

Overview of key developments, needs and challenges in energy performance standards and labels

A presentation to the International Conference On Sustainable Cooling

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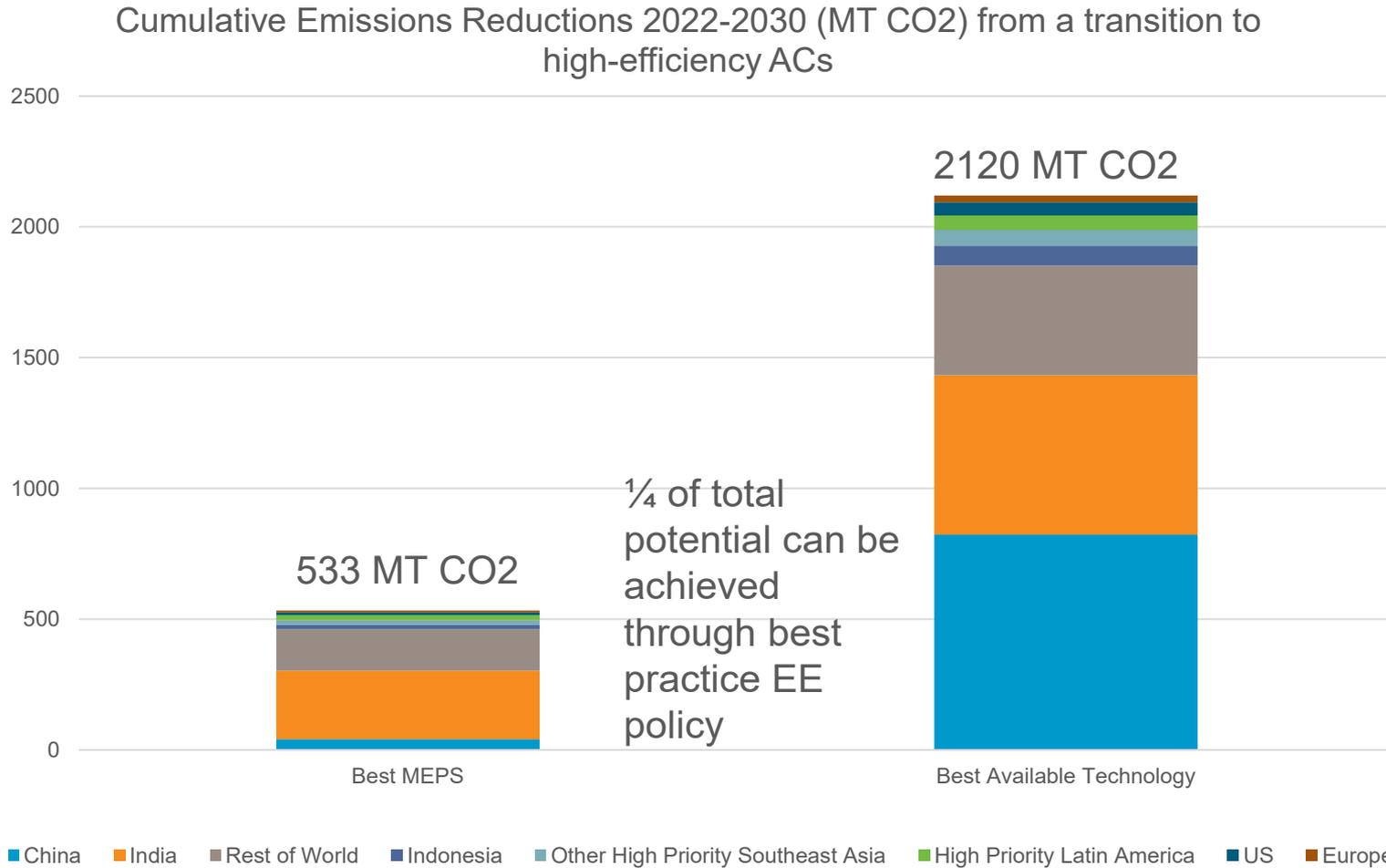
November 28, 2018



