented on the scale of a Summit and had participation from leading personalities from Government, Industry, Academia, and NGOs. It was, quite literally, a melting point of thoughts, ideas and experiences.

Yet, it was an event of the industry, for the industry and by the industry. The Conclave enabled each participating organization and delegate with a unique opportunity to network with the thought leaders and other industry leaders in energy, power and environment and brought participants closer to their colleagues in industry, academia and the Government in discussing the implications of climate change and related energy issues for industry.

Shri Anil Razdan, IAS, Secretary to the Government of India, Ministry of Power and Dr. Kirit Parikh, Member, Planning Commission, along with Shri Sunil Mitra, IAS, Additional Chief Secretary, Government of West Bengal, were the Guests of Honour during the Inaugural session. Dr. Parikh, the architect of the Integrated Energy Policy, was honoured by BCCI at the Conclave as the "Energy Thought Leader of the Year" for his pioneering contribution to the field of energy research and energy policy in the country. The theme of the keynote address was, "Climate Change and India's Economic Development - The role of the Integrated Energy Policy". In this session, the two stalwarts of the energy and environment field largely talked about the efficiency issues in the Government departments, the private public partnerships in the area of energy, how the Government could develop the overall situation by welcoming more MNCs in our country. Dr. Parikh, during his address, mostly talked about Climate Change and its impact on environment and our economy at large, what should be the objective of all the Governments to increase social well being, global environmental issues and goal of development conflict, range of commercial energy requirement and domestic production, India's hydro carbon reserves, renewable energy resources and most important the challenges of the 11th Five Year Plan.

Following the inauguration, the session on "Climate Change and Industry - Impact and Measures" was chaired by Shri Malay K De (IAS, Chairman & Managing Director, West Bengal State Electricity Distribution Company). The themes that were covered under this session were, Industrial Operations in the face of Climate Change -

Maximum Impact Areas and Implications; Prevailing Deal Structures in Carbon Finance and Focus Carbon - Financing Industrial Growth (Case Studies). The speakers included Senior Executives from PwC, Ernst & Young, CESC and ITC Limited. The speakers in this session mainly focused on Climate Change, Climate Change Risks, Carbon Footprints, Carbon Markets, Carbon Transactions, Carbon Finance, etc.

The next session focused on "Power - Creating Opportunities for Sustainable Industrial Growth" and themes like Energy Management and Energy Audit in Industry in the Age of Energy Conservation, Energy Efficiency in Transmission and Distribution System, Managing Energy at Integrated Steel Plants, Moving Markets for Energy Efficiency were covered. Mr. S. K. Dasgupta, Vice Chairman-Technical, Development Consultants Private Limited chaired the session. Noted personalities from Bureau of Energy Efficiency, Ministry of Power, Government of India; Senior Executives from WBSEDC, SAIL (DSP) and Thermax were the speakers.

The second day began with a brainstorming session on Energy Options in India - Fossil Fuel and New and Renewable Sources, which was chaired by Prof. Sujay Basu, Former Director, School of Energy Studies, Jadavpur University. Prof. Basu gave an overview on the energy options in India and what could be new technologies in this field. Thereafter, Shri S P Gon Choudhuri, Managing Director, West Bengal Green Energy Development Corporation made a detailed presentation on renewable energy options. The other speakers (all top executives) were from Thermax Limited, Vestas Wind Technology India Pvt. Ltd., Selco International Limited, GP Green Energy Systems Pvt. Ltd. and PTC India Limited. They touched upon areas like Solar Energy - Heating & Cooling, Opportunities in Renewable Energy, Waste to Energy, Biomass Gasification and Project Financing of RE Projects.

Shri P. S. Bhattacharyya, Chairman, Coal India Limited, chaired the following session, "The Coal Story". The session visited different fields related to Coal, e.g., New Coal Technologies, Challenges for Development of Mining in India to cater to Utilities and Large Process Industries, Coal Beneficiation for Clean Technologies and Coal Bed Methane. The speakers present in the session were senior executives from the EMTA Group of Companies, senior academics from Bengal Engineering and Science University, Shibpur and the Advisor-Projects, Ministry of Coal, Government of India.

The concluding session was entitled "Tomorrow's Choice". Mr. Alope Mookherjee, Chairman, Flakt (India) Limited & Immediate Past President, BCCI chaired the session, which focused on the future path that one should follow given that Global Warming was a reality.

The programme was attended by over 200 delegates and the Chamber received compliments from all participants and sponsoring entities on organizing such a relevant programme, which focused on on-the-ground issues for industry.



Left to right: Shri Anil Razdan, Union Power Secretary, Mr. S Radhakrishnan, President, BCCI and Dr. Kirit Parikh, Member, Planning Commission (with the silver salver presented to Dr. Parikh recognizing his pioneering contribution in energy research and energy policy



Mr. Arun K Mukherjee, Co-Chairperson, Energy and Environment Sub-Committee, BCCI



Left to right: Prof. Sujay Basu, Shri S P Gon Choudhuri, MD, WB Green Energy Dev. Corp, Mr. M S Unnikrishnan, MD, Thermax



Shri P S Bhattacharyya, Chairman, Coal India addressing the Conclave. Dr. Kalyan Sen, Professor Emeritus, BESU looks on



A session in progress: Right to left: Shri Subhash Rustagi, EVP, EHS, ITC; Mr. Sudipta Das, Partner, Ernst & Young; Mr. Surojit Bose, Associate Director, PwC, Shri M K De, CMD, WBSERC; Mr. Sanjoy Chakraborty, ED, CESC



Mr. Aloke Mookherjee, Chairman, Flakt and Immediate Past President, BCCI



The Conclave in progress

# Environment and Energy Conclave 2009

**28th & 29th August 2009, ITC Sonar, Kolkata**

The Environment and Energy Conclave, the Bengal Chamber's signature event and the only event of its reach and dimensions in the environment and energy spheres in the Eastern Region, was organized by the Energy and Environment Sub-Committee of the Chamber on 28th and 29th August 2009 at the ITC Sonar, Kolkata. The Conclave was addressed by speakers who were the veritable "who's who" of the environment and energy spheres – from the worlds of policy, fundamental and applied research, technology and business. The theme of the Conclave was, 'Solutions for Building Competitive Advantage'. Shri Shyam Saran, Prime Minister's Special Envoy; Dr. Bikash Sinha, renowned scientist and Former Director, Saha Institute of Nuclear Physics and Variable Energy Cyclotron Centre and Mr. Sanjay Mark Wadvani, Deputy High Commissioner of UK in Kolkata addressed the inaugural session. Dr. R K Pachauri, Chairman, Intergovernmental Panel on Climate Change and Director General, TERI made a video address.

As part of the technical sessions, there was an Industry Academia dialogue, a CEO's Roundtable and a Talk Show on the future energy options and whether these would actually increase competitiveness and reduce Greenhouse Gas emissions. Some of the speakers who addressed the Conclave were, Shri Partha S Bhattacharyya, Chairman, Coal India Limited; Shri M K De, IAS, Chairman & Managing Director, West Bengal State Electricity Distribution Company Ltd and Shri S P Gon Chaudhuri, Managing Director, West Bengal Green Energy Development Corporation Limited.

The CEO's Roundtable featured, Mr. Alope Mookherjea, Chairman, Flakt (India) Limited, Hon. Consul, Sweden, & Past President, BCCI; Mr. Pierre Jonette, CEO, ArcelorMittal Design & Engineering Centre P. Ltd.; Mr. M S Unnikrishnan, Managing Director, Thermax Limited and Mr. Amitabha Mukhopadhyay, President & Chief Financial Officer, Tata AutoComp Systems Limited.

They apart, some of the other speakers included Dr. G D Gautama, IAS, Principal Secretary, Department of Power and Non-Conventional Energy Sources, Government of West Bengal; Dr. N R Banerjea, Chairman, West Bengal Electronics Industry Development Corporation Limited (WEBEL)

and Dr. R R Sonde, Chief Technology Officer and Executive Vice President – Research, Technology & Innovation, Thermax Limited.

There were also speakers from Canada (presenting on fuel cell technology) and Germany (speaking on energy management by radio). There were many other topics and senior speakers from all over India who addressed the Conclave.

The focus of this Conclave was to create a forum for the best minds in environment and energy to meet and brainstorm on issues that were critical for industrial production and sustenance of business and the economy. Through such deliberations the Chamber endeavoured to create awareness on global environmental issues, discuss the importance of energy conservation and increasing process efficiency as well as minimizing the climatic impact of industrial operations while not deviating from the profit motive.

Indeed, the Conclave was a most necessary event for industry, Government and academia in the context of the present realities. The world is in the throes of a recession never before seen since the Great Depression of 1929. To make matters worse, the threat of climate change is very real and its impact would be most severely felt right here in Kolkata, one of the world's most vulnerable regions. In every crisis there lies an opportunity and the present-day environmental threat too is giving rise to technologies, practices and innovations, which, if applied appropriately, can have an immense impact on increasing the competitive advantage of firms. This year, the event was designed such that delegates would have the greatest takeaways in the areas of environmental / energy management, which would also benefit business operations and organizational strategy in the context of environmental threats and compulsions. Simultaneously, the Chamber also discussed Climate Change, which would be the most dominating issue in the immediate future and threaten the very existence of our children and future generations, unless we do something about it now.

The Conclave enabled participants to brainstorm together and learn from thought leaders how to harness the new opportunities, stay away from the

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ecological threats and build capabilities within the organization to create competitive advantages.

The Conclave was attended by delegates from manufacturing entities; power utilities; heavy engineering industries; electronics sector companies; infrastructure and real estate companies; consultants; universities, training institutions and business schools; think tanks; leading NGOs and various Government agencies. There were a number of participants from neighbouring States and also from Bangladesh.



Mr. Anup Singh, President, BCCI (left) with Shri Shyam Saran, Special Envoy of Prime Minister



Mr. Anup Singh sharing an anecdote with Prof. (Dr.) Bikash Sinha renowned physicist and Former Director, Saha Institute of Nuclear Physics and Variable Energy Cyclotron Centre



The Inaugural Session in progress



At the podium during the Inaugural Session: Mr. Sanjay Wadvani, OBE, British Deputy High Commissioner in Eastern Region



The Inaugural Session speakers during the brief Q/A round



Mr. Arun K Mukherjee, Co-Chairperson, Energy and Environment Sub-Committee, BCCI during his Vote of Thanks



Prof. N.R. Banerjea, Chairman, WEBEL conducting a technical session



Mr. Sutanu Ghosh, Managing Director, Ghosh, Bose and Associates and Co-Chairperson, Energy and Environment Sub-Committee, BCCI during his technical presentation



Shri Partha S Bhattacharyya, Chairman, Coal India Limited



L-R: Shri M K De, IAS, Chairman & Managing Director, West Bengal State Electricity Distribution Company Ltd. and Shri S P Gon Chaudhuri, Managing Director, West Bengal Green Energy Development Corporation Limited during the Industry Academia Discussion Forum



Mr. Alope Mookherjea, Chairman, Flakt (India) Limited; Hon. Consul, Sweden, & Past President, The Bengal Chamber of Commerce and Industry addressing the Conclave during the CEO's Roundtable



Mr. Pierre Jonette, CEO, ArcelorMittal Design & Engineering Centre P. Ltd.



Mr. M S Unnikrishnan, Managing Director, Thermax Limited

The Talk Show on Pushing the Frontiers of Energy  
L-R: Dr. R R Sonde, Chief Technology Officer and Executive Vice President – Research, Technology & Innovation, Thermax Limited; Mr. Nazeeb Arif, Vice President, Corporate Communications, ITC Limited and Dr. G D Gautama, IAS, Principal Secretary, Department of Power and Non-Conventional Energy Sources, Government of West Bengal



Mr. Karim Kassam, Director, Business and Corporate Development, Ballard Power Systems, Canada



Dr. Dieter Feldmann, Project Manager Globalization, Europäische Funk-Rundsteuerung GmbH (EFR, Germany)



The audience

# Environment and Energy Conclave 2010

**27th-28th August 2010, ITC Sonar, Kolkata**

The Energy and Environment Committee of the Bengal Chamber held the third edition of the now iconic two-day Environment & Energy Conclave on 27<sup>th</sup> and 28<sup>th</sup> August 2010 at the ITC Sonar, Kolkata. The Conclave is the leading forum for discussing and brainstorming global and local environmental issues like climate change and the response of business, the government and civil society. The Bengal Chamber has been holding this Conclave for quite some time and this is the Chamber's signature event. This year the theme was, "From Copenhagen to Mexico: Business Sustainability in Emerging Scenarios". The objective was to provide an even larger forum than the previous years for visiting the scenarios governing the Indian economy and industry with the Climate negotiations this year in the background.

The Conclave was the regional forum for industry leaders and CEOs to exchange best practices in energy efficiency, environmental management and enhancing funds inflow for Indian businesses through the carbon market route. The Conclave showcased the winning strategies from global and national corporate leaders and how these could be dovetailed into today's manufacturing entities and have a direct impact on enhancing profitability. As a leading Chamber of Commerce, our concern is with respect to the cost of adaptation to Climate Change for the country, which has been estimated at 2.6 per cent of India's GDP. Importantly, the Conclave addressed and tried to solve the specific challenges facing Indian industry in the realm of cutting the emission intensity by 20-25%. This was a huge challenge, especially since our growth momentum could not be compromised with.

The Inaugural Session focused on the overarching implications of the negotiations for India's economy and also included overseas perspectives and addresses on climate change mitigation efforts through a collaborative approach. The National Mission for Enhanced Energy Efficiency, an integral part of the National Action Plan on Climate Change, was also covered. The speakers were Ambassador C Dasgupta, Distinguished Fellow, TERI, Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency, His Excellency Peter Varghese, High Commissioner of Australia in India and Mr. Sanjay Wadvani, Deputy High Commissioner of Britain in

Kolkata. Thereafter, six technical sessions were held. Focus was on climate change and business sustainability, IPR and climate change, alternative energy in the East, international perspectives, Indian power paradox and sustainability in climate change initiatives. The sessions featured two Ashden Award winners, namely, Mr. A Saji Das, Director, BIOTECH Renewable Energy Private Limited and Shri S P Gon Chaudhuri, Managing Director, West Bengal Green Energy Development Corporation. Other speakers on green technology and renewable initiatives included Shri Shailendra Shukla, Director, Chhattisgarh Renewable Energy Development Agency. Mr. Alope Mookherjea, Hon. Consul Sweden & Chairman, Flakt (India) Limited, Mr. Clinton Brown, Consul for Political and Economic Affairs (USA), Mr. Fergus Auld, First Secretary, Climate Change & Energy, British High Commission, DFID, Dr. R R Sonde, CTO and Executive Vice President (Research, Innovation & Technology), Thermax Limited, Dr. P Ram Babu, CEO, General Carbon Advisory Services, Mr. S K Dasgupta, Vice Chairman, Development Consultants Pvt. Ltd., Ms. Preeti Malhotra, Director, Power & Env. Polices, Alstom Projects India Limited and Mr. Kandarp Mehta, Associate General Manager – Office Building Solutions, Schneider Electric India Private Limited were only a few of the eclectic mix of speakers well-known in their respective areas of work, who addressed the Conclave. Some others were Mr. S Saha, Deputy General Manager, The Tata Power Co. Ltd. and Dr. Surya Pandey, International Research Relations Director, Waikato Institute of Technology, New Zealand.

The Conclave concluded with a Valedictory Session, which focused on, "Moving forward after Copenhagen". Three thought leaders from the fields of industry and commerce, governance and science addressed the session, which was moderated by Mr. M S Unnikrishnan, Managing Director, Thermax Limited. Shri P S Bhattacharyya, Chairman, Coal India Limited, Dr. G D Gautama, IAS, Additional Chief Secretary, Government of West Bengal and Padma Bhushan Dr. Bikash Sinha, eminent physicist addressed the Valedictory Session.

The Conclave was attended by over 225 participants representing corporates, the Government, academia and NGOs and was a milestone summit on energy and environment in the country this year.





Mr. Harsh K Jha, Senior Vice President of the Bengal Chamber during his Welcome Address



Ambassador C Dasgupta, Distinguished Fellow, TERI



L-R: Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency; Mr. Arun Kumar Mukherjee, Co-Chairperson, Energy and Environment Committee, The Bengal Chamber; His Excellency Peter Varghese, High Commissioner of Australia in India



Mr. Sanjay Wadvani, Deputy High Commissioner of Britain



Mr. Fergus Auld, First Secretary, Climate Change & Energy, British High Commission, DFID



Mr. P Roy, Director General of the Bengal Chamber presenting a memento to Mr. Bushen Raina, Chairman, JUSCO. In front is Mr. Surojit Bose, Associate Director, PwC



L-R: Mr. Alok Mookherjee, Hon. Consul Sweden & Chairman, Flakt (India) Limited, Mr. Clinton Brown, Consul for Political and Economic Affairs (USA)



Mr. Sutanu Ghosh, Co-Chairperson, Energy and Environment Committee, The Bengal Chamber



L-R: Mr. Ramesh Kumar, Chairman, Beltron Telecom Green Energy Systems Limited; Dr. R R Sonde, Chief Technology Officer and Executive Vice President, Research, Innovation & Technology, Thermax Limited; Shri S P Gon Chaudhuri, Managing Director, West Bengal Green Energy Development Corporation Limited; Shri Shailendra Shukla, Director, Chhattisgarh Renewable Energy Development Agency (CREDA)



L-R: Dr. G D Gautama, IAS, Additional Chief Secretary, Department of Power and Non-Conventional Energy Sources, Government of West Bengal; Mr. M S Unnikrishnan, Managing Director, Thermax Limited; Shri Partha S Bhattacharyya, Chairman, Coal India Ltd.



The audience



Padma Bhushan Dr. Bikash Sinha, Homi Bhabha Professor, DAE, Former Director, Saha Institute of Nuclear Physics & Variable Energy Cyclotron Centre



The Conclave in progress

# EBTC B2B FORUM ENVIRONMENT AND ENERGY CONCLAVE 2011

25TH AUGUST AND 26TH - 27 TH AUGUST 2011

ITC SONAR, KOLKATA



The Energy and Environment Committee of the Bengal Chamber of Commerce and Industry organized the fourth annual Environment and Energy Conclave 2011 on 26th and 27th August 2011 at the ITC Sonar, Kolkata. The Conclave is the largest and most relevant forum to discuss Climate Change mitigation action for businesses and the economy without deviating from the profit motive and in fact, while enhancing profitability. The Conclave has also assumed the profile of an annual international meet, which is increasingly utilized by speakers, delegates and sponsors to exchange, share and learn about best practices in energy and environment management cutting across the boundaries of business domains, academic research and policy framework.

This year's Conclave brought together thought leaders in energy policy, senior officials of the Government, overseas Governments and Embassies, leading academics and CEOs from all over the country with delegates and speakers from India and abroad spanning two continents, North America and Europe.

In 2011, our theme was, "Sustainable Development and Driving Technology Advances in Future Energy". The Conclave promoted innovation and investment opportunities surrounding future energy technology including renewable energy. It also presented a most relevant business platform bringing together project owners and solution

providers with stakeholders from both the public and private sectors. The focus was to present solutions for a modern and sustainable energy system.

This year's event also stood out because of two reasons. The European Business and Technology Centre (EBTC), a premier organization financed by the European Union and coordinated by the European Chamber of Commerce (EUROCHAMBRES) was the Chamber's CleanTech Partner and Frost and Sullivan was the Knowledge Partner. Over 250 delegates from corporates across the country, NGOs and members of the academia attended the two-day Conclave.

EBTC had contacted the Chamber and signed a MoU in February focusing on promoting JVs and partnerships between Indian and European companies on Clean Technology. Since then, for the first time ever in the Eastern Region for EBTC, and through the exclusive efforts of the Bengal Chamber, Hari Machines Limited, an Indian company based in Kolkata and RAFAKO S.A., a Polish company signed a technology partnership in August during the Conclave. The Chamber has received tremendous mileage in the EU for this development. In fact, from 25th August to 27th August, the last two days coinciding with the Conclave, EBTC had brought an European delegation exploring tie-ups in West Bengal on clean technologies. The Bengal Chamber organized the local programme with EBTC

and the delegation was also part of the Conclave. This was a first-of-its-kind B2B meet that was organized on 25th August at the ITC Sonar. The programme was a great success with close to 150 participants.

