

City Gas Distribution Projects

8th Petro India

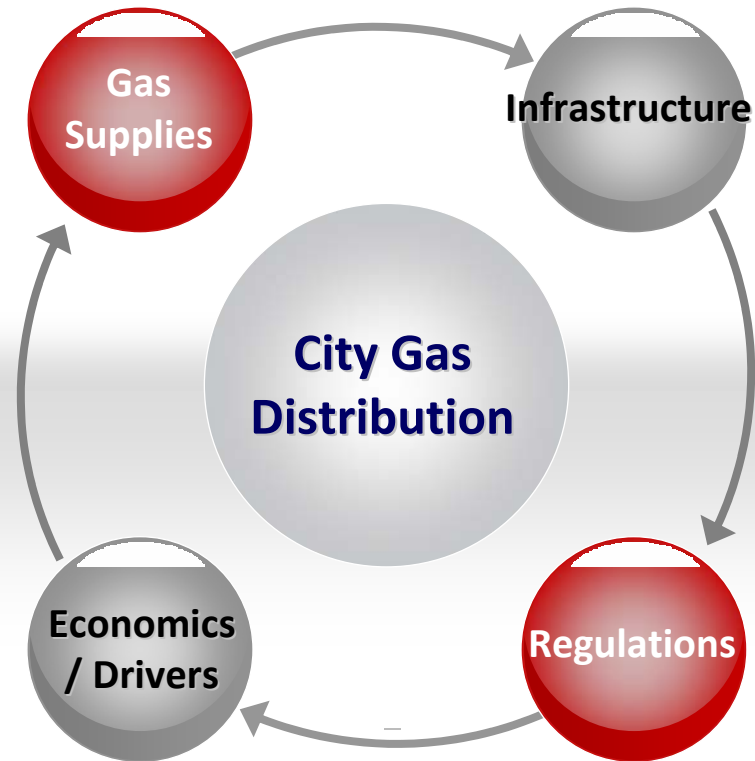
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25th November 2009

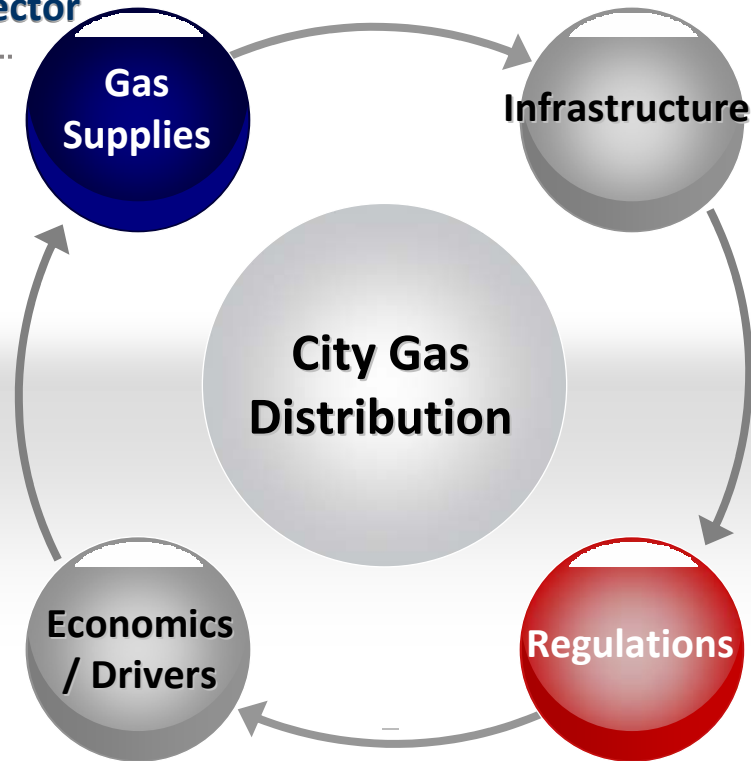
**Has the City Gas Space Changed
(significantly!) over the previous year(s)?**

Overview



Gas Supplies

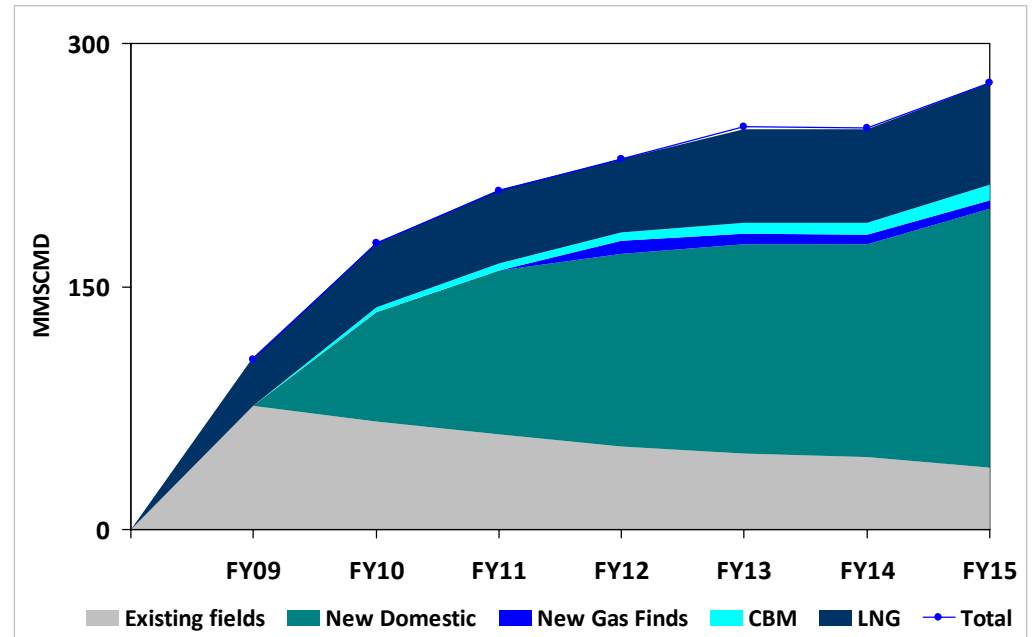
- Increased Domestic Gas Supplies
 - Allocation of gas to CGD sector
-



