ISGF
India Smart Grid Forum

NATURAL GAS SOCIETY

INDIA CGD FORUM
India City Gas Distribution Forum
(An initiative of ISGF and NGS)

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Webinar on

Collaboration between City Gas Distribution and Electricity Distribution Companies to Accelerate Transition to Gas Based Economy

15th July, 2021 (Thursday) | 15:00 to 17:00 hrs (IST)

NGS

A Brief About
NATURAL GAS SOCIETY

Presentation by:

D V Shastry,

Executive Director

NGS – Mission and Objectives

- To represent the collective interest and promote, facilitate and further sustainable growth of Natural Gas Industry in India (except E&P)
- To serve as a nodal point for coordination of all efforts at generation and dissemination of information and technology, relevant to natural gas
- Work on common interest issues like Safety Standards etc.
- Critical inputs to Policy Makers on major issues, relevant to development of natural gas industry
- Collaborate with similar organisations, internationally

Our Members…

PATRON MEMBERS

- GAIL (India) Limited
- MAHANAGAR GAS
- INDRAPRASTHA GAS LIMITED
- PETRONET LNG LIMITED

PRIMARY MEMBERS - B

- CUGL
- MNGL Maharashtra Natural Gas Limited
- BGL Bhagyanagar Gas Ltd.
- GREEN GAS LIMITED
- अवंतिका गैस लिमिटेड AAVANTIKA GAS LIMITED A Joint Venture Company of GAIL & HPCL

ASSOCIATE MEMBERS

- adani
- torrent GAS

NON VOTING MEMBERS

- THINK GAS
- IEX INDIAN ENERGY EXCHANGE
- TNGCL

NGS – a Few Initiatives

- Study undertaken on Gas Supply and Demand in India and "Measures to improve flexibility of Asian Natural Gas markets"
- Study undertaken on Tariffs and taxes and impact on industry
- Development of discussion papers on various issues pertaining to the CGD
- Impact study of EV on CNG and LNG sales (collaborative project)
- O&M Conference for CGD industry conducted annually.
- Safety workshop for the CGD industry

Our Associations/Linkages…

Associated with:

Industry Forums (eg. FICCI, PHDCCI), Regulator (PNGRB), MoP&NG,

BIS - Gas Cylinders and Metrology, etc. PESO - CCoE Cylinder Safety Committee

Linkages with:

PNGRB

SIAM Society of Indian Automobile Manufacturers

ISGF India Smart Grid Forum

ANGVA ASIA PACIFIC NATURAL GAS VEHICLES ASSOCIATION

The only Indian Organisation to have representation in……

IGU INTERNATIONAL GAS UNION UNION INTERNATIONALE DU GAZ

AGF Asian Gas Forum

GASEX

SHARE OF NATURAL GAS IN ELECTRICITY GENERATION IN INDIA

Power Generation in India

- **TOTAL INSTALLED CAPACITY** **384115.95 MW**
  Thermal (MW) **234058.22 MW**
  Gas (MW) **24924.01 MW**

- **SHARE OF GAS** **6.5%** **of total installed capacity**

- Source: https://npp.gov.in/dashBoard/cp-map-dashboard

Reforms in Progress in the Power Distribution Sector

- **POWER SECTOR IS GOVERNED BY THE ELECTRICITY ACT 2003**
  - **REGULATES GENERATION, TRANSMISSION, DISTRIBUTION, AND OTHER POLICY MATTERS**
- **DRAFT AMMENDMENT 2018 OF THE 2003 ACT**
  - **EMPHASISES ON SMART METERS AND PREPAID METERS**
- **UJJWAL DISCOMS ASSSURANCE YOJANA (UDAY)**
  - **ENCOURAGE DISCOMS TO REDUCE LOSSES (AT&C) TO 15%**
- **RESTRUCTURED ACCELERATED POWER DEVELOPMENT AND REFORM (APDRP)**
  - **ENCOURAGE DISCOMS TO INTRODUCE SCADA, AMR FOR HIGH REVENUE CUSTOMERS, PREPAID METERS, ETC.**

