

### **Presentation**

on

"Trading of ESCerts under Perform, Achieve & Trade (PAT) Scheme"

### **About PXIL**

#### **PROMOTERS**

National Stock Exchange (NSE)

National Commodity and Derivatives Exchange (NCDEX)

The largest exchanges in India with deep experience in creating vibrant markets

EQUITY PARTNERS				
Central Government Entities	State Government Entities	Private Sector Entities		
	GUVNL	JSW Energy Limited		
Power Finance Corporation Limited	MPPMCL	Tata Power Trading Company Limited		
	WBSEDCL	GMR Energy Limited		

An amalgamation for development of a vibrant Power Market

#### **PXIL** leverages on:

- ✓ Experience of Promoters in running Exchanges
- Experience of State Government entities and
- ✓ The most active Private players in the Country

### **Product Portfolio on Power Exchanges**

	Day Ahead Spot (DAS)	Daily One Auction session Next day Delivery (96 time blocks) Contract unit: 15 min	Double sided Closed
TRADING	Real Time Market (RTM)	Daily 48 Auction Sessions Next half hour delivery Contract unit: 15 min	Auction
ENERGY	Term Ahead Market* (TAM)	Day Ahead Contingency: After DAS (17:00 to 23:00 hours); Delivery in next days 24 hrs  Weekly*: Mon (00;00 hours) to Sun (24:00 hours) Delivery (Operates on Wed &	Continuous Matching /
	Green Term Ahead Market (GTAM)	Thu) Intra-Day: Delivery starts 3 hrs 15 min hence, operates on 24x7 basis Any Day: Operates for a Delivery period of 11 days	Multi form Matching*
CERTIFICATE TRADING	Renewable Energy Certificate (REC)	Tradable certificate for <b>Environmental</b> attributes of <b>RE Generation</b> Validity of REC: <b>1,095 days (i.e. 3 years)</b> Transaction: Last Wednesday of the Month <b>Sellers</b> : RE Generators <b>Buyers</b> : Discoms, Captive Generators, OAC and Voluntary Participants	Double sided
CERTIFICAT	Energy Savings Certificate (ESCert)	Tradable certificate for EE mandates under Energy Conservation Act 2001 Validity of ESCert: <b>Upto next PAT cycle (currently 2<sup>nd</sup> cycle in progress)</b> Transaction: Every Tuesday of the Week or as decided by BEE Buyers and Sellers: Designated consumers identified by BEE	Closed Auction

POWER EXCHANGE INDIA LIMITED www.powerexindia.in

### PAT (Perform Achieve & Trade) – Journey So far...

2001

✓ Energy Conservation Act 2001 notified

2010

- ✓ Amendment in Energy Conservation Act, 2001. Provides legal mandate to PAT
- ✓ Defines 'Energy Savings Certificate', to be issued by Central Govt. to 'Designated Consumers' whose energy consumption is less than prescribed norms

2012

✓ PAT Cycle - I (FY 12-13 to 14-15) notified, along with Targets to be complied by 478 Designated consumers in 8 Industrial sectors

2015

- ✓ MOP Advisory
  - BEE as Administrator, CERC as Regulator and POSOCO as Registry

2016

- ✓ PAT Cycle II notified on March 31,2016
- ✓ CERC issues Regulations for Trading of ESCerts on Power Exchanges
- ✓ Procedure approved by CERC for Trading of ESCerts on Power Exchanges

2017

- ✓ Trading in ESCerts issued under PAT Cycle I
- ✓ Banked ESCerts till completion of compliance of PAT Cycle II

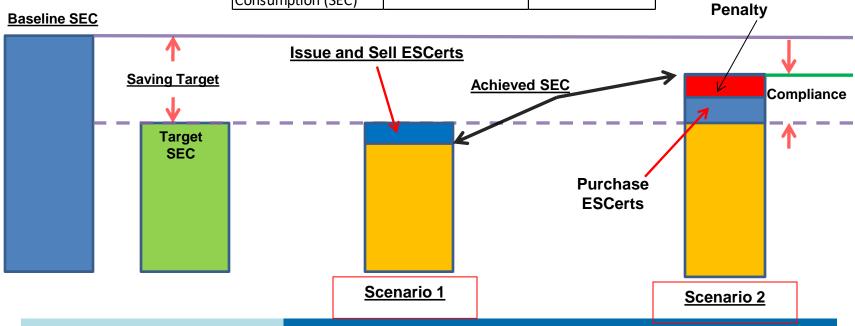
2021

√ Trading in ESCerts under PAT Cycle - II

## **PAT Cycle II overview**

Transaction in ESCerts:

Particulars	PAT Cycle I	PAT Cycle II
Period	FY 12-13 to FY 14-15	FY 16-17 to 18-19
Base line year information	Average of 3 years as per Rule 7 / Rule 8 (FY 07-08 to 09-10)	FY 14-15
Target Specific Energy Consumption (SEC)	FY 14-15	FY 18-19

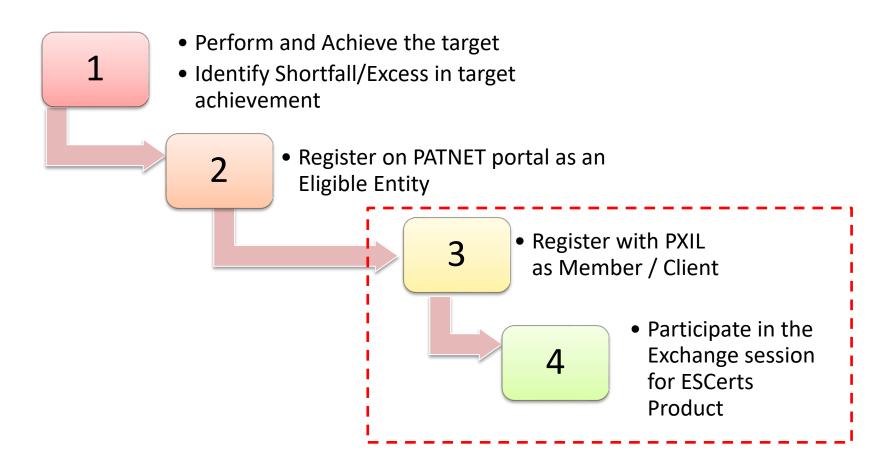


### **Designated Consumers & Targeted Energy Reduction**

Sr. No.	Sector	Existing no. of DCs of PAT cycle I (2012- 2015)	No. of New Dc's included under PAT Cycle II	Total Dc's in PAT II (2016-2019)	PAT cycle III (2017- 2020)	PAT cycle IV (2018- 2021)	PAT cycle V (2019- 2022)
1	Aluminium (ALM)	10	2	12	1		1
2	Cement (CMT)	84	27	111	14	1	12
3	Chlor Alkai (CNA)	21	3	24		2	2
4	DISCOM (DIS)		44	44			
5	Fertilizers (FTZ)	29	8	37			
6	Iron & steel (INS)	62	9	71	29	35	23
7	Petroleum Refinery (REF)		18	18		1	
8	Pulp and Paper (PNP)	25	4	29	1	2	8
9	Rallways (RLY)		22	22			
10	Textile (TXT)	85	14	99	34	7	16
11	Thermal Power Plant (TPP)	132	22	154	37	17	17
12	Commercial Buildings- Hotels (BHT)					37	31
	Petrochemical (PC)					8	
	Grand Total	448	173	621	116	109	110

- ✓ Till date BEE has notified PAT-VI cycle for compliance in FY 2022-23
- ✓ Objective **'Deepen and widen'** the PAT scheme
- ✓ New Sectors in PAT Cycle II Discoms, Railways and Refineries
- ✓ Transaction in ESCerts for PAT Cycle II to commence shortly

### **Steps to transact in ESCERTS**



### **ESCert Contract Specification**

Type of Contracts	Energy Saving Certificate
Matching Methodology	Double Sided Closed Bid Auction
Auction Timings	13:00 hours to 15:00 hours on the day of Auction or as amended by Exchange from time to time
Auction Day (s)	Every Tuesday of the Week or as decided by CERC / BEE
Minimum Bid Volume	1 Certificate
Minimum Volume Quotation Step	1 Certificate (Equivalent to 1 MToE)
Minimum Value Quotation step	Rs. 1 per Certificate
Settlement Price(s)	As per Matching Rules notified by Hon'ble CERC. Uniform Pricing (Intersection of Aggregate Supply and Aggregate Demand curve)
Pay – In	T Day
Pay – Out	T + 1 Day

