



INDRAPRASTHA GAS

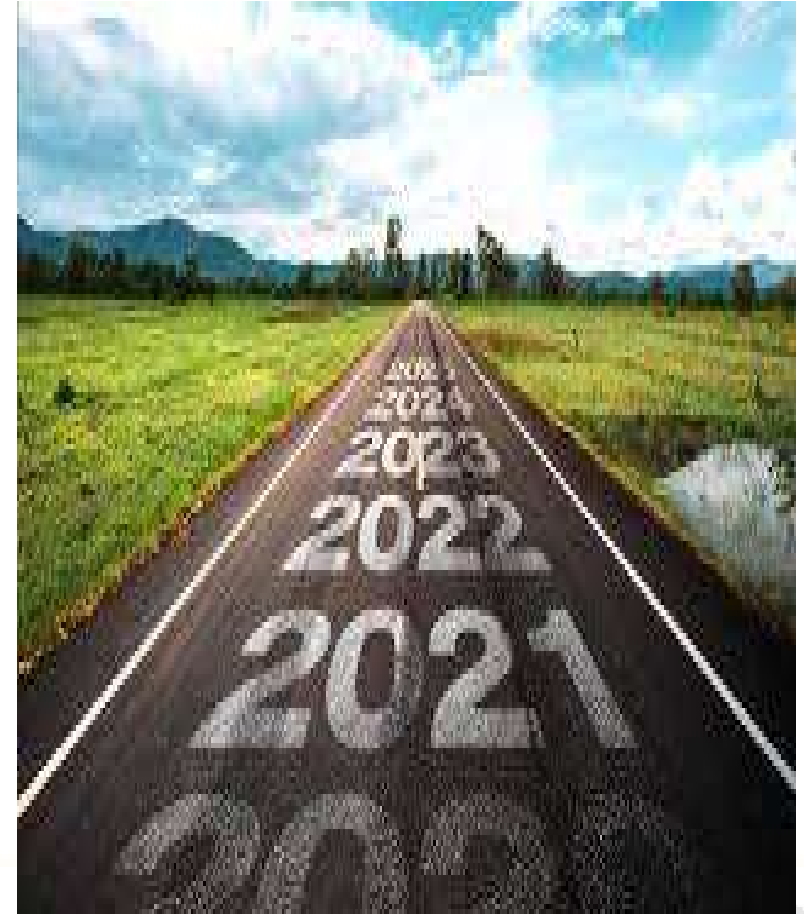
Best Practices, Digitalization & Asset Integrity in CGD Business



Presented by : -
Mr. Vikas Bansal
Vice President - IGL

TABLE OF CONTENTS

- ▶ IGL INFRASTRUCTURE GROWTH
- ▶ BEST PRACTICES IN IGL
 - ▶ STEEL PIPELINE
 - ▶ MDPE PIPELINE
- ▶ DIGITALIZATION
- ▶ ASSET INTEGRITY





INDRAPRASTHA GAS

IGL Presence in City Gas Distribution

Delhi and NCR

NCT of Delhi

Gautam Buddha Nagar

Ghaziabad & Hapur

Gurugram

Haryana

Karnal

Kaithal

Rewari



Uttar Pradesh

Kanpur (part),
Hamirpur and
Fatehpur

Muzaffarnagar, Meerut
& Shamli

Chitrakoot, Banda &
Mahoba

Rajasthan

AJMER

PALI

RAJASAMAND

4
States

32
Districts

11
GA's

Infrastructure	Since Inception Till - DEC'24
MDPE Laid (KMs)	26000 Kms
Steel Pipeline Laid (KMs)	2300 Kms

NATURE OF BUSINESS	TOTAL NO.
No. of CNG Stations	900
No. of Domestic Customers	29 Lakhs Approx.
No. of Commercial Customers	6600
No. of Industrial Customers	5100

Note: Above data contains value till 31.12.2024

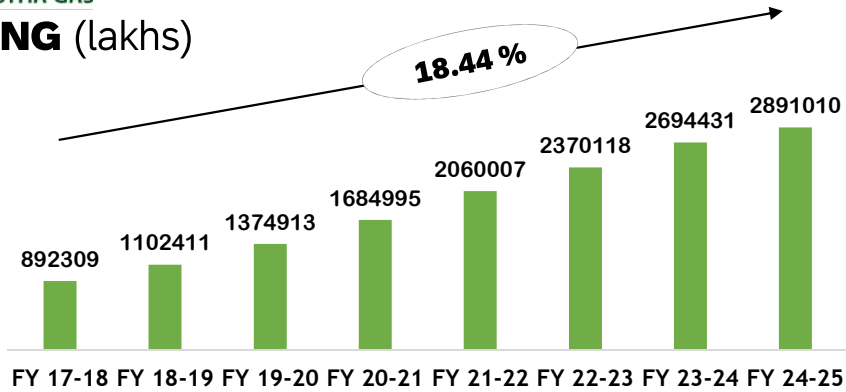




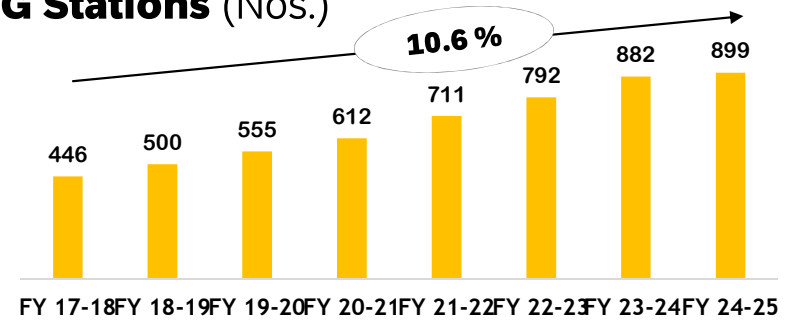
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Physical Performance (Cumulative)

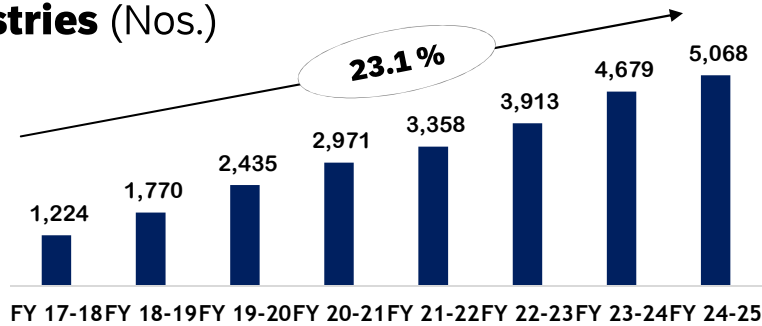
DPNG (lakhs)



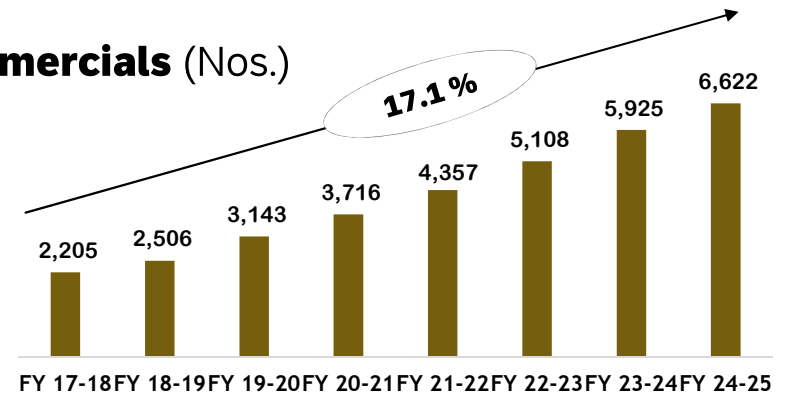
CNG Stations (Nos.)



Industries (Nos.)



Commercials (Nos.)



As on date 31.12.2024

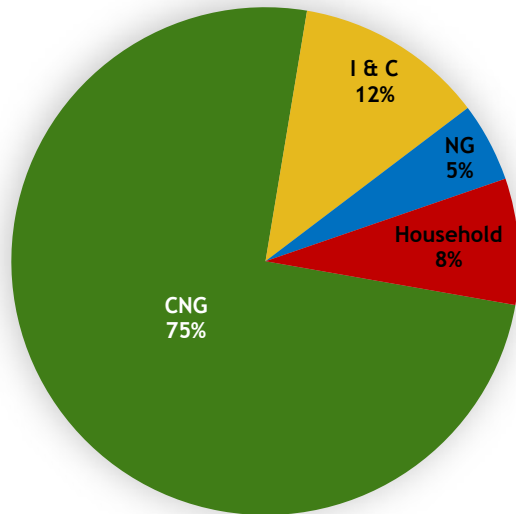




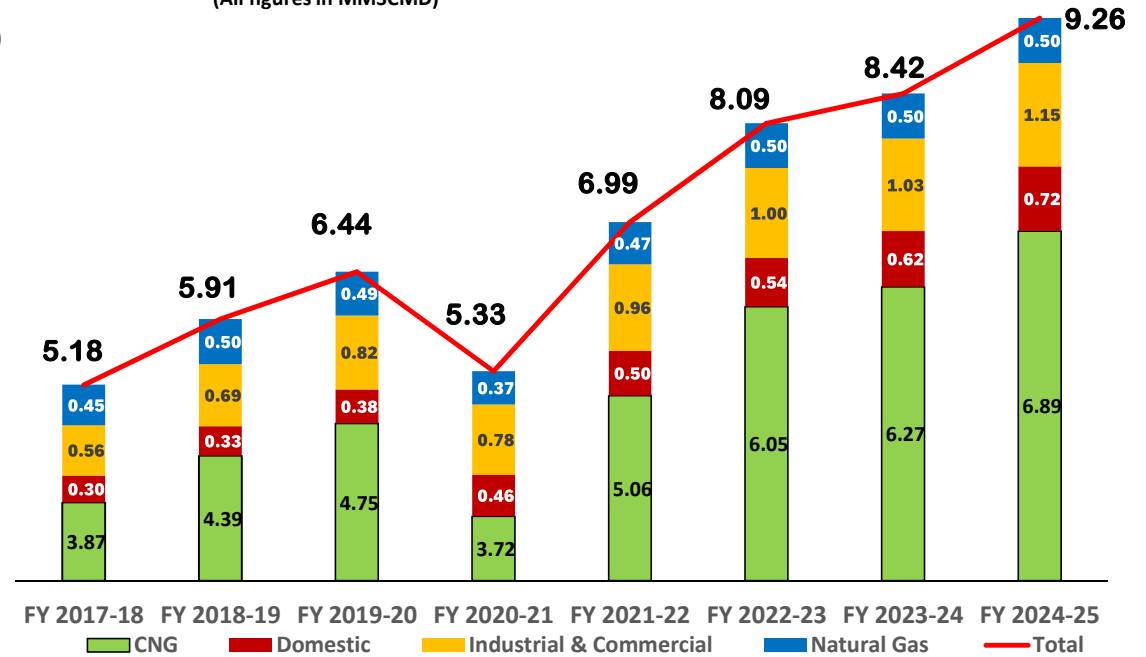
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Sales Volume Mix

Total Sales – 9.42 mmcmd (FY2024-25)



(All figures in MMSCMD)



Delhi : 5.55 mmcmd

UP : 2.38 mmcmd

Haryana: 0.75 mmcmd

Rajasthan : 0.09 mmcmd

NG: 0.50 mmcmd





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BEST PRACTICES IN IGL



MDPE PIPELINE



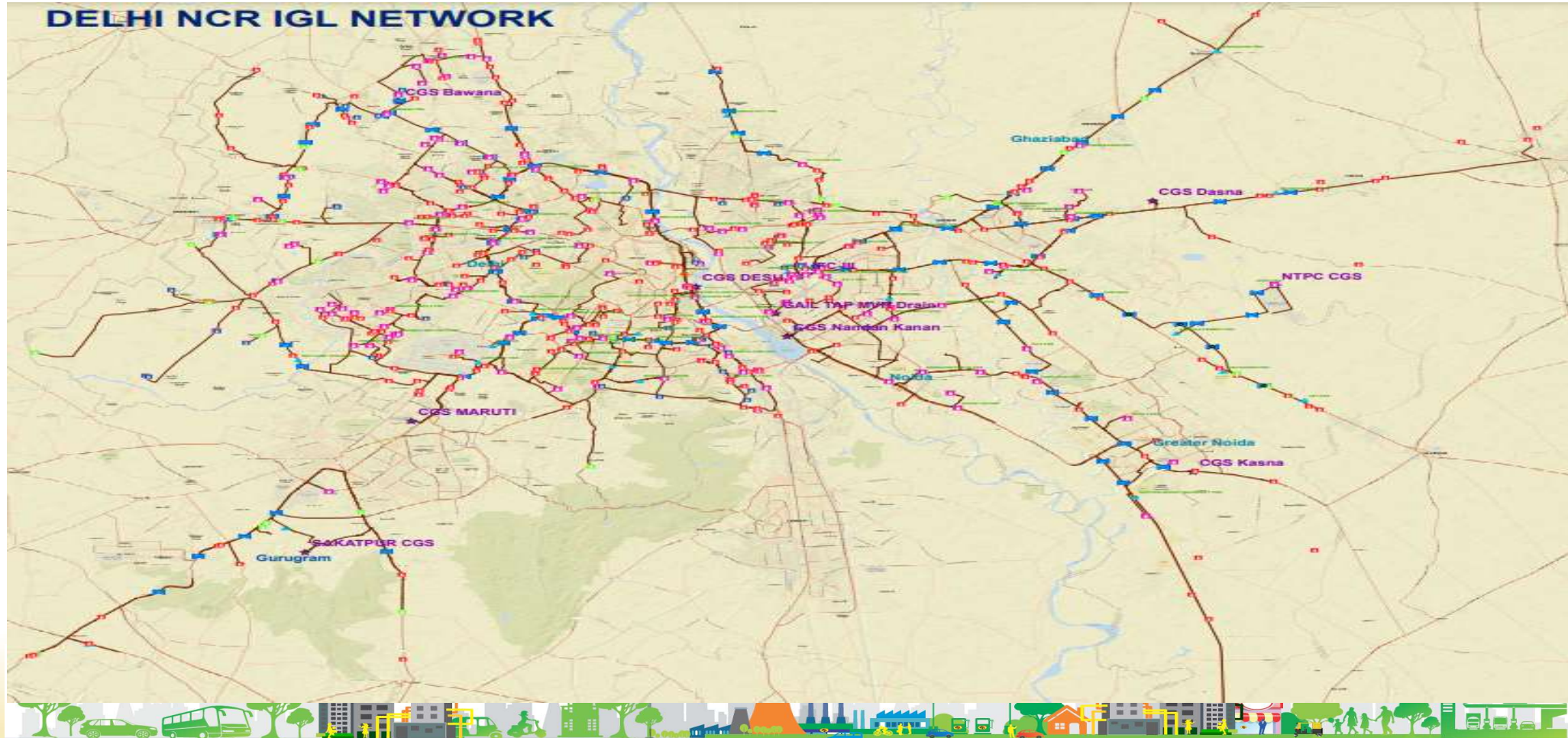
STEEL PIPELINE





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IGL Steel Pipeline Network





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ODORISATION





BEST PRACTICES IN ODORISATION

	PREVIOUS PRACTICES	PRESENT PRACTICES
ODORANT		
PARAMETER	ETHYL MERCAPTAN	80%TBM+20%MES
NAME	ETHYL MERCAPTAN	TERTIARY BUTYL MERCAPTAN + METHYL ETHYL SULPHIDE
BOILING POINT	35 degC	65 degC
Fading Effect	More Fading Effect	Lesser Fading Effect than EM
Chemical Name	EM	SCENTINNEL S20 (M/s U3S) SPOTLEAK (M/s VARICON)
OTHER ACTIVITIES		
ODORANT TANK RE-FILLING	MANUAL PUMPING MENTHOD	MILK-MAN CONCEPT
DOZING	TIME-BASED	FLOW-BASED
MONITORING	MANUAL	ONLINE THRU SCADA PORTAL