New Domestic Supply sources to fuel growth of CGD

- Total supply expected to increase from ~105 MMSCMD in FY09 to ~ 276 MMSCMD in FY15
- Traditional sources of supply (APM gas) expected to decline and shall be offset by new discoveries
- Fields discovered in early NELP rounds expected to start production in the short-term
- Greenfield LNG plants as well as expansion plans are proposed;
- CBM fields to add to regional gas supplies

Supply Projections – By supply source



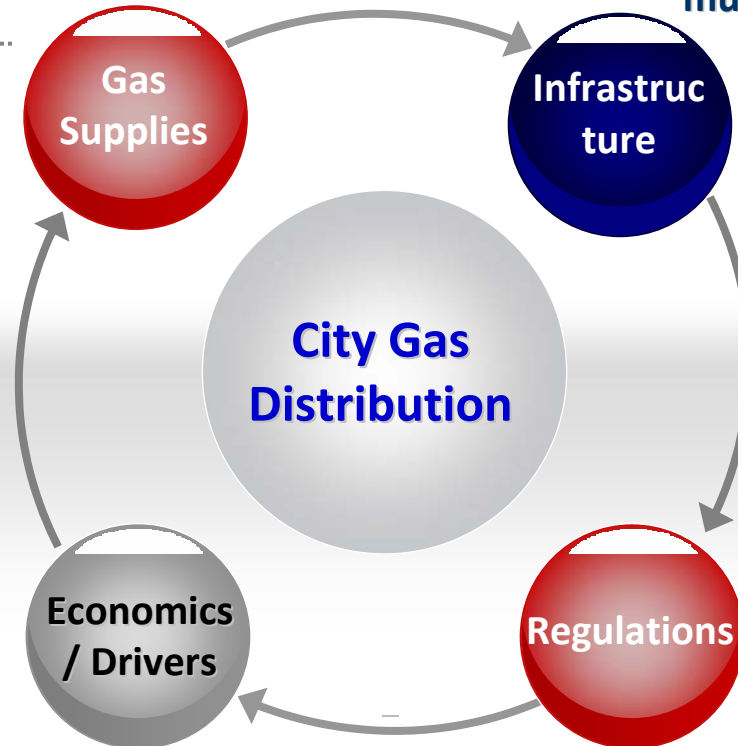
Source: CRIS Analysis

Allocation of 5 MMSCMD and further 2 MMSCMD (fallback, for industries & commercial) aimed to provide level playing field for CGD entities

Infrastructure

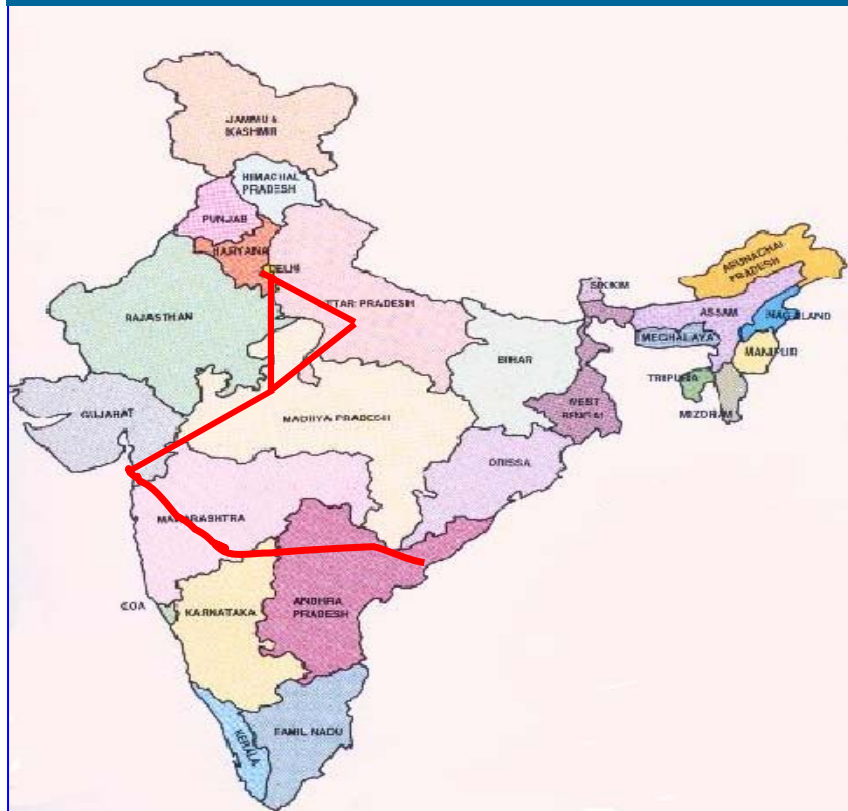
Availability of domestic gas supplies to spur growth of CGD

- Existing and proposed CGD infrastructure
- Expanding Transmission network a must for CGD growth