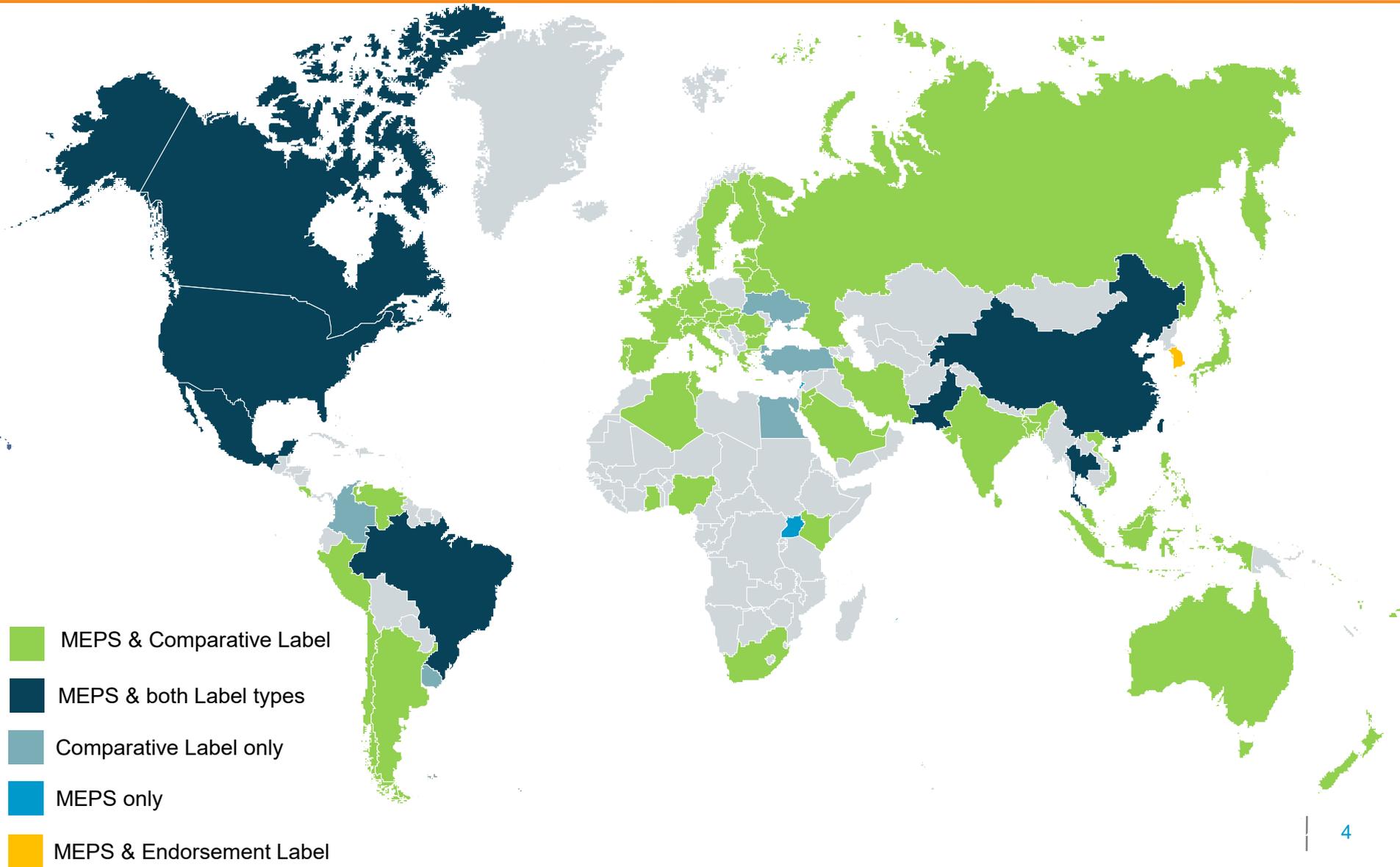
Outline

- The Policy Imperative
- The Energy Efficiency Policy Toolbox
- Policy Tools Implementation & Outcomes (case studies)
 - Brazil
 - Indonesia
 - Philippines
 - India

