

# ESCerts Trading under PAT Scheme



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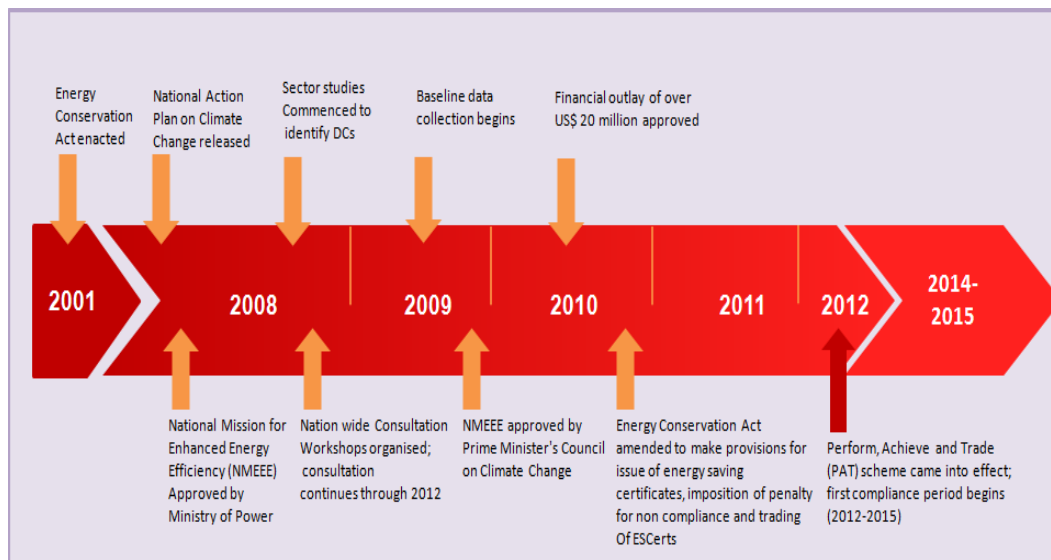
**BUREAU OF ENERGY EFFICIENCY**

(A Statutory body under Ministry of Power, Government of India)

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## EVOLUTION OF PERFORM ACHIEVE & TRADE (PAT)



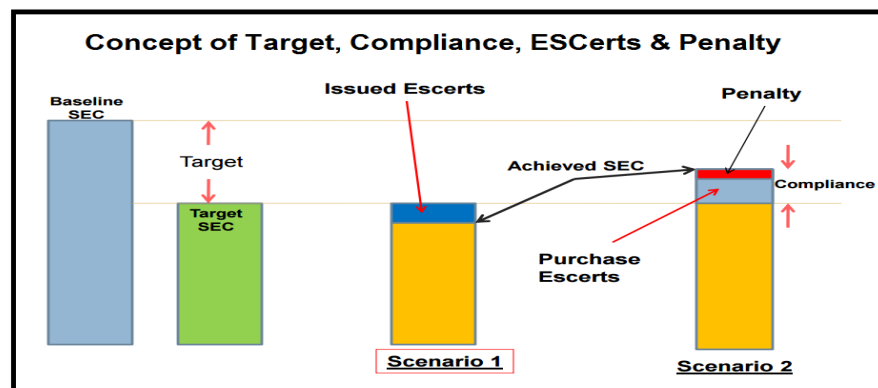


## INTRODUCTION TO PAT SCHEME

- ✓ MoP prescribed Energy Consumption Norms and Standards vide S. O. number 687(E) dated 30<sup>th</sup> March, 2012 under the Energy Conservation Rules 2012 (common parlance being PAT Rules) notified vide G.S.R. number 269 (E) dated 30<sup>th</sup> March 2012.
- ✓ The EC Act was amended on 24<sup>th</sup> August 2010 to give powers to the Central Government to issue Energy Savings Certificates (ESCerts) u/s 14A while also giving powers u/s 14 B to specify the value of energy.
- ✓ PAT Cycle I covers 478 Designated Consumers (DC) of eight energy intensive sectors :
  - Aluminum, Cement, Chlor-alkali, Fertilizer, Iron and Steel, Pulp and Paper, Textile and Thermal power plant
  - Targeted reduction in the average energy consumption by 2014-15:- **4.05%**
  - Annual energy saving of about **6.686 million tonnes of oil equivalent (mtoe)**
  - Annual reduction of carbon dioxide emission is about **23 million tonnes**



