

Presentation
To
The All India Glass Manufacturers' Federation



on
Indian Gas Exchange
(an IEX company)

May 2020





In this presentation

➤ IEX: About Company

IGX: The Gas Trading Platform

Our proposal

About IEX: IEX is operating Electricity Exchange successfully for last 11 years



- ✓ Market Share: **97%**
- ✓ Facilitates trades for **40% of Short-term Market**
- ✓ Average daily trade: **6000 MW+**
- ✓ High Participation: **4000+ (Electricity Market)**
- ✓ Record Daily Volume : 308 MUs (12,900MW)
 - 4000+** Industries | **55** Discoms (all) | **100+** ESCert Entities
 - 400+** Generators | **1500+** RE Generators & Obligated entities
- ✓ *Publicly listed company (NSE and BSE)*
- ✓ **IEX** is regulated by the CERC (Central Electricity Regulatory Commission)
- ✓ *ISO 9001:2015, ISO 27001:2013, ISO 14001:2015*

Transparency

Liquidity

Competition

IEX Market Segments

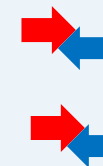
Day-Ahead Market since Jun'08

- *Delivery for next day*
- *Price discovery: Closed , Double-sided Auction*



Intraday Market & Day-Ahead Contingency Round the clock since Jul'15

- *Intraday: For Delivery within the same day*
- *Day Ahead Contingency: Another window for next day*
- *Gate closure : 2.5 hours*



Term-Ahead Contracts since Sep'09

- *For delivery up to 11 days*
- *Daily Contracts, Weekly Contracts*



Renewable Energy Certificates since Feb'11

- *Green Attributes as Certificates*
- *Sellers : RE generators not under feed in tariffs*
- *Buyers: Obligated entities; 1MWh equivalent to 1 REC*



