Roadmap on Energy Efficiency as a Climate Mitigation Strategy

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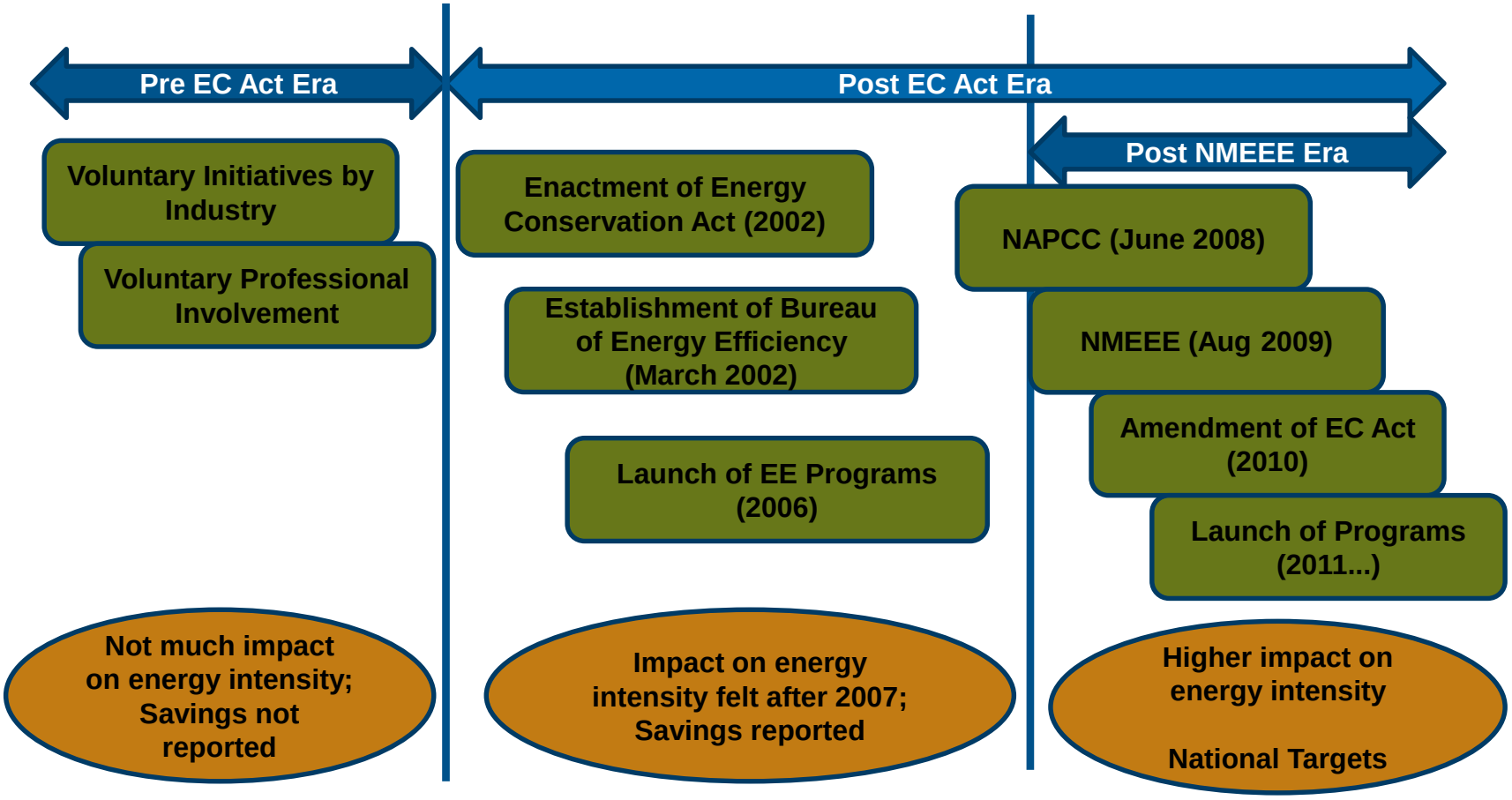
Structure

