

Proposition of modification of some aspects of the current bidding system for City Gas Distribution in India.

Though the current framework for natural gas in India has got very positive features, we believe that the following recommendations, based on our experience as investors and operators of City Gas Distribution networks in Europe and Latin America, will help to increase the penetration of natural gas in the country:

1. Modification of the current CGD bidding parameters:

Please refer to our letter to Shri A K Jain dated 2nd June, 2017; in paragraph 1.2 we explained our understanding of the problems associated with the close-to-zero bids that have been taking place in the latest CGD bidding rounds in India:

- Lack of incentive for the CGD operator for the expansion and investment in the growth of the network. This is due to the uncertainties for the CGD entity on its income after exclusivity expires and third parties can utilize the network paying a close-to-zero tariff.
- Deviation from the essence of bidding: loss of relation between the economic result of the operator and the tariff quoted in the bid process. The income of the CGD entity is not related with the tariff, but with the marketing margin they charge to customers.
- Potential loss of the main benefit of bidding: the most efficient entity is not necessarily selected, but the one with the largest financial muscle (that quotes the largest financial guarantee for non-fulfillment).

We believe that the most suitable system for awarding CGD concessions in India would be a bidding process based on the highness of certain milestones to be quoted by bidders.

In this sense, we also believe that the most adequate milestone would be the number of low-pressure customers¹ connected over a period of 8 years.

Hence, the winning bidder would be the one quoting the largest number of these customers. For evaluation and scoring purposes, the number of customers quoted on the second year and onwards would be brought to a present value using a discount rate for

Rationale:

- Defining a simple and unique parameter may prevent undesired outcome due to eventualities and combinations not foreseen by the bid-issuing institutions. More than one parameter may lead to speculation with the sensibilities and weights of the different parameters in the score: some parameters may have a high impact in the score and a very limited correlation with the interest of the sector and the Government.

For instance, in some of the distribution auctions held in Mexico in the past, the rules implemented to score the different bids assigned a high weight to certain parameters (such as the connection charge for the commercial customers) which in fact were not so relevant in terms of total income for the distributor, nor for the total cost for the system. As a consequence, the bidders that could identify this issue and quoted zero for this parameter were favored in the valuation, without really providing a significant advantage to the system. In this case, the high

¹ Low-pressure customers: residential and small commercial customers.

number of parameters led to a complex mechanism which caused difficulties for the regulator in the refining of the different weighting factors.

- The bidding parameter should be as closely related as possible with the main objective of the Government regarding the CGD sector. We understand that reaching a large number of low pressure customers will represent the closest indication of a high penetration of gas in the cities.

As an example of the importance of this principle, Mexican CGD concession issued in 1997 for the region of Sonora did not contemplate as a sole bidding parameter the number of customers connected. Lowness of network tariff also contributed to the score to select bidders. Winning bidder quoted a very low number of customers (26.000) and a very low tariff; 20 years later, number of customers connected remains similar and the gas penetration is only around 5%. Also, since small-size customers are less profitable than industrial ones, the CGD entity has not been incentivized to connect additional customers of small size; the majority of the customers connected are industrial ones.

- As per our experience, all reachable industrial, big commercial and CNG customers are always connected as soon as the network extends to their area. It is not needed to define a goal of reaching these customers since, being the most profitable, CGD companies would connect them as early as they can. On the contrary, defining a milestone of "volume of gas sales" would incentivize CGD entities to connect exclusively to these big customers.

For example, in Mexico, there is a special kind of companies, formally linked to industries' self-supply ("Sociedades de Autoabasto"), which don't have an obligation to achieve a certain number of domestic connections. Therefore, they supply almost exclusively to industrial customers.

- There is a direct relation for each city between the number of customers and the length of the network and the magnitude of efficient investment made. For each Geographical Area, depending on its morphology, an average length of pipeline per customer can be defined.

The proposed parameter will guarantee a cost efficient development of the network. Winning bidders will be those capable to connect a large number of customers with the lesser length of pipeline and investment, discarding those unable to connect customers efficiently. This cost reduction will imply lower network tariffs and hence lower final gas prices for users².

- Time of development of the network is also taken into account since the number of customers made in the second and subsequent years would have a lower weight in the score to rank bidders. If a high discount rate is defined by the Regulator, bidders would be incentivized to quote a faster development plan and a program of connections concentrated more in the initial years in order to win the bid.
- Also, we understand that the number of years through which the number of connected customers are to be evaluated must coincide with the initial marketing exclusivity period: the exclusivity in the marketing activities gives the CGD entity a considerable incentive to connect customers.

