PACE TASK FORCE

PNG Acceleration for Clean Energy

STRATEGY REPORT

Team Members:

Lead – Rahul Tandon (Business Head – GAS, BPCL)

- *Shatrunjay Kumar Singh (MNGL) – Senior VP (Planning & Projects), MNGL*
- *Anant Purohit (GAIL Gas Ltd.) – GM (CGD-Projects)*
- *Paramjeet Singh (ATGL) – DGM, Project Management Office*
- *Barun Singh (Think Gas) – Assistant General Manager (Strategy)*
- *Vipul Arora (BPCL) – Manager Brand, Innovations and New Initiatives (GAS), HQ*
- *Harpreet Singh Saini (Torrent Gas) - Manager Marketing*

Foreword

The expansion of the City Gas Distribution (CGD) network across India marks a significant step towards advancing cleaner energy adoption and strengthening the nation's energy security. As the sector continues to scale, ensuring uniformity in processes, accelerating customer onboarding, and enhancing execution efficiency have become critical priorities.

In this context, the PACE (PNG Acceleration for Clean Energy) Task Force, constituted under the aegis of the Petroleum and Natural Gas Regulatory Board (PNGRB), has been entrusted with the responsibility of driving coordinated and outcome-oriented efforts across the CGD ecosystem.

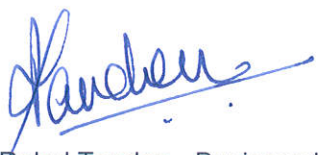
PACE has been envisioned to play a multi-dimensional role in enabling sectoral transformation. As a catalyst, it aims to accelerate the adoption of Piped Natural Gas (PNG) across households and institutions. As an integrator, it seeks to align CGD entities and stakeholders under a unified and structured framework. As an enabler, it focuses on identifying and addressing execution challenges that may hinder progress on the ground. Further, as a policy bridge, PACE facilitates the translation of regulatory intent into actionable and implementable solutions.

A key focus area of the Task Force has been the identification and use of technology-led interventions that can significantly improve the speed, efficiency and scalability of CGD operations. The report outlines several such advancements, including digital process standardization, streamlined customer onboarding journeys, data-driven monitoring frameworks, and the adoption of modern materials, alternate solutions and systems to enhance execution capabilities across entities.

The recommendations and frameworks presented in this report reflect a collaborative effort, bringing together insights from industry participants and aligning them with regulatory objectives. The emphasis has been on developing scalable, practical, and customer-centric approaches that can be adopted across diverse geographies and operating environments.

I would like to acknowledge the guidance provided by PNGRB and the valuable contributions of all PACE members in shaping this report.

It is envisaged that the outcomes of this initiative will play a pivotal role in accelerating PNG penetration, enhancing customer experience, and fostering a more integrated and efficient CGD ecosystem in the country.



Rahul Tandon - Business Head (Gas), BPCL
Team Lead, PACE

A. EXECUTIVE SUMMARY

India's PNG expansion has reached an execution inflection point. Pipeline infrastructure exists — the bottleneck is last-mile speed. PACE must drive 60 lakh new household PNG connections in 90 days (April–June 2026) through four parallel actions: communicate clearly, remove material and manpower constraints, integrate data digitally, and deploy new supply models where pipelines are absent.

Three converging forces make accelerated action urgent:

- LPG supply disruptions — availability constraints, price volatility and customer uncertainty are pushing households toward piped alternatives.
- Strong government policy — PNG is the preferred urban household fuel, backed by regulatory orders and mandatory transition timelines.
- Time-bound mandates — households in pipeline-served areas must connect within 90 days; deemed clearances and fast-track approvals are now in force.

PACE Mandate

The PACE (PNG Acceleration for Clean Energy) Task Force, constituted under PNGRB, operates as:

- **Catalyst —** Catalyst
  - Drives rapid household and institutional conversion to PNG.
- **Integrator —** Integrator
  - Aligns all CGD entities and stakeholders under one framework.
- **Enabler —** Enabler
  - Identifies and removes execution bottlenecks.
- **Policy Bridge —** Policy Bridge
  - Translates regulatory intent into ground-level action.

Target

Metric	Target
New Household Connections	60 Lakh — April to June 2026
Maximum Timeline per Customer	90 days (registration to commissioning)
Coverage	All CGD entities across all Geographic Areas (GAs); priority to RFC customers not yet using PNG

PACE Team Members:

- **Lead – Rahul Tandon (Business Head – GAS, BPCL)**



Rahul Tandon, Business Head (Gas) at Bharat Petroleum Corporation Limited, is a decisive force behind BPCL's transformation. Over a 28-year career, he has consistently led from the front across Retail, LPG, Gas, Industrial & Commercial, Corporate Strategy and Digital Transformation, taking on mandates where outcomes were critical. An alumnus of Malviya National Institute of Technology and S. P. Jain Institute of Management and Research, he combines engineering rigour with strategic vision. Today, he is steering the Gas business of BPCL exceeding ₹25,000 crores of Capex, including India's first Green LNG bunkering initiative, while delivering record market share, margin expansion and new revenue streams. Known for initiatives like Project Sena Saarthi and Silent Voices, Mr. Tandon blends commercial performance with national purpose and inclusive leadership, driven by a clear motto: do not wait for certainty, build it.

- **Shatrunjay Kumar Singh (MNGL) – Senior VP (Planning & Projects), MNGL**



Shatrunjay Kumar Singh is a senior oil and gas professional with nearly three decades of experience across the energy value chain, with leadership roles at Bharat Petroleum Corporation Limited and Maharashtra Natural Gas Limited.
An alumnus of IIT Delhi and IIM Calcutta, he brings extensive expertise across planning, projects, marketing, and strategy. Currently serving as Senior Vice President – Planning & Projects at MNGL, he leads strategic planning and execution of CGD infrastructure, including steel pipelines, CNG stations, LNG/LCNG/CGS facilities, and PNG expansion across multiple GAs. He also contributes to DCS frameworks and large-scale LNG-LCNG infrastructure development, supporting reliable and scalable network growth.