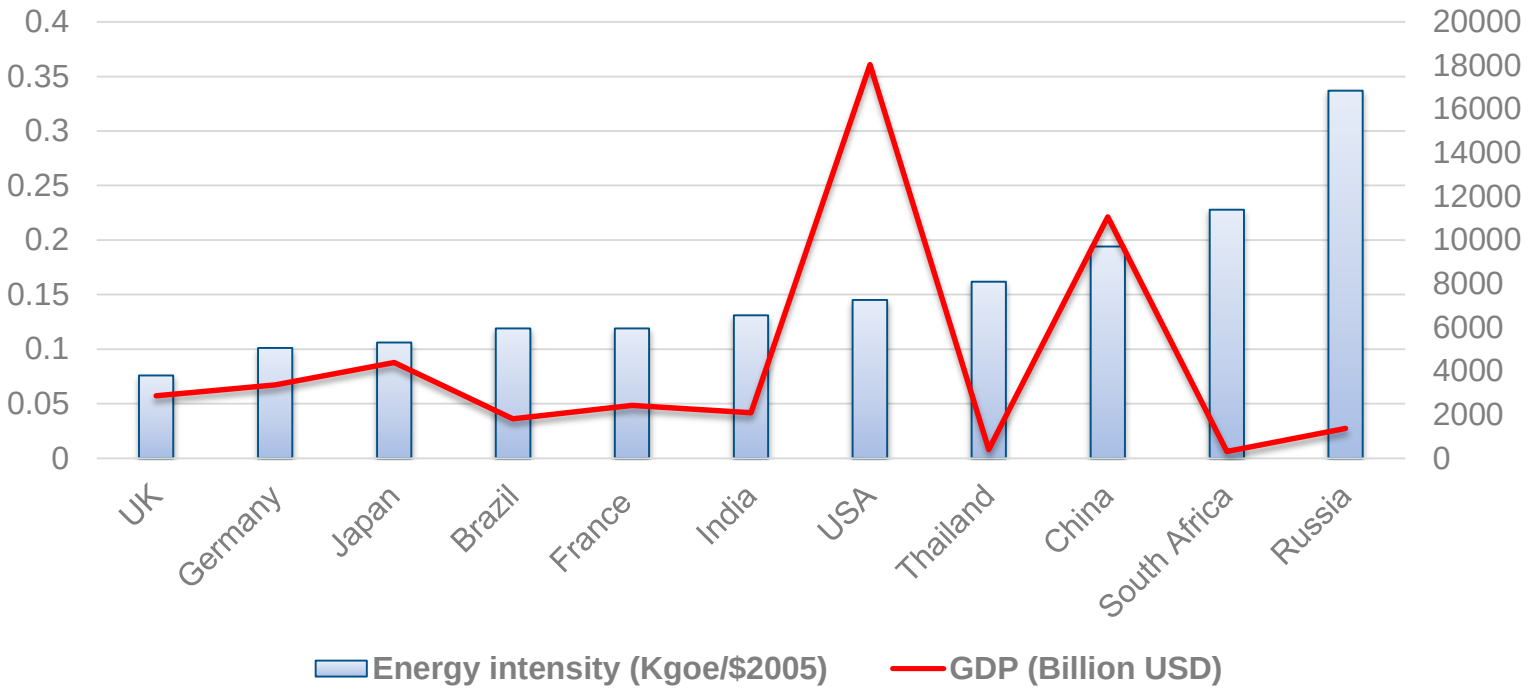
- Energy Efficiency transition in India
  - Pre and post enactment of the Energy Conservation Act, 2001
  - Results achieved so far
- Snapshot of approach followed for achieving the results
- Setting targets for reducing energy intensity by 2030
  - Possible Approach followed
  - Setting goals for reducing energy intensity

Energy Efficiency in India - Transition



NAPCC: National Action Plan on Climate Change
NMEEE: National Mission on Enhanced Energy Efficiency

Comparison of 2015 energy intensity for selected countries



Source: Global Energy Statistical Yearbook 2016

- India's energy intensity in 2015 (0.131) was lower compared to its BASIC countries partners, China and South Africa.
- Compared to developed countries such as UK, Germany and Japan, India's energy intensity is higher by 20 to 40%
- India's Energy intensity is slightly higher compared to same sized economies such as Brazil and France