### **Price discovery**

### **Bidding Window: 13:00 to 15:00 hrs**

Sellers	Price (Rs. / ESCert)	Quantity (no of ESCert)
DC1	100	50
DC4	50	25
DC6	200	50
DC8	75	25
DC10	150	50

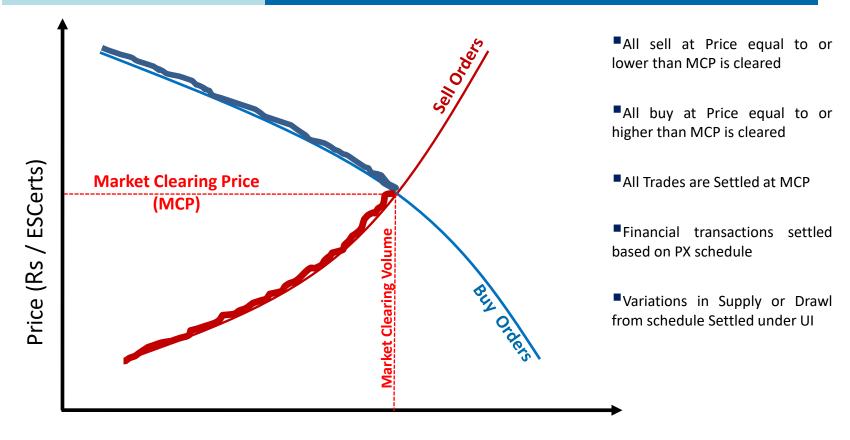
Buyers	Price (Rs. / ESCert)	Quantity (no of ESCert)
DC2	400	50
DC3	250	30
DC5	500	25
DC7	300	20
DC9	200	70
DC11	450	30
DC12	350	15

## Aggregation of Offers & Bids at all price points by Exchange

Price (Rs. / ESCert)	Aggregate Supply (No of ESCerts)
50	25
75	50
100	100
150	150
200	200

Price (Rs. / ESCert)	Aggregate Demand (No of ESCerts)
500	35
450	65
400	115
350	130
300	150
250	180
200	250

### **Price discovery**



Quantity (Aggregate Demand / Supply)

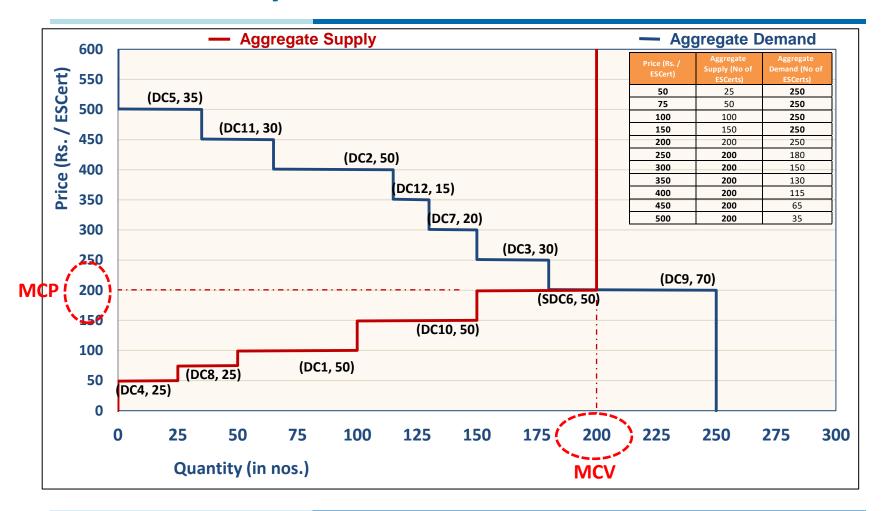
### **Price formation**

Aggregation of Offers & Bids at all price points by Exchange

Price (Rs. / ESCert)	Aggregate Supply (No of ESCerts)
50	25
75	50
100	100
150	150
200	200
	Aggregate
Price (Rs. / ESCert)	Demand (No of ESCerts)
	Demand (No
ESCert)	Demand (No of ESCerts)
ESCert) 500	Demand (No of ESCerts)
500 450	Demand (No of ESCerts) 35 65
500 450 400	Demand (No of ESCerts)  35  65  115
500 450 400 350	Demand (No of ESCerts)  35 65 115 130