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ODORISATION UNIT SCADA PORTAL

ODORIZING UNITS (DELHI-NCR)										
UNIT NAME	DESU CGS	NOIDA CGS	MARUTI CGS	DASNA CGS	KASNA CGS	HTPC DABRI	BARANA CGS	GT KARNAL BTC	HANGLOI BTC	SAKATPUR CGS
UNIT LOCATION	DELHI	NOIDA	GURUGRAM	GHAZIABAD	GREATER NOIDA	GREATER NOIDA	DELHI	DELHI	DELHI	GURUGRAM
VENDOR	CPL	CPL	CPL	VARICON	VARICON	VARICON	VARICON	VARICON	VARICON	VARICON
UNIT STATUS	RUNNING	RUNNING	RUNNING	RUNNING	RUNNING	RUNNING	RUNNING	RUNNING	STOPPED	RUNNING
ODORANT INJECTION MODE	FLOW BASED	FLOW BASED	FLOW BASED	FLOW BASED	FLOW BASED	FLOW BASED	FLOW BASED	FLOW BASED	FLOW BASED	FLOW BASED
ODORANT TANK LEVEL	0 Kg	961 Kg	0 Kg	0 %	0 %	0 %	35 %	0 %	0 %	0 %
NG FLOW RATE	14.08 m3/s	0.00 m3/s	2.30 m3/s	3.09 m3/s	1.84 m3/s	6.89 m3/s	0.00 m3/s	0.14 m3/s	0.00 m3/s	0.12 m3/s
ODORANT INJECTION RATE	25.0 mg/m3	25.0 mg/m3	10.0 mg/m3	25.0 mg/m3	25.0 mg/m3	25.0 mg/m3	8.0 mg/m3	8.0 mg/m3	6.0 mg/m3	25.0 mg/m3
STROKE COUNT	3823196	19020867	1520815	3932283	1826299	2907196	263208	679315	794132	2888373
ODORANT INJECTION TOTALIZER	0 g	66222140 g	2024891 g	249111 g	986096 g	1927201 g	1027304 g	49927 g	138373 g	248654 g
YESTERDAY'S INJECTION TOTAL	0 g	20796 g	0 g	3400 g	8639 g	15096 g	9798 g	0 g	0 g	1320 g
LAST 10 DAY'S INJECTION AVERAGE	-2147483648 g	543992 g	-2147483648 g	1271 g	4832 g	14991 g	8788 g	-2147483648 g	-2147483648 g	1300 g





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SECTIONALIZING VALVES



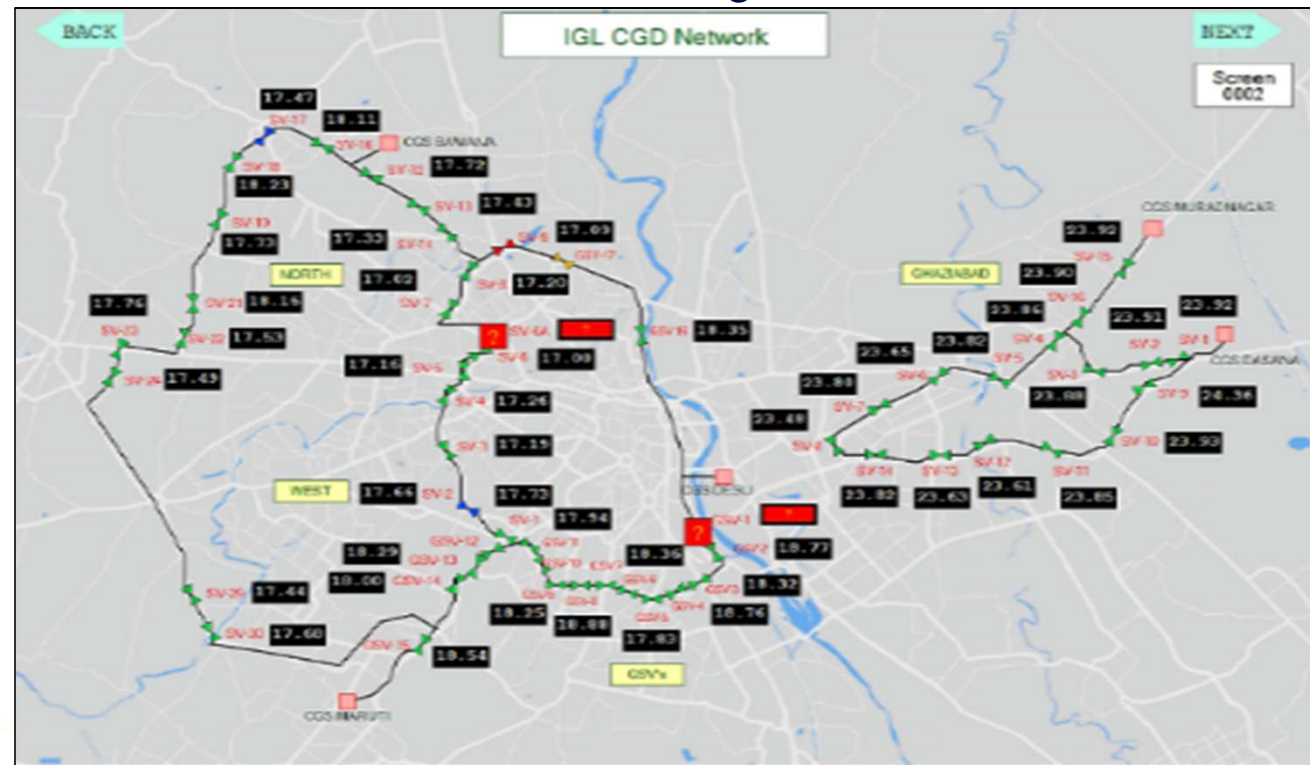


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IMPLEMENTATION OF SCADA

Remote Pressure Monitoring and Operation of Sectionalizing Valves

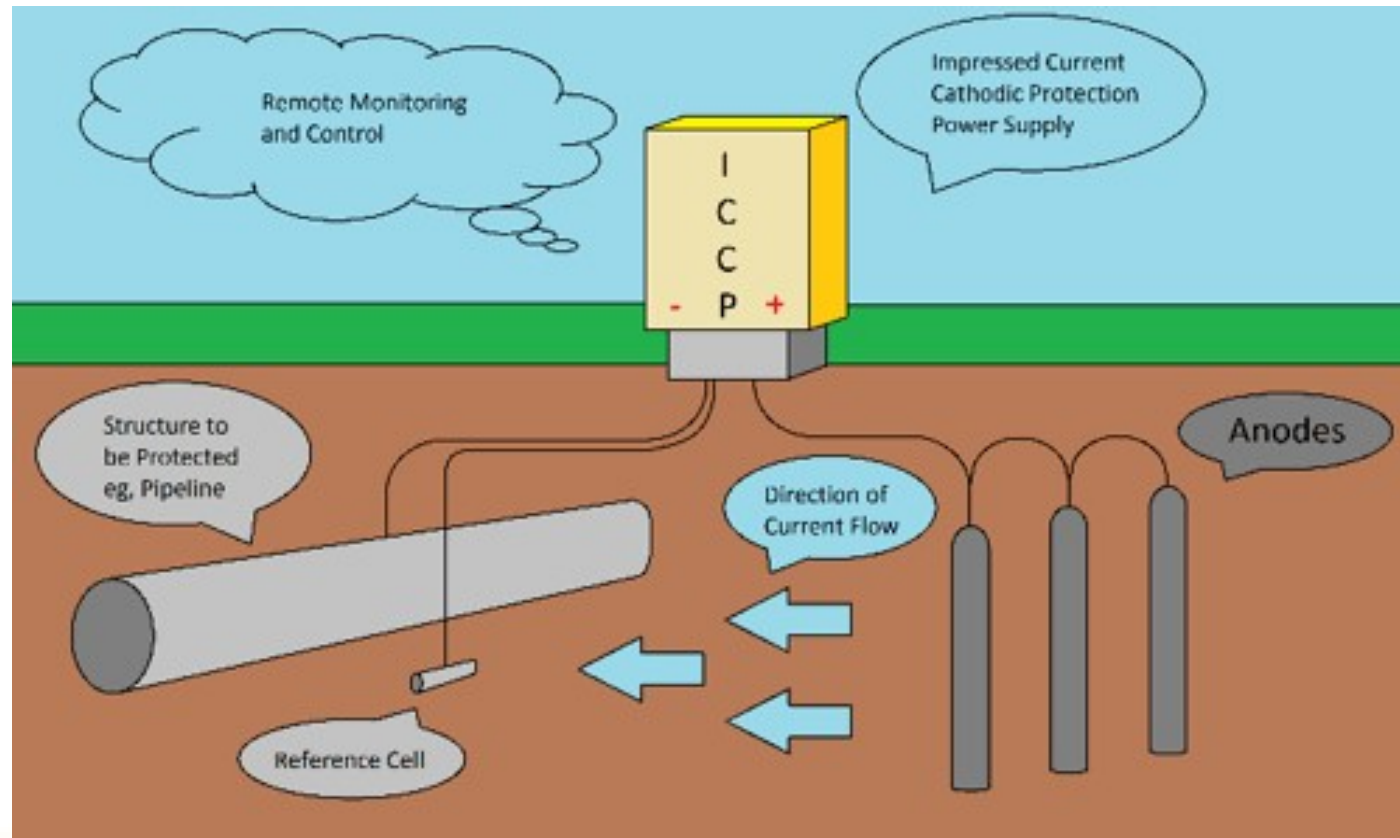
- ▶ SCADA coverage:
 - ▶ Mostly SVs are installed on 8" or above dia pipeline.
 - ▶ 56 SVs are online on SCADA which can be operated (Open/Close) from central control room in case of exigencies.





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Transformer-Rectifier Unit (PCP)



Transformer-Rectifier Unit (PCP)

- ▶ A current interrupter is a switch that turns on and off rectifiers for cathodic protection (CP) tests. It allows technicians to measure the potential of a pipeline when the current is on and off. This information helps determine the effectiveness of the CP system.
- ▶ The interrupter allows the technician to measure the polarization level of the pipeline.
- ▶ The interrupter eliminates IR drops in the circuit, which allows the technician to measure the true polarization current.





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TRU SCADA PORTAL

REMOTE DATA Home Alarms Report

Indraprastha Gas Limited 03/12/2024 02:27:4

TRU Summary

Station Name	Date Time	TRV (Volts)	TRI (Amps)	Ref (V/A)	ACV (Volts)	TR Run Hrs (Hrs)	TR Door Status	Ovr Prot	Und Prot	Fail
Pushpa Bhawan CNG	03/12/2024 08:00:23	3.03	1.02	-1.274	212.4	14083.8	CLOSE	Normal	Normal	Normal
DKKPL Metcalfe CNG	05/11/2024 19:09:01	2.42	0.7	-1.364	249.4	490.1	OPEN	Normal	Normal	Normal
Gail Desu	03/12/2024 09:00:00	5.76	8.73	-1.152	257.2	9581.8	CLOSE	Normal	Normal	Normal
Chatarpur Do Do	03/12/2024 09:00:00	2.12	0.91	-1.605	216	1151.1	CLOSE	Normal	Normal	Normal
Naglamachi	03/12/2024 09:30:03	4.09	0.8	-1.337	232.5	7315.6	OPEN	Normal	Normal	Normal
DSIDC OKHLA PHASE 2	03/12/2024 09:00:00	3.78	2.68	-1.292	235.5	1963.4	CLOSE	Normal	Normal	Normal
Sawada Ghevra	21/06/2024 13:24:52	0.93	0.49	-1.126	236.8	8937	OPEN	Normal	Normal	Normal
Shakrpur	03/12/2024 09:00:00	3.24	2.51	-1.071	227.6	5236.5	CLOSE	Normal	Normal	Normal
AANAND PRABAT										
DIMMS Dwarka										
Nanakpayau	03/12/2024 00:00:06	1.1	0.54	-1.186	242.3	9437.8	OPEN	Normal	Normal	Normal
Mayur Vihar	03/12/2024 08:00:16	3.05	1.79	-1.245	239.4	9565	CLOSE	Normal	Normal	Normal
Gourav Ent, Sidhrwali,	03/12/2024 10:37:49	1.43	0.95	-1.272	249.6	4967.5	OPEN	Normal	Normal	Normal





PIPELINE ROUTE LOCATOR

- ▶ A steel pipeline locator is a device that can find the location, depth, and direction of underground steel pipelines. It can also detect damage to the pipeline's coating layer.
- ▶ EM locators utilize an electromagnetic radio frequency transmitter and receiver to identify utility lines. The transmitter sends out a radio signal in a specific frequency, which transmits through the conductive material in an underground pipe or other piece of infrastructure





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Pipeline Route Locator

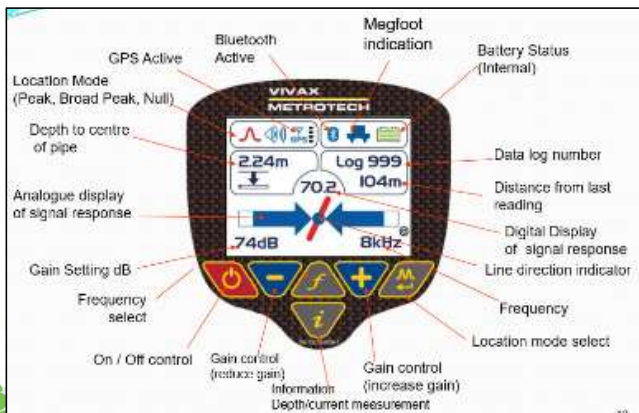
Receiver



Transmitter



Battery





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Locating pipeline with third party

- ▶ Locator is being used to detect the depth of the pipeline to avoid any damage during third party digging activities.





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HOT TAPPING

- Hot tapping is an alternative technique that allows the connection to be made without shutting down the system and venting gas to the atmosphere.
- The process involves attaching branch connections and cutting holes into the operating pipeline without interruption of gas flow, and with no release or loss of product.
- This method help reducing the gas venting and further gas loss.





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VIDEOGRAPHY FOR PIPELINE

- IGL took the initiative for pilot project of equipping Patrollers with cameras on their helmet for pipeline monitoring.
- Time Saving, Evidence Collection, Remote Monitoring, Enhanced Surveillance, Incident Documentation etc. are its key features.