Frost and Sullivan authored a paper on the Conclave theme, which was a comprehensive document presenting the existing scenario and suggesting solutions that need to be looked at seriously by various Energy, Environment, and Policy planners of the world and India for a sustainable future. It is imperative that these solutions are integrated at the earliest into the future energy plans of countries. Support from the policy makers, the Government, financial bodies, and commitment from the people and the industry is required for their early adoption. The paper was prepared by Mr. Pinaki Bhadury, Vice President – Consulting, Frost and Sullivan who presented his findings during the Inaugural Session. The Conclave was addressed during the Inaugural Session by Shri M K De, IAS, Principal Secretary, Department of Power and Non-Conventional Energy Sources, Government of West Bengal; Dr. Kirit S Parikh, Chairman, Expert Group on Low Carbon Strategy for Inclusive Growth, Planning Commission of India, Chairman, IRADe and Former Member, Planning Commission and an iconic personality in India's economic and energy policy realm and Mr. Poul V Jensen, Director, EBTC.

What has been most important for us is that we have been hosting our Conclave dedicated to the Environment and Green Practices in the world's first CDM-certified hotel, The ITC Sonar, which has been our preferred choice of venue for the four years that we have been holding the Conclave. In fact, ITC has the greenest luxury hotel chain in the world where every hotel is LEED Platinum certified. The ITC Sonar is also the world's first CDM certified hotel. This was, therefore, the most appropriate occasion for the Bengal Chamber to recognize the contribution of ITC Hotels and the leadership role played by ITC and ITC Hotels in contributing to the 'triple bottom line' of economic, social and environmental capital of the country. The Bengal Chamber, which has always recognized the need for balancing industrial growth with ecological stability, was most delighted to present a special commendation to ITC Hotels, which was received by Mr. Rajesh Sen, Regional Sales and Marketing Manager – East, ITC Hotels.

Thereafter, over the two days, the Conclave was broken up into five technical sessions and a Valedictory Session, which were :

- Energy efficiency in power generation: What is happening where?
- Clean Coal Technology – A Must-do for India
- Innovation in research, applications, finance and policies – a coordinated approach towards sustainable development
- Solar: Are we approaching parity with traditional energy sources as technology drives costs down and capacity up?
- Smart grids and super grids; Are they the key to renewables integration?
- Valedictory Session: Energy at razor's edge

The presentations were by senior executives from corporates like CESC, HSBC, BHEL, WBPDC, Hari Machines, Capgemini, KPMG, Alliance for an Energy Efficient Economy and educational institutes like St. Xavier's College. Overseas companies like RAFAKO of Poland and Serra Power Solutions from San Francisco, USA were also represented by their senior-most executives. Some of the eminent speakers during the sessions were,

- Mr. P S Bhattacharyya, Managing Director, Haldia Petrochemicals Limited
- Shri A K Ghoshal, Director, West Bengal Power Development Corporation Limited (WBPDC) Shri P R Mandal, Former Advisor-Projects, Ministry of Coal, Government of India
- Mr. Manish Sharma, Managing Director, Jamshedpur Utilities and Services Company Limited (JUSCO)
- Dr. Indraneel Ghose, Science and Technology Analyst, European Union Delegation to India
- Ms. Malini Thadani, Head, Group Communications, Public Policy and Corporate Sustainability, HSBC India
- Mr. Alope Mookherjea, Chairman, Flakt (India) Limited, Hon. Consul, Sweden and Past President, The Bengal Chamber
- Shri S P Gon Chaudhuri, Advisor, Renewable Energy, Department of Power and Non-Conventional Energy Sources, Government of West Bengal
- Dr. Saroj Mishra, Trade Commissioner (Energy & Environment), Canadian High Commission

- Shri Rajesh Pandey, IAS, Chairman & Managing Director, West Bengal State Electricity Distribution Company Limited (WBSEDCL)
- Mr. Sanjeev Mehra, Executive Vice President, PTC India Limited
- Mr. C N Raghupathi, Vice President & Head – India Unit, Infosys
- Mr. Sanjay Wadvani, OBE, Deputy High Commissioner of Britain, Eastern Region
- Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency
- Mr. Saud Siddique, Joint Managing Director, SREI Infrastructure Finance Limited

The Chamber was privileged to receive sponsorship support from ITC, Tata Steel, CESC, Exide, SKF India, WBSEDCL, Rohit Ferro-Tech, DPSC, Hari Machines and HSBC without which the Conclave could not have been presented with such glitter.

**At the conclusion of the Valedictory Session, the Chamber awarded special certificates of merit to children whose drawings had been shortlisted by the Judges of the first-ever Bengal Chamber Sit 'n' Draw Competition for Schoolchildren (including underprivileged children) held on 5th June 2011 on the occasion of World Environment Day.**



Mr. Sutanu Ghosh, Co-Chairperson, Energy & Environment Committee (left) presenting the special commendation to ITC Hotels, recognizing the contribution of ITC Hotels and the leadership role played by ITC and ITC Hotels in contributing to the 'triple bottom line' of economic, social and environmental capital of the country, to Mr. Rajesh Sen, Regional Sales and Marketing Manager – East, ITC Hotels (middle) and his team member

L-R: Mr. Sandipan Chakravorty, President, The Bengal Chamber; Dr. Kirit S Parikh, Chairman, Expert Group on Low Carbon Strategy for Inclusive Growth, Planning Commission of India and Mr. Arun Kumar Mukherjee, Chairperson, Energy & Environment Committee, The Bengal Chamber



Shri M K De, IAS, Principal Secretary, Department of Power and Non-Conventional Energy Sources, Government of West Bengal



Mr. Poul V Jensen, Director, EBTC



Mr. Pinaki Bhadury, Vice President – Consulting, Frost and Sullivan (left) releasing the White Paper on the Conclave theme with Mr. Sandipan Chakravorty, President of the Chamber



L-R: Shri A K Ghoshal, Director, WBPDC; Mr. P S Bhattacharyya, Managing Director, Haldia Petrochemicals Limited



L-R: Mr. P R Mandal, Former Advisor – Projects, Ministry of Coal; Mr. Marian Molenda, Rafako SA, Poland



L-R: Dr. Saroj Mishra, Trade Commissioner (Energy & Environment), Canadian High Commission; Mr. Anupam Ray, Associate Director, KPMG; Mr. Alok Mookherjee, Hon. Consul (Sweden); Mr. Sanjay Dani, CEO & Founder, Serra Power Solutions, Inc., San Francisco, USA



L-R: Mr. Manish Sharma, Managing Director, JUSCO; Dr. Indraneel Ghose, Science and Technology Analyst, European Union Delegation to India



Ms. Malini Thadani, Head, Group Communications, Public Policy and Corporate Sustainability, HSBC India



Shri S P Gon Chaudhuri, Advisor, Renewable Energy, Department of Power and Non-Conventional Energy Sources, GoWB



L-R: Mr. C N Raghupathi, Vice President & Head – India Unit, Infosys; Shri Rajesh Pandey, IAS, Chairman & Managing Director, WBSSEDCL; Mr. Sanjeev Mehra, Executive Vice President, PTC India Limited; Mr. Rajat Datta, Architect, Energy and Utilities, Capgemini



Mr. Sanjay Wadvani, OBE, Deputy High Commissioner of Britain, Eastern Region



Mr. Saud Siddique, Joint Managing Director, SREI Infrastructure Finance Limited



Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency



Dr. Ajay Mathur while presenting a certificate of merit to a student whose drawing was selected at the Bengal Chamber Sit 'n' Draw Competition on World Environment Day



Mr. Sanjay Wadvani with some students in front of some of the selected drawings, which were displayed at the venue



Some of the selected drawings displayed at the venue



The audience during the Conclave



During the Conclave.



With the students of Towards Life Foundation whose drawings were specially selected. Extreme left is Dr. R P Banerjee, Director & Dean, EILM, Co-Chairperson, Resurgent Bengal Committee, The Bengal Chamber



# The Bengal Chamber 5th Annual Environment and Energy Conclave 2012: The Water Forum – Conserving Energy. Preserving Environment. Towards Tomorrow

31st August – 1st September 2012, ITC Sonar, Kolkata

The Energy and Environment Committee of the Bengal Chamber of Commerce and Industry organized the fifth edition of our annual Environment and Energy Conclave on 31st August and 1st September 2012 at the ITC Sonar, Kolkata. This iconic event is the largest forum for environmental and energy management and Climate Change mitigation in the Eastern Region.

This year's theme was "Water Forum – Conserving Energy. Preserving Environment. Towards Tomorrow." The leading environment and energy consulting firm in the world, Frost and Sullivan, are our Knowledge Partners. The forum also presented a most relevant business platform bringing together project owners and solution providers with stakeholders from both the public and private sectors – end users, researchers, practising engineers, managers, educators, suppliers and contractors.

The Water Forum of the Environment and Energy Conclave 2012 presented a strong educational conference, founded with an emphasis on commercial free discussions on technology. The Forum presented the latest developments and trends in scientific advances and practical applications in this field, cutting across a wide range of industries, technologies and functional areas.

The Inaugural Session was addressed by

- **Shri S Narsing Rao**, IAS, Chairman-cum-Managing Director, Coal India Limited
- **Mr. Pinaki Bhadury**, Vice President - Strategy Consulting (South Asia, Middle East & North Africa), Frost and Sullivan
- **Dr. Sunita Narain**, Director General, Centre for Science and Environment (CSE); Director, Society for Environmental Communications; & Publisher, Down To Earth
- **Mr. Pavan Sukhdev**, Founder-Director of Corporation 2020; Founder-CEO, GIST Advisory; Visiting Fellow, Yale University; and Former Special Advisor and Head of UNEP's Green Economy Initiative
- **Mr. Poul V Jensen**, Director, European Business and Technology Centre (EBTC)

- **Mr. Sanjay Wadvani**, OBE, Deputy High Commissioner of Britain in Kolkata

The Lead Session for Day 1 was on "Water and Sustainable Livelihoods – Leadership case study" which was addressed by **Dr. Ashesh Ambasta**, Vice President and Head – Social Investments, ITC Limited. **Mr. Sutanu Ghosh**, Co-Chairperson Energy and Environment Committee, The Bengal Chamber & Managing Director Ghosh, Bose and Associates Pvt. Ltd. introduced the theme of the Session.

The next Technical Session was on 'Water, Energy, Sustainability'. **Shri Rajesh Pandey**, IAS, Chairman and Managing Director, West Bengal State Electricity Distribution Company Limited chaired the Session. The speakers included **Ms. Shakuntala Ghosh**, Partner & Principal Architect, Ghosh, Bose & Associates Architects; **Dr. Indra N Mitra**, Vice President, World Water Works, USA and **Shri B K Maiti**, Director General - Water Services, Kolkata Municipal Corporation.

**Prof. B K Dutta**, Chairman, West Bengal Pollution Control Board chaired "An integrated approach to water management". The speakers were **Mr. Deb A Mukherjee**, Managing Director, Enfragy Solutions India Private Limited; **Mr. R Rajkumar**, Head –Application Engineering, Water Technologies, Siemens Limited, **Mr. Ashutosh Potdar**, General Manager, Sales and Marketing for Wastewater Solutions Business, A.T.E. Enterprises Private Limited.

The concluding Session of the Day 1 was **Expert-speak: Water in Industries (Focus: Best practices case studies)** chaired by **Mr. Aloke Mookherjea**, Past President, The Bengal Chamber, & Chairman, Flakt (India) Limited. The speakers were **Mr. Aloke Kumar Sarkar**, Chief Operations Manager, Haldia, Exide Industries Limited; **Shri Amarendra Nath Bhattacharjee**, Director, Ballavpur Paper Mfg. Ltd. (A Unit of EMTA Group) with **Shri Manas Bose**, Manager Electrical, Ballavpur Paper Mfg. Ltd. (A Unit of EMTA Group), **Shri Gautam Dhar**, Chief General Manager (Corporate Planning), Coal India Limited and **Mr. Sanjoy Chakraborti**, Executive Director (Generation), CESC Limited.

The Lead Session of Day 2 was, **“The Policy Forum with Industry perspectives: The Water /Energy / Sustainability co-relation: Towards better development and civic governance”**. The Session was mentored by **Shri Sunil Mitra**, Former Revenue and Finance Secretary, Government of India and Former Power Secretary, Government of West Bengal. The Panelists were

- **Shri M K De**, IAS, Principal Secretary, Department of Power and Non-Conventional Energy Sources, Government of West Bengal.
- **Dr. Subrata Gupta**, IAS, Managing Director, Kolkata Metro Rail Corpn. Limited & Managing Director, West Bengal Highway Development Corpn. Ltd.
- **Mr. Deb A Mukherjee**, Managing Director, Enfragy Solutions India Private Limited.

The Technical Sessions of Day 2 were **‘Benchmarks in Water Management’** and **‘Lessons from the ground – and business concepts in treated groundwater’**. The ‘Benchmarks in Water Management’ session was chaired by **Mr. Partha S Bhattacharyya**, Senior Vice President, The Bengal Chamber of Commerce and Industry. **Mr. Manas Kumar Mukherjee**, Regional Manager- Personnel, Liaison & IR with **Mr. Soumen Sengupta**, General

Manager - Personnel, Administration & Orientation, MPS Group of Companies and **Mr. A D Ghosh**; Sr. Deputy General Manager & Cluster Project Manager (Water and Solar - SBG), L&T Construction were the speakers. **Dr. S P Sinha Roy**, President, Centre for Ground Water Studies & Member, State Level Expert Appraisal Committee, West Bengal chaired ‘Lessons from the ground – and business concepts in treated groundwater’. Presentations were made by **Prof. Alpana Hira**, Aqua Welfare Society, Head of Department, Geography, Shibpur Dinobandhu Institution College, Howrah, Life Member, Geographical Society of India with **Mrs. Paromita Guha**, Project Manager, Aqua Welfare Society and **Mr. Rajdeep Hira**.

**The programme was attended by over 250 delegates from corporates, the Government agencies, research scholars, academicians and NGOs.**

**At the conclusion of the Conclave, in keeping with our practice, we presented certificates of merit to children (including underprivileged kids) whose drawings have been selected for special display following the Bengal Chamber Sit n Draw held on the occasion of World Environment Day 2012 in June this year.**



During the Inaugural Session seated on the dais (L-R): Mr. Pinaki Bhadury, Vice President – Strategy Consulting (South Asia, Middle East & North Africa), Frost and Sullivan; Mr. Sanjay Wadvani, OBE, British Deputy High Commissioner, Eastern India; Mr. Poul V Jensen, Director, European Business and Technology Centre (EBTC), Dr. Sunita Narain, Director General, Centre for Science and Environment (CSE) and Mr. Arun Kumar Mukherjee, Chairperson, Energy and Environment Committee, The Bengal Chamber



Mr. P. Roy, Director General, The Bengal Chamber addressing during the Inaugural Session, Seated on the dais (L-R): Shri S Narsing Rao, IAS, Chairman-cum-Managing Director, Coal India Limited; Mr. Partha S Bhattacharyya; Mr. Pavan Sukhdev, Founder-Director of Corporation 2020; Founder-CEO, GIST Advisory, Visiting Fellow, Yale University and Former Special Advisor and Head of UNEP’s Green Economy Initiative and Mr. Sutanu Ghosh, Co-Chairperson, Energy and Environment Committee, The Bengal Chamber

**The Bengal Chamber 5th Annual Environment and Energy Conclave 2012: The Water Forum – Conserving Energy. Preserving Environment. Towards Tomorrow**

**31st August – 1st September 2012,  
ITC Sonar, Kolkata**



Mr. Partha S Bhattacharyya, Senior Vice President, The Bengal Chamber delivering the Welcome Address



Shri S Narsing Rao addressing the audience during the Inaugural Session. Seated on the dais (L-R): Mr. P. Roy, Mr. Partha S Bhattacharyya, Mr. Pavan Sukhdev, Mr. Sutanu Ghosh



Mr. Partha S Bhattacharyya (L) and Mr. Pinaki Bhadury (R) releasing the Environment and Energy Conclave 2012 White Paper focusing on 'Water for the future- Challenges for India and its Industry'



Mr. Pinaki Bhadury addressing the audience. Seated on the dais (L-R): Mr. P. Roy, Mr. Partha S Bhattacharyya, Mr. Pavan Sukhdev, Mr. Sutanu Ghosh



Dr. Sunita Narain addressing the audience. Seated on the dais (L-R): Mr. Pinaki Bhadury, Mr. Sanjay Wadvani, Mr. Poul V Jensen and Mr. Arun Kumar Mukherjee



Mr. Pavan Sukhdev addressing the audience.

**The Bengal Chamber 5th Annual Environment and Energy Conclave 2012: The Water Forum – Conserving Energy. Preserving Environment. Towards Tomorrow**

**31st August – 1st September 2012, ITC Sonar, Kolkata**



Mr. Sanjay Wadvani addressing the audience



Mr. Arun Kumar Mukherjee delivering the Vote of Thanks



Mr. Sutanu Ghosh introducing the Session Theme of the Lead Session of Day 1 (31st August 2012) – Water and Sustainable Livelihoods – Leadership case study, Dr. Ashesh Ambasta, Vice President and Head – Social Investments, ITC Limited seated on the dais



Mr. Sutanu Ghosh presenting a memento to Shri S Narsing Rao



Packed Hall on Day 1 (31st August 2012)



Seated on the dais (L-R): Mr. Sanjoy Chakraborti, Executive Director (Generation), CESC Limited; Mr. Alope Mookherjee, Past President, The Bengal Chamber, & Chairman, Flakt (India) Limited and Shri Gautam Dhar, Chief General Manager (Corporate Planning), Coal India Limited



Dr. Ashesh Ambasta addressing the audience

**The Bengal Chamber 5th Annual Environment and Energy Conclave 2012: The Water Forum – Conserving Energy. Preserving Environment. Towards Tomorrow**

**31st August – 1st September 2012, ITC Sonar, Kolkata**



Seated on the dais (L-R): Shri Rajesh Pandey, IAS, Chairman and Managing Director, West Bengal State Electricity Distribution Company Limited and Ms. Shakuntala Ghosh, Partner & Principal Architect, Ghosh, Bose & Associates Architects



Seated on the dais (L-R): Prof. B K Dutta, Chairman, West Bengal Pollution Control Board and Mr. Deb A Mukherjee, Managing Director, Enfragy Solutions India Private Limited



Seated on the dais (L-R): Shri M K De, IAS, Principal Secretary, Department of Power and Non-Conventional Energy Sources, Government of West Bengal and Shri Sunil Mitra, Former Revenue and Finance Secretary, Government of India and Former Power Secretary, Government of West Bengal



Dr. Subrata Gupta, IAS, Managing Director, Kolkata Metro Rail Corporation Limited, & Managing Director, West Bengal Highway Development Corporation Ltd. addressing the audience



Mr. Arun Kumar Mukherjee (L) and Mr. Sutanu Ghosh (R) presenting a merit certificate to a participant of The Bengal Chamber Sit n Draw held on the occasion of World Environment Day



Mr. Arun Kumar Mukherjee (L) and Mr. Sutanu Ghosh (R) presenting merit certificate to a participant of The Bengal Chamber Sit n Draw held on the occasion of World Environment Day

**The Bengal Chamber 5th Annual Environment and Energy  
Conclave 2012: The Water Forum – Conserving Energy.  
Preserving Environment. Towards Tomorrow**

**31st August – 1st September 2012,  
ITC Sonar, Kolkata**



Mr. R P Banerjee, Chairperson, Education Committee, The Bengal Chamber presenting a merit certificate to a participant of The Bengal Chamber Sit n Draw held on the occasion of World Environment Day



(L-R): Mr. R P Banerjee, Mr. Arun Kumar Mukherjee and Mr. Sutanu Ghosh presenting a merit certificate to a participant of The Bengal Chamber Sit n Draw held on the occasion of World Environment Day



Packed Hall on Day 2 (1st September 2012)



Selected drawings from The Bengal Chamber Sit n Draw held on the occasion of World Environment Day exhibited at the venue

# Energy Sustainability Conclave 2013 (Energy Security – Empowering the Energy Future)

30th - 31st August 2013, ITC Sonar, Kolkata

The Bengal Chamber presented the sixth edition of the annual Environment and Energy Conclave on 30th and 31st August 2013 at the ITC Sonar, Kolkata. Titled, "The Energy Sustainability Conclave 2013", the focus this year was, "Energy Security – Empowering the Energy Future". The Conclave, over the years, has become one of the leading annual platforms in the country for discussing and brainstorming environmental challenges and the response of Business, the Government, the Academia and the Civil Society.