Price (Rs. / ESCert)	Aggregate Supply (No of ESCerts)	Aggregate Demand (No of ESCerts)
50	25	250
75	50	250
100	100	250
150	150	250
200	200	250
250	200	180
300	200	150
350	200	130
400	200	115
450	200	65
500	200	35

### **Price discovery**



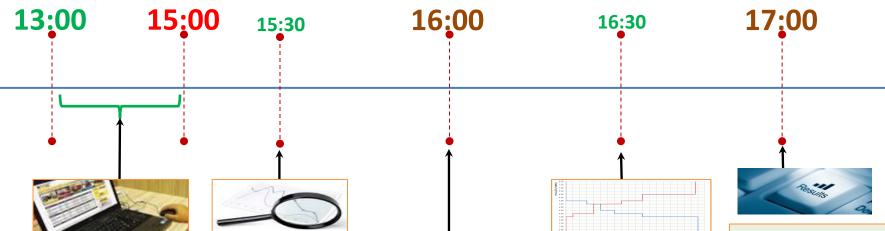
### **Quantity allocation**

#### Eligible Orders for contract determination

Sellers	Price (Rs. / ESCert)	Quantity (no of ESCert)		Aggregate Supply (No of ESCerts)
DC4	50	25		50
DC8	75	25		75
DC1	100	50		100
DC10	150	50		150
DC6	200 <	<b>-50</b> MCP	at Rs. 200	<b>&gt;</b> 200
Buyers	Price (Rs. / ESCert)	Quantity (no of ESCert)		Aggregate Demand (No of ESCerts)
DC9	200 <	MCI	at Rs. 200 -	250
DC9	200 <b>&lt;</b> 250	MCI 30	at Rs. 200 -	250 180
			at Rs. 200 -	~ >
DC3	250	30	at Rs. 200 ~ ·	180
DC3 DC7	250 300	30 20	at Rs. 200 -	180 150
DC3 DC7 DC12	250 300 350	30 20 15	at Rs. 200 ~ ·	180 150 130

- ✓ Cleared quantum (MCV) 200 ESCerts
- All Sellers are cleared
- ✓ Final Buyers: DC3, DC7, DC12, DC2, DC 11 and DC5 full bided quantity (180 ESCerts), DC9 20 ESCerts

# **Operational time line – ESCert Trading**



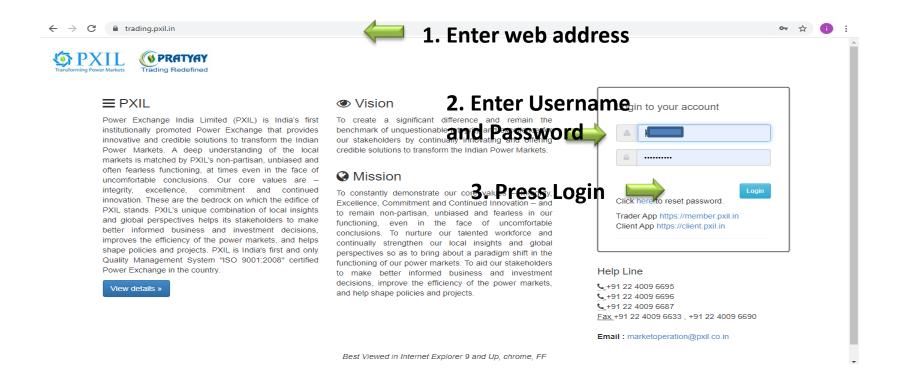
Market
Participant
submit their bids
(Enter, Modify,
Delete, Validate
& Store)

PXIL submits
Buy and Sell
quantum
information to
ESCert
Registry

ESCert Registry to confirm Power Exchange the Buy & Sell quantum with acceptance or rejection against each Eligible Entity