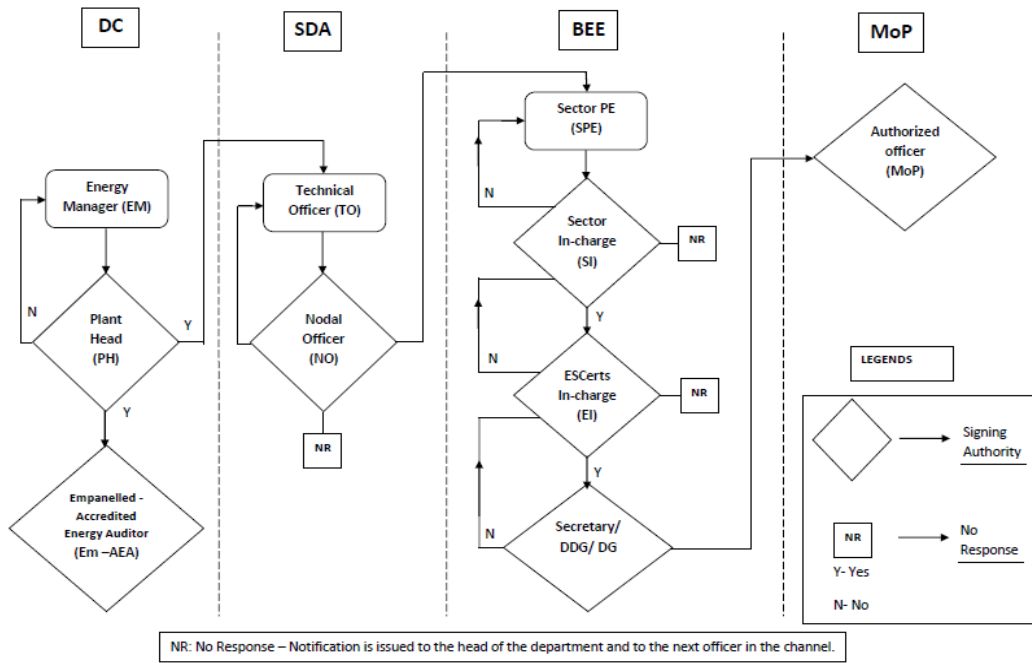
## INTRODUCTION TO PAT SCHEME...Cont.



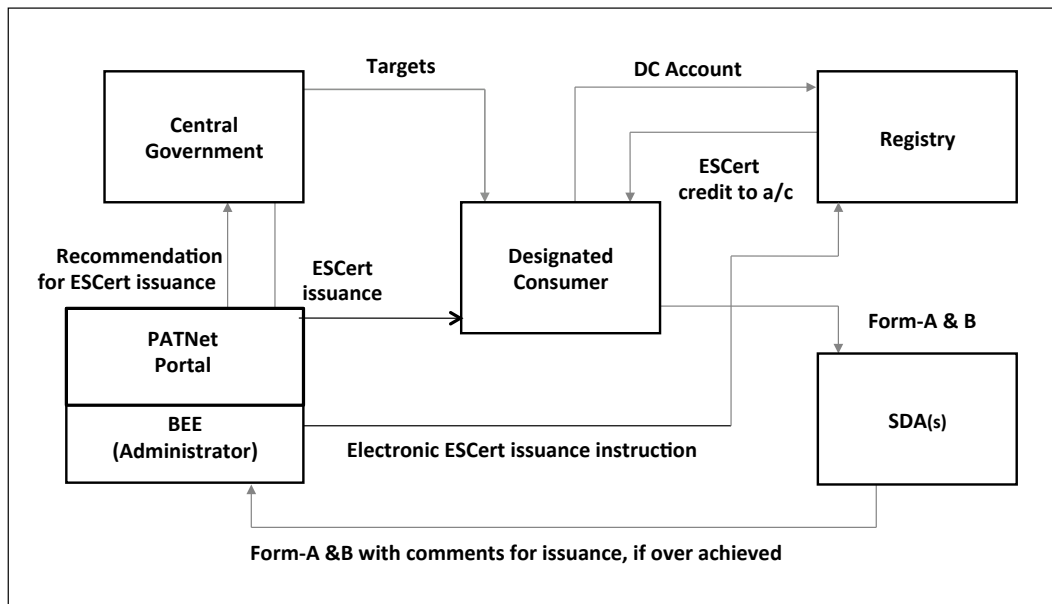
- ✓ Quantified energy savings are converted into Energy Saving Certificates (ESCerts).
- ✓ When a designated consumer achieve and surpass the target, the ESCerts are to be issued by Central Government and the same can be sell to the designated consumer who fails to achieve their targets to comply the energy consumption norms and standards.



