

RATING METHODOLOGY – CITY GAS DISTRIBUTION

July 2023



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This rating methodology updates and supersedes ICRA's earlier methodology document on this subject, published in July 2021. While this revised version incorporates a few modifications, ICRA's overall approach to rating entities in the sector remains materially similar. Also, a section has been added to provide a broad perspective on how environmental, social and governance (ESG) risks are incorporated by ICRA in its credit assessments.

Overview

City gas distribution (CGD) companies supply piped natural gas (PNG) to commercial and industrial establishments for heating and power generation purposes and to households for cooking and heating purposes. CGD companies also retail compressed natural gas (CNG) for use as auto fuel. A CGD company may have operations in one or more geographical area (GA).

According to the Petroleum and Natural Gas Regulatory Board (PNGRB) data as on March 2023, the CGD sector supplies about ~33.4 million standard cubic metres per day (MMSCMD) of natural gas to various consumer segments. The same has witnessed a growing trend over the past few years, supported by multiple factors like (a) favourable cost economics due to higher calorific value and priority allocation of domestic natural gas by the Government of India (GoI) to PNG (domestic)/CNG consumers under the Administrative Price Mechanism (APM), (b) policy initiatives transitioning to cleaner fuel (gas), especially by industrial and commercial vehicles and (c) increasing availability of imported natural gas. The demand for the CNG/PNG(D) segment is largely met through domestic gas (APM) and the balance is met through imported LNG or high pressure-high temperature (HPHT) gas. The demand for the PNG(I) and PNG(C) segments is met through imported LNG. Over the next few years, the sector is expected to see significant growth in investments as well as sales volumes on the back of operationalisation of the GAs authorised in the recent rounds of bidding.

For distribution of PNG to consumers, the CGD companies set up a network of steel and medium-density polyethylene pipelines across its GAs and transport the gas from their city gas stations (where the gas is received from the supplier) to the consumers. For retailing CNG, the CGD companies set up dispensers either at their own exclusive stations and/or at the fuel pumps of oil marketing companies (OMCs). As large upfront capex and multiple regulatory approvals are required for setting up the pipeline network and CNG stations, the credit risk profile of CGD companies depends on the expected demand growth, size of capex, means of funding, status of approvals and the stage of operations, among other factors.

In 2007, the GoI set up a regulator, the PNGRB, which has, among other mandates in the hydrocarbon sector, the mandate of regulating the CGD business. The PNGRB invites bids for different GAs and 11 such rounds have been conducted till date. The attractiveness of a particular GA is dependent upon the availability of pipeline connectivity with trunk pipelines, the potential for gas sales and the mix of

industrial, commercial, domestic and CNG segments. The domestic and CNG segments have been more profitable over the past few years, while the PNG industrial and commercial segments have been relatively less profitable owing to the dependence on the more costly imported LNG to meet the demand and competition from alternative fuels like liquified petroleum gas/propane etc.

Additionally, aggressive bidding by companies may make them vulnerable to competition from third-party marketers once the exclusivity period (currently eight years) is over, though competition from third party marketers has not materialised till date, even for GAs where the marketing exclusivity period is over. Accordingly, the credit risk profile of a CGD entity depends upon the current gas consumption, demand growth potential in its GA, the user mix, gas tie-ups with suppliers and the bid parameters.

In the initial years, the regulatory mandate (such as mandatory conversion of public transport into CNG) was the real demand driver for CGD business growth; however, subsequently the improved cost economics of gas vis-à-vis alternative fuels spurred the demand growth of the former. In February 2014, the GoI mandated the highest priority for the provision of domestic gas for the consumption of the CNG and PNG (D) segments. Domestic gas, being cheaper than imported re-gassified liquid natural gas (RLNG), made the economics of switching to gas more attractive for the end consumers. APM gas allocation is expected to remain inadequate, going forward, to meet the entire demand for the CNG and PNG(D) segments as gas production from the APM fields trails the demand from the aforementioned segments. However, as per a January 2023 guideline, the CGD sector (for meeting the CNG and PNG(d) requirement) has been given priority in allocation while bidding for the domestic gas produced from the difficult fields which ensures low reliance on higher priced R-LNG to meet the demand for this segment, as the HPHT gas price is capped by the GoI. On the other hand, gas demand from the commercial and industrial segments continues to be met currently by the relatively costly R-LNG, wherein the economics of using gas vis-à-vis alternative fuels vary with the type of the competing fuel. Hence, the assessment of the credit risk profile of CGD companies also involves a study of the volume growth and the average gross margins achievable, which in turn is a function of the price competitiveness relative to the alternative fuels and the company's ability to tie-up gas at a competitive rate.

