

# New energy services and programs for energy efficiency

Tony Westmore  
General Manager  
Australian Alliance for Energy Productivity

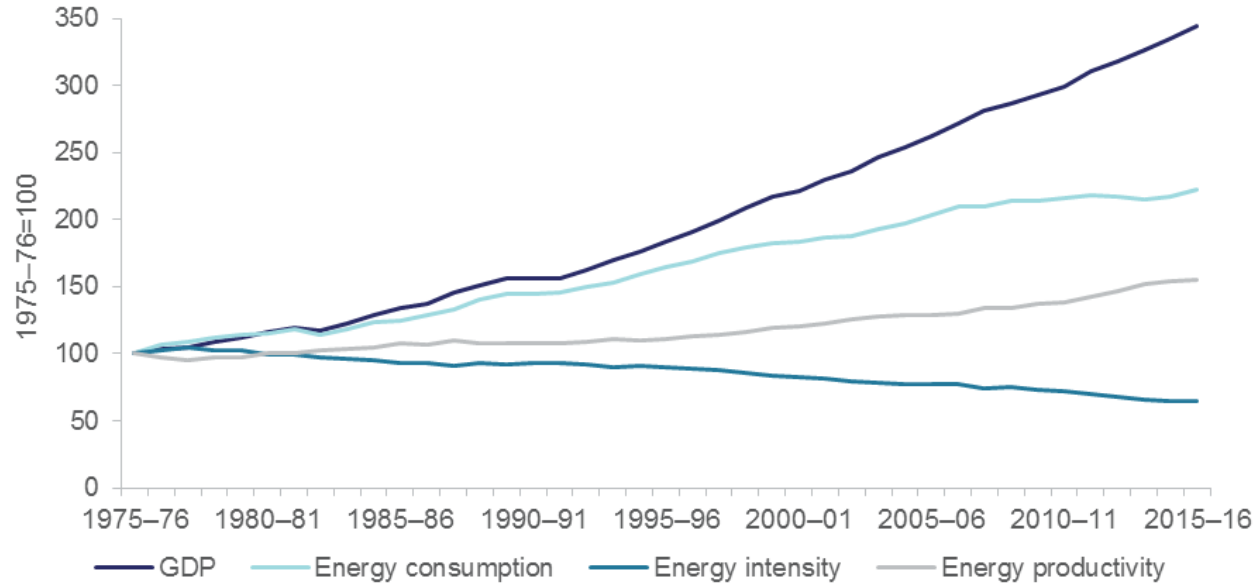
Energy Consumers Australia  
Foresighting Forum  
28 February 2018, Sydney



