



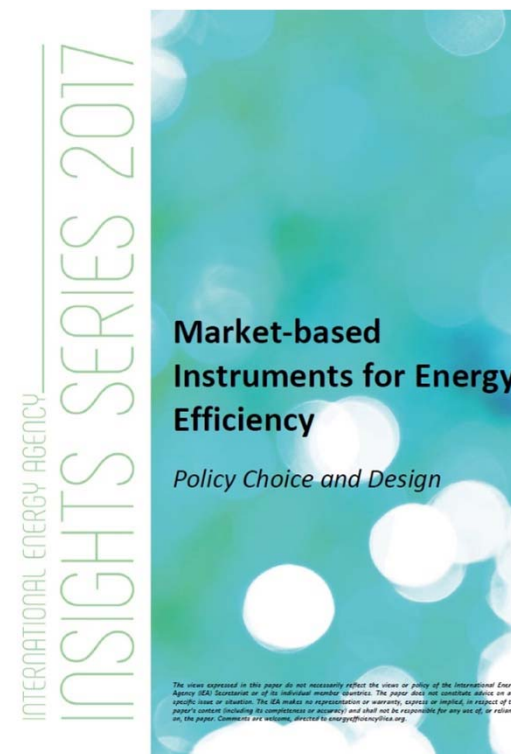
Market-based Instruments for Energy Efficiency

Samuel Thomas (IEA) and Jan Rosenow (RAP)
White Certificate Club, Paris, 30th June 2017

Introduction to Market-based Instruments (MBIs)

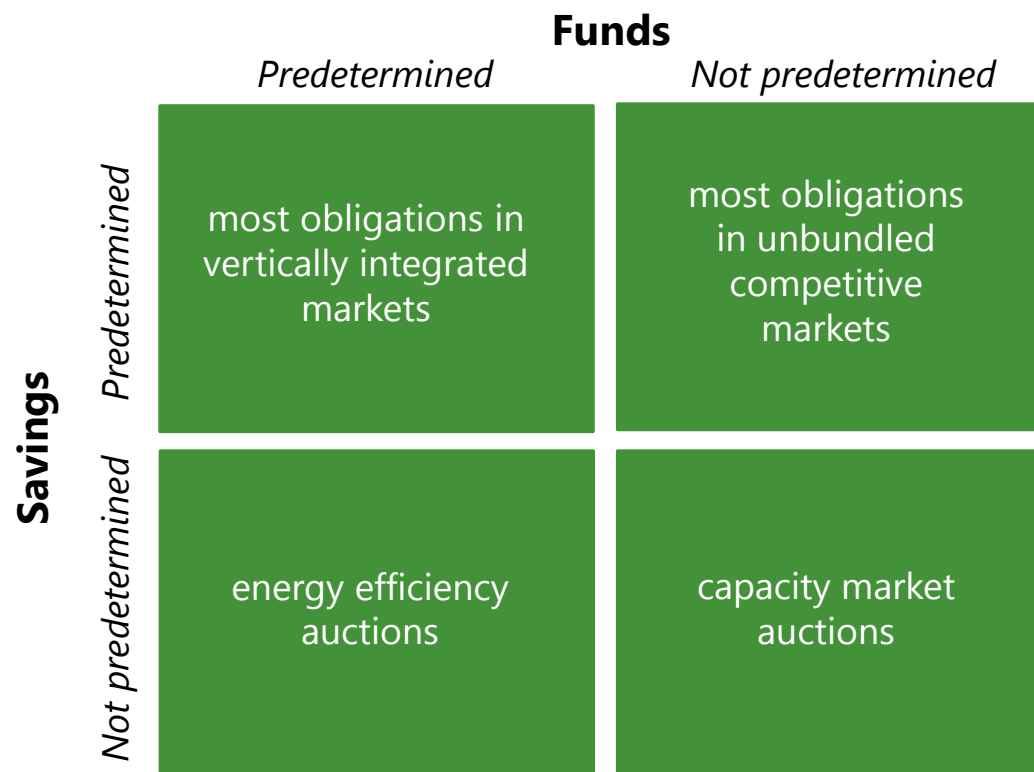


- Instruments that are
 - Facilitated by a policy framework specifying the outcome
 - energy savings,
 - emissions reductions,
 - capacity resources,
 - fuel poverty alleviation
 - Delivered by market actors
 - Without prescribing the delivery mechanism and the measures to be used



