

Welcome to the Webinar on Indian Gas Exchange *(an IEX company)*

08.04.2020





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)*

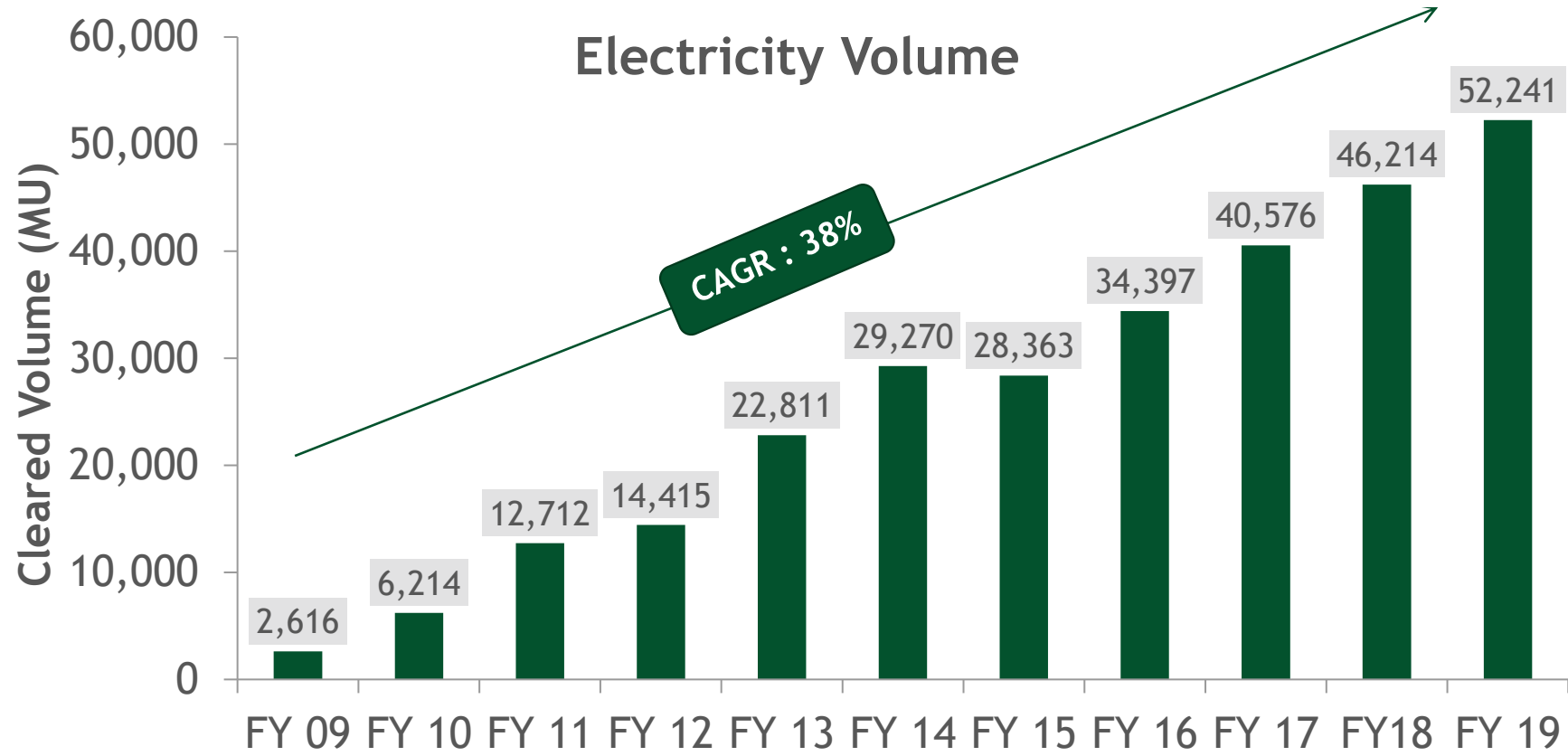


Auction



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



Best Power Exchange in India
2019 | 2018 | 2017 | 2016 | 2015
2014 |



Leaders in Power Market Development
2018 | 2015



Exchange of the Year
2014 | 2013 | 2012

Best Performing Power Exchange
2014 | 2013 | 2012



Best CFO Award
2018



Investor Relations Award
2018

**selected representation*



In this presentation

IEX: About Company

➤ IGX: The Gas Trading Platform

Our proposal

Appendix

IEX is now going to launch a gas trading platform (IGX)

- IGX will be India's first online gas trading platform for physical delivery of natural gas.
- IGX is a wholly owned subsidiary of Indian Energy Exchange (IEX) at present.
- We propose to launch IGX this month.
- We have already started enrollment for memberships on IGX.