Industry Risk Assessment

- Regulatory risks
- Margin and demand risk resulting from changes in cost economics vs alternative fuels

Business Risk Analysis

- Scale of operations and overall demand potential of the GA
- Gas tie-ups and connectivity infrastructure
- Consumer mix
- Project risk and risk of performance bank guarantee (PBG) encashment for slippage in execution of minimum work programme (MWP)
- Geographical diversification

Financial Risk Analysis

- Profitability and earnings stability
- Leverage and coverage
- Working capital management
- Cash flows and liquidity

Other Elements of Credit Risk Assessment

- Tenure mismatches, and risks relating to interest rates and refinancing
- Financial flexibility
- Foreign currency related risks
- Contingent liabilities/ Off-balance sheet exposures
- Event risks
- Parentage

Management Quality Assessment

Assessment of Environmental, Social and Governance (ESG) Risks

- Environmental (E) and social (S) risks
- Governance practices

Industry Risk Assessment

Regulatory risk

The regulatory risk for the sector is generally limited as the authorisation for operations in the allotted GAs by PNGRB is awarded as per the bidding criteria which defines the minimum work programme and tariffs, among others. Prior to the enactment of the PNGRB Act (2009), the authorisation was awarded by the Ministry of Petroleum and Natural Gas (MoPNG). Most PSU CGD companies, which received their initial approvals from MoPNG, have subsequently obtained authorisation from PNGRB as well. However, authorisation is awaited for a few cities as there are multiple operators in those cities, which results in exposure to regulatory risk for a few entities. As the PNGRB Act envisages a single entity providing network access for each city, the operators have approached the courts. The companies whose presence is deemed unauthorised run the risk of stranded investments.

Margin and demand risk from changes in cost economics vs alternative fuels and emerging technologies

The demand from industrial and commercial consumers faces competition from alternative fuels like LPG/propane, fuel oil etc. If the PNG supplied by the CGD entities to these sectors becomes costlier than the alternative fuels, a portion of these consumers can shift temporarily to the alternative fuels till there is economic parity, which results in demand volatility as well as pressure on margins to maintain competitiveness with the alternative fuels. Thus, ICRA analyses the relative sales mix between industrial/commercial and PNG(D)/CNG to determine the sensitivity of sales volumes and cash generation to the changes in cost economics.

The demand potential of the GAs may witness headwinds from the increasing adoption of electric vehicles in the long term. At present, the total cost of ownership (TCO) of EVs is significantly higher than CNG vehicles, which along with the inadequate charging infrastructure, has kept EV adoption limited to the two-wheeler and three-wheeler segments (e-rickshaws). Going forward, the expected moderation in the overall TCO of the EVs with the advances in battery technology being made, along with the improvement in charging technology and infrastructure, will support EV adoption. Several government initiatives towards increased share of EV buses in the state transport corporation fleets remains a threat to the CNG offtake for the CGD entities, given bus segment is a bulk consumer of CNG volumes. Rising share of EV buses as part of the fleet can lead to a lower demand potential for CNG if the EVs replace the existing fleet instead of fleet expansion. Additionally, initiatives by Government authorities to push EV adoption e.g. Draft EV policy for cab aggregators released by Government of Delhi can impact the demand for CNG demand in specific GAs. While in the near-term threat from EVs is not material, but the same is expected to materialise over longer term.

Business Risk Assessment

Scale of operations and overall demand potential of GA

Every GA may have some uniqueness in terms of demand potential/growth drivers for natural gas demand. The returns from the GA for a CGD company need to be ascertained from its current and potential scale of operations or gas volumes. The factors that need to be considered include the distance travelled by the average commuter, population density, presence of industrial/commercial establishments and supporting infrastructure in the GA. The initial cost of setting up the pipeline network and other infrastructure may make the project economics non-remunerative in case the market potential is low. Additionally, many cities do not have many multi-storey buildings as is the case with big cities which pushes up the cost of providing PNG (domestic) connections. Also, in comparison to the bigger cities, the distances travelled by commuters are shorter in the smaller ones, which implies that the CNG volumes per vehicle per day are lower. These factors impact the viability and returns of rolling out CGD networks in smaller towns. Even as setting up a CGD network is a capital-intensive activity, the scaling-up of volumes can remain slow and even a reasonable level of 50-60% customer penetration level is generally achieved only after nine to 10 years after the start of operations in most cities. Thus, the entities operating in cities with higher population density, higher industrial and commercial activity and overall higher economic growth will tend to have higher demand potential over the long run. The demand potential of the GA will determine the scale of operations any CGD player can achieve in the long run. A company operating in multiple GAs will also have more geographical diversification in revenue stream and be able to build a higher scale of operations which can translate into higher profitability, driven by benefits of operating leverage. Entities operating in smaller cities or with lower industrial activity are likely to achieve lower gas volumes and thus lower returns in the long run.

Gas tie-ups and pipeline connectivity

For the CNG and PNG(d) segments, the gas demand is largely met through APM gas allocation and the recently preferential allocation in the bidding for domestic gas from difficult fields. CGD players tie up LNG for their PNG(I) and PNG(C) segments, mostly through long term/medium-term contracts while keeping a small portion untied to take advantage of the movement in spot LNG prices. Generally, the changes in gas prices are passed on to the consumers; however, the competition from alternative fuels can limit the pass through to industrial consumers. Accordingly, the tie-up of gas on long term/medium-term basis provides visibility on demand as well as margins and is better from a credit perspective as spot prices are more volatile.

