BEST SAFETY PRACTICES IN CITY GAS DISTRIBUTION INDUSTRY

Indraprastha Gas Limited
(A Joint Venture of GAIL (India) Ltd., BPCL and Govt. of NCT)

About IGL

Incorporated in 1998, IGL took over Delhi City Gas Distribution Project in 1999 from GAIL (India) Limited (Formerly Gas Authority of India Limited with the objective to provide safe, convenient and reliable natural gas supply to its customers across domestic, commercial, industrial and transport segment.

Indian’s Leading Clean Energy Solution Provider through Customer Centricity, Innovative Technology and Diversification, with International Presence.

Committed to Provide Safe, Reliable & Clean Energy Solutions to Improve Quality of Life and Enhance Stakeholder’s Value.”
Areas of Operation - IGL is operating in 14 cities in India

- 50% Equity Stake
- 10 Geographical Areas
- 20,000 Sq. miles (Area Size)
- 55 Million Population

Business Segments

- CNG: 500 Nos.
- Industries: More than 1800 Nos.
- Domestic: ~11.1 Lakhs
- Commercials: More than 3500 Nos.
Natural Gas Supply and Distribution layout: IGL has 20+ years of experience in supplying uninterrupted gas to the customers

Safety Management System in IGL

- Safety - Accorded Top Priority by Management and is the Top Agenda during all review meetings.
- Safety is followed in Design, Construction and Operation of all Activities.

Safety Management System of IGL exists comprising following key elements:

- Health, Safety & Environment Policy
- Safe Operating Procedures
- Safety Work Permit System
- Personnel Protective Equipments (PPE)
- Emergency Response Plan
- Accident/Incident Reporting and Investigation
- Safety Awareness Programs
- Safety Training
- Safety Audits (External/Internal)
- Safety Committees
- Emergency Drills
- Annual Health Checkup
MAJOR SAFETY CHALLENGES FOR CGD INDUSTRY

Poor maintenance of CNG vehicles and kits:

• No periodic maintenance/ checking schedule is defined for maintenance of kits.

• CNG was introduced as an alternate fuel for environmental concerns, however general public prefer CNG vehicles because CNG is economical compared to other fuels. And consumers generally do not spend on maintenance of kits and vehicles.

Use of unauthorized spare parts:

• Installation of unauthorized spare parts, safety discs of cylinders may lead to serious consequences.
MAJOR SAFETY CHALLENGES FOR CGD INDUSTRY

Validation of Cylinders:
Requirement of foolproof user friendly system to ensure the healthiness of CNG cylinders on-board and should be same at PAN India level.

Shortage of cylinder test facilities:
Around 100 test facilities in India for more than 3.2 million vehicles. Hydrostatic test interval is 3 years.

Concerns:
Untested and unsafe cylinders is a matter of serious concern. As CGD industry is more than 20 years old and many vehicles are running with the cylinders of that time.

MAJOR SAFETY CHALLENGES FOR CGD INDUSTRY

Third Party Damages to Pipeline Network leading to gas leaks and fires:

• Lack of coordination/planning of other utility companies with CGD companies

• Unauthorized infrastructure development
SAFETY INITIATIVES & BEST SAFETY PRACTICES

Safety Awareness programs for customers:
Safety Clinics for CNG consumers are organized for checking CNG kits

- Safety awareness information is broadcasted through FM radio

SAFETY INITIATIVES & BEST SAFETY PRACTICES

- Animated Films for Customer Awareness are developed and are shown during safety awareness programs.
- Distribution of pamphlet of safety instructions/information to consumers
- Mobile training van is designed to effectively address safety training needs for various target groups at their premises.
- Mobile training van is equipped with all latest training aids and live fire fighting demo module.
SAFETY INITIATIVES & BEST SAFETY PRACTICES

Safety Training Programs for Employees & Contract Staff:

Safety & Technical Competency Training is imparted internally as well as through certified third parties along with the Live Fire Fighting Training before deploying the staff on duty.

- IGL Employees - One Day Module (Annually)
- Contract Staff (Less than 2 years old) - Two Day Module (Annually), Refresher (Quarterly)
- Contract Staff (More than 2 years old) - One Day Module (Annually), Refresher (Quarterly)

Validation of Cylinders:

- Indraprastha Gas Limited has strictly implemented requirement of compliance plate/hydrostatic testing of cylinders in due course of time through distribution of educating pamphlets, newspapers ad, FM radio announcements and then strict implementation ensured.
- Compliance Plate is checked for validity and to ensure healthiness of cylinder before refilling of gas.
- Expression of interest for enhancing the CNG cylinder validation infrastructure invited in 2014 and more than 20 new CNG cylinders testing centres were added during the initiative.

CNG Vehicles’ Valid Compliance Plate is mandatory for gas filling.
SAFETY INITIATIVES & BEST SAFETY PRACTICES

Initiatives to Prevent Third Party Damages:

- **Route markers** are installed over pipeline route to inform public in general about pipeline location.
- **Round the clock patrolling** of pipeline route is carried out by patrolling staff and if any activity is being carried out in proximity of gas pipeline is informed immediately to concerned Control Room to take suitable action.
- **Tracking of patrolling staff** is monitored through Vehicle Tracking System.
- **Coordination with other utility companies and agencies** has been improved and any work near proximity of pipeline is done through proper planning. FM radio campaigns are conducted.

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SAFETY INITIATIVES & BEST SAFETY PRACTICES

- **State of the Art Fire Fighting and Emergency Response arrangements** are provided for CNG and PNG installations as per relevant codes and Standards.

  - CO₂ Flooding System
  - DCP System (Bus Dispensers)
  - High Capacity DCP System (for Cascades)
  - High Pressure Water Mist Foam System
  - Emergency Response Vehicles
SAFETY INITIATIVES &
BEST SAFETY PRACTICES

MOCK DRILLS TO PRACTICE EMERGENCY RESPONSE & DISASTER
MANAGEMENT PLAN (ERDMP)

For any emergency IGL has a well defined Emergency Response and Disaster Management (ERDMP) duly approved by PNGRB.

Accordingly regular mock drills are rehearsed at CNG stations and PNG control rooms and suitable action taken on recommendations and observations.

THANKS