The focus of the Conclave is and has always been Climate Change mitigation and action on the ground in the context of burgeoning needs of incremental energy consumption (albeit efficiently) and the need to adopt sound environmental management practices so as to minimize the environmental footprint, especially in business and industrial operations. A melting pot of experiences and best practices, the Conclave is addressed by thought leaders in energy and environment policy, senior officials of the Government, overseas Governments and Embassies, leading academics and CEOs from all over the country with delegates and speakers from India and abroad. This year apart from CEOs from leading players in energy and senior Government minister and officials, speakers from 4 overseas countries participated.

Worldwide, in the context of a global slowdown and the impasse over Climate negotiations, the need is more than ever to devise strategies, practices and technologies at the micro and macro level, which will help us get over the problem of supply side constraints in energy, the most essential driver of growth. Both conventional and unconventional and renewable sources of energy have their pluses and bottlenecks. In this scenario, to talk about sustainability in the Indian energy sector is to talk about Energy Security of India, an issue of paramount importance for the nation both in the realms of economic and strategic contexts.

Each day presented a different theme and the discussions for the Day focused on the chosen theme for the Day. Day 1 (30th August) had the theme, "Sustainable Energy – An interplay of source

diversification, uninterrupted supply, and low carbon cost effective technology". The Conclave was inaugurated by Shri Manish Gupta, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal following which the audience was captivated with the Inaugural Panel Discussion on "Energy Security: The intersection of demand, energy markets, and supply routes", which was addressed by Dr. Kirit S Parikh, Former Member, Planning Commission and Chairman, Integrated Research and Action for Development (IRADe); Shri Sunil Mitra, Former Revenue and Finance Secretary, Government of India and Former Power Secretary, Government of West Bengal and Mr. Phil Marker, Counselor and Head, Energy, Climate and Growth Unit, British High Commission, New Delhi.

Plenary Session 1 was a first-of-its-kind Business Leaders' Panel Discussion on "Energy as corporate security measure: Experiences and insights". The focus was on the fact that while energy efficiency and cost management continue to be the rallying cry for large companies that have created some sort of energy management strategy, the issue of energy security is becoming a larger factor among companies developing a corporate energy strategy. The discussion was chaired by Mr. Sumit Mazumder, Vice Chairman and Managing Director, TIL Limited and Past President, The Bengal Chamber. The high-powered panel comprised of Ms. Nicola Watkinson, Senior Trade & Investment Commissioner, South Asia, Australian Trade Commission; Mr. Sanjib Bezbaroa, Vice President - Corporate EHS, ITC Limited; Mr. Shishir Joshipura, Managing Director & Country Manager, SKF India Limited and Mr. Sandipan Chakravorty, Managing Director, Tata Steel Processing and Distribution Limited.

The next Plenary Session was an Expert Panel Discussion on "Energy, the Environment and Economic Growth". The cultivation of sustainable markets for energy including renewable energy, energy efficiency and natural gas solutions requires an integrated policy approach that includes incentives, standards, stable investment climates, research and development and public education. It also requires a wholesome approach to renewing

the way we think about energy, from a perspective of economic growth, environmental protection, national security and quality of life. The focus of the panel discussion was to bring to board the interplay of energy elasticity of GDP with economic growth trends, the need for and status of evolving environmental regulations and environmental management norms in industrial projects. This unique session was chaired by Mr. Alope Mookherjea, Chairman, Solyvent Flakt (India) Private Limited & Past President, The Bengal Chamber with the panelists being Dr. Suman K Mukerjee, USAEP Environmental Fellow; & Principal, Dean and Senior Professor, Bhavans Institute of Management Studies and Dr. Ketan Shukla, IFS, Deputy Director General, Mahatma Gandhi Labour Institute; Former Secretary, Gujarat Electricity Regulatory Commission. Dr. Mukerjee spoke from the perspective of an environmental economist, while Dr. Shukla addressed in his capacity as a former bureaucrat in a key office in India's leading State in terms of economic development.

Plenary Session 3 was the bridge between Day 1 and Day 2 (31st August) for which the theme was, "Technology for energy security – Making the conventional out of the unconventional". Since the focus of Day 2 was largely on technology issues, Plenary Session 3 dealt with "Power from conventional and renewable sources in a world still dominated by fossil fuels". It is estimated that USD 30 trillion worth of fossil fuels are still buried in the earth and almost 2800 gigatonnes of carbon locked up in fossil fuels underground. Many are saying we can emit another 565 gigatonnes of CO<sub>2</sub> and still keep the warming to 20 C. In the year 2011-12, approximately 31.6 gigatonnes of CO<sub>2</sub> were emitted worldwide. Atmospheric CO<sub>2</sub> concentration during pre-industrial times was 280 ppm, which has risen to above 400 ppm currently. Almost 26% of this increase is attributed to the energy (generation) sector (with 19.4% from industry and 13.1% from transport). Although electricity generation from hydro plants have exceeded expectations due to improved rains, the social cost and the human displacement and high gestation period of hydel projects are bottlenecks at times. This leaves nuclear and renewables. If the former is always embroiled in controversies on safety and technology, the latter is still governed by relatively higher costs. On the brighter side, India has an installed renewable generation capacity of around 12.5% representing

almost 400% increase in the past 5 years alone. The renewable energy sector is seen as a significant player in grid-connected power generation and investments in renewable energy grew by 25% last year. In this background, Mr. Sutanu Ghosh, Managing Director, Ghosh Bose and Associates Pvt. Ltd. made a presentation on, "Mitigation options in Indian power generation", while Mr. Saunak Saha, Manager – Climate Change and Sustainability Service, Ernst & Young LLP talked about "Renewable energy in India – Options, technology and a cost-benefit analysis". The session was chaired by Prof. B K Dutta, Chairman, West Bengal Pollution Control Board.

The Inaugural Session for Day 2 commenced with an address by Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency, Ministry of Power, Government of India who, in keeping with the theme, spoke about "Energy security through innovative technologies in the context of Indian needs and circumstances".

Dr. Mathur's engrossing theme address was followed by the presentation of the Chamber's first ever Young Energy Researcher Award. This year, the Chamber launched this special initiative, through which we would be acknowledging and facilitating the achievements of a Young Energy Researcher for his or her outstanding work at the grass-roots. In 2013, "The Bengal Chamber Young Energy Researcher Award" went to Shri Senthil A Kumar, an outgoing student in the Master of Public Systems Management programme at the Indian Institute of Social Welfare and Business Management (IISWBM). The award was presented to Shri Senthil Kumar for his outstanding achievements in grass-roots energy technology adaptation. Senthil, during his Summer Project, worked at Tirla Kocha, a remote un-electrified village about 26 km from Ranchi. He went to Ramakrishna Mission, Morabadi and met Swami Shashankananda Maharaj, the sevak Secretary of the Ashram. He was guided to choose his Summer Project topic as he was looking for some application work that would bring direct benefits to its users. The plight of the villagers of Tirla Kocha, particularly the children, moved his heart to find a solution and he could implement it by his own efforts and resources. His friends, faculty and Ramakrishna Mission, Morabadi provided him with moral support and guidance, when necessary. He identified a community centre at Tirla Kocha, estimated the demand, designed a suitable Solar Photovoltaic (SPV) System, purchased



the major components from Kolkata, purchased some components, such as sulfuric acid from the nearest market, took them to the site, fabricated and commissioned the SPV system with lights and fans. The system was working in the community centre (a single room hut) and helped the children with light and little amount of air at night and other times when needed in building their character and capacity through studies, yoga, cultural programmes, etc. The monks of the Mission, Professors from IISWBM who visited the site and faculty examiners who evaluated his Summer Project report were all in praise for this extraordinary work.

On the heels of the presentation ceremony came the Power Sector CEO Panel Discussion on, "Power in India – Growth amidst constraints" chaired by Dr. Mathur. The focus was on cost of energy, reliability of energy supply, carbon emissions, regulatory compliance, energy price volatility, predictability and the coming of age of utilities. The bottom line is, because of their energy density and ease of use, fossil fuels remain the best energy source. As opposed to an installed generating capacity addition of 69231 MW target for the 11th Plan, that for the 12th Plan is 118536.6 MW of which 72,340 MW (61%) would be thermal. It is also estimated that in 2012, 2017 and 2030 thermal electricity generation would have a share of 70%, 69% and 58% respectively. India, as we all know, depends greatly on fossil fuel sources, mostly coal. The problem of efficiency, including that of below-average PLF, is omnipresent. In fact, up to December 2012, the all-India thermal PLF (based on coal / lignite based thermal power stations only) for 2012-13 was 69.63% down from 73.32% achieved in 2011-12. Added to this, the problem of availability of coal, the volatile price and the increased dependence on the import of coal are grim reminders of the fact that electricity in India is anything but sustainable. Both the panelists, namely, Dr. Rajiv Mishra, Executive Director, PTC India Limited and Mr. Siddharth Mehta, CEO, India Power Corporation Limited spoke from their personal experiences and apart from generation, focused on distribution and power trading.

Plenary Session 4 was all about "Experiences in Technology and Energy Efficiency". Chaired by Mr. P S Bhattacharyya, Former Chairman, Coal India Ltd; currently Executive Director Deepak Fertilisers & Petrochemicals Corporation Ltd, Pune, the session

explored best practices in technology development across the world. The speakers were Dr. Ing.Jörg-W. Fromme, Managing Partner, DFIC, Germany (Former Head of International Division WestLB Group; Former Chairman of Board of German Russian Consultant Nishinovgorod; Former Advisor of Jordanian Ministry of Energy and Mineral Resources) who spoke on "Energy efficiency and renewable energy: German experience with increasing competitiveness of industries"; Mr. Alok Goel, Country Manager, India & South Asia Region, Ballard Power Systems, Canada (Techno economic feasibility of hydrogen fuel cells); Shri A K Debnath, Chairman-cum-Managing Director, Central Mine Planning & Design Institute Limited (CMPDI) (Sustainable mining in India); and Mr. Saibal Sen, General Manager and Head of Business Development for India, Steel Plantech India Pvt. Ltd. (Utilization of waste heat recovery in steel industry).

Plenary Session 5 was also the Concluding and the Valedictory Session on "The future of Power in India", which was moderated by Mr. Deb A Mukherjee, Managing Director, Enfragy Solutions India Pvt. Ltd. The Valedictory speaker was Dr. Bikash Sinha, Homi Bhabha Professor, DAE, Former Director, Saha Institute of Nuclear Physics and Variable Energy Cyclotron Centre, Department of Atomic Energy, Government of India. The session discussed the technology, economics and safety aspects of nuclear power with focus on India – from fission to fusion; from reactor to fast breeder technology and the realities and myths of nuclear safety. The session also covered the latest groundbreaking technologies as well as on-the-ground applications, which could be escalated even at the rural level and reduce dependency on conventional fuels. Dr. Sinha spoke from the heart and from his experience as one of the leading physicists in the world. He dispelled the myths surrounding nuclear energy and spoke about the desired fuel mix incorporating renewables and nuclear energy.

The Conclave which was attended by over 250 participants from industries, government agencies, academia, researchers, NGOs and students on each day, concluded with the presentation of special merit certificates to select schoolchildren (including underprivileged children) who had participated in the annual Bengal Chamber Sit n Draw Competition, held on 27th April 2013 on occasion of Earth Day and World Environment Day.



The packed hall on Day 1



Mr. Kallol Datta, President, The Bengal Chamber (R) in conversation with Shri Manish Gupta, Hon'ble Minister-in-Charge, Power and Non-Conventional Energy Sources, Government of West Bengal



Shri Manish Gupta addressing the audience. Seen on the dais (L-R): Mr. Kallol Datta; Shri Sunil Mitra, Former Revenue and Finance Secretary, Government of India and Former Power Secretary, Government of West Bengal; Mr. P Roy, Director General, The Bengal Chamber



The packed hall on Day 1



Mr. Arun Kumar Mukherjee, Chairperson, Energy and Environment Committee, The Bengal Chamber introducing the speakers



During the Inaugural Session on the dais (L-R): Mr. Phil Marker, Counselor and Head, Energy, Climate and Growth Unit, British High Commission, New Delhi; Shri Manish Gupta; Mr. Kallol Datta; Dr. Kirit S Parikh, Former Member, Planning Commission and Chairman, Integrated Research and Action for Development (IRADe); Shri Sunil Mitra and Mr. P Roy



Mr. Alok Mookherjee, Chairman, Solyvent Flakt (India) Private Limited; & Past President, The Bengal Chamber (third from the left) joined the Panel later on



Shri Sunil Mitra addressing the audience. Seated on the dais (L-R): Mr. Arun Kumar Mukherjee, Mr. Phil Marker, Shri Manish Gupta; Mr. Alok Mookherjee; Dr. Kirit S Parikh; Mr. P Roy



The packed hall on Day 1



Dr. Kirit S Parikh addressing the audience



Mr. P Roy delivering the Vote of Thanks



Mr. Arun Kumar Mukherjee (L) presenting a memento to Dr. Kirit S Parikh (R)



Mr. Sumit Mazumder, Vice Chairman and Managing Director, TIL Limited; Past President, The Bengal Chamber commencing Plenary Session 1



Ms. Nicola Watkinson, Senior Trade & Investment Commissioner, South Asia, Australian Trade Commission addressing the audience



Mr. Sandipan Chakravorty addressing



Mr. Sanjib Bezbaroa, Vice President - Corporate EHS, ITC Limited addressing. Seated on the dais (L-R): Mr. Sumit Mazumder; Ms. Nicola Watkinson; Mr. Shishir Josphipura, Managing Director & Country Manager, SKF India Limited and Mr. Sandipan Chakravorty, Managing Director, Tata Steel Processing and Distribution Limited



Dr. Ketan Shukla, IFS, Deputy Director General, Mahatma Gandhi Labour Institute; Former Secretary, Gujarat Electricity Regulatory Commission looking at the drawings by school children drawn at the Bengal Chamber Sit n Draw Competition, organized on the occasion of Earth Day and World Environment Day



Mr. Shishir Josphipura addressing. Seated on the dais (L-R): Mr. Sumit Mazumder; Ms. Nicola Watkinson; Mr. Sanjib Bezbaroa and Mr. Sandipan Chakravorty



Mr. Alope Mookherjea (standing and making a point) during the Interactive Session



Mr. Sumit Mazumder (L) presenting a memento to Mr. Sandipan Chakravorty



(L-R): Mr. Alope Mookherjea; Dr. Ketan Shukla and Dr. Suman K Mukerjee, USAEP Environmental Fellow; & Principal, Dean and Senior Professor, Bhavans Institute of Management Studies during Plenary Session 2



Mr. Sutanu Ghosh, Managing Director, Ghosh Bose and Associates Pvt. Ltd. during Plenary Session 3



(L-R): Prof. B K Dutta, Chairman, West Bengal Pollution Control Board; Mr. Sutanu Ghosh and Mr. Saunak Saha, Manager – Climate Change and Sustainability Service, Ernst & Young LLP



Mr. Arun Kumar Mukherjee (L) presenting a memento to Prof. B K Dutta



Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency, Ministry of Power, Government of India addressing during Inaugural Session of Day 2



Mr. Arun Kumar Mukherjee (L) and Dr. Ajay Mathur (R)



Dr. B K Choudhury, Professor, Energy Management Dept., Indian Institute of Social Welfare and Business Management (L) receiving the award from Dr. Ajay Mathur (R) on behalf of Shri Senthil A Kumar who was conferred "The Bengal Chamber Young Energy Researcher Award" for his outstanding achievements in grass-roots energy technology adaptation



Mr. P S Bhattacharyya, Former Chairman, Coal India Ltd; Currently Executive Director Deepak Fertilisers & Petrochemicals Corporation Ltd, Pune commencing Plenary Session 4



(L-R): Mr. Arun Kumar Mukherjee; Dr. Ajay Mathur; Dr. Rajiv Mishra, Executive Director, PTC India Limited and Mr. Siddharth Mehta, CEO, India Power Corporation Limited



Mr. Siddharth Mehta addressing the Conclave



Mr. Deb A Mukherjee, Managing Director, Enfragy Solutions India Pvt. Ltd. (at the podium) introducing Dr. Bikash Sinha, Homi Bhabha Professor, DAE, Former Director, Saha Institute of Nuclear Physics and Variable Energy Cyclotron Centre, Department of Atomic Energy, Government of India (on the dais) during the Valedictory Session



Dr. Bikash Sinha addressing during the Valedictory Session



(L-R): Mr. P S Bhattacharyya; Dr. IngJörg-W. Fromme, Geschäftsführender Partner (Managing Partner), DFIC, Germany (Former Head of International Division WestLB Group; Former Chairman of Board of German Russian Consultant Nishinovgorod; Former Advisor of Jordanian Ministry of Energy and Mineral Resources); Mr. Alok Goel, Country Manager, India & South Asia Region, Ballard Power Systems, Canada; Shri A K Debnath, Chairman-cum-Managing Director, Central Mine Planning & Design Institute Limited (CMPDI) and Mr. Saibal Sen, General Manager and Head of Business Development for India, Steel Plantech India Pvt. Ltd.



Mr. P S Bhattacharyya (L) presenting a memento to Shri A K Debnath (R)



Mr. Arun Kumar Mukherjee (L) presenting memento to Mr. P S Bhattacharyya (R)



Mrs. Nilanjana Datta presenting special certificates to school children who secured positions of merit in the Bengal Chamber Sit n Draw Competition, organized on the occasion of Earth Day and World Environment Day



Mr. P S Bhattacharyya presenting certificates to school children. Mr. Kallol Datta standing next to him (R)



Mr. Kallol Datta presenting certificates to school children



Mr. Kallol Datta presenting certificates to school children. Mrs. Nilanjana Datta standing next to him (R)



Mr. Arun Kumar Mukherjee presenting certificates



The children posing with dignitaries.



# SEVENTH ANNUAL ENVIRONMENT AND ENERGY CONCLAVE 2014 (THEME: SUSTAINABLE RESOURCE MANAGEMENT)

29TH – 30TH AUGUST 2014, THE ITC SONAR, KOLKATA

The Bengal Chamber of Commerce and Industry organized the seventh annual Environment and Energy Conclave, an international forum for Climate Change mitigation and business response, on 29th and 30th August 2014 at the ITC Sonar, Kolkata. The theme of the Conclave this year was Sustainable Resource Management.

The relevance and importance of the Conclave stems from the fact that the new schemes, policies, practices and opportunities in the mining, energy and power sectors including energy efficiency related measures announced by the Government were discussed by renowned speakers from the Government as well as the Industry. Furthermore, environment management practices, and sustainable resource management being the focus area, the Conclave featured “Master Classes” by some of the iconic personalities in India Inc. and Civil Society.

ERM India was the Knowledge Partner of the Conclave. The Theme Paper: Sustainable Power – Unpacking the Buzz Word was published on occasion of this Conclave.

Shri Manish Gupta, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal was the Chief Guest who addressed the Inaugural Session along with Dr. Arup Roy Choudhury, Chairman & Managing Director, NTPC Limited; Mr. Partha S Bhattacharyya, Former Chairman, Coal India Limited and currently Executive Director, Deepak Fertilisers and Petrochemicals Corporation Limited (DFPCL); Mr. Scott Fursessedonn-Wood; British Deputy High Commissioner in Eastern India; Dr. Prodipto Ghosh, Distinguished Fellow, Earth Science and Climate Change Division & Director, The Energy and Resources Institute (TERI); and Mr. Siddharth Mehta, Chief Executive Officer, India Power Corporation Limited.

The Inaugural Forum during the Inaugural Session focused on India's Energy Future and Carbon Management – Perspectives on Policy and Practices.

The Forum Members included Mr. Richard Rekhy, CEO, KPMG India; Mr. A Krishnakumar, Vice Chairman and Managing Director, Philips India Limited and Mr. Alope Mookherjea, Chairman, Solyvent Flakt (India) Private Limited.

The Conclave Commemorative Session: Master Class on Sustainability: The Indian story of Environment, Development, People and Resources featured Smt Medha Patkar. The other Master Classes included,

- Master Class on Sustainable Mining – What the future holds for India (Technology, R&R Practices, Policy and Legislation) by Mr. Partha S Bhattacharyya, Former Chairman, Coal India Limited and currently Executive Director, Deepak Fertilisers and Petrochemicals Corporation Limited (DFPCL) and Mr. Rana Som, Former Chairman and Managing Director, NMDC Limited;
- The Revival, Regeneration and Conservation Master Class: Focus Water by Dr. Suresh Kumar Rohilla, Programme Director - Water Management, Centre for Science and Environment;
- The Ecological and Economic Interrelationships Master Class: A reality check for Global Warming – Indian Sunderbans Delta: Beyond Vulnerability and a Vision by Dr. A. Anurag Danda, Head-Climate Adaptation & Sundarbans Landscape, WWF-India; and
- Technology Master Class, Energy Technologies for India – Making the Conventional out of the Unconventional by Dr. R R Sonde, Chief Technology Officer and Executive Vice President, Research, Innovation & Technology, Thermax Limited.

