

# Mapping & Benchmarking of the Impact of “Phase-out” on the Lighting Market (updated)



The IEA's 4E Mapping and Benchmarking activities provide policy makers with evidence based comparisons of the performance of products sold in various national markets. This allows benchmarking of the success of national policies in managing product energy consumption and efficiency and enables identification of opportunities to further encourage the uptake of energy efficient products.

This briefing updates the outcomes of the international comparison on the impact of policies to phase-out inefficient lighting products from national lighting markets. The analysis includes information drawn from Australia, Austria, Canada, Denmark, the EU, Japan, the Republic of Korea, the UK and the USA.

## Observations for Policy Makers

- Although regulatory actions to phase-out the least efficient lamps from individual markets appear very similar, **variations in the detail of each regulation have the potential to lead to different outcomes.** Harmonisation of requirements would yield higher energy savings, better compliance, improved enforcement opportunities and cost reductions for consumers.
- **Minimum Energy Performance Standards (MEPS)** to phase-out less efficient lighting products **have resulted in substantial falls in the sales of traditional incandescent lamps.** However, in most markets, a consumer migration to halogen lamps means increases in overall efficiency are often substantially less than anticipated.
- Failure to maintain the current momentum of market change to transition away from halogen lamps to the most efficient lighting options represents a significant missed energy saving opportunity and risks **halogen products becoming the default choice for consumers** making their later removal from the market more challenging.
- Despite heavy promotion and rapidly increasing sales, **LED lamps typically accounted for only 5% of all 2013 lamp sales** in any market researched, and no more than 15% in markets where their penetration is most advanced.
- **Non-regulatory interventions in lighting markets can have significant impact.** However, in general these impacts are not sustained, and purchasing patterns rapidly revert to their original state when the interventions are ended.
- **Lighting products with extended functionality (e.g. internet connectivity, changeable colour, etc) are beginning to enter all markets.** The energy impacts of these products need to be monitored to inform the development of appropriate policy frameworks. This may be best achieved through international collaboration.

## More Information

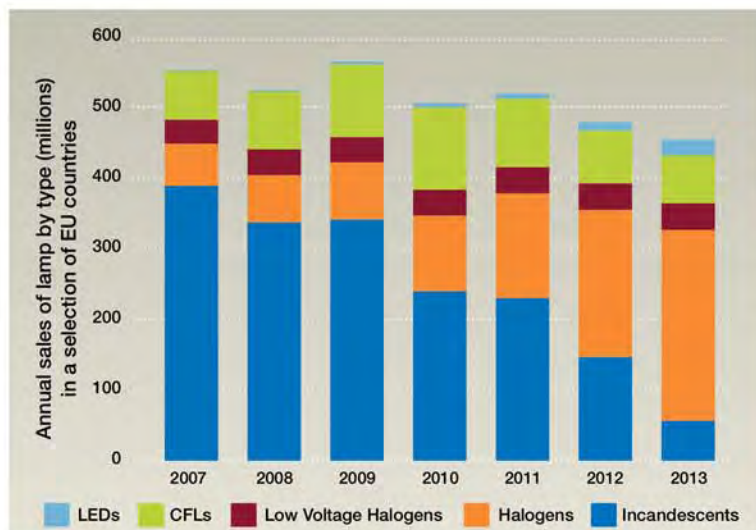
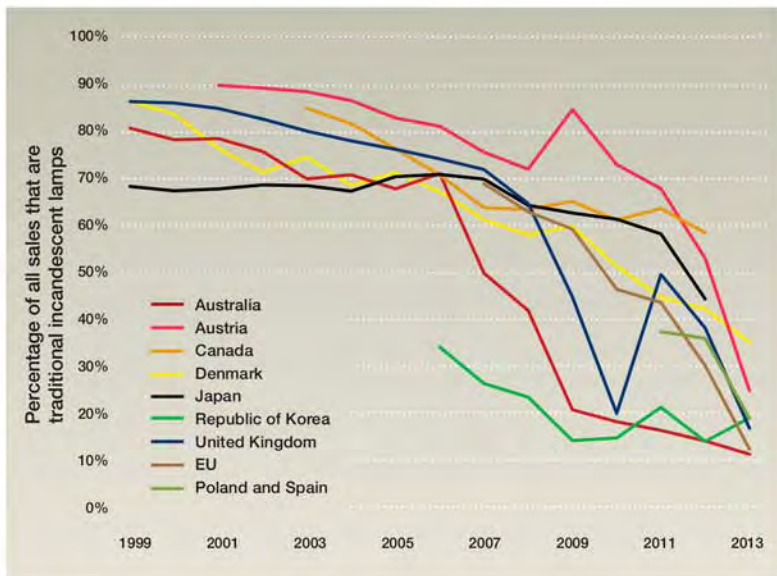
All publicly available mapping and benchmarking outputs are available at <http://mappingandbenchmarking.iea-4e.org>.