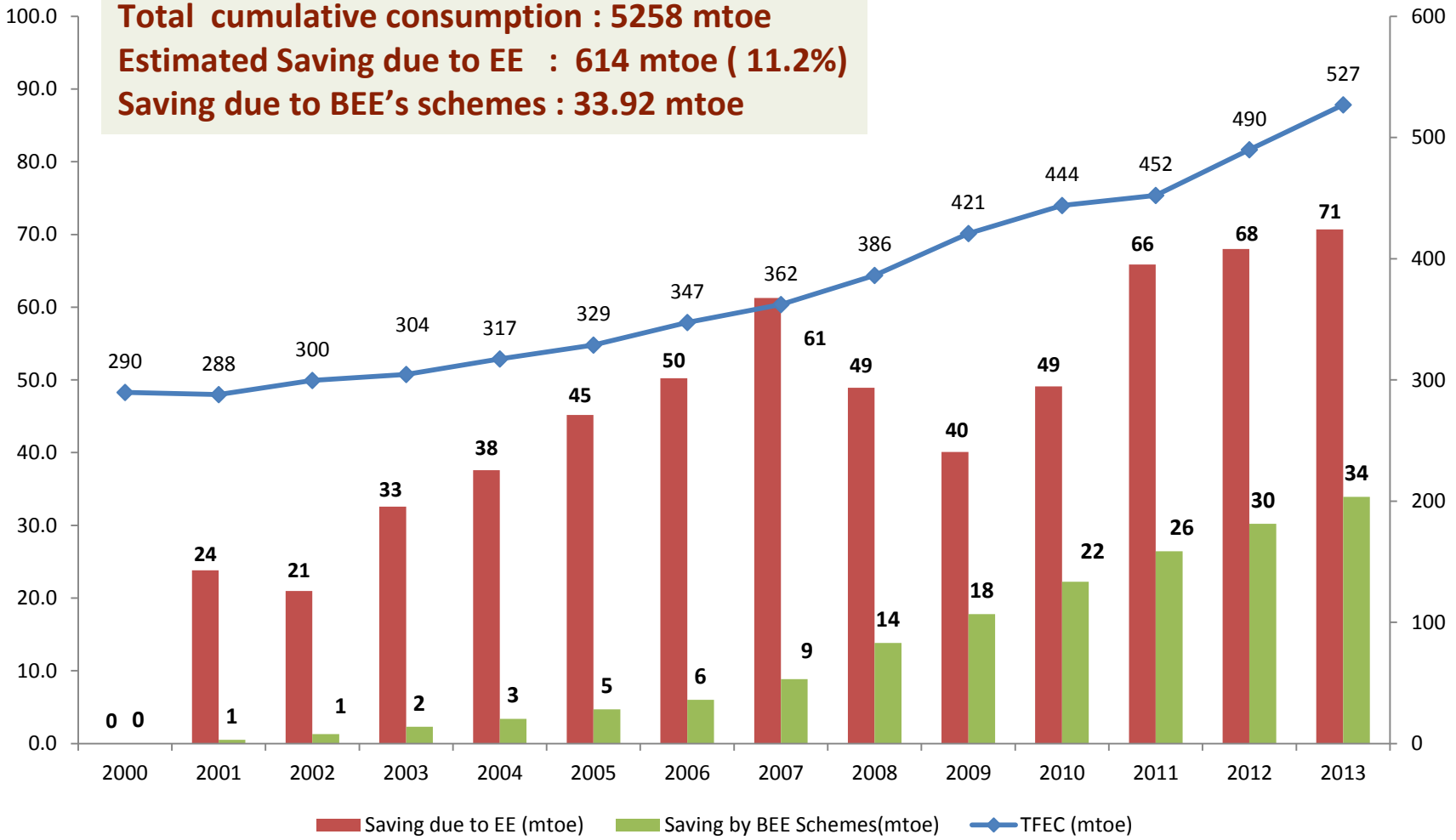
Energy Saving due to energy efficiency in India (During 2000-2013)