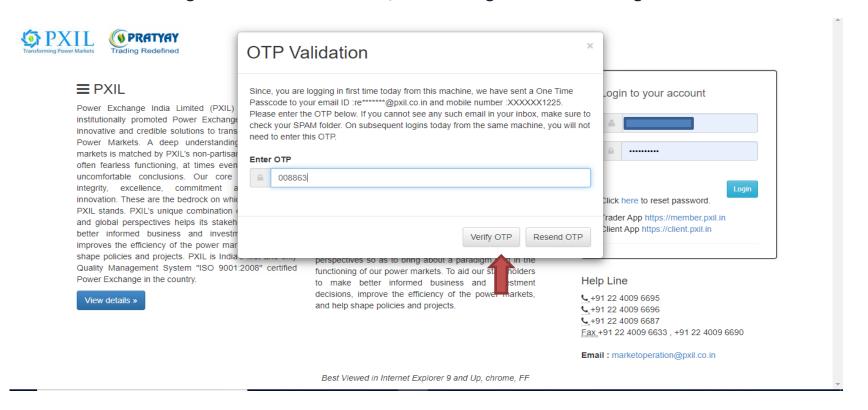
- Match valid Buy& Sell Order
- Compute
   Market Clearing
   Price (MCP) and
   Market Clearing
   Volume (MCV)
- Power Exchange to Declare trade results and submit the final result to the registry for updating accounts.
- Reports to be made available to the market participants

### **ESCerts Snapshot**

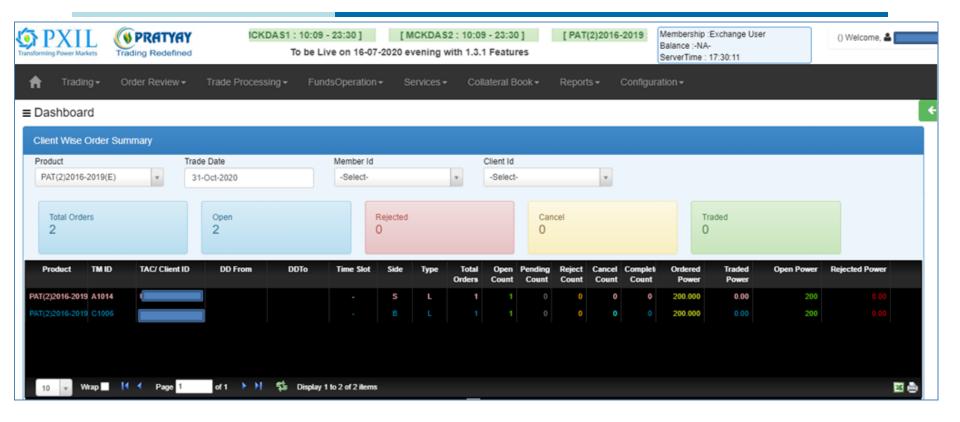


# **Trading Platform Login**

- When member/client logs in for the first time in the day, One Time Passcode will be sent to their email ID and mobile number.
- This will also be generated if the member/client changes their P-Nest logon machine



#### **Landing Page**



- ✓ You can select the filters in order to view the breakup of trades as per product, trade date, member ID and Client ID.
- ✓ This provides the counts of the bids for the filter criteria provided by member and would show breakup as per the status viz; Open, Rejected, cancelled, traded and the total orders.

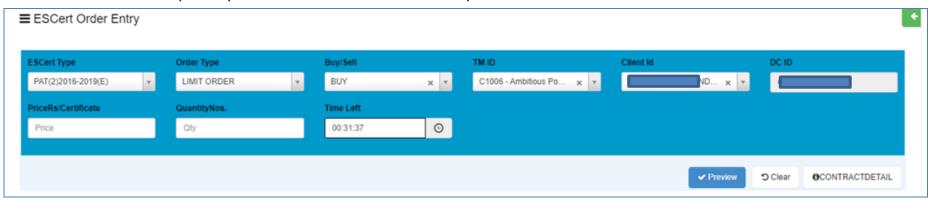
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#### **ESCerts - Single Order Entry**



#### Trading Second Order entry

> The order form will be displayed with the TIME LEFT depicting the time remaining for ESCert trading session. You can place your order before the time expires!!!