For further information email: [webmaster4e@gmail.com](mailto:webmaster4e@gmail.com)

# Key Findings

## Impact of Phase-out on Sales of Incandescent Lamps

Markets where mandatory regulation to curb the sale of inefficient lighting products has been in effect for a significant period (Australia, EU and Korea) have seen dramatic falls in the sales of traditional incandescent lamps. Due to specific cultural and economic drivers, Japan is the only market to have demonstrated significant market change from non-regulatory policy intervention, most recently resulting from the urgent need to reduce energy consumption following the loss of power supply facilities.

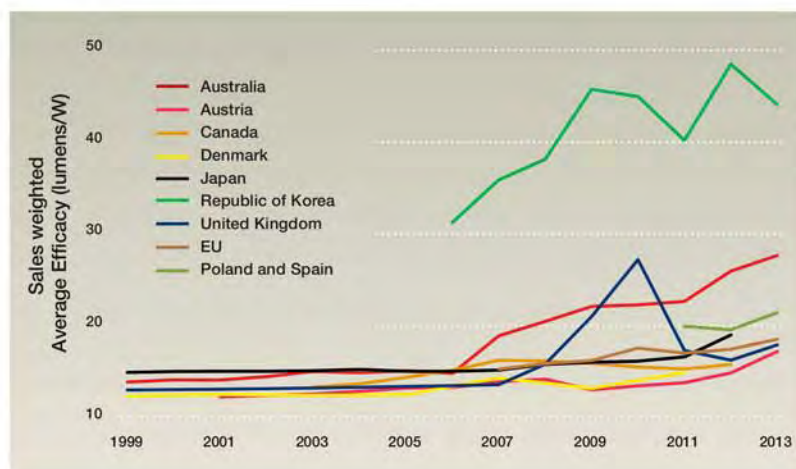


## Market Migration to Halogen Technology

There has been a migration to halogen lamps in all markets to varying degrees. Sales of lamps in a selection of EU countries illustrate the typical move away from traditional incandescent lamps towards halogens and, to a far lesser extent, towards LEDs.

## Impact on Overall Efficiency

Since halogen lamps are only marginally more efficient than traditional incandescent equivalents, market average efficiencies of lamp sales have typically risen from 12-15lm/W to 17- 20lm/W. Australia has achieved an average of 27lm/W due to higher levels of CFL sales resulting from a range of additional measures in support of their MEPS, including engagement with retailers. Through regular revision of MEPS, adoption levels of CFLs have been particularly high in Korea leading to average efficiency of lamp sales in excess of 40lm/W. To emulate the results from Korea, and to realise the significant additional energy savings immediately available, most economies will require revisions to their MEPS to remove the majority of halogen lamps from their market.



This policy brief is based on a full report published in March 2015. Data quality varies between countries and graphs. See full report for details. The IEA Implementing Agreement on Efficient Electrical End Use Equipment has made its best endeavours to ensure the accuracy and reliability of the data used herein, however makes no warranties as to the accuracy of data herein nor accepts any liability for any action taken or decision made based on the contents of this report.