Repairability indices and labels

Repairability indices and labels are regulatory instruments that provide reliable and transparent consumer information to guide markets toward longer-lasting and more resource-efficient products.

Developing clear and robust repairability and durability indices is complex, as these metrics must be both technically meaningful and easily understood by consumers. Ensuring that energy-efficient appliances remain affordable is also a key concern, as is designing policies that effectively influence consumer behaviour.

Selected lessons

- Regulation covering repairability, durability, and circularity can help drive energy efficiency progress, so there is merit to combining this information for consumer products.
- It is possible to develop multi-criteria indicators on repairability and durability for appliances such as phones and tablets.
- Multi-criteria indicators offer consumers more coherent and comprehensive information that is comprehensible for consumers.
- The introduction of repairability and durability indexes can positively influence consumer behaviour.
- The combination of regulation, information campaigns, and incentives enables the replacement of inefficient products with highly efficient, more durable ones.
- This is an emerging policy area, and the impact of introducing repairability scores on energy labels, including on consumer experience and product performance, is still under assessment.

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Examples of relevant policies adopted by Hub Members include the following:

In **China**, major manufacturers have developed new production standards through voluntary initiatives. The GB/T 34454-2017 standard was issued to measure the performance of dry-cleaning robots, refrigerators, washing machines, and ACs. The GB/T 21097-2025 standard sets out recommendations for manufacturers to adopt designs for products that are lightweight, modular, easily-disassembled, and recyclable. GB/T 24986 provides guidance on testing to improve the repairability and increase the lifespan of household electrical appliances. Manufacturers are mandated to keep spare parts in stock for appliances for at least 5 years.

In 2025, the **European Commission** introduced repairability scoring for devices within the Ecodesign for Sustainable Products Regulation (ESPR). The ESPR established a framework for energy labelling policies together with the Energy Labelling Regulation (2023). Devices placed on the EU market must meet minimum performance standards and must also carry a new EU label indicating battery endurance, drop resistance, battery cycle durability, a repairability score, and an energy efficiency class. The EPREL database allows consumers to compare models and filter by best energy or repairability ratings. Research is underway to better understand consumer experiences and product performance.

France introduced requirements on repairability and recyclability in the 2020 AGEC law. It led to the creation of the repairability index, used for a number of appliances. Impact analysis indicates a shift toward models with higher repairability. Two years after implementation, the average repairability score rose across all categories, including a 12% increase for smartphones. A durability index was later developed, incorporating reliability and robustness criteria based on existing European-harmonised standards such as resistance to stress and wear. A national durability index database was created to ensure transparency and provide free public access to information for the individual appliance categories of televisions and washing machines. A repair bonus encourages individuals to repair their equipment rather than replacing it by offering a discount on the repair.

Saudi Arabia put in place awareness campaigns to reduce energy consumption and promote product efficiency. Two incentive programmes are also encouraging consumers to purchase highly-efficient split ACs and to replace inefficient window ACs. As a result, 600 000 AC units were sold, and 300 000 units were recycled. The improvement of equipment energy performance is favoured by energy efficiency standards, regulations, and testing protocols. Commercial regulations require retailers to ensure availability of adequate spare parts for repair and provide warranties of a minimum of 2 years.

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Resources

- Policy Toolkit for Appliances provides an overview of the most important elements of regulation, information and incentives instruments to support appliance energy efficiency.
- Super-Efficient Equipment and Appliances Deployment (SEAD) promotes the manufacture, purchase, and use of efficient appliances, lighting, and equipment worldwide.

These policy insights are derived from Members' exchanges during Policy Exchange Workshops. Hub Members regularly exchange knowledge and practical experience through the Energy Efficiency Hub's Policy Exchange Workshop series. These closed-door sessions provide a platform for experts nominated by Member governments to explore specific energy efficiency topics in greater depth across sectors such as buildings, transport, and industry. Each workshop features national policy presentations, peer-to-peer discussion among officials responsible for design and implementation, and scene-setting contributions from IEA experts.

Findings presented in this Policy Insight are drawn from the discussions that took place during the Policy Exchange Workshop from the 10 February 2026 (China, European Commission, France, and Saudi Arabia).

For more information, please contact the Energy Efficiency Hub Secretariat at secretariat@energyefficiencyhub.org.

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