

## IEEE OES India Council Chapter Event

### Conference on Technologies for Renewable Energy and Water (TREW)



National Institute of Ocean Technology (NIOT), Institute of Electrical and Electronics Engineers –IEEE Oceanic Engineering Society India Council Chapter (IEEE-OES), Indian Desalination Association South Zone (InDA (SZ)) and the SRM Institute of Science and Technology joined hands and organized a three day conference from 7<sup>th</sup> to 9<sup>th</sup> March, 2019 at NIOT, Chennai 600100. The unique conference on the twin topics of water and energy was conspicuous by the presence of high profile technology thought leaders and the attendance of aspiring and ambitious young science and technology students with the active intervention by industry experts and corporate C-suite CEOs.

Dr Purnima Jalihal welcomed the gathering. Dr S. Prabhakar mentioned the role of Indian Desalination Association in the arena of water and renewable energy. Dr M.A. Atmanand's remarks included the activities of NIOT during the past 25 years and the importance of renewable energy and water. Dr. Rajeevan Secretary, Ministry of Earth Sciences expressed that the growth of renewable energy in the country has been satisfactory with its 4<sup>th</sup> rank in global solar power production and with an ambitious futuristic program on the anvil. He added that water could be a vexatious issue unless addressed expeditiously and energetically, this merits immediate attention of water technologists and professionals.

Dr. V.K. Saraswat, Member NITI Aayog was the Chief Guest and delivered the keynote address. In a scintillating discourse covering the whole spectrum of water and energy, he demonstrated the power of technology as the art of the soluble and also as the art of the possible. The Smart Energy Program envisions smart cities, smart, transportation, smart grids, smart water supply and smart living. He lamented the 'luxurious' misuse and abuse of water in a five star setting for a bath, which could quench the thirst of a whole population of a Rajasthan village. He emphasized that energy efficiency and resource recovery are the twin critical variables of sustainable development.

The two million liters per day capacity low temperature thermal desalination plant using condenser reject heat at Tuticorin Thermal Power station was flagged off. A coffee table book which chronicles the 25 year journey of NIOT in the area of ocean energy and water was also released.



Dr. V.K. Saraswat also presented the coveted Make in India Awards of InDA South Zone to the recipients. The Award for Energy sector was conferred on Professor Chetan Singh Solanki of IIT Bombay and that for Water sector was conferred on Dr. Asim Kumar Ghosh of Bhabha Atomic Research Centre. He also inaugurated the exhibition section participated by various industries related to the field of renewable energy and water

Dr. M.A. Atmanand delivered the opening plenary session talk on "Technology Developments for Blue Economic Growth in India".

Recalling the fact that India is having a coastline of around 7600 km long and an exclusive economic zone of 2.3 million square kilometers, he reiterated the need for strategic technology developments for the harvesting of living and non-living blue economic resources and for protecting the oceanic ecosystems.

Dr. K. Balaraman, Director General, National Institute of Wind Energy provided an overview of Wind Power Development in India. He informed that the governmental target for wind power is 60 GW by 2020 and India's rank today is 4<sup>th</sup> in the world.

Dr. G.V. Reddy of DST presented an outline of the water technology initiatives undertaken by the department to address the water challenges and capacity building of research professionals and water managers.

Dr. N. Vedachalam of NIOT focused attention on the oceans as a strategic frontier with reference to gas hydrates. It is estimated that 1894 trillion cubic metre of methane gas as gas hydrates below the Indian sea floor between 800 to 3000 m depth. A reservoir with 90% hydrate saturation can produce 8 billion cubic metres of methane and 75 million cubic metre of water over a period of 3.6 years.

Many delegates participated from various Government organizations, Research Institutes, Academia and Industries participated and stressed about the importance of technology for renewable energy and water

In the Oral and Poster Sessions, young scientists, engineers and research students presented a wide spectrum of research findings pertaining to water and energy and explained their work to the delegates.

SRMIST, as part of the conference conducted an exhibition of working models which had wide participation from the students of various schools across Tamil Nadu



The conference concluded with a valedictory function with remarks by Dr. G A Ramadass, Chairman, IEEE-OES , Guest of Honour Dr. M. Vairamani, Dean, School of Bio Engineering, SRMIST and the Chief Guest Dr. M.A. Atmanand, Director, NIOT. Prize distribution to school and college students for model competition and paper and poster presentations was the highlight of the valedictory function.

The conference highlights include:

No. of Participants: 300

No. of Exhibitors: 6

No. of invited talks: 37

No. of Student Papers & Posters received: 28

No. of Papers presented: 8

No. of Posters presented: 12

An Organizing Committee of 10 distinguished Patrons, a Conference Advisory Committee of 11 Desalination thought leaders and a National Organizing Committee of 36 experts powered the high quality and high density conference. Coherent synergy was brought into action between academia and industry. On the whole, the conference brought together academia, industry and researchers for the common cause of renewable energy and water.

*Report by: Dr Purnima Jalihal*