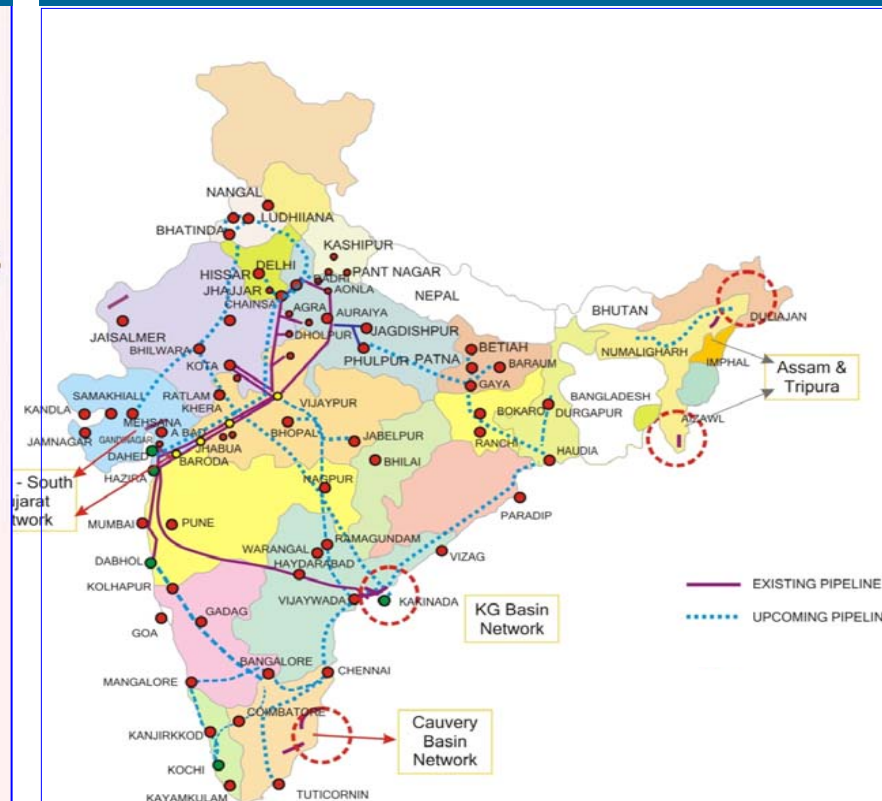


New domestic finds will/have stimulate(d) infrastructure investment in transmission network

Earlier

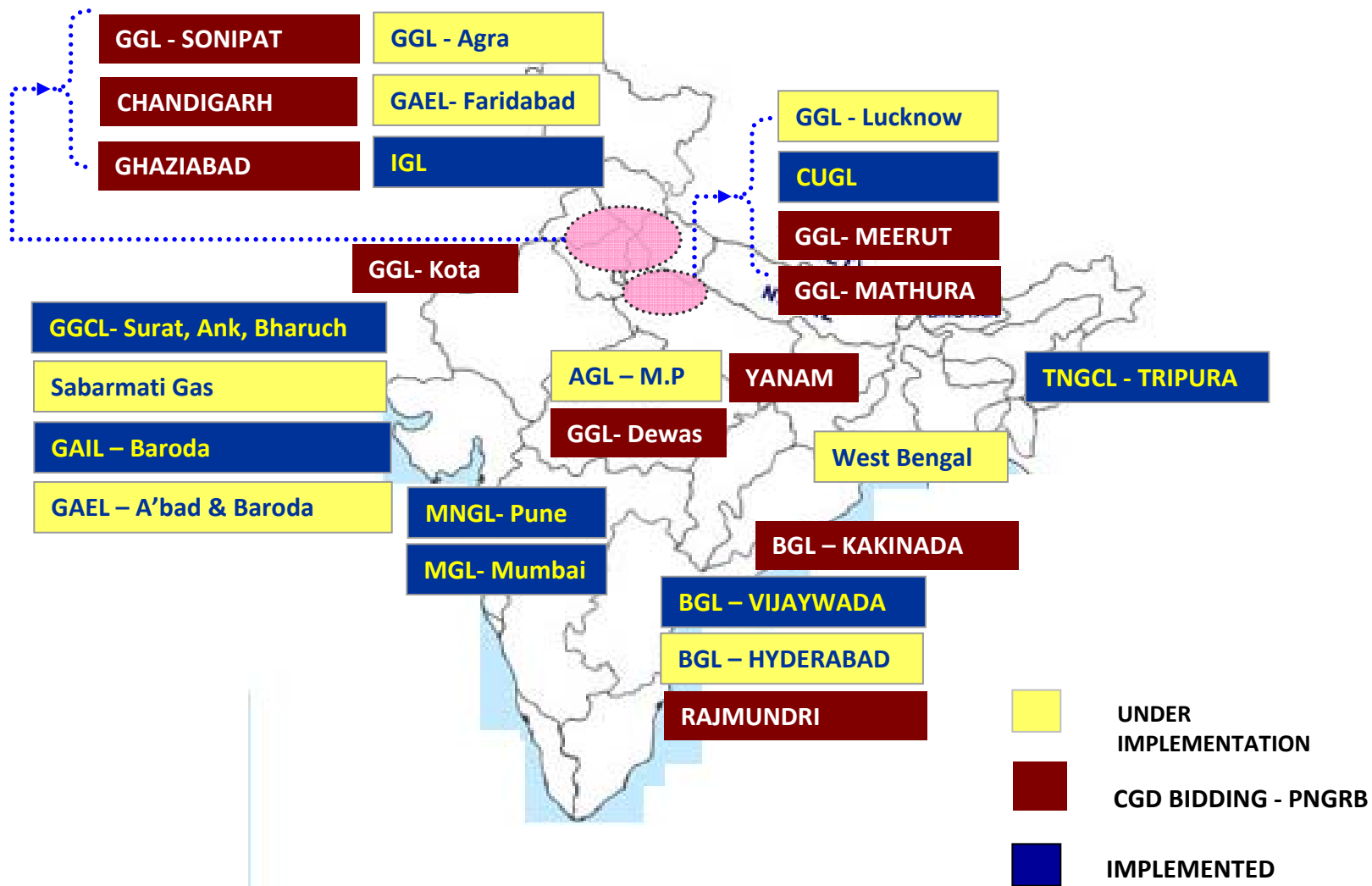


Future



New pipelines to connect new demand centers
National Gas Grid to integrate sources with demand centers
Gas Highways being proposed to increase connectivity

