

HPCL investing INR 2,000 Crore to set up 24 CBG plants across multiple locations in India

Facility Type(s)	Development Scope	Organization	Part of Sector
Plants	Multi-Site	HPCL	Oil & Gas
Announced	Est. Completion	Approx. Investment	Opportunity Score
20 th June, 2025	1 st December, 2027	INR 2,000 Crore	High

About this Development

Hindustan Petroleum Corporation Limited plans to invest approximately \$215 million (~INR 2,000 crore) to develop 24 compressed biogas (CBG) plants across India as part of its clean energy transition strategy, with projects to be executed under the government’s SATAT (Sustainable Alternative Towards Affordable Transportation) initiative.

The rollout will follow a distributed infrastructure model, with each plant designed to process agricultural residue, municipal solid waste, and other organic feedstock into biogas for automotive and industrial use. While individual plant capacities have not been fully detailed, typical SATAT-aligned facilities operate at standardized output levels, indicating a multi-site network of medium-scale processing units.

The project is expected to be undertaken in phased developments across multiple states to support decentralized energy production and waste management integration.

Given the geographically dispersed asset base and industrial processing environment, this project is likely to require consistent deployment of perimeter security, surveillance systems, access control, and centralized monitoring solutions to ensure operational safety, regulatory compliance, and asset protection across all locations.

Electronic Security Requirements Foreseen by Types of Solutions

I. Video Surveillance

PTZ Cameras, Fixed Cameras (Incl. Bullet & Box), Dome Cameras, Thermal Cameras

- Surveillance systems are deployed across feedstock handling areas, digestion units, gas upgrading sections, cascade filling zones, storage areas, and administrative/control room environments to ensure complete visibility with minimal blind spots.
- A combination of fixed, PTZ, thermal, and dome cameras is used to support process monitoring, perimeter coverage, indoor surveillance, and anomaly detection, with low-light and infrared capabilities enabling continuous day-night operation.
- Installations in hazardous or gas-sensitive zones require explosion-proof (FLP/Exd) enclosures, while outdoor deployments use high IP-rated (IP66/67) cameras suited for dust, moisture, and corrosive conditions. Given the scale of deployment across 24 plants, systems are expected to follow standardized architectures to ensure consistency in monitoring, maintenance, and lifecycle management.
- All systems are integrated with centralized monitoring infrastructure via fiber/CAT6 networks, supported by storage systems such as NVRs or NAS for recording and retrieval.

II. Access Control

RFID / Card-Based Access Systems, Biometric Access Systems, Vehicle Access Management Systems, Boom Barriers, UHF Long-Range RFID Systems

- Access control systems are deployed to regulate personnel movement across operational zones, administrative areas, and control rooms using credential-based systems such as RFID or smart cards.
- Biometric authentication is implemented in restricted or high-security zones requiring enhanced access control and auditability.
- Vehicle access management systems, integrated with boom barriers, are deployed at entry and exit points to regulate logistics movement and track vehicles involved in feedstock supply and gas distribution.
- UHF RFID systems may be used for long-range vehicle identification and seamless access at plant gates.
- Systems support role-based access control, centralized policy enforcement, and audit trails across all plant locations under a unified framework.

III. Perimeter Intrusion Detection Systems

Fence Intrusion Detection Systems, Intrusion Alarm Systems, Microwave / IR Barriers

- Perimeter intrusion detection systems are deployed to secure plant boundaries, storage zones, and restricted areas using fence-mounted sensors, infrared beams, and microwave barriers.
- These systems enable real-time detection of intrusion attempts, particularly in remote or low-visibility areas across distributed plant locations.
- Integration with video surveillance systems supports automated event verification and coordinated response workflows.
- Given the multi-site deployment model, systems are designed to enable centralized alerting, monitoring, and incident tracking across all locations.