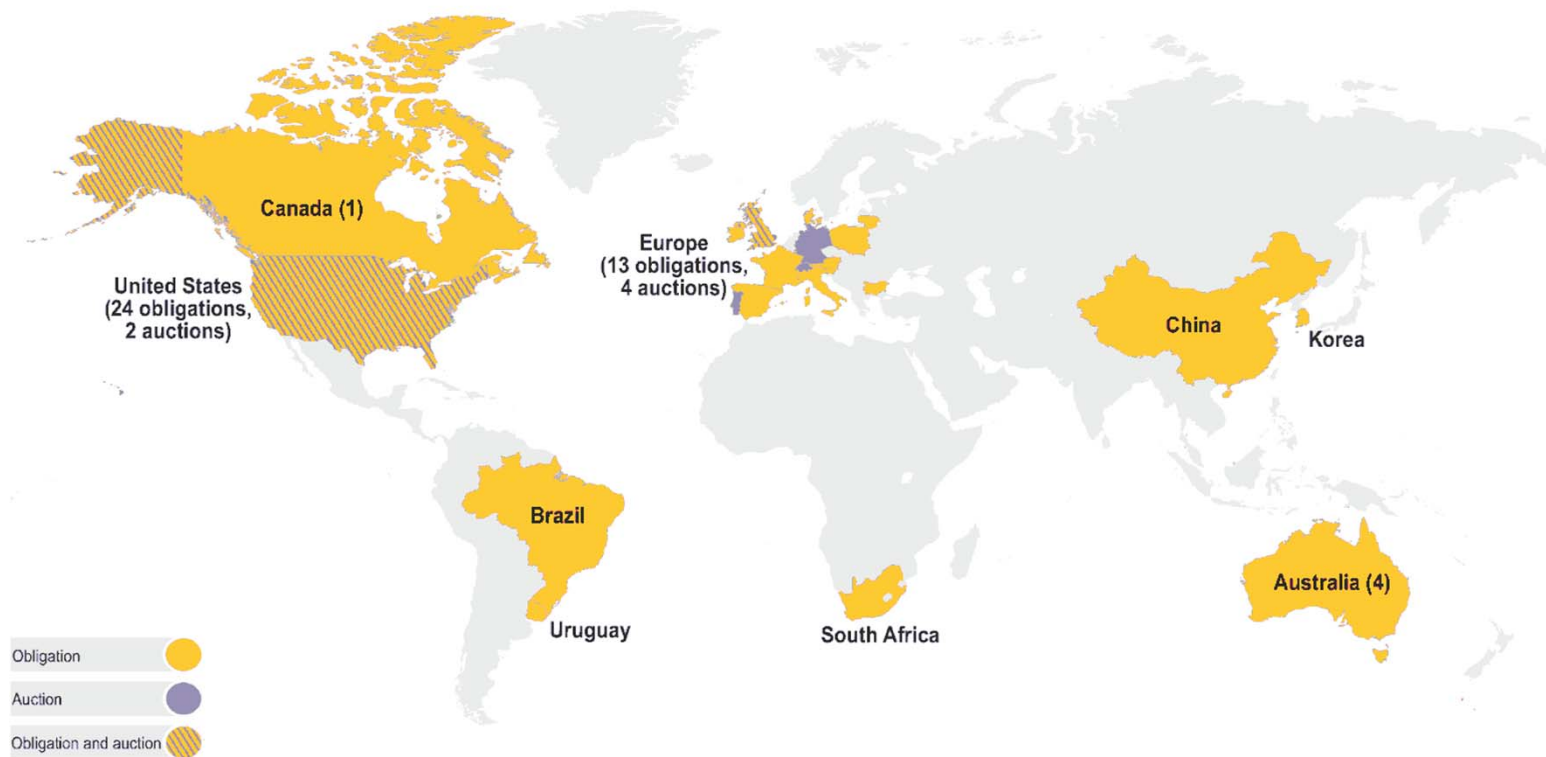
MBIs offer potential for policy maker to access more cost-effective efficiency gains