## PROCESS FLOW FOR ISSUANCE OF ESCerts



## PROCESS FLOW FOR ISSUANCE OF ESCerts Cont...





## ESCert CERTIFICATE NUMBER - FORMAT

<b>CYCLE</b>	-	<b>DC Registration Number</b>	-	<b>S No.</b>	-	<b>Issued –Date [DDMMYY]</b>
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<b>C1</b>	-	<b>TPP0000MH</b>	-	<b>0000001</b>	-	<b>171015</b>
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**C1-TPP0000MH-00000001-171015**



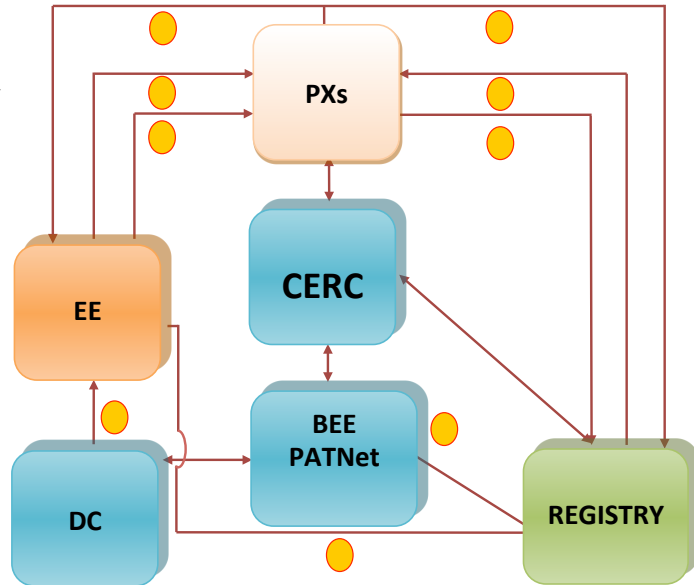
## Progress So Far

- **Finalization of Roles and Responsibilities of Entities Involved**
- **Finalization of ESCerts Exchange Regulations**
- **Up-gradation of PATNet Portal** including M & V process, ESCerts Issuance, Check Verification Process, Trading, Compliance Process, Banked ESCerts. **[MoP authorized official for online issuance]**
- **Determination of value of one ESCert**
- **Manual on Penalty & Adjudication Process**
- **Formulation of Business Procedures for ESCerts Exchange on Power Exchanges**



## ENTITIES INVOLVED IN ESCerts TRADING MECHANISM

- ✓ Bureau of Energy Efficiency (BEE)
- ✓ Central Electricity Regulatory Commission (CERC)
- ✓ Registry (POSOCO)
- ✓ Power Exchanges (PXs)
- ✓ Eligible Entity (EE) [Designated Consumers (DC)]



## ENTITIES INVOLVED IN ESCerts TRADING MECHANISM

### COMMISSION:

- ✓ CERC would be the Market Regulator for development of ESCert Market.
- ✓ Central Electricity Regulatory Commission (CERC) defines the regulatory framework for trading of Energy Savings Certificate on Power Exchanges to facilitate the trading component of PAT scheme under NMEEE.
- ✓ MoP agreed to issue the advisory to CERC to frame Regulations and issue necessary Orders / Guidelines.

