

**CONFERENCE DAY 3 – 04 MARCH 2021 - SEMINAR
SMART CITY GAS DISTRIBUTION AND GREEN HYDROGEN**

Venue & Time

Venue	Seminar Hall
Time	New York 3:30 ~ 7:30 Paris 9:30 ~ 1:30 India 14:00 ~ 18:00 Tokyo 5:30 ~9:30

Session Background

Government of India (GoI) is planning to increase the share of gas in the energy mix of the country. Under the Ujala program cooking gas connections have been given to more than 100 million households in the past 5 years. Besides this, GoI has issued licenses for City Gas Distribution in 228 districts in the country. This will increase the share of gas in the economy to 15% by 2030 from the present levels of 7 %. We are about to witness a huge expansion in City Gas Distribution (CGD) sector. The automation and IT systems and the last mile connectivity solutions for building smart electricity grids can be leveraged for automating the water and gas distribution systems at marginal cost. Similarly, the billing and collection systems of the electric utility can be leveraged to provide a single bill for all 3 services – electricity, water and gas. This will not only enhance convenience of the customer who has to pay only one bill, but will also reduce the cost of business operations for the gas and water utilities. From this perspective, ISGF feels there is a compelling business case to bring city gas distribution companies to the smart grid forum and explore the collaborative business opportunities. There are many common issues that all water, gas and electric utilities are facing with municipal authorities and regulatory bodies which again can be effectively addressed jointly. On the technology and business process side as well, there are many things electricity, gas and water utilities can learn from each other.

ISGF initiated many activities in the gas domain and also constituted a City Gas Distribution Working Group to start knowledge creation and to bring stakeholders on one platform which received acceptance amongst the industry; and now we are launching an **India CGD Forum** which will be chaired by **Shri Tarun Kapoor, Secretary, Ministry of Petroleum and Natural Gas (MoPNG)**. The India CGD Forum will start the promotion of initiatives of Government of India towards the gas-based economy.

Smart City Gas Distribution session at ISUW 2021 will provide an effective platform for virtual interactions on new themes related to post-Covid transformation in CGD business, efficient operation and maintenance management; and intervention of hydrogen and CNG driven vehicles.

14:00 ~ 15:00

Inaugural Session

Welcome Address: India Smart Grid Forum

Special Address:

1. **G Chakraborty**, Executive Director, Gail India Ltd.
2. **MV Ravi Someswarudu**, Chief Executive Officer, Gail Gas Limited
3. **Suresh Mangalani**, Chief Executive Officer, Adani Gas Limited
4. **AK Jana**, Managing Director, Indraprastha Gas Limited

Inaugural Address: **Tarun Kapoor**, Secretary, Ministry of Petroleum and Natural Gas

Vote of Thanks: **Vivek Joshi**, Executive Director, Natural Gas Society

15:00~16:30

Session-1: Post Covid Transformation in CGD Business

- Digitalization for transforming utilities during the pandemic: contact less billing, defaulter's management and revenue maximization
- Automation for remote operations
- Operational agility and resilience

Chair: **Rajiv Sikka**, Chief Executive Officer, Indian Oil-Adani Gas Pvt. Ltd.

Speakers:

1. **Manjeet Singh**, Sr Vice President, IGL
2. **Murali Srinivasan**, Sr Vice President, Mahanagar Gas Limited
3. **Rajesh K Mediratta**, Director-Strategy and Regulatory Affairs, Indian Energy Exchange (IEX)
4. **Sumit Gupta**, Chief Executive Officer, AssetPlus Consulting

16:30 ~17:30

Session-2: Efficient Operation, Maintenance and Digitalization

- Sharing of Digital Assets amongst Utilities (Electricity, Water, Gas)

	<ul style="list-style-type: none"> • Common IT Infrastructure • Smart Techniques for Safety • Management of Tanker Safety: Intermediate Commercial Vehicle (ICV), Gas Cascade Carrying Vehicle, LNG Vehicles in Gas Distribution <p>Chair: G Chakraborty, Executive Director, (CGD), GAIL India Limited</p> <p>Speakers:</p> <ol style="list-style-type: none"> 1. Tulika Pradhan, Cloud Advisor, Public Sector, Amazon Web Services, India 2. Raman Srivastava, Chief General Manager, IGL
--	--

Key Takeaways by Moderator

Session – 3: GREEN HYDROGEN ROADMAP FOR INDIA

Session background

Fast paced activities on Green Hydrogen are going on all the around the world. Countries after countries are issuing Hydrogen Roadmaps and Strategies. Globally, green hydrogen is considered as the sustainable solution to decarbonize the “hard-to-abate-or electrify” sectors such as long-haul truck traffic, shipping, aviation and production of steel and cement which contribute about 15% of global CO₂ emissions. The hydrogen produced traditionally with CO₂ emission from natural gas is referred as **Grey Hydrogen** while that is produced from coal and petroleum coke is called **Brown Hydrogen**. In the recent past technologies have evolved to produce hydrogen with reduced or no CO₂ emissions. Grey and brown hydrogen produced with carbon capture and storage is known as **Blue Hydrogen** while that is produced through pyrolytic processes is referred as **Turquoise Hydrogen**; and the hydrogen produced from electrolyzers run on electricity from renewable resources (solar and wind) is called **Green Hydrogen**. The latest entrant in this vibrant domain is **White Hydrogen** produced from plastics and biomass.

According to a report by Hydrogen Council, green hydrogen could supply up to 25% of the world's energy needs by 2050. The emergence of a hydrogen economy could change geopolitical dynamics as many countries are already investing in this new energy systems as potential importer or exporter. The cost reduction of green hydrogen will lead to the hydrogen economy replacing the hydrocarbon economy in the long run. As the global demand for green hydrogen increases, new exporters will emerge from different geographies replacing the present oil exporting countries. This will lead to major geopolitical realignments which is a great opportunity for India to leverage to be a net exporter of green hydrogen as well as drastically reduce our oil and gas imports.

In order to manufacture green hydrogen at scale, India has many strategic advantages, including:

- Large land mass for renewable energy production at low cost
- Integrated, country-wide natural gas pipeline networks and storage systems
- Stable electric grid that could support seamless operation of giga-watt (GW) scale electrolyzers
- Skilled manpower in abundance

These advantages, if planned well and acted upon with strategy and focus could attract foreign direct investment for fast development of the green hydrogen ecosystem in the country and India could emerge as a leading exporter of green hydrogen. We could start with blue hydrogen as well in the near term. To leverage these advantages and seize the opportunity, India needs to build technology cooperation and partnership with leading countries around the world.

This session will discuss the plan for a Hydrogen Mission and a Hydrogen Roadmap for India.

17:30 ~ 18:30	<p>Chair: PC Maithani, Advisor, Ministry of New and Renewable Energy</p> <p>Speakers:</p> <ul style="list-style-type: none"> • K.R. Jyotilal, Principal Secretary, Transport, Kerala • Gauri Singh, Deputy Director-General, International Renewable Energy Agency • Anand Vasudevan, Founder & CEO, Spotimzye Energy, USA • Sanjeev Gupta, Chairman, Power Committee (RE&AE), PHD Chamber of Commerce
----------------------	--

Key Takeaways by Moderator