For an entity which is setting up operations in a new GA, assessing the connectivity with the national grid or trunk pipeline is critical as there have been several instances in the past where connectivity with the national grid or trunk pipeline has been delayed by months or years compared to the initial estimates. Delays in connectivity in turn leads to delays in commencement of the project, leading to weak economics and cash flow mismatch. For grid/trunk pipeline connectivity, a CGD company has to depend on the trunk pipeline owner, who may have several competing projects to execute. Further, the bargaining power of the CGD entity with the trunk pipeline owner remains limited, given the much bigger size of the latter. This apart, even after the pipeline project commences, laying of new pipelines might get delayed because of several reasons, including delays in securing right of use (ROU), delays in approvals, local activism, etc.

Consumer mix

The credit risk profile of a CGD entity also depends upon the gas consumption mix. Domestic gas allocation is provided by the GoI for the CNG and the PNG(d) segment, which is generally cheaper than imported natural gas and competitive vis-à-vis other fuels. Thus, the pricing pressure is limited in this segment. As long as this allocation continues, entities having a higher proportion of sales from the CNG and the PNG (D) segments would tend to have higher average gross margins. Entities that have higher PNG (industrial) concentration in their sales volumes are likely to be less profitable on account of the strong competitive pricing pressure from alternative liquid fuels and coal. While the PNG (industrial) segment is the least profitable segment, the volume per customer is very high. The PNG (C) segment offers the benefits of greater pricing flexibility and lower

customer management efforts (compared to PNG (D) as individual volumes are higher here). From the industrial and commercial customers’ perspective, the use of gas offers various benefits like cost savings, environment friendliness (gas being a relatively cleaner fuel), higher efficiency, low maintenance costs and operational convenience. The industrial consumers act as anchor customers for CGD companies and provide large volumes in the initial years even as the PNG (D) and CNG segments require several years to build commercially viable volumes. While developing CNG stations requires significant capex as it involves land acquisition and setting up of the entire facilities, and balance sheet strength may limit the pace of such expansion, companies have also been following the Dealer Owned Dealer Operated (DODO) model for setting up of CNG stations which does not require significant capex on part of the CGD entities and thus enables faster network expansion through an asset light model. This model can aid achieving a healthier consumer mix by rapid network expansion.

Project risk and slippages in execution of Minimum Work Programme

The implementation and operation of a CGD network requires approvals from a number of agencies, such as the National Highways Authority of India, municipal corporations, public works departments and pollution control board. Obtaining multiple approvals from various civic and Government agencies and authorities calls for extensive liaison work, besides time, and may stretch the manpower resources of smaller companies. Moreover, local administration and state governments play a crucial role in facilitating statutory approvals from various agencies. At times, it is the state development authority that allots land for CNG stations at heavy vehicular traffic areas of cities. The state pollution control board encourages the industry to switch from cheaper but polluting fuels like coal to natural gas and the regional transport authority mandates conversion of public transport vehicles to CNG. However, these initiatives require strong political will and administrative machinery to implement, and if lacking, could well delay a CGD player’s project commencement or break-even achievement. Moreover, the project economics need to factor in the volatility and escalation in the prices of steel and other commodities, given the long construction and project execution time (typically three to five years) that a CGD project typically requires. Given the multiple approvals required and the long project execution time, the CGD entities remain exposed to project execution risks.

Some of the incumbent CGD companies have been participating in the bids for gas distribution projects in the new GAs as part of their pan-India growth strategy. While entering the new GAs could lower their geographical concentration risk, it could translate into other risks from the several challenges posed by the new GAs (as discussed earlier). The impact on their credit profiles would be a function of the potential of its GA, consumption mix, size of capital expenditure, means of finance and bid parameters, in relation to the existing operations. Also, in certain rounds, the entities may have submitted performance bank guarantees of high values to the PNGRB. In case there is a slippage in execution compared to the MWP¹, PNGRB could encash the bank guarantees, thereby increasing the project cost and impacting the overall project returns for the players. The progress made with respect to MWP is monitored by ICRA and the companies which meet or exceed their targets are viewed favourably.

According to the PNGRB regulations, the award of CGD networks for new areas has to be done through a competitive bidding process. Under this, along with technical and financial parameters, the bidders are evaluated against a specific set of criteria. The CGD regulation was revised by PNGRB in April 2018 and the revised bidding criteria therein are as listed below:

Bidding Criteria Weightage	Weightage
Lowness of transportation rate for CGD (for each year during the network exclusivity)	10%
Lowness of the compression charge for CNG (for each year during the network exclusivity)	10%
Highness of the number of CNG stations to be installed within eight contract years from the date of authorisation	20%
Highness of number of domestic piped natural gas connections to be achieved within eight contract years from the date of authorisation	50%

¹ Minimum Work Programme (MWP) as defined in the authorisation letters for a Geographical Area (GA) lays out details pertaining to the infrastructure to be developed by the CGD entity in the particular GA on a yearly basis for the few years of operations. The infrastructure includes laying of length of steel pipelines, setting up of CNG stations, length of HDPE pipelines and achievement of domestic PNG connections. If the entity fails to meet its MWP commitments, PNGRB can invoke the bank guarantees furnished by the CGD entity.

