MISSION INNOVATION
Accelerating the Clean Energy Revolution

सत्यमेव जयते

biofuture platform
Kickstarting a global, advanced bioeconomy

Department of Biotechnology
Ministry of Science & Technology
Government of India

**International Conference on Sustainable Biofuels 2018**

**February 26-27th, 2018, Stein Auditorium, India Habitat Centre, New Delhi**

**27thFebruary 2018**

The two day international conference on Sustainable Biofuelswas jointly beingorganized by Department of Biotechnology (DBT), Govt. of India and Biofuture platform at Stein Auditorium, India Habitat Centre, New Delhi. The eventbrought~400 experts and delegates from 19 countries together in Sustainable Biofuels sector to take stock of current knowledge, share information and best practices, and build consensus on the actions most needed to move forward.

Use of fossil fuels for transportation contributes significantly to global greenhouse gases (GHG) emission. The sustainable biofuels have ability to reduce the GHG emission load and this consideration led to establishment of Sustainable Biofuel Innovation Challenge (SBIC) under Mission Innovation (MI).

Advanced or second-generation biofuels produced from non-food biomass materials and specially grown high yielding plants or algae, if managed sustainably can contribute to significantly reduce emissions. However, many of the advanced biofuels still remain in pre- or an early commercial stage of development and need innovations and breakthrough for low cost sustainable production. The Sustainable Biofuel Innovation Challenge (SBIC) aims to accelerate research, development and deployment of low cost, high GHG impacting advanced biofuels.

The SBIC will build on existing knowledge of individual participating countries and international institutes like IEA, IRENA and in collaboration of Biofuture Platform. A major aim of these cooperation is to avoid duplication of efforts and define clear areas of collaboration for speeding up of innovations in this area.

This event aims to provide a common platform to research community, Government policy makers, industryand investors to exchange experiences and challenges related to development and scaling of advance biofuels. Besides this the conference is focusing on concerns of the private sectors to speed up large scale production of sustainable biofuels.

About 50 international delegates including country representatives from mission innovation member countries, IEA, Biofuture Platform member countries, IRENA and Below50 have attended the conference. All co-leads of sustainable biofuel challenge - China, Brazil, Canada and India were very well represented in the conference. These country representatives presented the status of biofuel development in their countries.

An Exhibition in which 12 companies had put up their stalls show casing their technologies in the area of biofuels was the star attraction of the conference. Delegates utilized this opportunity to have in-depth discussion on the technologies of their interest with the expert present in the exhibition.

The conference discussions provided a clear understanding of the development in bio-economy made by participating countries, increase awareness of policy makers about the challenges faced by the industry-investor for commercial scale up of advanced biofuels. The need for collaboration-cooperation to speed up commercialisation and focus on latest R&D in advanced biofuels will be the expected outcomes of this International event.

Department of Biotechnology (DBT), Ministry of Science & Technology has been assigned the role of coordinating and steering the activities of Mission Innovation in India by Government of India, for which a Mission Innovation India unit has been set-up at ICGEB, New Delhi. DBT has in past taken lead in ushering R&D in advanced biofuels and has set up four large Bioenergy Research centres.

Welcoming the delegates Dr. Renu Swarup, Senior Advisor, DBT, Govt of India, mentioned that India was one of the first few countries who joined Mission Innovation and agreed to double its investment in a span of 5 year research on clean enegy. She further emphasized that the Govt of India lays major emphasis on the development of biobased fuel and energy to meets its target of renewable energy.

Shri V.K. Saraswat, Member NITI Aayog, said in his key note address that collective wisdom of all participating countries can foster clean energy revolution. He further highlighted that this event will enable different countries to exchange their experience and share best practices for development and commercialization of advanced biofuels. More importantly, he emphasised on the sustainability of the biofuels.