Fundamental choices for the design of market-based instruments



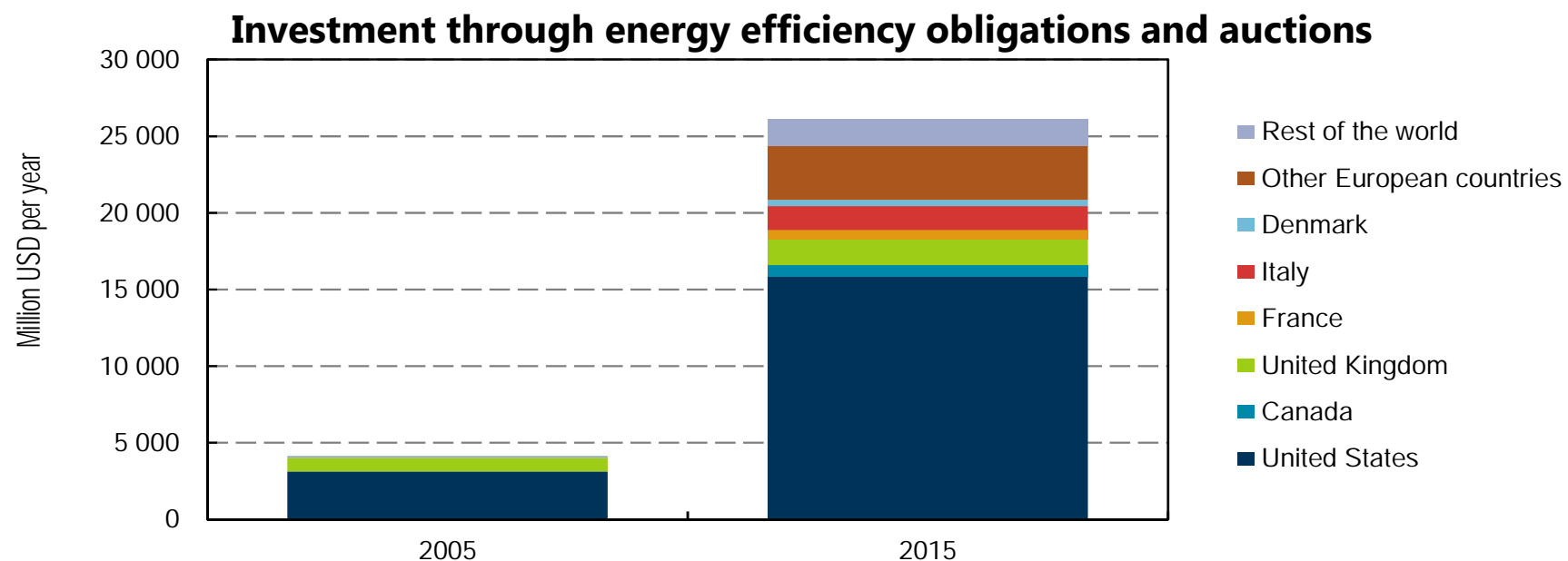
No conclusive evidence that one is better than the other

MBIs for energy efficiency – where can they be found?