- **Anant Purohit (GAIL Gas Ltd.) – GM (CGD-Projects)**



Anant Purohit is a seasoned oil & gas professional with nearly three decades of experience. He began his career with Indo Gulf Fertilizers in 1995 and joined GAIL (India) Limited in 1997. He has extensive expertise across petrochemicals, gas processing, CGD projects, operations, and corporate procurement. His experience spans plant construction and commissioning at Pata, project development and expansion initiatives, operations leadership at LPG Plant Lakwa, and execution of gas processing projects. He has also led centralized procurement for CGD GAs and, since 2021, has been overseeing corporate CGD project procurement, tendering, and execution across multiple geographies.

- **Paramjeet Singh (ATGL) – DGM, Project Management Office**



Paramjeet Singh is a CGD professional with over 20 years of experience in planning, execution, and governance of natural gas infrastructure projects, with specialization in CGS, LCNG, and CNG station development.

He has led Geographical Areas with end-to-end responsibility for O&M of CNG and PNG assets, and brings strong expertise in program and project management, including planning, budgeting, risk management, compliance, and contractor governance. He has successfully delivered complex projects within timelines and budgets while ensuring safety, regulatory adherence, and operational excellence.

- **Barun Singh (Think Gas) – Assistant General Manager (Strategy)**



Barun Singh is the Assistant General Manager – Strategy at THINK Gas, bringing over 14 years of experience across the oil and gas sector, including retail, aviation and city gas distribution. He holds a B.Tech in Mechanical Engineering from VNIT and an MBA from IIM Ahmedabad, and has authored several peer-reviewed research papers.

- **Vipul Arora (BPCL) – Manager Brand, Innovations and New Initiatives (GAS), HQ**



Vipul Arora is currently driving Brand, Innovations & New Initiatives (Gas) at GAS, HQ (BPCL), focusing on transformation and growth of the CGD business. An alumnus of IIT Roorkee (Mechanical Engineering), he has ~9 years of experience across project execution, strategy, and business development in GAS Business. He has led CGD projects including CNG and PNG infrastructure projects and contributed to CGD bidding (Rounds 9–12A). He has also played a key role in SAP IS-U implementation and in deploying automation, AI/ML, SCADA, and GIS solutions for GAS Business. Additionally, he has contributed to branding and digital outreach initiatives to support customer adoption and market development including the current PNG Drive 2.0 for CGD Industry.

- **Harpreet Singh Saini (Torrent Gas) - Manager Marketing**



Harpreet Singh Saini is a CGD professional with over 15 years of experience in the energy sector, currently associated with Torrent Gas Limited, where he leads Domestic Marketing from the Head Office.
He is responsible for driving PNG customer acquisition through targeted marketing strategies, enhancing digital onboarding journeys, and implementing standardized SOPs across operations. His work focuses on improving conversion efficiency, streamlining customer touchpoints, and enabling scalable, technology-driven PNG expansion.

Supported by:



- **Aditya Ramdasi (MNGL) – Chief Manager – Planning & Projects**
  Aditya Ramdasi is a CGD professional with over 17 years of experience in planning, infrastructure development, project execution, and strategic analysis. He currently serves as Chief Manager – Planning & Projects at Maharashtra Natural Gas Limited (MNGL), leading the development of steel pipeline networks, CNG stations, LNG–LCNG infrastructure, and CGS projects across multiple geographies. His key contributions include city-wide pipeline planning in Nashik, DCS framework development, and commissioning of large-capacity LNG–LCNG infrastructure. He has also contributed to strategic reports and policy papers, and actively participates in industry forums.

B. THE CORE CHALLENGE

> ***The bottleneck is NOT infrastructure — pipelines exist. The bottleneck is EXECUTION: slow last-mile connections, material shortages, skilled workforce deficit, fragmented approvals, and no unified digital system.***

Execution Gap	Impact
Shortage of trained plumbers and installation technicians	Installation throughput severely constrained; 90-day target at risk
No standardised, scalable execution model across CGDs	Quality and speed inconsistent; no ability to replicate success
Critical material shortfall (meters, regulators, valves)	Supply chain chokepoint blocks commissioned connections
Fragmented clarity to RWA	Last-mile access denied in many societies
No integrated LPG–PNG database	Dual connections persist; LPG cannot be discontinued systematically
Slow GI piping installation	4–6 hours per connection; labour-intensive; high rework rate
Limited Innovation in technology and materials	Conventional Continued reliance on conventional methods leading to time-intensive execution

C. STRATEGY FRAMEWORK — THE FOUR PILLARS

The strategy is structured around four mutually exclusive and collectively exhaustive pillars. Each addresses a distinct execution gap; together they cover every dimension of the challenge.

P1 **COMMUNICATION**
Awareness & alignment — customers, RWAs, government bodies, field staff

P2 **IMPLEMENTATION**
Execution speed — materials, manpower, and installation methods

P3 **LPG–PNG TRANSITION**
Data & visibility — integrated systems, unified onboarding, real-time tracking

P4 **NEW INITIATIVES**
Coverage gaps — supply solutions for areas without pipeline infrastructure

D. PILLAR 1 — COMMUNICATION

> ***Goal: Every household, RWA, and government official in a pipeline-served area must clearly understand what PNG is, what they must do, and by when — with no friction.***

D1. National Campaign — "PNG ke saath Non-Stop Zindagi"

A positive, handholding campaign (not fear-based) using Ministry of I&B assets (TV, radio, print) and CGD/OMC digital channels (SMS, WhatsApp, apps).