Energy Saving Certificates since Sep'17

- *1 ESCert = 1 mtoe (metric Tonne of Oil Equivalent)*

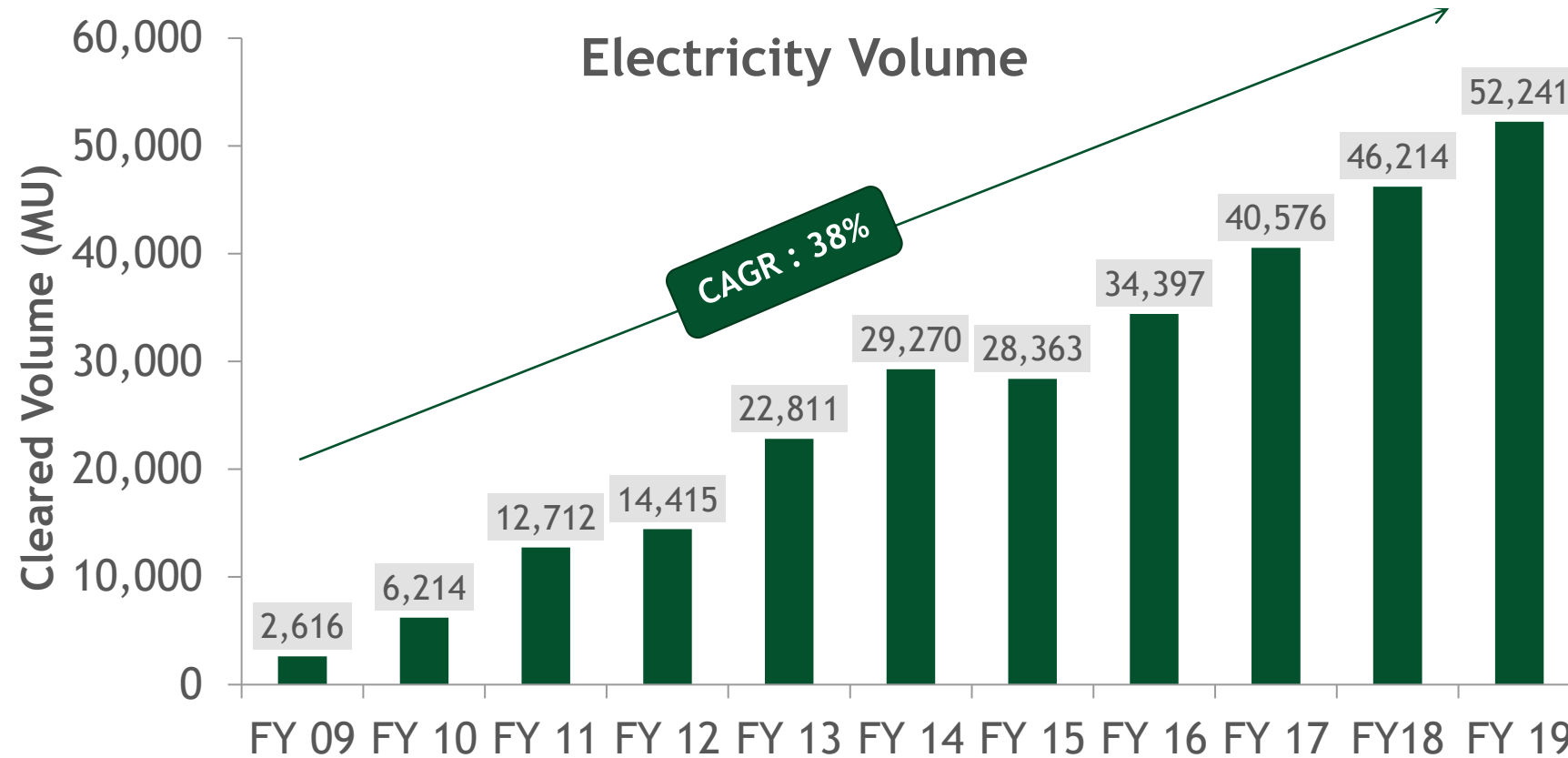


Auction



Continuous

IEX Volume Growth : Strong trend line



Source: IEX Data (DAM+TAM)

IEX Members and Clients: All major PSUs and Industries

Major PSUs

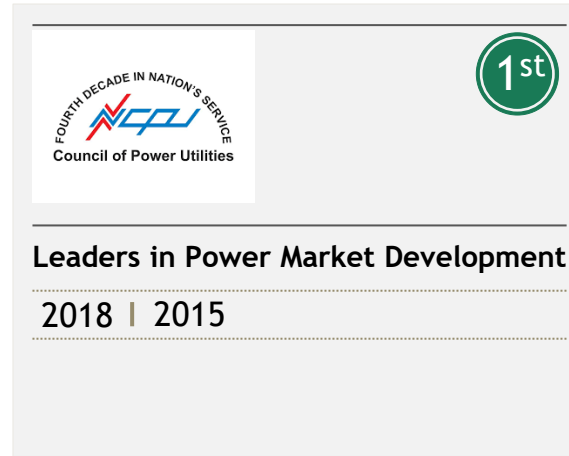


Major Industries



**selected representation*

IEX has consistently been conferred with prestigious awards



**selected representation*



In this presentation

IEX: About Company

➤ IGX: The Gas Trading Platform

Our proposal

Appendix

IEX all geared to launch gas trading platform (IGX)

- IGX plans to launch India's **first online gas trading** platform for physical delivery of natural gas.
- IGX is a **wholly owned subsidiary** of IEX at present.
- About **8 Members & 100+ clients** registered already.
- Have successfully **conducted mock trading sessions** with encouraging participation from all sectors
- IGX to **go live by mid-june**

Inviting Membership for India's First Nationwide Online Gas Trading Platform



In keeping with the Govt's vision of increasing the natural gas share in energy mix from 6% to 15% by 2030, IEX is poised to set up IGX – the first nationwide gas trading platform powered with advanced technology.

Advantages for Members

- Transparent price discovery
- Flexibility to trade 24X7
- Delivery facilitation
- Ease of transaction through online platform
- Competitive prices with participation from multiple buyers & sellers

Introductory Offer valid till 31st March.
Be a part of India's gas based economy.

www.igxindia.com

Call +91-7290097658; email: membership@igxindia.com  [igx_india](#)  Indian Gas Exchange Limited

IGX governance structure

Members/clients



Bye-laws: contain the essential rules for the organization of IGX, the tasks of its committees/bodies as well as the preconditions for access to trading.



Circulars: IGX communication with its members and/or clients



Market Rules: Govern the day to day operations of IGX, rules of trading, the relationship between IGX and its members/clients.



Contract Specifications: As part of the market rules, include the rules regarding execution of trading and, in particular, the trading forms, the order types and the execution of orders.