The number of MBIs has quadrupled over the last ten years

Investment through market-based instruments



The amount of investment generated by MBIs has increased six-fold over the last decade

Market-based instruments are able to leverage programme costs



- Different programmes reveal different leverage ratios

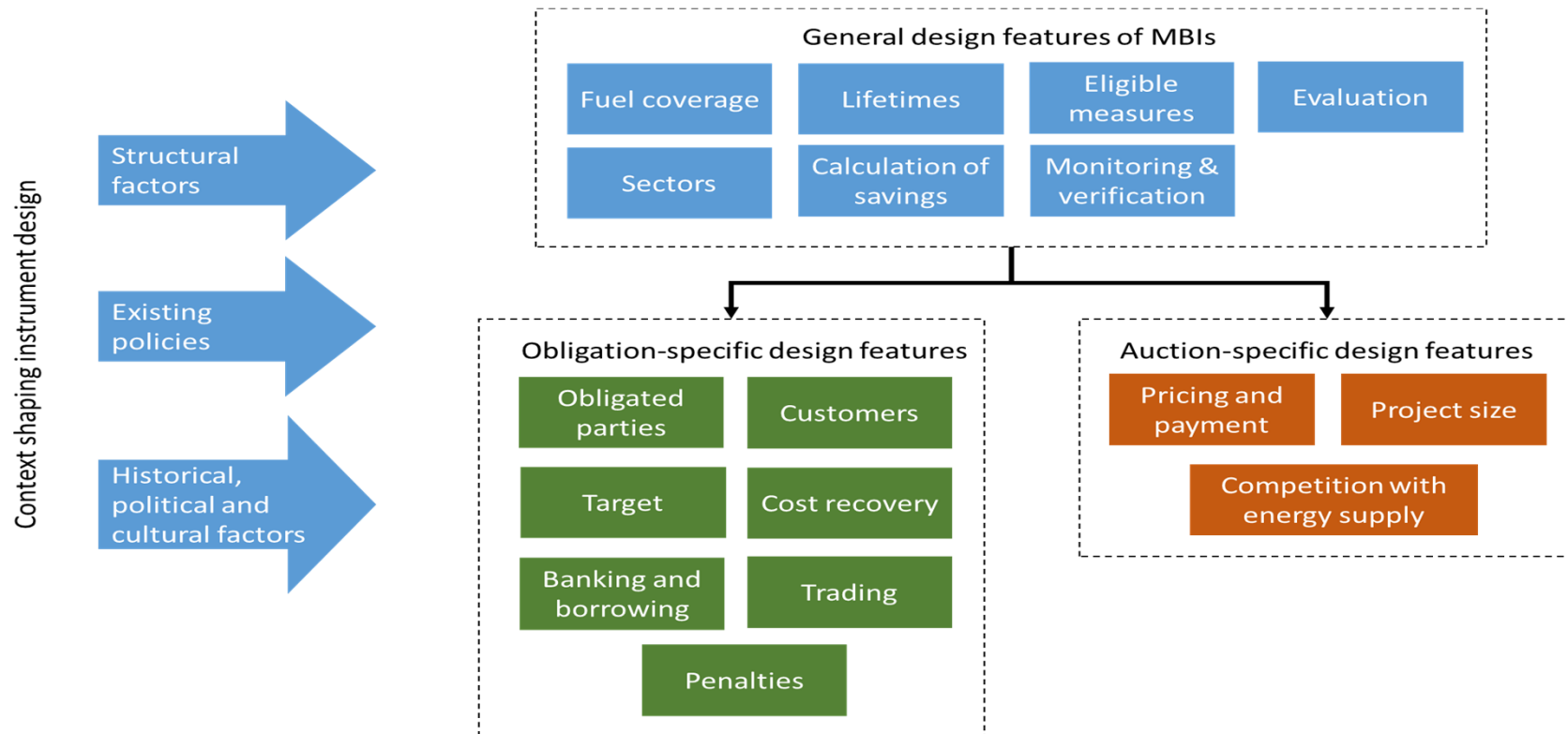
Obligation programme	Leverage effect
United States (across several obligations)	241%
United States (residential)	174%
United States (commercial, industrial and agriculture)	217%
United States (low income)	106%
United Kingdom (across obligation 2002-05)	187%
United Kingdom (residential 2005-08)	144%
France	137%
Denmark	300%

- Depending on certain choices in programme design

	Leverage effect low	Leverage effect high
Aggressiveness of target or ambition level	High	Low
Focus on low-income beneficiaries	Yes	No
Approach to additionality	Stringent	Relaxed
Sectors	Low-income residential sector	Commercial, public and industrial sector