***Once you've taken charge of your bills,  
you can take charge of your energy use.***

Government-operated website, 26 February 2018

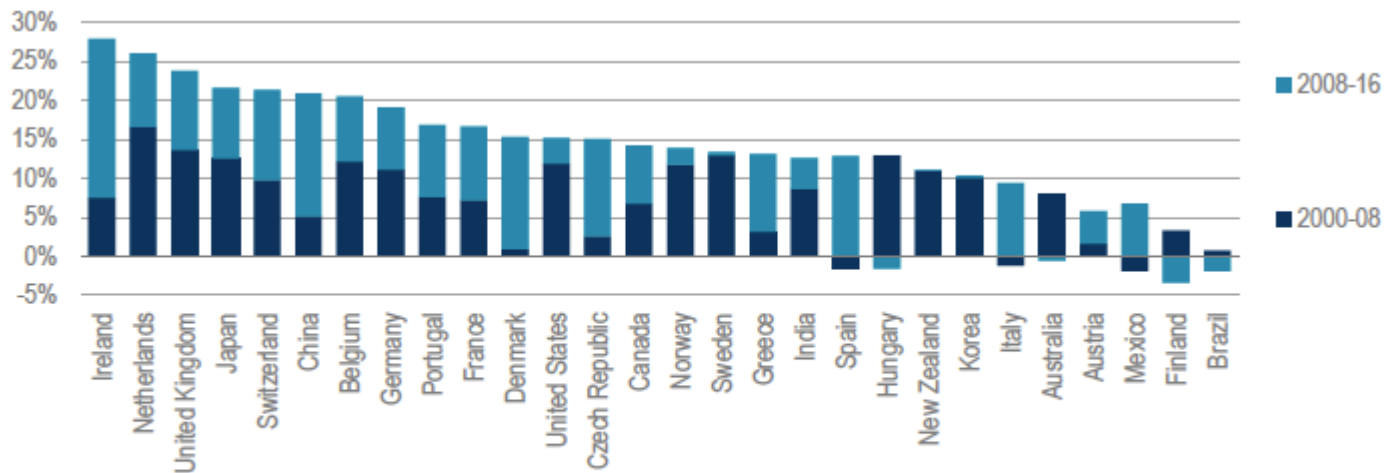
# Energy productivity, energy intensity



Source: Department of the Environment and Energy, *Australian Energy Update 2017*



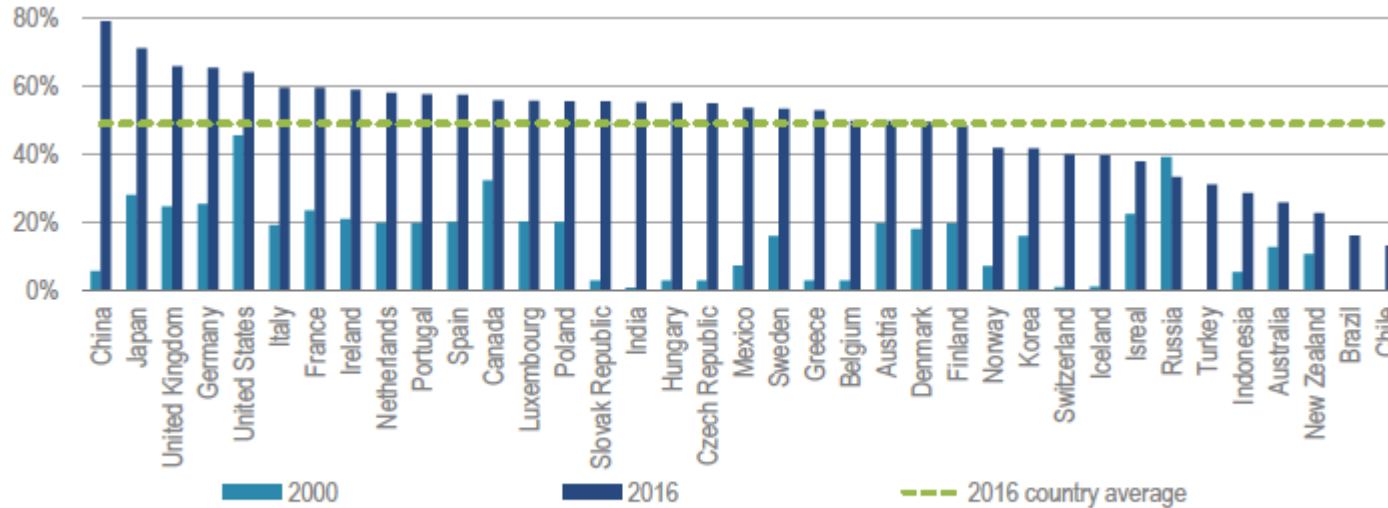
## Percentage improvement in the efficiency effect for select countries 2000-16



Sources: Adapted from IEA (2017e), *Energy Efficiency Indicators* (database), [www.iea.org/statistics/topics/energyefficiency/](http://www.iea.org/statistics/topics/energyefficiency/); Timmer et al. (2015), *World Input Output Database* (database), [www.wiod.org](http://www.wiod.org); IEA (2017c), *Mobility Model* (database), [www.iea.org/etp/etpmodel/transport](http://www.iea.org/etp/etpmodel/transport); IEA (2017d), *Energy Technology Perspectives 2017* (Residential Model); and IEA (2017a), *World Energy Statistics and Balances 2017* (database), [www.iea.org/statistics](http://www.iea.org/statistics).