### POWER EXCHANGE:

- ✓ Power Exchange means the power exchange as defined in Power Market Regulations of the Commission.



## ESCerts TRADE/EXCHANGE REGULATIONS

### **OBJECTIVE:**

- ✓ To define a framework for trading of Energy Savings Certificate on Power Exchanges to facilitate the trading component of Perform, Achieve and Trade (PAT) scheme under NMEEE.
  
- ✓ The Regulation covered the definitions, functions of the Commissions & the Bureau, Category of Certificates, dealing of ESCerts, pricing of Certificate, fees and charges, market oversight, power to Relax.



## ESCerts EXCHANGE REGULATIONS - DEFINITIONS

- ✓ **EXCHANGE OR TRADE OF ESCerts:** Sell or purchase of ESCerts under the Perform, Achieve and Trade (PAT) scheme on Power Exchanges, Including the delivery of ESCerts.
- ✓ **ELIGIBLE ENTITY:** Any Designated Consumer registered with Registry who has been issued or deemed to have been issued ESCerts and desire to sell or purchase ESCerts for compliance with the energy consumption norms and standards under clause (g) of section 14 of the EC Act.
- ✓ **POWER EXCHANGE:** Means the power exchange as defined in Power Market Regulations of the Commission.
- ✓ **POWER MARKET REGULATIONS:** Power Market Regulations means the Central Electricity Regulatory Commission (Power Market) Regulations, 2010 and as amended from time to time.
- ✓ **REGISTRY:** Registry means POSOCO or any other agency appointed by the Commission for management of exchange of ESCerts.



## ROLE OF REGISTRY

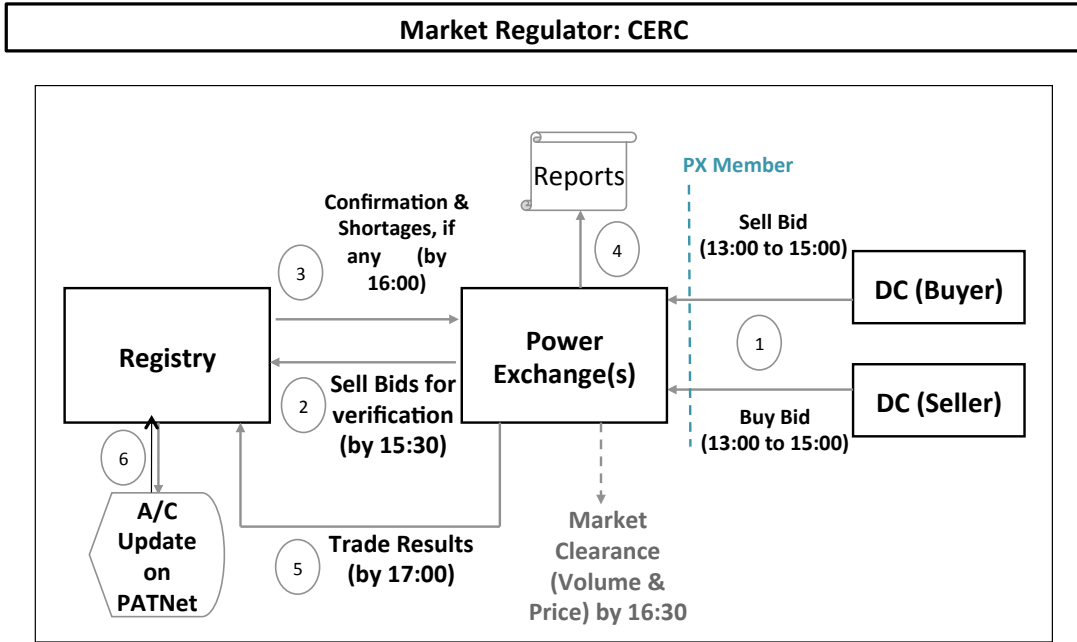
- ✓ Assist in registrations process of ESCerts including crediting of ESCerts to DCs.
- ✓ The agency may collect fees and charges, approved by the commission in consultation with Bureau for the purpose of meeting the cost and expense towards the management of Registry and software platform.
- ✓ Management of ESCerts trading/ exchange.
- ✓ Coordination and information dissemination with DCs, Power Exchanges, BEE and Commission.
- ✓ Assist in development of IT platform along with guidance on hardware infrastructure for maintaining database of ESCerts and records of trading of ESCerts.