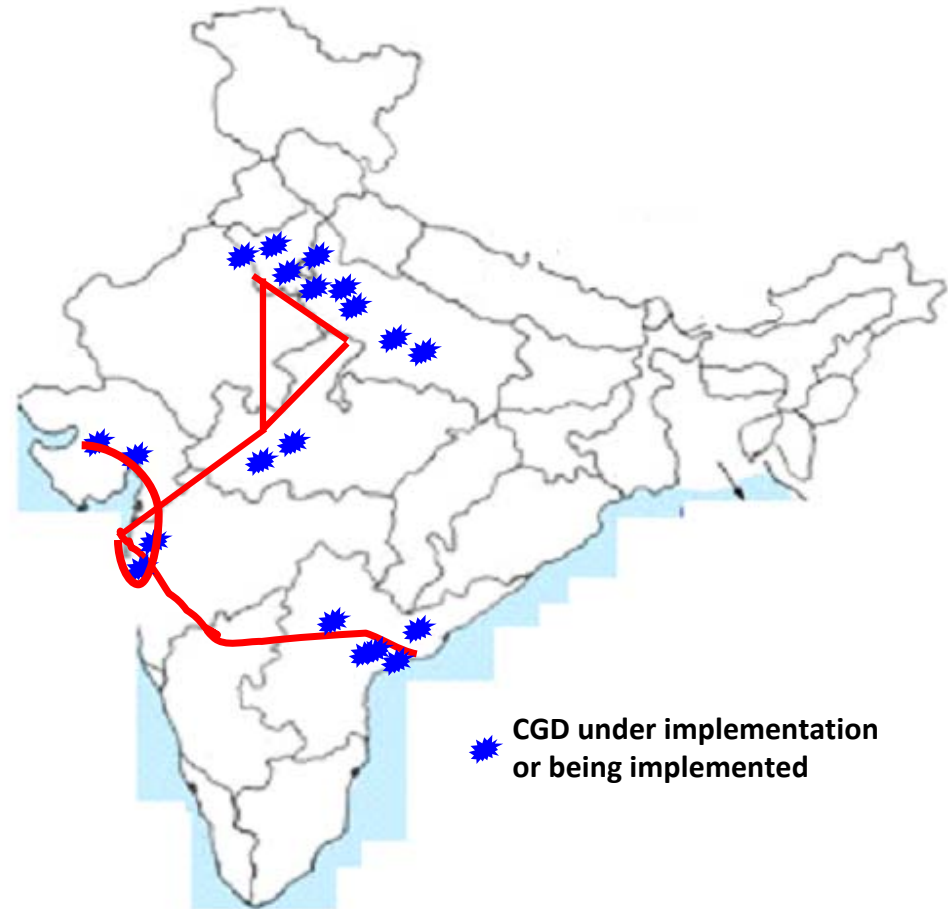
Numerous downstream distribution projects being implemented in the Country



PNGRB has published EOIs for more than 60 cities

Bidding for Cities has been done after considering availability of pipeline infrastructure

- Factors considered in selection of cities for development of CGD network –
 - Proximity to existing / proposed pipeline infrastructure
 - Time frame in which the said connectivity is likely to be available
 - Gas supply / source to meet the demand for CGD network in the identified city
 - Economic viability based on demographics and type of demand which is likely to be captured by the CGD network
 - Presence of other players who may be interested in setting-up CGD network

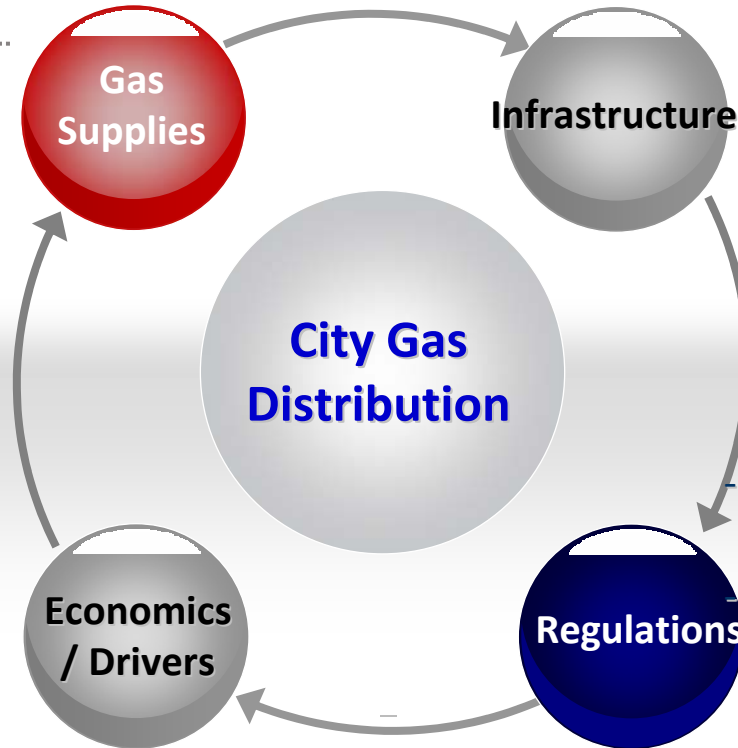


Cities which are close to existing pipeline infrastructure have been the first to receive the attention of entities & PNGRB for development of CGD networks

Regulations

Availability of domestic gas supplies to spur growth of CGD

Existing and proposed CGD infrastructure
Expanding Transmission network a must for CGD growth