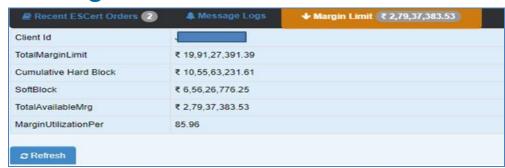
- > TM ID will show the member ID by default
- Client id have to select according to place a bid
- Order Type: By default Limit order
- DC id will show automatically according to client choose

#### **Order Summary**

· Order Summary: Once Bids are entered, they are displayed within this section just below the Order entry screen.



#### **Margin Limit**



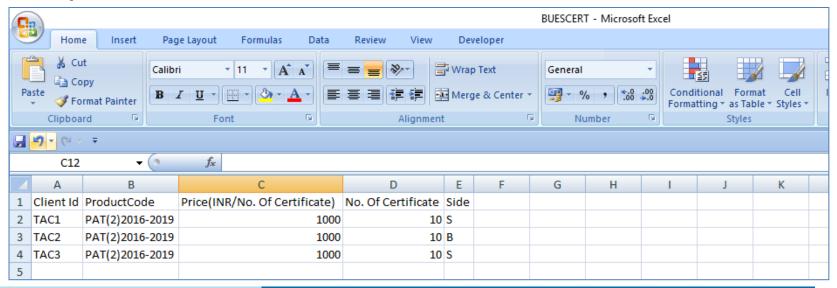
At the Bid Entry screen, CM's ledger can be viewed with respect to its various segments (Soft Block/Hardblock/Available)

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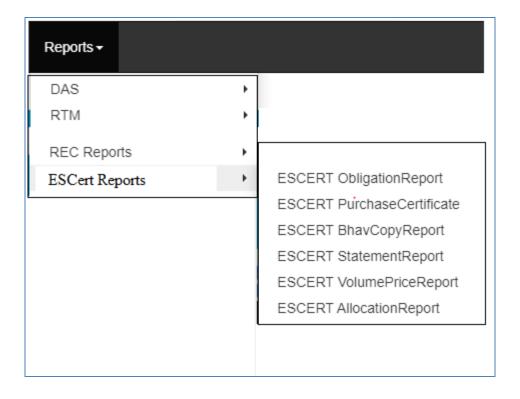
### **ESCerts - Bulk Order file Upload**



#### Template of Bulk order file



### **ESCerts Reports on Exchange**



#### Template of ESCERT Purchase/Sell Certificate issued to successful participant after declaration of session result



#### POWER EXCHANGE INDIA LIMITED

Certificate of Purchase/Sell of Energy Savings Certificate [ESCerts]					
Number C - PX/		Issued On - [DD_MM_YYYY]			
Serial No PXI/					
		[number ] Certificates			
		Session ID			
This certifies that	[ESCerts Buyer/Seller]	is the holder of [number issued]			
non transferable Energy Savings Certificate (s) bought/Sold on day of 2020.					
Power Exchange India Limited.					
This certificate represent	ted hereby is issued and shall be he	eld subject to all the provisions of the			
regulations of Honorable	CERC as amended from time to til	me and the Bye - laws, Rules and			
Business Rules of Pow	er Exchange India Limited.				
Note: - This is a computer	generated statement hence doesn't	require signature.			

### **PXIL Membership**

#### **ESCert can be transacted on PXIL by registering as:**

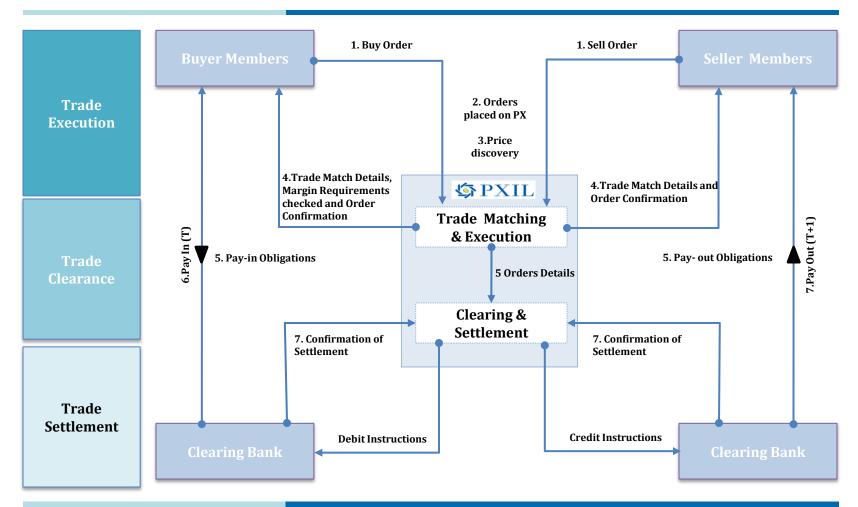
- Directly as a Member
  - ➤ Trading and Self Clearing Member (TSCM):