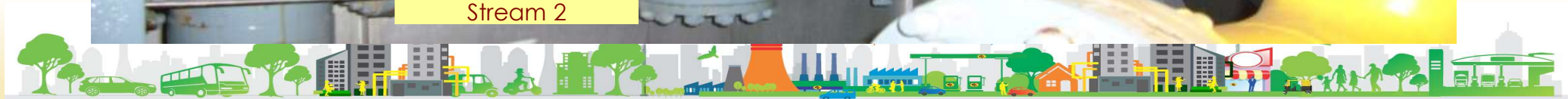
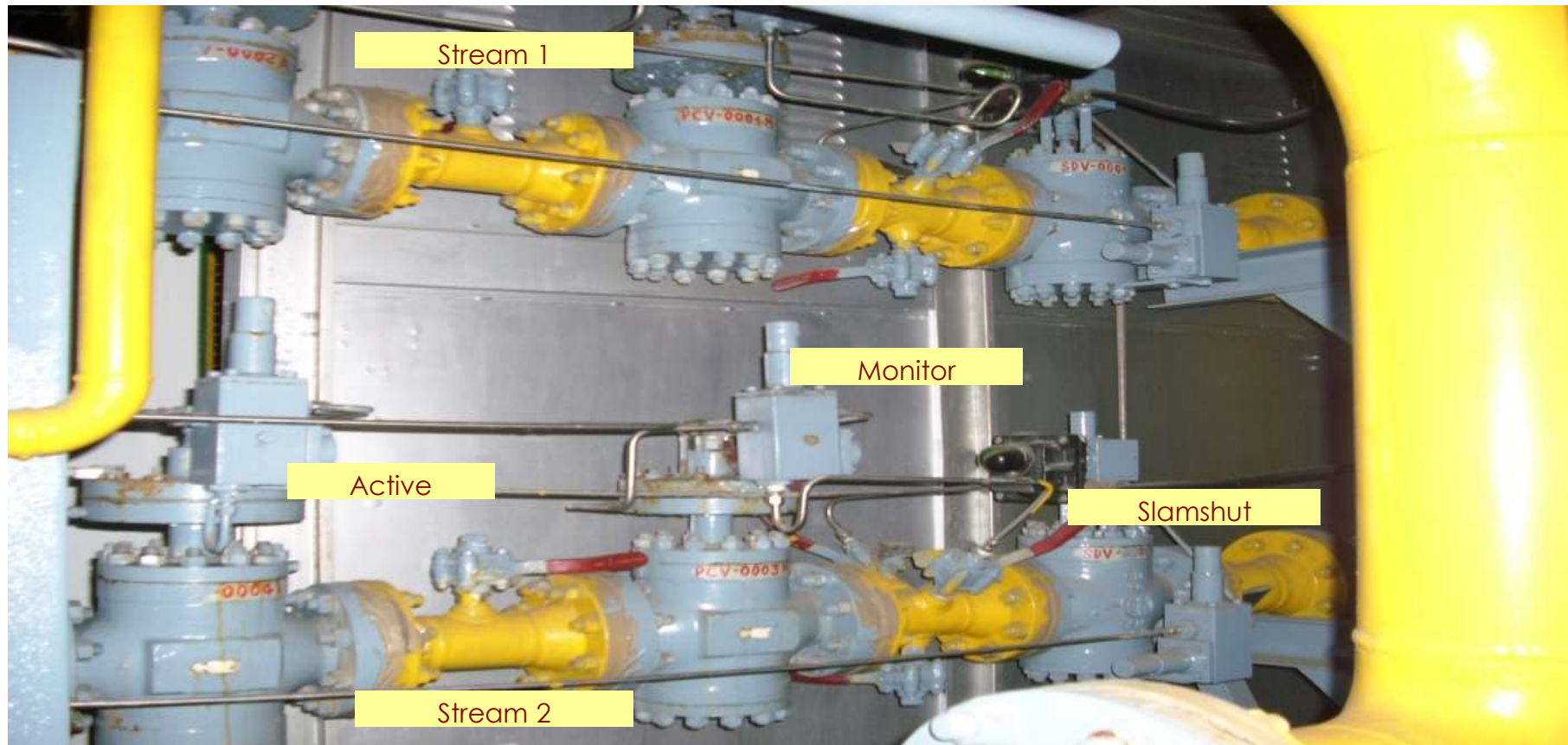
BEST PRACTICES IN MDPE





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FIELD REGULATING STATION (FRS)





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FRS SCADA PORTAL

Home Jun 21, 2024

- Station Map
- Control Room Overview
- Report Generation
- DELHI
- NOIDA
- CHAZIABAD
- REWARI
- MUZAFFARNAGAR
- PNG
- PNG_DELHI**
- DLSHADGRDN_FRS
- GURUGRAM

Indraprastha Gas Limited

Incorporated in 1996, IGL took over Delhi City Gas Distribution Project in 1999 from GAIL (India) Limited (Formerly Gas Authority of India Limited).

The project was started to lay the network for the distribution of natural gas in the National Capital Territory of Delhi to consumers in the domestic, transport, and commercial sectors. With the backing of strong promoters - GAIL (India) Ltd. and Bharat Petroleum Corporation Ltd. (BPCL) - IGL plans to provide natural gas in the entire capital region.

The transport sector uses natural gas as Compressed Natural Gas (CNG), the domestic and commercial sectors use it as Piped Natural Gas (PNG) and R-LNG is being supplied to industrial establishments.

IGL continues to augment its infrastructure so as to meet the increasing demand of CNG arising out of growing number of CNG vehicles in Delhi. The growth drivers for increase in demand of CNG are - car manufacturers coming up with CNG variants and Delhi Government's directive making it mandatory for all LCVs operating in Delhi to run on CNG. The company is in the process of enhancing its compression capacity by adding new stations.

On the PNG front, IGL has planned to expand its business activities in Delhi and its neighbouring towns like Noida, Greater Noida and Ghaziabad. Our customers will now be benefited with supply of PNG for non cooking applications like Geysers also. IGL is also working towards expanding its PNG network to cover all charge areas of Delhi.

#	Parameter	Value	#	Parameter	Value
1	SKID INLET PRESSURE	18.30 Bar	2	STREAM 1 METERING PRESSURE	3.93 Bar
3	STREAM 2 METERING PRESSURE	3.87 Bar			

Temperature Parameters

#	Parameter	Value	#	Parameter	Value
1	STREAM 1 METERING TEMPERATURE	27.04 deg C	2	STREAM 2 METERING TEMPERATURE	27.75 deg C

Other Parameters

#	Parameter	Value	#	Parameter	Value
1	STREAM 1 CORR VOL FLOW RATE	1,148.79 scmh	2	STREAM 2 CORR VOL FLOW RATE	1,140.00 scmh
3	STREAM 1 CORR VOL TODAY TOTAL	13,696.25 scm	4	STREAM 2 CORR VOL TODAY TOTAL	13,583.81 scm
5	STREAM 1 CORR VOL YST TOTAL	25,039.45 scm	6	STREAM 2 CORR VOL YST TOTAL	25,206.02 scm
7	STREAM 1 CORR VOL TOTAL	23,380,480.00 scm	8	STREAM 2 CORR VOL TOTAL	23,918,670.00 scm
9	STREAM 1 UNCORR VOL TOTAL	4,701,897.50 m3	10	STREAM 2 UNCORR VOL TOTAL	880,024.88 m3





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DE-COMPRESSION UNIT



Jan 19, 2025 12:48:29 PM
gc 2 Foy Sagar Road
Rawat Nagar
Ajmer Division
Rajasthan





DE-COMPRESSION UNIT

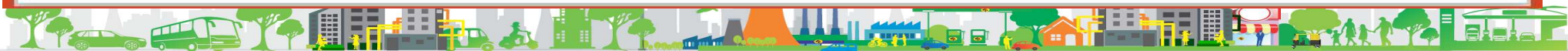
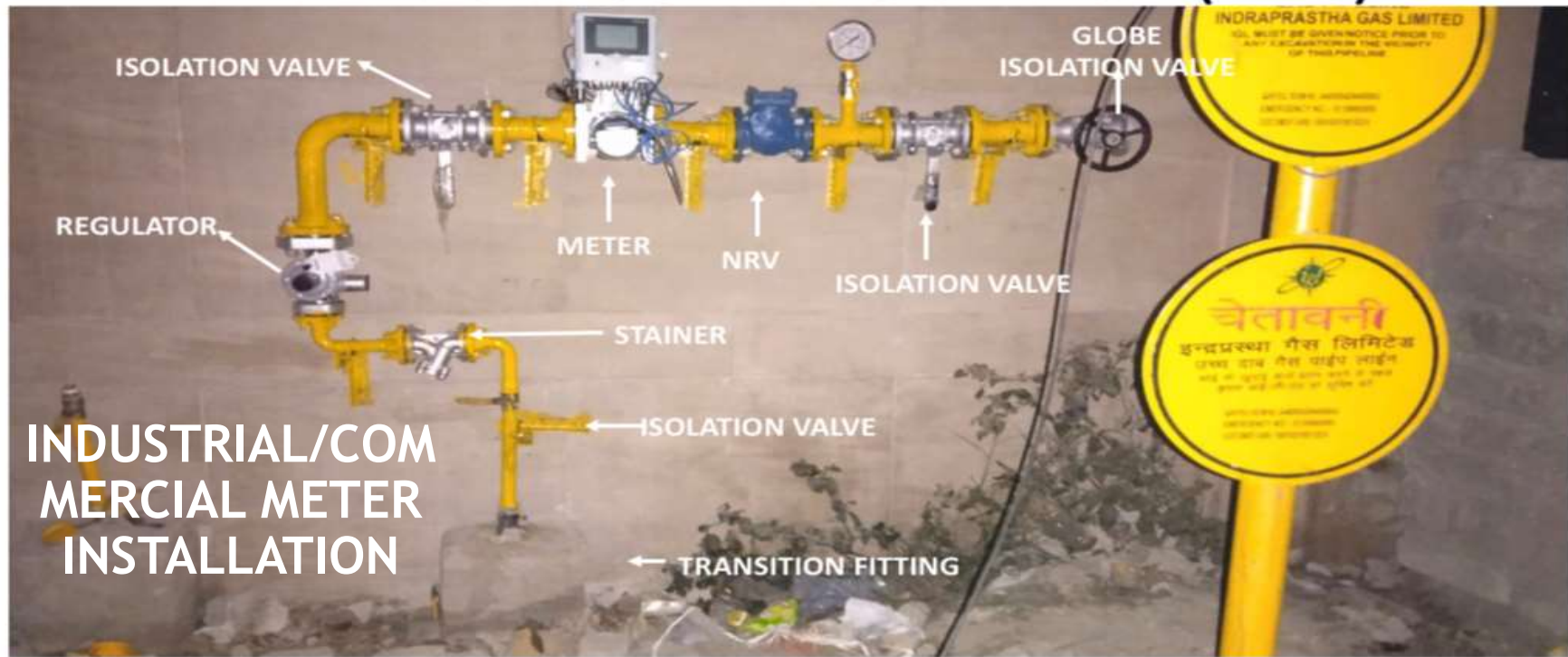
- ▶ A DCU (Decompression Unit) is a crucial piece of equipment in the natural gas supply chain, particularly for domestic and Industrial & Commercial (I&C) customers.
- ▶ Key Components and Process
- ▶ **Two-Phase Decompression:** The DCU unit decompresses the gas in two stages: 1. First Regulator: Reduces the pressure from 250 bar to 20 bar. 2. Second Regulator: Further reduces the pressure from 20 bar to 4 bar.
- ▶ **Gas Heater:** To prevent icing on the tubes, the gas passes through a gas heater. The heater consumes natural gas to heat water, which in turn transfers heat to the gas.
- ▶ # Capacity and Applications
- ▶ **Capacity:** IGL uses DCUs with capacities of 500 SCMH (Standard Cubic Meters per Hour) and 1000 SCMH.
- ▶ **Applications:** DCU units are employed to supply natural gas to domestic and I&C customers in areas where steel pipelines are not available.





INDUSTRIAL/COMMERCIAL METER INSTALLATION

METERING REGULATING STATION (MRS)





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CAGING INDUSTRIAL/COMMERCIAL METER INSTALLATION

1. Y-strainer
2. NRV
3. Caging
4. Lock n Key arrangement
5. AMR Meter
6. Yearly Load testing
Qmin, Qmax





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LASER DETECTOR GAS LEAKAGE

- ▶ Laser Gas Detector is based on utilization of laser absorption spectrophotometer of methane gas for gas measurement.
- ▶ Detection Distance range is 0.5 - 30 Meters.
- ▶ Detection Limits for methane column density (ppm-m) is 1 - 50,000 (ppm-m) methane density (ppm) multiplied by the thickness (m)
- ▶ OEM of these detectors are
 - ▶ TOKYO GAS ENGG, JAPAN
 - ▶ HENAN ZHONG, CHINA





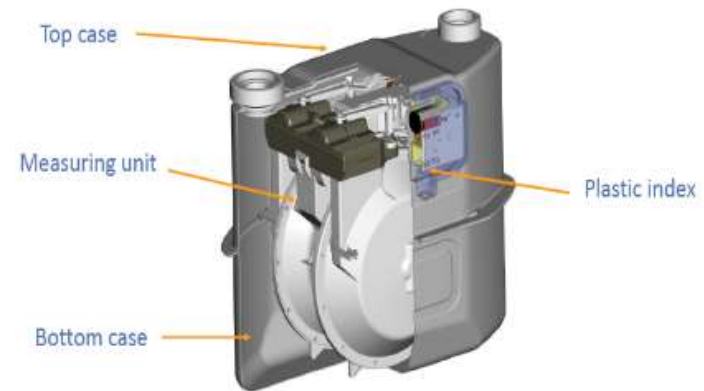
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GAS METERS

- **Diaphragm gas meters** are positive displacement meters or volumetric flow meters. As the name suggests, they work by measuring the exact volume of gas as it passes through the chamber compartments. Contains two movable diaphragms. Gas flow directed to fill one diaphragm as the other discharges and then redirected to fill the discharged diaphragm while the full diaphragm discharges. This flow causes movement in levers that drive a counter mechanism.
- Available meters G1.6, G.4, G6,G10, G16, G25, G40



Diaphragm Meter - Design





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AMR DEVICES FOR DOMESTIC METER READING

- ▶ Provide a solution to improve meter reading efficiency and eliminate billing data manipulation without having to intrude into the consumer premises.
- ▶ Approx 4.0 Lakhs AMR Meters have been installed.
- ▶ Eliminate manual meter reading.
- ▶ Better quality of data.





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SHORT-CODE (EMERGENCY NO.)

Emergency number 155216 can now be dialled across the nation in case of any Emergency.

1. Being a public utility the need for common Emergency contact number was felt and the request for the same was put up to Department of Telecommunication.
2. DOPT was persuaded for the same and after rigorous efforts the request was accepted and the SHORTCODE “155-216” was assigned to IGL and the same was communicated to the telecom operators across India to map the Number for IGL.
3. IGL then chose MTNL to set up the arrangement at central location to handle emergency number and MTNL communicated to map the SHORTCODE on their communication network .