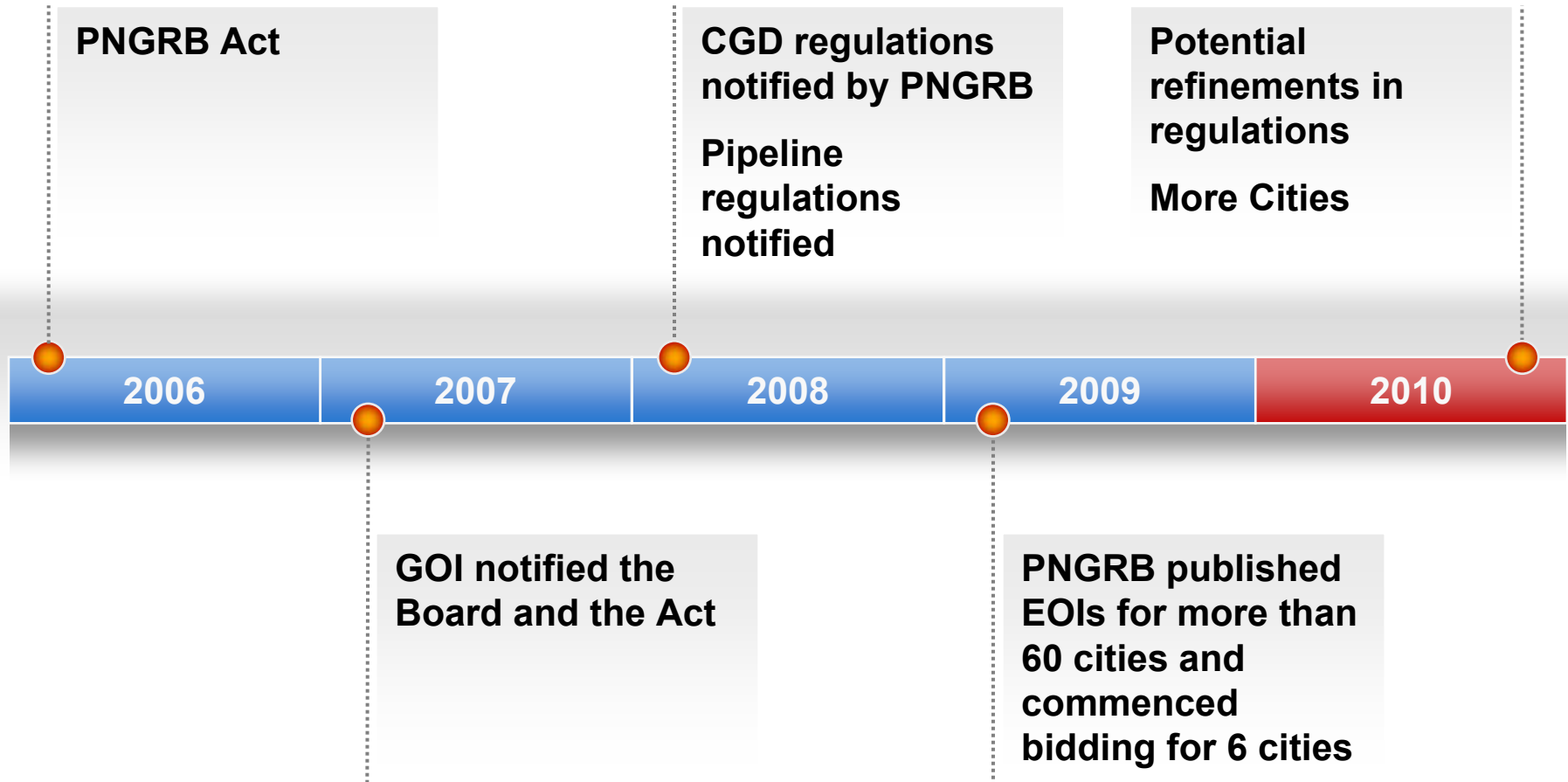


First ever competitive bidding of CGD in India

Learning/ Issues from the bidding

Regulations to have a significant bearing on investment flow in infrastructure

(1/2)



- Board has
 - Shown commitment to the spirit of the PNGRB Act
 - Shown keenness to move with speed
 - Adopted consultative approach
 - Laid emphasis on transparency
 - Shown preference to less intrusive regulation
 - Signaled independence

Regulations have been conceptualized considering many parameters...

Level playing field to non-energy sector players

Flexibility of entering into technical tie-ups likely to allow entry of non-energy sector entities into the CGD space

Intention to have serious bidders with detailed plans

Time allowed by PNGRB for bid submission to allow entities to develop a thorough plan before submission of bids (having 25 year validity)

Benefits to new entity (Exclusivity)

Five year marketing exclusivity for new cities to encourage faster network penetration with a view to capture maximum customer base and enjoy commodity margins

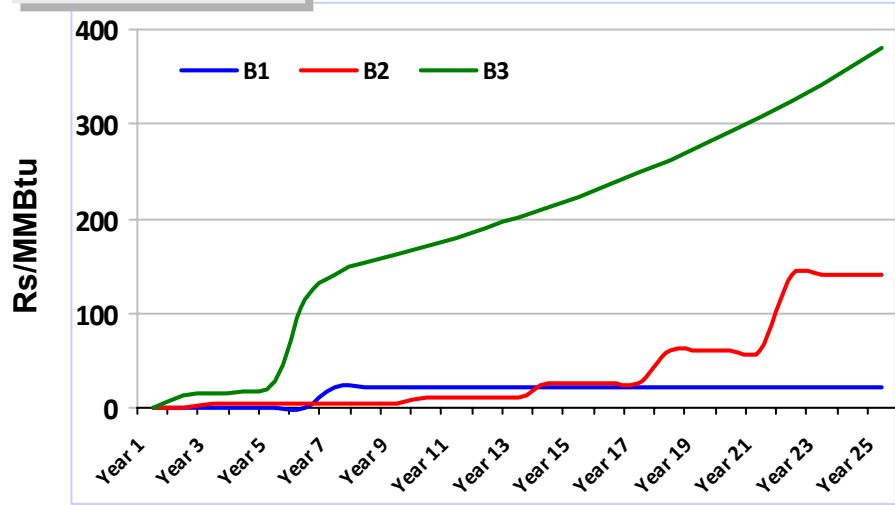
Benefits to consumer (Open Access)

Open access of the distribution network after the exclusivity period to allow competition and choice to consumer