    Transact and clear obligations for your own

    Orders
- Client of a Member
  - Trading and Clearing Member (TCM): Register as a Client of TCM and submit Orders and Settle obligations through Member
  - Advisory Member (AM): Register as a Client of AM and submit Order through Member and Settle obligations directly with Exchange



### **Clearing and Settlement Mechanism**



### **PXIL Membership**

- □ Existing Members and Client of PXIL either in REC and/or in Electricity segments are eligible to trade in ESCerts segment at no additional cost
  - Existing Members have to submit the **Membership Additional Information Form** to the Exchange
  - Members to submit to the Exchange Client Information Form (Member to Exchange) for their existing clients.
  - Members to submit to the Exchange Client Registration Form (Member to Exchange) for their new clients
- Exclusive Membership in ESCerts segment is also available
- □ Fee Structure
  - Existing Member and / or existing Client in other segments No Fees

# Membership and Fee deposit structure

	All Segment (Physical, REC & ESCERTS) (In Rs.)				
SI No	Fees Structure	ТСМ	TSCM	AM	Clients
1	Processing Fees	5,000	5,000	5,000	-
2	One Time Fees	10,00,000	10,00,000	2,50,000	-
3	Annual Fees	2,50,000	2,50,000	1,00,000	1,00,000
4	IFSD	40,00,000	25,00,000	-	-
5	Total Amount (1+2+3+4)	52,55,000	37,55,000	3,55,000	1,00,000
6	Goods and Service tax* @ 18 %	2,25,900	2,25,900	63,900	18,000
7	Total Fees (5+6)	54,80,900	39,80,900	4,18,900	1,18,000

# Membership and Fee deposit structure

	Green Segment (REC, Green Physical / G-TAM & ESCERTS) (in Rs.)					
Sr No	Fees Structure	ТСМ	TSCM	AM	Clients  1. Applicable to REC, GTAM Sellers 2. ESCert Buyers & Sellers	
1	Processing Fees	5,000	5,000	5,000	-	
2	One Time Fees	6,50,000	6,50,000	2,50,000	-	
3	Annual Fees	1,00,000	1,00,000	50,000	20,000	
4	IFSD	2,00,000	2,00,000	-	-	
5	Total Amount (1+2+3+4)	9,55,000	9,55,000	3,05,000	20,000	
6	Goods and Service tax* @ 18 %	1,35,900	1,35,900	54,900	3,600	
7	Total Fees (5+6)	10,90,900	10,90,900	3,59,900	23,600	

# **Membership Fee structure**

	ESCERTS Only Segment (in Rs.)				
Sr No	Fees Structure	TCM	TSCM	AM	Clients
1	Processing Fees	5,000	5,000	5,000	-
2	One Time Fees	5,00,000	5,00,000	2,00,000	-
3	Annual Fees	80,000	80,000	45,000	20,000
4	IFSD	2,00,000	2,00,000	-	-
5	Total Amount (1+2+3+4)	7,85,000	7,85,000	2,50,000	20,000
6	Goods and Service tax* @ 18 %	1,05,300	1,05,300	45,000	3,600
7	Total Fees (5+6)	8,90,300	8,90,300	2,95,000	23,600

The Membership and Fee deposit structure for participating in ESCert Product is provided in PXIL Circular No PXIL/MEM/2020-2021/333 dated 25.05.2021

Membership contact details: marketoperation@pxil.co.in / pxi\_mktops@pxil.co.in

#### Disclaimer:

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## THANK YOU



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