Source: International Energy Agency, *Energy Efficiency 2017*, p22

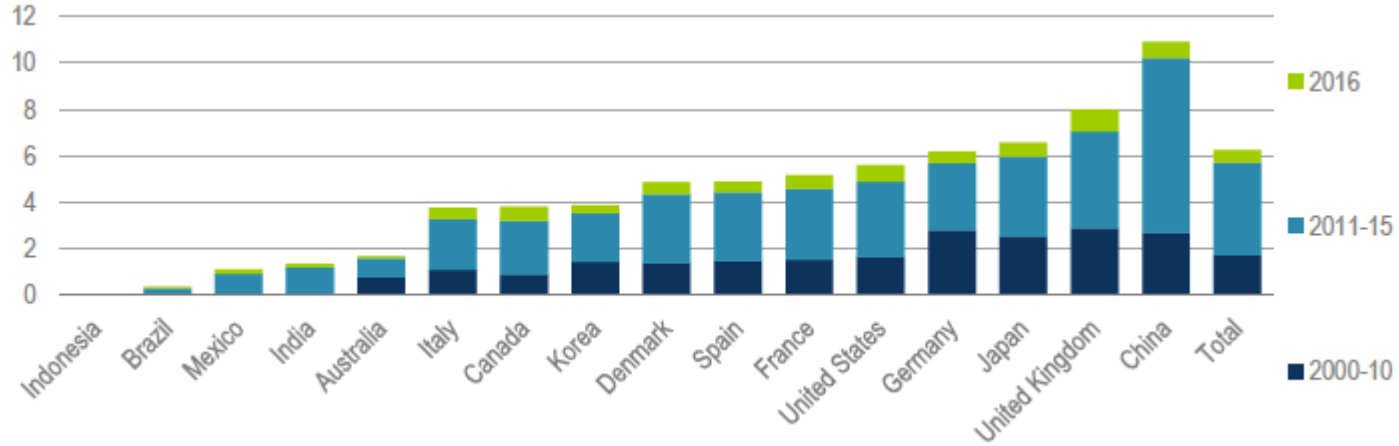
## Coverage potential of existing mandatory codes and standards



Note: The dotted green line in the chart is the arithmetic (unweighted) country average (mean) of coverage potential across the 37 countries.

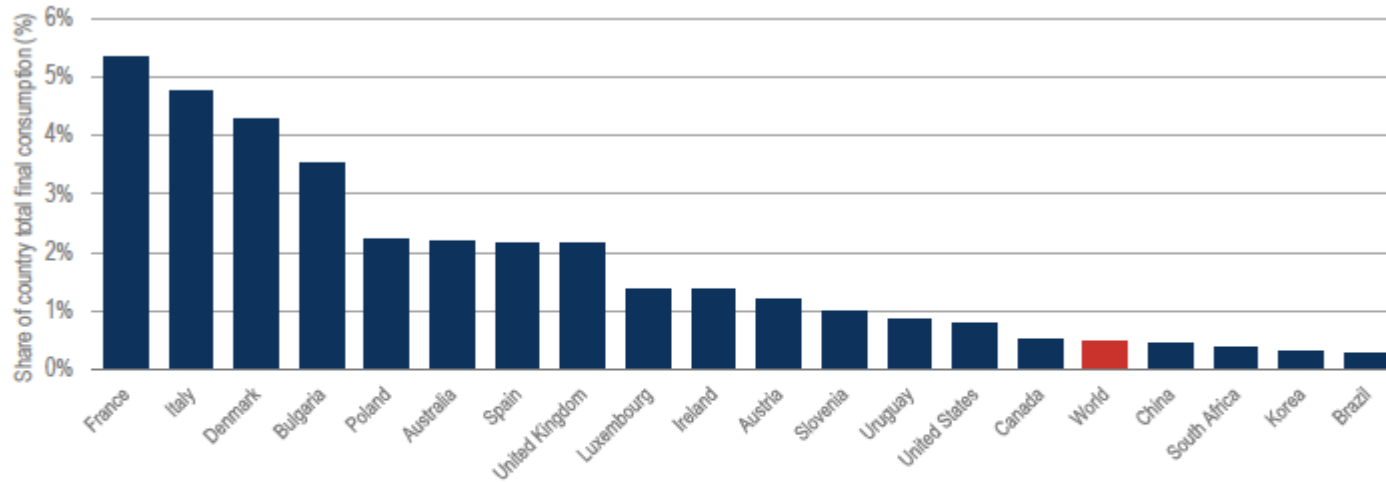
Source: International Energy Agency, *Energy Efficiency 2017*, p40