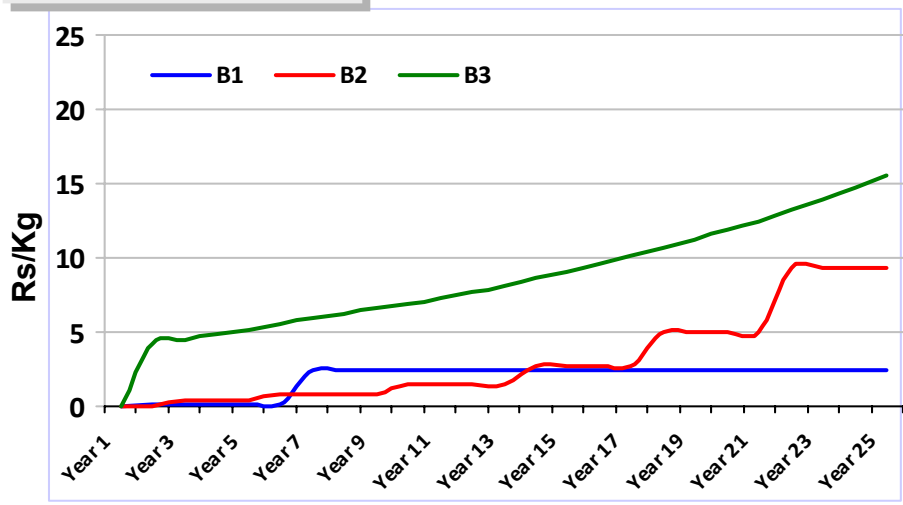
CGD Regulations encourage faster network coverage with benefits to both CGD entity and end- consumer

...However recent bids show significant variation in the biddable parameters may suggest 'Need to Rethink'

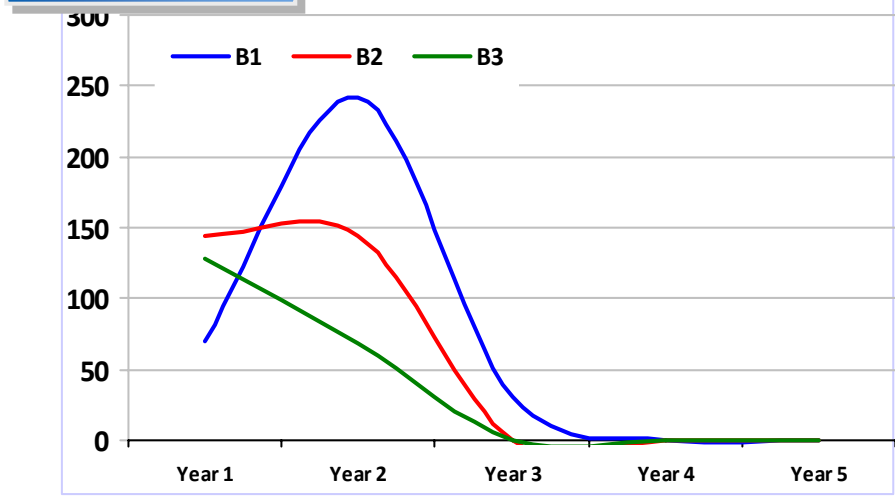
NETWORK TARIFF



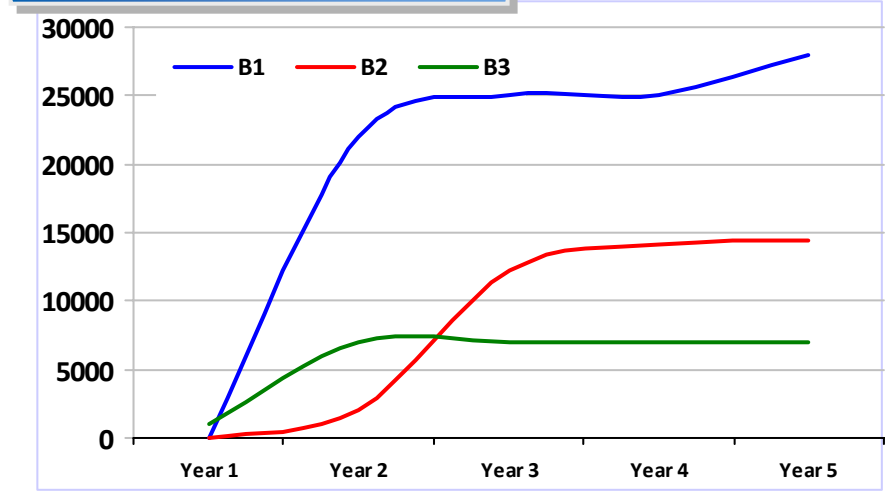
COMPRESSION CHARGE



INCH KM



NOS. OF DOMESTIC CONSUMER



Large difference between the bids along with 'ZERO' bid have raised questions on efficacy of bidding parameters

Rethinking may be required on several counts

Lowness of Network Tariff and Compression Charge

Regulation's Intention

- To provide consumers lowest possible network tariff & compression charge. This would eventually reduce the delivered price to customer

Question ?

- Will lowest tariff hamper future expansion plans ?

Highness of Steel Grid and Nos. of Domestic Connections

Regulation's Intention

- Faster penetration of distribution network and reach to all segments of consumers

Question ?

