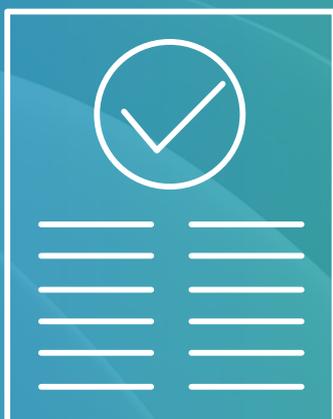


Policy tool



#3

Regulations and certification

Policy tool

Use international standards to avoid regulatory fragmentation when upgrading energy efficiency regulations.

#3 Regulations and certification



What are technical regulations and standards?

Technical regulations set out mandatory product characteristics or requirements for their related processes and production methods. Standards are similar, but are voluntary in nature. To assess compliance with such measures, conformity assessment procedures (e.g. testing, verification, inspection and certification) may be used. Regulations are often adopted to fulfil legitimate policy objectives, including those related to climate action.

How can regulations, such as energy efficiency requirements, help mitigate climate change?

The role of energy efficiency regulations in addressing climate change can be twofold. First, energy efficiency requirements for certain consumer goods, such as electric vehicles, construction material or household appliances, can help reduce domestic energy consumption and related GHG emissions, by excluding the most polluting goods from the market. Second, energy efficiency labelling schemes, notably on household appliances or in emission-intensive industries, can lead to more informed decision-making by consumers. As awareness of the availability of more energy-efficient and less emission-intensive goods grows, labelling schemes can be instrumental in allowing consumers to more easily choose greener products when they wish to do so.

The key role of regulatory instruments in climate change mitigation efforts was recognized by the [6th Assessment Report by the IPCC](#). Studies reviewed in the Report estimate that the growing number of energy efficiency measures around the world have saved at least 500 metric tonnes of CO₂ equivalent per year since 2000 ([IPCC, 2022](#)). For example, in South and South-East Asia, energy efficiency in buildings has improved by 5-6 per cent annually since 2010. Energy efficiency regulations therefore offer great emission-reducing potential for the future, having already reduced annual energy-related emissions by 12 per cent in the 2000-17 period and potentially delivering over 40 per cent of the abatement required to be in line with the Paris Agreement targets by 2040 ([IEA, 2021a](#)).

Although some markets have introduced new regulations mandating the exclusive sale of high-efficacy LED lamps as opposed to less energy-efficient forms of lighting, progress in this area must be sustained to ensure that all economies sell predominantly LED technology by 2025, and with increasing efficiency, to align with the IEA's Net Zero Emissions by 2050 Scenario. Energy efficiency

WTO members' experiences with energy efficiency regulations

Since 2009, over 1,180 energy efficiency and conservation regulations have been notified to the WTO by over 70 WTO members ([EDB](#)). The number of measures notified over the years has stayed constant, with a minimum of 68 measures notified each year and a peak in notifications in 2021 (147 measures notified).

Most of the regulations target commercial appliances and industrial equipment (such as air conditioning, and heating and cooling systems), household appliances (e.g. clothes dryers, refrigerators and dishwashers), and fluorescent lamps, construction products and material.

Some recent examples include:

- *Draft East African Standard 1064-1&2:2021* – a minimum energy performance standard for lighting products harmonizing requirements across East African economies (2022);
- The European Union's new Ecodesign for Sustainable Products Regulations (2022) providing EU-wide rules for improving the energy performance of certain goods;
- Chile's law on energy efficiency, which provides for the establishment of energy efficiency standards for light-, medium- and heavy-duty vehicles (2021); and
- Indonesia's Minimum Energy Performance Standard and Label for Energy Utilizing Household Products (2021).

measures in the building sector, such as insulation or more efficient appliances, could also help reduce GHG emissions in the sector by 50 per cent by 2050 ([Creutzig et al., 2021](#)).

What could be done to align energy efficiency regulations with wider climate action policy plans?

When adopting climate-related regulations, adherence to WTO principles is important. For example, coherence, effectiveness and international cooperation – as well as harmonization with international standards – will make measures more effective in achieving climate goals ([WTO, 2022g](#)). The importance of international cooperation in tackling climate change was also recognized by the IPCC in its 2022 Report ([IPCC, 2022](#)). It holds particularly true for technical regulations and standards. For example, different measuring methodologies for calculating the energy efficiency of goods across trading partners can lead to legitimacy issues and make tracking global emissions reduction efforts more challenging. Moreover, different methodologies can also increase unpredictability and compliance costs for producers and unnecessarily restrict international trade ([WTO, 2022i](#)).

WTO rules and institutions help promote coherent and fit-for-purpose regulations as well as alignment with international standards, including for the measurement of carbon emissions embodied in traded goods or energy efficiency. The WTO also provides a platform where international cooperation is encouraged and discussions on climate-related measures take place (see box). In order to reduce regulatory fragmentation, WTO members have held multiple discussions on at least 80 specific energy efficiency regulations at the Committee on Technical Barriers to Trade. Through these discussions, WTO members have contributed to more regulatory convergence on energy efficiency, which has advanced cooperation on some of the current climate-related challenges.

When adopting climate-related regulations or standards, it is crucial to keep in mind that developing economies face specific challenges which may render compliance more difficult, including in the area of energy efficiency. A well-developed domestic quality infrastructure⁴ can help surmount some of these limitations. Providing support and technical assistance to developing economies in this area could help them demonstrate their carbon competitiveness, which will be crucial for a just transition to a low-carbon economy. It could also help SMEs take full part in global low-carbon value chains.

The WTO Secretariat, including in close cooperation with institutions working on international standards, can help governments' efforts to ensure that standards development and regulatory practices are better aligned with their climate action plans.