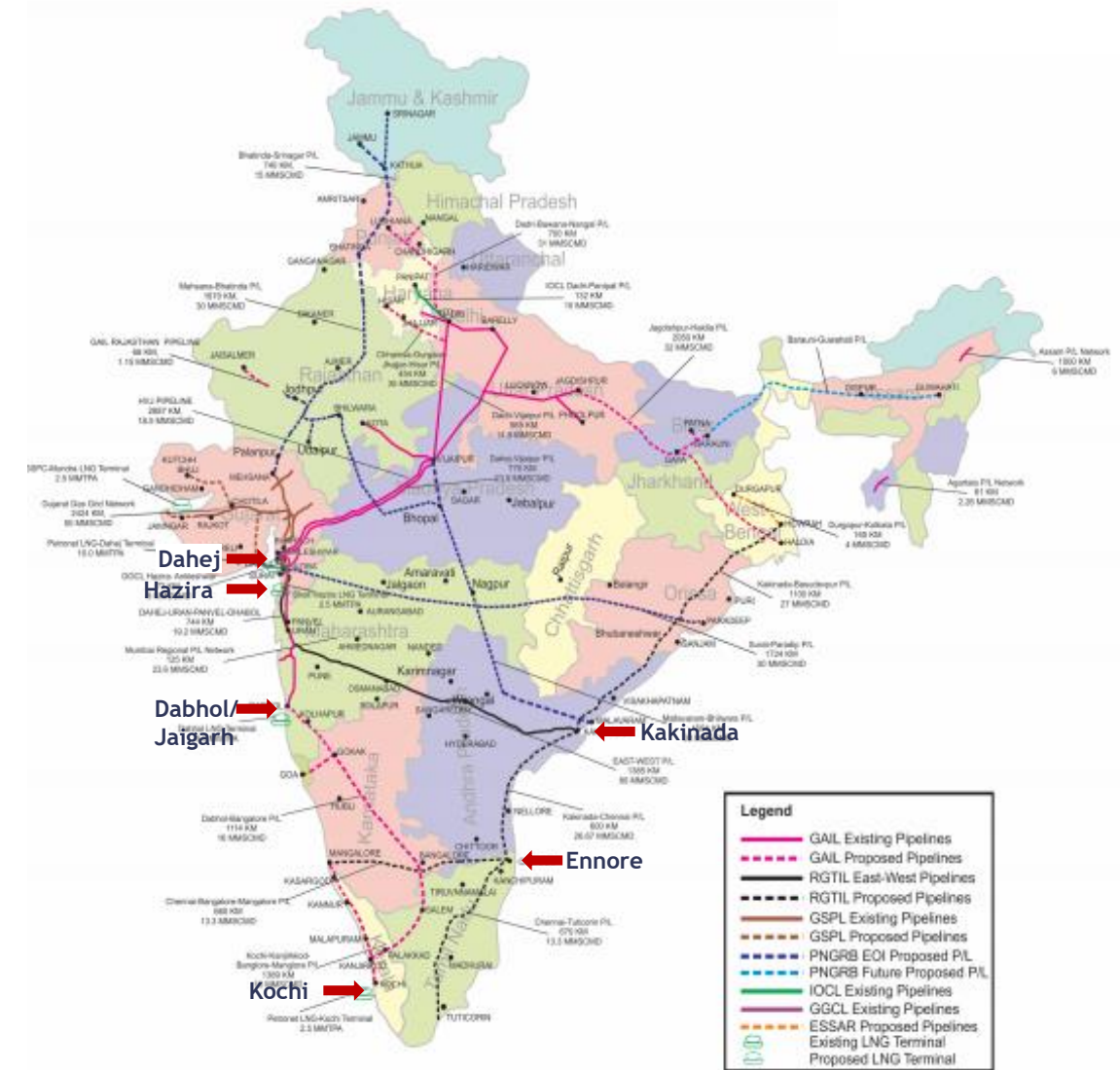


Market Model: Physical Trading hubs

Physical Trading Hubs (Delivery points)

- Transmission Pricing is route based, therefore multiple physical hubs.
- Can move to Virtual hubs, if we adopt Unified Tariff or Entry-Exit pricing

Hub	Delivery point	Planned launch date
Dahej	Ex terminal, after regas	Immediate
Hazira	Mora interconnection point	Immediate
Kakinada	Gas land fall point (Kakinada/ Oduru)	Immediate
Dabhol/ Jaigarh	Interconnection point of 'Jaigarh-Dabhol tie-in connectivity pipeline' & 'DBPL' pipeline	June 2020
Kochi	Ex terminal, after regas	Q2 2020
Ennore	Ex terminal, after regas	Q2 2020
Mundra	Ex terminal, after regas	Q2 2020