Bidding Criteria Weightage	Weightage
Highness of inch-kilometre of steel pipeline (including sub-transmission steel pipelines) to be laid within eight contract years from the date of authorisation	10%

Source: PNGRB, ICRA Research

Prior to the ninth round of bidding, several bidders made aggressive bids, with reference to network and compression tariff (at nearly nil rates) as these were the only two parameters in the bidding criteria earlier. The strategy of quoting low tariff exposed the aggressive bidders to competition once the marketing exclusivity period is over; any third-party marketer could use the network of the successful bidder at a nominal cost and sell gas to the current or the new customers in the region. The revised bidding criteria applicable since Round 9 have set the floor rates for the transportation rates to prevent unreasonable bidding. Also, these revised criteria emphasise on a shift in focus towards expansion of PNG pipeline and CNG network to ensure better coverage.

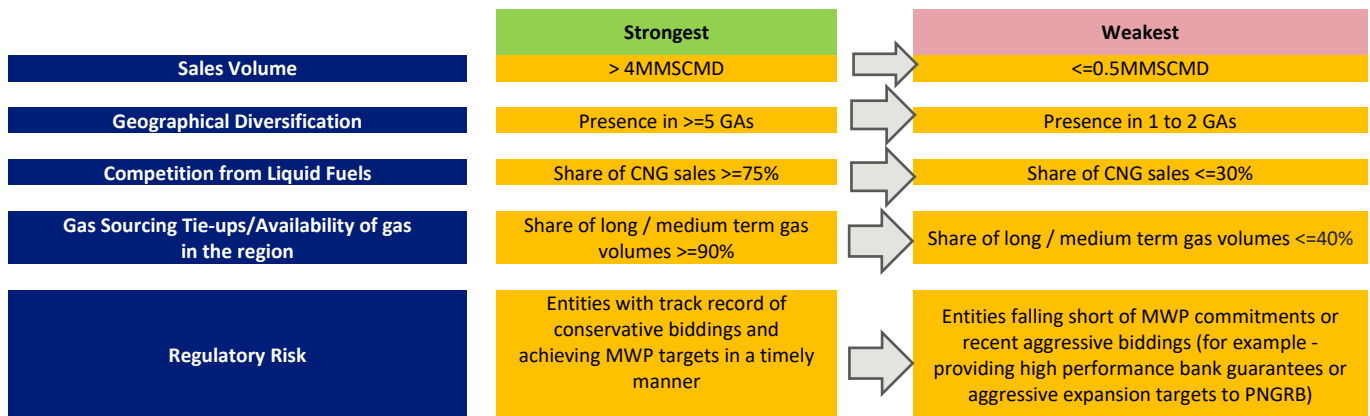
As per the earlier bidding criteria, in case of a tie in the tariff bid by players, a winner was selected based on the value of the bid bond submitted. Due to high competition for some GAs, the performance bank guarantees (PBG) bid by the CGD companies were significantly high in some rounds (Rounds 4-6). While the willingness to submit a large guarantee indicates the higher commitment of the players to carry out operations, this also impacts the players by way of bank guarantee charges and margin money for the facilities. A high quantum of PBG also exposes the bid winners to a significant contingent liability in case of any delay/default on the MWP and the inability to meet the service standards. In the worst case scenario of the guarantees being fully or partially encashed for non-fulfilment of MWP and/or service standards, the same amount in effect would add to the project cost for setting up the network in a particular GA, which could affect the project’s viability.

This issue was majorly resolved in the revised bidding criteria notified in April 2018 in which the PNGRB linked the amount of PBG to be submitted by the CGD companies to the population of the GA with the maximum PBG to be submitted being capped at Rs. 50 crore per GA. Also, PNGRB prescribed an annual MWP for the bid winners to achieve in terms of laying of steel pipeline, setting up of CNG stations and providing PNG (domestic) connections in each of the eight MWP years. At the end of every year, as per the April 2018 regulations, PNGRB could encash the value of the PBG equivalent to the pre-decided penalty for under-achievement in each of the first eight years of implementation, which could impact the liquidity profile of the company at the time. Further, the company would also be required to immediately replenish the PBG for the amount encashed by PNGRB.

Geographic diversification

Geographical diversification across a number of GAs reduces the vulnerability of demand and revenues to the risks at any one GA. Accordingly, greater the number of GAs an entity operates in, the better it is from a credit perspective.

Summary of the salient business risk factors



Financial Risk Assessment

ICRA analyses the long period past financial performance trends and estimates the future financial performance to assess the financial risk exposure of an entity. The financial metrics provide a useful reference not only to evaluate the performance trends of an entity over a given time horizon, but also enable a comparison with its peers. The financial risk assessment is not done in isolation but in conjunction with the business and the industry risks that the entity is exposed to. An entity with low exposure to business and industry risks would generally have stable cash flows and thus would have a higher tolerance to operate with a relatively modest financial risk profile. In contrast, entities that are exposed to high business and industry risks need to maintain a stronger financial risk profile to have an adequate cushion to manage cash flow volatility. The various financial metrics assessed by ICRA could be divided into five categories viz., profitability, leverage and coverage, working capital intensity, liquidity and cash flows. As the prime objective of the rating exercise is to assess the debt servicing capability of an entity, ICRA draws projections for the rated entity based on the expected movements in the operating performance, while factoring in the capex/investment requirements and upcoming debt obligations. Depending on the uncertainty around how the various credit drivers could evolve in the future, ICRA also carries out sensitivity analysis to assess the impact of the key variables on the various financial metrics.