Base Year : 2000

Total cumulative consumption : 5258 mtoe

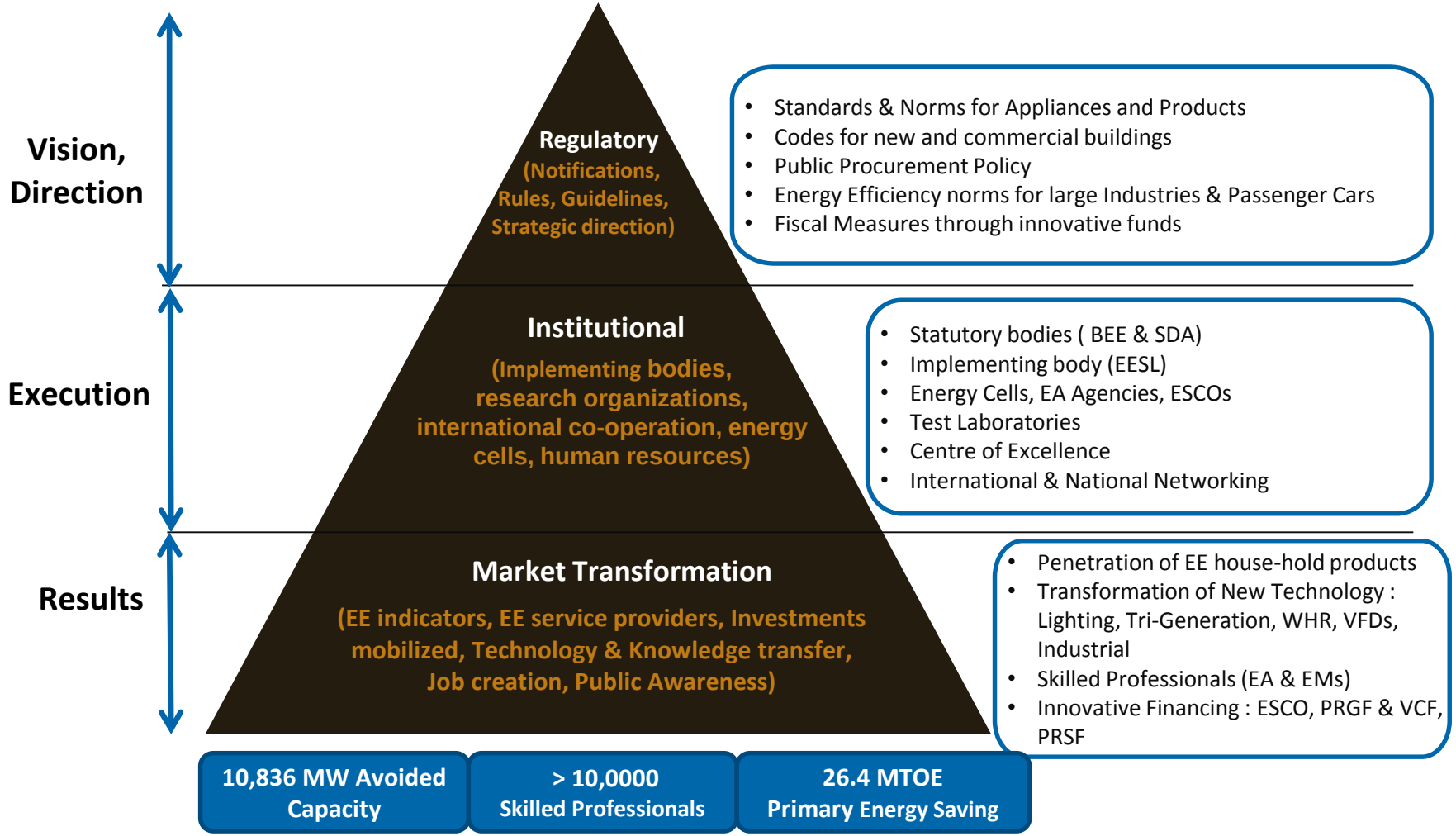
Estimated Saving due to EE : 614 mtoe (11.2%)