The Day 1 concluded with a CEO's Forum – “From strategic environmentalism to environment management as an opportunity – Is India Inc. truly committed to sustainable management?” moderated by Mr. Nazeeb Arif, Vice President – Corporate Communications, ITC Limited. The Forum Members included Mr. Subir Gupta, CEO, ERM India Private Limited; Mr. Sutanu Ghosh, Managing

Director, Ghosh, Bose & Associates Pvt. Ltd. and Mr. Aloke Mookherjea, Chairman, Solyvent Flakt (India) Private Limited.

The Inaugural Session of Day 2 (30th August) was graced by Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency, Ministry of Power, Government of India who addressed on “Moving towards Sustainable Power: Nudging users and suppliers with policies, technologies, and tariffs”.

Mr. Anindo Chatterjee of ERM India made a presentation on the Theme Paper: Sustainable Power – Unpacking the Buzz Word.

The Discussion Forum of Energy Leaders: India’s Shift to a Sustainable Energy Future was part of the Inaugural Session of Day 2 which was chaired by Dr. Ajay Mathur. The Forum Members were Shri Sanjay Seth, Energy Economist, Bureau of Energy Efficiency; Mr. Saurabh Kumar, Managing Director, Energy Efficiency Services Limited; Mr. Joerg Uehlin, Head of Operations, European Business and Technology Centre (EBTC) India; Mr. Lalit Puri, Business Head – Professional Lighting Solutions, Philips India Limited; Mr. Padam Prakash Gupta, Managing Director, Techno Electric and Engineering Company Limited and Shri Narayan Swaroop Nigam, IAS, Chairman and Managing Director, West Bengal State Electricity Distribution Company Limited.

The Conclave also included a special session for the Academia: CleanTech on the Drawing Board – Insight into fundamental research and energy applications. Dr. Sudipta De, Professor, Mechanical Engineering Department, Jadavpur University made a presentation on “Sustainable Power: some facts, some confusion” and Dr. B K Choudhury, Professor, Department of Energy Management, Indian Institute of Social Welfare and Business Management spoke on, “Bio-Energy Use: From Tradition to Transition”.

The Bengal Chamber Special Young Energy Researcher Awards 2014 were presented to Mr. Pratim Raha and Mr. Dipayan Sarkar, both having completed Masters in Public Systems Management with Specialization in Energy Management (2012 - 2014) at IISWBM, for their innovative on-field research in renewable energy applications.

Special Certificates were also presented to the school children who participated in The Bengal Chamber Sit n Draw Competition, held on 26th April 2014 commemorating Earth Day and World Environment Day.

The Conclave was greatly appreciated by the speakers, sponsors and the participants and a detailed paper on suggestions and recommendations would be prepared and submitted to the Government shortly.



Mr. Sutanu Ghosh, Co-Chairperson, Environment and Energy Committee, BCC&I emceeding the Inaugural Session on Day 1



Mr. P Roy, Director General, BCC&I delivering the Welcome Address on Day 1



Mr. Partha S Bhattacharyya, Former Chairman, Coal India Limited and currently Executive Director, Deepak Fertilisers and Petrochemicals Corporation Limited (DFPCL) during the Inaugural Session on Day 1

**SEVENTH ANNUAL ENVIRONMENT AND ENERGY CONCLAVE  
2014 (THEME: SUSTAINABLE RESOURCE MANAGEMENT)**

**29TH – 30TH AUGUST 2014,  
THE ITC SONAR, KOLKATA**



Mr. Scott Fursessedonn-Wood; British Deputy High Commissioner in Eastern India during the Inaugural Session on Day 1



Mr. Richard Rekhy, CEO, KPMG India during the Inaugural Session on Day 1



Mr. Siddharth Mehta, Chief Executive Officer, India Power Corporation Limited during the Inaugural Session on Day 1



Mr. Alope Mookherjea, Chairman, Solyvent Flakt (India) Private Limited and Past President, BCC&I during the Inaugural Session on Day 1



Shri Manish Gupta delivering the Inaugural Address on Day 1



Shri Manish Gupta, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal (L) is greeted by Mr. Kallol Datta, President, BCC&I (M) and Dr. Arup Roy Choudhury, Chairman & Managing Director, NTPC Ltd (R)

**SEVENTH ANNUAL ENVIRONMENT AND ENERGY CONCLAVE  
2014 (THEME: SUSTAINABLE RESOURCE MANAGEMENT)**

**29TH – 30TH AUGUST 2014,  
THE ITC SONAR, KOLKATA**



Mr. Kallol Datta (R) presenting memento to Shri Manish Gupta (M). Dr. Arup Roy Choudhury is standing next to the Minister.



Dr. Prodipto Ghosh, Distinguished Fellow, Earth Science and Climate Change Division & Director, The Energy and Resources Institute (TERI) during the Inaugural Session on Day 1



Shri Manish Gupta addressing media



Smt Medha Patkar during the Conclave Commemorative Session: Master Class on Sustainability: The Indian story of Environment, Development, People and Resources



Mr. Deb A Mukherjee, Key Resource Person, Environment and Energy Committee, BCC&I (R) with Smt Medha Patkar (L)



Mr. Deb A Mukherjee (L) presenting memento to Smt Medha Patkar



Mr. Rana Som, Former Chairman and Managing Director, NMDC Limited during Master Class on Sustainable Mining – What the future holds for India (Technology, R&R Practices, Policy and Legislation)



Mr. Nazeeb Arif, Vice President – Corporate Communications, ITC Limited moderating CEO's Forum – "From strategic environmentalism to environment management as an opportunity – Is India Inc. truly committed to sustainable management?"

**SEVENTH ANNUAL ENVIRONMENT AND ENERGY CONCLAVE  
2014 (THEME: SUSTAINABLE RESOURCE MANAGEMENT)**

**29TH – 30TH AUGUST 2014,  
THE ITC SONAR, KOLKATA**



Dr. A. Anurag Danda, Head-Climata Adaptation & Sundarbans Landscape, WWF-India (L) and Dr. Suresh Kumar Rohilla, Programme Director - Water Management, Centre for Science and Environment (R) during their Master Classes on The Ecological and Economic Interrelationships



Mr. Arun Kumar Mukherjee (L) presenting memento to Mr. Nazeeb Arif (R)



The drawings, made by school children during the Bengal Chamber Sit n Draw 2014, displayed



During the CEO's Forum (from L-R): Mr. Arun Kumar Mukherjee; Mr. Nazeeb Arif; Mr. Alope Mookherjee; Mr. Subir Gupta, CEO, ERM India Private Limited and Mr. Sutanu Ghosh

**SEVENTH ANNUAL ENVIRONMENT AND ENERGY CONCLAVE  
2014 (THEME: SUSTAINABLE RESOURCE MANAGEMENT)**

**29TH – 30TH AUGUST 2014,  
THE ITC SONAR, KOLKATA**



Dr. Alok Roy, Senior Vice President, BCC&I delivering the Welcome Address on Day 2



Dr. Alok Roy (R) presenting memento to Dr. Ajay Mathur (L)



Mr. Anindo Chatterjee of ERM India made a presentation on the Theme Paper: Sustainable Power – Unpacking the Buzz Word during Inaugural Session on Day 2



Shri Narayan Swaroop Nigam, IAS, Chairman and Managing Director, West Bengal State Electricity Distribution Company Limited during the Discussion Forum of Energy Leaders: India's Shift to a Sustainable Energy Future was part of the Inaugural Session of Day 2



Mr. Saurabh Kumar, Managing Director, Energy Efficiency Services Limited during the Discussion Forum of Energy Leaders: India's Shift to a Sustainable Energy Future was part of the Inaugural Session of Day 2



Shri Sanjay Seth, Energy Economist, Bureau of Energy Efficiency during the Discussion Forum of Energy Leaders: India's Shift to a Sustainable Energy Future was part of the Inaugural Session of Day 2



Audience on Day 2



Mr. Lalit Purj, Business Head – Professional Lighting Solutions, Philips India Limited during the Discussion Forum of Energy Leaders: India's Shift to a Sustainable Energy Future was part of the Inaugural Session of Day 2

**SEVENTH ANNUAL ENVIRONMENT AND ENERGY CONCLAVE  
2014 (THEME: SUSTAINABLE RESOURCE MANAGEMENT)**

**29TH – 30TH AUGUST 2014,  
THE ITC SONAR, KOLKATA**



Dr. Ajay Mathur (L) presenting The Bengal Chamber Special Young Energy Researcher Awards 2014



Mr. Padam Prakash Gupta, Managing Director, Techno Electric and Engineering Company Limited during the Discussion Forum of Energy Leaders: India's Shift to a Sustainable Energy Future was part of the Inaugural Session of Day 2 (R). Dr. Ajay Mathur (L)



Dr. R R Sonde, Chief Technology Officer and Executive Vice President, Research, Innovation & Technology, Thermax Limited during Technology Master Class, Energy Technologies for India – Making the Conventional out of the Unconventional



Dr. Sudipta De, Professor, Mechanical Engineering Department, Jadavpur University made a presentation on "Sustainable Power: some facts, some confusion"



Dr. B K Choudhury, Professor, Department of Energy Management, Indian Institute of Social Welfare and Business Management spoke on, "Bio-Energy Use: From Tradition to Transition".



The school children, who participated in the Bengal Chamber Sit n Draw 2014, with Prof. Sujay Basu, Key Resource Person, Environment and Energy Committee, BCC&I



The school children, who participated in the Bengal Chamber Sit n Draw 2014, with the dignitaries

**SEVENTH ANNUAL ENVIRONMENT AND ENERGY CONCLAVE  
2014 (THEME: SUSTAINABLE RESOURCE MANAGEMENT)**

**29TH – 30TH AUGUST 2014,  
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Dr. Arup Roy Choudhury during the Inaugural Session on Day 1



Mr. A Krishnakumar, Vice Chairman and Managing Director, Philips India Limited during the Inaugural Session on Day 1



Mr. Arun Kumar Mukherjee, Chairperson, Environment and Energy Committee, BCC&I delivering the Vote of Thanks during the Inaugural Session on Day 1



Mr. Deb A Mukherjee emceeding Inaugural Session on Day 2



Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency, Ministry of Power, Government of India addressing Inaugural Session on Day 2



# Eighth Annual Environment and Energy Conclave 2015

**28th August 2015, ITC Sonar, Kolkata**

The eighth edition of the annual Environment and Energy Conclave of The Bengal Chamber of Commerce and Industry, held on 28th August 2015 in ITC Sonar, brought together Shri Piyush Goyal, Hon'ble Minister of State with Independent Charge for Power, Coal and New & Renewable Energy, Government of India and Shri Manish Gupta, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal along with the decision makers from Government and Industry in the realm of Power and Energy. It was a Summit conference on Power!

Both Shri Goyal and Shri Gupta were effusive in their praise about The Bengal Chamber and its work in the space of Energy and Environment in the last few years.

The Conclave was graced by Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency; Shri Sutirtha Bhattacharya, Chairman, Coal India Limited; Shri P S Bhattacharyya, Former Chairman, Coal India Limited & Currently Executive Director, Deepak Fertilisers and Petrochemicals Corporation Limited (DFPCL); Mr. Deepak Amitabh, Chairman and Managing Director, PTC India Limited and Mr. Pradeep S Mehta, Secretary General, Consumer Unity and Trust Society (CUTS International) among others.

Dr. Sunita Narain, Director General, Centre for Science and Environment was the Valedictory Speaker.

The other speakers included Shri Niranjana Das, Chief General Manager (Environment), Coal India Limited; Mr. Sanjay Seth, Secretary, Bureau of Energy Efficiency; Mr. Sanjoy Chakraborti, Executive Director, CESC Limited; Mr. Shrirang Karandikar, Chief Executive Officer, India Power Corporation Limited; Mr. S Datta, Principal Consultant - Lighting, Energy Efficiency Services Limited; Prof. Rahul Tongia, Ph.D., Fellow, Brookings India / Brookings Institution; Adj. Professor, Carnegie Mellon

University; Tech. Advisor, Smart Grid Task Force, Govt. of India; Advisor, India Smart Grid Forum; Shri V Subramanian, Former Secretary to the Government of India, Ministry of New and Renewable Energy; Mr. J Mukherjee, Managing Director, GP Green Energy Systems Pvt. Ltd.; Mr. S Kamath, Partner- Infrastructure & Government Services, KPMG India Private Limited and Mr. Jan Grimbrandt, Chairman and CEO, Boson Energy SA (Luxembourg).

This year, the Conclave took inspiration from the Government of India's "Swachh Bharat" (Clean India) mission. The driving objective behind the programme was to bring on board the latest developments in the country both in the policy realm as well as in the investment and operational areas to realise 'Clean and Smart' power for India.

The Conclave was held in the background of energy being one of the drivers of a growing economy like India. It is an essential building block of economic development. The Indian power sector, which is critical for the nation's growth, is still overwhelmingly dependent on fossil fuels. Apart from increasing generation from renewables, ensuring fuel linkages and new technologies / best practices in coal mining, technological upgrades in power generation, transmission and distribution, focusing on smart grids and the likes, the need is to ensure collective R&D effort and collaboration in the direction of having a clean energy path. Investments from G20 nations, setting up a global virtual centre for clean energy research and development and focusing on energy conservation across the board are being prioritized.

CUTS Special Publication, "Mainstreaming Sustainable Development: A Quick Diagnostic of Key Challenges and Opportunities for Water, Energy & Food Security in South Asia" was released in the presence of Shri Piyush Goyal and Shri Manish Gupta and other dignitaries present.



Exhibition of Drawings by children in the Sit and Draw Competition on 25th April in the Chamber.



Dr. Alok Roy, President, The Bengal Chamber welcoming the guests.



Mr. Sutanu Ghosh, Senior Vice President, The Bengal Chamber as the Master of Ceremonies.



Shri Sutirtha Bhattacharya, IAS, Chairman-cum-Managing Director, Coal India Limited addressing.



In conversation (L-R): Shri Manish Gupta, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal; Dr Alok Roy, President, The Bengal Chamber and Shri Piyush Goyal, Hon'ble Minister of State with Independent Charge for Power, Coal and New & Renewable Energy, Government of India.



Shri Manish Gupta, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal during his address.



Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency addressing.



Shri Piyush Goyal, Hon'ble Minister of State with Independent Charge for Power, Coal and New & Renewable Energy, Government of India during his Inaugural Address.



Release of CUTCs Special Publication, "Mainstreaming Sustainable Development: A Quick Diagnostic of Key Challenges and Opportunities for Water, Energy & Food Security in South Asia".



Shri Piyush Goyal, Hon'ble Minister of State with Independent Charge for Power, Coal and New & Renewable Energy, Government of India during his Inaugural Address.



Press Conference in progress.



(L-R) Shri Manish Gupta, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal; Shri Piyush Goyal, Hon'ble Minister of State with Independent Charge and Dr Alok Roy, President, The Bengal Chamber are addressing the Media.



Mr. S Datta, Principal Consultant - Lighting, Energy Efficiency Services Limited.



Shri Niranjan Das, Chief General Manager (Environment), Coal India Limited.



Mr. Shirang Karandikar, Chief Executive Officer, India Power Corporation Limited.



Mr. Arun Kumar Mukherjee, Chairperson Emeritus, Energy and Environment Committee, The Bengal Chamber conducting a Session.



Mr. Sanjay Seth, Secretary, Bureau of Energy Efficiency



Mr. Sanjoy Chakraborti, Executive Director, CESC Limited.



Mr. Arun Kumar Mukherjee, Chairperson Emeritus, Energy and Environment Committee, The Bengal Chamber presenting memento to Shri P S Bhattacharyya, Former Chairman, Coal India Limited & Currently Executive Director, Deepak Fertilisers and Petrochemicals Corporation Limited (DFPCL)



Shri P S Bhattacharyya, Former Chairman, Coal India Limited & Currently Executive Director, Deepak Fertilisers and Petrochemicals Corporation Limited (DFPCL) addressing.



Mr. J Mukherjee, Managing Director, GP Green Energy Systems Pvt. Ltd.



Mr. Soumya Maity, Ms Nabanita Gupta, Ms Priyadarshini Dutta, students of IISWBM received the "BCC&I Special Young Energy Researcher Award (2015) for Innovative Application Research in Renewable Energy at Field".



Mr. Jan Grimbrandt, Chairman and CEO, Boson Energy SA (Luxembourg).



Prof. Rahul Tongia, Ph.D., Fellow, Brookings India / Brookings Institution; Adj. Professor, Carnegie Mellon University; Tech. Advisor, Smart Grid Task Force, Govt. of India; Advisor, India Smart Grid Forum.



Shri V Subramanian, IAS, Former Secretary to the Government of India, Ministry of New and Renewable Energy.



Mr. S Kamath, Partner- Infrastructure & Government Services, KPMG India.



Mr. Deepak Amitabh, Chairman and Managing Director, PTC India Limited



Mr. Pradeep S Mehta, Secretary General, Consumer Unity and Trust Society (CUTS International)



Mr. Deb A Mukherjee, Chairperson, Energy and Environment Committee, The Bengal Chamber conducting a Session.



Dr. Sunita Narain, Director General, Centre for Science and Environment addressing the Valedictory Session.



Children who participated in the Sit and Draw Competition on 25th April in the Chamber with the dignitaries.



Mr. Deb A Mukherjee, Chairperson, Energy and Environment Committee, The Bengal Chamber presenting a memento to Dr. Sunita Narain, Director General, Centre for Science and Environment, the Valedictory Speaker.



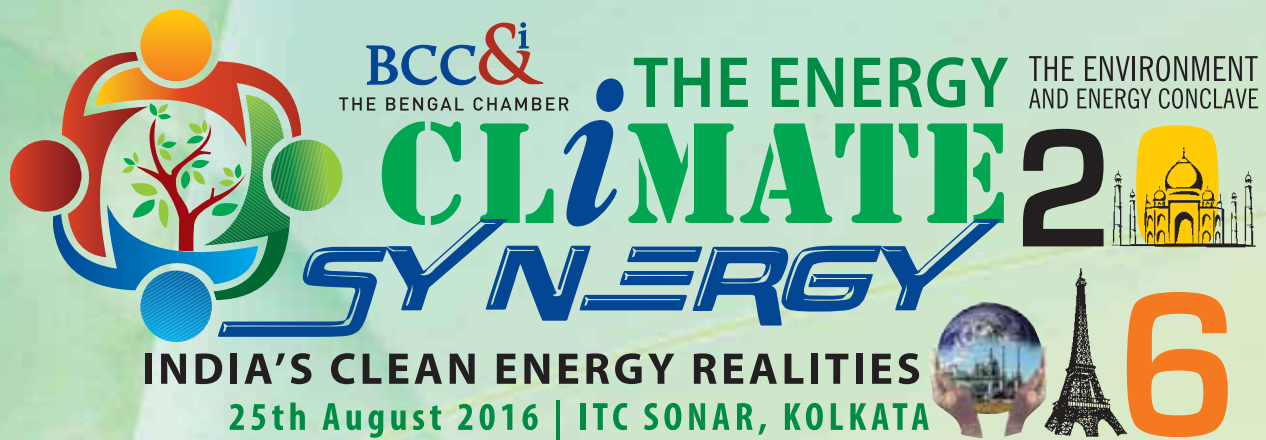
Children who participated in the Sit and Draw Competition on 25th April in the Chamber with the dignitaries.



Children who participated in the Sit and Draw Competition on 25th April in the Chamber with the dignitaries.