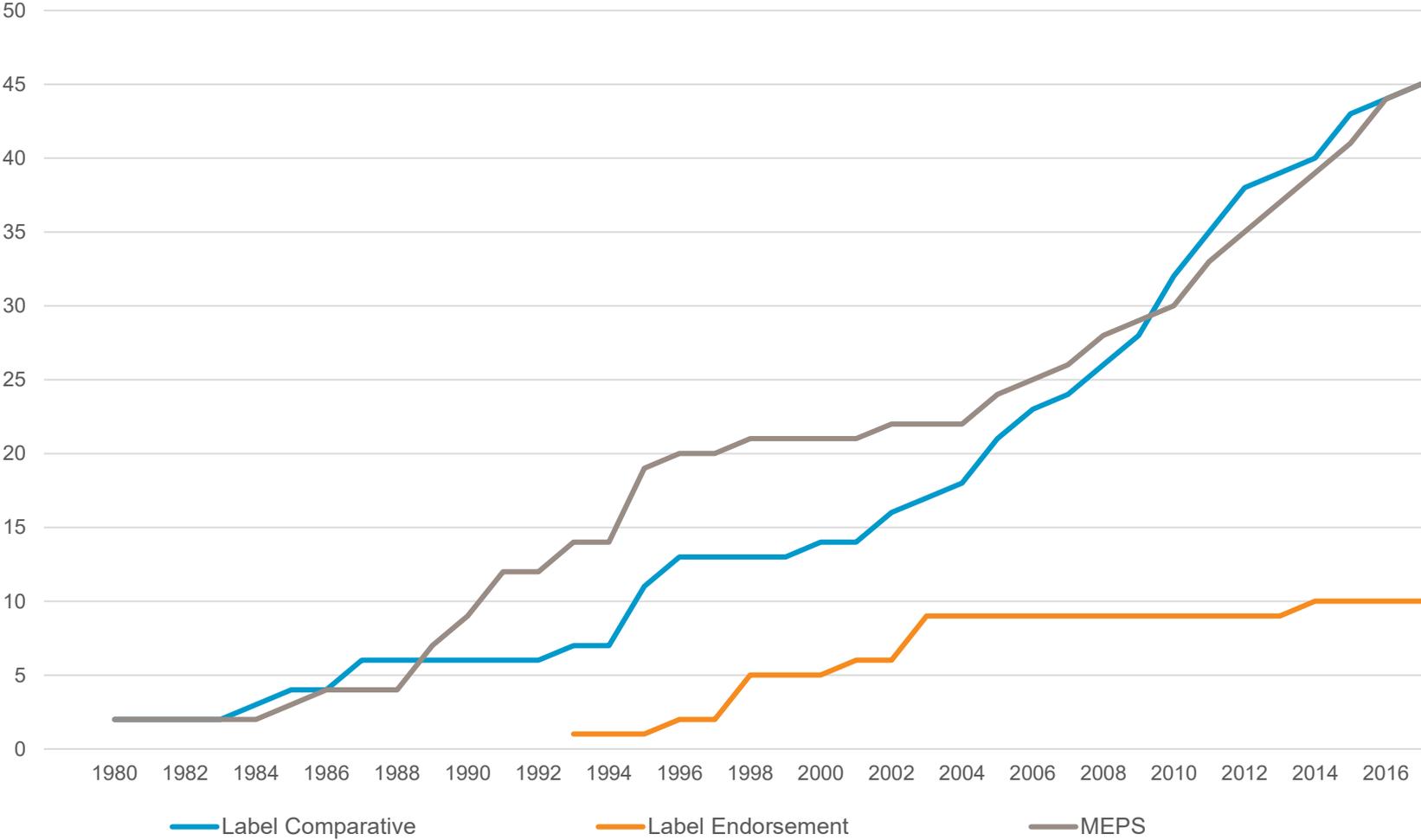
What is the policy imperative?



AC Policies Around the World



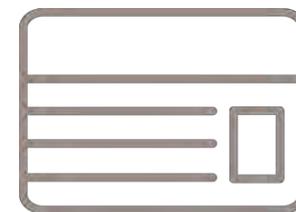
Room AC Policies Over Time



Impacts of Policy Implementation

In Mexico, impacts from AC and refrigerator standards implemented between 1995 and 2014 resulted in:

- National electricity savings of **5.2 TWh** of electricity in 2014, roughly equivalent to **two 500 MW power plants**
- Cumulative CO₂ emissions mitigation of **23 million metric tons through 2014**
- Avoided over **40 thousand million Mexican pesos (3 billion USD)** of electricity bills through 2014.



Energy Efficiency Policy Toolbox



MEPS



Comparative Label



Endorsement Label



Bulk Procurement specification

What happens when you don't use the toolbox?