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.



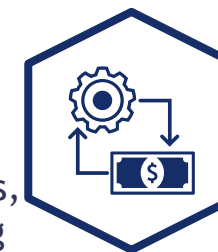
Circulars: IGX communication with its members and/or clients



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.

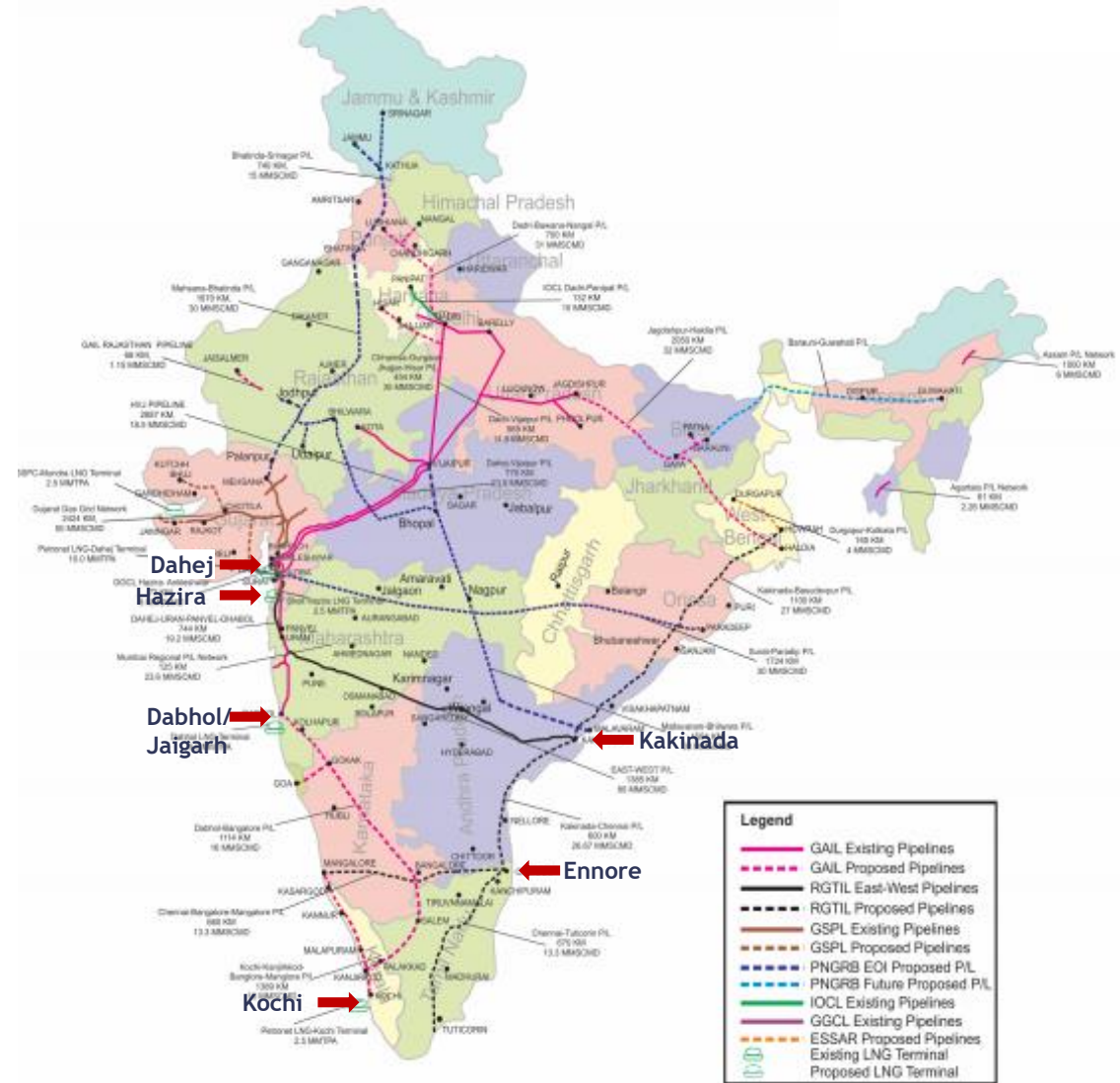


Market Model: Physical Trading hubs

Physical Trading Hubs (Delivery points)