# Ninth Annual Environment and Energy Conclave 2016

25th August 2016, ITC Sonar, Kolkata



The Bengal Chamber of Commerce and Industry organized the ninth edition of the Chamber's signature programme, the Environment and Energy Conclave, in association with Coal India Limited, on 25th August 2016 in ITC Sonar, Kolkata. Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal graced the Conclave as the Chief Guest. The Conclave featured signing of Memorandum of Understanding between The Energy and Resources Institute and the Chamber for working together in the realm of Renewables and allied areas. Dr. Ajay Mathur, Director General, The Energy and Resources Institute (TERI) and Mr. Deb A Mukherjee, Chairperson, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry signed the MoU. Mr. Jonathan T. Ward, Principal Commercial Officer, U.S. Consulate General Kolkata made a Special Presentation on 'An Inconvenient Truth'. Dr. Ajay Mathur, set the tone by speaking on, 'Will the Climate Change after Paris? - As assessment of India's energy strategies and INDCs'. Shri Sutirtha Bhattacharya, IAS, Chairman and Managing Director, Coal India Ltd spoke about, 'Coal - India's mainstay - What you did not know about Coal - an efficient clean and low emission pathway'. Shri Anil Razdan, IAS, Former Secretary, Power, Government of India delivered his address on, 'The Balance between Conventional and Renewables for India's Energy Basket - Economic Feasibility'. Shri P S Bhattacharyya, Former Chairman and Managing Director, Coal India Ltd presented the Theme 'The Energy Climate Synergy'. The Inaugural Session also included a Power Panel which had Mr. Deepak

Amitabh, IRS, Chairman and Managing Director, PTC India Limited; Mr. Debasis Gupta, GM (Special Projects), CESC Limited and Mr. Santosh Kamath, Partner- Infrastructure, Government and Healthcare, KPMG Advisory Services Pvt. Ltd. as speakers. The topics were 'Open Access, Electricity Trading and power Markets in India'; 'Power Distribution for the future' and 'Ever evolving and increasingly important energy sector in India' respectively. CUTS International was the Consumer Connect Partner of the Chamber. Mr. Udai S Mehta, Deputy Executive Director, CUTS International presented the Draft Comments on the Conclave theme, which would be finalized after collating the speeches and recommendations of the speakers.

The Sessions on 'Generating cost effective power in the context of progressive technology' and 'How feasible is the Renewables Target of 175 GW by 2022' were joined by Mr. Ashok Kr Goswami, Wholtime Director, India Power Corporation Limited; Dr. R R Sonde, Chief Technology Officer and Executive Vice President, Research, Innovation & Technology, Thermax Limited; Dr. Bikash Sinha, Homi Bhabha Professor, DAE, Former Director, Saha Institute of Nuclear Physics and Variable Energy Cyclotron Centre, Department of Atomic Energy, Government of India; Mr Shirish S Garud, Director, EETD (Energy-Environment Technology Development) Division, The Energy and Resources Institute (TERI) and Mr. Sriram Kuchimanchi, Founder and Principal, Smarter Dharma.

Dr. Kirit S Parikh, Former Member, Planning Commission and Chairman, Integrated Research

and Action for Development (IRADe) was the Valedictory Speaker who addressed on 'Business Opportunities in the era of Energy Climate Synergy'.

The annual Environment and Energy Conclave, an international forum for Climate Change mitigation and business response, is held every August and is the preferred forum for discussing environmental and climate challenges and mitigation actions in sync with India's clean energy-led development pathway.

This year, The Conclave addressed the issue of bringing about a balance in India's energy basket and power infrastructure by focusing on the theme, "Energy Climate Synergy – India's Clean Energy Realities".



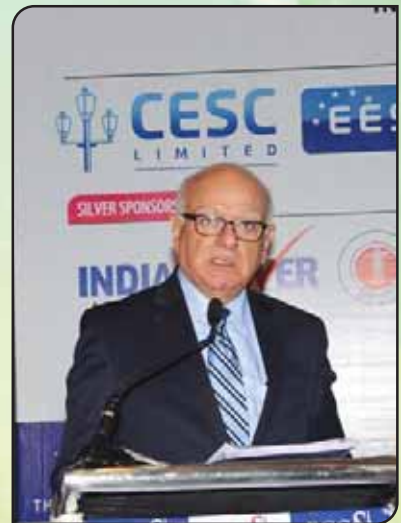
Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal delivering the Inaugural Address



Mr. Jonathan T. Ward, Principal Commercial Officer, U.S. Consulate General Kolkata making a special presentation on "An Inconvenient Truth"



Shri P S Bhattacharyya, Former Chairman and Managing Director, Coal India Ltd Presenting the Conference Theme



Shri Anil Razdan, Former Secretary, Power, Government of India addressing 'The Balance between Conventional and Renewables for India's Energy Basket – Economic Feasibility'



Shri Sutirtha Bhattacharyya, IAS, Chairman and Managing Director, Coal India Ltd speaking on 'Coal – India's mainstay: What you did not know about Coal – an efficient clean and low emission pathway'





Dr. Ajay Mathur, Director General, The Energy and Resources Institute addressing 'Will the Climate Change after Paris? - As assessment of India's energy strategies and INDCs'



Mr. Ambarish Dasgupta, President, The Bengal Chamber of Commerce and Industry delivering the Welcome Address



Mr. Ambarish Dasgupta, President, The Bengal Chamber presenting a Bonsai, as memento, to Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal



Mr. Deb A Mukherjee, Chairperson, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry moderating the Inaugural Session



Mr. Subhodip Ghosh, Director General Designate, The Bengal Chamber of Commerce and Industry commences the Conclave



Release of the Position Paper prepared by CUTS International.



Signing of MoU - The Bengal Chamber & TERI to work together on Renewables and allied areas



Exchange of MoU



Mr. Debasis Gupta, GM (Special Projects), CESC Limited speaking on 'Power Distribution for the future'



Mr. Santosh Kamath, Partner-Infrastructure, Government and Healthcare, KPMG Advisory Services Pvt. Ltd. addressing 'Ever evolving and increasingly important energy sector in India.'



Mr. Deepak Amitabh, IRS, Chairman and Managing Director, PTC India Limited addressing 'Open Access, Electricity Trading and Power Markets in India.'



Valedictory Session: Business Opportunities in the era of Energy Climate Synergy by Dr. Kirit S Parikh, Former Member, Planning Commission and Chairman, Integrated Research and Action for Development (IRADE).



Mr. Uday S Mehta, Deputy Executive Director, CUTS International presenting the Position Paper by the Consumer Connect Partner (CUTS).



(L-R): Mr. Arun Kumar Mukherjee, Chairperson Emeritus, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry; Mr. Ashok Kr Goswami, Wholetime Director, India Power Corporation Limited; Mr Shirish S Garud, Director, EETD (Energy-Environment Technology Development) Division, The Energy and Resources Institute (TERI); Dr. R R Sonde, Chief Technology Officer and Executive Vice President, Research, Innovation & Technology, Thermax Limited; Mr. Sriram Kuchimanchi, Founder and Principal, Smarter Dharma and Dr. Bikash Sinha, Homi Bhabha Professor, DAE, Former Director, Saha Institute of Nuclear Physics and Variable Energy Cyclotron Centre, Department of Atomic Energy, Government of India.



Part of the 350 plus audience.



The Conclave in progress.



During the proceedings.

# THE TENTH EDITION OF THE ANNUAL ENVIRONMENT AND ENERGY CONCLAVE 2017

23RD AND 24TH AUGUST 2017, ITC SONAR, KOLKATA



The Chamber has, over the past decade, been providing a relevant and sustainable forum towards promoting clean technology access and energy and environment management. The annual Environment and Energy Conclave, an international forum for Climate Change mitigation and business response, is held every August and is the preferred forum for discussing environmental and climate challenges and mitigation actions. The Conclave focused on the critical aspect of the changing scenario in energy management. The following four pillars of technology applications in energy, which are pivotal to the concept of convergence, were addressed in depth:

- Changing character of Grid due to renewables integration, distributed generation, and storage.
- Prosumer level convergence.
- Digital infrastructure, IoT and energy management.
- Electric mobility.

This being the tenth year, the Conclave reached a greater dimension showcasing exhibition stalls and B2B Pavilion. UK was the Partner Country having Delegation Members participating in the Conclave. There was participation also from Germany, Italy, Georgia and Luxembourg.

**On 23rd August, the Conclave featured Visionary Addresses by Thought Leaders. This included:**

- Energy transformation on the sustainability landscape by Mr. P S Bhattacharyya, Former Chairman, Coal India Limited
- Global Success Story of Energy Efficiency Made

in India by Mr. Saurabh Kumar, Managing Director, Energy Efficiency Services Limited (EESL)

- Following COP 21: Current Realities from Indian and Global Perspectives by Dr. Ajay Mathur, Director General, The Energy and Resources Institute
- Prospects and Challenges of Renewables in the transformational journey of Sustainable Energy by His Excellency Shri Upendra Tripathy, Director General, The International Solar Alliance (ISA)
- Regulator's Role in transformational face of energy by Shri Gireesh B. Pradhan, Chairperson, Central Electricity Regulatory Commission
- Energy Future : Politics and Policy by Mr. Franzjosef Schafhausen, Member and Chairman of the Trustees of the "Institute of Energy Economics of the University of Cologne – ewi; Managing Director, "E.U.K - Consulting", Neuss; Former Director General, Department of Climate Change Policy, European and International Policy Federal Ministry: Environment, Nature Conservation, Building & Nuclear Safety (BMUB)

**Mr. Sanjib Bezbaroa, Executive Vice President Corporate, EHS, ITC Limited and Mr. Anirban Ghosh, Chief Sustainability Officer, Mahindra Group shared industry perspectives on Energy Security- The ITC Approach and Industry Story on Sustainability, respectively.**

The Forum offered a Special Session on 'Sustainable Energy: A Transformational Journey': Highlights of a joint collaboration between academia and industry by Dr. Mohsen Assadi, Professor, Faculty of Science and Technology, University of Stavanger, Norway and Dr. Sudipta De, Professor, Department

of Mechanical Engineering, Jadavpur University and Key Resource Member, Energy and Environment Committee, The Bengal Chamber.

There was a Presentation by Energy Efficiency Services Limited (EESL) on Investment Opportunities for Overseas Projects and Role of EESL in facilitating the process and exploring partnerships in UK and Europe.

On 24th August, in the Inaugural Session, Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal delivered the Inaugural Address. Mr. Sutanu Ghosh, President, The Bengal Chamber made the Concave Presentation. The other speakers included His Excellency Sir Dominic Asquith KCMG, High Commissioner of the United Kingdom in India on 'UK-India Partnership on Clean Energy'; His Excellency Archil Dzuliashvili, Ambassador of Georgia to the Republic of India, the Kingdom of Thailand, the Federal Democratic Republic of Nepal, the Democratic Socialist Republic of Sri Lanka, and the People's Republic of Bangladesh on 'Emerging Energy Hub: Opportunities for collaborations'; Mr. Franzjosef Schafhausen, Member and Chairman of the Trustees of the "Institute of Energy Economics of the University of Cologne – ewi; Managing Director, "E.U.K - Consulting", Neuss; Former Director General, Department of Climate Change Policy, European and International Policy Federal Ministry: Environment, Nature Conservation, Building & Nuclear Safety (BMUB) on 'Sustainable Energy: Global Perspectives'; His Excellency Shri Upendra Tripathy, Director General, The International Solar Alliance (ISA) on 'Role of International Solar Alliance in Solar Transformation' and Dr. Ajay Mathur, Director General, The Energy and Resources Institute on 'Policy, Business Models, Investments for Energy Transformation'.

The Inaugural Session featured a special event on Signing of the MoU between The Energy and Resources Institute and Cenergist Limited, UK.

Mr. Deb A. Mukherjee, Chairperson, Energy and Environment Committee, The Bengal Chamber moderated the Inaugural Session.

Session 1: 'Changing character of Grid due to

renewables integration, distributed generation and storage' focused on:

- Likely Changes in transmission, scheduling, load dispatch
  - Strengthening of grid to ensure reliability and energy security
  - Scheduling and operating the grid with more renewable power which has very low / insignificant variable cost but may be intermittent in nature
  - Use of high-end technology (smart smarter) to manage grid
  - Microgrids
  - Changing business model with introduction of grid level storages
- Operations of Distribution Business
  - Lesser focus on centralized generation being taken to the point of consumption and increasing focus on small sized distributed generation close to the point of consumption
  - Technology enabled changes beyond the metering point – change in the overall demand pattern
- Demand Response / Virtual Power Plants (VPP) / Low cost Distributed Generation
- Energy efficiency tools – individually or collectively
- Innovations in Storage – Transforming Energy Business

The Power Panel included Mr. Anand Kumar Bansal, CEO, India Uniper Power Services Pvt. Ltd.; Mr. Rajiv Malhotra, ED & CRO, PTC India Ltd.; Mr. Alekhya Datta, Fellow, Electricity and Fuels Division, The Energy and Resources Institute and Dr. Mohsen Assadi, Professor, Faculty of Science and Technology, University of Stavanger. The Panel was chaired by Mr. Aloke Mookherjee, Past President, The Bengal Chamber of Commerce and Industry.

### Session 2 focused on 'Disruptions for innovations in Energy'.

Innovations and disruptions in the energy paradigm which are expected to be the game changer for the future were discussed. Just as the shale gas and oil revolution burst onto the scene in the new millennium reshaping the global energy landscape, distributed generation is approaching critical mass. As more and more industrial, commercial, and even

residential consumers install their own generation—be it roof-mounted solar panels, gas-fired combined heat and power (CHP) plants, or even conventional diesel backup generators—they get the opportunity to sell power into the grid. This has originated the new concept of ‘Prosumers’, an increasingly important actor in India’s urban scene who could help the country reach its ambitious goal of 40 GW of rooftop solar power capacity by 2022. For major cities in developing countries, the prosumer could be an essential ingredient in meeting the growing need for electricity.

Similarly, the disruption in the fuel economy with electric vehicles or the new-age solar roof tiles powering homes and new storage technologies are all transforming energy businesses and indeed the way of life. More than ever, digital technology has increasingly been making its way into the power generation, transmission, and distribution sectors.

The speakers included Mr. Aditya Sharma, Senior Vice President Asia, Boson Energy SA on ‘Distributed Clean Energy Solutions’; Mr. Mitesh Dhanak, Managing Director, Cenergist Limited, UK on ‘Digital Infrastructure, IoT and energy management’; Mr. Debanjan Bandyopadhyay, Partner and Lead – ERM’s operations in Kolkata, ERM on ‘Emerging Sustainability Drivers for the evolving Indian Renewables Industry’ and Mr. Anirban Ghosh, Chief Sustainability Officer, Mahindra Group on ‘Electric mobility’. Mr. S. Radhakrishnan, Past President, The Bengal Chamber chaired the Session.

Presentations were made by UK Delegates on ‘Climate Change--Role of Energy efficiency and Renewable Energy in West Bengal’; ‘Climate Risk Management in Power Sector in India--learnings from international practices’; ‘Technologies in BIPV and floating solar; Opportunities and challenges in the solar sector in India’; ‘UK solar energy perspective and access to green finance’ and ‘Cost effective emission reduction in India’. Ms. Shahida Khan, Deputy Head of Mission, British Deputy High Commission, Kolkata moderated the Session.

Dr. Sunita Narain, Director General, Centre for Science and Environment (CSE), Director, Society for Environmental Communications & Publisher, Down To Earth delivered the Valedictory Address

on “Green Above. Green Below- Synergy in the Approach to Sustainability”. Mr. Arun Kumar Mukherjee, Chairperson Emeritus, Energy and Environment Committee, The Bengal Chamber moderated the Session.



Presentation by Energy Efficiency Services Limited (EESL) on Investment Opportunities for Overseas Projects and Role of EESL in facilitating the process and exploring partnerships in UK and Europe.



During Presentation by Energy Efficiency Services Limited (EESL).



Mr. Deb A. Mukherjee, Chairperson, Energy and Environment Committee, The Bengal Chamber.



Dignitaries on the dais on 23rd August 2017 (L-R): Mr. Anirban Ghosh, Chief Sustainability Officer, Mahindra Group; Mr. Saurabh Kumar, Managing Director, Energy Efficiency Services Limited (EESL); His Excellency Shri Upendra Tripathy, Director General, The International Solar Alliance (ISA); Dr. Ajay Mathur, Director General, The Energy and Resources Institute; Shri Gireesh B. Pradhan, Chairperson, Central Electricity Regulatory Commission; Mr. Franzjosef Schafhausen, Member and Chairman of the Trustees of the "Institute of Energy Economics of the University of Cologne – ewi"; Managing Director, "E.U.K - Consulting", Neuss; Former Director General, Department of Climate Change Policy, European and International Policy Federal Ministry; Environment, Nature Conservation, Building & Nuclear Safety (BMUB); Mr. P. S Bhattacharyya, Former Chairman, Coal India Limited; Mr. Sanjib Bezbaroa, Executive Vice President Corporate, EHS, ITC Limited; Mr. Arun Kumar Mukherjee, Chairperson Emeritus, Energy and Environment Committee, The Bengal Chamber.



Mr. P. S. Bhattacharyya, Former Chairman, Coal India Limited.



Mr. Saurabh Kumar, Managing Director, Energy Efficiency Services Limited (EESL).



Dr. Ajay Mathur, Director General, The Energy and Resources Institute.



His Excellency Shri Upendra Tripathy, Director General, The International Solar Alliance (ISA).



**THE TENTH EDITION OF THE ANNUAL ENVIRONMENT AND ENERGY CONCLAVE 2017**

**23RD AND 24TH AUGUST 2017,  
ITC SONAR, KOLKATA**



Shri Gireesh B. Pradhan, Chairperson, Central Electricity Regulatory Commission.



Mr. Franzjosef Schafhausen, Member and Chairman of the Trustees of the "Institute of Energy Economics of the University of Cologne – ewi; Managing Director, "E.U.K - Consulting", Neuss; Former Director General, Department of Climate Change Policy, European and International Policy Federal Ministry: Environment, Nature Conservation, Building & Nuclear Safety (BMUB).



Dr. Sandip Das, Professor, Department of Mechanical Engineering, Jadavpur University and Key Resource Member, Energy and Environment Committee, The Bengal Chamber.



Mr. Sanjib Bezbaroa, Executive Vice President Corporate, EHS, ITC Limited.



Mr. Arun Kumar Mukherjee, Chairperson Emeritus, Energy and Environment Committee, The Bengal Chamber.



Stall at B2B Pavilion.

**THE TENTH EDITION OF THE ANNUAL ENVIRONMENT AND ENERGY CONCLAVE 2017**

**23RD AND 24TH AUGUST 2017,  
ITC SONAR, KOLKATA**



His Excellency Archil Dzuliashvili, Ambassador of Georgia to the Republic of India, the Kingdom of Thailand, the Federal Democratic Republic of Nepal, the Democratic Socialist Republic of Sri Lanka, and the People's Republic of Bangladesh.



His Excellency Sir Dominic Asquith KCMG, High Commissioner of the United Kingdom in India.



Mr. Sutanu Ghosh, President, The Bengal Chamber.



Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal.



MoU Signing - Mr. Mitesh Dhanak, Managing Director, Cenergist Limited UK (L) and Dr. Ajay Mathur, Director General, The Energy and Resources Institute (R). Standing (L-R): His Excellency Sir Dominic Asquith KCMG, High Commissioner of the United Kingdom in India; Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal and Mr. Deb A. Mukherjee, Chairperson, Energy and Environment Committee, The Bengal Chamber.



Mr. Alope Mookherjee, Past President, The Bengal Chamber of Commerce and Industry.



Dr. Ajay Mathur, Director General, The Energy and Resources Institute visiting stalls.



Dignitaries in the inaugural Session on 24th August 2017 (L-R): Mr. Deb A. Mukherjee, Chairperson, Energy and Environment Committee, The Bengal Chamber; His Excellency Sir Dominic Asquith KCMG, High Commissioner of the United Kingdom in India; Dr. Ajay Mathur, Director General, The Energy and Resources Institute; Mr. Sutanu Ghosh, President, The Bengal Chamber; Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal; His Excellency Shri Upendra Tripathy, Director General, The International Solar Alliance (ISA); His Excellency Archil Dzuliashvili, Ambassador of Georgia to the Republic of India, the Kingdom of Thailand, the Federal Democratic Republic of Nepal, the Democratic Socialist Republic of Sri Lanka, and the People's Republic of Bangladesh; Mr. Arun Kumar Mukherjee, Chairperson Emeritus, Energy and Environment Committee, The Bengal Chamber; Mr. Franzjosef Schafhausen, Member and Chairman of the Trustees of the "Institute of Energy Economics of the University of Cologne – ewi; Managing Director, "E.U.K - Consulting", Neuss; Former Director General, Department of Climate Change Policy, European and International Policy Federal Ministry: Environment, Nature Conservation, Building & Nuclear Safety (BMUB) on 'Sustainable Energy: Global Perspectives.



Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal and His Excellency Sir Dominic Asquith KCMG, High Commissioner of the United Kingdom in India visiting stalls along with Mr. Deb A. Mukherjee, Chairperson, Energy and Environment Committee, The Bengal Chamber.



Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal and His Excellency Sir Dominic Asquith KCMG, High Commissioner of the United Kingdom in India visiting WBSEDCL stall.



Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal, with Mr. S Radhakrishnan, Past President, The Bengal Chamber, visiting an overseas stall.