Brazil

- **Infrequent revisions** of labeling categories have resulted in 57% of room ACs belonging to the most efficient labeling class, a disincentive to industry and consumers

Philippines

- **The lack of an EE policy** resulted in a market mostly stagnant for the past 5 years, with little improvement in the overall efficiency of AC products

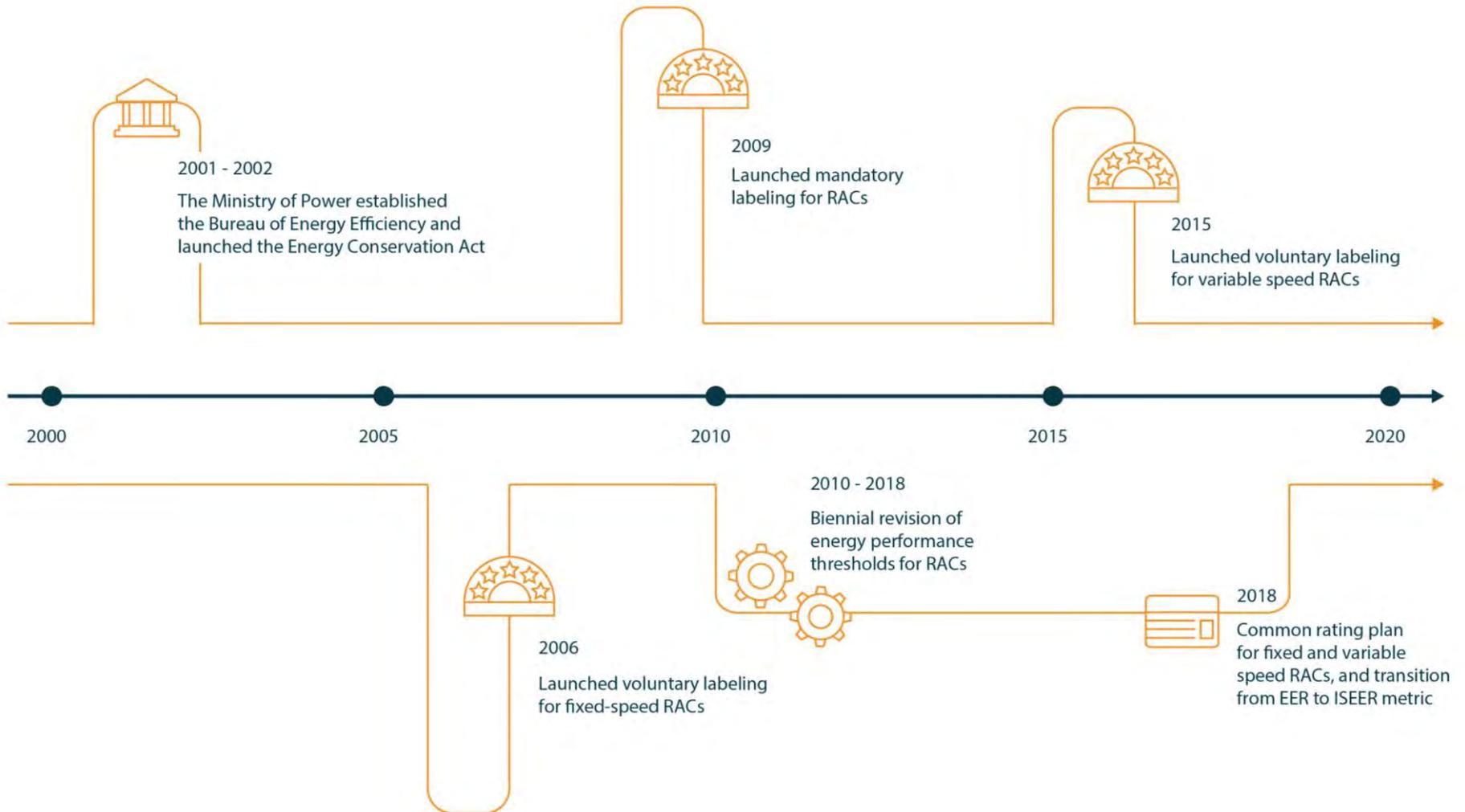
Indonesia

- **Too lenient EE policy** when implemented has no effect on the market



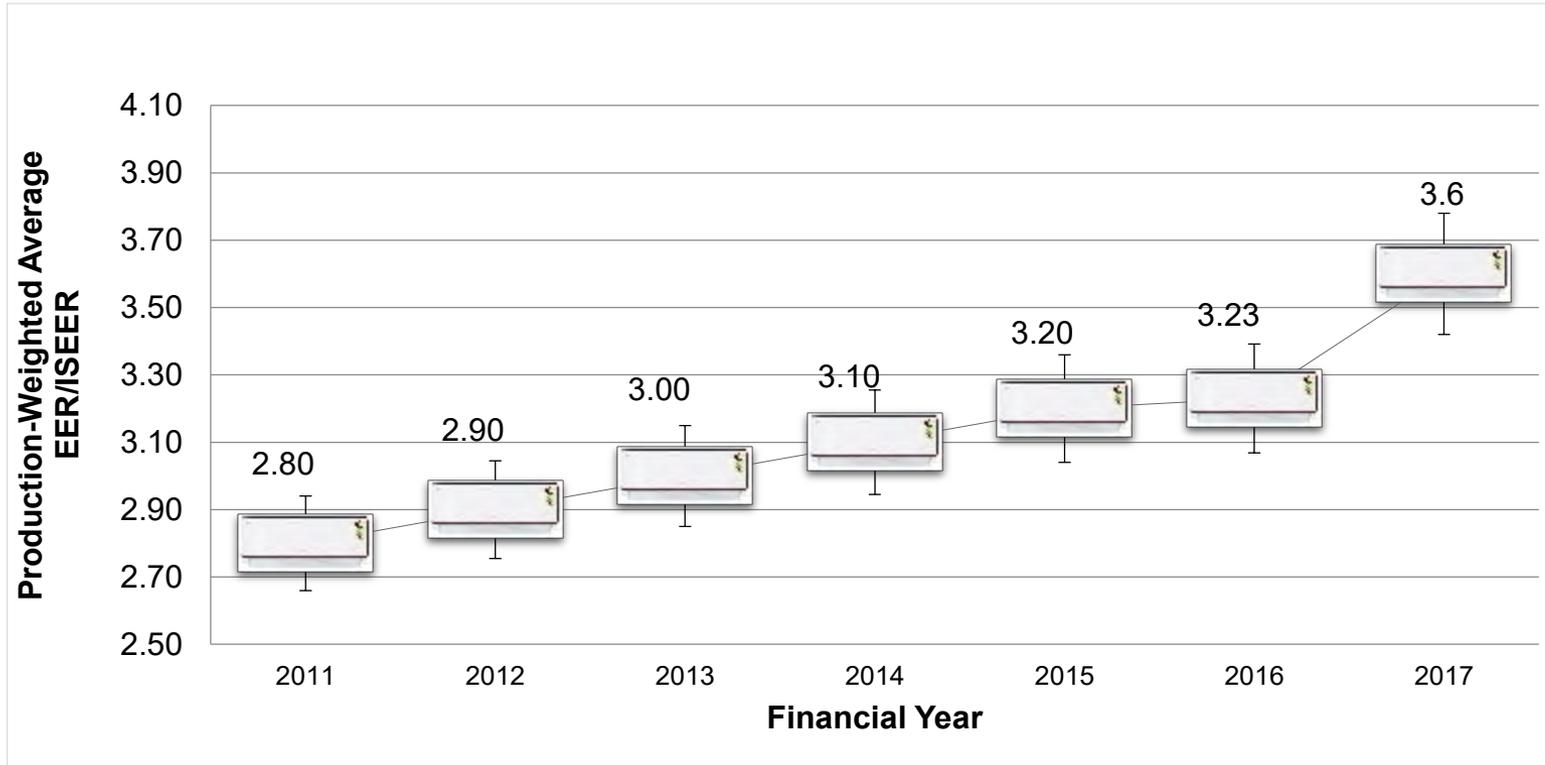
Policy Tools – Implementation and Outcomes: Case Study of Market Transformation in India

