The IEA’s 4E Mapping and Benchmarking Annex provides 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 describes the outcomes of an international comparison of the energy consumption of two types of self-contained retail display cabinet: horizontal ice cream freezers and vertical glass door chilled cabinets. The full report draws data from Australia, Canada, UK and the USA (USA represented via ENERGY STAR and Californian Energy Commission data).

**Observations for Policy Makers**

- **There is significant scope for improvement in efficiency** across products in all markets analysed. The best cabinets use less than one third of the energy per unit volume consumed by the average chilled and frozen cabinets of both large and average sizes.

- **There appears significant scope to tighten minimum efficiency requirements** in Australia, Canada and the USA for these products when compared to (for example) ENERGY STAR levels, although there may be cost implications.

- **Significant differences exist between Europe/Australia and the USA/Canada** test methodologies, product classifications and efficiency metrics. Closer alignment is likely to lead to increased competition among suppliers, easier benchmarking and monitoring by enforcement agencies, and efficiency benefits from increased technology or product transfer between markets.

**More Information**

All publicly available Annex mapping and benchmarking outputs are available on the Annex website at [http://mappingandbenchmarking.iea-4e.org](http://mappingandbenchmarking.iea-4e.org).

For further information email: [contact@mapping.iea-4e.org](mailto:contact@mapping.iea-4e.org)
Key Findings

**Average energy consumption of glass door refrigerated cabinets**

The average consumption of self-contained vertical glass door refrigerated cabinets in Canada, Australia and California has remained at around 6 kWh/day between 2008 and 2011. Consumption for horizontal ice cream cabinets in the same markets varies between 6 and 9 kWh/day and has improved by 10% per annum over the 2 to 3 years to 2011.

**Significant scope for improvement in glass door refrigerated cabinets**

Canadian product data shows a spread of over 300% from the worst to the best performing glass door cabinets of all sizes. In California there is an equivalent spread of just 200%, possibly explained by the adoption of more stringent MEPS. Best performing cabinets across the board achieve consumption per unit volume of around one third of the average—implying significant scope for improvement.

**Regulatory efficiency requirements vary significantly**

As the graph for self-contained horizontal ice cream cabinets shows, the USA Federal MEPS level was more stringent than that in Canada in 2011, until Canadian requirements were tightened in 2012 to coincide with the USA (both regulations apply to vertical as well as horizontal cabinets; Californian dataset did not enable filtering out of vertical frozen cabinets). Data implies that existing Canadian and USA MEPS could be cut by one third and still retain a reasonable choice of frozen horizontal cabinets, although there may be price implications (the same applies to chilled cabinets—see main report).

*This policy brief is based on a full report published in December 2012. 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.*