Saving due to BEE's schemes : 33.92 mtoe

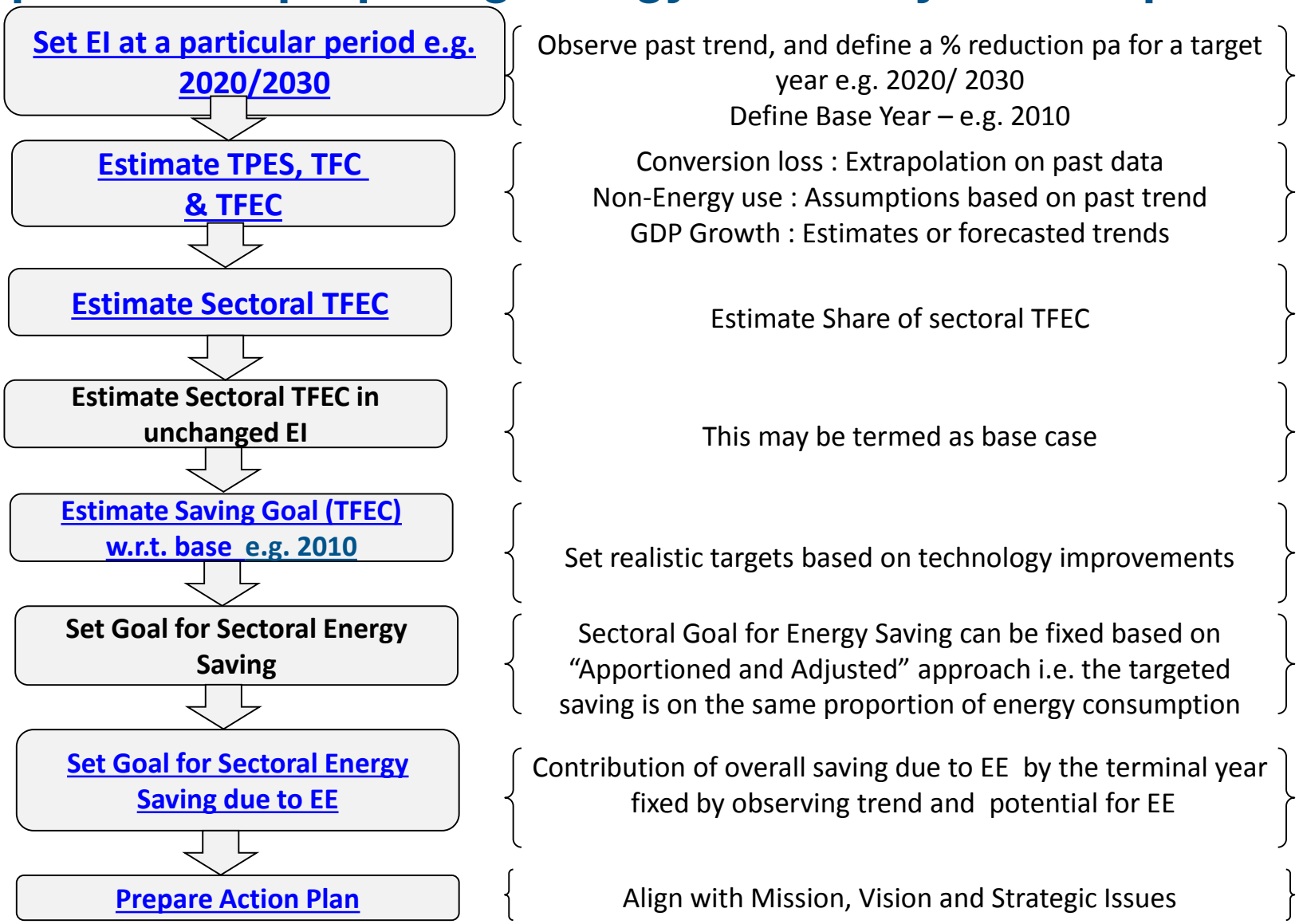


Source: IEA Data, BEE Annual reports

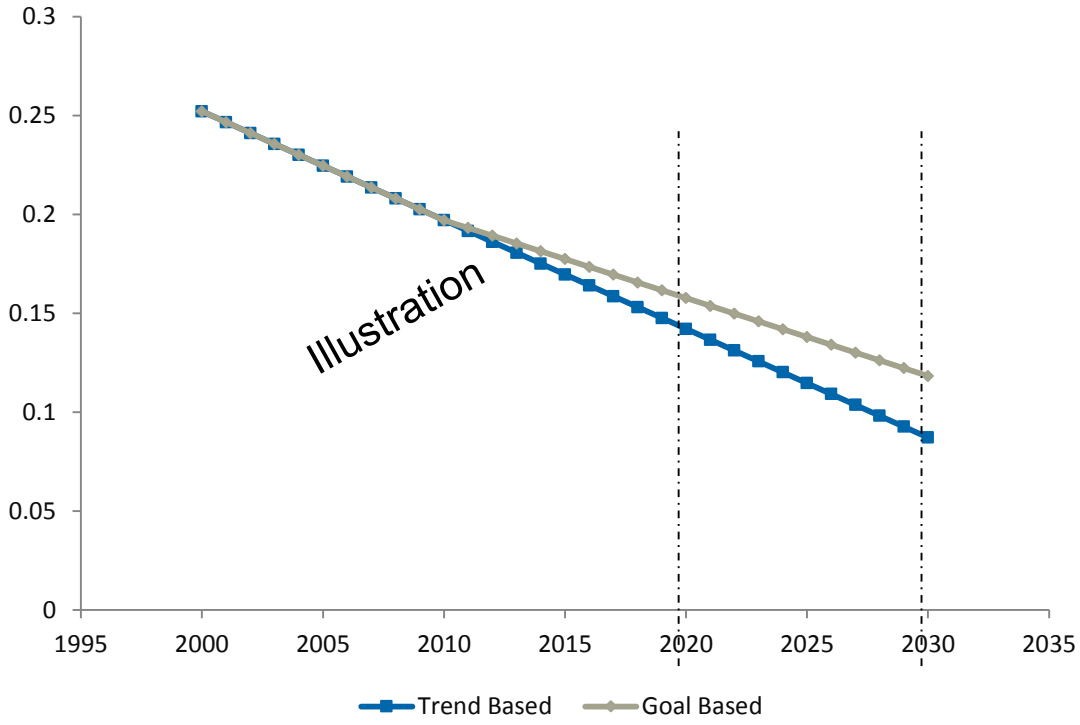