Indian CGD Sector: An Overview

• Gas Cons by CGD (MMSCMD)		
	– 25.3 (2020-21)	65# (2030)
• Authorized GAs (No.)		
	– 232 (Jun 21)	400 (2022)
• CNG stations (No.)		
	– 3101 (Mar 21)	10,000** (2030)
• CNG vehicles (million) (1.05.2020)		
	– 3.2 (May 20)	33* (2030)
• PNG connections (million) (31.12.2020)		
	– 7.86 (Mar 21)	50** (2030)
• Districts covered (No)		
	– 406 (after 10th round) round)	741 (after 11th
• Population covered (%) appx		
	– 70	100

*Estimated as per report published by Nomura
** Estimates according to statements made by MoPNG
# As per NGS estimates
Sources: GSR, News Reports, NGS Research

Reforms in Progress in the Natural Gas Sector

- **Setting up of an online Gas Trading Exchange platform –**
  - **To offer transparency, competitive price of Natural Gas,**
  - **24x7 Trade facility, delivery facilitation and ease of transaction to the market participants.**
  - **Discovery of market price**
- **Notification of access codes –**
  - **Help the new CGD units to transport, distribute and price Natural Gas through simplification of Gas Pipeline tariffs.**
  - **Attract investment for building new Gas Infrastructure.**
  - **Increase competition among suppliers in newer cities coming under Gas Distribution Networks.**
- **Formulation of an 'unified' tariff structure to –**
  - **Make the fuel more affordable for distant users**
  - **Attract investment for building New Gas Infrastructure**
- **LNG Dispensing**

Areas of Collaboration

Activity Mapping

- PERMISSIONS FROM LOCAL AUTHORITIES
- NETWORK EXPANSION AND ASSETS INFORMATION SHARING
  - DOMESTIC
  - INDUSTRIAL
- CUSTOMER RELATIONSHIP MANAGEMENT
  - DATABASE SHARING
  - METERING
  - BILLING AND REVENUE COLLECTION
  - CUSTOMER FEEDBACK AND GRIEVANCE REDRESSAL DBM

Activity Mapping

- INTER UTILITY COORDINATION
  - CROSS UTILITY COORDINATION INCLUDING COMMON GIS MAPPING
- EMERGENCY AND DISASTER MANAGEMENT
  - DOMESTIC
  - INDUSTRIAL
- KNOWLEDGE AND EXPERIENCE SHARING
  - CAPABILITY BUILDING THROUGH L&D
  - SKILL BUILDING

Thank You

Customer Data

BACK

- Digital data can be shared easily : removes spatial and inter-domain barriers
- Cross-pollination over several sectors

The market opportunities

- Share with Service Providers in other Domains: Water and Gas Distribution, Municipal Agencies, Renewable Energy Development Agencies
- Large aggregation allows for better and more integration of renewables into the grid on the supply side and more effective DR tools on the demand side
- **Big data analytics** can use power system data for various cross sectoral themes - environment, lifestyles, wealth, health, etc.
- Analytics **both real-time and non real-time from remote - equipment, systems, O&M**
- The use of AI and m2m to determine optimal energy use, lifestyle comfort, energy efficiency

Billing and Collection System

BACK

- State of the art Billing and Collection Systems deployed in utilities cover all customers (residents in the service area) and are capable of extending to other smart city domains

The market opportunities

- Extension of the billing and collection system to water and gas distribution, house tax collection, other municipal/city taxes
- Can even be extended to private utilities such as cable TV, internet, telephone, etc.
- Considerable savings in **cost of doing business** to other domains
- Additional **revenue stream** for electric utilities

GIS Maps

BACK

- All electrical assets (medium voltage and low voltage lines, substations) and consumers are mapped on a digital map and the Utilities update this system on regular basis to capture changes/addition to the electrical network as well as new consumers/buildings
- This digital map can be effectively used by other infrastructure services providers for planning as well as operation and maintenance of their systems
- Very useful for planning the laying of water supply and sewerage lines, telecom cables, gas pipe lines etc. also useful for planning of road network

The market opportunities

- Share the maps with other stakeholders in a city for a modest fee