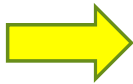


INDRAPRASTHA GAS

ROUTE MARKERS



RCC Markers



Stone Markers



Steel Pole Markers



FRP Pole Markers

1. We replaced RCC Markers with Stone Markers and Steel pole markers with FRP Pole Markers
2. Its reduces theft issues, lower maintenance.





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THIRD PARTY DIGGING ACTIVITIES



PATROLLING

Around **900 security guards** ensure safety of pipelines



ERV

Strategically located round the clock manned by qualified, skilled and experienced staff State of Art **Emergency Response Vehicles**



APP BASED SAFETY WORK PERMIT SYSTEM

All activities are done through

- **Hot work Permit & Cold work Permit**



CBUD

Call Before you dig initiative in line with GOI directive



GIS (Geographical Information System)



GIS System

PNGRB Compliance

Data Sharing with PM Gati Shakti and GSDL

Multiple Asset Visualization on single platform as per Spatial Location

Better Decision Making and Planning for Expansion

Improved and Transparent Data Sharing across users



Asset Management



- ✓ **Automated Scheduling** for Maintenance / Monitoring Activities.
- ✓ **Historical Digital Record Keeping** of Maintenance parameters for different asset class.
- ✓ **System generated** reports ISO formats

Outage Management



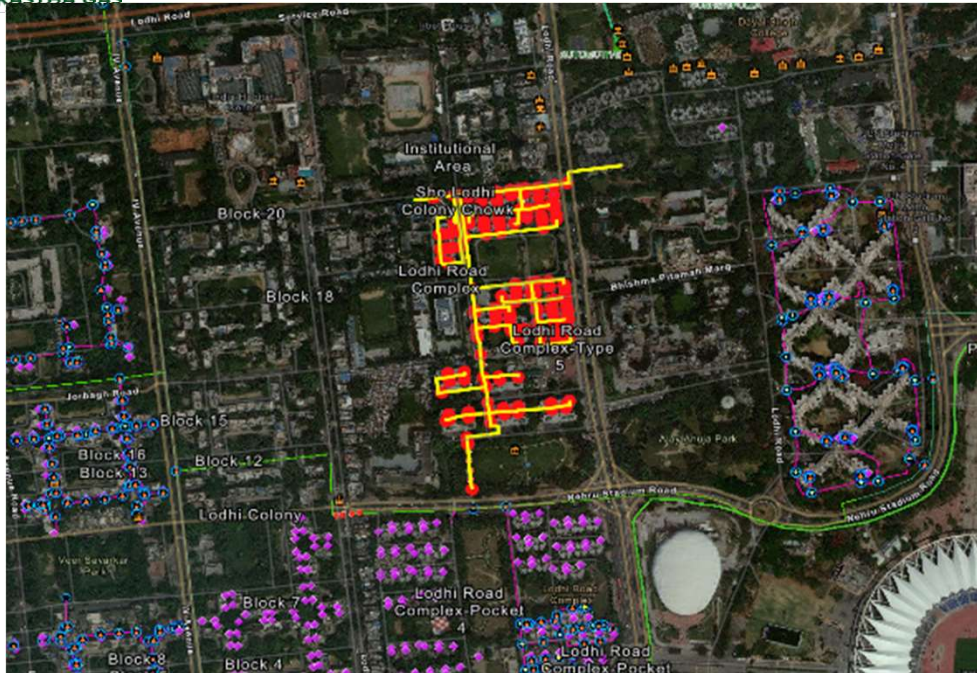
- ✓ **Identify** Valves to be closed
- ✓ **Share** outage location with O&M and F&S in charges and management.
- ✓ **Generate Outage Report** with Summary of affected customers .
- ✓ **Send Notification to affected customers** with estimated time of restoration.





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GIS (Geographical Information System)

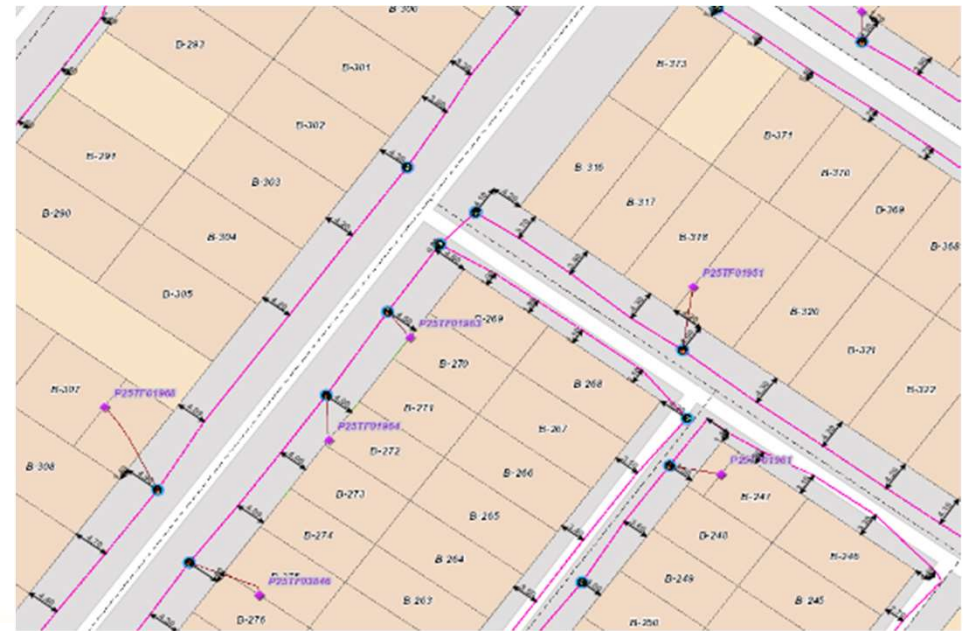


ABD Digitization :

- ✓ Reducing Dependency on paper based maps.
- ✓ Accessibility from everywhere

Network Tracing:

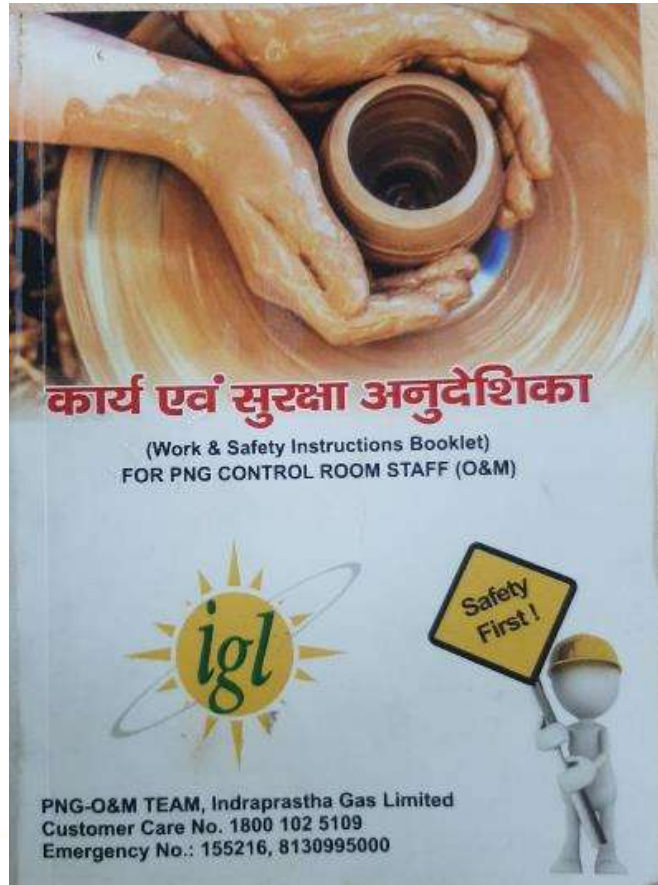
- ✓ Identifying Valves to be closed in case of Outage
- ✓ Identifying impacted network & Customers in case of outage



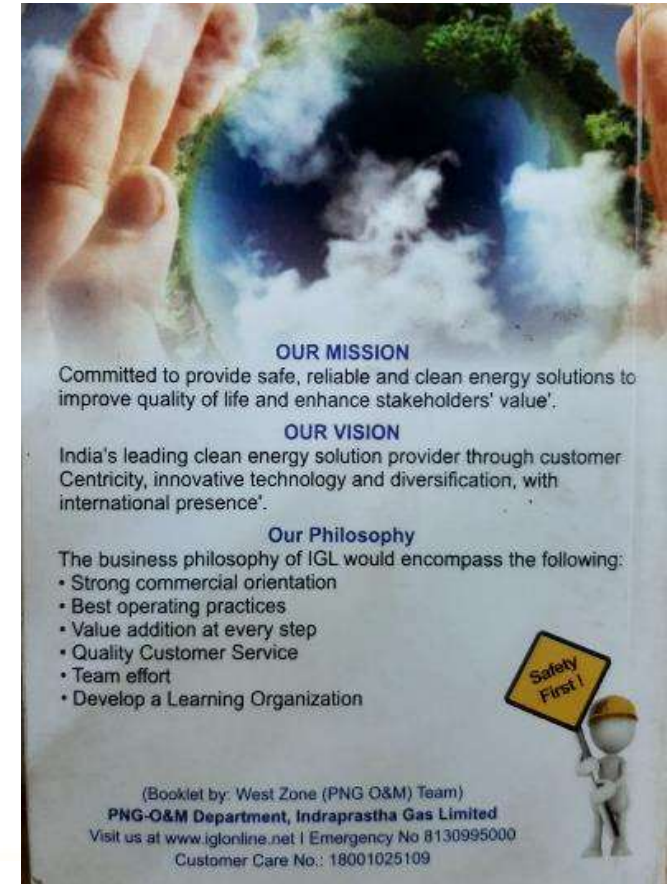


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SOP BOOKLET



SOP BOOKLET designed in Hindi for Technicians, Plumbers and helpers





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SAFETY AWARENESS SMS TO CUSTOMERS

▶ IN HINDI

- ▶ "प्रिय PNG गैस उपभोक्ता, दिवाली पर्व की हार्दिक शुभकामनाएँ !! त्योहारों के इस सीज़न में सुरक्षा की दृष्टि से पटाके व दीये/मोमबत्ती IGL गैस पाईपलाइन से हटकर जलाएँ। किसी भी प्रकार की आग या गैस लीकेज की स्थिति में IGL 24x7 आपातकालीन न०. 8448588516, 8448588517, 8130995004, 8130995000, 155216 पर तुरन्त सम्पर्क करें। कृपया इस मैसेज को अधिक से अधिक शेयर करें! PNG कंट्रोल रूम, इंद्रप्रस्थ गैस लिमिटेड!

▶ IN ENGLISH

- ▶ "Dear PNG Users "Happy Diwali" In this festive season, for safety purpose, keep crackers/diyas away from IGL yellow colored gas pipeline. For your own safety do not allow digging work near IGL P/L. In case of fire/gas leakage, contact IGL at 8448588516, 8448588517, , 8130995004, 8130995000, 155216. Team IGL

SMS for festival like Diwali

- ▶ "Dear Valued Customer, IGL gas pipeline damaged by M/s Delhi Jal Board while carrying out the digging activities, IGL is carrying out pipeline repair work on {#var#} from {#var#} to {#var#} in {#var#}. PNG supply shall be affected during this period. Please do not use PNG and keep your gas appliance closed till the restoration of gas supply. For any emergency please contact {#var#} on {#var#}/{#var#}.

- ▶ "Dear Valued Customer, We would like to inform you that the emergency repair work of natural gas pipe line in your society is completed and gas supply restored. Thank you for your co-operation. For any emergency please contact {#var#} on {#var#}/{#var#}. Team IGL

SMS for any shutdown or damage





HAPPY CODE

IGL Service Ticket: 9912821512, Temporary Disconnection Personal Reason

Back

Save | Cancel | New | New from Template | Create Follow-Up | Auto Complete | Find Related Problems | Create New BP

(2) [User Icon]

Find Knowledge Articles | More

General Data

Service Ticket ID: 9912821512
Description: Temporary Disconnection Personal Reason
Customer: Mr. Faroj Sharma
BP Number: 4001732748
Employee Responsible: Mr. ABHISHEK ANAND
Service Team: D-Mkt
Created By: CALLCENTER23
Creation Channel: CCA
Connection Object: 100004968724
Disconnection Agent:
Collection Agent:
CA No: 400001530293
Job Performer: PNG MARKETING SUPPORT STAFF 9

Processing Data

Status: In process
Priority: Medium

Subject

Customer Segment: Domestic
Ticket Type: Temporary Disconnection Personal Reason
Category: Dom Service Requests
Status Reason: TD Done Without Device Removal
Reason:
Period From:
Period to:
Meter Number: SMT773196011132
Meter Reading: 52.894
Meter Reading Date: 19.01.2025
Customer Feedback: Very Satisfied
Girm Attachment: Yes
Happy code: 6482
Feedback Status: Happy Code Matched
Permit Number.:





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BEST PRACTICES IN DIGITIZATION

Digitization in CGD (City Gas Distribution) brings several benefits, including:

- ▶ **Improved Efficiency:** Automation and digitization of processes, such as billing, meter reading, and customer management, streamline operations and reduce manual errors.
- ▶ **Real-time Data Access:** Digital systems enable real-time monitoring of gas consumption, leak detection, and pipeline health, ensuring quick responses to potential issues.
- ▶ **Cost Reduction:** By minimizing human intervention and optimizing operations, digitization helps in cutting down operational costs, maintenance, and labor.
- ▶ **Better Customer Service:** Digitized platforms offer customers easier access to services, such as online bill payments, consumption tracking, and service requests, enhancing satisfaction.
- ▶ **Enhanced Safety:** Digital technologies help in monitoring the gas distribution network more effectively, detecting anomalies, and preventing accidents through predictive maintenance.
- ▶ **Scalability and Flexibility:** Digitized systems are easier to scale, allowing for seamless expansion of the distribution network and faster adoption of new technologies.
- ▶ **Data Analytics:** Leveraging data analytics tools enables CGD companies to gain insights into usage patterns, optimize distribution, and forecast demand more accurately.
- ▶ **Regulatory Compliance:** Digitization simplifies the tracking and reporting of data required for regulatory compliance, ensuring adherence to industry standards and guidelines.
- ▶ Overall, digitization fosters operational efficiency, safety, and customer satisfaction within CGD networks.





INDRAPRASTHA GAS

Digital Initiatives for Customers

Field MobilityApp

End to end process for customer registration for domestic connections

E-billing

70% customer subscribed e-bill/WhatsApp bill – Saving Rs. 7 cr. yearly

Online Payments

Online payments by 97% PNG Domestic customers & nearly 50 % CNG customers.



Communication Channel

Mobile App, Chat bot, IGL Website, 24*7 Customer Care Centre, Social Media Platforms such as Facebook, Twitter, Koo etc.

Industrial Customers

Online Registration, AMR (> 70%), Online payments facility through IGL Portal, Net Banking, E-bill facility, etc..