Target audiences: PNG-ready customers, RWAs, OMC/CGD field teams, LPG distributors, and commercial customers.

D2. CGD HelpDesk — cgdhelpdesk.in

Strengthen the existing helpdesk to fast-resolve permission issues, field blockages, and administrative delays by setting up of a team. Expand scope to include immediate escalation support for field-level stoppages.

D3. RWAs and Housing Societies

- Ministry of Cooperation to direct State Registrars/Sub-Registrars to formally notify all RWAs of the PNG mandate and LPG sunset.
- Mandatory response deadline: 3 days for PNG infrastructure expansion requests.
- Sub-Registrars to conduct joint meetings with CGDs to guide societies through the transition process.

D4. Rural and Non-Society Areas

- District Collectors and CEO Zila Parishads to direct ward administrators to facilitate PNG adoption.
- Proactive outreach with empathetic and collaborative communication in rural/ urban wards.

D5. OMC–CGD Coordination

- Define ward-level LPG-free zones; map PNG infra rollout status on standard GIS platform.
- Stop LPG supply in areas where PNG is active through this GIS roll-out. CGD to issue immediate NOC for technically infeasible cases to prevent supply disruption.
- Share customer data between OMCs and CGDs for ease in switching customers to PNG.

D6. Inter-Ministerial Actions Required

Ministry / Body	Action Required
State Governments (Chief Secretaries)	Mandate PNG in new/under-construction buildings; fast-track government building permissions; reduce VAT on PNG (priority: Bihar, UP)
Ministry of Consumer Affairs (Legal Metrology)	Exempt PNG meters from re-verification; address April 2026 notification issues
Ministry of Cooperation	Direct State Registrars to handhold RWAs; circulate PNG government order
Ministry of Commerce & Industry (PESO)	Allow DCS approvals on MOU/LOI; keep 3 m DRS safety distance order in abeyance pending review
Ministry of I&B	Enable mass messaging for LPG surrender using government communication assets
Ministry of Health (FSSAI)	Mandate PNG for commercial food establishments where infrastructure exists
Ministry of Housing & Urban Affairs	Share ward-wise household data with CGDs; support ward-by-ward LPG-free zone declarations
Ministry of Skill Development (PMKVY/ITIs)	Launch CGD-specific plumber courses; RPL certification; apprenticeships under NAPS
Ministry of Road Transport / NHAI	Exempt HDD-laid pipelines from relocation; create uniform national NHAI–CGD pipeline policy; review debarment of CGD entities
PNGRB	Form Technical Committee for MLC pipes and anti-rodent features; form Investment & Authorization Committee for SOPs on entry/exit and GA swapping
Ministry of Environment (MoEFCC)	Simplify forest clearances for underground CGD pipeline crossings along existing road corridors

D7. Standard Communication Templates for CGDs

Six ready-to-use templates **(attached as Annexure)** are prescribed for uniform rapid rollout:

- Notice of PNG availability to prospective DPNG customer.
- Notice of PNG availability to housing society.
- Notice to RWA/Managing Committee under Clause 5(4) of the Order.
- Request to OMC for LPG discontinuation (individual and society).
- NOC to customer/society for technical infeasibility (authorising continued LPG supply).
- Public Notice as per Clause 4(11) of the Order.

E. PILLAR 2 — IMPLEMENTATION

Goal: Execute 60 lakh household connections in 90 days by solving three physical bottlenecks — shortage of materials, shortage of skilled workers, and slow installation methods.

E1. Accelerated Customer On-Boarding

- Standardization of Registration form and a simple three step process to simplify on-boarding of customer.
- Registration camps in societies, Govt. offices (Like DC office, MC office), malls, parks, OMC retail outlets, and CNG stations.
- TATKAL PNG Connections — mobile units with full material and manpower kits for on-the-spot registration-to-commissioning. Reward structure to be devised for CGD entities to help enable TATKAL PNG Connections.
- Request letters to all potential customers in charged areas requiring transition within 90 days.
- All Central/State/ULB public spaces and OMC outlets to be made available; all publicity/signage charges waived until 30th June 2026.

E2. Material Supply — Critical Enabler

Current material shortfalls and resolution plan:

Material	Requirement	Available	Vendor Capacity (3M)	Shortfall	Action Required
Gas Meters	60 Lakh	~20 % (12 Lakh)	~27 Lakh	Short by (60-12-27 = 21) 21 Lakh	PNGRB may endeavour to review and, wherever necessary, amend T4S provisions to **facilitate wider participation of manufacturers and suppliers within India.**
Domestic Regulators	60 Lakh	~20% (12 Lakh)	~30 Lakh	Short by (60-12-30 = 18) 18 Lakh	
Appliance & Isolation Valves	~150 Lakh	~10 % (15 Lakh) (equivalent to 6 Lakh D-PNG)	~15 Lakh (equivalent to 6 Lakh D-PNG)	Short by (150 – 15 – 15 = 120) 120 Lakh	PNGRB may consider issuing guidelines for **pan-India standardization of thread specifications (NPT/BSPT), enabling optimization of manufacturing capacities** and reducing fragmentation.

GI Pipes	~38,000 km	~5% (equivalent to 2.5 Lakh D-PNG)	Adequate	-	-
MDPE Pipes	~21,000 km	~40% (equivalent to 23 Lakh D-PNG)	Adequate	-	-

Form a CGD Industry Technical Committee under PNGRB to take all technical and material decisions including exploration of new/ advance materials and allowing them for use. Enable material pooling across CGDs. Expedite procurement via reverse auctions and pre-approved vendor panels.

E3. Workforce Scaling — Solving the Manpower Shortage

- Ministry of Urban Development to immediately deploy water plumbers for outside-kitchen PNG work.
- Ministry of Skill Development to run urgent 2-week plumber/technician training courses with CGD entities at local institutions.

