

Roadmap on Energy Efficiency as a Climate Mitigation Strategy

7th June 2017



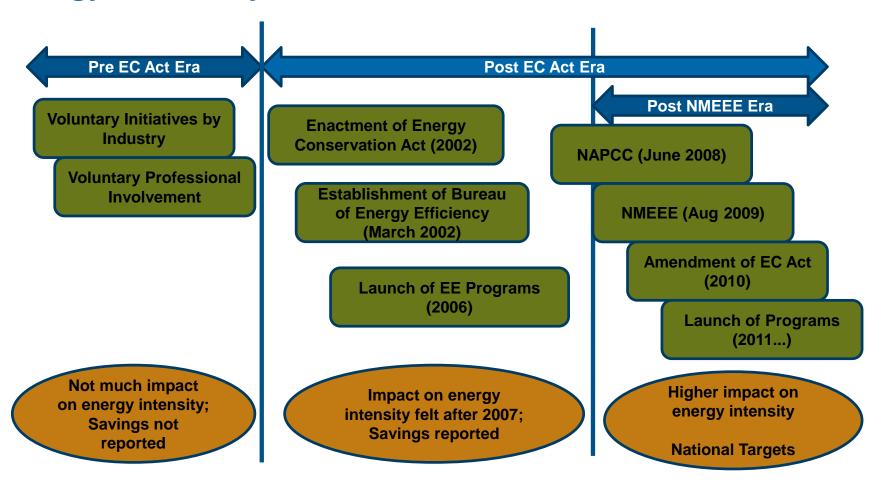
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Structure

