

## PAT Scheme

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PAT is a cyclic scheme where certain notified energy intensive units having threshold energy consumption are given Specific Energy Consumption (SEC) reduction targets over a cycle of three years. PAT Scheme or the Perform, Achieve and Trade Scheme was launched by the Bureau of Energy Efficiency (BEE) in July 2012.

- The chief goal of the scheme is to make India's industrial sector energy efficient.
- The scheme sets energy efficiency targets for industries with those failing to achieve the targets having to pay a penalty. The penalty is based on what remains to be achieved in terms of the target.
- PAT scheme is a part of the BEE's [National Mission for Enhanced Energy Efficiency \(NMEEE\)](#).

#### About BEE:

- Set up on 1st March 2002 by Government of India.
- Under the provision of the Energy Conservation Act, 2001.
- It is a **statutory** body under the Ministry of Power.
- Mission – To assist in developing policies and strategies with a thrust on self-regulation and market principles with the primary objective of reducing the energy intensity of the Indian economy within the overall framework of the Energy Conservation Act, 2001.
- This can be achieved with the active participation of all stakeholders, resulting in accelerated and sustained adoption of energy efficiency in all sectors.

#### How the PAT Scheme Works?

Under the scheme, Designated Consumers (DCs) are given specific energy saving targets for a three-year cycle.

- The targets are given according to the current energy efficiency levels of the DCs in such a manner that energy efficient DCs are given lower targets while DCs that are not energy efficient are given higher targets.
- While calculating the specific energy consumption a “gate-to-gate” approach is adopted, thereby including all energy consumption against the total production.
- The values are normalised to take into account factors beyond the DC's control.
- At the end of the cycle, the DC's performance is assessed by a cadre of professionals known as Accredited Energy Auditors who are empanelled with the BEE.

## Salient Features of PAT Scheme

The PAT scheme is a market-based mechanism wherein energy saving certificates are given as incentives to industries that overachieve their targets. These certificates can be traded in an energy exchange ([Indian Energy Exchange](#) or Power Exchange India). The certificates can be bought by other DCs that have not achieved their prescribed targets under the scheme. Units that are unable to achieve the targets either by their own actions or by buying the energy saving certificates are liable to pay the prescribed penalty.

## PAT Cycles

### PAT Cycle I (2012-13 to 2014-15)

- The PAT scheme (Cycle I) targeted energy-intensive industries in the first cycle (3 years). The sectors are aluminium, fertiliser, thermal power, cement, iron and steel, textiles, chlor-alkali, and pulp and paper.
- From the 8 energy guzzling industries, 478 DCs were selected.
- As against a target of 6.686 Million Tonne of Oil Equivalent (MTOE), the first cycle of the PAT scheme achieved 8.67 MTOE in energy savings, which is over the target by 30%.
- This energy saving translates into avoiding about 31 million tonnes of carbon dioxide emission.

### PAT Scheme Cycle 1 Achievements:



Image source: <https://beeindia.gov.in/>

### PAT Cycle II (2016-17 to 2018-19)

- This cycle included three new sectors namely, Railways, Refineries and Electricity Distribution Companies (DISCOMs).

- 621 DCs in 11 sectors have been selected under this cycle.
- As against a target of 13.38 Million Tonne of Oil Equivalent (MTOE), the second cycle of the PAT scheme achieved 13.28 MTOE in energy savings which is short of the target by 0.7%.

#### PAT Scheme Cycle 2 Achievements:



Image source: <https://beeindia.gov.in/>

#### PAT Cycle III (2017-18 to 2019-20)

- In this cycle, 116 DCs have been selected from six sectors namely, thermal power, aluminium, cement, pulp and paper, iron and steel, and textiles.
- The cycle seeks to achieve an overall energy consumption reduction of 1.06 MTOE.
- A decision was taken to put the PAT scheme under the rolling cycle from PAT-II onwards and so the third cycle was notified in 2017 itself.

#### PAT Cycle IV (2018-19 to 2020-21)

- A total of 109 DCs with a total reduction target of 0.6998 MTOE was notified under this cycle.
- Here, the petrochemicals and buildings sectors were also included in the previous cycle's list of six sectors to make it a total of eight sectors.
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#### PAT Cycle V (2019-2020 to 2021-22)

- Here, 110 DCs have been notified for targeted energy savings of 0.5130 MTOE.

#### PAT Cycle VI (2020-21 to 2022-23)

- This cycle has commenced in April 2020.
- 135 DCs are selected with a target of 1.277 MTOE.

- The six sectors notified are cement, commercial buildings (hotels), iron and steel, petroleum refinery, pulp and paper and textiles.

The PAT scheme is very crucial in helping the country achieve energy efficiency, which is an important part of achieving sustainable development goals.