(L-R): His Excellency Sir Dominic Asquith KCMG, High Commissioner of the United Kingdom in India; Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Power & Non-Conventional Energy Sources, Government of West Bengal; Ms. Haimanti Poddar, Senior Energy Adviser-UKTEP, British Deputy High Commission; Mr. Bruce Bucknell, Deputy High Commissioner, British Deputy High Commission in Kolkata in the Stall of British Deputy High Commission.



(L-R): Dr. Mohsen Assadi, Professor, Faculty of Science and Technology, University of Stavanger; Mr. Alekhya Datta, Fellow, Electricity and Fuels Division, The Energy and Resources Institute; Mr. Alope Mookherjea, Past President, The Bengal Chamber of Commerce and Industry; Mr. Anand Kumar Bansal, CEO, India Uniper Power Services Pvt. Ltd and Mr. Rajiv Malhotra, ED & CRO, PTC India Ltd.



Stalls at B2B Pavilion.



Stalls at B2B Pavilion.



L-R - Mr. Aditya Sharma, Senior Vice President Asia, Boson Energy SA; Mr. Mitesh Dhanak, Managing Director, Cenergist Limited UK; Mr. S. Radhakrishnan, Past President, The Bengal Chamber; Mr. Debanjan Bandyopadhyay, Partner and Lead – ERM's operations in Kolkata, ERM and Mr. Anirban Ghosh, Chief Sustainability Officer, Mahindra Group.



Ms. Shahida Khan, Deputy Head of Mission, British Deputy High Commission, Kolkata moderating the presentations by the UK Delegation.



Dr. Sunita Narain, Director General, Centre for Science and Environment (CSE), Director, Society for Environmental Communications & Publisher, Down To Earth. Seated Mr. Arun Kumar Mukherjee, Chairperson Emeritus, Energy and Environment Committee, The Bengal Chamber.

# 11TH EDITION OF THE BCC&I ENVIRONMENT AND ENERGY CONCLAVE 2018

23rd August 2018, ITC Sonar, Kolkata



The Bengal Chamber of Commerce and Industry organized the 11th edition of Environment and Energy Conclave “Energy Tech – Disruptive Innovations in Energy Transition” on 23rd August 2018, at ITC Sonar, Kolkata.

Each of the previous editions created benchmark of their own culminating into the grand tenth edition themed “The Transforming Face of Energy – A Convergence towards Sustainability”- held on 23rd and 24th August 2017. The Conclave reached a greater dimension showcasing exhibition stalls and B2B Pavilion. UK was the Partner Country having Delegation Members participating in the Conclave. There was participation also from Germany, Italy, Georgia and Luxemburg. The Energy and Resources Institute (TERI) was the Knowledge Partner. International Solar Alliance (ISA) also partnered in the Conclave.

This year, the Conclave was mounted as a relevant and meaningful forum on Technologies, Innovations and aligned activities in the realm of energy transition. The objective was to create a Business and Strategic Discussion Forum.

The Conclave was graced by Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Department of Power & Non-Conventional Energy Sources, Government of West Bengal as the Chief Guest. The Keynote Speaker was Dr. Ajay Mathur, Director General, The Energy and Resources Institute. The Inaugural Session also included “Policies in Energy Efficiency in Energy Transition” by Mr. Abhay

Bakre, Director General, Bureau of Energy Efficiency, Ministry of Power, Government of India; “The Right Balance between Economy and Ecology – Related Technologies” by Shri Sutirtha Bhattacharya, Principal Adviser (Infrastructure), Cabinet Secretariat, Government of West Bengal and Former Chairman, Coal India Ltd.; “Global collaborations - innovations in energy transition” by Ms. Ratika Jain, CEO, Global Innovation and Technology Alliance and “Energy Security Strategy – Focus needed for India” by Shri P S Bhattacharyya, Former Chairman, Coal India Ltd.

The Inaugural Session was followed by the Lead Session on “Efficient Energy for All – Innovative Technologies”. The objective of the Session was to present a holistic perspective of the technologies which are shaping energy transition and alignment of the related areas. The Discussions included “Challenges faced in aligning multiple stake holders in meeting the energy transition” by Dr. R R Sonde, Chief Technology Officer and Executive Vice President, Research, Innovation & Technology, Thermax Limited; “Energy Transition- HR Challenges” by Mr. Gautam Ray, Executive Director, CESC Limited; “City Gas Distribution” by Mr A K Jana, Chief Executive Officer, GAIL Gas Ltd. and “Disruptions in Power for All” by Mr Prashant Chaudhary, President-Strategy and New Business, India Power Corporation Limited.

This Edition of the Conclave had a special feature, “In Conversation” which brought in two speakers who conversed with each other on common or related topics. There were four sets of conversations

between Mr. Neil Spann, Managing Director, Power Roll Limited and Mr. Vinod Sharma, Managing, Director, Deki Electronics Ltd. on “New Technologies in Power Generation and Storage”; Dr. Saptarshi Ghosh, Vice President – Technology (Li-Ion), Exide Industries Limited and Mr. Bhupesh Trivedi, Chief Marketing Officer, Chemtrols, Solar Pvt Ltd. on “Storage for future business” and “Disruptive Innovations making renewables affordable” and Ms. Kritika Krishnamurthy, Advocate & Business Consultant and Ms. Namrata Mukherjee, Head of Public Policy, Sterlite Power Transmission Ltd. on “Emerging Vistas in Regulation and Policy in the realm of energy transition and new technologies”.

Delegates to the recognitions we have extended to the contributions by Academia. This year, as well, we had a Special Session ‘Lab to Market’ to showcase the disruptive technologies produced by the academia. Dr. Sudipta De, Professor, Department of Mechanical Engineering, Jadavpur University and Key Resource Member, Energy and Environment Committee, The Bengal Chamber moderated the Session. Presentations were made by Dr. Ranjan Ganguly, Professor Power Engineering Department, Jadavpur University and Dr. Suman Chakraborty, Professor, Mechanical Engineering Department and Institute Chair Professor, Indian Institute of Technology, Kharagpur.

The Chamber always emphasizes on bridging the gap between the Industry and Academia and our Environment and Energy Conclave has always stood testimony to the same – from participation of

The programme was concluded with “Future of energy driven by technology innovations” by Mr. Anirban Ghosh, Chief Sustainability Officer, Mahindra Group.



Mr. Indrajit Sen, President Designate, The Bengal Chamber of Commerce and Industry delivering the Welcome Address



Mr. Deb A Mukherjee, Vice President and Chairperson, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry moderating the Inaugural Session



Shri P S Bhattacharyya, Former Chairman, Coal India Ltd



Mr. Abhay Bakre, Director General, Bureau of Energy Efficiency, Ministry of Power, Government of India



Dr. Ajay Mathur, Director General, The Energy and Resources Institute delivering the Keynote Address

**11TH EDITION OF THE BCC& ENVIRONMENT AND ENERGY CONCLAVE 2018**

**23rd August 2018, ITC Sonar, Kolkata**



Ms. Ratika Jain, CEO, Global Innovation and Technology Alliance



Shri Sutirtha Bhattacharya, Principal Adviser (Infrastructure), Cabinet Secretariat, Government of West Bengal and Former Chairman, Coal India Ltd



On the dias - (L-R): Shri Sovandeb Chattopadhyay , Hon'ble Minister-in-Charge, Department of Power & Non-Conventional Energy Sources, Government of West Bengal; Mr. Indrajit Sen, President Designate, The Bengal Chamber of Commerce and Industry and Dr. Ajay Mathur, Director General, The Energy and Resources Institute



Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Department of Power & Non-Conventional Energy Sources, Government of West Bengal delivering the Inaugural Address



Dr. R R Sonde, Chief Technology Officer and Executive Vice President, Research, Innovation & Technology, Thermax Limited



Mr. A K Jana, Chief Executive Officer, GAIL Gas Ltd



Shri Sovandeb Chattopadhyay, Hon'ble Minister-in-Charge, Department of Power & Non-Conventional Energy Sources, Government of West Bengal



Mr. Gautam Ray, Executive Director, CESC Limited



Mr. Prashant Chaudhary, President- Strategy and New Business, India Power Corporation Limited



"In conversation", Mr. Neil Spann, Managing Director, Power Roll Limited and Mr. Vinod Sharma, Managing, Director, Deki Electronics Ltd



"In conversation", Dr Saptarshi Ghosh, Vice President – Technology (Lil- lon), Exide Industries Limited and Mr. Bhupesh Trivedi Chief Marketing Officer Chemtrols Solar



"In conversation", Ms. Kritika Krishnamurthy, Advocate & Business Consultant and Ms. Namrata Mukherjee, Head of Public Policy, Sterlite Power Transmission Ltd



Mr. Arun Kumar Mukherjee, Chairperson Emeritus, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry delivering the Vote of Thanks





Special Session on Lab to Market (L-R) : Dr. Ranjan Ganguly, Professor Power Engineering Department, Jadavpur University; Dr. Sudipta De, Professor, Department of Mechanical Engineering, Jadavpur University and Key Resource Member, Energy and Environment Committee, The Bengal Chamber and Dr. Suman Chakraborty, Professor, Mechanical Engineering Department and Institute Chair Professor, Indian Institute of Technology Kharagpur

Mr. Anirban Ghosh, Chief Sustainability Officer, Mahindra Group concluding the Conclave



Section of audience

Section of audience



# 12TH EDITION OF THE BCC&I ENVIRONMENT AND ENERGY CONCLAVE 2019 : "SUSTAINABILITY AND RESOURCES SECURITY"

29th August 2019, ITC Sonar, Kolkata



The Bengal Chamber of Commerce and Industry, in association with H Energy, presented the 12<sup>th</sup> Edition of Environment and Energy Conclave on 29<sup>th</sup> August 2019 in ITC Sonar, Kolkata. The theme, this year, was "Sustainability and Resources Security".

The Conclave brought together State Government, Business Leaders, Overseas Policy Makers and Businesses, Think Tanks together to network and share their knowledge, vision and best practices to enable businesses, government and other stakeholders to achieve sustainable goal with special focus on resources security.

Janab Firhad Hakim, Hon'ble Mayor, Kolkata Municipal Corporation and Hon'ble Minister-in-Charge, Urban Development and Municipal Affairs, Government of West Bengal was the Chief Guest. Dr. Ajay Mathur, Director General, The Energy Resources and Institute (TERI) delivered the Keynote Address. Mr. Patrick Medecin, Ambassador of Monaco to India, who visited the city for the first time travelled from Monaco, to join the Conclave. He shared "Green is the New Glam – Green activities and Sustainable Policies in Monaco - Opportunities for Cooperations and Scope of Implementations".

The Chamber felicitated Mr. Nitin Desai, Chairman, TERI for his Leadership in Sustainability in the global arena. His international contributions towards development and promotion of sustainable development as the goal of policy gained significant prominence, first as Senior Adviser and principal

draftsman for 'Our Common Future', the Report of the Brundtland Commission on Environment and Development and then as Deputy Secretary-General for the Rio Earth Summit, as manager of the Commission on Sustainable Development for its first decade and as the Secretary General for the Johannesburg Summit. He was also known for his organisation of the Copenhagen Summit on Social Development, the Monterrey Summit on Finance for Development and many other global events. He was also instrumental in increasing the involvement of NGOs in the work of the UN. He has been a member of the Commonwealth Secretariat Expert Group on Climate Change and has published several articles and papers on development planning, regional economics, industry, energy and international economic relations. In his career with Government of India Mr Desai worked at senior levels in the Planning Commission where he helped to establish and manage the system for the cost-benefit analysis of public investment projects. He was also the Secretary of the National Commission on the Development of Backward Areas and a Member-Secretary of the Economic Advisory Council to the Prime Minister. He was the Chief Economic Adviser and Secretary in the Department of Economic Affairs in the Ministry of Finance.

Mr. Desai also addressed on "Advocacy for Sustainability".

The Inaugural Session also included Dynamics of Power Trading in context of Sustainability and

Resources Optimization by Mr. Deepak Amitabh, IRS, Chairman and Managing Director PTC India Limited and Making Coal Efficient – Towards Sustainability keeping with the Development and addressing the Power Need by Mr. P S Bhattacharyya, Former Chairman, Coal India Limited and Chairperson, Minerals and Mining Committee, The Bengal Chamber of Commerce and Industry.

The Inaugural Session was followed by Round Table – Sustainability and Business which was joined by Mr. Sanjoy Mukherjee, Vice President – Distribution Technical, CESC Ltd.; Mr. Vinay Bajaj, Chief Strategy Officer, *Exide Leclanche Energy Private Limited*; Mr. Hireen Mehta, General Manager- Marketing, H-Energy and Mr. Anirban Ghosh, Chief Sustainability Officer, Mahindra Group. Mr. P S Bhattacharyya chaired the Discussion.

A special feature of the Conclave was Japan's Blue Sky Initiatives. It is comprised of a list of efforts implemented by Japanese public and private sectors in India to improve air pollution. Mr. Yuki Yoshida, Second Secretary( Environment), Economic Section, Embassy of Japan in India made the introduction. Mr. Yohei Maeno, Nitto Denk and Mr. Hiroyuki Ito, Hitachi Zosen addressed on Dust Suppressant and Waste to Energy. Mr. Masayuki Taga, Consul General of Japan in Kolkata was also present at the Conclave.

The Japanese Group had a Meeting with the Hon'ble Mayor at the sidelines of the Conclave.

The Conclave also included a presentation on Innovative Solutions for Air Quality by Mr. Virendra Patil, Director of Sales-India, Jiangnan Environmental Technology Inc.

Regional Dialogue for World Sustainable Development Summit of TERI on "Water Secure Economies: Perspectives from the Industries" was organized as part of the Conclave in the second half. Dr. Kalyan Rudra, Chairman, West Bengal Pollution Control Board addressed in the Opening Session. The Session was commenced by Dr. Annapurna Vancheswaran, Senior Director, TERI.

The Opening Session was followed by Panel Discussion on Water Secure Economies. The Panelists were Mr. Anshuman, Senior Fellow & Associate Director, TERI; Mr. Surajit Lahiri, MD, Sunanda Environmental International Pvt Ltd. ; Mr. Mark Pattison, Cenergist Ltd. UK; Mr. Giresh Mohan, Regional Manager, Social Investments Programme, ITC Ltd. Mr. Tapas Kumar Ghatak, Geophysicist, IIT Kharagpur, and Geospatial Mapping Expert was the Chairperson.

Dr. Mihir Shah, Former Member Planning Commission, Government of India delivered the Valedictory Address on 'Need for Integrated Policy for Water'. The Session was chaired by Mr. Nitin Desai.

Sunanda Environmental International Pvt. Ltd. also showcased their product of UK technology for ground water testing as Exhibitor. H Energy also put up their stall.



(L-R) Mr. Indrajit Sen, President, The Bengal Chamber of Commerce and Industry delivering the Welcome Address; Mr. Arun K Mukherjee, Chairperson Emeritus, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry; Mr. Gautam Ray, Co-Chairperson, Energy and Environment Committee; Chairperson, Power Think Tank, The Bengal Chamber of Commerce and Industry and Executive Director (HR and Admin), CESC Ltd.; Mr. Deepak Amitabh, IRS, Chairman and Managing Director PTC India Limited; Dr. Ajay Mathur, Director General, The Energy Resources and Institute (TERI); Mr. Patrick Medecin, Ambassador of Monaco to India; Mr. Deb A Mukherjee, Senior Vice President and Chairperson, Energy and Environment Committee; The Bengal Chamber of Commerce and Industry, Mr. Nitin Desai, Chairman, TERI; Mr. Proshanto Banerjee, Senior Advisor- Business Development, H-Energy Group of Companies and Mr. P S Bhattacharyya, Former Chairman, Coal India Limited and Chairperson, Minerals and Mining Committee, The Bengal Chamber of Commerce and Industry

**12TH EDITION OF THE BCC&I ENVIRONMENT AND ENERGY CONCLAVE  
2019 : "SUSTAINABILITY AND RESOURCES SECURITY"**

**29th August 2019,  
ITC Sonar, Kolkata**



Dr. Ajay Mathur, Director General, The Energy Resources and Institute (TERI) released the Overview on Sustainable Action Dialogue, Monaco of World Sustainable Development Summit 2020



Mr. Deepak Amitabh, IRS, Chairman and Managing Director PTC India Limited addressing on Dynamics of Power Trading in context of Sustainability and Resources Optimization



Mr. Patrick Medecin, Ambassador of Monaco to India was sharing the insights of Green Initiatives in Monaco



Mr. Nitin Desai, Chairman, TERI addressing the audience



(L-R) Mr. Nitin Desai, Chairman, TERI, was felicitated on Leadership in Sustainability by Mr. Indrajit Sen, President, The Bengal Chamber of Commerce and Industry



(L-R) Mr. Anirban Ghosh, Chief Sustainability Officer, Mahindra Group; Mr. Vinay Bajaj, Chief Strategy Officer, Exide Leclanche Energy Private Limited; Mr. P S Bhattacharyya, Former Chairman, Coal India Limited and Chairperson, Minerals and Mining Committee, The Bengal Chamber of Commerce and Industry; Mr. Sanjoy Mukherjee, Vice President – Distribution Technical, CESC Ltd and Mr. Hiren Mehta, General Manager- Marketing, H-Energy



(L-R) Mr. Hiroyuki Ito, Hitachi Zosen; Mr Yohei Maeno, Nitto Denk; Mr. Arun K Mukherjee, Chairperson Emeritus, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry and Mr. Yuki Yoshida, Second Secretary( Environment), Economic Section, Embassy of Japan in India



A photograph of the stall of H- Energy



Janab Firhad Hakim, Hon'ble Mayor, Kolkata Municipal Corporation and Hon'ble Minister-in-Charge, Urban Development and Municipal Affairs, Government of West Bengal addressing the audience

**12TH EDITION OF THE BCC&I ENVIRONMENT AND ENERGY CONCLAVE  
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**29th August 2019,  
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Mr. Virendra Patil, Director of Sales-India, Jiangnan Environmental Technology Inc



Janab Firhad Hakim, Hon'ble Mayor, Kolkata Municipal Corporation and Hon'ble Minister-in-Charge, Urban Development and Municipal Affairs, Government of West Bengal visiting the stall of Sunanda Environmental International Pvt. Ltd.



(L-R) Dr. Annapurna Vancheswaran, Senior Director, TERI; Mr. Deb A Mukherjee, Senior Vice President, President and Chairperson, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry; Mr. Arun K Mukherjee, Chairperson Emeritus, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry and Dr. Kalyan Rudra, Chairman, West Bengal Pollution Control Board during the Opening Session of the Regional Dialogue of TERI's WSDS on "Water Secure Economies" which was organized as part of the Conclave



Dr. Kalyan Rudra, Chairman, West Bengal Pollution Control Board addressing the audience



(L-R) Mr. Nitin Desai, Chairman, TERI and Dr. Mihir Shah, Former Member Planning Commission, Government of India addressing on 'Need for Integrated Policy for Water'



(L-R) Mr. Anshuman, Senior Fellow & Associate Director, TERI; Mr. Tapas Kumar Ghatak, Geophysicist, IIT Kharagpur, and Geospatial Mapping Expert; Mr. Gireesh Mohan, Regional Manager, Social Investments Programme, ITC Ltd; Mr. Surajit Lahiri, MD, Sunanda Environmental International Pvt Ltd and Mr. Mark Pattison, Cenergist Ltd. UK in the Panel Discussion on Water Secure Economies



Packed Pala with Distinguished Audience- Mr. Jayanta Chakraborty, Senior General Manager, Indofil Industries Limited; Mr. Satyabrata Mukherjee, Chairperson, Agriculture & Rural Development and CEO, Ambrosia Enterprise Pvt. Ltd; Mr. Subir Chakraborty, Deputy Managing Director, Exide Industries Limited; Mr. Somesh Dasgupta, Group President, India Power Corporation Limited and Chairperson, People Management Committee, The Bengal Chamber of Commerce and Industry; Mr. Abraham Stephanos, Vice President, The Bengal Chamber of Commerce and Industry and Managing Director, Tata Steel Processing and Distribution Limited; Ms. Patricia Hoffman, Consul General, U.S Consulate, Kolkata and Mr. Alok Mookherjee, Former President, The Bengal Chamber of Commerce and Industry are seen in the photograph among others

# 13TH EDITION OF ENVIRONMENT AND ENERGY CONCLAVE ON "INCLUSIVE GROWTH WITH RESOURCE EFFICIENCY"

26th and 27th August 2020, Virtual Platform



The Bengal Chamber of Commerce and Industry is preparing to participate in COP26 of the United Nations Framework Convention on Climate Change (UNFCCC) which will take place in Glasgow, United Kingdom from 1 to 12 November 2021. 13th Edition of Environment and Energy Conclave on "Inclusive Growth with Resource Efficiency" on 26th and 27th August 2020 was presented as precursor to COP26.