- 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

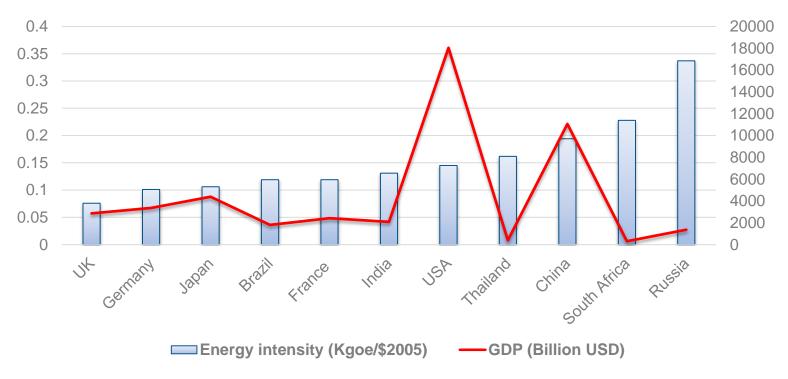


NAPCC: National Action Plan on Climate Change

NMEEE: National Mission on Enhanced Energy Efficiency



Comparison of 2015 energy intensity for selected countries

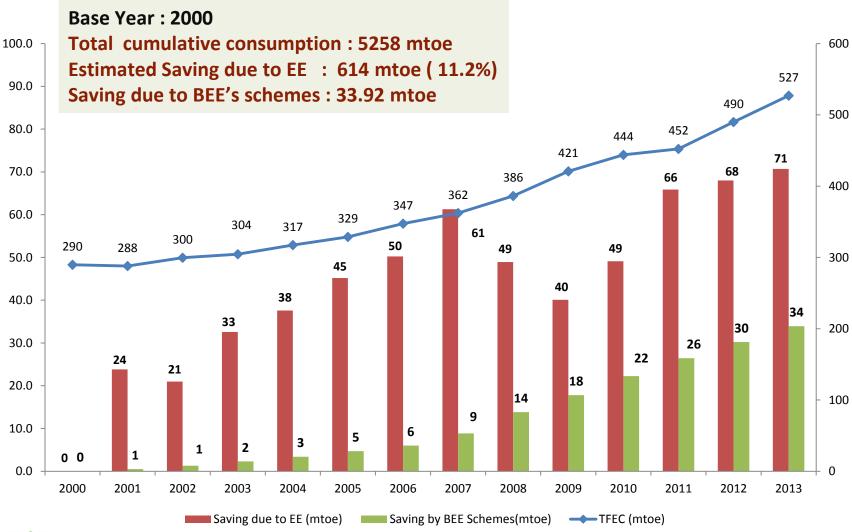


Source: Global Energy Statistical Yearbook 2016

- 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

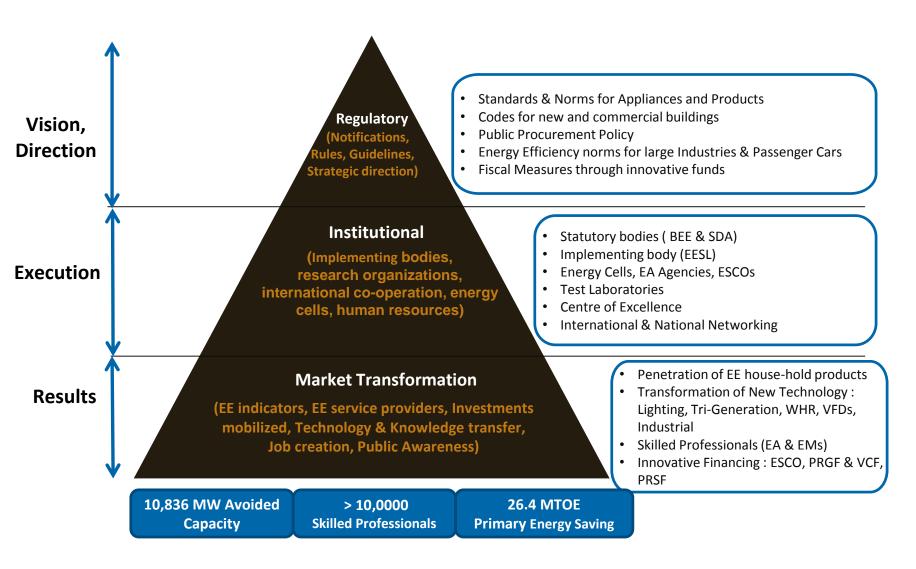


Energy Saving due to energy efficiency in India (During 2000-2013)





Approach by Government of India for achieving the targets



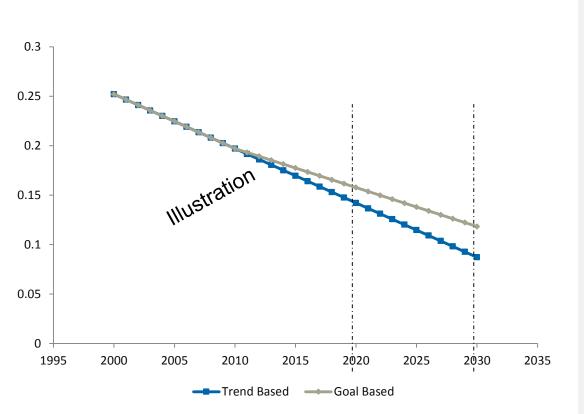


Approach for preparing energy efficiency roadmap

Set El at a particular period e.g. Observe past trend, and define a % reduction pa for a target 2020/2030 year e.g. 2020/ 2030 Define Base Year – e.g. 2010 Conversion loss: Extrapolation on past data **Estimate TPES, TFC** Non-Energy use: Assumptions based on past trend & TFEC GDP Growth: Estimates or forecasted trends **Estimate Sectoral TFEC** Estimate Share of sectoral TFEC **Estimate Sectoral TFEC in** unchanged EI This may be termed as base case **Estimate Saving Goal (TFEC)** w.r.t. base e.g. 2010 Set realistic targets based on technology improvements **Set Goal for Sectoral Energy** Sectoral Goal for Energy Saving can be fixed based on Saving "Apportioned and Adjusted" approach i.e. the targeted saving is on the same proportion of energy consumption **Set Goal for Sectoral Energy** Contribution of overall saving due to EE by the terminal year Saving due to EE fixed by observing trend and potential for EE **Prepare Action Plan** Align with Mission, Vision and Strategic Issues



Setting a Target Energy Intensity (kgoe/USD)

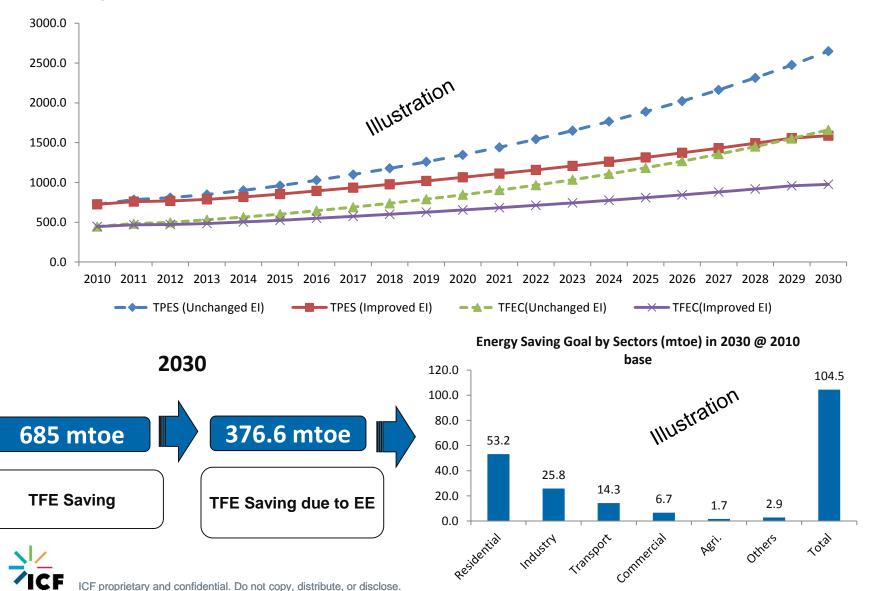


The EI is based on Total Primary Energy Supply (TPES) per unit of GDP

- 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



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

Combined with on-going schemes / program

Impact in electricity consumption and peak demand reduction

Contribution in sector(s)

Easy to Implement

Quick market transformation, technology transfer and tangible energy saving



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

Fan Dashboard

Tubelight Dashboard

हिंदी में अनुवाद

FAQs

Register your complaint







Total LEDs distributed as on 02 JUN 2017 09:28

23,84,33,572











THANK YOU!