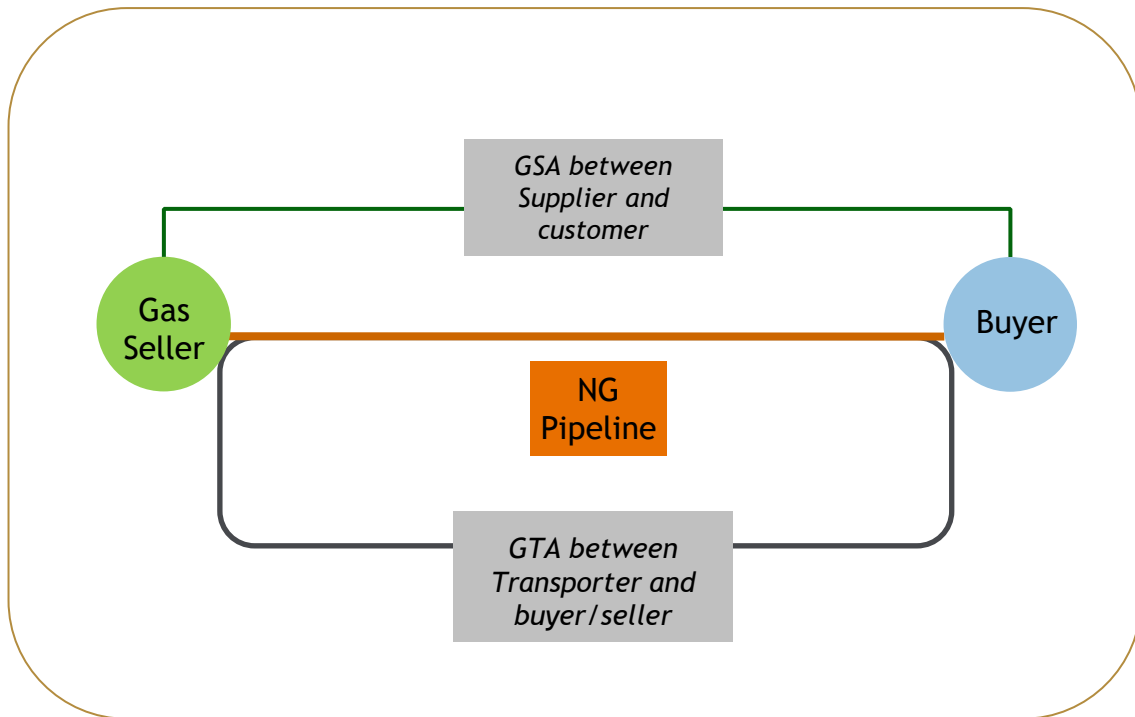
- Transmission Pricing is route based, therefore multiple physical hubs.
- Can move to Virtual hubs, if we adopt Unified Tariff or Entry-Exit pricing