IV. Software & Command Platforms

Video Management Systems (VMS), Video Analytics / Smart Surveillance Analytics, ANPR (Automatic Number Plate Recognition), Storage & Archiving Solutions, Central Monitoring & Dashboards, Systems Integration (BMS / SCADA / ERP)

- A centralized Video Management System (VMS) is deployed to enable unified monitoring and management of surveillance infrastructure across all plant locations.
- Video analytics capabilities support intrusion detection, activity monitoring, and safety-related use cases across critical operational zones.
- ANPR systems are deployed at entry and exit points to monitor and log vehicle movement associated with plant logistics operations.
- Systems are supported by storage and archiving solutions to ensure long-term data retention and compliance requirements. Integration with SCADA, BMS, and ERP platforms enables enhanced operational visibility and coordinated incident response.
- Central monitoring dashboards provide multi-site visibility, supporting real-time monitoring, alert management, audit trails, and incident review workflows.

Buying Processes

How Procurement is Typically Structured at HPCL

HPCL follows a centralized, tender-driven procurement model via e-tendering platforms. Most infrastructure and security projects are executed through structured bids with clearly defined technical and commercial criteria.

A two-bid system (techno-commercial + financial) is standard, where vendors must first qualify technically before price evaluation. Specifications are defined by internal engineering, project, and operations teams with strict compliance norms and qualification frameworks.

Vendor Engagement Flow:

- Tender publication (HPCL / GeM / CPPP)
- Submission of pre-qualification and technical bids
- Technical evaluation and clarification rounds
- Financial bid opening for qualified vendors

Vendors must meet strict eligibility criteria including prior experience, technical capability, and compliance requirements. Participation is largely restricted to formal tender routes, with limited direct engagement outside official channels.

Where to Track Opportunities:

- HPCL Procurement Portal - <https://www.hindustanpetroleum.com/purchase-procurement>
- Government eMarketplace (GeM) - <https://gem.gov.in/>
- Central Public Procurement Portal (CPPP)
- Tender documents and project-specific listings

HPCL also publishes procurement plans, tender announcements, and vendor updates, offering visibility into upcoming requirements. Early positioning depends on tracking tenders, maintenance cycles, and recurring infrastructure needs.

Implications:

- Qualification and documentation drive success
- Alignment with technical specs is critical
- Continuous tracking is essential to avoid missed bids
- Proven, standardized solutions have higher win probability
- Early awareness is key due to limited pre-tender engagement

Sales Discussion Guide

Key Talking Points and Pitch Angles for Engagement

- Hazardous Area Surveillance:** Emphasize **ATEX/explosion-proof CCTV systems** for gas handling zones to ensure safety compliance. Highlight **thermal cameras with AI analytics** for early detection of gas leaks, overheating, and abnormal conditions.
- Standardized Multi-Site Architecture:** Position a **standardized security design across all 24 plants** to ensure consistency, easier maintenance, and scalability. Reduces complexity and improves lifecycle management.
- Centralized Monitoring & Integration:** Promote **centralized VMS integrated with SCADA/BMS** for unified monitoring across all locations. Enables real-time alerts, remote visibility, and faster incident response.
- Integrated Perimeter Protection:** Advocate a **layered approach** using fence sensors, IR/microwave barriers, and video verification. This is critical for securing large, distributed, and low-visibility sites.
- Logistics & Vehicle Management:** Highlight **ANPR, RFID, and vehicle access systems** for managing truck movement. Improves flow, reduces bottlenecks, and ensures auditability.
- Scalable, Future-Ready Systems:** Position systems as **scalable and upgradeable**, supporting future plant expansion and advanced analytics adoption.

Key Points to Clarify

- Approximate timelines and scope of development
- Level of standardization across plants
- Centralized vs site-level monitoring approach

Key Personnel to Approach



Ms. Radhika Mahto
Sr. Manager – Category Management, CPO - Marketing



Mr. Saket Kalikar
GM - Category Management, CPO - Marketing

Related Case Studies

Relevant Deployments in Similar Environments	Client	Vendor(s)
Maintenance of CCTV and access control system at a petrochemicals complex in Mangalore.	ONGC	AVer Solutions and Global Services Pvt. Ltd.

Part of Megatrend

Title: Set-up of 5,000 CBG Plants across India

All Opportunities Related to this Megatrend

- HPCL investing INR 2,000 Crore to set up 24 CBG plants across multiple locations in India
- GAIL investing INR 450 Crore to set up CBG Plants across 15 districts in Karnataka under the SATAT Scheme
- Integrating automated electronic security solutions across 10 Compressed Bio-Gas (CBG) plants being set up by GAIL