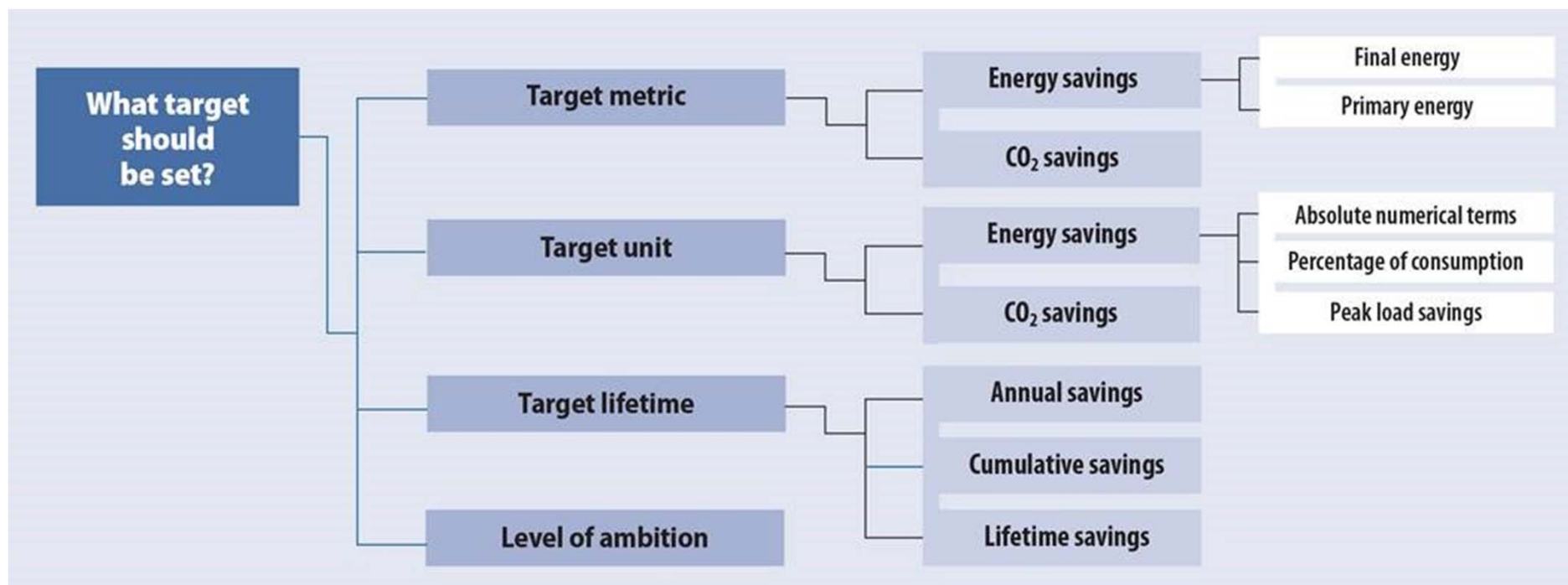
Policy design can have a big impact on programme leverage

Design choices for market-based instruments



Plentiful option menu to choose from for designing market-based instruments needs to be tailored to (policy and cultural) context