Prof. Ashutosh Sharma, Secretary, DBT&DST, Ministry of Science &Technology, India, highlighted India's interest and progress in all the seven Mission Innovation Challenges and the country workshops organized by the DBT and DST in these challenges. He praised the willingness of investors and industries to take forward the leads provided by R&D community.

The other key speakers of the inaugural event includedMs. Sarah Webb, Mission Innovation Secretariat, United Kingdom and Mr. J. Antonio Marcondes, Ambassador, MoFA, Biofuture Platform, Brazil.

The Plenary talk was given by Prof Jack Saddler, University of British Columbia, Canada and made a strong pitch for India to join IEA TASK39.

A national perspective was given by the representatives of MI Co-lead countries, where the advancement made in the area of sustainable biofuels was highlighted. All countries agreed to develop partnership to accelerate the technology development and commercialization of sustainable biofuels.

The technical session on the need for innovation for technical development was chaired by Prof. K.T. Shanmugam, University of Florida, USA where the status of current 2-G ethanol technology was discussed and continuous support from various elements of innovations was highlighted. This session hadpanellist from industries and academia, such as IOCL, Royal DSM, DBT-ICT Centre, Praj Industries and TEKES.

The session on Global Status of Biofuels was represented by Biofuture countries, IEA, European Commission, IRENA, Below50. This session was moderated by Mr. Adam Brown, Senior Consultant International Energy Agency, IEA and lead talk was given by DucanAkporiaye, SINTEF Energy, Norway. The country representatives from France, Norway, Brazil, Mexico, Paraguay, Sweden and partnering agencies presented the status of development of sustainable biofuels in their respective countries and highlighted various collaboration opportunities in their countries.

On the second day of conference, the session started with discussion on Sustainable Biofuels – Technology Scale-up opportunity moderated by Dr. Anjan Ray, Director CSIR-Indian Institute of Petroleum, India. In his lead talk, Dr PasiRouso, President, Chempolis, Finland presented the company's involvement in addressing various engineering challenges in 2G- ethanol process. Another lead talk given by Dr. G.S. Krishnan, Managing Director, Novozymes South Asia Pvt Ltd, India, who highlighted the effort Novozyme has put in the reduce the price of enzymes for 2G-Ethanol. The panellists of the session were from HPCL-India, RaizenEnergia-Brazil, Center for Renewable Energy Sources and Saving-Greece, Bio-energy Research Centre-India and DBT-ICGEB Centre-India, who gave perspectives on 2-G ethanol process including identifying hot-spots in the process, feed supply and plant sizes, updates on enzyme research, utilization biofuels, etc.

In the technical session on Advanced Biofuels, which was moderated by Dr. Preto Fernando, Executive Director, Natural Resources, Canada, major emphasis was given to products other than ethanol, such as Drop-in Fuels, Bio-hydrogen, and the role of synthetic biology and gas fermentation in producing useful fuel molecules. In her lead talk, Dr. Jennifer Holmgren, Chief Executive Officer, Lanzatech, USA highlighted the achievement of Lanzatech in gas fermentation. The panellists of the session were represtatives from DBT-PAN-IIT Centre-India, Reliance Renewable-India, Cenerbio-Brazil, Shell- India, Honeywell UOP-USA.

The session on Policy support for commercialization was chaired by Dr. Renu Swarup, Senior Advisor, DBT, Govt of India and co-chaired by Dr. Jose Antonio Marcondes de Carvalho, Ambassador, Ministry of Foreign Affairs, Brazil. The panellists of the session represented various countries, such as Switzerland, Brazil, Denmark and MoPNG-India. The panel discussion led to understanding of various policy support for Sustainable Biofuels by different countries.

The two days session was concluded by adoption of "Delhi Declaration". The declaration was developed in consultation with Mission Innovation Sustainable Biofuels(IC#4) Co-lead countries – Brazil, Canada, Chinaand India, Biofuture platform partnering countries as well as ARENA and IEA. After deliberation with all the members from the participating countries, a consensus document was endorsed.

Photos and Additional Information available to the press.

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