**The focus was to make the event a forum for International Policy Advocacy towards Climate Change bringing in inputs from Government, Business, Think Tanks, Academia and also Youths.**

**Shri Sobhandeb Chattopadhyay**, Hon'ble Minister-in-Charge, Department of Power, Government of West Bengal was the Chief Guest.

## ■ Towards Green Recovery and Industry Transition

**Dr. John Murton**, UK Government's COP26 Envoy and **Dr. Ajay Mathur**, Director General, TERI and also a 'Friend of the COP' were present in the Conclave. **Ms. Natalie Toms**, Director-Prosperity Team India British High Commission, New Delhi and **Mr. Mohammad Hossain**, Director General, Power Cell, Power Division, Ministry of Power, Energy & Mineral Resources, Government of Bangladesh also joined them.

**Dr. John Murton** who was the Lead Speaker on 26th August said: "It is great to be virtually in India today with The Bengal Chamber of Commerce and TERI, to talk about how we can build back better

and ensure a clean and resilient recovery. India is making world-beating progress in renewables and Indian businesses and innovators will play a vital role alongside governments in ensuring a successful COP26 in Glasgow."

5 Key campaigns that they are now focusing on for COP 26 summit are:

- Campaign on "Transition to clean Energy": India already leading. Has a commitment to reach 1 lakh MW from solar power by end of 2020.
- Campaign on "Transition to Clean Transport": India has huge opportunities in this sector.
- Campaign on "Nature based solutions": To demonstrate how the mangrove forest of Sundarbans also acts as a carbon sink and helps the State of West Bengal become low carbon resilient.
- Work on adaptation and resilience policies: This can have excellently good effects on Bangladesh and other low lying areas.
- Work on finance: All Financial institutions, the Finance Ministry, the Finance departments of all organizations should consider Climate Change and other sustainable factors before making any financial sanctions, so that there are no negative impacts on environment.

**Dr. Ajay Mathur**, the Keynote Speaker, said "It is important to link actions to be taken now with



India's goals till COP26 and India's commitments of the Nationally Determined Contributions (NDCs) till the 2030." He mentioned need for electrification in areas possible, for example; transport, particularly public transport and low temperature industries. Electrification in transport is slow but growing. We now need to focus on infrastructure and technology improvement, such as creating and maintaining charging stations. We also need to focus on related policy issues. A common issue that persists is that several people still say that they would purchase electric two wheelers if there were enough charging stations. The good part is in Kolkata electric buses are growing. This indicates we are on the right track.

The Conclave featured **India Inc. Round Table towards Green Recovery** bringing together Business Leaders from Private Sector and PSUs with COP26 Leadership to discuss policy interventions and business models to create roadmap for green recovery. The Session included:

- **Mr. Nigel Topping**, UK Government's High Level Climate Action Champion, COP26
- **Mr. Stefan Louis**, CEO, Exide Leclanche Energy Pvt Ltd.
- **Mr. Subhasendu Chatterjee**, Whole Time Director Haldia Petrochemicals Limited
- **Mr. Raghav Raj Kanoria**, Managing Director, India Power Corporation Limited
- **Ms. Anna French**, Deputy Head of DFID India, and Head of the Urban, Energy and Green Growth Team
- **Dr. P K Mukhopadhyay**, Member Secretary, Damodar Valley Corporation
- **Mr. Deepak Amitabh**, IRS, Chairman and Managing Director, PTC India Limited
- **Mr. Rahul Tabhane**, Country Head, India, UK Export Finance

**Mr. Deb A Mukherjee**, President Designate, The Bengal Chamber of Commerce and Industry moderated the Sessions as mentioned above.

The Conclave opened with addresses by **Shri Rajnath Ram**, Adviser (Energy), NITI Aayog, Government of India on 'Energy Data Management for Inclusive Growth'; **Mr. Mohit Bhargava**, Head of Renewable Energy Division & CEO, NVVN, NTPC Limited on 'Social and Environmental Growth as core Business Strategy' and **Mr. Ghanshyam Prasad**, Joint Secretary, Ministry of Power, Government of

India welcomed and chaired by **Mr. Gautam Ray**, Chairperson, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry.

#### ■ **Kolkata Virtual Sustainable Action Dialogue of WSDS 2021 -Driving Post COVID Economic Growth through Resource Efficiency**

The Conclave also featured **The Kolkata Virtual Sustainable Action Dialogue of TERI's The World Sustainable Development Summit** chaired by **Mr. Ajay Shankar**, Distinguished Fellow, The Energy and Resources Institute. **Dr. Annapurna Vancheswaran**, Senior Director-Communication Outreach and Advocacy Unit, The Energy and Resources Institute introduced WSDS addressing the theme, 'Redefining our Common Future: Safe and Secure Environment for All' is slated for February 10-12, 2021, in New Delhi to be held as a hybrid event-with partial onsite and online discussions.

The Theme of the **Virtual Sustainable Action Dialogue was Driving Post COVID Economic Growth through Resource Efficiency. The speakers included**

- **Mr. Souvik Bhattacharjya**, Associate Director, Integrated Policy Analysis Division, The Energy and Resources Institute
- **Prof. Dr. Sadhan Kumar Ghosh**, Professor, Mechanical Engineering & Chief Coordinator, Centre for Sustainable Development and Resource Efficiency Management, Jadavpur University
- **Dr. Divya Tiwari**, CEO, Saahas
- **Dr. Rachna Arora**, Deputy Team Leader (EU-REI Project), GIZ
- **Scientia Professor Veena Sahajwalla** FAA FTSE HonFIEAustCPEng, ARC LAUREATE FELLOW, Director, ARC Green Manufacturing Research Hub, Director, NSW Circular, Director, Centre for Sustainable Materials Research & Technology, Faculty of Science, University of New South Wales (UNSW)

**Dr. Ajay Mathur** and **Mr. Deb A Mukherjee** concluded the Session.

#### ■ **Round Table Discussions on Sustainable Energy Security for the Sub Continent**

A special focus was made on the energy landscape of the Indian Subcontinent with speakers from:

- **Bangladesh**
- **Nepal**
- **Bhutan**

**Mr. Kulman Ghising**, Managing Director, Nepal Electricity Authority; **Mr. Shafique Uddin**, Managing Director, West Zone Power Company, Bangladesh Power Development Board and **Mr. Sonam Tobjey**, Chief Executive Officer, Bhutan Power Corporation Limited were speakers with **Mr. Arun M Mukherjee**, Mentor, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry and the Session Chairperson.

#### ■ **Setting the Agenda**

**Shri Sobhandeb Chattopadhyay**, addressed on 27th August, He was joined by **Ms. Libby Green**, Head of Prosperity (Climate, Energy, Urban, Ease of Doing Business, Financial Services), British High Commission New Delhi; **Mr. Deb A Mukherjee** and **Mr. Gautam Ray**.

- **Climate Resilient Strategies for Vulnerable Sunderbans**

**This Session was chaired by Mr. Aloke Mookherjea**, Past President, The Bengal Chamber and Commerce and Industry. The Speakers were:

- **Mr. Jayanta Chakraborty**, Senior General Manager, Indofil Industries Limited and Co-Chairperson, Agriculture & Rural Development Committee, The Bengal Chamber of Commerce and Industry
- **Dr. Debalina Sengupta**, Associate Director, TEES Gas and Fuels Research Center; WEF Nexus Coordinator, Texas A&M Energy Institute
- **Professor Andy Large**, Director, UKRI GCRF Living Deltas Research Hub, School of Geography, Politics and Sociology, Newcastle University
- **Dr. A. Anurag Danda**, Senior Visiting Fellow, Observer Research Foundation
- **Mr. Alexei Levene**, Co-Founder, Desolenator

#### ■ **E-Mobility Forum**

It is one of the four key focus areas of COP26—Clean Growth. Electric mobility will be a key thematic area on which countries, cities and businesses will showcase their ambition at COP26.

Kolkata has been the first city to feature in the report of International Energy Agency (IEA), Paris-based autonomous intergovernmental organization established in the framework of the Organisation for Economic Co-operation and Development in 1974 in the wake of the 1973 oil crisis, on success of e-buses.

**Mr. Vedantha Kumar**, Head of Transport and Industry, International Climate Strategy (COP26) was the Lead Speaker. **Mr. Anirban Ghosh**, Chief Sustainability Officer, Mahindra Group chaired the Session.

**Shri Debashis Sen**, Chairman, Housing Infrastructure Development Corporation Limited and Additional Chief Secretary, Government of West Bengal and **Shri Prabhat Kumar Mishra**, IAS, Principal Secretary, Department of Transport, Government of West Bengal graced the Session showcasing the E-mobility Initiatives in Rajarhat New Town Area and the Success Story of e-buses in Kolkata.

The other speakers were :

- **Mr. S. Gopal**, Managing Director, Energy Efficiency Services Limited
- **Dr. Prabodh Bajpai**, Associate Professor, Electrical Engineering, Energy Science and Engineering, Indian Institute of Technology Kharagpur
- **Mr. Udai S Mehta**, Deputy Executive Director, CUTS International, Jaipur
- **Mr. Hemang Shah**, India Head, EO Charging India
- **Ms. Haimanti Poddar**, Senior Energy, Climate Change & Urban Adviser, Prosperity Team--UK Trade, Economics and Prosperity, British Deputy High Commission, Kolkata

**PHEV integration in Smart Grid, Electric Vehicle Policy-making in India: Comparative assessment of existing EV policies in Indian States and Union Territories, Opportunities in faster creation of**

**charging infrastructure in cities, Making E-Mobility Convenient** and **UK-India Knowledge Exchange Programme on electric mobility** were discussed.

■ **Youth Forum: #GREEN**

This Session brought together youths from different countries with their perspectives on 'Sustainability'.

**The Session was presented as part of UN75 Dialogues.**

**Ms. Pauline Laravoire**, Sustainability Director, Techno India Group, Founder, Y-East, Curator, Offbeat CCU and Director, Technopreneurs' Surrogate Ventures chaired the Session. The Speakers included:

- **Mr. Bonu Ramesh Naidu**, Research Scholar, Department of Electrical Engineering, IIT Kharagpur (**India**)
- **Mr. Mohamed Sufiyan Challiwala**, Research Scholar, Texas A&M University (**USA**)
- **Mr. Shashank Shekhar**, Techno India University/Y-East Ambassador(**India**)
- **Mr. Srijan Mukhopadhyay**, M.Tech, TERI

School of Advanced Studies (**India**)

- **Ms. Meheruba Mahbub**, LLB, University of London(**Bangladesh**)
- **Ms. Areeya Tandukar**, Bronze Awardee and current Silver Award Participant, from The Duke of Edinburgh's International Award, Grade 10, Sanskriti International School (**Nepal**)
- **Ms Michaela Samanta**, Undergraduate Student, The University of British Columbia, Bronze Silver and Gold Holder Awardee from The Duke of Edinburgh's International Award (**Indonesia**)

**CUTS International was the Knowledge Partner. The Chamber pledged to its Members and Stakeholders, on occasion of the Conclave, to plant trees after the havoc impact of Super Cyclone Amphan in Eastern India. With their support, 257,070 trees are being planted in Bengal and Jharkhand especially in industrial regions.**

**The programme was organized virtually in multiple digital platforms including cloud streaming and interactions designed for the Conclave.**



**Shri Sobhandeb Chattopadhyay**, Hon'ble Minister-in-Charge, Department of Power, Government of West Bengal addressing as the Chief Guest of the Conclave

**Dr. John Murton**, UK Government's COP26 Envoy delivering the Leadership Address in the session on 'Towards Green Recovery and Industry Transition'



**13TH EDITION OF ENVIRONMENT AND ENERGY CONCLAVE ON  
"INCLUSIVE GROWTH WITH RESOURCE EFFICIENCY"**

**26th and 27th August 2020,  
Virtual Platform**



**Dr. Ajay Mathur, Director General, TERI and also a 'Friend of the COP'** were present in the Conclave



**Ms. Natalie Toms, Director Prosperity Team India British High Commission, New Delhi**

**Ms. Natalie Toms**



**Mr. Mohammad Hossain, Director General, Power Cell, Power Division, Ministry of Power, Energy & Mineral Resources, Government of Bangladesh**

**Mr. Mohammad Hossain**



**Mr. Nigel Topping, UK Government's High Level Climate Action Champion, COP26 delivering the Special Remarks in the session on 'India Inc. Round Table towards Green Recovery'**

**Mr. Nigel Topping**

**13TH EDITION OF ENVIRONMENT AND ENERGY CONCLAVE ON  
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**Mr. Stefan Louis**, CEO, Exide Leclanche Energy Pvt Ltd



**Ms. Anna French**, Deputy Head of DFID India, and Head of the Urban, Energy and Green Growth Team



**Mr. Subhasendu Chatterjee**, Whole Time Director Haldia Petrochemicals Limited



**Mr. Raghav Raj Kanoria**, Managing Director, India Power Corporation Limited

**13TH EDITION OF ENVIRONMENT AND ENERGY CONCLAVE ON  
"INCLUSIVE GROWTH WITH RESOURCE EFFICIENCY"**

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The screenshot shows a virtual meeting interface. On the left, a video feed displays Dr. P K Mukhopadhyay. On the right, a large logo for Damodar Valley Corporation (DVC) is visible. The background banner includes the BCC&C logo, the text '13th Edition of Environment & Energy Conclave', and the theme 'INCLUSIVE GROWTH WITH RESOURCE SECURITY'. Logos for 'GREAT' and 'Principal Country Partner' are also present.

**Dr. P K Mukhopadhyay**, Member Secretary, Damodar Valley Corporation

The screenshot shows a virtual meeting interface with a video feed of Mr. Deepak Amitabh. The background banner is identical to the previous slide, featuring the BCC&C logo, '13th Edition of Environment & Energy Conclave', and the theme 'INCLUSIVE GROWTH WITH RESOURCE SECURITY'.

**Mr. Deepak Amitabh**, IRS, Chairman and Managing Director, PTC India Limited

**Mr. Deepak Amitabh**

The screenshot shows a virtual meeting interface with a video feed of Mr. Rahul Tabhane. To his right is a presentation slide titled 'About UK Export Finance'. The slide lists the following points:

- World's first export credit agency with over 100 years' experience
- UK government department working alongside the Department for International Trade, Her Majesty's Treasury and over 70 private lenders and credit insurers
- Named Best ECA by Global Trade Review and Trade Finance Global

The slide also features logos for 'UKEF UK Export Finance' and 'GREAT'.

**Mr. Rahul Tabhane**

**Mr. Rahul Tabhane**, Country Head, India, UK Export Finance

The screenshot shows a virtual meeting interface with a video feed of Shri Rajnath Ram. To his right is a presentation slide titled 'NITI Aayog's Initiatives'. The slide features three icons and their corresponding initiatives:

- PEMA ENERGY DASHBOARDS** (represented by a red icon with a bar chart)
- INDIA ENERGY SECURITY SCENARIO (IESI)** (represented by a green icon with a gear and a leaf)
- GIS-BASED ENERGY MAP OF INDIA** (represented by a yellow icon with a map of India)

The background banner is consistent with the other slides, showing the BCC&C logo and the conclave theme.

**Shri Rajnath Ram**, Adviser (Energy), NITI Aayog, Government of India delivering his speech on Energy Data Management for Inclusive Growth

**NITI Aayog's Initiatives**

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**Mr. Gautam Ray**, Chairperson, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry, Executive Director (HR & Admin.) - CESC Limited & President (HR) – Power Group, RPSG delivering the opening remarks



**Mr. Mohit Bhargava**, Head of Renewable Energy Division & CEO, NVVN, NTPC Limited

**Mr. Mohit Bhargava**



**Mr. Ghanshyam Prasad**, Joint Secretary, Ministry of Power, Government of India delivering the Special Address

**Mr. Ghanshyam Prasad**

**Dr. Annapurna Vancheswaran**, Senior Director-Communication Outreach and Advocacy Unit, The Energy and Resources Institute introduced WSDS addressing the theme, 'Redefining our Common Future: Safe and Secure Environment for All' is slated for February 10-12, 2021, in New Delhi to be held as a hybrid event-with partial onsite and online discussions



**Dr. Annapurna Vancheswaran**

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**Mr. Ajay Shankar**

**Mr. Ajay Shankar**, Distinguished Fellow, The Energy and Resources Institute chaired the **The Kolkata Virtual Sustainable Action Dialogue of TERI's The World Sustainable Development Summit**



**Mr. Souvik Bhattacharjya**

**Mr. Souvik Bhattacharjya**, Associate Director, Integrated Policy Analysis Division, The Energy and Resources Institute



**Prof. Dr. Sadhan Kumar Ghosh**

**Prof. Dr. Sadhan Kumar Ghosh**, Professor, Mechanical Engineering & Chief Coordinator, Centre for Sustainable Development and Resource Efficiency Management, Jadavpur University



**Dr. Divya Tiwari**

**Dr. Divya Tiwari**, CEO, Saahas



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**Dr. Rachna Arora**

**Dr. Rachna Arora**, Deputy Team Leader (EU-REI Project), GIZ

**Scientia Professor Veena Sahajwalla**

**Scientia Professor Veena Sahajwalla** FAA FTSE HonFIEAustCPEng, ARC LAUREATE FELLOW, Director, ARC Green Manufacturing Research Hub, Director, NSW Circular, Director, Centre for Sustainable Materials Research & Technology, Faculty of Science, University of New South Wales (UNSW)

**Arun K Mukherjee**

**Mr. Arun M Mukherjee**, Mentor, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry and the Session Chairperson of **Round Table Discussions on Sustainable Energy Security for the Sub Continent**

**Mr. Kulman Ghising**

**Mr. Kulman Ghising**, Managing Director, Nepal Electricity Authority

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**Mr. Shafique Uddin**, Managing Director, West Zone Power Company, Bangladesh Power Development Board



**Mr. Sonam Tobjey**, Chief Executive Officer, Bhutan Power Corporation Limited



**Ms. Libby Green**, Head of Prosperity (Climate, Energy, Urban, Ease of Doing Business, Financial Services), British High Commission New Delhi



**Mr. Deb A Mukherjee**, President Designate, The Bengal Chamber of Commerce and Industry and Managing Director, Cenergist Energy Private Limited setting the agenda

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**Mr. Alope Mookherjea**, Past President, The Bengal Chamber and Commerce and Industry chaired the session on **Climate Resilient Strategies for Vulnerable Sunderbans**



**Mr. Jayanta Chakraborty**, Senior General Manager, Indofil Industries Limited and Co-Chairperson, Agriculture & Rural Development Committee, The Bengal Chamber of Commerce and Industry

**Mr. Jayanta Chakraborty**



**Dr. Debalina Sengupta**, Associate Director, TEES Gas and Fuels Research Center; WEF Nexus Coordinator, Texas A&M Energy Institute

**Dr. Debalina Sengupta**



**Professor Andy Large**, Director, UKRI GCRF Living Deltas Research Hub, School of Geography, Politics and Sociology, Newcastle University

**Professor Andy Large**

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**Dr. A. Anurag Danda**

**Dr. A. Anurag Danda**, Senior Visiting Fellow, Observer Research Foundation



**Mr. Alexei Levene**, Co-Founder, Desolenator

**Mr. Alexei Levene**



**Mr. Anirban Ghosh**

**Mr. Anirban Ghosh**, Chief Sustainability Officer, Mahindra Group chaired the Session on E – Mobility Forum



**Mr. Vedantha Kumar**, Head of Transport and Industry, International Climate Strategy (COP26) was the Lead Speaker

**Mr. Vedantha Kumar**

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**Shri Debashis Sen**, Chairman, Housing Infrastructure Development Corporation Limited and Additional Chief Secretary, Government of West Bengal



**Shri Prabhat Kumar Mishra**, IAS, Principal Secretary, Department of Transport, Government of West Bengal

**Shri. Prabhat Kumar Mishra**



**(From L- R) Ms. Pauline Laravoire**, Sustainability Director, Techno India Group, Founder, Y-East, Curator, Offbeat CCU and Director, Technopreneurs' Surrogate Ventures chaired the Session on **Youth Forum: #GREEN**; **Mr. Mohamed Sufiyan Challiwala**, Research Scholar, Texas A&M University (USA) and **Mr. Bonu Ramesh Naidu**, Research Scholar, Department of Electrical Engineering, IITKharagpur (India)

**(From L- R) Ms. Pauline Laravoire**, Sustainability Director, Techno India Group, Founder, Y-East, Curator, Offbeat CCU and Director, Technopreneurs' Surrogate Ventures; **Ms. Michaela Samanta**, Undergraduate Student, The University of British Columbia, Bronze Silver and Gold Holder Awardee from The Duke of Edinburgh's International Award (Indonesia); **Ms. Meheruba Mahbub**, LLB, University of London (Bangladesh) and **Ms. Areeya Tandukar**, Bronze Awardee and current Silver Award Participant, from The Duke of Edinburgh's International Award, Grade 10, Sanskriti International School (Nepal)



# 14TH EDITION OF BENGAL CHAMBER'S ANNUAL ENVIRONMENT AND ENERGY CONCLAVE

26th and 27th August 2021, Physical and Virtual (Phygital)



The Bengal Chamber of Commerce and Industry is preparing to participate in COP26 of the United Nations Framework Convention on Climate Change (UNFCCC) which will take place in Glasgow, United Kingdom from 1 to 12 November 2021.