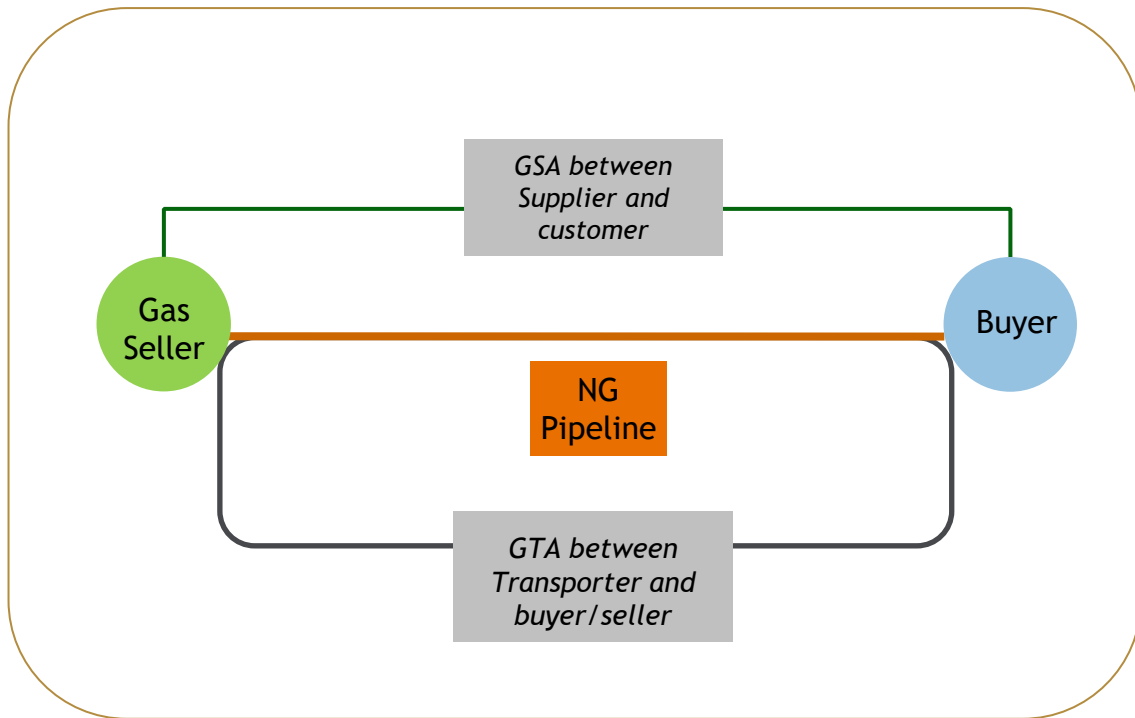
Market Model: Trading products and timetable

Exchange products	Trading hours (IST)	Tenor	Trading window (S)	Trading window (E)
Day-ahead *	10:00 - 12:00	1 Gas Day	D-1 business days	D-1 business days
Daily	10:00 - 12:00	1 Gas Day	D-9 business days	D-2 business days
Weekly	10:00 - 12:00	7 Gas Days	D-5 business days	D-5 business days
Weekdays	10:00 - 12:00	5 Gas Days	D-5 business days	D-5 business days
Fortnightly	10:00 - 12:00	13-16 Gas Days (1-15 & 16-EoM)	D-6 business days	D-6 business days
Monthly	10:00 - 12:00	Calendar Month	D-9 business days	D-9 business days

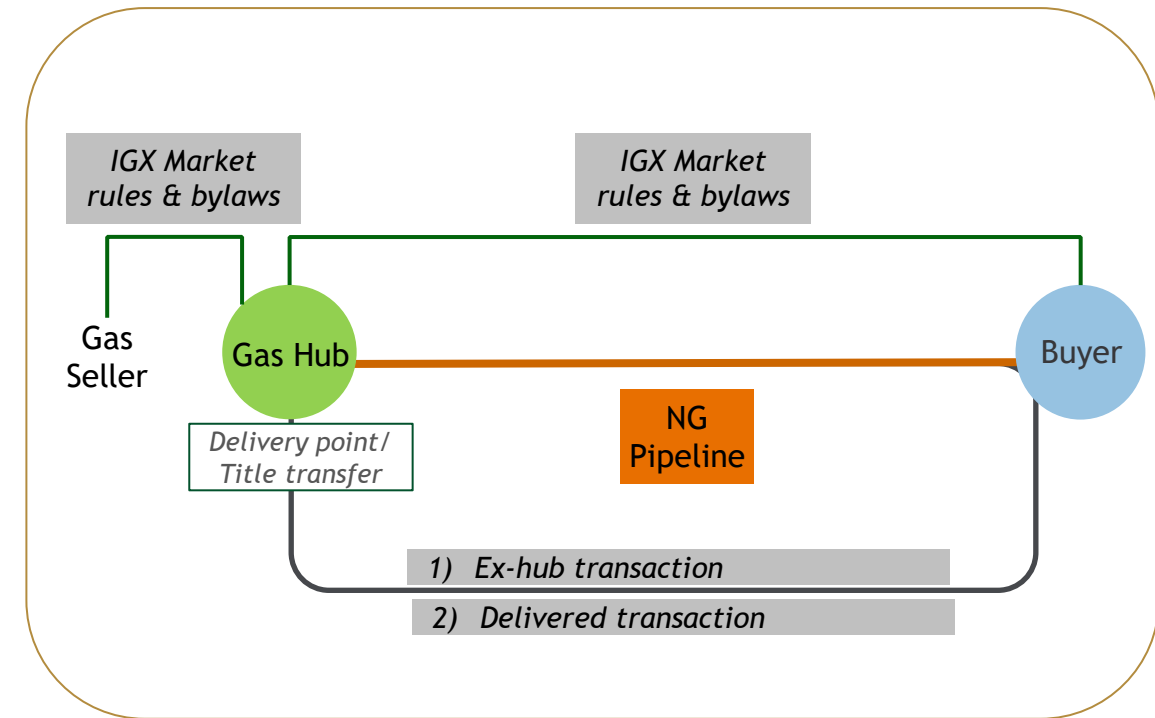
* Subject to getting capacity booking confirmation for next day