E4. Switch to MLC Piping for Last Mile Connectivity — 3× Faster Installation

Multi-Layer Composite (MLC) pipes dramatically reduce installation time and skill dependency compared to traditional GI piping:

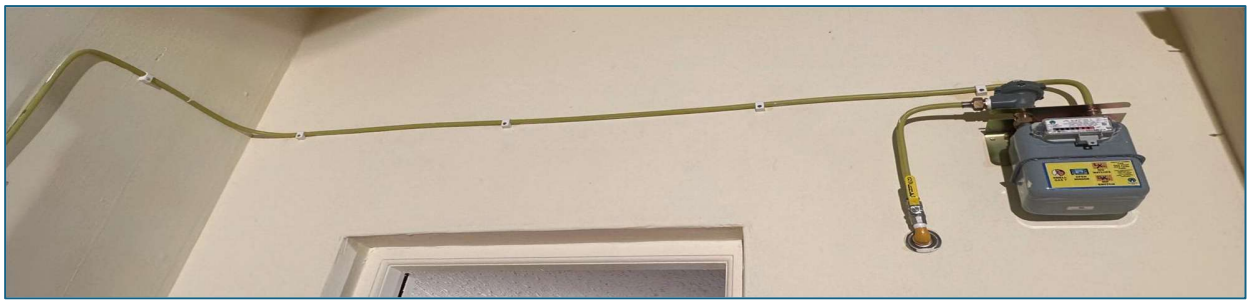
GI Piping



MLC Piping



MLC Piping



Parameter	GI Pipe	MLC Pipe	Improvement
Avg. time per connection	4–6 hours	1.5–2.5 hours	~60% faster
Workers per connection	2–3 workers	1–2 workers	~40% less manpower
Skill required	Trained plumber (mandatory)	Semi-skilled technician	Lower skill dependency
Post-install leak callbacks	High (threaded joints)	Nil	Less rework; more connections
Training cycle for new technician	3–6 months	3–5 days	Rapid workforce ramp-up

Action: Mandate or promote use of MLC piping from Meter Control Valve-1 (MCV) onwards, including all covered external sections outside the kitchen once pipeline enters customer premises and complete internal kitchen piping.

E5. Performance-Linked Incentive Framework

The key bottleneck in PNG rollout lies in last-mile execution, particularly at the level of plumbers, technicians, and field staff who directly impact customer activation, meter readiness, gas charging, and first billing conversion.

It is recommended to implement a tiered, performance-linked incentive framework to enhance productivity and drive accountability at the ground level. This approach will also help address the limited availability and geographic concentration of skilled plumbers by improving motivation, retention, and deployment efficiency in different geographies across India and help expedite asset monetization (Illustrative; CGDs to adapt as per internal policies):

Monthly Connections	Plumber Incentive (Rs. /Connection)	TPI Incentive (Rs. /Connection)	Max Monthly Incentive
0–75	Nil	Nil	Nil
76–100	Rs.40–80	Rs.80–100	~Rs.2,000
101–125	Rs.80–150	Rs.150	~Rs.3,500
126–150	Rs.140–200	Rs.200	~Rs.5,000
>150	Rs.200+	Rs.250+	Open (performance-based)

Society/cluster-level conversion multiplier: up to 25% = base; 26–30% = 2× base; 31–40% = 3× base; >40% = higher multiplier/bonus.

E6. Commercial Customer Transition

- CGDs to publish a fixed Schedule of Rates (SOR) for all downstream piping work in commercial premises.

- Pre-approved vendor list to be displayed on each CGD website.
- CGDs to offer end-to-end solutions for commercial customers right from registration to commissioning and after services — not merely PNG supply.

F. PILLAR 3 — LPG–PNG TRANSITION

The transition from LPG to PNG remains fragmented due to the absence of an integrated ecosystem across stakeholders, including CGDs, OMCs, LPG distributors, and local authorities. Current processes are largely manual, resulting in data silos, dual connections, delayed LPG discontinuation, and limited visibility on conversion progress at a household and geographic level.

> ***Goal: Replace fragmented manual PNG processes with a unified digital system — giving CGDs real-time data, customers a seamless experience, and planners accurate targeting information. Enable systematic, trackable LPG handover where PNG has been activated.***

F1. LPG–PNG Data Integration (MC as Nodal Agency)

The Municipal Corporation (MC)/ District level agency acts as nodal data custodian, coordinating among CGDs, OMCs, and LPG distributors through a structured five-step process:

- Household Mapping — addresses mapped via property IDs; MC holds the master database; CGDs help update data.
- Area Prioritisation — gated societies converted first for bulk rollout, followed by individual households.
- PNG Commissioning — customer applies; CGD ensures connection within 90 days; status updated on unified portal.
- LPG Discontinuation — auto-triggered after PNG commissioning; portal logic restricts LPG supply based on PNG status.
- Digital Enforcement — non-compliant households face LPG supply restrictions; weekly progress reviews led by MC.

F2. Unified Digital Platform for Customers

Feature	Specification
PNG Availability Check	Customer enters location → sees pipeline coverage and CGD contact details
Registration	Web portal — enter LPG ID + mobile number, upload documents, get application number instantly for simplify registration process in 3 steps
Feasibility Check	CGD confirms technical feasibility within 30 days of registration approval
Commissioning	CGD completes connection within 90 days of approval
Real-Time Tracking	Customer tracks registration / feasibility / commissioning status using application number
Integration with CLDP, LPG–PNG Deduplication	Once customer is activated with PNG, LPG to be auto surrendered as it is integrated with CLDP. Common Customer Database (CPDB) linked with GIS and MC household data will further help prevents dual connections.