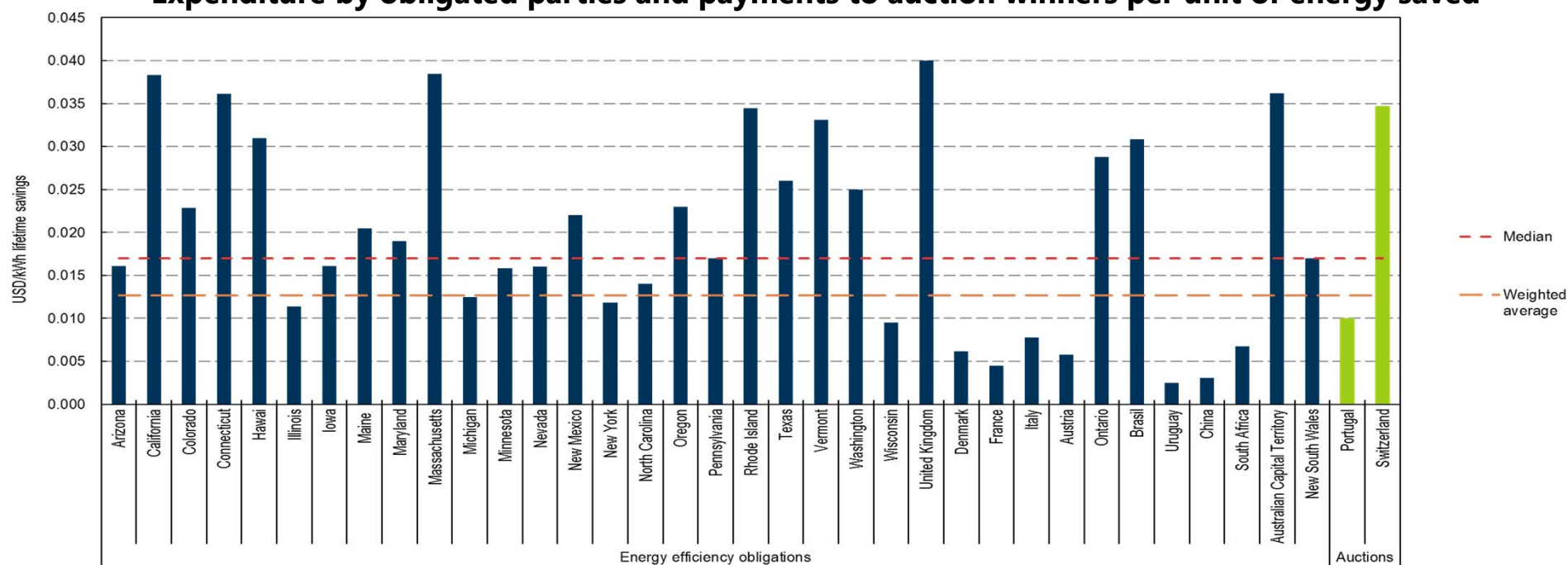
Example: Target metric



Considerable variation in cost among programmes

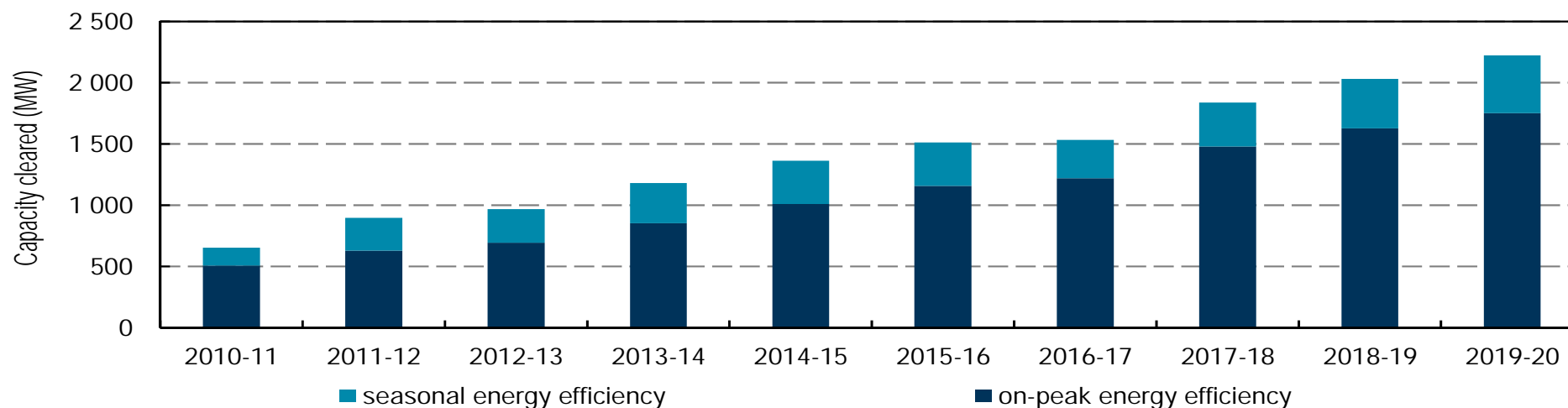


Expenditure by obligated parties and payments to auction winners per unit of energy saved