² See point 3 for tariff fixation

We will elaborate in point 2 why we consider 8 years as an adequate duration for the initial exclusivity period.

Below there is a reference to the 2013 Peruvian bidding process: the awarded entity was the one that quoted the highest number of connections over the exclusivity period of 8 years.

PRIMER PLAN DE CONEXIONES

(Número de Consumidores Conectados nuevos alcanzados al término de cada uno de los años indicados en el siguiente cuadro)

Localidad/Año	2016	2017	2018	2019-	2020	2021	2022	2023	Total por localidad
Chimbote									
Chiclayo									
Trujillo									
Huaraz									
Cajamarca									
Lambayeque									
Pacasmayo									

Total por Año (*)

$$VPC = \sum_{i=1}^8 \frac{CC_i}{(1.12)^i}$$

The initial year for the computation of the number of connected customers should always be subsequent to the commencement of gas supply to the city gate.

In the interest of pragmatism, we suggest to perform biannual checks of the fulfilment of the milestones. This way, during the period of 8 years, there would be checks of the fulfillment of the number of customers achieved after the second, fourth, sixth and eight year.

As a conclusion, if the main goal of the government is to increase the penetration of gas in the cities, so that a large number of citizens (small consumers) can perceive the benefits of gas, and pollution could be controlled through lesser emissions from vehicles and industries, we believe that the appropriate parameter to structure a bidding process would be the number of low-pressure customers.

Defining additional or alternative parameters, (i) such as number of industrial and CNG customers may not be needed since CGD entities are already self-motivated to connect them; (ii) also, defining as a milestone the level of gas sales would incentivize CGD companies to focus exclusively in the CNG and industrial segment; (iii) while defining as a milestone the level of investments or the length of pipeline could lead CGD entities to build and invest either in inefficient pipelines (where they are not needed) to avoid penalties, or build long pipelines to reach big customers located in remote places.

In addition, we are of the opinion that the defined set of bidding criteria should be unique for the whole country: (i) it is important to generate confidence in the investors in a simple and straight forward system, where past methodologies could be applied and learning from past mistakes in bidding be benefitted for new areas; (ii) introducing different methodologies among cities will also create an added difficulty and need for resources for the Authorities and Regulator.

After the expiration of the initial period of 8 years, we understand that there must be an obligation in place for the CGD entity to continue supplying to those residential customers that desire so.

2. Recommendation of a longer Marketing Exclusivity Period

The gas marketing exclusivity period provides an incentive for the CGD companies to grow and develop rapidly the grid, connect gas customers and expedite gas sales during the mentioned period, since marketing margins are not pressed down by competition of other marketing companies, and only limited by competition with alternative fuels.

Longer exclusivity periods will promote more competitive bids by participants, who would be willing to quote a larger number of low-pressure connections.

One of the problems that has been identified in the Indian CGD scenario is the lack of growth of the network in already allocated areas. We think that increasing marketing exclusivity beyond 5 years would help promote growth and initial development of the network.

As per our experience in other countries, we recommend to extend the marketing exclusivity period to 8 years.

- Mexico: exclusivity period: 5, 12 or 0 years, depending on the auction.
- Peru: 8 years.
- Brazil (S. Paolo): exclusivity period of 12 years for large customers; continuous exclusivity for small ones.
- Brazil (Río de Janeiro, gas), Chile (power) and Panamá (power): continuous exclusivity for small customers.

In addition, CGD sector also complains for the difficulty of obtaining the multitude of licenses and authorizations required from local authorities to lay the infrastructure. Increasing the exclusivity period will provide additional relief to the entities.

3. Recommendation of a procedure to establish Network Tariffs and Compression Charges³.

We understand that, in a regulatory framework like the Indian, that guarantees marketing exclusivity during the initial years of the gas distribution activities, it is unnecessary to define network tariffs during this period. The CGD entity, while expanding the network in the exclusivity period, will charge its customers the gas priced at a discount versus competing fuels. It is irrelevant to define a network tariff since there are no third-party marketing companies that can access the network and supply the customer base.

In our opinion, after marketing exclusivity expires, network tariffs must be defined by the Regulator. Network tariffs must have the lowest value that ensures the adequate provision of the service and the financial viability of the CGD entity.

We believe that fixation of the tariffs through a RAB⁴ methodology is aligned with the former criteria and also provides a predictable environment much of the taste of investors. As per this methodology, a certain rate of return and its calculation mechanism are defined ex-ante, previous

³ Hereafter, network tariff to be understood as network tariff and compression charge.

⁴ Regulatory Asset Base

to the bidding process. Income for the CGD entity would be composed of: compensation for the operational expenses that an efficient operator would have incurred, an asset depreciation component and a remuneration on the assets according to the defined rate of return.