Profitability and earnings stability

The analysis here focuses on determining the trend in the entity’s operating profitability and how these compare versus the peers in other cities. Barring a few exceptions, the incumbents have demonstrated the ability to pass on the increase in gas costs to consumers, albeit with some time lag. Accordingly, while analysing the CGD companies, a key metric to analyse is the gross margin (gas sale price - gas purchase price) on a per scm basis. CGD companies strive to maintain the gross margin on a per scm basis even though the operating profitability may decline due to higher base effect (on account of the increase in gas cost). Besides the gross margin on an overall blended basis, the same is analysed on a segmental (PNG, CNG) basis, subject to the availability of the data, with the objective to detect any pressure on profitability in any of these segments due to the resistance of consumers to price pass-through. Further, the return on capital employed (RoCE) needs to be analysed to measure the efficiency with which an entity utilises the capital deployed in its business. An entity’s ability to consistently generate RoCE over and above its cost of capital reflects well on its long-term business viability.

It usually takes about two years for a CGD company to develop the infrastructure, including among others, the pipeline network, a city gas station, and CNG stations before commencing operations. PNG (domestic) has low profit margins as the

lack of competitiveness vis-à-vis LPG (domestic) limits the ability of the CGD companies to increase the prices of PNG (domestic) beyond a certain level. Additionally, the fixed costs incurred for the extensive network to be established in residential areas has a long payback period due to the low billing per household and low conversions in the initial years, even though part of the fixed costs are recovered as deposits. After the start of operations, the sales scale-up is typically slow and it takes three to four years to reach a commercially viable level. The slower scale-up of sales and the large upfront capital outlays also mean the payback period of a CGD project is six to seven years.

Assessment of return metrics
[Indicative metrics²]

	Strongest	Weakest
RoCE	$\geq 25\%$	$< 10\%$
Volatility in RoCE	$\leq 10\%$	$> 55\%$

Leverage and coverage indicators

A CGD project entails large upfront capex, besides which the CGD entities incur large capex on a regular basis to expand network and increase sales. Accordingly, the objective here is to ascertain the level of OPBDITA in comparison to the overall debt levels, i.e total debt/OPBDITA. A long maturity and structured repayment profile with the ballooning of payments, given the gradual scale up of volumes, can partially offset the risk associated with high financial leverage, as the payback period for CGD business can be long. For higher rated CGD companies, inter-alia, ICRA expects these companies to have low financial leverage to offset the high business risk associated with slow build-up in volumes or delays in commencement of operations due to execution risk/regulatory risk.

Also, the key debt service coverage ratios like interest coverage and debt service coverage ratio are examined to understand the level of cushion the company has to ensure timely debt servicing.

Assessment of leverage
[Indicative metrics]

	Strongest	Weakest
Indebtedness Ratio	$\leq 0.9x$	$> 3.0x$
Debt to Profit Ratio	$\leq 0.5x$	$> 5.0x$

Assessment of coverage
[Indicative metrics]

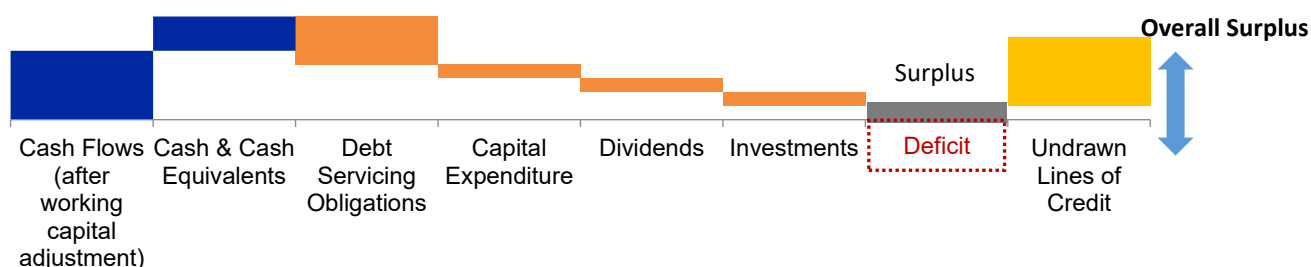
	Strongest	Weakest
Interest Coverage	$\geq 18.0x$	$< 2.0x$
DSCR	$\geq 4.0x$	$< 1.1x$

² The indicative financial metrics mentioned here and elsewhere in the document are intended to provide a broad overview to the readers regarding what ICRA generally considers as ‘relatively strong’ or ‘relatively weak’ metrics. It is, however, possible that an entity has relatively weak metrics on one or more financial parameters, but its credit risk is assessed to be low because of other mitigating factors, including (but not limited to) stronger metrics on other financial parameters, a healthy business risk profile, strong financial flexibility or a strong promoter group that is willing to extend distress support to it.