Approach by Government of India for achieving the targets



Approach for preparing energy efficiency roadmap



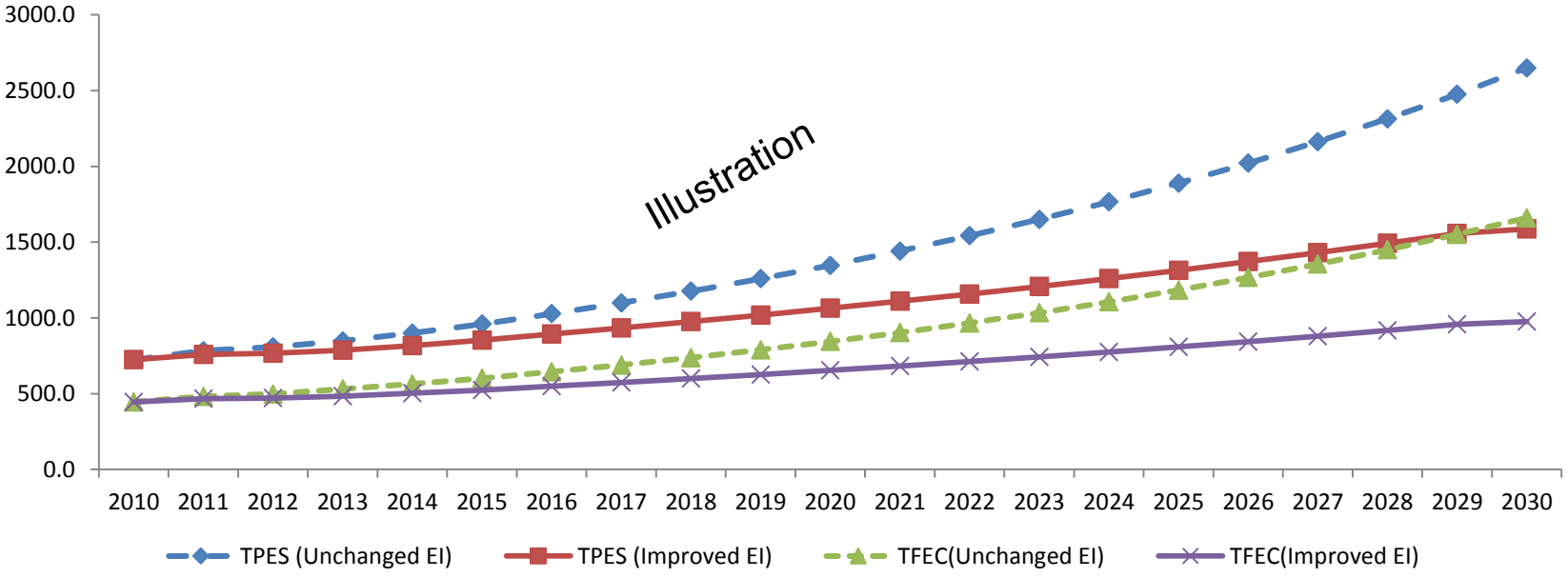
Setting a Target Energy Intensity (kgoe/USD)