Call Centre

8000 call per day, Complaint Closure TAT Ach- 97%





METER TESTING AND INSTALLATION

7000xxxxxx40xxx...(max 300)

Select Vendor: Submit by Vendor

Select Vendor

- Select Vendor
- Iskraenergypvt.ltd.
- S.p.construction
- DIJARTI ASSOCIATES PRIVATE LIMITED
- ARADHYA ENTERPRISES
- Shreesiddhivinayakengineers
- K K Infra Projects
- S K ENGINEERS
- EXPOMITE DESIGNS PVT
- PRV ENGG CENTRAL

RFC Pending List

Total Pending Case - 10838, Assigned - 1684, UnAssigned - 9154, TPI Claims

Assign Unassign Change Priority

Excel CSV Copy

Priority	BP No.	SLA	Consumer Name	Mobile	Area	Society	H No	Pushed On	RFC Contractor	Claim Status	Job Status	CA Creation Date	Age
Assign Normal	4001862777	10	TARANUM	+919811432343	JAMIA NAGAR	JOHRIFARM NOOR NAGAR EXTENSION	A-28	2023-09-14 07:14:15	Pending	Pending	Pending	2023-09-13	00M1

Assign Pending cases to the RFC Contractor

7000xxxxxx40xxx...(max 300)

Select Priority: Submit

Select Priority

- Select Priority
- Normal
- Interested

RFC Pending List

Total Pending Case - 10842, Assigned - 1682, UnAssigned - 9160, TPI Claims - 15, Interested Customer - 116

Assign Unassign Change Priority

Excel CSV Copy

Priority	BP No.	SLA	Consumer Name	Mobile	Area	Society	H No	Pushed On	RFC Contractor	Claim Status	Job Status	Creation Date	Age
Assign Normal	4001863664		ANIL KUMAR	9818621663	NLW RAJENDR NAGAR	BLOCK F	F-263	2023-09-14 07:11:21	Pending	Pending	Pending	2023-09-14	00M1
Assign Normal	4001863897		USHA	7827858091	BAJURI GARDEN	BANK ENCLAVE	16	2023-09-14 07:11:30	Pending	Pending	Pending	2023-09-14	00M1



Change the Priority of the Customer



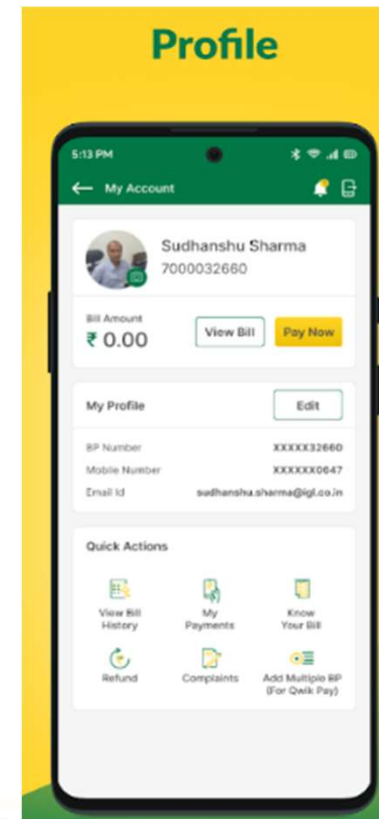
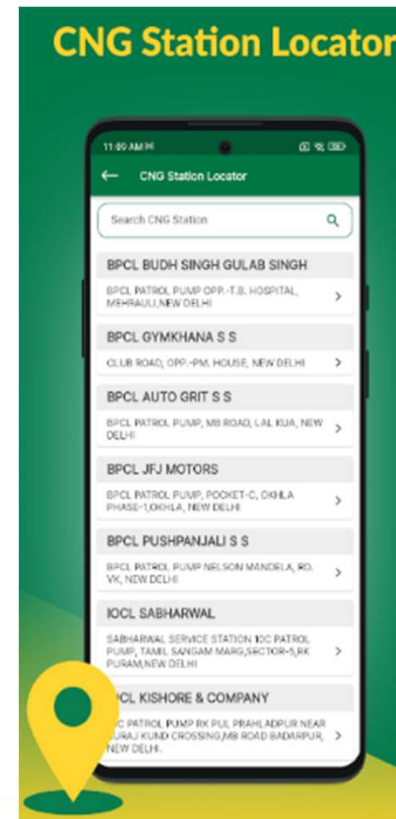


ONE STOP SOLUTION FOR CUSTOMERS

IGL Connect Application

IGL connect serve as a one stop solution for Natural Gas Customers of IGL.

- ✓ New customer registration request for PNG connection
- ✓ Self billing through app without any meter reader intervention
- ✓ Special Meter Reading facility through book an appointment option
- ✓ Registration and tracking of Customer Service Requests/ Complaints
- ✓ Payment of gas bills through app
- ✓ CNG queue information at CNG station





INDRAPRASTHA GAS

CHAT BOT (MAITRI), SELF BILLING & WHATSAPP CONNECTIVITY

Ask Maitri
20 January 2025

Namaste,

I am **Maitri**, Realtime IGL Virtual Assistant. I can try to help you in getting answer to your queries related to IGL.

Frequently Asked Questions

- Raise a complaint
- My outstanding bills
- Report gas leakage
- Status PNG new connection
- Payment modes
- Self Billing/Meter Reading

English ▾

Ask your query here

Powered by **CoRow**

Igl WhatsApp
Indraprastha Gas Limited

Hi 20:57 ✓✓



Welcome to Indraprastha Gas Limited.

Hi 🤖 **919718242996**,
Choose one of the options below to start.

- Pay My Bill
- Last Transactions
- View/Download Bill

Tap Below 📌 to explore **All Services**

- All Services


12:20 PM

Indraprastha Gas Limited

Bill of Rs.248.59 is generated against BP No. **4001939353**. Kindly proceed for payment by clicking on below options. Please ignore if already paid. IGL 8:33 am

- Pay With UPI
- Pay With Other Modes

21 December 2024



getarchivedinvoice?provider_id=...
833 kB · PDF

Bill of Rs.605.39 is generated against BP No. **4001939351**. Kindly proceed for payment by clicking on below options. Please ignore if already paid. IGL 8:53 pm

- Pay With UPI
- Pay With Other Modes





APP BASED SAFETY WORK PERMIT SYSTEM

INDRAPRASTHA GAS

► Safety Work Permit System

As per IGL's approved Safety work Permit Policy, all activities are done through

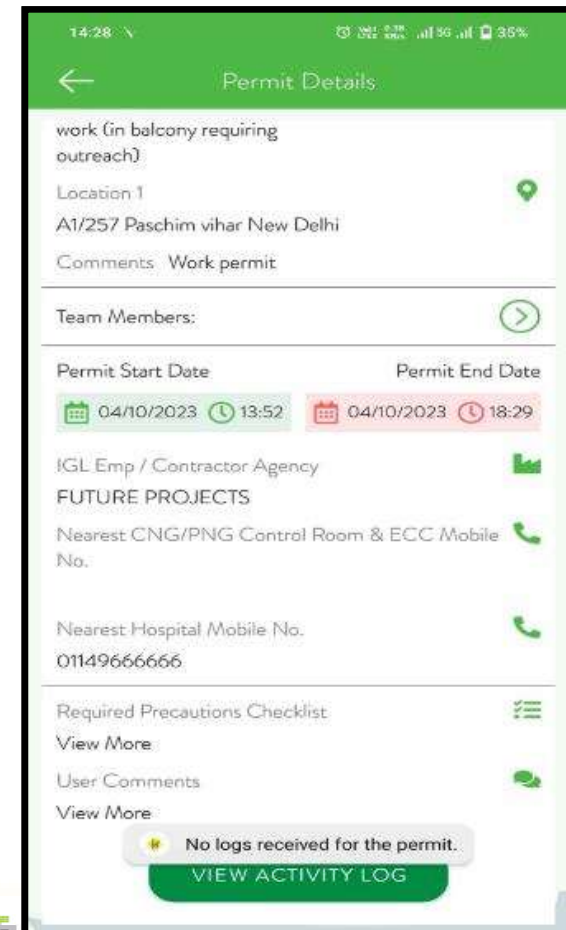
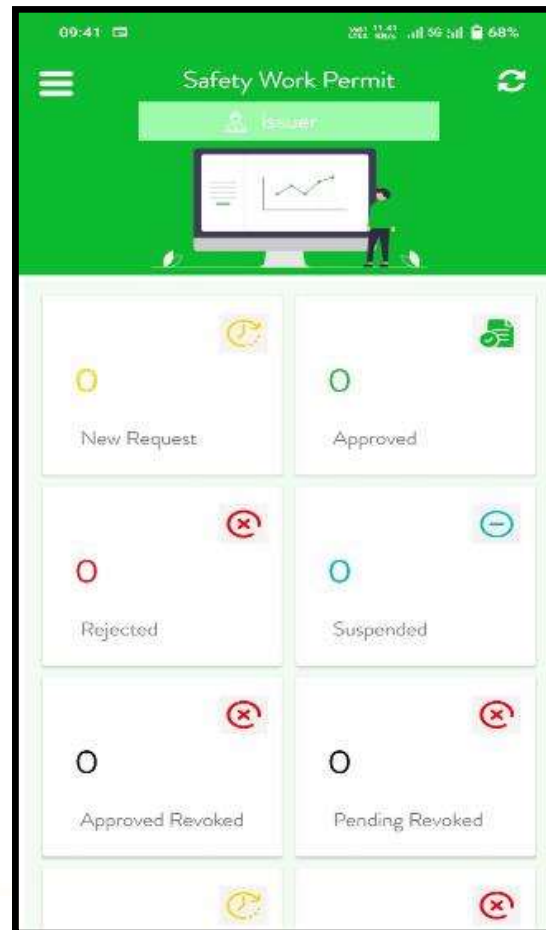
- Hot work Permit
- Cold work Permit

► IGL Safety Work Permit App

Authorized personnel is able to request permit as unique Training ID is the log-in ID.

Real time validation of as it captures site Geo-coordinates.

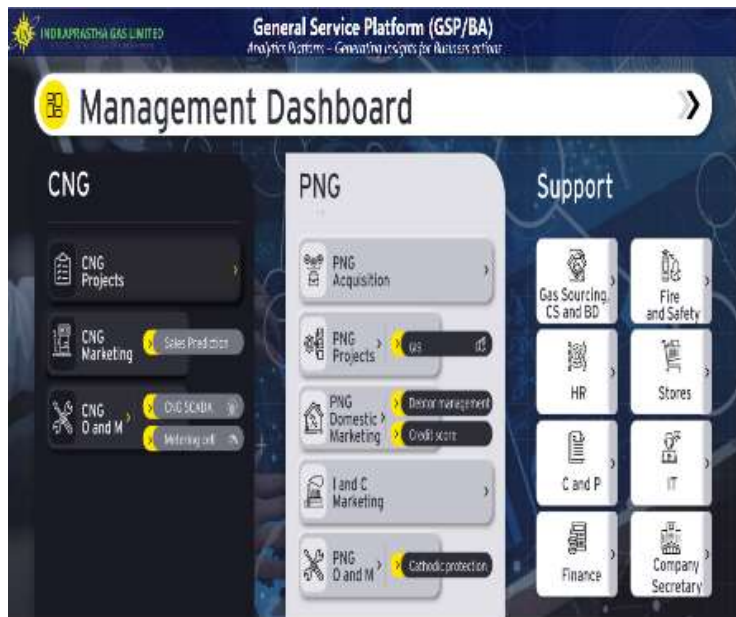
apture of site photographs.





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GSP (General Service Platform)



Benefits & Utilization

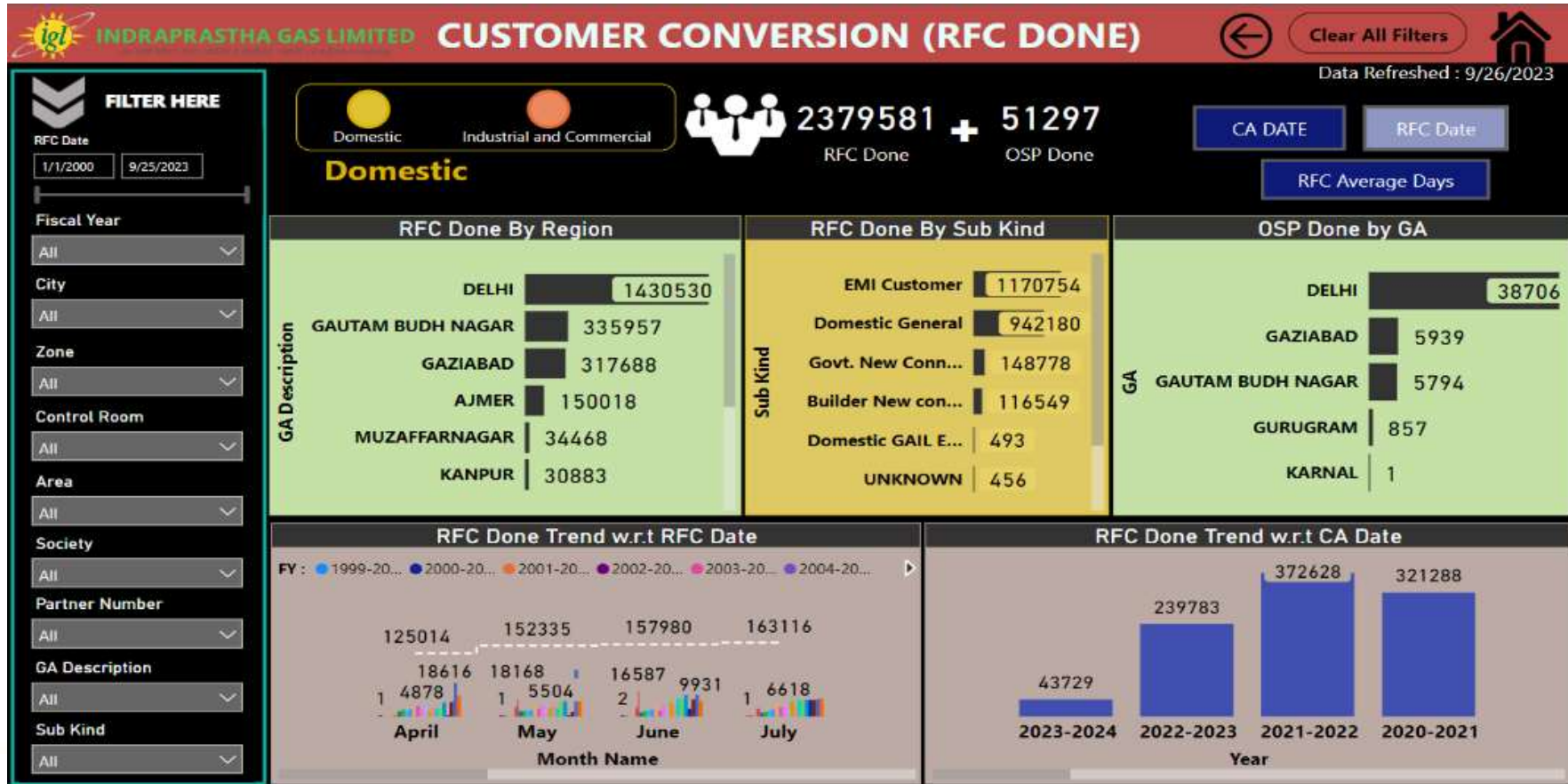
- Better Decision making backed by data
- Digital Transformation
- Time Saving
- Predictive Analysis
- Dynamic Reporting
- One stop Solution
- Data Reliability