# Efficiency policy progress index, 2000-16



Source: International Energy Agency, *Energy Efficiency 2017*, p45

## Energy savings in 2016 from utility obligations in operation since 2005 (% of final energy)



Sources: IEA (2017d), *Market Based Instruments for Energy Efficiency*, [www.iea.org/publications/insights/insightpublications/MarketBased\\_Instruments\\_for\\_Energy\\_Efficiency.pdf](http://www.iea.org/publications/insights/insightpublications/MarketBased_Instruments_for_Energy_Efficiency.pdf); ATEE (2017), *Snapshot of Energy Efficiency Obligation Schemes in Europe: 2017 Update*, [http://atee.fr/sites/default/files/part\\_6\\_2017\\_snapshot\\_of\\_eeos\\_in\\_europe.pdf](http://atee.fr/sites/default/files/part_6_2017_snapshot_of_eeos_in_europe.pdf); ACEEE (2016b), *State and Local Policy Database*, <http://database.aceee.org/state-scorecard-rank>; US EIA (2017), *State Profiles and Energy Estimates*, [www.eia.gov/state/seds/](http://www.eia.gov/state/seds/); DOIS Australia (2016), *Energy in Australia*, <http://industry.gov.au/Office-of-the-Chief-Economist/Publications/Pages/Energy-in-Australia.aspx>; Ontario Energy Board and IESO (2017), *Ontario Energy Report*, [http://www.ontarioenergyreport.ca/pdfs/5806\\_IESO\\_OntarioEnergyReportQ42016\\_Electricity\\_EN\\_FA.pdf](http://www.ontarioenergyreport.ca/pdfs/5806_IESO_OntarioEnergyReportQ42016_Electricity_EN_FA.pdf).



## Optimisation:

- > focus on outcomes (eg temperature) and services (heat/cool)
- > first look first to *necessary* demand and consumption
- > then scale to *right-size* and supply effectively



## Integration:

- > efficiency of processes for services (context, equipment, appliances)
- > grid delivered supply and services, tariffs and demand management
- > distributed generation and storage
- > data and control, analysis and automation

## Information:

- > about optimisation and integration, to enable consumers to consider options and make informed choices
- > about consumption and production, as an enabler of optimisation and integration, as an essential (and largely missing) contributor to choice, policy, regulation etc

## **To do:**

- > Properly resource the National Energy Productivity Plan. Review. Update.
- > Facilitate, incentivise and reward investment by consumers
- > Accelerate innovation: Update the ARENA mandate
- > Improve and share the knowledge base. Build tools.

## **Households**

- > Accelerate implementation of a residential ratings and disclosure framework
- > Accelerate increased stringency of performance standards

## **Businesses**

- > Incentivise metering, sub-metering and monitoring
- > Accelerate gas displacement
- > Pilot value chain precincts



*Doing more. Using less.*



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*Doing more. Using less.*