Market Model: Contractual Arrangement

Current contractual arrangement



Contractual arrangement with IGX



**IGX is a platform to facilitate natural gas trading and doesn't own the title of gas.*

Market Model: Salient Features

Salient features

Physical	All trades for firm delivery. Non-transferable.
Automated Platform	Facilitates - Trading, Delivery and financial settlement
Entities	Sellers- to put bid for sale of gas at delivery point (post re-gas) Buyers- to put bid for buying gas at delivery point
Lot Size	1 lot = 100 MMBTU
Partial selection	Possible (Trade/Selected volume < Bid Quantity)
Bid unit	INR/MMBTU
Price tick	1 INR/MMBTU
Price discovery	Auction - Uniform price, Closed, double-sided auction <ul style="list-style-type: none">Bids collected during Call period and then matched
Types of delivery	Delivered transactions. Gas and transmission capacity together Ex-hub transactions. Gas only. Capacity will be organized by Buyer
Imbalance management	Through the exchange for delivered transactions Out of exchange for Ex-hub transactions
Margins	Buyers to pay upfront cash margins for Day Ahead and Daily Contracts; and cash + non-cash margins for Weekly, Fortnightly and Monthly contracts

Market Model: Auction types

Type(s) of auction- price discovery

Uniform price double sided closed auction



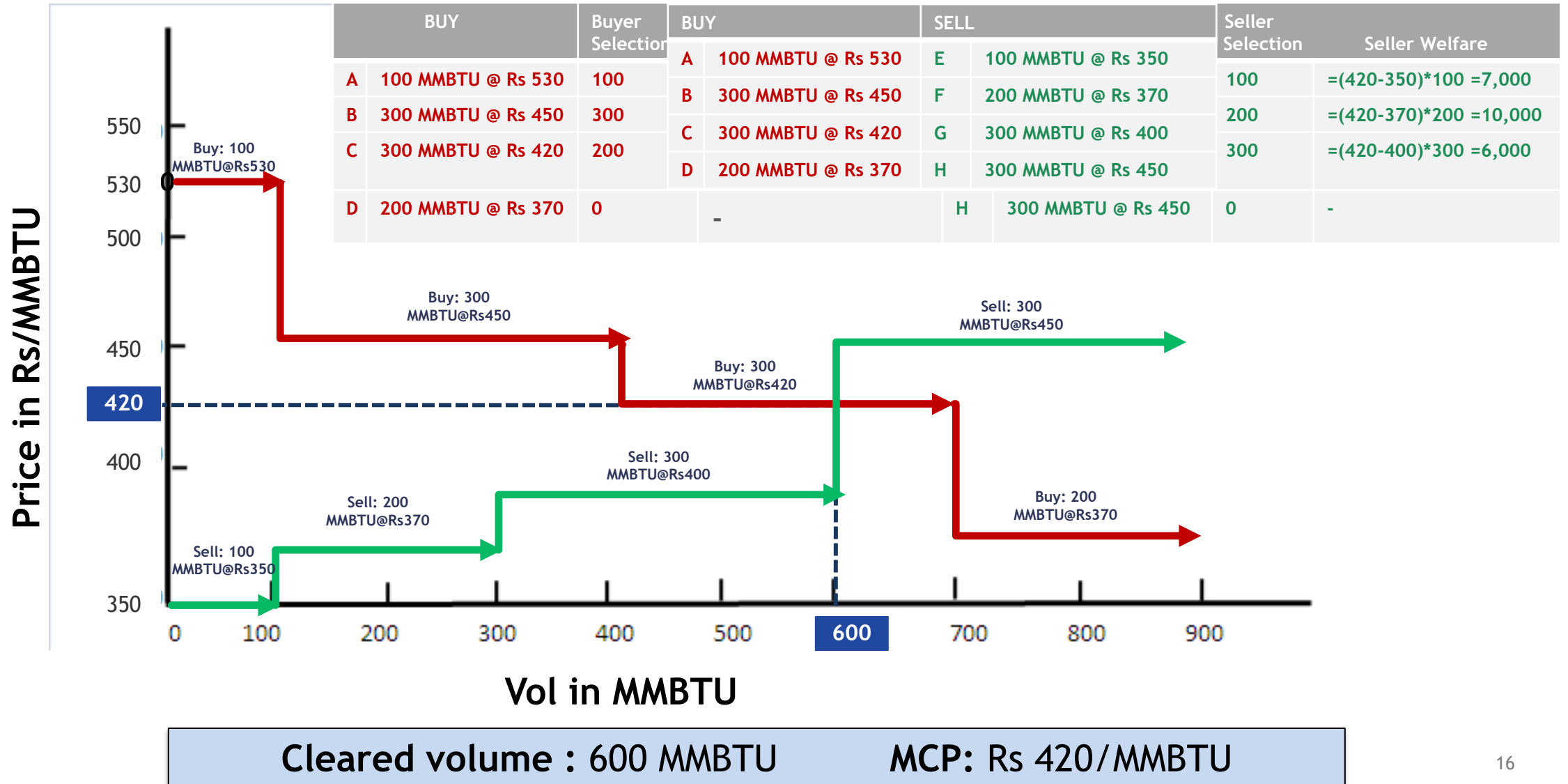
- Orders not disclosed to market participants.
- Single Market Clearing Price and trade quantity are informed only after Market is closed.
- Single price to buyers and sellers
- Bid price decision on own requirement basis since no market information