INDRAPRASTHA GAS

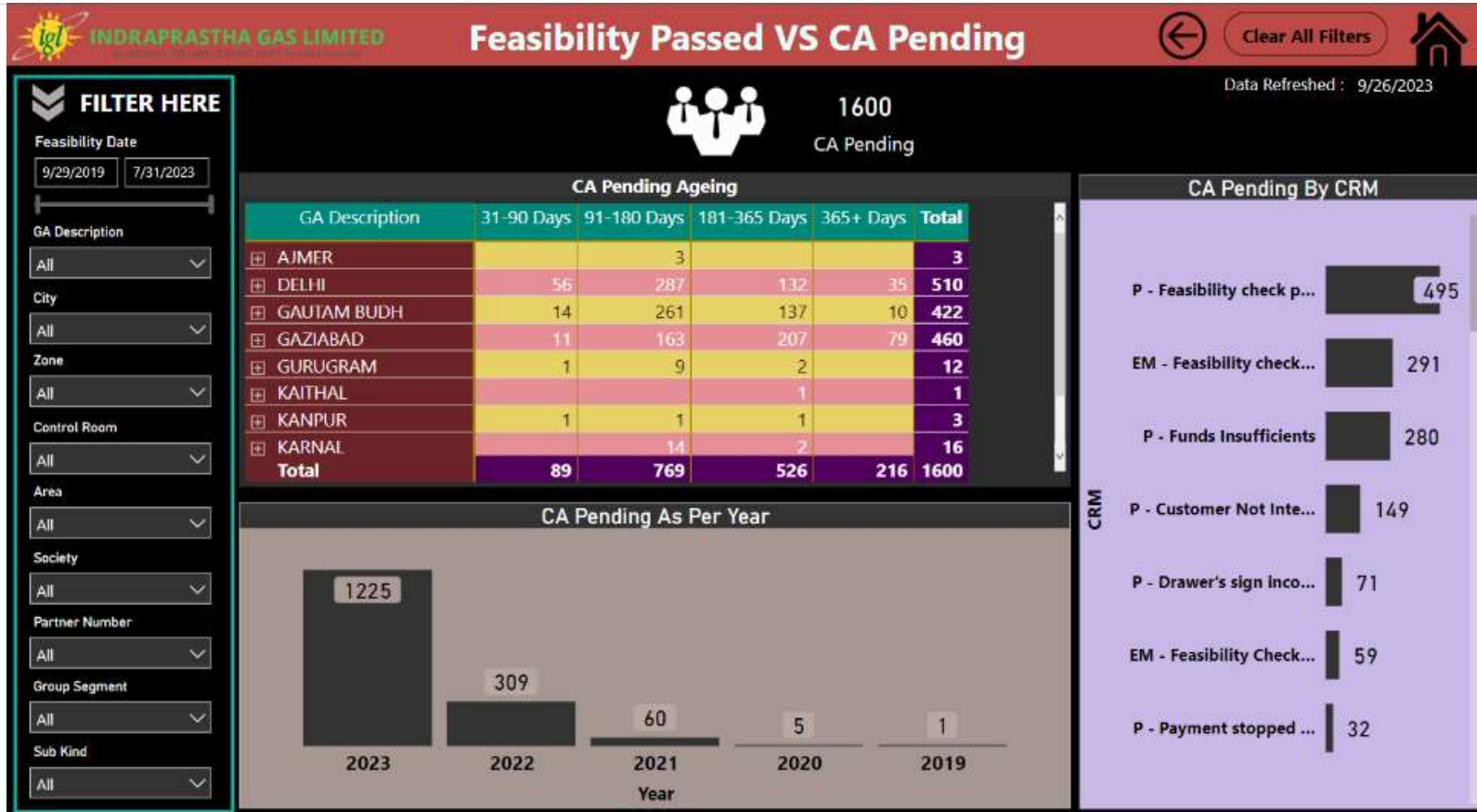
DATA ANALYTICS - RFC DONE





INDRAPRASTHA GAS

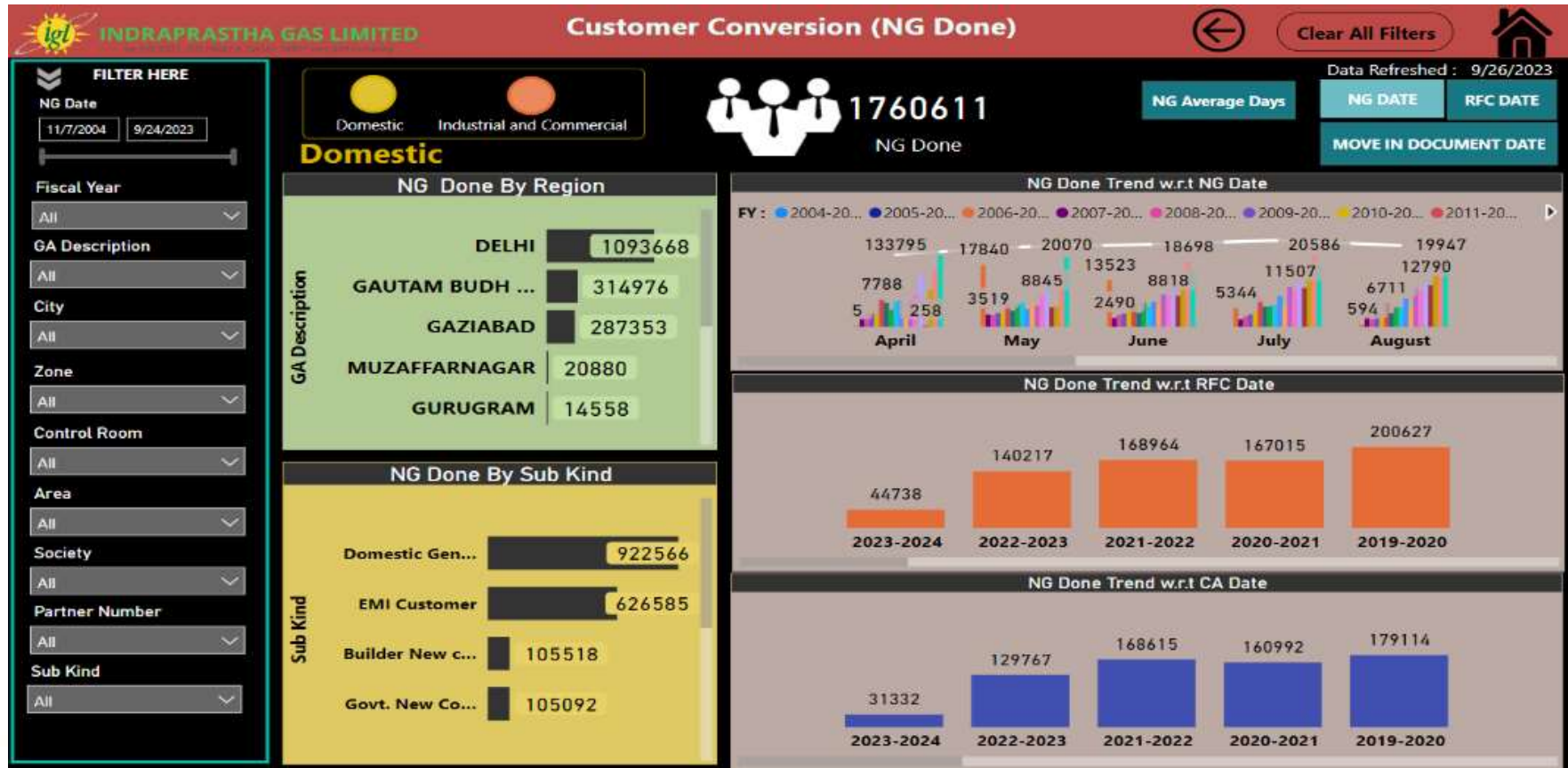
DATA ANALYTICS - CA PENDING





INDRAPRASTHA GAS

DATA ANALYTICS - NG DONE





INDRAPRASTHA GAS

METER AGING REPORT

INDRAPRASTHA GAS LIMITED
Meter Ageing Report (All GA)
← Clear All Filters

FILTER HERE

Meter Installation Date

Business Partner Number

Serial Number

Meter Type/ Make

Control Room

GA

Zone

Bucket

Group Segment Desc

Commercial
Domestic
Industrial

1938086

Total Active Meters

Default OFF All GA

Ageing of Currently Installed Meters

0-5 Years	915054
5-10 Years	654258
10-15 Years	286300
15 Years+	82797

City Wise Active Meters

Delhi	1180586
Uttar Pradesh	695995
Haryana	50733
Rajasthan	10952
UNKNOWN	1

Meter Type/Make Wise Active Meters

RAYCHEM	637634
UNKNOWN	448487
CAPITAL POWE...	321279
ITRON	267739

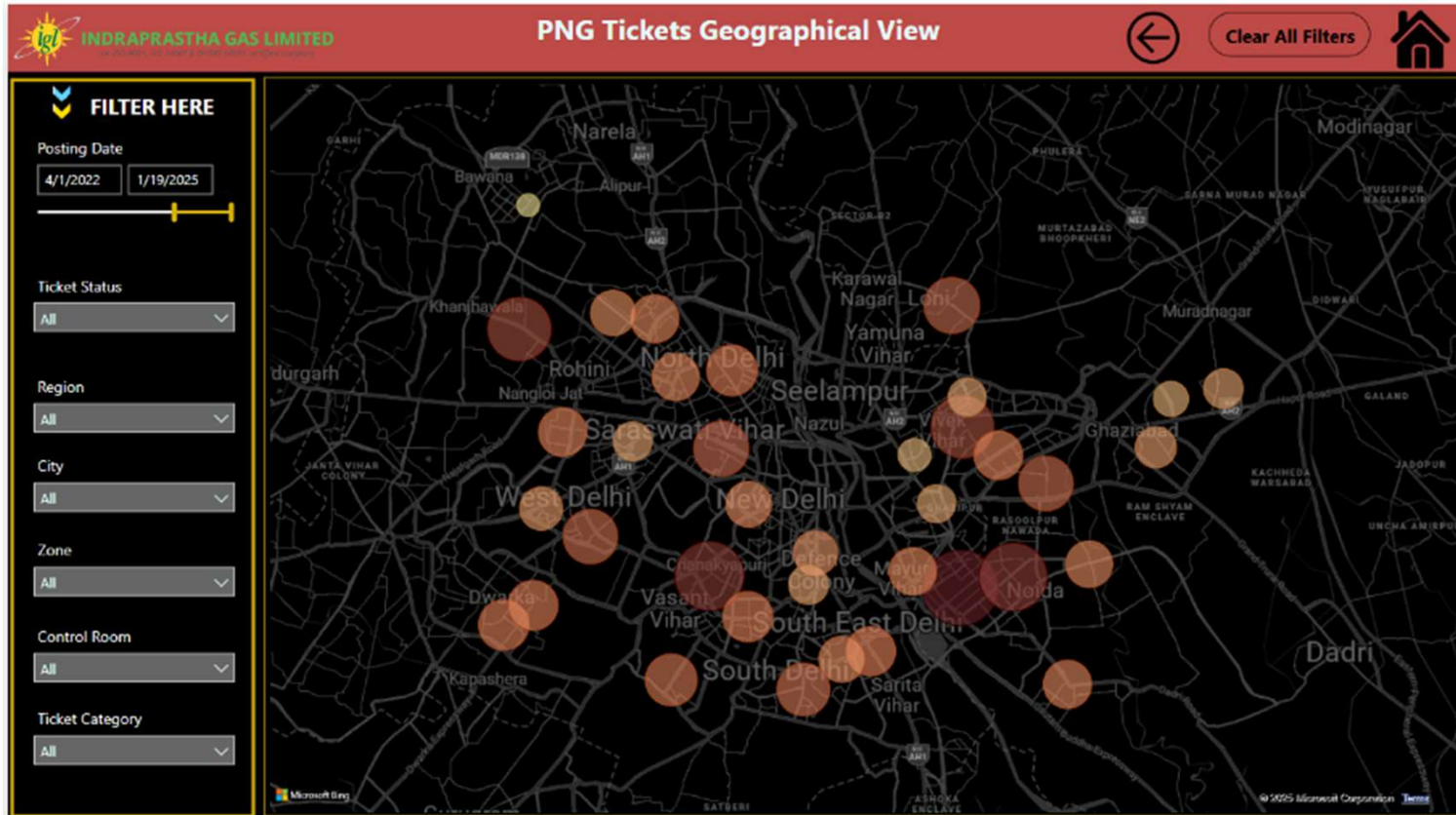
Business Partner Number	Control Room	GA	Zone	Installation Date	Serial Number	Meter Type/Make	Ageing Bucket
1000000563	SAN MARTIN	Delhi	CEN	8/11/2017	17557165	RAYCHEM	5-10 Years
1000001461	SAN MARTIN	Delhi	CEN	7/4/2011	1366951	UNKNOWN	10-15 Years
1000001548	R K PURAM SECTOR 3	Delhi	SOU	12/30/2021	608	UNKNOWN	0-5 Years
1000002243	SAN MARTIN	Delhi	CEN	8/9/2021	RAY-772534015957	RAYCHEM	0-5 Years
1000002244	SAN MARTIN	Delhi	CEN	8/9/2021	RAY-772534015958	RAYCHEM	0-5 Years
1000002245	SAN MARTIN	Delhi	CEN	8/9/2021	RAY-772534015960	RAYCHEM	0-5 Years
1000002246	SAN MARTIN	Delhi	CEN	8/26/2021	RAY-772534015905	RAYCHEM	0-5 Years
1000002247	SAN MARTIN	Delhi	CEN	8/9/2021	RAY-772534015959	RAYCHEM	0-5 Years