Existing CGD portals and channel partner apps to continue but integrated with the unified portal. Platform built as modular system adaptable by all CGD entities. CGD entities to have basic minimum IT infrastructure for integration with unified portal, PNGRB to include in IT regulations.

F3. Digital Communication Campaigns

- Local SMS/WhatsApp campaigns declaring LPG-free zones and directing customers to PNG registration. Upload LPG free zones in a common map on the portal for ease of identification by the customer.
- Promote MyPNGD.in for LPG surrender and refundable security deposit claims — no dealership visit required.
- Continue existing CGD digital PNG drives and safety communications.

F4. Expected Digital Outcomes

Outcome	Mechanism
Better household mapping	GIS overlay of LPG + PNG data; MC property ID database
Seamless LPG-to-PNG transition	Automated portal triggers for LPG discontinuation on PNG activation
Controlled LPG supply	Digital validation; dual-connection prevention via Common PNG Database Platform (CPDP)
Faster customer onboarding	Single platform reduces registration and approval time across all CGDs with a simplified process
Real-time national visibility	Live dashboards tracking progress at national and GA level with ageing analysis

G. PILLAR 4 — NEW INITIATIVES

Goal: Reach customers where conventional pipelines do not yet exist or are delayed — through alternative supply models, new technologies, and smarter deployment of existing networks.

G1. Mini LNG — Hub & Spoke Model

Cryogenic cylinders (250–950 litres) deliver natural gas without waiting for high pressure pipeline infrastructure. Existing LCNG/ LNG stations serve as hubs; Light Commercial Vehicles (LCVs) as spokes to remote clusters. This enables CGDs to monetise demand immediately, expand beyond pipeline limits, and ensure supply resilience. The model works like reticulated LPG — mobile gas network first, permanent pipelines later but can be easily integrated/ plugged with the main line later.







G2. LPG Distributors as PNG Transition Partners

LPG distributors have verified customer databases, deep local presence, community trust, and field manpower. Rather than facing business erosion, they should be repositioned as gas transition partners:

- Onboard as Direct Marketing Agencies (DMAs) to acquire domestic PNG customers.
- Provide meter reading, billing support, and outstanding payment recovery services.
- Annual maintenance of PNG connections using trained LPG technicians.
- Use existing LPG customer centres as PNG service centres and control rooms.

This delivers faster PNG penetration, orderly LPG surrender, and business continuity for LPG distributors — simultaneously.

G3. Smart Prepaid Meters

Transition from conventional mechanical meters to Smart Prepaid Meters for domestic and commercial PNG customers to enhance revenue assurance, operational efficiency, and customer experience. Prepaid metering eliminates post-consumption billing cycles, reduces outstanding dues, and minimizes billing disputes while enabling real-time consumption visibility and faster grievance resolution.

These meters support remote reading, connect/disconnect, and monitoring, thereby lowering operating costs and reducing manual intervention. Integration with ERP/CRM systems enables seamless recharge, consumption tracking, and automated customer communication.

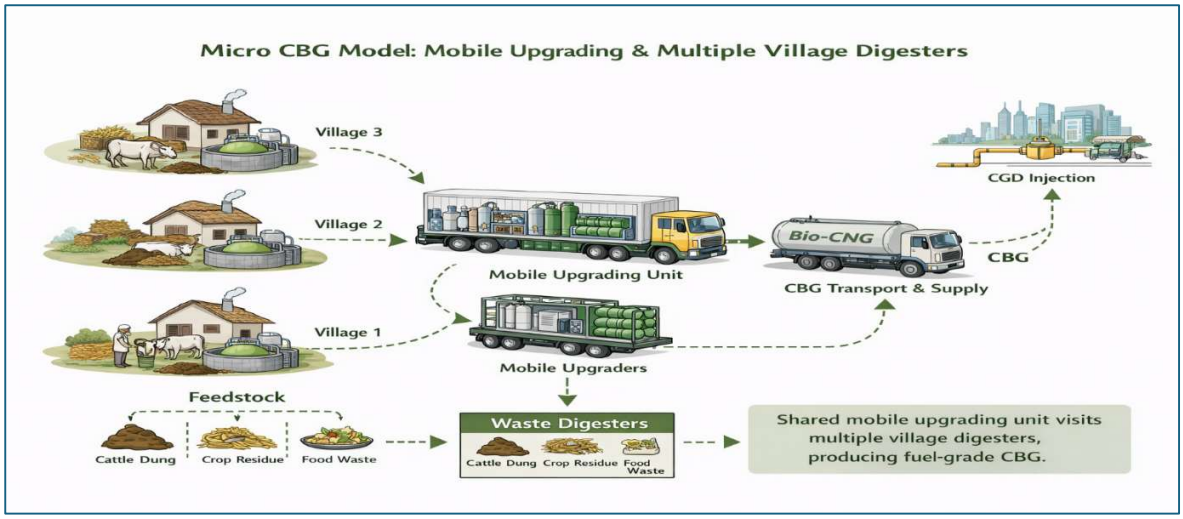
To enable scalable deployment, CGD entities should adopt a standardized HES/MDM architecture capable of supporting multiple vendors with a single integration. At an industry level, there is a strong need for collaboration on standardization of technical specifications, communication protocols, and cybersecurity frameworks, along with addressing key bottlenecks related to cost and technology fragmentation.

It is recommended that the industry adopts a collaborative approach for aggregated procurement, including floating an industry-level tender, similar to the model followed under PNG Drive 2.0 and how EESL have transformed usage of LED lights. This will help leverage economies of scale, optimize costs, and accelerate adoption across geographies.

Overall, Smart Prepaid Meters can deliver improved cash flows, elimination of under-recovery, reduced operational costs, and a more transparent, customer-centric PNG ecosystem.