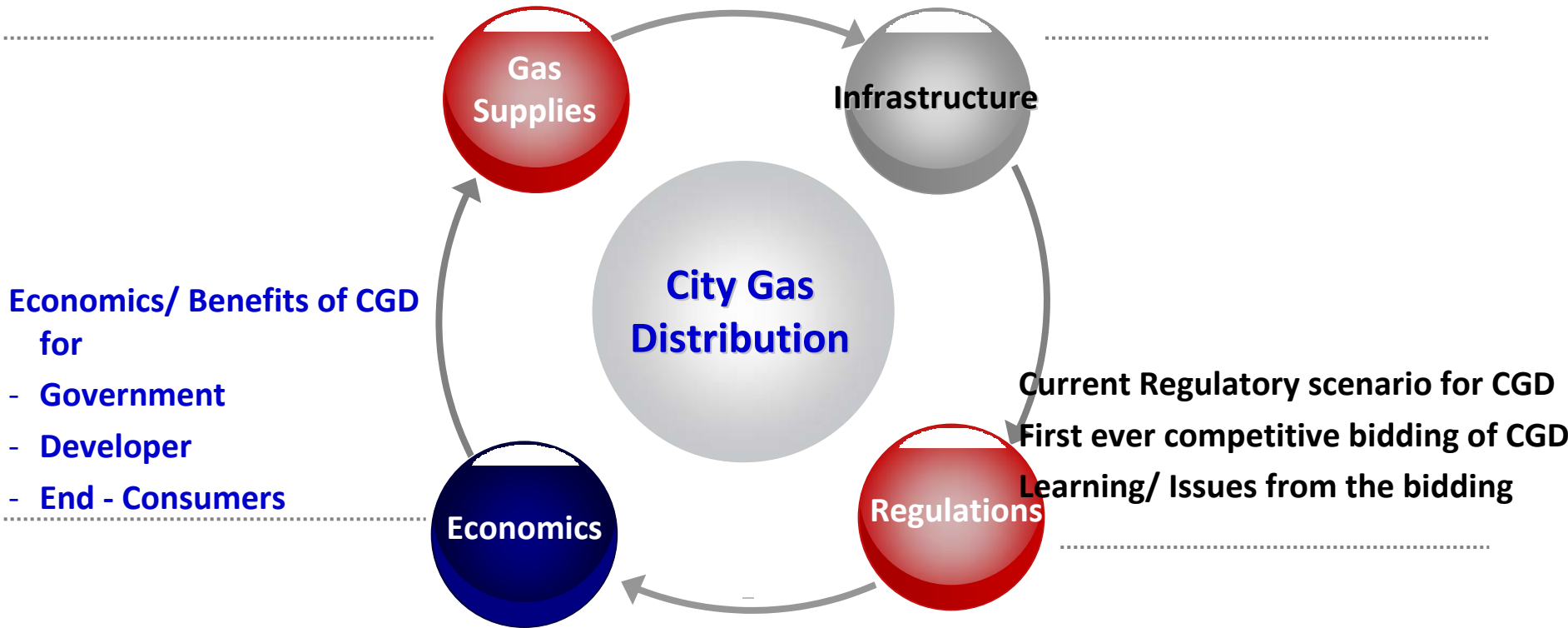
- How does the regulator plan to monitor the actual development ?

While the biddable parameters are have strong consumer orientation, scope for a large number of assumptions exists while bidding for the parameters

Economics

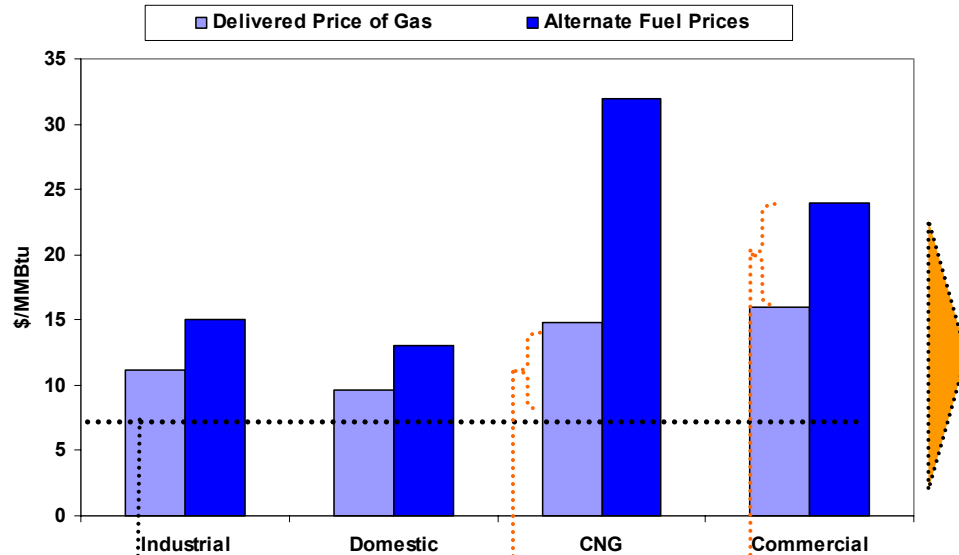
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Though CGD business looks profitable but underlying risks need to be appreciated