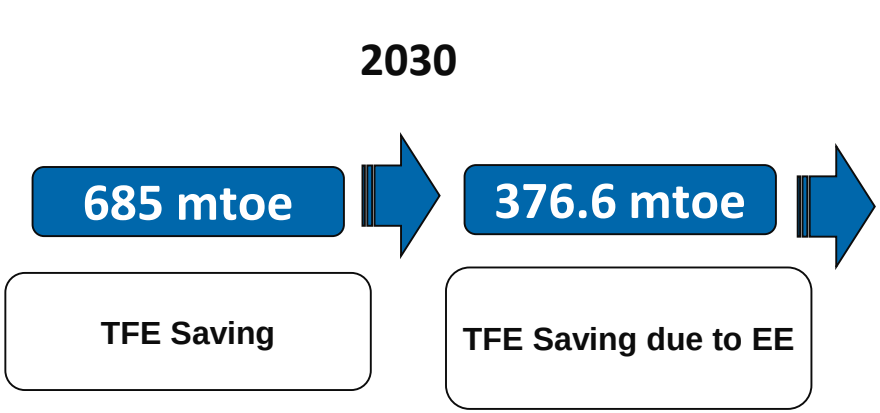


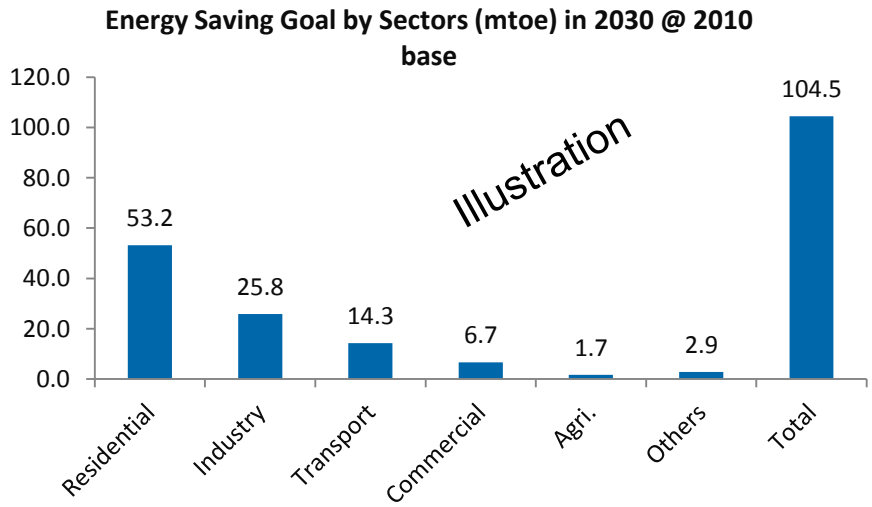
- The % reduction in EI can be calculated based on available data
- With the same trend, the EI could be estimated for the terminal year
- It is highly unlikely to sustain the estimated past trend as low hanging fruits are picked up early
- Cost-effectiveness and practicable measures become less available due to near-saturation level in major sectors.
- Based on this assessment, we can estimate a % reduction of EI upto 2020 and different % from 2020 to 2030
- The % reduction could be aligned with the National goal

❖ **The EI is based on Total Primary Energy Supply (TPES) per unit of GDP**

Total Primary Energy Supply (TPES) and Total Final Energy Consumption (TFEC) @ 2030