G4. Micro-CBG (Compressed Biogas) Clusters

- Deployment of multiple village-level digesters within a defined cluster, supported by a **shared mobile upgrading and compression unit**.
- Upgraded and compressed biogas to be transported to nearby CGD / CNG networks for utilisation.



- Model designed to ensure viability for **small plant capacities (up to 1,000 kg/day)** through aggregation and shared infrastructure.

Key Benefits:

- Optimised capital investment through shared upgrading infrastructure
- Improved project viability for sub-scale plants
- Scalable deployment across rural and semi-rural geographies
- Unlocking India's untapped biogas potential through decentralised implementation
- Strengthening rural economy via localised energy production and value creation through other by-products (Bio-fertilizers like FOM, LFOM, PROM etc.)
- Rural village/ semi-urban areas can also be made LPG free zones

G5. Flexible Composite Pipe (FCP/RTP) Technology

High-Pressure Flexible Composite Pipe (FCP/RTP) systems are corrosion-free, scaling-free, and virtually maintenance-free, and are increasingly being adopted globally as an alternative to conventional steel pipelines. These non-metallic pipelines offer faster installation, lower OPEX, and longer service life (up to ~50 years), with proven reliability under high-pressure and corrosive conditions.

- Widely deployed globally across gas, hydrocarbons, water injection, and slurry applications
- Demonstrated performance in challenging terrains including mountainous, desert, rocky, and offshore environments
- In India, systems such as those by SoluForce have been implemented for Vedanta Limited, with ~25 km pipeline laid by Megha Engineering & Infrastructures Ltd. in Barmer, Rajasthan
- Conform to API 15S standards for 4" & 6"; gas-tight variants enhance suitability for gas applications
- Offer ~30% lifecycle cost savings



Given these advantages and proven track record, it is recommended that the PNGRB Technical Committee undertake a feasibility study for adoption of FCP/RTP systems in India's CGD sector and accordingly advise CGD entities/ incorporate in T4S regulations (the information Brochure of M/s SoluForce is attached for reference)

G6. Virtual Pipeline Models for Remote Areas

Model	How It Works	Typical Illustration
DRS + LCV Model	Install a District Regulating Station in a virgin area. LCVs/cascades from nearby CNG stations decant gas into the DRS, which feeds the pre-laid MDPE household network	
DCU + Stationary Cascade	Deploy a Decompression Unit with stationary cascades where MDPE network exists. Mobile cascades replenish the stationary bank, supporting 1,000+ households continuously	
Cluster-Based Rollout	Prioritise high-density residential pockets, townships, and societies to maximise conversion and asset utilisation	

All temporary setups are designed for seamless switchover to permanent steel pipeline supply — no stranded assets. Benefits: early customer stickiness, faster ROI, and reduced gestation in new Geographic Areas.

H. MASTER ACTION PLAN — CONSOLIDATED

Action	Owner	Timeline
PILLAR 1: COMMUNICATION		
Launch 'PNG ke saath Non-Stop Zindagi' campaign via I&B assets and CGD/OMC digital channels	PNGRB / MoPNG + CGDs + OMCs	Immediate
Strengthen cgdhelpdesk.in for permission issues and field-level blockages	PNGRB + CGDs	Immediate
Ministry of Cooperation to direct State Registrars for RWA notification (3-day response mandate)	Ministry of Cooperation	Within 2 weeks
District Collectors to direct ward administrators for proactive PNG adoption	State Governments	Within 2 weeks
OMCs and CGDs to jointly map LPG-free zones on GIS and enforce LPG cutoff where PNG is active	OMCs + CGDs	Within 4 weeks
Inter-ministerial actions: VAT reduction, DCS approval reform, FSSAI mandate, NHAI policy, forest clearances, PESO review	MoPNG (coordination) + respective Ministries	Within 4 weeks
Distribute 6 standard communication templates to all CGD entities	PNGRB	Immediate
PILLAR 2: IMPLEMENTATION		
Run registration camps and TATKAL on-wheels conversion drives in all active GAs	CGDs	Immediate
Waive publicity/signage/licensing charges for PNG camps until 30 June 2026	State Govts / ULBs	Immediate
Nil import duty and statutory clearances for Meters, Regulators, Isolation & Appliance Ball Valves	MoPNG + Ministry of Commerce	Within 1 week
Form CGD Industry Technical Committee under PNGRB for material and technical decisions	PNGRB	Within 1 week
Deploy water plumbers for outside-kitchen PNG work (Ministry of Urban Development)	Ministry of Urban Development	Within 2 weeks
2-week urgency plumber/technician training courses with CGDs at local institutions	Ministry of Skill Development + CGDs	Within 2 weeks
Directions for need-based LPG cylinder allocation to PNG workforce (~40,000 cylinders/3 months)	MoPNG + OMCs	Immediate
Mandate/encourage MLC piping over GI for inside-kitchen installations	PNGRB + CGDs	Within 2 weeks
Implement tiered performance-linked incentives for plumbers, TPIs, and society conversions	CGDs	Within 2 weeks
Publish fixed SOR and approved vendor list for commercial downstream work	CGDs	Within 4 weeks

PILLAR 3: LPG–PNG TRANSITION		
CGDs to share gasified area GIS/KMZ maps with OMCs	CGDs + OMCs	Within 2 weeks
OMCs to send PNG availability notices (letter/SMS/WhatsApp) to customers in gasified areas	OMCs	Within 4 weeks
Build unified digital customer onboarding platform covering all CGDs	PNGRB / MoPNG + Tech partner	Within 60 days
Develop common GIS overlay for LPG+PNG to identify and eliminate dual-connection households	CGDs + OMCs	Within 30 days
Create common CPDB linked with GIS across CGD industry	PNGRB + CGDs	Within 60 days
Promote MyPNGD.in for online LPG surrender	OMCs + CGDs	Immediate
PILLAR 4: NEW INITIATIVES		
Deploy Mini LNG hub-and-spoke models in areas awaiting steel pipeline connectivity	CGDs + PNGRB guidance	Within 60 days
Onboard LPG distributors as DMAs, AMC providers, and PNG service partners	CGDs + OMCs	Within 30 days
Roll out Smart Prepaid Meters with common HES/MDM portal per CGD entity	CGDs	Within 90 days
Pilot micro-CBG clusters in high-potential rural areas	CGDs + PNGRB	Within 90 days
PNGRB Technical Committee to assess FCP/RTP pipe feasibility for India	PNGRB	Within 60 days
Deploy DRS+LCV and DCU+Cascade virtual pipeline models in virgin/remote areas	CGDs	Within 60 days

