

# FREQUENTLY ASKED QUESTIONS ON PAT SCHEME



### **Q.1 What is PAT scheme?**

**Ans.** PAT is a regulatory instrument to reduce specific energy consumption in energy intensive industries, with an associated market-based mechanism to enhance the cost effectiveness through certification of excess energy saving which can be traded. It is an indigenously developed programme to enhance the cost effectiveness of improvements in energy efficiency in energy intensive large industries listed in schedule of EC Act 2001. The energy savings is translated into tradable instruments called Energy Savings Certificates (ESCerts). Those industries which over achieve their targets are issued energy saving certificates and those who under achieve are entitled to purchase such certificates for compliance. The platform for trading is the existing power exchanges under the regulation of Central Electricity Regulatory Commission (CERC).

### **Q.2 Who can participate in the PAT scheme?**

**Ans.** Bureau of Energy Efficiency has notified threshold limits of energy consumption for all the sectors covered under the PAT scheme. Thus, any industry where annual energy consumption crosses the threshold limit is eligible for participating under the PAT scheme.

### **Q.3 What is a PAT cycle?**

**Ans.** PAT cycle means a period of three years available with a Designated Consumer or (DC) to comply with the energy consumption norms and standards.

### **Q.4 What do you understand by a rolling cycle?**

**Ans.** Rolling cycle means that new Designated Consumers and / or new sectors would be included every year under the PAT scheme. Every year new PAT cycle will be notified with inclusion of DCs from existing sectors and new sectors.

### **Q.5 Which are the various timelines that needs to be adhered by DCs for submission of forms and reports to the SDA?**

**Ans.** The DC needs to submit the following forms and reports to the SDAs during the period of their notification as a DC:

- Action Plan within three months of notification as a DC.
- Form 1 within three months of notification as a DC and after that yearly submission (within 3 months of completion of the financial year) till the completion of the cycle.
- Mandatory Energy Audit report along with Form 2 – within 18 months of notification as a DC.
- Form 3 every year within 3 months of completion of financial year.
- Performance Assessment Documents at the time of Monitoring & Verification consisting of Form–A, Form –B (certificate of verification duly signed by accredited energy auditor).
- Form –C - in case the DC has undergone check-verification.
- Form–D- compliance form to be at the end of every cycle (1 month after completion of trading).

**Q.6 Will the DCs get benefit of unforeseen circumstances that had not been mentioned in the baseline year? What is the process for the same?**

**Ans.** For any unforeseen circumstances if DC provide documentary evidence then it will be taken into account during the normalization process. Normalization is the process of rationalization of energy and production data of Designated Consumer taking into account the impact of quantifiable external variables that are beyond the control of a designated consumer.

**Q.7 What do you mean by MEA and when is it required to be carried out?**

**Ans.** Mandatory Energy Audit or MEA is a compulsory energy audit that has to be conducted by every Designated Consumer in their plant premises within 18 months from the date the DC has been notified. Thereafter, MEA has to be carried out every three years.

**Q.8 Will the DC get benefit under PAT scheme if it has installed solar plant outside the boundary of the plant?**

**Ans.** As per current provisions under the EC Act, there is no provision of benefits if the solar plant is outside the boundary of the plant and its supply gets interacted with the grid.

**Q.9 How many Energy Managers can be employed by a DC?**

**Ans.** As per EC Act, 2001, designated consumer has to designate or appoint energy manager in charge of activities for efficient use of energy and its conservation. The DC may employ either one or more Energy Manager in their plant, but they have to designate at least one of them as in charge of activities for efficient use of energy and its conservation.

**Q.10 What are the penalty provisions and mechanisms for non-complying Dcs?**

**Ans.** The penalty provisions and the Adjudication process is already included for non-complying DCs in the EC Act. Draft enforcement manual of the same has already been prepared and circulated to all SDAs and SERCs wherein all clauses covered under the EC Act and Rules have been covered in one document. As per the EC Act 2001, the power of applying penalty to the non-complying DCs is vested by the State Designated Agencies (SDAs).

**Q.11 Who is the adjudicating officer?**

**Ans.** An adjudication officer is required to be appointed by the SERC among one of its members. Wherever the state commission has not been appointed, the state government is required to appoint an adjudication officer.

**Q.12 What is the criterion of calculation of the number of ESCerts?**

**Ans.** The Central Government, on the receipt of recommendation from the Bureau under rule 10 of PAT Rules, shall on satisfying itself in this regard, issue energy savings certificates of required value to the concerned designated consumer. The energy savings certificate shall be issued in electronic form. The value of one energy savings certificates shall be equal to one metric ton of oil equivalent of energy consumed.

The exact number of energy savings certificates to be issued to the designated consumer and the entitlement for such energy savings certificates after determining by the following formula:

- i For thermal power plant sector:  
Number of energy savings certificates =  
(Heat rate notified for the target year – Heat rate as achieved in the target year) ×  
Production in the baseline year in million kWh/10).
- ii For other sectors:  
Number of energy savings certificates =  
(Specific energy consumption notified for the target year – Specific energy  
consumption as achieved in the target year) × Production in the baseline year.

**Q.13 Can a DC transfer ESCerts to its sister concern?**

**Ans.** As per current provisions under PAT Rules, bilateral trading is not permitted. All trading will be done through the power exchanges which are the common platform.

