Minimum Energy Performance Standards

WHAT THEY ARE

Minimum energy performance standards (MEPS) are a regulatory instrument in the appliance policy package. They set a minimum efficiency threshold for appliances or other energy-consuming equipment to overcome barriers to improved efficiency, such as potentially higher purchase prices or product availability, and provide a level playing field in competitive markets. Equipment that does not comply with these minimum requirements is not allowed to be sold on the market.

Depending on the lifetime of a product and possible policies to incentivise early replacement, such as financial rewards, the stock turnover induced by MEPS happens over a longer or shorter time period. MEPS effectively limit the products on the market to new equipment that is more energy efficient. Less efficient equipment will not enter the stock or leave the stock gradually as it is replaced. MEPS are among the longest standing energy efficiency policy instruments and often very cost-effective in improving the energy efficiency of products on the market. As of 2024, over 128 countries representing 97% of world electricity consumption have MEPS in place for at least some appliances.

HOW TO IMPLEMENT

The implementation of MEPS requires technical expertise to set up a Quality Infrastructure System adjusted to local requirements. This contains a regulatory framework (standards and technical regulations), institutions (standardisation, accreditation and certification bodies, as well as market surveillance and enforcement) and a dedicated infrastructure such as local or regional laboratories. The implementation usually follows this process:

1. **Technical assessment**: Using energy demand analysis and market data, identify target products based on the potential impact of energy efficiency regulation. Priorities are assigned based on energy consumption and savings potential.
2. **Development of technical standards**: Develop standards which define and specify the testing procedures and conditions to determine the efficiency of a product. These can be based on international standards (such as ISO or IEC standards) to facilitate trade and simplify the implementation process.
3. **Technical regulation:** Issue technical regulation that defines minimum energy efficiency performance thresholds and legislative acts that prohibit manufacturers and importers to put equipment on the market that does not comply with the regulation. These acts define the scope, the obligations, the implementation timeline, the conformity assessment procedures and other relevant requirements.
4. **Implementation period**: Identify the date the regulation will come into force. To give market actors more time to adapt, policymakers can implement the regulation at first with a less stringent threshold and increase stringency at specified dates.

5. **Compliance and enforcement**: Set up compliance and enforcement frameworks to ensure that products comply with the requirements, based on three pillars:
   - Conformity assessment procedures define the process for suppliers to ensure their product complies with the regulation. They can include product testing, performance declaration and product registration.
   - Market surveillance by the responsible authorities to monitor registered products, verify declarations and screen the market for non-registered products.
   - Enforcement by the authorities, including issuing of penalties for non-compliance and to deter further non-compliance.
6. **Continuous updates**: Once the system is functioning and the number of non-compliant products is under control, continue to expand the scope and stringency of the standards with regular updates to keep up with market and technology developments.

HOW TO MONITOR

To update the policy and to ensure compliance and enforcement, the programmes should be periodically evaluated, ideally by independent researchers. Evaluation should be transparent. Objectives, indicators and methods for data collection and analysis should be clear in advance. Analysis should include indicators on target achievement (e.g. all new devices sold have at least the regulated minimum energy performance), impacts (e.g. the energy consumption of the given equipment is reduced by x% per year; household energy savings; reduced additional cost to consumers), and process (e.g. number of faulty energy performance certificates; number of complaints by manufacturers; cost of market surveillance). The impact evaluation should carefully define a baseline of equipment that would have been sold without the regulation and compare it with the volume of equipment actually sold. Manufacturers may be required to report their annual sales by efficiency level..