I. CONCLUSION & IMMEDIATE ASKS

This is an execution challenge — and it is solvable. Every element of the PACE strategy is actionable now. What is needed is decisive, coordinated intervention from the Secretary level to unlock the specific bottlenecks identified in this report.

Immediate Asks from the Secretary, MoPNG

#	Ask	Impact
1	Issue Inter-Ministerial directions for RWA compliance, PESO order review, FSSAI mandate, and ward data sharing	Removes administrative and approval blockages at scale
2	Instruct OMCs to initiate LPG-free zone mapping and begin LPG cutoff enforcement in PNG-active areas	Enables systematic LPG-to-PNG transition
3	Grant nil import duty and fast-track clearances for 21 lakh gas meters and 18 lakh regulators	Removes the material chokepoint blocking 60 lakh connections
4	Direct Ministry of Skill Development for 2-week urgency plumber training and Ministry of Urban Development for water plumber deployment	Solves the workforce bottleneck immediately
5	Approve waiver of publicity/signage charges for PNG registration camps until June 2026	Enables ground-level outreach without friction
6	Direct PNGRB to constitute CGD Industry Technical Committee and Investment & Regulatory Reform Committee within 7 days	Unblocks technical decisions and investment flows simultaneously

Annexures

PUBLIC NOTICE

Whereas Ministry of Petroleum and Natural Gas issued the "Natural Gas and Petroleum Products Distribution (Through Laying, Building, Operation and Expansion of Pipelines And Other Facilities) Order, 2026" ("Order") from _____; and

Whereas, as per the Clause 4(11) of the Order, there is a 'deeming permission' for the pipeline permission, if not granted by (Name of Authority), within a period of ____ days; and

Whereas, "-------" is the authorised entity for development of CGD network for the geographical area of _____ districts, has applied for the permissions for the pipeline at _____ on _____; and

Whereas, no permission has been received by "-----" after the expiry of _____ days;

Now therefore, in terms of the Clause 4(11) of the Order, there is deemed permission for _____.

Please note that "-----" shall commence pipeline laying works or establishment of CNG/LNG/LCNG at the above location from _____ and will carry out all works in accordance with the Pipeline and Other Facilities RoW Order, 2026 and applicable safety standards, with minimum disruption to the public.

For any query or support, you may contact to "------" at:

Customer/Public Helpline Number | Email Address | Website URL

Authorised Signatory

NO OBJECTION CERTIFICATE

(Technical Infeasibility — Continuation of LPG Supply)

NOC Reference Number	
Date of Issue	
Address of Premises / Household	

This is to certify that the Authorised Entity ("------"), a PNGRB-authorised City Gas Distribution entity for [Geographic Area], [State], has carried out a technical assessment of the feasibility of providing a Piped Natural Gas (PNG) connection to the above-mentioned premises.

Upon due technical assessment, "-------" hereby certifies that it is currently technically not feasible to provide a Piped Natural Gas connection to the above premises for the following reason(s) [tick all that apply]:

Reason(s) for Technical Infeasibility (select and detail applicable reason):

☐ Internal pipeline network has not yet been laid within the building / premises due to: [structural constraints/ constraints to connect the kitchen].

☐ Service line from the main pipeline to this specific unit cannot be routed due to: [physical obstruction — constraint like Nala/railway crossing — specify].

☐ The household is located at a distance from the nearest pipeline that cannot currently be served due to: [terrain / technical barrier — specify].

☐ The main distribution pipeline in this area has not yet been laid. Expected commissioning: [date / quarter].

☐ Other technical reason [describe in detail]: _____

In view of the above, "------" has no objection for continuation of LPG supply to the above premises.

Please note that this NOC is valid only for the duration of the technical infeasibility and will withdraw this NOC as and when it is in a position to provide and operationalise piped gas connectivity to this household. Written notice of withdrawal will be given at least 30 days before cessation of LPG supply.

This NOC is subject to periodic review by "------" and may be withdrawn at any time upon "-------" becoming technically capable of providing a PNG connection.

Authorised Signatory

COMMUNICATION TO SOCIETIES

Date:

The Resident / Owner / Lawful Occupier
[Flat / House No.], [Building / Colony Name]
[Street / Sector / Locality]
[City / Town], [State] — [PIN Code]

Sub: Notice of Availability of Piped Natural Gas (PNG) Connection at Name of the Society

Dear Secretary,

1. Authorised Entity ("---------") is a PNGRB-authorised entity for the development of the City Gas Distribution (CGD) network in the concerned Geographical Area in the State of [●].
2. "-----" has already laid a natural gas distribution pipeline at or in the near vicinity of your premises and is in a position to supply Domestic Piped Natural Gas (DPNG) to your society. DPNG is a safe, reliable, ensuring uninterrupted supply and economical fuel for cooking supplied directly through pipeline infrastructure.
3. In this regard, you are requested to facilitate and/or apply for DPNG connections for the residents of your society. As per the recent order of the Government of India dated 24.03.2026, in the event that an application for PNG connection is not made within 3 (three) months from the date of this communication, LPG supply to your society is liable to be discontinued from 3 months of this communication.
   It is clarified that the application for a PNG connection may be made by the lawful occupier of the household, i.e., either the tenant or the owner of the premises.
4. To apply for a PNG connection, you may contact "-----" through any of the following channels:

Contact Person Name	[●]
Phone Number	[●]
Email	[●]
"----" Office Address	[●]
Office Hours	[●] on [working days]

5. You are requested to take necessary steps at the earliest to ensure uninterrupted availability of PNG at your society and to avail the benefits of DPNG.