The RAC Policy Timeline in India



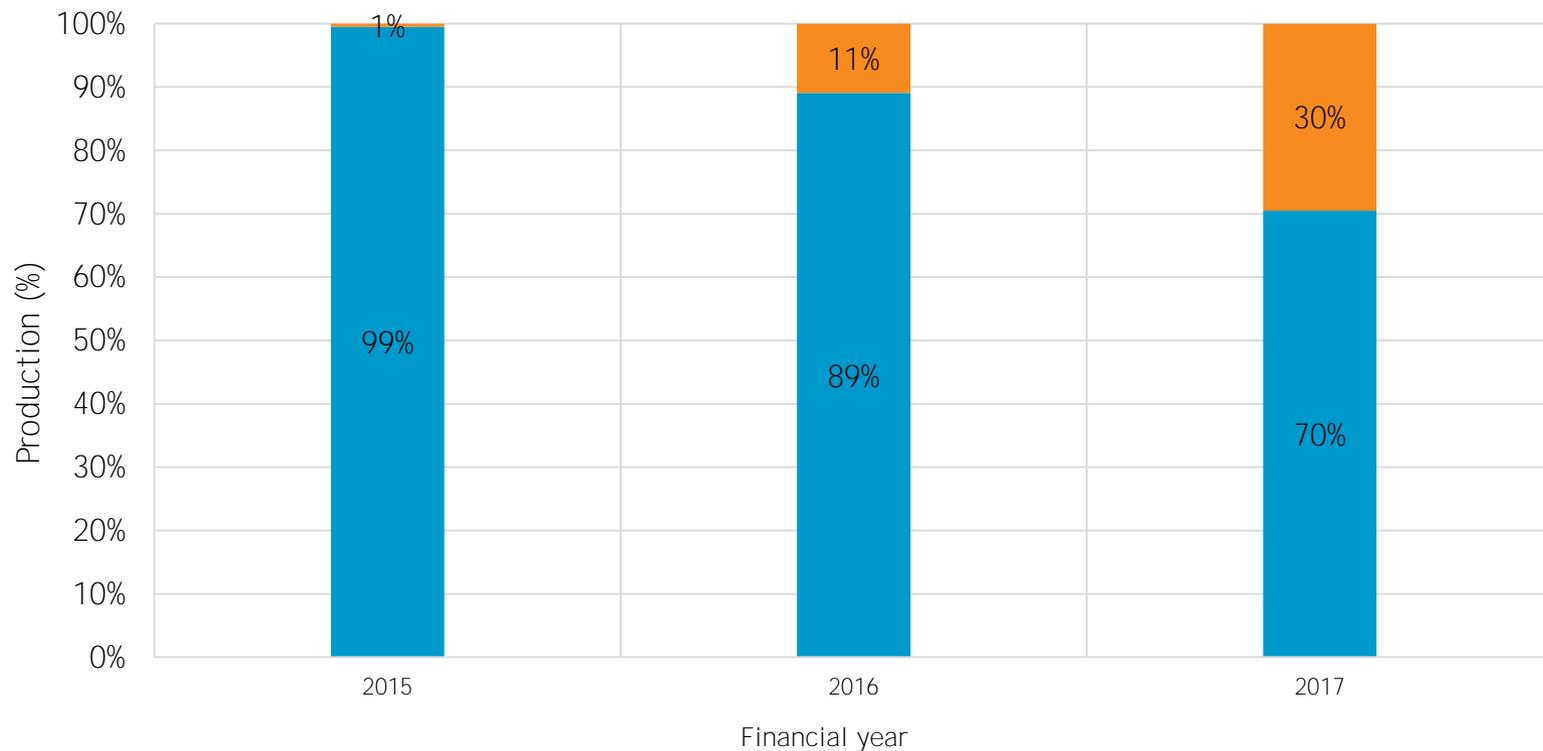
Policy Tools – Implementation and Outcomes: Case Study of Market Transformation in India

- The production-weighted average EER/ISEER of RACs has increased **from 2.8** in 2011-12 **to 3.6** in 2017-18, which represents a **29% increase in efficiency** over the period



Policy Tools – Implementation and Outcomes: Case Study of Market Transformation in India