Single sided auction



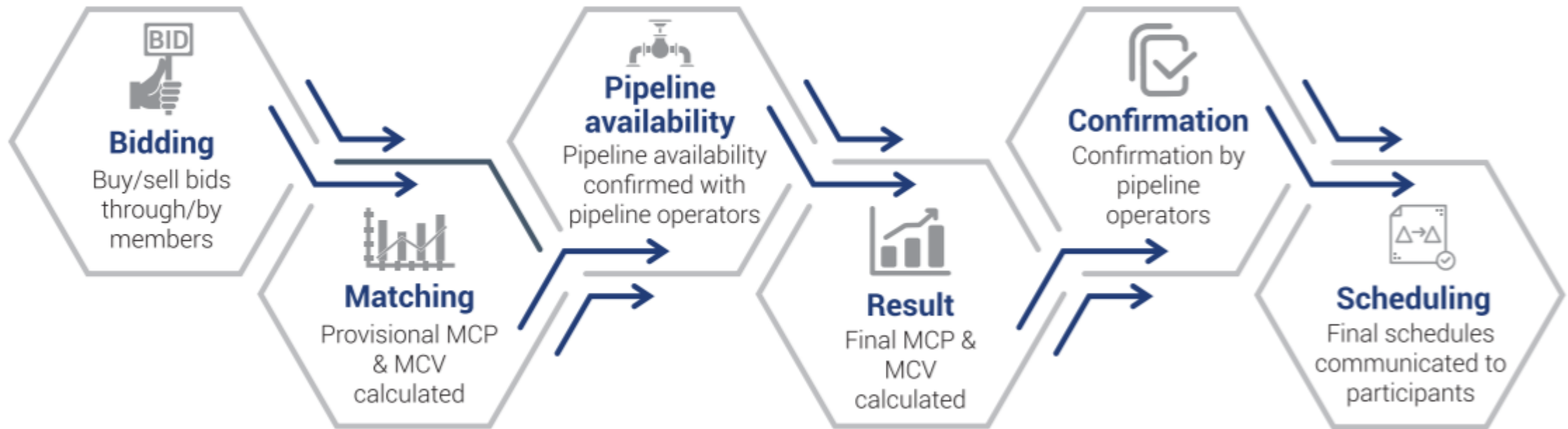
- Either Buyer or Seller can initiate an auction based on their own customized requirement.
- In case, Buyer initiates the auction then Sellers will register their counter-offer & compete to get selected

Closed-double sided auction mechanism



Typical trade flow

Trade Flow



Market Model: Delivery management

Delivery management



Imbalance management

- **Prioritization of Gas traded through IGX-** If Buyer taking gas from multiple sources then IGX traded gas be evacuated/metered on first priority.
- **Reason for first priority:**
 - 100% take or pay on gas traded on IGX platform
 - Imbalance settlement at buyer side will be nullified