Yours faithfully,

COMMUNICATION TO LPG DISTRIBUTOR & STATE OMC - SOCIETY

Date:

LPG Distributor
Address

Sub: Request for discontinuation of LPG Cylinder to the residents of _____ Locality/Housing Society/Address

Ref: "-------" Public Notice dated [●] at Name of Locality/Address

Sir / Madam,

1. In terms of Clause 5(4)(d) of the "Natural Gas and Petroleum Products Distribution (Through Laying, Building, Operation and Expansion of Pipelines and Other Facilities) Order, 2026" ("Pipeline and Other Facilities RoW Order"). "-------" had applied for permission to lay a natural gas pipeline within Name of Housing Society, Address ("Housing Area") to supply Piped Natural Gas to all residential units therein on _____.

2. Despite the legal mandate under Clause 5(1) and 5(3) of the Pipeline and Other Facilities RoW Order, the RWA / Managing Committee of Society Name has refused permission / failed to grant permission within the prescribed 3 working days.

3. In terms of Clause 5(4)(b) and 5(4)(c) of the Pipeline and Other Facilities RoW Order, "-------" has accordingly issued a Public Notice dated [●] at the entry points of the Housing Area and in two daily newspapers. Under Clause 5(5) of the Order that LPG supplies to all residential addresses listed in **Annexure-1** to this letter will cease upon expiry 3 months from the date of the Public Notice, i.e., on or before cessation date.

4. As required under Clause 5(4)(d) of the Pipeline and Other Facilities RoW Order, we hereby request you to notify the LPG subscribers at the addresses listed in **Annexure-1** — by **SMS, telephone call, or recorded voice message** that the LPG supply shall cease within 3 months from the date of this notice.

5. Please confirm receipt of this letter and the action taken at the earliest.

Yours faithfully,

[Authorised Signatory Name]

Copy to: State / Area Marketing Manager — IOCL / BPCL / HPCL (OMC Name and Address)

COMMUNICATION TO LPG DISTRIBUTOR & STATE OMC – INDIVIDUAL HOUSE

Date:

LPG Distributor
Address

Sub: Request for discontinuation of LPG Cylinder to the residents of _____ Locality/Housing Society/Address

Ref: "-----" Public Notice dated [●] at Name of Locality/Address

Sir / Madam,

1. In terms of Clause 5(4)(d) of the "Natural Gas and Petroleum Products Distribution (Through Laying, Building, Operation and Expansion of Pipelines and Other Facilities) Order, 2026" ("Pipeline and Other Facilities RoW Order"). "-------" had applied for permission to lay a natural gas pipeline within Name of Housing Society, Address ("Housing Area") to supply Piped Natural Gas to all residential units therein on _____.

2. Despite the legal mandate under Clause 5(1) and 5(3) of the Pipeline and Other Facilities RoW Order, the RWA / Managing Committee of Society Name has refused permission / failed to grant permission within the prescribed 3 working days.

3. In terms of Clause 5(4)(b) and 5(4)(c) of the Pipeline and Other Facilities RoW Order, "------" has accordingly issued a Public Notice dated [●] at the entry points of the Housing Area and in two daily newspapers. Under Clause 5(5) of the Order that LPG supplies to all residential addresses listed in **Annexure-1** to this letter will cease upon expiry 3 months from the date of the Public Notice, i.e., on or before cessation date.

4. As required under Clause 5(4)(d) of the Pipeline and Other Facilities RoW Order, we hereby request you to notify the LPG subscribers at the addresses listed in **Annexure-1** — by **SMS, telephone call, or recorded voice message** that the LPG supply shall cease within 3 months from the date of this notice.

5. Please confirm receipt of this letter and the action taken at the earliest.

Yours faithfully,

[Authorised Signatory Name]

Copy to: State / Area Marketing Manager — IOCL / BPCL / HPCL (OMC Name and Address)

COMMUNICATION TO HOUSEHOLDS

Date:

The Resident / Owner
[Flat / House No.], [Building / Colony Name]
[Street / Sector / Locality]
[City / Town], [State] — [PIN Code]

Sub: Notice of Availability of Piped Natural Gas (PNG) Connection at Name of the Colony

Dear _____,

1. Authorised Entity ("----------") is a PNGRB-authorised entity for the development of the City Gas Distribution (CGD) network in the concerned Geographical Area in the State of [●].
2. "---" has already laid a natural gas distribution pipeline at or in the near vicinity of your premises and is in a position to supply Domestic Piped Natural Gas (DPNG) to your colony. DPNG is a safe, reliable, uninterrupted supply and economical fuel for cooking supplied directly through pipeline infrastructure.
3. In this regard, you are requested to apply for DPNG connections for your house. As per the recent order of the Government of India dated 24.03.2026, in the event that an application for PNG connection is not made within 3 (three) months from the date of this communication, LPG supply to your house is liable to be discontinued from 3 months of this communication.
4. The connection may be applied both by the tenant or the owner of the premises.
5. To apply for a PNG connection, you may contact "----" through any of the following channels:

Contact Person Name	[●]
Phone Number	[●]
Email	[●]
"---" Office Address	[●]
Office Hours	[●] on [working days]

6. You are requested to take necessary steps at the earliest to ensure uninterrupted availability of PNG at your house and to avail the benefits of DPNG.

Yours faithfully,