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

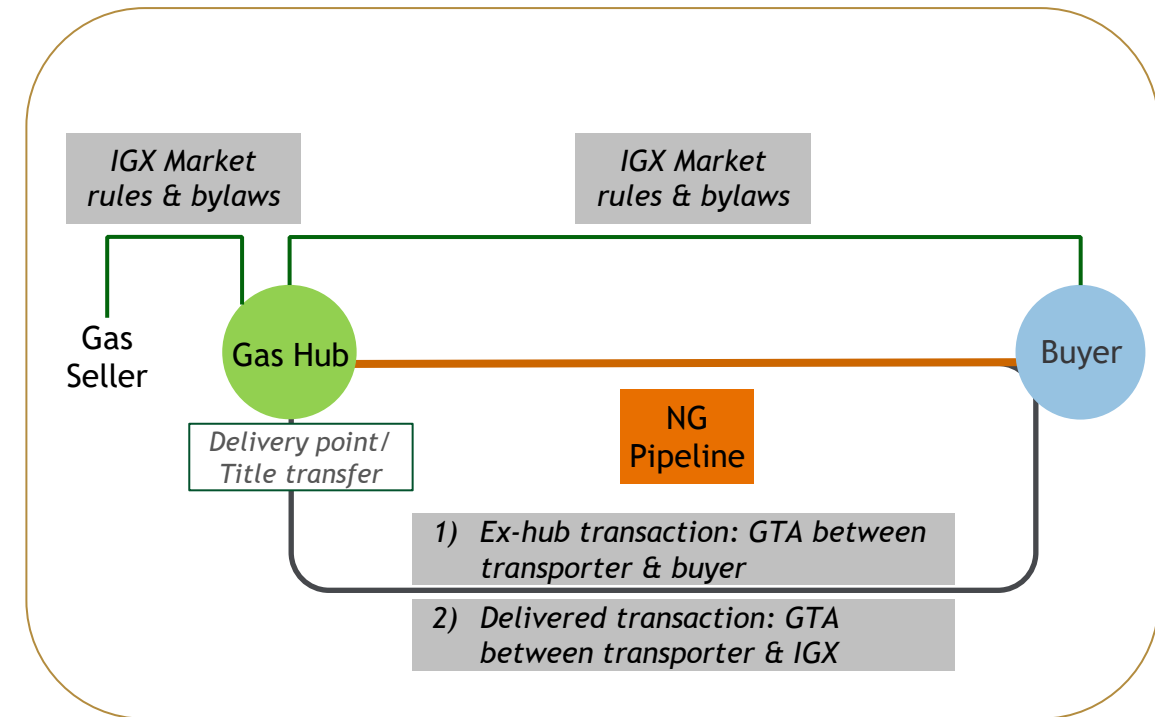


Market Model: Contractual Arrangement

Current contractual arrangement



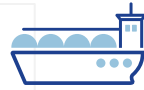
Contractual arrangement with IGX



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

Market Model: Delivery types

Contract types by type of delivery



Ex-hub transactions

Delivered transactions

1 Features

- Transmission capacity booking to be handled by the Buyer or Seller (as Shipper).

- Transmission capacity booking to be handled by IGX

2 Pre-requisites for trading

- The bidder should have a valid GTA and CT with the transporter.

- Bidder should sign a Gas Transportation Undertaking (GTU) with IGX; IGX will sign GTA & CT Agreement with transporter on behalf of Buyer.

3 Post-trading

- **Delivery:** Bidder will send trade nomination to the transporter to schedule delivery.
- **Financial settlement:** of transportation tariff etc. between bidder and transporter, Of commodity between seller and buyer.
- **Imbalance settlement:** with transporter will be handled by buyer/seller.

- **Delivery:** IGX will send trade nomination to transporter on behalf of buyer to schedule delivery.
- **Financial settlement:** of transportation tariff between IGX & transporter, of commodity between seller & buyer through IGX. IGX to keep appropriate margins.
- **Imbalance settlement:** done with transporter by IGX. IGX to keep appropriate margins.

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-4 business days	D-4 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-5 business days	D-5 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