Margins of various segments

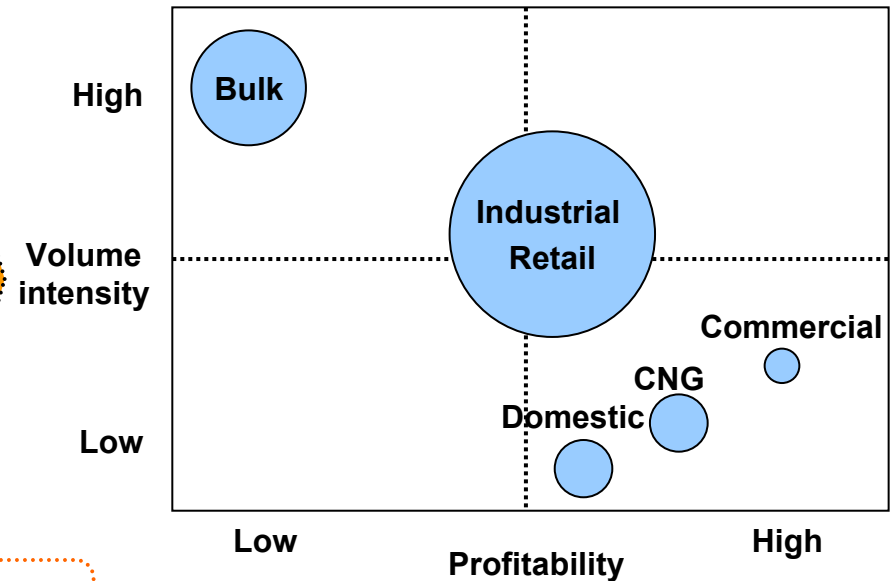


Weighted Average Cost of Gas + Network charge

Margins
•Commodity
•Infrastructure

Discount to Alternate Fuel

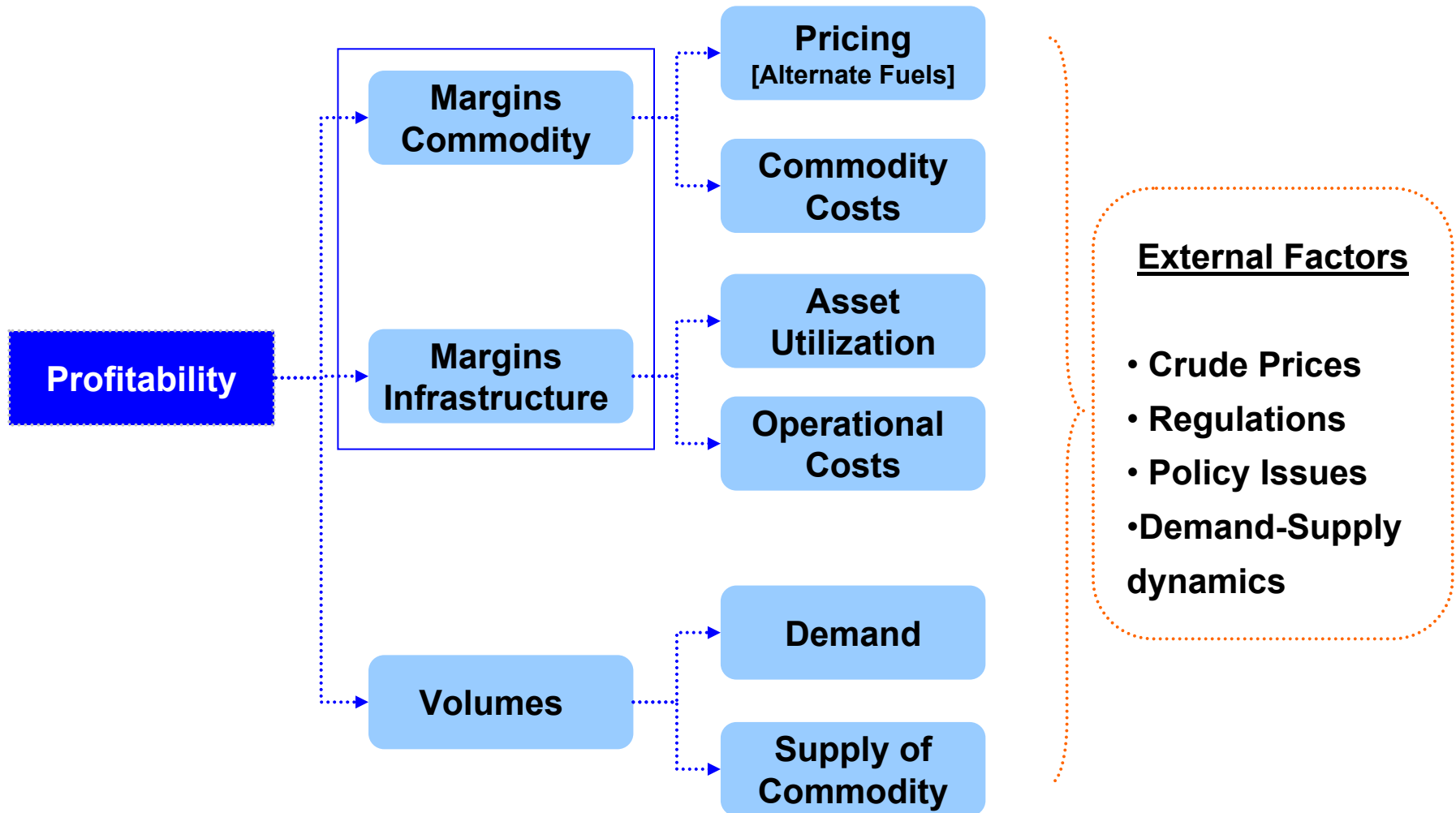
High margin segment doesn't offer good volume intensity



A typical CGD networks costs around Rs.250-300 Crores to service volumes of a level of around 1.5 MMSCMD. The build-up of volumes is quite slow and customer penetration of a reasonable level of 50-60% is achieved only after 9-10 years.

Long gestation period coupled with low volume off-take can adversely impact the CGD business.

Returns of CGD business is a function of margins on commodity , infrastructure and overall volumes



There are significant external factors such as crude prices, regulations / policies that can impact the overall returns

Implementation of City Gas Distribution - Benefits to all stakeholders

Benefits to Consumers

- **Industrial consumers**
 - Continuous supply
 - Low inventory cost
 - Increased operational efficiency
- **Domestic and commercial customers**
 - Cleaner fuel
 - More convenient fuel alternative – indoors
- **Transportation**
 - Reduces emissions
 - Higher safety in combustion (higher flash point)
 - Quieter operation (less vibration and less odour than diesel)

Benefits to Government

- **Reduction of import dependence** as NG replaces FO, LPG and Diesel
- Reach of LPG cylinders in rural areas
- Feel good factor – convenience, savings

Benefits to Society

- **Better environment** as adoption of NG significantly reduces the CO2 emissions

Benefits to Upstream entities

- **Higher realization** at retail level compared to bulk sales acts as an incentive for gas suppliers

The returns of CGD business is not only limited to the CGD entity but benefits all the stakeholders

How can we accelerate CGD development

Some suggestions.....

- **Clarity on gas allocation**
 - Who ensures availability of gas to CGD entities?
 - Can gas be allocated with contract to the winning bidder?
- **Limited availability of gas**
 - Can we prioritise cities?
- **Development plan for CGD**
 - Can we look at standardised plans for which all bidders quote a price?
- **Enhance monitoring capacity**

Key Messages

Has the City Gas Space Changed?

Allocation of new supplies

New Pipelines, National Gas Grid, Gas Highways

Refinement / changes in regulations considering recent bids

CGD offers reasonable opportunity for returns but also has considerable underlying risks

Returns of CGD business is not only limited to the CGD entity but benefits all the stakeholders

Development can be accelerated if clarity obtained on a few issues

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