**Q.14 Can the DCs bank their ESCerts in PAT Cycle-I and sell them in PAT Cycle-II?**

**Ans.** Yes. However, ESCerts once sold cannot be resold.

**Q.15 What will happen to the unsold ESCerts?**

**Ans.** The unsold ESCerts of a DC will get banked only up-to its next cycle.

**Q.16 Can the banked ESCerts of a DC be used for itself?**

**Ans.** Yes, the DCs can use the banked ESCerts for compliance purpose of themselves.

**Q.17 What is the life span of ESCerts that have been bought by the Dcs?**

**Ans.** It is till the next compliance period that is till the submission of Form-D in the immediate next cycle.

**Q.18 What is Monitoring & Verification? Who will conduct the Monitoring & Verification (M&V)?**

**Ans.** Monitoring & Verification or M&V is carried out after completion of a PAT cycle in order to assess the energy savings done by DC. The M&V would be done by the Accredited Energy Auditors empaneled by BEE.

**Q.19 Who is an empaneled accredited energy auditor (EmAEA)?**

**Ans.** EmAEA are accredited energy auditors that have been empaneled by BEE and who can conduct M&V audit of DCs under PAT scheme.

**Q.20 What is the role of SDA before notification of PAT cycle?**

**Ans.** The SDA may assist BEE in identification of probable DCs who could be included under PAT and assigned mandatory SEC reduction targets. The SDAs must also pursue with such plants for conducting baseline verification audit for fixing targets of the probable DCs and meet other statutory requirement under Rules and Regulations framed under ECAct.

**Q.21 What is the role of SDA immediately after notification of PAT targets?**

**Ans.** The SDA after notification of PAT targets by the Central Government should communicate with their state DCs about the same. Subsequently, the SDA should also apprise their state DCs about the Action Plan, Form-1 and other submissions as per Rules/Act.

**Q.22 What is the role of SDA during M&V?**

**Ans.** The SDA must make sure that all the DCs in their respective states has engaged and EmAEA for conducting M&V. After the M&V has been completed, the SDA must also make sure that the DC submits all the required forms and reports to the SDA with a copy to BEE. After receiving the reports, the SDA needs to scrutinize all the reports and also send their recommendations to BEE.

**Q.23 What is the obligation of DCs before and after notification of PAT cycle?**

**Ans.** Before notification, felicitate the empanelled agencies of BEE for conducting baseline verification audit and submit necessary documents to complete the verification process. After notification, the DC has to submit Action Plan and Form -1 within three months of its notification as a DC. Subsequently, the DC has to undergo Mandatory Energy Audit with 18 months of notification as a DC and submit the MEA report along with Form -2 to the SDA with a copy to BEE. In addition to this, the DC has to submit Form-3 (every year) which will include the measure undertaken by the DC within one year. The DC upon completion of the PAT cycle will engage an EmAEA for conducting Monitoring and Verification Audit. The DC will submit the PADs which includes Form A, Form B and the audit report to SDA with a copy to BEE within 4 months of the completion of the cycle. After issuance and trading of ESCerts, every DC will submit the Form –D i.e. compliance report within one month of the completion of trading.

**Q.24 How many PAT cycles already rolled out? How many of the DCs- Sector Wise are included?**

**Ans.** Presently, four cycles of PAT have already been notified, out of which the first cycle starting from April 2012 was completed on 31st March 2015. After the successful completion of PAT Cycle-I, the second cycle of PAT was notified in April 2016. Further, upon recommendations of various committees on climate change, PAT is being implemented on a rolling cycle basis i.e. notification of new DCs/sectors every year. Therefore, the third cycle of PAT was notified in March, 2017 followed by the notification of the fourth cycle of PAT in March, 2018.

The number of DCs sector wise under PAT cycle –II, III and IV is given in the following table:

S. No	Sectors	Dcs in PAT Cycle II (2016-19)	Dcs in PAT Cycle III (2017-20)	Dcs in PAT Cycle IV(2018-21)
1	Aluminum	12	1	0
2	Cement	111	14	1
3	Chlor-Alkali	24	0	2
4	Fertilizer	37	0	0
5	Iron and Steel	71	29	35
6	Pulp and Paper	29	1	2
7	Textile	99	34	7
8	Thermal Power	154	37	17
9	Railways	22	0	0
10	Refineries	18	0	0
11	DISCOMs	44	0	0
12	Buildings	-	-	37
13	Petrochemical	-	-	8
	<b>Total</b>	<b>621</b>	<b>116</b>	<b>109</b>

**Q.25 Which are the probable new sector to be included in the next PAT cycle?**

**Ans.** The possible sectors that could be included in the subsequent PAT cycles are Sugar, Mining, chemicals, Ceramics, glass and Non-Ferrous. BEE is undertaking a feasibility study for inclusion of the above sectors under PAT.

**Q.26 What are the brief outcomes of PAT Cycle I and PAT Cycle II?**

**Ans. Outcomes of PAT cycle –I:**

The implementation of PAT cycle –I in large industries has led to energy saving of 8.67 MTOE by year 2014-15 which is about 1.25% of total primary energy supply to the country. This energy saving also translates in to avoiding of about 31 million tonne of CO<sub>2</sub> emission. Also, the reported investment figure from the DCs of PAT cycle - I is approx. Rs. 26100 crores and savings of about Rs. 9500 crores from saved energy consumption.

The energy savings of the DCs of PAT Cycle-I have been converted to tradable instruments called Energy Saving Certificates (ESCerts) and also have been traded at the power exchanges. The trading that took place at the power exchange has resulted into a total traded volume of about 12.98 lakh ESCerts and a business of about INR 100 crores.

**Outcomes of PAT cycle –II:**

PAT cycle –II seeks to achieve an overall energy consumption reduction of 8.869 MTOE for which energy reduction targets have been assigned to DCs. PAT cycle –II will complete on 31<sup>st</sup> March 2019 after which the verification of energy savings will be calculated. It is expected that energy savings of PAT cycle –II will translate in to avoiding of about 30 million tonnes of CO<sub>2</sub>. Also, the expected investment on energy efficient project and technologies, under PAT cycle-II is around Rs. 30,000 crores.