



# Perform, Achieve & Trade – A Market Mechanism to Enhance Industrial Energy Efficiency

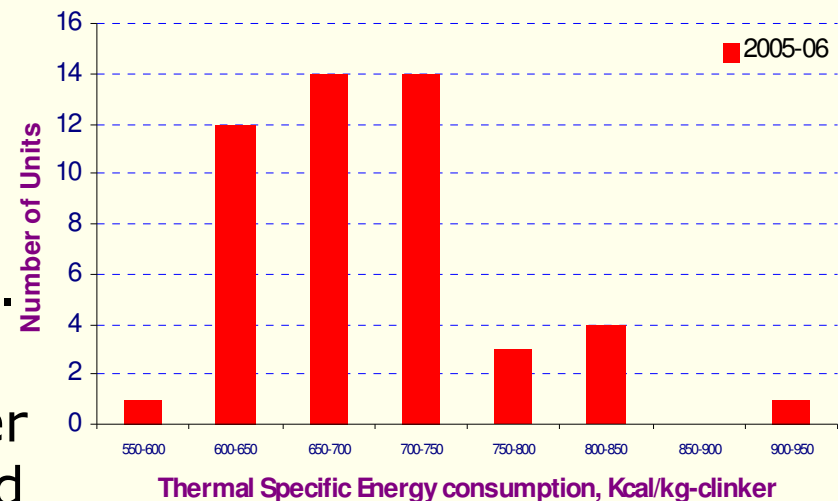
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# Reduce Energy Intensity of High Energy Consuming Units



- Energy Conservation Act 2001 provides for energy intensive industries and other establishments to be notified as designated consumers (DCs)
- DCs are required to, inter alia, comply with energy consumption norms
  - Difficult to establish a common sectoral norm because of diversity – in technology, vintage, raw materials, products etc.
  - Norms would need to be set for designated consumer – need for transparency and clear rules in norms setting

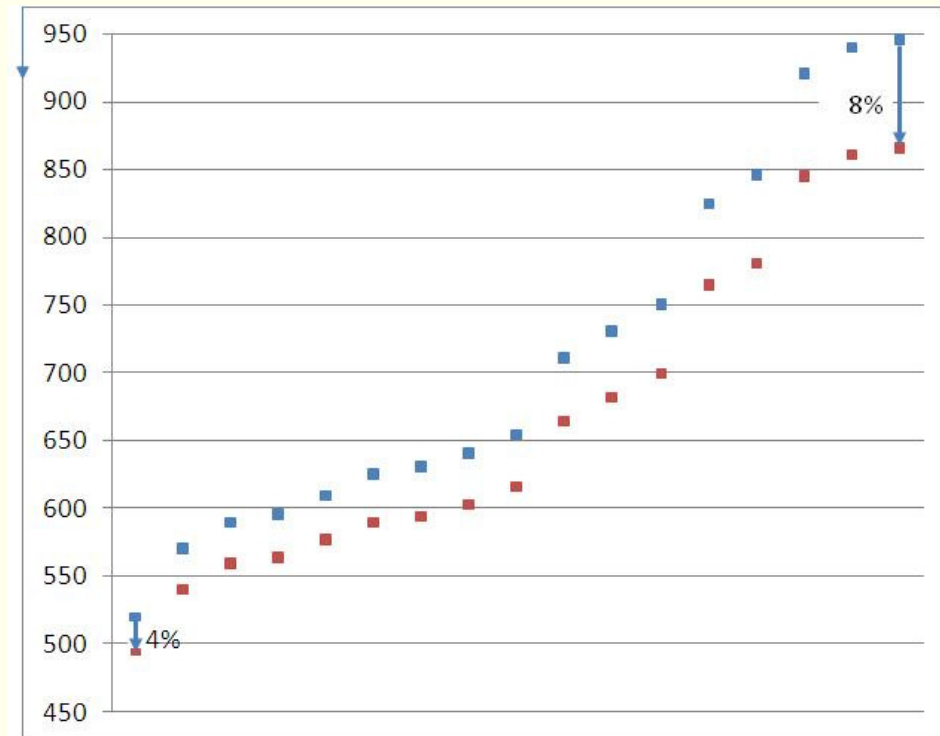




# Perform, Achieve and Trade (PAT)

## ➤ Covers units using about 165 million toe/year

- Gate-to-gate specific energy consumption, collectively, to be about 4% less in 2014-15 than the base year (2009-10)
- Less efficient units have larger SEC %-reduction targets – so that the collective SEC reduction is 5.8% in manufacturing sectors and 3% in TPPs





# Proposed target-setting methodology

- Total savings target for a sector set on top-down basis
  - Manufacturing sector to reduce sector average SEC by 5.8% and Thermal Power plant sector by 3%.
- Inter se allocation of savings to units within a sector based on current Specific Energy Consumption
  - Required percentage reduction in SEC is smallest for the unit with the lowest SEC, and largest for the unit with the highest SEC
  - For example, if SEC percentage reduction is 2% for the unit with lowest SEC (SEC of 100, say), then SEC %-reduction target for a unit with SEC of 150 will be:  
 $(2\% \times 150/100) = 3\%$
- The SEC percentage reduction target for the unit with lowest SEC will be set so that the production-weighted average SEC percentage reduction for the sector is achieved



## PAT - Scope



- Covers 477 DCs in 8 sectors
- The 477 DCs together consume about 165 million toe) of energy, i.e. about 40% of total energy consumption of the country
- Each DCs will need to comply with a percentage reduction target in its SEC to reach the energy consumption norm within the defined period
  - Achievement > Target                      E-Scerts
  - Achievement < Target                      Purchase E-Scerts / Penalty
- National Target: Achieve 6.6 million toe savings at the end of 1st PAT Cycle



# Data Requirements and Verification

- Verification to be carried out by independent BEE-designated energy auditors (DENAs)
- SEC for a plant is based on the records of quantum of energy going into the plant and quantity of products shipped out of plant
  - Cross check with records such as invoices, payment receipts, and excise paid
  - Inplant renewable energy production would not be added to quantum of energy used
- Issuance of ESCerts possible after one year
- Correction factors for large changes (during the 3-year period) in:
  - Share of captive electricity generation
  - Capacity utilization



## PAT – Status



- All the stakeholders like designated consumers, regulators, energy auditors & managers, energy exchangers etc. have been appraised of out the scheme through a nationwide extensive consultation program
- Targets for 477 industries established
- Notification to be published anyday
- PAT Operational document has been prepared which will be a part of the notification.
- Targets are to be achieved in the 2014-15 financial year



## Domestic NAMA-esque character of PAT

- Domestic resources to meet all costs
- Transparency in
  - Methodology for target setting
  - Measurement process and protocol
  - Verification process
  - Issuance and trading of ESCerts
- Institutional approach to:
  - Programme management
  - Verification
  - Trading
- Third party verification
  - Baseline
  - Achieved performance