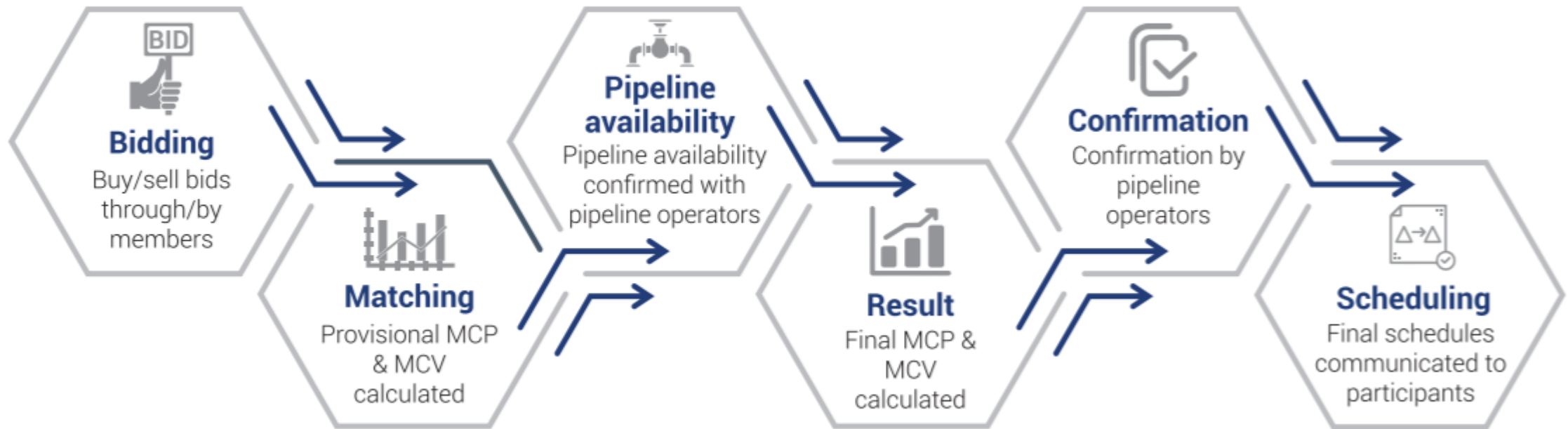
Market Model: Salient Features

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 margins for day-ahead and daily contracts For contracts beyond weekly, buyers will provide non-cash collateral for contract value.

Typical trade flow

Trade Flow



Market Model: Auction types

Type(s) of auction- price discovery

Uniform price double sided closed auction



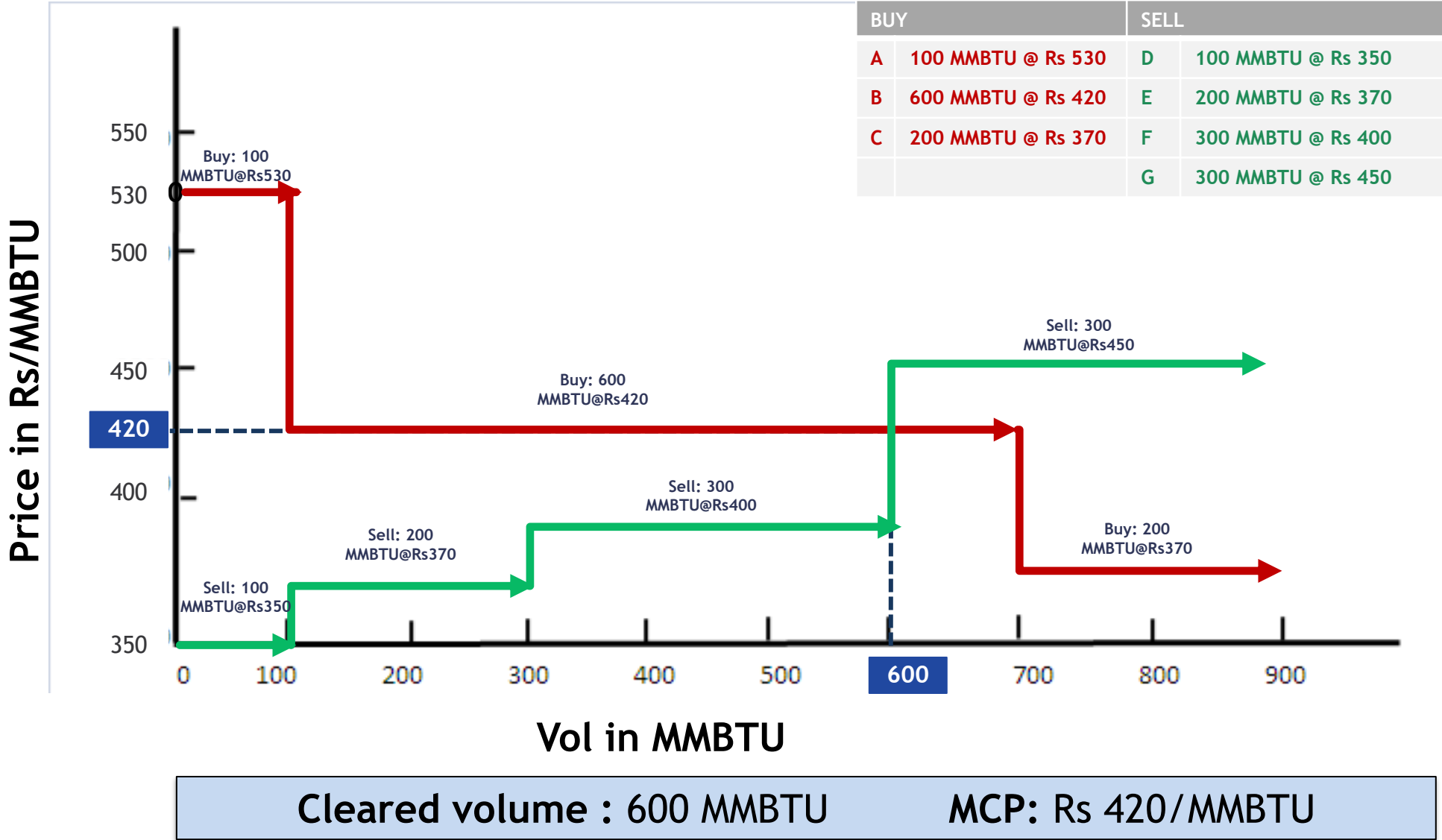
- Orders not disclosed to market participants.
- Single Market Clearing Price and trade quantity are informed only after Market is closed.
- Single price to buyers and sellers
- Bid price decision on own requirement basis since no market information