The **14th Edition** of the Chamber's **Annual Environment and Energy Conclave** was held on **26th and 27th August 2021**. The theme of this year is **'Journey Towards Net Zero : At The Threshold of COP26'**.

Two Sessions were held phygitaly and the rest were held virtually over the two days.

With the 14th Edition, the Chamber endeavours to curate a **Movement for Sustainability and Journey towards Net Zero** at the levels of policy, business, society and individual. **UK, USA and Australia were Partners this year.**

**Shri S. Suresh Kumar**, IAS, Additional Chief Secretary, Department of Power, Government of West Bengal graced the Conclave in **Round Table on Policies for green agenda** online. **Ambassador Manjeev Singh Puri**, Honorary Distinguished Fellow, The Energy & Resources Institute (TERI), **Ms. Rowan Ainsworth**, Consul General, Australian Consulate General, Kolkata and **Dr. Gianluca Rubagotti**, Consul General, Consulate General of Italy were present in person at the Chamber.

The Inaugural Session was moderated by **Mr. Gautam Ray**, Chairperson, Energy and Environment Committee and Vice President, The Bengal Chamber of Commerce and Industry and Executive Director (HR & Admin.) - CESC Limited & President (HR) –

Power Group, RPSG. **Mr. Deb A Mukherjee** delivered the Welcome Address. **Ms. Sophie Ross**, Acting British Deputy High Commissioner Kolkata and Deputy Head of Political and Bilateral Affairs British High Commission, India set the Context for COP26. They were all present in person at the Chamber.

**Ms. Melinda Pavak**, Consul General, US Consulate Kolkata joined the Conclave virtually and it was her first appearance after her appointment as the US Consul General, Kolkata. **Dr. Ajay Mathur**, Director General, International Solar Alliance (ISA) and also a **'Friend of the COP'** was present in the Conclave and delivered the Keynote Address - Vision of ISA for Enabling Finance Flow for Solar. **Mr. Saurabh Kumar**, Executive Vice Chairperson, Energy Efficiency Services Limited (EESL) was also present virtually. **Ambassador Manjeev Singh Puri** shared his views on Global Perspective.

**Dr. Sunita Narain**, Director General, Centre for Science and Environment (CSE), & Director, Society for Environmental Communications; & Publisher, Down To Earth was felicitated on Leadership in Sustainability.

She said "Energy transition issue and the energy access issue combined together gives a solution for the poor in the world and that can be done with green energy resources. We need to talk about action today and to do that we need to focus on 2030 and not Net-Zero. Net-Zero believes too much on the role of absorptive capacity of the sinks. We know today the amount of uncertainty in calculating that. The ability to form an inclusive, affordable future is at the core of a sustainable future for India.

It's not about climate change but about the co-benefits that we will get of being able to not just walk the talk but run the talk and move ahead with greater speed."

**Ms. Sophie Ross**, Acting British Deputy High Commissioner Kolkata and Deputy Head of Political and Bilateral Affairs British High Commission, India, said, "With only two months to COP 26, the message is absolutely clear: we must act now to tackle climate change, before it is too late. But amid crisis there is always opportunity. Climate action is not a narrative of cost, but one of sustainable economic growth – and green growth is profitable. We need to transform the world's economies towards new, low-emission pathways and India is well-positioned to play a leading role in this process globally. We are glad to be working with Indian States, including West Bengal, in the journey towards a greener and prosperous future for us all."

The Conclave featured **COP26 enhancing the pace of Sustainability in Business**. The Session included:

- **Mr. Subir Chakraborty**, Senior Vice President, The Bengal Chamber of Commerce and Industry and Managing Director & Chief Executive Officer, Exide Industries Limited
- **Mr. Raghav Raj Kanoria**, Managing Director, India Power Corporation Limited **Mr. Harish Saran**, Executive Director, Marketing & Commercial, PTC India Limited
- **Mr. M C Rakshit**, Executive Director - Commercial, Damodar Valley Corporation
- **Mr. Chandan Sengupta**, Senior Vice President and Head Marketing & Commodity Business, Haldia Petrochemicals Limited
- **Ms. Madhulika Sharma**, Chief Corporate Sustainability, Tata Steel Limited
- **Mr. Gaurav D Joshi**, Senior Environmental Specialist, World Bank

**Mr. Abraham George Stephanos**, President Designate, The Bengal Chamber of Commerce and Industry and Managing Director, Tata Steel Downstream Products Limited moderated the session.

**The UK Hour was focused on COP 26 and Clean Transition-Sharing of best practices and new opportunities. The session was moderated by**

**Mr. Gautam Ray**, Chairperson, Energy and Environment Committee and Vice President, The Bengal Chamber of Commerce and Industry and Executive Director (HR & Admin.) - CESC Limited & President (HR) – Power Group, RPSG. **Ms. Libby Green**, COP26 Diplomacy Lead and Head of Climate and Energy pillar, British High Commission New Delhi | UK's Foreign, Commonwealth & Development Office delivered the Welcome Address of the session. The speakers were

- **Ms. Shamala Evans-Gadgil**, Transport, Innovation and Infrastructure Lead Consultant, Coventry City Council, UK
- **Ms. Liani Baglietto Castellares** and **Ms. Ira Gupta**, Advisory Services Lead, ARUP
- **Mr. Andrew Stokes**, Business Development Manager, Energy Systems Catapults, UK
- **Mr. Joe Phelan**, Director-India, World Business Council
- **Ms. Swati Madan**, Project Officer, Energy Transitions, India, The Climate Group
- **Mr. Hemang Shah**, India Head, EO Charging UK

*The endeavour was to address on the Journey towards Net Zero by various approaches and engaging with diversified stakeholders.*

### **Green Entrepreneurship**

Two promising Start Ups with their unique innovations joined this Session moderated by **Mr. Sanjiva de Silva**, Counsellor (Industry, Science, Energy and Resources), Australian High Commission New Delhi moderated the session.

- **Mr. Arijit Das**, Incubate, Weibel-BCC&I Tech Incubation Centre, Founder and CEO of Schoppen Solutions Pvt Ltd spoke on AI based Bee Corridor
- **Mr. Nikky Jha**, Co-founder & CEO, Saptkrishi addressed on Nature based storage solutions for Agri Products

### **Water Forum**

This session was chaired by **Mr. Arun Kumar Mukherjee**, Mentor, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry. The speakers were

- **Dr. Ajay Pradhan**, President, Consulting Engineers Association of India and Managing Director, Cetus Consulting Solutions Services
- **Mr. Rudranarayan Kumar**, Chief Manager-Business Development & **Mr. Akshan Gupta**, Manager -Finance & Accounts, Swach Environment Pvt Ltd
- **Dr. Abhijit Mukherjee**, Associate Professor - Geology and Geophysics, Indian Institute of Technology Kharagpur
- **Mr. A B Pandiya**, Former Chairman, Central Water Commission

### **Building climate resilience for vulnerable landscapes**

**Mr. Jayanta Chakraborty**, Chairperson, Agriculture & Rural Development Committee, The Bengal Chamber of Commerce and Industry and Senior General Manager, Indofil Industries Limited delivered the Opening Remarks of the Session and **Dr. Palatty Allesh Sinu**, Assistant Professor, Central University of Kerala moderated the session. The speakers were

- **Dr. Robert John Chandran**, Associate Professor, Indian Institute of Science Education And Research Kolkata
- **Dr. Silanjan Bhattacharya**, Professor, Department of Zoology, West Bengal State Technological University
- **Dr. Renee Borges**, Professor, The Indian Institute of Science, Bangalore

### **Moving towards Cleaner Fuels**

**Mr. Suresh P Manglani**, CEO, Adani Total Gas Ltd chaired and gave the opening remarks. The speakers were

- **Mr. Hiren Mehta**, AVP and Head - Marketing and Commercial, H-Energy Group of Companies
- **Mr. Satyabarata Bairagi**, CEO, Bengal Gas Company Ltd

### **Transition to Renewable Energy**

**Mr. Alope Mookherjee**, Past President, The Bengal Chamber of Commerce and Industry chaired the session. The speakers were

- **Mr. Jason Marenda**, Senior Manager, Power Engineers
- **Mr. Rahul Kale**, Founder and CEO, Sun Power Renewables

### **Dynamics of Carbon Credit Market and Green Funding**

The session was moderated by **Mr. Gautam Ray**, Chairperson, Energy and Environment Committee and Vice President, The Bengal Chamber of Commerce and Industry and Executive Director (HR & Admin.) - CESC Limited & President (HR) – Power Group, RPSG.

- **Mr. Anirban Ghosh**, Chief Sustainability Officer, Mahindra Group
- **Ms. Sarah Dobie**, Manager, Resilience Programs, Climate Resilience Consulting

A special feature of this year Conclave was engagement with children. The Chamber had collaborated with **Vawsum**, an incubate at **WEBEL BCC&I Tech Incubation Centre**, and curated a **creative platform for students** in which they may engage, sharing a brief video of their creative expression on their perspective and vision for a 'Green Planet'. The aim is to engage **students to build climate-sensitive ecosystem for the future**. The winners are :

- **Yuvraj Kamlesh Khimlani** of Class I, Cygnus World School, Gujarat
- **Mannat Pankul Arneja**, of Class IV, DLF Public School, Ghaziabad
- **Gargi D Borah** of Class VII, Sri Sathya Sai Vidya Vihar, Golaghat, Assam

These children after their presentation had interaction with jury members which include **Mr. Arun Kumar Mukherjee**, Mentor, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry, **Dr. Anjan Chakravarty**, Member, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry and Director, All Wave Consultancy, **Mr. Sanjeev Ranjan**, Member, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry and Deputy General Manager- Commercial, Energy Efficiency Services Limited, **Mr. Ashok Kr Goswami**, Member, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry and



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Group Head - New Initiative, India Power Corporation Limited, **Dr. Sudipta De**, Member, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry and Professor, Department of Mechanical Engineering, Jadavpur University.

The programme was streamed on multiple digital platforms including cloud streaming and interactions designed for the Conclave.



Shri S. Suresh Kumar, IAS, Additional Chief Secretary, Department of Power, Government of West Bengal

(L-R) Dr. Gianluca Rubagotti, Consul General, Consulate General of Italy, Ambassador Manjeev Singh Puri, Honorary Distinguished Fellow, The Energy & Resources Institute (TERI) and Ms. Rowan Ainsworth, Consul General, Australian Consulate General, Kolkata



The Inaugural Session (L-R) Mr. Gautam Ray, Chairperson, Energy and Environment Committee and Vice President, The Bengal Chamber of Commerce and Industry and Executive Director (HR & Admin.) - CESC Limited & President (HR) – Power Group, RPSG; Ms. Sophie Ross, Acting British Deputy High Commissioner Kolkata and Deputy Head of Political and Bilateral Affairs British High Commission, India; Mr. Deb A Mukherjee, President, The Bengal Chamber of Commerce and Industry and Managing Director, Cenergist Energy Private Limited and Ambassador Manjeev Singh Puri, Honorary Distinguished Fellow, The Energy & Resources Institute (TERI)

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Ms. Sophie Ross, Acting British Deputy High Commissioner Kolkata and Deputy Head of Political and Bilateral Affairs British High Commission, India



Ms. Melinda Pavek, Consul General, US Consulate Kolkata



Dr. Ajay Mathur, Director General, International Solar Alliance (ISA)

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Mr. Saurabh Kumar, Executive Vice Chairperson, Energy Efficiency Services Limited (EESL)



Mr. Abraham George Stephanos, President Designate, The Bengal Chamber of Commerce and Industry and Managing Director, Tata Steel Downstream Products Limited



Mr. Deb A Mukherjee, President, The Bengal Chamber of Commerce and Industry and Managing Director, Cenergist Energy Private Limited felicitating Dr. Sunita Narain, Director General, Centre for Science and Environment (CSE), & Director, Society for Environmental Communications & Publisher, Down To Earth

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Mr. Subir Chakraborty, Senior Vice President, The Bengal Chamber of Commerce and Industry and Managing Director & Chief Executive Officer, Exide Industries Limited

Mr. Raghav Raj Kanoria, Managing Director, India Power Corporation Limited



Top (L-R) Mr. Subir Chakraborty, Senior Vice President, The Bengal Chamber of Commerce and Industry and Managing Director & Chief Executive Officer, Exide Industries Limited; Mr. Raghav Raj Kanoria, Managing Director, India Power Corporation Limited; Mr. M C Rakshit, Executive Director - Commercial, Damodar Valley Corporation; Ms. Madhulika Sharma, Chief Corporate Sustainability, Tata Steel Limited; Mr. Abraham George Stephanos, President Designate, The Bengal Chamber of Commerce and Industry and Managing Director, Tata Steel Downstream Products Limited; Mr. Gaurav D Joshi, Senior Environmental Specialist, World Bank; Mr. Harish Saran, Executive Director, Marketing & Commercial, PTC India Limited and Mr. Chandan Sengupta, Senior Vice President and Head Marketing & Commodity Business, Halda Petrochemicals Limited

**14TH EDITION OF BENGAL CHAMBER'S ANNUAL ENVIRONMENT AND ENERGY CONCLAVE**

**26th and 27th August 2021, Physical and Virtual (Phygital)**

**Mr Sanjiva de Silva**

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Mr. Sanjiva de Silva, Counsellor (Industry, Science, Energy and Resources), Australian High Commission New Delhi

**Mr Arijit Das**

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Mr. Arijit Das, Incubate, Webel-BCC& Tech Incubation Centre, Founder and CEO of Schoppen Solutions Pvt Ltd

**Mr Nikky Jha**

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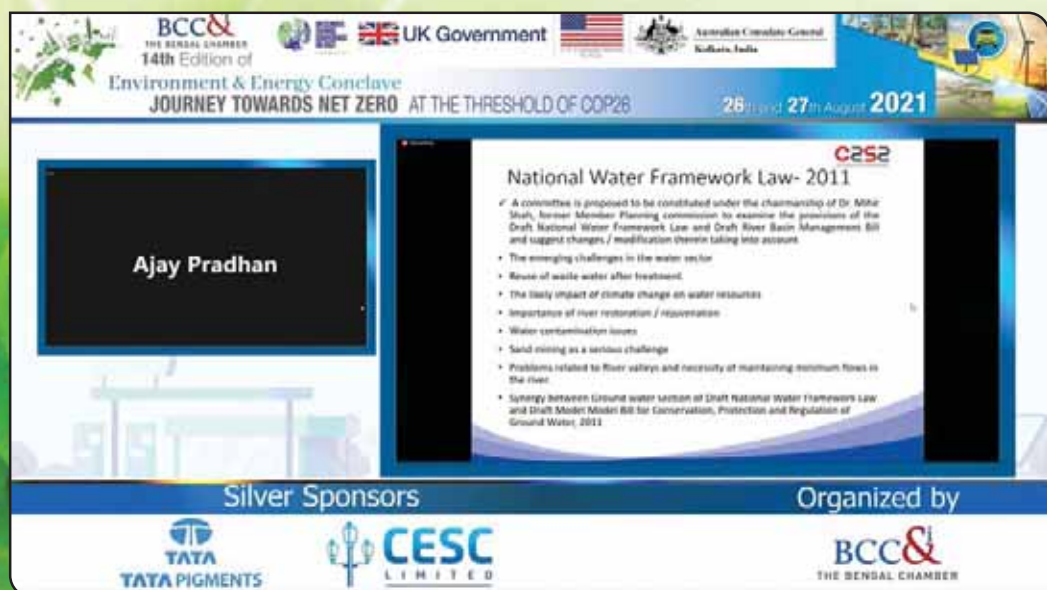
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Mr. Rudranarayan Kumar, Chief Manager -Business Development & Mr. Akshan Gupta, Manager -Finance & Accounts, Swach Environment Pvt Ltd



Mr. Arun Kumar Mukherjee, Mentor, Energy and Environment Committee, The Bengal Chamber of Commerce and Industry

Dr. Ajay Pradhan, President, Consulting Engineers Association of India and Managing Director, Cetus Consulting Solutions Services



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**Groundwater systems of Indian Subcontinent**

**Heterogeneous Aquifer vis-a-vis Groundwater Distribution**

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 Mukherjee et al., J.Hydro. 2015

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Dr. Abhijit Mukherjee, Associate Professor-Geology and Geophysics, Indian Institute of Technology Kharagpur

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 26<sup>th</sup> and 27<sup>th</sup> August 2021

**Roadmap to ICID Vision 2030 Organisation Goals**

**Goals**

1. Develop a clear vision and strategy for the future of ICID
2. To enhance the capacity of ICID members
3. Establish a network of knowledge and expertise
4. Develop a strong relationship and partnership with industry
5. Develop a program to support the growth of ICID members
6. Develop a program to support the growth of ICID members

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Mr. A B Pandiya, Former Chairman, Central Water Commission

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(TOP L- R) Mr. Jason Marenda, Senior Manager, Power Engineers; Mr. Aloke Mookherjee, Past President, The Bengal Chamber of Commerce and Industry and Mr. Rahul Kale, Founder and CEO, Sun Power Renewables

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UK Hour- (Top L-R) Gautam Ray, Chairperson, Energy and Environment Committee and Vice President, The Bengal Chamber of Commerce and Industry and Executive Director (HR & Admin.) - CESC Limited & President (HR) – Power Group, RPSG; Ms. Haimanti Poddar, Senior Energy & Climate Change Adviser, COP 26 Zero Emission Vehicles India Lead, UKFCDO, British Deputy High Commission, Kolkata; Mr. Joe Phelan, Director-India, World Business Council; Mr. Andrew Stokes, Business Development Manager, Energy Systems Catapults, UK; Ms. Angana Guha Roy Chowdhury, Director and Head Operations, The Bengal Chamber Secretariat; Ms. Swati Madan, Project Officer, Energy Transitions, India, The Climate Group; Mr. Hemang Shah, India Head, EO Charging UK; Ms. Ira Gupta, Advisory Services Lead, and Ms. Liani Baglietto Castellares, ARUP



(TOP L-R) Mr. Hiren Mehta, AVP and Head - Marketing and Commercial, H-Energy Group of Companies; Mr. Satyabarata Bairagi, CEO, Bengal Gas Company Ltd and Mr. Suresh P Manglani, CEO, Adani Total Gas Ltd



(L-R) Mr. Gautam Ray, Chairperson, Energy and Environment Committee and Vice President, The Bengal Chamber of Commerce and Industry and Executive Director (HR & Admin.) - CESC Limited & President (HR) – Power Group, RPSG; Mr. Anirban Ghosh, Chief Sustainability Officer, Mahindra Group and Ms. Sarah Dobie, Manager, Resilience Programs, Climate Resilience Consulting



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(L-R) Dr. Palatty Allesh Sinu, Assistant Professor, Central University of Kerala, Dr. Robert John Chandran, Associate Professor, Indian Institute of Science Education And Research Kolkata; Dr. Silanjan Bhattacharya, Professor, Department of Zoology, West Bengal State Technological University and Dr. Renee Borges, Professor, The Indian Institute of Science, Bangalore



Mr. Jayanta Chakraborty, Chairperson, Agriculture & Rural Development Committee, The Bengal Chamber of Commerce and Industry and Senior General Manager, Indofil Industries Limited



Yuvraj Kamlesh Khimlani, Class I, Cygnus World School

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Mannat Pankul Arneja, Class IV, DLF Public School, Ghaziabad



Gargi D Borah, Class VII, Sri Sathya Sai Vidya Vihar



Audience





Mr. Subhodip Ghosh,  
Director General,  
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E-mail : [director\\_general@bengalchamber.com](mailto:director_general@bengalchamber.com), Website : [www.bengalchamber.com](http://www.bengalchamber.com)

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