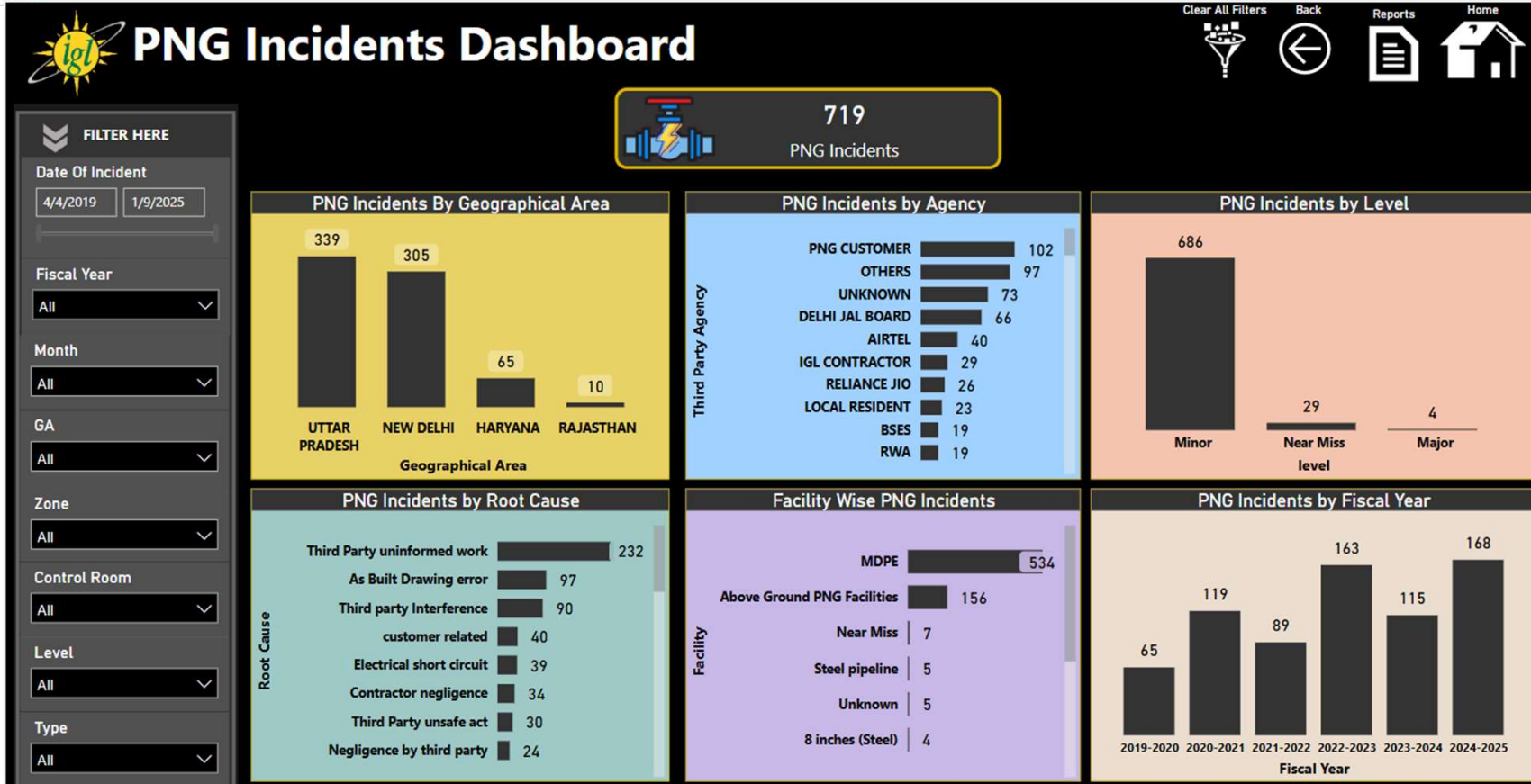
INDRAPRASTHA GAS

DENSITY PLOTTING OF CUSTOMER COMPLAINTS





PNG INCIDENT (AGENCY WISE)

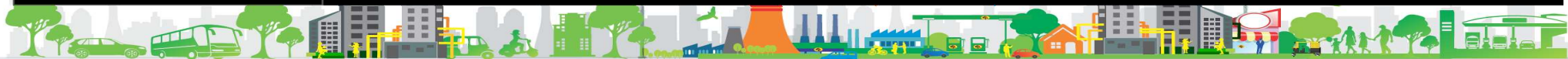




INDRAPRASTHA GAS

AUTOMATIC GAS LOSS CALCULATIONS

GAS MDPE Loss/Gain Report(with CF)																					
FILTER SECTION		FY	Month Year	Region	Loop	Download Report in same format		Download Comparison Report wi...		With CF	Without CF	*With CF									
Month Year	Region	Loop	FRS Loop Inlet	Actual Billed BPs	Estimated Billed BPs	Moveln not billed BPs	Dom Connection	Avg/ Day	Dom Sales	CF for Dome stic	Final Domestic Sale	Comm Connection	Comm Sales	Ind Connection	Ind Sale	CNG Sale	Gas Venting	Total FRS Downstream	Loss/Gain (SCM)	%	Remark
2024NOV	REWARI GA	RWR	3,328.24K	11118	2421	184	13723	0.33	136.27K	0.95	129K	106	129K	229	3,077.06K	0.00	0.00	3,335,474.25	-7,236.25	0.20 %	
	NWSC	D1 + D2 (SOUTH CENTRAL)	4,880.50K	172533	93353	2847	268733	0.38	3,087.74K	0.95	2,933K	1318	1,380K	238	316.76K	0.00	19,644.00	4,650,166.43	230,336.20	4.70 %	
		D3 (CENTRAL)	1,916.98K	18203	7794	191	26188	0.41	318.97K	0.95	303K	644	1,206K	25	35.32K	365,773.74	51.00	1,910,200.14	6,776.47	0.40 %	
		D4 (BRAR SQUARE)	221.39K	5403	705	35	6143	0.35	64.87K	0.95	62K	220	59K	20	78.40K	0.00	17,384.00	216,754.83	4,636.10	2.10 %	
		D5 (NORTH)	6,593.77K	178266	86778	1974	267018	0.41	3,244.27K	0.95	3,082K	564	613K	1082	2,596.83K	0.00	5,179.00	6,297,563.69	296,211.17	4.50 %	
		D6 (AEROCITY)	427.53K	0	0	0	0	0.00	0.00K	0.95	0K	14	418K	1	0.00K	0.00	0.00	417,774.89	9,755.11	2.30 %	
		D7 (WEST)	6,003.47K	229197	110918	2792	342907	0.38	3,929.71K	0.95	3,733K	962	1,141K	281	779.96K	0.00	0.00	5,654,087.26	349,379.09	5.80 %	
		D8 (IIPA)	103.66K	2102	394	18	2514	0.36	27.08K	0.95	26K	55	75K	2	0.59K	0.00	0.00	100,909.93	2,749.81	2.70 %	
		D9 (BSF CHAWLA)	58.74K	3439	463	285	4187	0.40	49.87K	0.95	47K	20	8K	0	0.00K	0.00	0.00	55,336.01	3,403.99	5.80 %	
		D10 (NSG PALAM)	1.57K	0	0	0	0	0.00	0.00K	0.95	0K	8	1K	0	0.00K	0.00	0.00	1,445.08	127.14	8.10 %	
	NCRE	N1 (CBD)	2,597.30K	78172	51093	332	129597	0.39	1,500.73K	0.92	1,381K	276	298K	160	683.07K	0.00	135.57	2,362,181.78	235,123.14	9.10 %	
		N2 (LONI ROAD)	840.06K	40038	25153	386	65577	0.40	779.05K	0.92	717K	24	19K	27	50.31K	0.00	0.00	785,747.92	54,311.09	6.50 %	
		N3 (PPG MEGA)	1,136.55K	55857	14607	620	71084	0.35	746.38K	0.92	687K	172	160K	47	158.57K	0.00	313.05	1,006,028.74	130,526.21	11.50 %	
		N4 (DMRC VINOD NAGAR)	14.58K	452	116	0	568	0.42	7.14K	0.92	7K	2	8K	0	0.00K	0.00	0.00	14,322.64	261.10	1.80 %	
		N5 (NOIDA)	8,839.38K	137787	51723	707	190217	0.35	1,968.75K	0.92	1,811K	802	861K	1272	5,720.95K	0.00	202.18	8,392,983.55	446,392.42	5.10 %	
		N6 (GREATER NOIDA)	6,023.42K	81301	69057	1179	151537	0.34	1,522.95K	0.92	1,401K	440	499K	623	3,958.02K	0.00	10,120.74	5,868,326.67	155,092.15	2.60 %	
		N7 (SHIVNADAR)	19.67K	16	153	3	172	0.27	1.40K	0.92	1K	16	13K	0	0.00K	0.00	0.00	14,306.85	5,359.55	27.30 %	
		N8 (CHW)	664.65K	78	324	3	405	0.36	4.42K	0.92	4K	1	0K	21	690.23K	0.00	0.00	694,518.68	-29,865.10	-4.50 %	
		N9 (GOVINDPURAM)	4,026.83K	72504	44046	709	117259	0.39	1,354.34K	0.92	1,246K	227	219K	285	2,475.39K	0.00	1,063.62	3,940,955.63	85,877.46	2.10 %	
		N10 (VAISHALI)	4,813.31K	103237	52525	517	156279	0.36	1,701.88K	0.92	1,566K	297	383K	357	2,771.35K	0.00	0.00	4,720,201.81	93,103.90	1.90 %	
		N11 (TRONICA CITY)	147.38K	26	33	0	59	0.30	0.53K	0.92	0K	2	0K	94	143.11K	0.00	0.00	143,632.79	3,746.33	2.50 %	
Total			55,283.18K	1233755	632330	14034	1880119	0.30	21,255K	0.94	19,903K	6,244.00	7,550K	4,829.00	24,474K	365.77K	80.52K	52,374.28K	2,908.90K	5.26%	





INDRAPRASTHA GAS

CUSTOMER TICKET REPORT MAILS

GI

GSP, insights

😊 Reply

To: Kumar, Kamlesh (कमलेश कुमार); UDAI.VIR@IGL.CO.IN; Prashant (प्रशान्त); kumar, nishant (निशांत कुमार); ALOK. <KUMAR@IGL.CO.IN>

Cc: Amit (अमित); Yasir Jalal (यासिर जलाल); bhanu.galhotra@in.ey.com; surbhi.gupta@in.ey.com; sanyam.gupta2@in.ey.com; +5 other



Dear Sir,

Please find PNG O&M Ticket Status below :

Open/In Progress Tickets

Ticket Type	Status	TAT Level	Bucket	Gaziabad ZII							TOTALS
				ASHOK NAGAR	CROSSING REPUBLIC	GOVINDPURA M	HAPUR	LOHIA NAGAR	MODI NAGAR	MURAD NAGAR	
Defective Meter	Within TAT	TAT (LEVEL 0)		1	6	0	0	0	0	0	7
		LEVEL - 5 (MD)	0-30 Days	0	0	0	0	0	0	1	1
Flame Problem	Within TAT	TAT (LEVEL 0)		0	0	1	0	2	0	0	3
Modification - Geyser/Extra Point	Within TAT	TAT (LEVEL 0)		2	0	0	0	0	0	0	2
Modification - GI	Within TAT	TAT (LEVEL 0)		1	0	8	1	7	2	0	19
Modification - PE Modification	Within TAT	TAT (LEVEL 0)		1	0	0	1	0	0	0	2
New Stove Conversion	Within TAT	TAT (LEVEL 0)		0	2	2	0	5	2	0	11
No Gas Supply I & C	Within TAT	TAT LEVEL 1 (C/R INCHARGE)		0	1	0	0	0	0	0	1
Permanent Disconnection	Within TAT	TAT (LEVEL 0)		1	0	4	0	0	0	2	7
Restoration With Device Installed	Within TAT	TAT (LEVEL 0)		2	1	0	0	2	0	0	5
Restoration Without Device Installed	Within TAT	TAT (LEVEL 0)		1	0	1	0	0	0	0	2
Rubber Tube Replacement	Within TAT	TAT (LEVEL 0)		2	2	5	0	0	0	0	9
Temporary Disconnection - Renovation	Within TAT	TAT (LEVEL 0)		0	1	3	1	1	0	0	6
Temporary Disconnection- Personal Reason	Within TAT	TAT (LEVEL 0)		2	1	1	0	0	0	0	4





INDRAPRASTHA GAS

ESCALATION EMAIL

Reminder-Cum-Escalation Mail

B basis<noreply@igl.co.in>
To: Amit (अमित)

😊 Reply Reply all Forward

Sat 1/18/2025 8:19 AM

IMPORTANT: This is system generated message - Do not reply to this email.

Dear Amit ,

The following tickets have crossed the current level of TAT as per the SLA on 18.01.2025 08:15. Please take appropriate action to avoid further escalation to your reporting manager.

Serial No.	Ticket No.	BP No.	Ticket Category	Ticket Status	Employee Responsible	Escalation Date
ESCALATED TO LEVEL 1						
1	9912810690	4000293302	Permanent Disconnection	PD-BO Pending With Device Removal	Amit .	18.01.2025
2	9912818346	4000548410	New Stove Conversion	BO Pending (Req New Stove Conversion)	Amit .	18.01.2025
3	9912819999	4000070941	Rubber Tube Replacement	RTR-BO (Pending Rubber Tube Replacement)	Amit .	18.01.2025
4	9912820064	4000276883	New Stove Conversion	BO Pending (Req New Stove Conversion)	Amit .	18.01.2025

Matter extremely urgent.





INDRAPRASTHA GAS

ASSET INTEGRITY





INDRAPRASTHA GAS

INTRODUCTION

- The objective of asset Integrity Management System is to maintain integrity of natural gas pipelines at all times to ensure :
 - Public safety,
 - Protect environment
 - Transport gas without interruptions
 - Minimize business risks associated with accidents and losses





INDRAPRASTHA GAS

Why Asset Integrity is required ?

Safe operations

Customer satisfaction

Profit maximization

Environment protection

Good company reputation





The objectives of IMS regulations

- 1. Evaluating the risk** associated with city gas distribution networks and effectively allocating resources for prevention, detection and mitigation activities.
- 2. Improving the safety** of city gas distribution networks so as to protect the personnel, property, public and environment.
- 3. Bringing more streamlined and effective operations** to minimize the probability of CGD network failure.





INDRAPRASTHA GAS

DIRECT ASSESSMENT AND EVALUATION

Direct assessment (DA) is a method of evaluating a pipeline's integrity. DA assesses the risk of three types of threats to a pipeline's integrity:

External corrosion: The impact of external corrosion on the pipeline's integrity

Internal corrosion: The risk of internal corrosion to the pipeline's integrity



EXTERNAL-CORROSION IN PIPELINE



- ▶ External corrosion of pipelines in the city gas distribution (CGD) network is a gradual process that weakens the pipeline over time. It's caused by electrochemical reactions that occur when the pipeline metal interacts with environmental factors. The degree of corrosion depends on the age of the pipeline and how well it's protected.
- ▶ Coating surveys should be carried out where third party damage is suspected, or where there is known localized coating deterioration, erosion or any other identified reason. It is necessary to carry out the CIPL survey, DCVG survey to monitor the coating conditions/damage to the pipeline, as the pipelines though Cathodically protected might have undergone some damage due to the city conditions.