Market Model: Risk Management

Risk management

Contract Type	Daily Contracts	Fortnightly Contracts
Buyer Margin	120% of Trade value (#) (Cash; Trade Day)	100% of Trade value (on Trade Day)
Seller Margin	15% of Contract value (Non-cash)	15% of trade value (Non-cash)
Pay-in from Buyer	On D+3 working day, Pay-in adjusted with Cash Margin	Each day rolling on D-1 working day basis, Last 4 days Pay-In adjusted with Cash Margin
Pay-out to Seller	On D+3 working day	Each Day rolling basis on D+3 working day

(#) Considering Ex-hub transaction

Market Model: Transaction Fees

Contract types: Transaction fees

Particulars	UoM	Transaction Fees
Transaction fees- Ex Hub	INR/MMBTU	5
Transaction fees- Delivered	INR/MMBTU	7



- Discounted transaction fee on ex-hub transactions vis-à-vis delivered transactions.

IGX Platform: Scheduled to Go-live shortly



IGX
INDIAN GAS EXCHANGE

System → Participants Instruments Orderbooks RFQ Trades Clearing Supervision → Admin → Logout

Filter by

Code: Name: Credit Check Type: Quote Currency: Primary Exchange: Primary Segment: Status:

Instruments (Search)

Code	Name	Credit Check Type	Quote Currency	Expiry Date	Participant	Primary Exchange	Primary Segment	Status	Reference (Close) Price	Last Updated	Last Updated By	Edit	Add Market Notice
DA-DH-200220	DA-DH-20/02/20-THU		INR	2020-02-19	Indian Gas Exchange	IGX	Gas	ACTIVE	100.0 INR	2020-02-19 12:01	product.roll		
DA-HZ-200220	DA-HZ-20/02/20-THU		INR	2020-02-19	Indian Gas Exchange	IGX	Gas	ACTIVE	100.0 INR	2020-02-19 12:01	product.roll		
DA-KN-200220	DA-KN-20/02/20-THU		INR	2020-02-19	Indian Gas Exchange	IGX	Gas	ACTIVE	100.0 INR	2020-02-19 12:01	product.roll		
DL-DH-200221	DL-DH-21/02/20-FRI		INR	2020-02-19	Indian Gas Exchange	IGX	Gas	ACTIVE	100.0 INR	2020-02-11 10:58	product.roll		
DL-DH-200222	DL-DH-22/02/20-SAT		INR	2020-02-20	Indian Gas Exchange	IGX	Gas	ACTIVE	100.0 INR	2020-02-12 05:28	product.roll		
DL-DH-200223	DL-DH-23/02/20-SUN		INR	2020-02-21	Indian Gas Exchange	IGX	Gas	ACTIVE	50.0 INR	2020-02-17 07:03	product.roll		
DL-DH-200224	DL-DH-24/02/20-MON		INR	2020-02-22	Indian Gas Exchange	IGX	Gas	ACTIVE	29.0 INR	2020-02-17 07:03	product.roll		
DL-DH-200225	DL-DH-25/02/20-TUE		INR	2020-02-23	Indian Gas Exchange	IGX	Gas	ACTIVE	12.0 INR	2020-02-17 07:03	product.roll		
DL-DH-200226	DL-DH-26/02/20-WED		INR	2020-02-24	Indian Gas Exchange	IGX	Gas	ACTIVE	99.0 INR	2020-02-17 12:01	product.roll		
DL-DH-200227	DL-DH-27/02/20-THU		INR	2020-02-25	Indian Gas Exchange	IGX	Gas	ACTIVE	50.0 INR	2020-02-18 12:01	product.roll		
DL-DH-200228	DL-DH-28/02/20-FRI		INR	2020-02-26	Indian Gas Exchange	IGX	Gas	ACTIVE	100.0 INR	2020-02-19 12:01	product.roll		

- Member Advisory Committee (MAC) formed and first meeting held on 20th Feb 2020.
 - MAC is represented by participants across Industry such as GAIL, BPCL, Shell, PLL, PIL, H-Energy, GSPCL, MGL, IGL, Torrent Gas, Adani Gas, NFL, Reliance Industries Saint Gobain etc.
- Market Rules & Bylaws in place; available at Website (www.igxindia.com)
- 2 Mock trading session held (20 March & 9 Apr) with significant participation from industry.
- Onboarding of New Members & Clients started
 - 8 Members (Adani, Manikaran, GMR, Zak, Kreate, Gita, Abja)
 - 100+ clients (GSFC, GNFC, Saint Gobain, Piramal, Kajaria, HSIL)
- First edition of Monthly Newsletter “Gas Connect” was published