Market penetration of Inverter RAC, 2015 - 2017

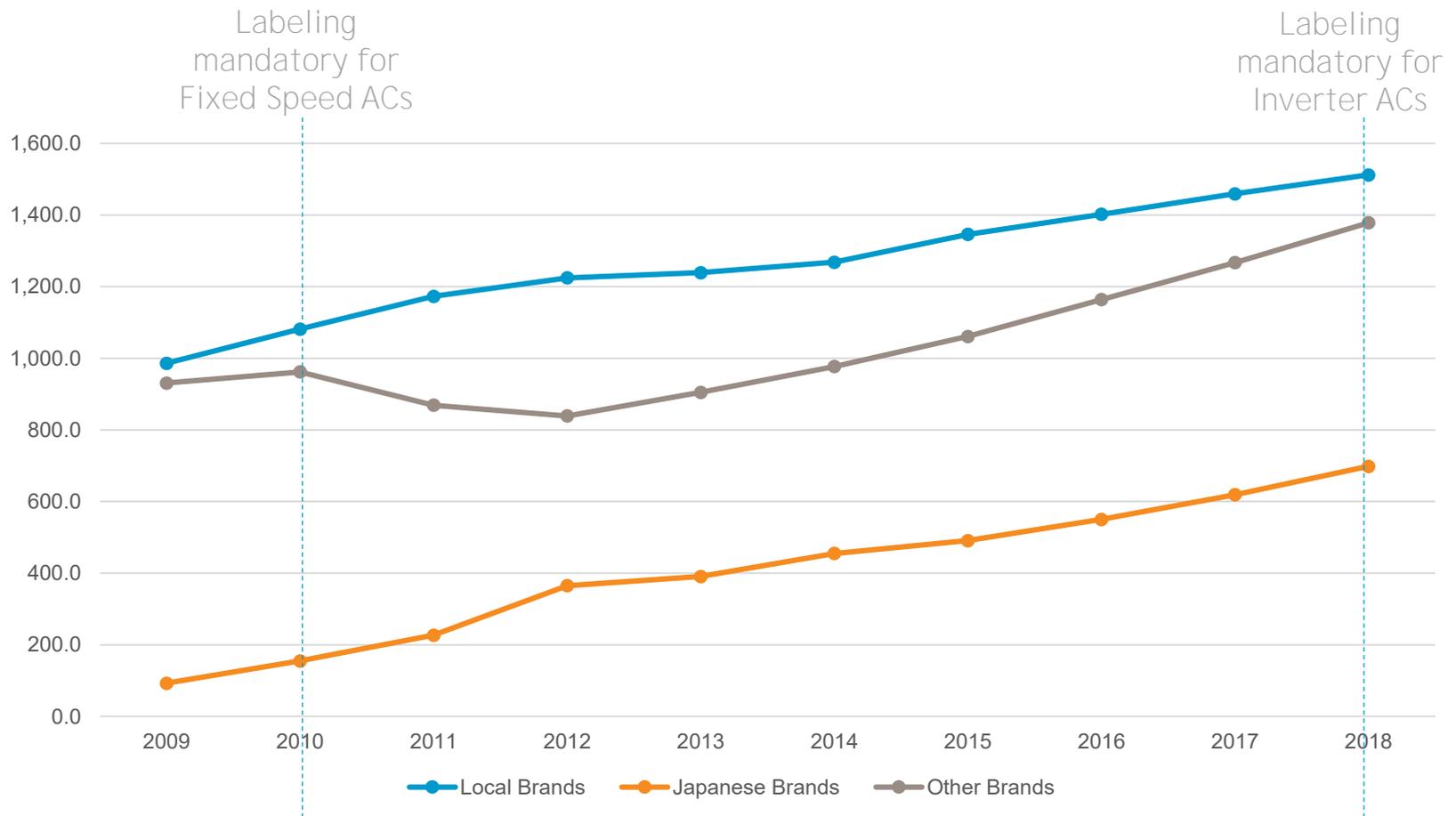


Source: BEE

■ Fixed Speed RAC ■ Inverter RAC

Policy Tools – Implementation and Outcomes: Case Study of Market Transformation in India

Annual sales of leading brand ACs between 2009 and 2018 ('000s)



Source: Euromonitor International

Key Takeaways

- Energy efficiency policy alone can secure $\frac{1}{4}$ of total potential GHG savings from a transition to high-efficiency ACs
- The benefits of EE AC policy translate to:
 - Electricity savings, curbing energy demand and the need for new power plants
 - Billions of USD in electricity bills savings for consumers
- EE AC policy in India is a great example of market transformation
- Lessons from the energy efficiency policy toolbox implementation in India can be replicated in other markets

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Any questions?