MBIs are saving significant amounts of energy for less than the cost of supply

Energy efficiency savings successfully cleared in the ISO-NE capacity market



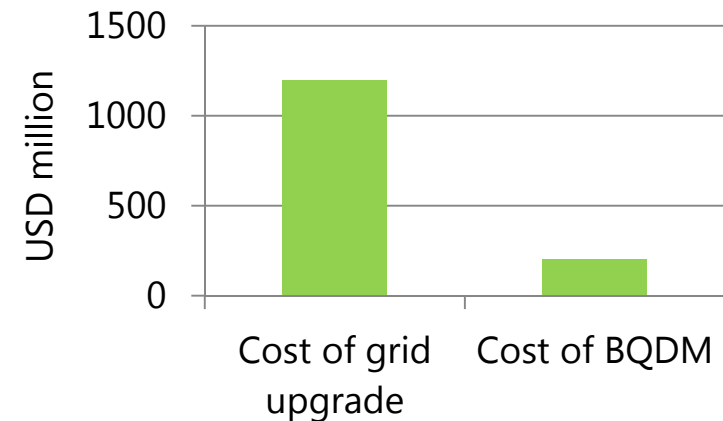
Capacity auctions reward energy efficiency for just one of the multiple benefits they provide

Energy efficiency as a resource – potential for grid services

- Brooklyn-Queens Demand Management (launched 2014): Customer-based efficiency and other distributed resources in order to avoid or defer grid upgrade



Goal: Reduce load by at least 52 MW for periods as long as 12 hours per day in peak summer days



- Efficiency measures in 3 700 SMEs, 1 000 multi-family buildings, and 2200 homes
- SMEs saving an average of USD 3 500 on their power bills each year

Market-based instruments as part of demand side management can avoid costly investment in grid services and benefit customers

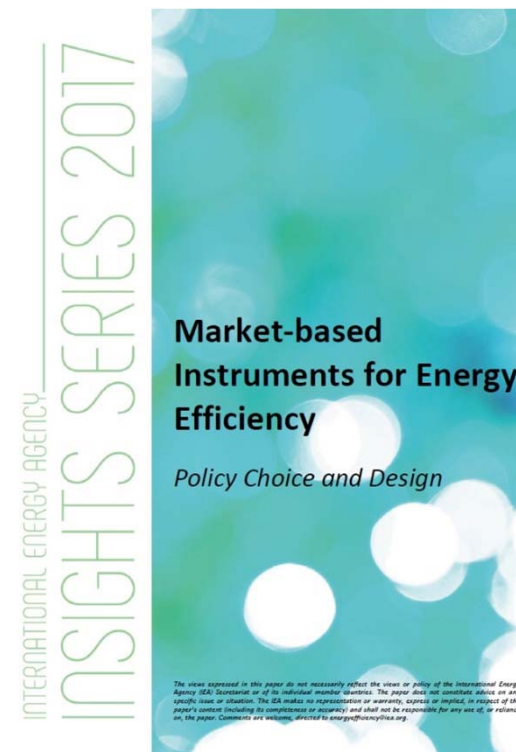
Key policy design and implementation issues

- MBIs put a premium on good policy design and implementation.
- MBIs must work within existing policy frameworks.
- Flexible programme design that permits savings to be delivered across a broad range of customers and fuels has proven to be a sound approach.
- Programme rules should be as simple as possible but as complex as necessary.
- Independent monitoring, verification and evaluation are vital for the integrity of programmes.

Further reading



Report: Market-based Instruments for Energy Efficiency Policy Choice and Design





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