

INAE fellows & experts discuss Role of Hydrogen in India's Energy Strategy

Experts and INAE (Indian National Academy of Engineering) fellows shared insights on Role of Hydrogen in India's Energy Strategy and discussed the current and future global situation of use of Hydrogen as an energy source and the overall situation in India with respect to technologies, capabilities and affordability for Generation, Storage, Transportation and Usage of Hydrogen at a round table discussion at Pune.

A set of recommendations were put together to be followed by INAE in forwarding recommendations to the Government. INAE Pune Local Chapter organised the round table interaction of domain experts on February 15, 2020, at Pune. It was attended by domain experts from INAE Fellowship and other expert invitees from Academia, R&D organisations and Industry. INAE is an autonomous institution under the Department of Science and Technology (DST)

The experts agreed that energy strategy is crucial in India's growth and said that India's growth & sustainability are rooted in selecting the right strategic path, integrating renewable energy – Solar, Geothermal, Tidal, Biomass & Wind, with existing sources involving Hydro, Coal, Oil, Gas & Nuclear. They said that India would have to carve out its strategy while considering the rapid developments taking place globally and this strategy will have to be necessarily transformative, to satisfy aspirations of millions of young Indians and for the country to play its rightful role in a sustainable global community

It was discussed that India's energy security, by and large, will have to depend on its resources both renewable as well as non-renewable. According to them, this implies that energy sources like solar, wind, biomass will have to be seamlessly integrated with conventional, well-established sources. Simultaneously, the imperatives of reduction in GHGs and the carbon footprint must be factored in. Linkages need to be established keeping in mind the necessary energy storage requirements. They said that the current electricity transmission & distribution infrastructure would not be able to support the above needs and it was obvious that a clean and well-planned distributed energy system will always remain a vital component of India's energy strategy.

Speakers said that given the demand from industrial, residential, commercial, rural & transport sectors, multiple options had been considered by several agencies and working groups. Apart from technological feasibility, the most important questions of financial viability and affordability have also been covered to some extent. As an example, the proposed switch from fossil-fueled vehicles to electric vehicles while bringing in significant benefits poses challenges in terms of availability of suitable charging networks and strategically important access to basic raw materials if Lithium-based batteries are the primary mode for energy storage.

They deliberated on whether Hydrogen can play an important role in this energy strategy for India. In the interaction meeting, the speakers shared insights on the current and future global situation about use of Hydrogen as an energy source and discussed the overall situation in India with respect to technologies, capabilities and affordability for Generation, Storage, Transportation and usage of hydrogen.



Ongoing Deliberations during the meeting



Group Photograph of Delegates in the Round Table Interaction