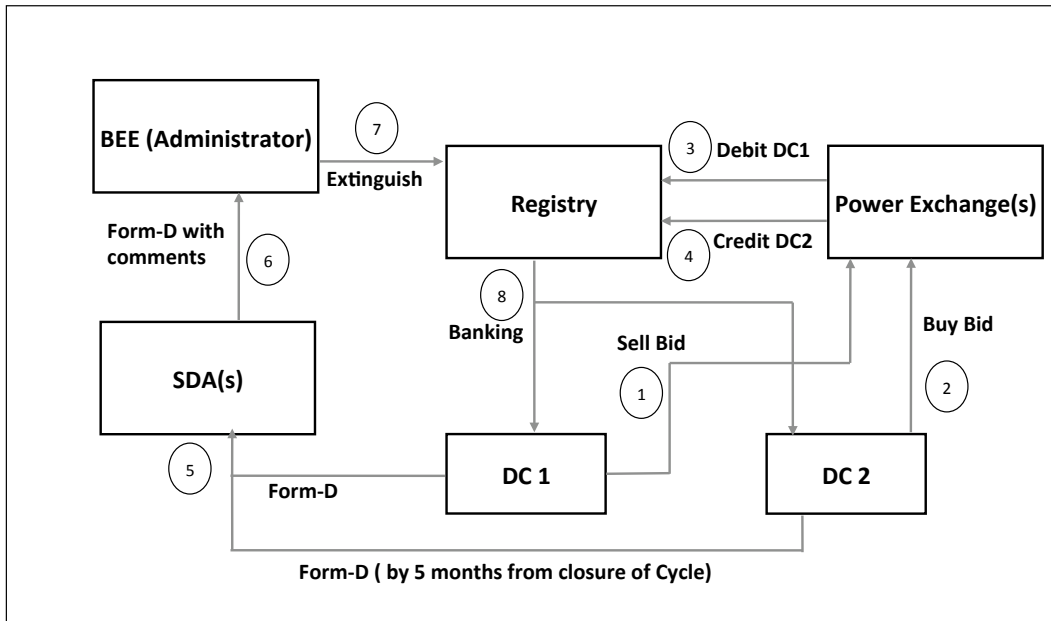
## DEALING IN ENERGY SAVINGS CERTIFICATE (ESCerts)

- ✓ Exchange of ESCerts shall be in accordance with the rules and bye laws of respective Power Exchanges.
- ✓ The frequency of exchange of ESCerts shall be on monthly basis or in such periodicity as per the Commission.
- ✓ All eligible entities who intend to participate in the exchange of ESCerts shall register themselves with the Power Exchange.
- ✓ Eligibility Entity can exchange the ESCerts either directly on a Power Exchange or through a Member of a Power Exchange.
- ✓ In any trading session, an eligible entity shall not place sale bids in excess of total ESCerts held in its Registry Account. In case of breach, such eligible entities shall be treated as defaulter and any bid submitted by such eligible entity shall not be considered by the Power Exchange for the purpose of price discovery.