Liquidity and adequacy of future cash flows

As CGD companies incur a large capex on a regular basis with the benefits accruing from the same with a lag of a few years, the cash flows are analysed for the upcoming capex requirements and the term loan repayments. The liquidity ratios measure the buffer that an entity has in the form of cash or cash equivalents with respect to its obligations that can be utilised in case of any temporary cash flow mismatch. The existence of adequate buffers of liquid assets/bank lines to meet the short-term obligations is viewed favourably. In addition, ICRA notes that an entity with strong liquidity can mitigate the impact of any short-term exigencies or events that might adversely impact the cash flows in the interim. The entity’s liquidity is assessed by its unutilised bank/credit limits and liquid investments. The working capital requirement is usually low. In the domestic PNG segment, the receivable days are around 45, while in the commercial & industrial PNG segment they are around 15 days. Inventories remain low and mainly include spares with limited gas stocks. For the purchase of gas, the company gets a credit period of three days, where the bills are raised on a fortnightly basis.

Liquidity snapshot over any defined period



A cash flow statement represents the sources from which cash is generated and its deployment. ICRA analyses the entity’s fund flow from operations, cash consumed to fund the working capital, the retained cash flows after paying out the dividends or carrying out share buy-backs, and the free cash flows after meeting the debt repayment obligations and capital expenditure needs. The cash flow analysis helps in understanding the external funding requirements that an entity has to meet its obligations.

Other Elements of Credit Risk Assessment

Tenure mismatches and risks relating to refinancing and interest rates

Large dependence on short-term borrowings to fund-long term investments can expose an entity to significant re-financing risks, especially during periods of tight liquidity. The existence of adequate buffers of liquid assets/bank lines to meet short-term obligations is viewed favourably. Similarly, the extent to which an entity would be impacted by the movements in interest rates is also evaluated.

Financial flexibility

An entity’s financial flexibility (or the lack thereof) is reflected in its ability to access the capital or the money markets at a short notice, attract diverse and marquee investors and enjoy the confidence of banks, financial institutions and intermediaries. A strong financial flexibility allows an entity to raise fresh borrowings or refinance existing ones in a quick time and whenever required. Financial flexibility could arise from factors such as an entity's large scale of operations with strong financials, large unencumbered cash flows, unencumbered assets and the flexibility to borrow against such assets, or strong parentage, or linkages with a strong group.

In contrast, among the various measures of an entity’s depleting financial flexibility, one relates to a high share of pledged promoter shareholding. A sign such as this may imply that the entity might be persuaded to distribute high dividends or support

the promoter group through other means to the detriment of its own credit profile. If the promoters fail to repay their loans (availed by pledging of shares) or top up collateral, when required, the lenders could sell the pledged shares. In some cases, this could trigger a change-of-control clause in the rated entity's bond indentures or loan documents and require it to redeem its debt ahead of schedule, creating a liquidity squeeze, besides affecting fresh capital-raising ability.

Foreign currency risks

For imported gas requirements, CGD companies are dependent on companies that import gas and provide re-gasification services. Typically, such importers have back-to-back foreign currency-based pricing arrangements with their suppliers. Hence, the pricing charged from domestic users like CGD companies is also dollar denominated. Domestic gas supply is also dollar denominated and the CGD entities experience an increase in the rupee cost if the rupee depreciates against the dollar. Thus, CGD entities face the risk of passing on these foreign exchange fluctuations to their consumers. Generally, the CGD companies have back-to-back foreign currency pass-through clauses in contracts with large commercial and industrial consumers. For all other PNG (industrial), PNG (commercial), PNG (domestic), CNG consumers, the impact of the depreciation in the rupee vis-à-vis the dollar is passed through periodic price increases. Thus, the ability to take frequent price changes remains crucial. Additionally, for any imports (of compressors, etc.) the CGD company may avail buyer's credit for which the hedging policy is assessed.

Contingent liabilities/Off-balance sheet exposures

The likelihood of devolvement of contingent liabilities/off-balance sheet exposures and the financial implications of the same are evaluated for this. In case of CGD players, the probability of the encashment of bank guarantees by PNGRB for their inability to meet the MWP remains a key point of analysis.

Event risks

ICRA recognises the possibility of events such as unrelated diversification, mergers and acquisitions, business restructuring, asset sales and spin-offs, litigations, equity infusion and refinancing, which could have a material impact on the credit profile of an entity. In case of industry-specific risks e.g. adverse changes in natural gas allocation policy, changes in regulatory guidelines governing the industry etc. can lead to an adverse impact on the credit profile of the entities. Incorporating the impact of such discrete events in the credit rating, from the beginning, is often difficult. Depending on whether and when such events occur, the rating opinion could be substantially different. To take rating decisions in such cases, ICRA applies its analytical judgment based on the rated entity's track record, the credibility of the management and the experience of having seen similar situations play out in other entities. However, given the nature of such events, it is possible that the rating may undergo a material change later, upon the occurrence of the event.