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



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
Exposure (Pre-Trade)	Buyer: 20% Cash+Non-cash Collaterals	Buyer: 20% Cash+Non-cash Collaterals
Buyer Margin (Post-Trade)	100% of trade value + Transmission + Exchange transaction Charges & Taxes (50% Cash + 50% min. Non Cash)	100% of trade value+ Transmission + Exchange transaction Charges & Taxes (50% Cash + 50% min. Non Cash)
Seller Margin (Post-Trade)	15% of trade value (Non cash)	15% of trade value (Non cash)
Pay-in from Buyer	On D-1 basis on confirmed Trade	On D+6, D+11,D+16 On confirmed 5-day trade
Pay-out to Seller	On D+2 at allocated quantity	On next day of pay in

Market Model: Transaction Fees

Contract types: Transaction fees

Exchange Transaction Fees (ETF) - Product wise tiered structured

2-tiered	Particulars	UoM	Transaction Fees	
			> 12000 MMBtu per Month	< 12000 MMBtu per Month
			Transaction fees- Ex Hub	INR/MMBTU
Transaction fees- Delivered	INR/MMBTU	6	7	

- Discounted transaction fee on ex-hub transactions vis-à-vis delivered transactions.
- Lower trading fee in case of long duration products like fortnightly and monthly.
- Slab based fee: discounted fee for members crossing a certain threshold in trading in terms of volumes.

IGX Platform: Scheduled to Go-live in April 2020



- 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)
- Conducted first mock trading session on 20th Mar with 15+ market participants
- Onboarding of New Members & Clients started
 - Manikaran & GMR amongst the first members
- First edition of Monthly Newsletter “Gas Connect” published
<https://igxindia.com/wp-content/uploads/2020/03/Gas-Connect-IGX-April-2020.pdf>

IGX
INDIAN GAS EXCHANGE
OF INDIA

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

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

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		

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

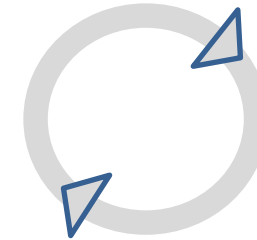
Client- A client can trade either through a full member or through a trader member

	Full Member (INR)	Trader Member (INR)	Existing IEX Member (INR)
1. Member Fees*			
Admission Fee (applicable till 30 th Apr 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 till 30th April 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.

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



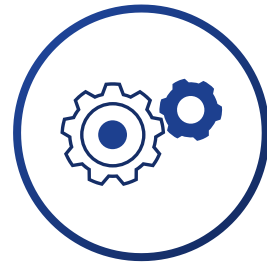
10+ years
of successful
operations of a power
trading platform



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



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.

Dharmendra Pradhan Kamal Narang

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

Connect at igx-bd@igxindia.com for any queries

April 2020