## PROCESS FLOW FOR ESCerts TRADING



## PROCESS FLOW FOR EXTINGUISHING ESCerts





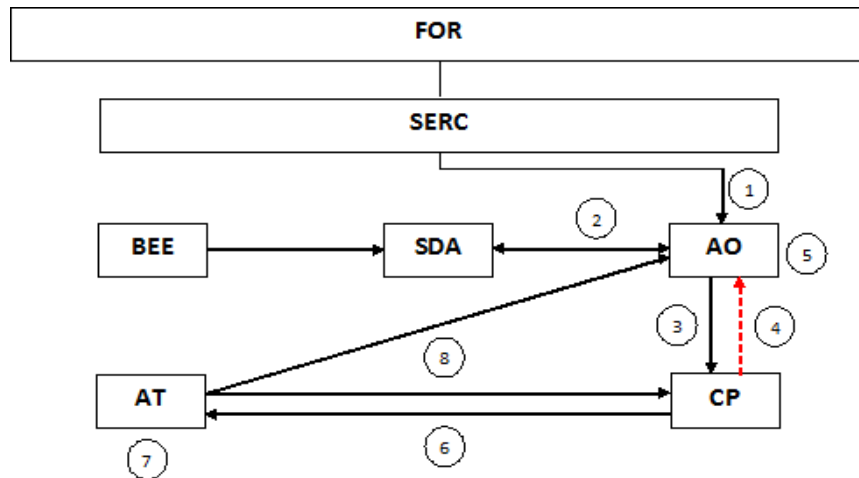


## ESCerts TRANSFER OWNERSHIP

ALM0000MH		CYCLE I				CYCLE II	
S. No	ESCerts Issued	Trading Session I		Trading Session II		Trading Session I	Trading Session II
1	C1- ALM0000MH-0000001-1710 15	TPP0057TN	IX				
2	C1- ALM0000MH-0000002-1170 15	TPP0057TN	IX				
3	C1- ALM0000MH-0000003-1710 15	TPP0001MH	PX				
4	C1- ALM0000MH-0000004-1710 15						
5	C1- ALM0000MH-0000005-1710 15			TXT0001RJ	PX		



## ADJUDICATION PROCESS FLOW



**ENTITIES INVOLVED:**

**FOR** : Forum of Regulators;  
**AO** : Adjudicating Officer  
**BEE** : Bureau of Energy Efficiency  
**CP** : Concerned Person

**SERC** : State Electricity Regulatory Commission  
**SDA** : State Designated Agency  
**AT** : Appellate Tribunal



## DC DASHBOARD ON PATNet PORTAL

M & V STATUS		ESCerts ISSUANCE		CHECK VERIFICATION		TRADING		COMPLIANCE		ESCerts BANKED	
DC Registration Number	DC Name	PAT Cycle	FORM 1			FORM A	FORM B				
			FIRST YEAR	SECOND YEAR	THIRD YEAR						
PNP0000PB	XYZ	Cycle I	<a href="#">SUBMIT/VIEW</a>	<a href="#">SUBMIT/VIEW</a>	<a href="#">SUBMIT/VIEW</a>	<a href="#">SUBMIT/VIEW</a>	<a href="#">VIEW</a>				
		Cycle II	<a href="#">SUBMIT/VIEW</a>	<a href="#">SUBMIT/VIEW</a>	<a href="#">SUBMIT/VIEW</a>	<a href="#">SUBMIT/VIEW</a>	<a href="#">VIEW</a>				



## DC DASHBOARD ON PATNet PORTAL

M & V STATUS		ESCerts ISSUANCE		CHECK VERIFICATION		TRADING		COMPLIANCE		ESCerts BANKED	
DC Registration Number	DC Name	PAT Cycle	No. of ESCerts (Claimed)		No. of ESCerts (Approved by MoP)		Register to become Eligible Entity				
			I	P	I	P					
PNP0000PB	XYZ	Cycle I	1000		1000		<a href="#">REGISTER</a>				
		Cycle II		-300		-300	<a href="#">REGISTER</a>				



## DC DASHBOARD ON PATNet PORTAL

M & V STATUS		ESCerts ISSUANCE	CHECK VERIFICATION	TRADING	COMPLIANCE	ESCerts BANKED				
DC Registration Number	DC Name	PAT Cycle	Trading Date	Session Id	Opening Balance [No. of ESCerts]		Trading		Closing Balance [No. of ESCerts]	
					Sell	Purchase	IEX	PXIL	Sell	Purchase
PNP0000PB	XYZ	Cycle I [2012-15]	8-NOV-15	IA	1000	-	-100		900	
			15-NOV-15	IB	900			-100	800	
			21-NOV-15	IC						
			08-SEPT-19	ID	800	-				
			15-SEPT-19	IE	800			-100	700	
			21-SEPT-19	IF	700		-200		500	
		Cycle II [2016-19]	08-SEPT-19	ID	-	0	+200			200
			15-SEPT-19	IE						
			21-SEPT-19	IF						