<https://igxindia.com/wp-content/uploads/2020/03/Gas-Connect-IGX-April-2020.pdf>

Inviting membership

Full member-

Member who can self-trade and also on behalf of its clients

Trader member-

Member who can only trade on behalf of its clients

Client- A client can trade either through a full member or through a trader member

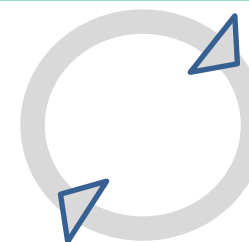
	Full Member (INR)	Trader Member (INR)	Existing IEX Member (INR)
1. Member Fees*			
Admission Fee (discounted fee applicable till 31 st May 2020)	25 L	10 L	10 L
Security Deposit (One Time)	25 L	25 L	25 L
Annual Fees	5 L	5 L	5 L

Client Fees : Annual Fee Rs 1L waived off for FY 2020-21

(Documents to be submitted by 30th June 2020)

**excludes applicable taxes*

Exchange



Full Member

Self Account

Client 1

Client 2

Traded Member

Client 1

Client 2

Link to Memberships forms: <https://www.igxindia.com/join-igx/>

Please connect with us at membership@igxindia.com or visit www.igxindia.com to avail of exclusive offering for early registrants.

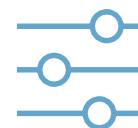
Benefits to Glass Manufacturers

Competitive Gas for Glass manufacturers



- Exchange can provide gas at competitive rates and reduce input cost to glass manufacturing
- Gas purchase in INR compared to \$ denominated contracts

Flexible Products



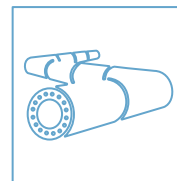
- Multiple products provide option to purchase gas for next day up to one-month duration
- Flexible products can help avoid obligations under long term contract

Transparent Price Discovery



- Price discovered for the entire market in an anonymous manner (robust uniform price closed double-sided closed auction)

Delivery Facilitation



- Option of delivered transactions, wherein exchange will facilitate transportation booking

Indian Gas Exchange is backed by IEX, the leading power exchange in India



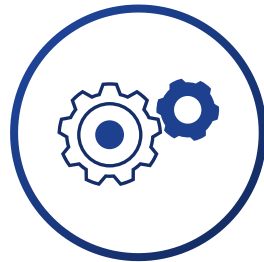
10+ years
of successful
operations of a power
trading platform



Superior exchange
technology, sourced
from a leading global
player



Strong connect across
market participants,
specially industries



Robust market model
customized to suit
Indian market players'
expectations



Financially backed by
strong players across
the industry

Exchange Value proposition for members

1st Gas exchange of India

Members can become a part of the
1st gas exchange in India

Pan India Market

Members will get access to pan India
gas market

Delivery facilitation

By exchange in coordination with
pipeline operators



Revenue certainty

Certainty in revenue streams with
the help of aggregation on exchange.
Payment made the next day of
delivery.

Safety & security


Central clearing helps mitigate
counterparty credit risk

IEX is aligned to Governments' vision of creating a successful gas trading hub - a benchmark for Asian gas trades

January 2020

International Energy Agency slams govt over pricing policy of natural gas

The Modi government, after storming to power in 2014, had approved a formula to price domestically produced gas at the average rate prevailing in gas exporting countries such as the US, UK, Canada, and Russia

 PTI Last Updated: January 13, 2020 | 10:32 IST

July 2019

India is likely to set up gas trading hub by first quarter of 2020-21

The Narendra Modi government is looking into a plan to unbundle the gas transmission and marketing business of GAIL

Shine Jacob | New Delhi
Last Updated at July 22, 2019 22:33 IST

Dec 2018

Gas trading hub to be set up soon: Pradhan

Our Bureau | New Delhi | Updated on December 11, 2018 | Published on December 11, 2018



Dharmendra Pradhan Kamal Narang

India will soon set up a gas trading hub and have the price for domestically produced gas determined through this market according to Minister for Petroleum and Natural Gas, Dharmendra Pradhan.

January 2020

Interministerial talks on gas sector reforms begin

The petroleum and natural gas ministry has begun interministerial consultations on its proposal to end the power sector's priority access to cheap domestic gas, setting up a gas trading platform and hiving off GAIL's pipeline business into a subsidiary.

Thank you

Disclaimer

The contents covered under the presentation are subject to change without any prior intimation. For more details please visit Market Rules & Bye Laws published on the website www.igxindia.com from time to time.