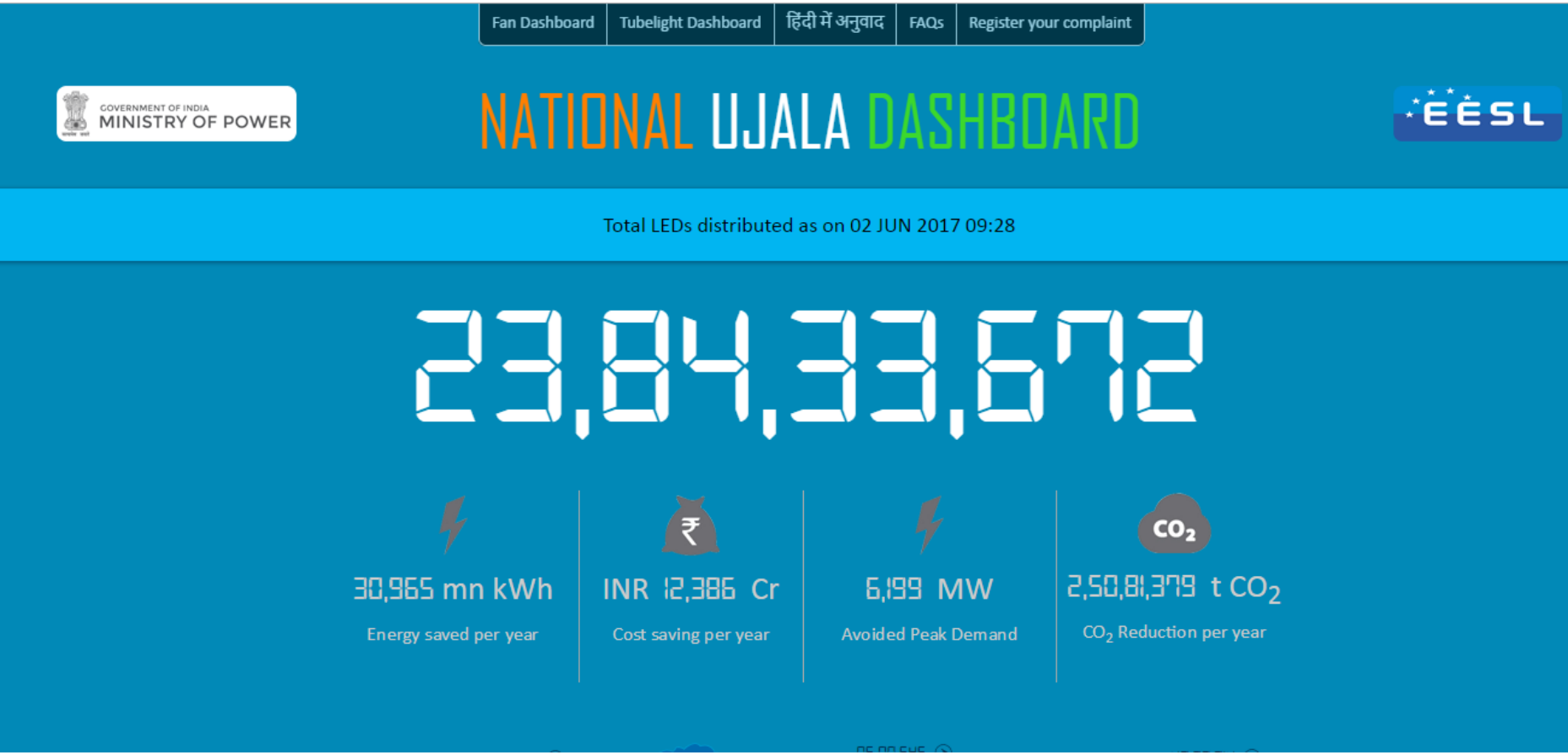


Strategic Areas

- Employ **mandatory measures for energy efficiency** through laws, regulations & standards
- Employ measures which create widespread effects on **awareness, behavioural change of consumers, market transformation, decision-making of entrepreneurs** towards efficient use of energy
- Promote **decentralized energy efficiency activities in public and private organizations** which possess resource, infrastructure and experience readiness like States, Power Utilities and other Government departments
- Promote **Public Private Partnership** for supporting and implementing energy conservation measures
- **Engage energy professionals and Energy Servicing Companies (ESCOs),** as vital links, in terms of consultation and implementation of energy efficiency projects and technologies
- Launch national level program to accelerate

Rationale for Identification of National Program

Snapshot of DELP – Dashboard (on June 2, 2017)



THANK YOU !