## DC DASHBOARD ON PATNet PORTAL

M & V STATUS		ESCerts ISSUANCE	CHECK VERIFICATION	TRADING	COMPLIANCE	ESCerts BANKED		
DC Registration Number	DC Name	PAT Cycle	FORM D	Closing Balance [No. of ESCerts] [Current Cycle]	Closing Balance [No. of ESCerts] [Previous Cycle]	ESCerts Submitted for Compliance	Balance ESCerts [After Compliance]	Penalty [No. of ESCerts]
PNP0000PB	XYZ	Cycle I	<a href="#">SUBMIT/VIEW</a>	800	0	0	800	0
		Cycle II	<a href="#">SUBMIT/VIEW</a>	200	500	200	200	100





## Registry Dashboard ON PATNet PORTAL

PAT CYCLE					
CYCLE I		CYCLE II		CYCLE III	CYCLE IV
ELIGIBLE ENTITY REGISTRATION	ORDER MATCHING	CROSS – CHECK REPORT	CONFIRMATION REPORT	KYE	

CYCLE I							
S. No	Eligible Entity	Trading Session I		Trading Session II		Trading Session III	
		IEX	PXIL	IEX	PXIL	IEX	PXIL
1	ALM0001MH	2000					
2	ALM0003MH	3500					
3	CMT0045UP	2500					
4	CAL0001MH	4000					
5	PNP0001MH	5000					
6	INS0001MH	2000					
7	FTZ0001MH	3500					
8	FTZ0023MP	7000					
9	TPP0003MP	4000					
10	TPP0054RJ	5000					



## Registry Dashboard ON PATNet PORTAL

PAT CYCLE					
CYCLE I		CYCLE II		CYCLE III	CYCLE IV
ELIGIBLE ENTITY REGISTRATION	ORDER MATCHING	CROSS – CHECK REPORT	CONFIRMATION REPORT	KYE	

CYCLE I							
S. No	Eligible Entity	Trading Session I		Trading Session II		Trading Session III	
		IEX	PXIL	IEX	PXIL	IEX	PXIL
1	ALM0001MH		CONFIRM				
2	ALM0003MH		CONFIRM				
3	CMT0045UP		CONFIRM				
4	CAL0001MH		CONFIRM				
5	PNP0001MH		CONFIRM				
6	INS0001MH		CONFIRM				
7	FTZ0001MH		CONFIRM				
8	FTZ0023MP		CONFIRM				
9	TPP0003MP		DEFAULT				
10	TPP0054RJ		CONFIRM				





## Registry Dashboard ON PATNet PORTAL

PAT CYCLE					
CYCLE I		CYCLE II		CYCLE III	CYCLE IV
ELIGIBLE ENTITY REGISTRATION	ORDER MATCHING	CROSS – CHECK REPORT	CONFIRMATION REPORT	KYE	
				CYCLE I	CYCLE II

KYE		ALM0001MH					
		CYCLE I			CYCLE II		
S. No	ESCerts Issued	Trading Session I	Trading Session II	Trading Session III	Trading Session I	Trading Session II	Trading Session III
1	CI-ALM0001MH-000001-1015	TPP0057TN	IX				
2	CI-ALM0001MH-000002-1015		IX				
3	CI-ALM0001MH-000003-1015		IX				
4	CI-ALM0001MH-000004-1015		IX				
5	CI-ALM0001MH-000005-1015		PX				
6	CI-ALM0001MH-000006-1015		PX				
7	CI-ALM0001MH-000007-1015		PX				
8	CI-ALM0001MH-000008-1015		PX				
9	CI-ALM0001MH-000009-1015		PX				
10	CI-ALM0001MH-000010-1015		PX				



तेन (समस्त ऊर्जा को) त्यक्तेन (त्याग के साथ) मुंजीथ: ( उपयोग करे )  
-----ईशावास्योपनिषद

# THANK YOU

## BUREAU OF ENERGY EFFICIENCY

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