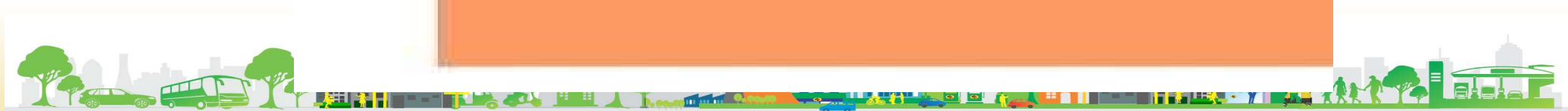
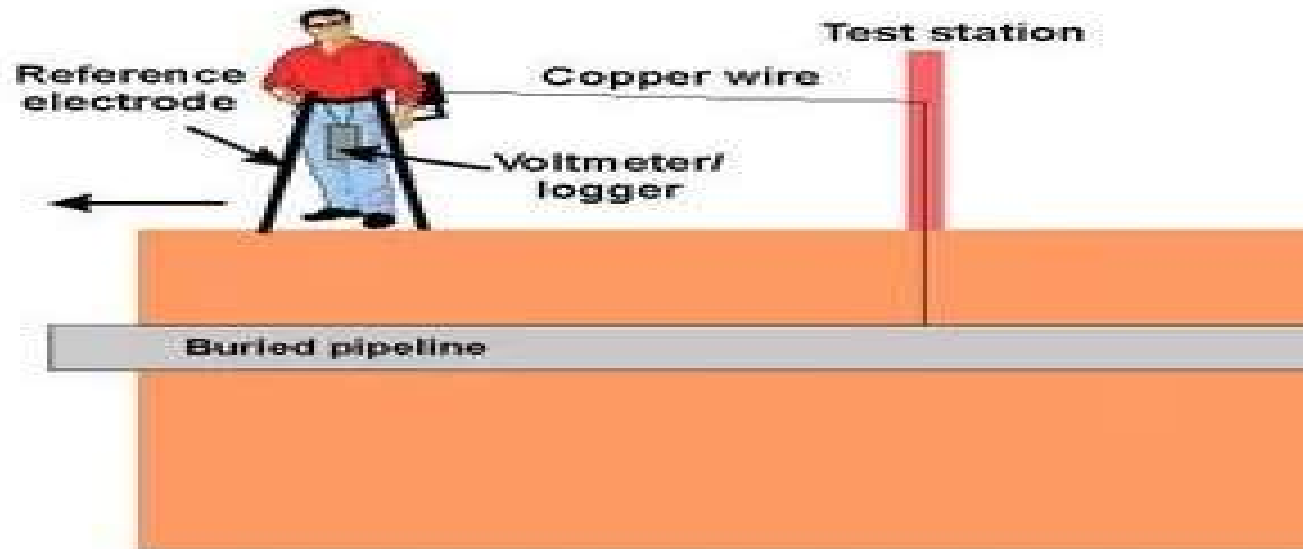


INDRAPRASTHA GAS

CLOSE INTERVAL POTENTIAL LOGGING SURVEY

A close interval potential logging survey (CIPLS) is a non-intrusive survey that measures the effectiveness of a cathodic protection system on a pipeline. It can be used on buried (onshore) or immersed (offshore) pipelines. Assessing the effectiveness of the cathodic protection system

The effectiveness of a cathodic protection system is important for ensuring that the pipeline is adequately protected from corrosion



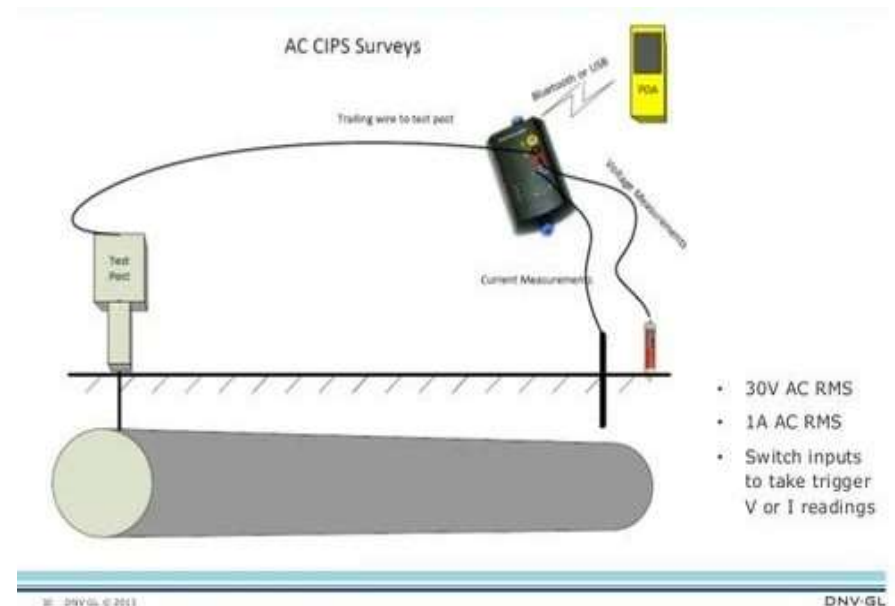
CURRENT ATTENUATION TEST (CAT) SURVEY

► CURRENT ATTENUATION TEST (CAT)

CAT survey is method to locate faults and poor coating that is draining the current.

A current attenuation test (CAT) survey, also known as an AC current attenuation survey, measures the strength of an AC signal along a pipeline to assess the condition of the pipeline's coating. The survey can help identify coating damage, faults, and shorts.

A signal transmitter is connected to the pipeline. A receiver is moved along the pipeline to measure the signal strength. The signal strength is recorded at each survey point. The data is analyzed to determine the condition of the pipeline's coating.





INDRAPRASTHA GAS

DIRECT CURRENT VOLTAGE GRADIENT

- ▶ **DIRECT CURRENT VOLTAGE GRADIENT (DCVG)**
- ▶ DCVG Survey is used for locating and sizing of coating defect of buried pipelines. The technique is fundamentally based on measuring the voltage gradient in the soil above a cathodically protected pipeline.
- ▶ The voltage gradient becomes larger and more concentrated the greater the current flowing and the closer to coating defect. Larger the defect, the greater the current flow and hence the voltage gradient.
- ▶ DCVG Survey is carried out for verification of the Coating defects identified during Close Interval Potential Logging Survey and Current Attenuation Test.





INDRAPRASTHA GAS

COATING REPAIR

- ▶ Pipeline coating repair is essential to maintaining the integrity of pipelines, ensuring their protection against environmental factors such as corrosion, chemical exposure, and physical damage. Repairing pipeline coatings typically involves the following steps:
- ▶ **Inspection:** Assess the pipeline to identify the extent of damage to the coating. This could involve visual inspection, ultrasonic testing, or coating adhesion tests.
- ▶ **Surface Preparation:** Remove any rust, dirt, or damaged coating material from the affected area. This may involve methods like abrasive blasting, power washing, or using solvents to clean the surface.
- ▶ **Application of Repair Coating:** Apply the repair coating, ensuring it matches the original in terms of material properties and thickness. Types of coatings can include epoxy, polyurethane, or bituminous coatings, depending on the pipeline's use and the environmental conditions.
- ▶ **Curing:** Allow sufficient curing time for the repair material to set and bond with the pipeline surface.
- ▶ **Inspection:** After the coating has cured, inspect the repaired area to ensure that the repair is solid, uniform, and provides adequate protection.



COATING REPAIR



Health Assessment of Pipeline by using Magnetic Tomography Method

- The Magnetic Tomography Method (MTM) works on magnetic stress technology, is a non-intrusive solution for health assessment and defect identification of old steel pipeline network.
- The magnetic tomography method (MTM) is a non-contact external inspection method for detecting metal magnetic memory signals.
- This technology is based on magnetic stress principal and is able to detect all types of defects whether internal or external.
- **The detectable defects are as follows:**
Metal loss anomalies, Crack like defects anomalies, Geometry changes anomalies ,Discontinuity anomalies, Weld anomalies, Elevated Stress Deformed State Anomalies, Mechanical damages like dent etc.

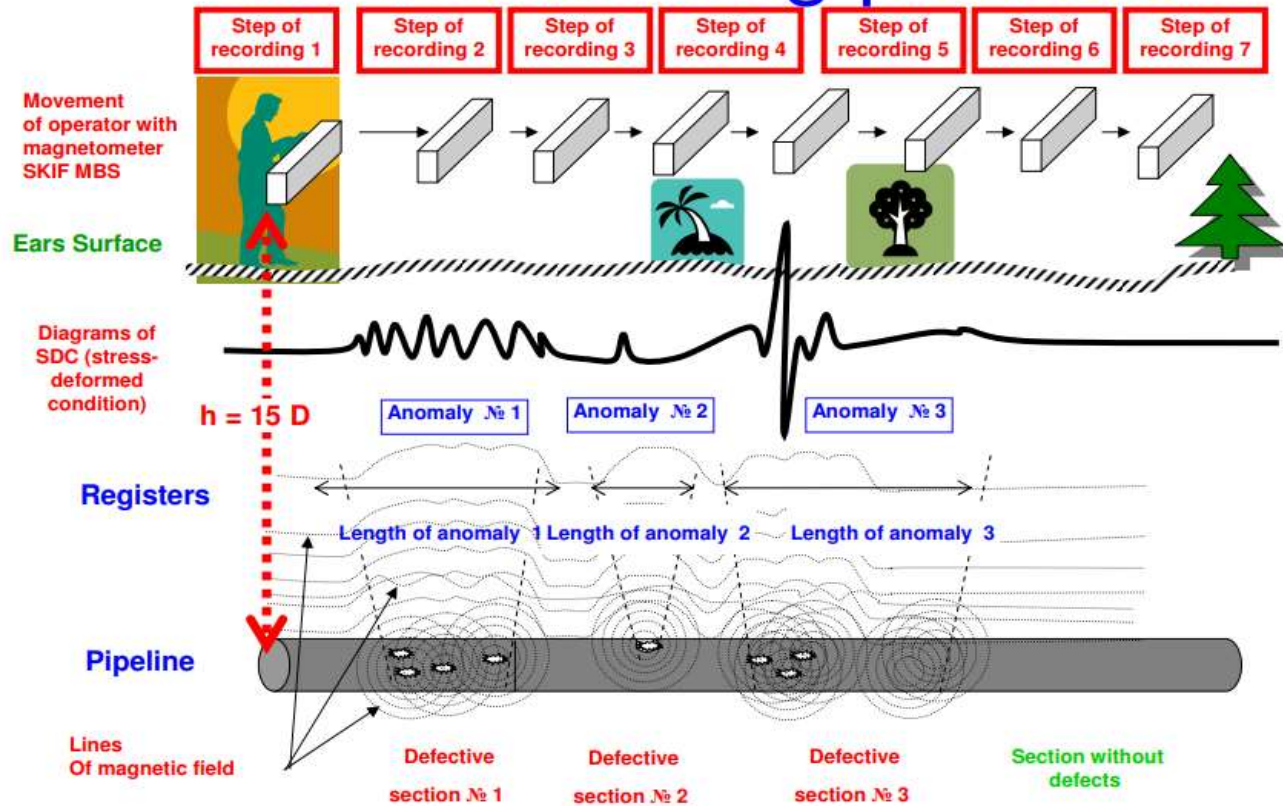




INDRAPRASTHA GAS

Magnetic Stress Technology

MTM scanning process

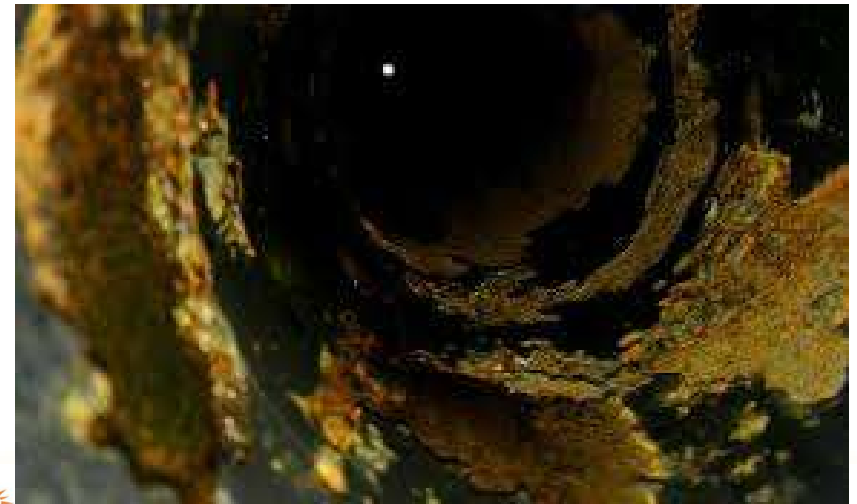




INDRAPRASTHA GAS

INTERNAL CORROSION

- ▶ Internal corrosion of pipelines in City Gas Distribution (CGD) systems occurs when the pipe's inner walls deteriorate due to chemical reactions. These reactions can be caused by the gas being transported, the pipe material, and the surrounding environment.
- ▶ **DETECTION**
- ▶ **Corrosion coupons or probes:** Evaluate coupons or probes placed inside the pipeline. (ICMS)
- ▶ **In-line inspection tool:** Use an in-line inspection tool to identify areas of pitting or metal loss.
- ▶ **PREVENTION**
- ▶ **Control gas quality:** Control the quality of gas entering the pipeline.
- ▶ **Periodic sampling:** Periodically sample and analyze the gas, liquids, and solids removed from the pipeline





INDRAPRASTHA GAS

Internal Corrosion Monitoring Systems

- ▶ An internal corrosion monitoring system measures the rate of corrosion in a material using probes, sensors, or other devices. The system can provide real-time information about corrosion, which can help with maintenance and prevention.
- ▶ **Probes** are inserted into the material being monitored and exposed to the process conditions. Probes can be mechanical, electrical, or electrochemical.
- ▶ Corrosion rate **sensors** measure the change in resistance between electrodes embedded in the material.
- ▶ A **data logger** can collect and store data from the probes and transmit it to a cloud system

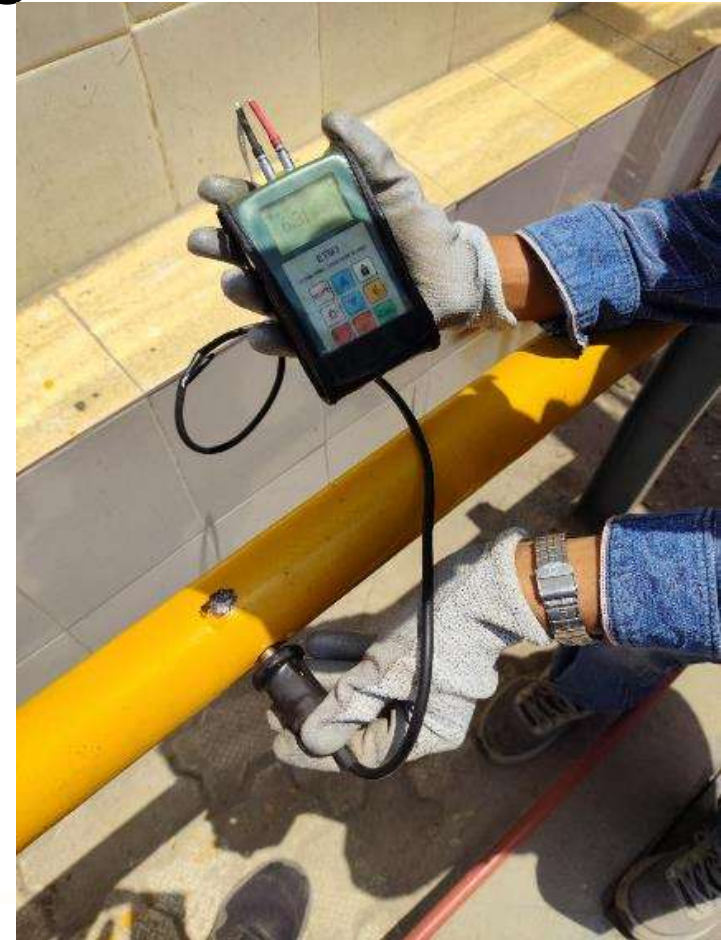




INDRAPRASTHA GAS

ULTRA SONIC THICKNESS

- ▶ This technique is used for the detection of internal surface (particularly distant surface) defects in sound conducting materials.
- ▶ In this method high frequency sound waves are introduced into a material and they are reflected back from surface and flaws. Reflected sound energy is displayed versus time, and inspector can visualize a cross section of the specimen showing the depth of flaws.



QR CODE BASED ASSET INTEGRITY



FUTURE CHALLENGES CGD BUSINESS