Parentage

Apart from the standalone credit considerations, the likelihood of extraordinary support from a parent to an entity or the support that an entity is likely to extend to the other Group companies is factored in while assessing the credit profile of an entity. This process involves an assessment of the ability and willingness of the parent to extend support to the entity (and vice versa), in addition to evaluating the entity's own fundamental credit strength. As the CGD sector entails significant business risks, companies backed by strong sponsors, preferably with background in the oil and gas business, can be better placed to navigate the risks involved. Besides financial support, a rated entity may also benefit from operational support from the sponsors, which can come in several ways, such as the competitively priced R-LNG tie-ups, co-location of the CNG stations in their retail outlets and tap-off access from adjacent gas transmission pipelines.

Management Quality Assessment

In addition to the industry, business and financial risk analysis, all credit ratings incorporate an assessment of the quality of the rated entity's management and its financial policies.

Quality of management and financial policies

As a part of its process, ICRA undertakes discussions with the rated entity's management to understand its views on past performance as well as its future plans and strategies, besides the outlook on the industry. Some of the points assessed are:

- » Experience of the promoter/management in the industry
- » Commitment of the promoter/management to the rated entity
- » Risk appetite of the promoter/management and risk mitigation plans
- » Policies on leveraging, managing interest rate and currency risks
- » Management's past success in introducing new projects and managing changes in the external environment
- » Management's plans on new projects, acquisitions and expansions

Periodic interactions with the management help in ascertaining the shifts, if any, in their financial policies.

Assessment of Environmental, Social and Governance (ESG) Risks

Environmental (E) and social (S) risks

As this methodology highlights, while undertaking the credit assessment of entities, ICRA seeks to incorporate all the relevant credit considerations into its rating decisions while taking a forward-looking view on the risks and the mitigants. The relevant credit considerations include (sometimes overtly, sometimes covertly) the E&S factors that could affect the rated entity/transaction. While ICRA's analytical approach does not explicitly disaggregate these risks to assess their impact on the rating, these risks are often assessed broadly. Further, it is not always feasible to fully or precisely disaggregate the sub-components of E&S risks in a credit analysis as these considerations often tend to overlap.

That said, the materiality of the E&S risks and the time horizon over which they are expected to crystallise differ widely across sectors and entities. In some cases, while the E&S risks could be material, their effect on the credit profile may be muted because of other fundamental strengths of the entity. In other cases, the adverse impact of the E&S risks is expected to play out in the distant future, and hence these considerations do not necessarily weigh on the rating today — with the expectation that when these risks manifest in the distant future, the rated entity by then would possibly adapt itself by realigning its business model.

While evaluating the E&S risks, ICRA's objective is only to assess the direct and indirect risks that an entity faces and how it already is or is intending to mitigate the impact of such risks on its credit profile. As an example, ICRA only assesses whether an entity is exposed to physical climate risks, or carbon transition risks such as those arising from changes in regulations or other environmental and social risks; and seeks to understand the various mitigation and adaptation approaches that the entity is implementing to mollify these risks. Notwithstanding the above, as an example, it is possible that even if an entity A has a higher carbon footprint than entity B, it does not materially affect ICRA's credit opinion on entity A. This is because ICRA's credit opinion on an entity considers a wide gamut of credit-relevant factors, and the E&S factors are only one among those.

CGD players face carbon transition risks as a slowdown in incremental investments in fossil fuel extraction may lead to lower gas availability and development of alternative fuel sources. While natural gas is an environment friendly fuel relative to the crude oil derivatives, its contribution to greenhouse gas (GHG) emission remains a key risk as customers may look to shift to

renewable sources of energy. At present, the CNG segment remains the mainstay for the CGD sector entities' offtake and increasing adoption of electric vehicles (EV) may impact the incremental growth in the CNG segment. However, with the current cost of ownership for EVs being significantly higher than the CNG powered vehicle, the pace of adoption is expected to remain slow in the near to medium term. Going forward, with the advancement in battery technology expected to result in lowering of the total cost of ownership (TCO) for EV vehicles, the transition of users to EVs will remain a key environmental risk for the entities.

Social considerations for CGD entities mainly include the potential shift of consumers to EVs as they become aware of the climate impact of using natural gas as a fuel. Additionally, the right of way (RoW) required for setting up gas pipelines which may be met through social resistance and may delay the execution remains a key social risk.

Governance practices

A sound corporate governance structure attempts to make clear the distinction of power and responsibilities between the Board of Directors and the management. The constitution of an entity's Board and the Board's participation in strategy formulation, besides the entity's adherence to legal and statutory compliance requirements are factored in during credit assessments. ICRA seeks to gain a qualitative understanding of an entity's commitment to following transparent and credible practices by the way its financial statements are reported, level of disclosures, consistency in communication and openness in sharing information during the credit rating exercise. Besides, the corporate group structure (whether simple or complex), the rated entity's related party transactions and instances of supporting group entities at the expense of debt holders are assessed.