RAB methodology is utilized widely for the calculation of CGD network tariffs in Mexico, Brazil, Argentina, Spain and Italy, among other countries.

Hence, we see that fixation of the network tariff through its quotation in the offer by the bidder is not recommendable for the Indian framework, as it is irrelevant during the initial exclusivity period. After that, if it has a relevant weight in the auction, it will lead to very low quoted tariffs and similar problems to the ones existing in the current system (as described in point 1); if it has a very reduced weight in the auction, it may result in very high tariffs quoted in the winning bid, which will, in turn, lead to reduced competition after the end of exclusivity.

4. Recommendation to implement periodic Network Tariff revisions

We also believe that periodic network tariff revision and fixation by the Regulator is a very recommendable practice to contribute to a long term sustainable relationship between the CGD entities and the Government. Periodic revisions based on a detailed analysis by the Regulator of the business of the CGD company will prevent the entity from making unreasonably high earnings and also sustained losses that may discourage it to make further investments, adjusting income and cost of service of CGD entities.

The rationale behind tariff revisions is the difficulty to make long term predictions of the circumstances and eventualities related to the level of demand, the economic environment, the cost of capital, the interest rates, the price of commodities, etc. that may affect the CGD companies during the life of the concession.

As mentioned, before each periodic tariff revision, level of investments, sales, operational expenses, etc. would be audited and network tariffs adjusted accordingly as per the RAB methodology.

In most of the countries where we operate, tariff revisions take place every five years.

- Mexico: Every 5 years
- Panama: Every 4 years (for electricity)
- Colombia: Every 5 years
- Brazil: Every 5 years
- Peru: Every 5 years (Initial period 8 years)
- Argentina: Every 5 years
- Chile: Every 4 years (for gas and electricity)

Based on the previous examples, we believe that 5 years is a reasonable period to perform network tariff revisions in India.

As periodic tariff revisions involve a significant amount of additional work for the Regulator, a shorter span of time between revisions would not be advisable. Regulator should be provided with the adequate means and resources to perform efficiently this task.

5. Increasing the maximum supply volume.

Currently, customers below 50,000 scmd are supplied through the network of the CGD entity. Above that volume, customers can be supplied by additional pipelines laid by other companies.

The usual practice in the jurisdictions where we operate is that the CGD entities have the sole competency to perform gas distribution activities in the area, consequently, there is not such limit and other companies are not allowed to lay pipelines and connect to customers within the CGD area, whatever their size is⁵.

This principle is related to cost efficiency: the construction of new parallel (and unnecessary) pipelines means a loss of important revenues associated with the network tariff that the industrial customer would otherwise pay to the CGD entity, resulting in an increase of the network tariffs for the rest of the users.

Thus, we suggest to implement a similar exclusion for companies other than the CGD entity to lay pipelines and perform distribution activities in the Geographical Area, independently of the size of the customers.

Also, this measure will improve the attractiveness of the CGD business and augment the interest from bidders; more competitive bids and larger number of customers would be connected during the initial years as per quoted in the bid.

Nevertheless, it is frequent that regulations allow customers to connect through their own pipeline to the gas high pressure transportation grid (connection to the transportation grid normally is only economical for big customers). A similar allowance can also be considered for the Indian regulation.

6. Penalties

The main risk of failure of a bidding system based on highness of certain milestones, like the one we are proposing, is the unjustified non fulfillment of these milestones by the winning bidder. Therefore, sufficient penalties must be imposed on the defaulting party to incentivize it to perform and avoid setting a precedent and its contagious effect.

We propose a system of penalties to be defined as per the following principles:

- Proportionality: penalties must be equivalent to the investment in the connections that have not been performed.
- Modulation: Penalty must be paid for every non connected customer. The unitary penalty (per customer) will be lower if the difference between the quoted objective and real connections is low; higher if the difference is large.
- Yearly⁶ provision of guarantees: Sufficient guarantees must be provided by the CGD entity (and released by the Authorities) every year as per the compromises of the following year.

⁵ Please note that this sole competency does not mean exclusivity or monopoly over the gas sales to customers. Third parties may sell their gas through the grid of the CGD entity paying the corresponding tariff.

⁶ Or biannually if we consider the suggestion to perform checks of the milestones every 2 years (see point 1).

- Anticipation: Adequate monitoring by the Regulator of the working plans and authorization and licensing processes must be in place. Regulator must be empowered to impose penalties and take corrective measures whenever it is evident that a particular CGD entity is not taking necessary steps during the year to fulfill the committed milestone.
- Revocation: Loss of the concession must be contemplated for severely defaulting entities.