Summing Up

ICRA's credit ratings are symbolic representations of its current opinion on the relative credit risk associated with the instrument being rated. This opinion is arrived at following a detailed evaluation of the entity's business and financial risks, its likely cash flows and the adequacy of such cash flows vis-à-vis the entity's debt-servicing obligations and other funding requirements. ICRA's rating approach also involves an assessment of the entity's management quality and governance practices. In addition to these considerations, an entity's credit rating may also be influenced by its ownership, the nature of linkages with its parent or group entities, degree of financial flexibility, the corporate legal structure, track record of operations and that of debt servicing, and vulnerability (if any) to discrete event risks.

Annexure

Summary of rating factors and an example to illustrate the key building blocks of a credit rating

		Strong			Comfortable			Adequate			Moderate			Weak	
Industry Risk	Industry Position	■	■	■											
	Scale							■	■	■					
Business Risk	Geographic Diversification				■	■	■								
	Competition from Liquid Fuels							■	■	■					
	Gas Sourcing	■	■	■				■	■	■					
	Regulatory Risk	■	■	■											
Financial Risk	Profitability and Earnings Stability							■	■	■					
	Leverage	■	■	■											
	Coverage	■	■	■											
		Enhance					Support/ Neutral					Hinder			
Do these factors enhance or hinder the credit profile?	Diversification							■	■	■	■	■			
	Refinancing Dependence, Liquidity and Financial Flexibility	■	■	■	■	■	■								
	Foreign Exchange Risk							■	■	■	■	■			
	Financial Policy							■	■	■	■	■			
	Management, Governance & Reporting							■	■	■	■	■			
		Very High				High			Moderate				Low		
Parent Support	Likelihood of Parent Support														
	Rating of Parent	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B/ C category
	Final Rating	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B/ C category

The above graphic is only for illustration purpose and does not represent a rating output from a formulaic model. The ratings assigned by ICRA are determined by Rating Committees based on both quantitative and qualitative considerations.

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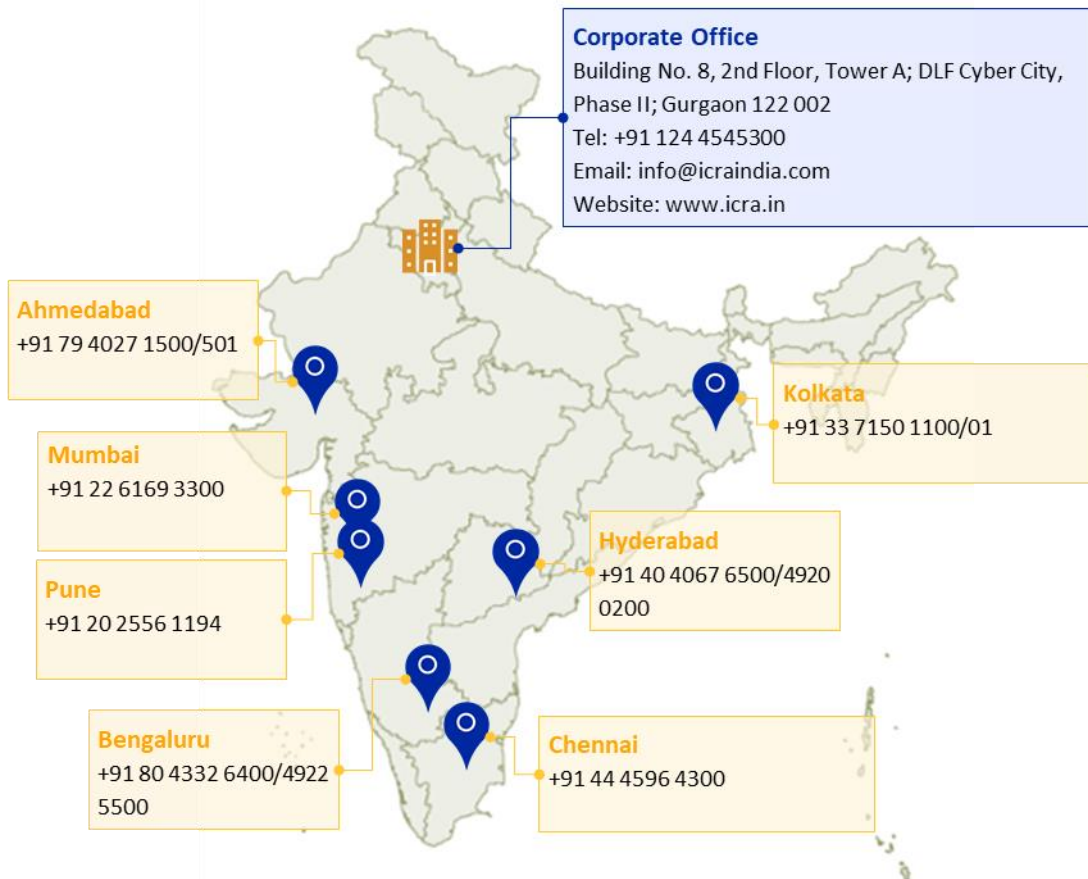


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