



Spain

Review of past and existing policy options for the acceleration of electric motor renovation

EU-MORE

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List of Acronyms

Acronym	Text
EuPs	Energy-using Products



SPAIN

Introduction and description of the national policy framework and important related national programmes, measures and/or developments:

Spain's NECP: "In particular, the Commission's recommendations may address (i) the level of ambition of objectives, targets and contributions with a view to collectively achieving the Energy Union objectives and, in particular, the Union's 2030 targets for renewable energy and energy efficiency as well as the level of electricity interconnectivity that the Member State aims for in 2030". The Measure 2.5 (*Improvements in the technologies and industrial processes*) includes the renovation of industrial processes including energy efficiency measures, particularly in SMEs, but applies to all industries. Also, promotes investments in these substitutions by using BTAs (Best technologies available). It mentions this measure is linked to ISO50001.

Odysse-Mure database: 2 policy documents were found on the "Recast Ecodesign Directive for Energy-related Products (Directive 2009/125/EC) - Ecodesign requirements for energy-related products (recast)"

- Household sector (not within this research scope);
- Services sector (within this research scope).

The Ecodesign requirements, approved by Royal Decree 1369/2007, involve an addition to the already existing national legislation on the equipment in the buildings of the tertiary sector. The joint implementation of both measures will enhance the impact on the affected products, resulting in greater penetration of more efficient products on the market.

The Regulation 2019/1781 prescribes the rules to be followed for the ecologic design of electric motors^{1 2}:

- Applies to electric motors up to 1.000 kW
- Establishes requirements for electric motors and speed variators. For electric motors, efficiency level should be minimum IE3. When using speed variators, the power losses in variator+motor should not lead to a lower efficiency level than the stipulated for IE2.

Brief evaluation of the overall size and scope of national actions in relation to the replacement of electric motors and the EU-MORE project as a whole

Energy efficiency measures in industries, with special focus on substitution of equipment by more efficient, should lead to 10.260 kTOE of accumulated final energy savings in the period 2021-2030.

Considering that electric motors in industries can be responsible of 50% of the energy demand, the potential for this period is over 5.000 kTOE in total.

¹ <https://static.weg.net/medias/downloadcenter/h8f/h1a/WEG-new-european-efficiency-regulations-50103352-guide-spanish-web.pdf>

² <https://www.boe.es/doue/2019/272/L00075-00094.pdf>

Larger industries, due to obligations in energy audit developments, are taking the lead of the substitution of electric motors. SMEs are also renovating electric motors but in a lower number, due to both the size of the companies (less motors) and economic reasons (more difficult competitiveness).

1.1 Measure 1: Ecodesign requirements for EuPs Royal Decree 1369/2007

	Overview
Short Description	The Ecodesign requirements are to be applied to energy-using products (EuPs) for their functioning with a view to contributing to sustainable development and the preservation of the environment through an increase of energy efficiency, a decrease of pollution and an increase in the security of energy supply.
Responsible Authority	Central Government Trade Associations
Status	Ongoing
Issue Date	2007
Start Date	2007
Ending Date	-
Duration	Ongoing (15 years)
Reference:	https://www.measures.odyssee-mure.eu/energy-efficiency-policies-database.html#/measures/1912 NECP 2021-2030, original in NECP 2021-2030, original in Spanish , English version EC's individual assessment (SWD/2020/908) in Spanish or English

1.1.1 Main Description

A detailed description of the policy measure – including references to (if applicable) anchoring national law, EU directives, other schemes

This Royal Decree considers a series of enforcement measures establishing the ecodesign requirements needed for specific EuPs or their environmental features. To achieve this objective, it is necessary to act from the very product-design phase, as the pollution brought about during its shelf-life is in fact determined during this phase:

- the manufacturer will draft a technical documentation register, enabling to assess the compliance of the EuPs with the requirements of the applicable enforcement measure;
- the decree requires – on the part of the manufacturer – to provide information that may have an influence on the way to deal, use or recycle the EuP;
- the documentation will include:
 - a general description of the EuP and its established use;
 - the results of the environmental assessment studies duly carried out by the manufacturer;
 - the eco-profile if it is so required by the enforcement measure;
 - productive design specification elements in relation to the environmental design features of the product;
 - the results of the measurement in relation to the Ecodesign requirements carried out.

Target audiences: Large Enterprises; SMEs; Local Authorities; Professional Associations

Targeted end use or type: Space heating; Lighting; Refrigeration; Cooking; Washing. Specifically, this Royal Decree makes up by itself an enforcement measure as regards energy efficiency, in the framework to establish the Ecodesign requirements applicable to EuPs. In this way, with the approval of this Royal Decree, the pre-existing regulation are updated in this sense, and it adjusts them to its application scope, as regards the performance and energy efficiency of new hot water boilers fed with either liquid or gas fuels, fridges, freezers and household electric appliances and of fluorescent lamp ballasts. As regards energy consumption when in use, an energy efficiency level will be established, trying that the EuP representative models should have a minimum shelf-life cost for end-users, bearing in mind the consequences to other environmental aspects.

	Characteristics
Budget	-
Financing of the measure	-
Policy focusses	Physical intervention
Intervention Type	Mandatory standards - Regulation for building equipment/appliances - Minimum Energy Performance for building equipment/appliances Mandatory standards - Other regulations - Energy efficiency regulation for public lighting Mandatory information - Energy management obligations - Energy managers
Main Barriers Addressed	Ease of Regulation
Key Driver(s)	Directive
Replicability	High
EU Inclusion	Yes. This Royal Decree builds on the current Ecodesign Directive 2009/125/EC
Related Characteristics	The Ministry of the Presidency, in joint proposal with the Ministry of Industry, Tourism and Commerce and the Ministry of the Environment will announce, within the scope of the competences of the State's General Administration, the regulations of an exclusively technical nature that may be necessary to ensure the suitable application of the Ecodesign requirements. Likewise, the regulations will have the competence to modify the technical conditions established in compliance with the technical innovations that may take place.

1.1.2 Impacts

A detailed description of the final (expected) results of the measure implementation and any achievements related to the measure implementation.

The regulation is expected to improve Spain products' circularity, energy performance and other environmental sustainability aspects.

It is expected a reduction in the energy demand and CO2 emissions and better overall management as new motors are able to send/receive more data (ISO50001).

	Impacts
Case level impact	High (>30% in the industry sector and probably similar in overall electric motors)
Policy level impact	Medium (0.1-0.5%)
Size	Not available
Energy	Overall more than 50% electric motors below IE0 or IE1. Changing to IE3 or IE4 should lead to 3-4% better energy efficiency. Considering also speed variators the increase could go up to 30%. As indicated above, 5.000 kTOE savings could be reached.
Impact evaluation	-

Description of the method used for calculating the final energy- / cost- savings achieved through the measure.

1.1.3 Lessons Learnt

Description of the lessons learnt and/or (initial) feedback gathered in response to the measure's implementation. The main barriers found that hamper and/or the conditions that are necessary for the implementation of the measure.

An outstanding issue is that Ecodesign specific requirements in relation to some environmental aspects with an important environmental impact may be further introduced.

	Lessons Learnt
Key takeaways	
Recommendations	
Linked measures	<ul style="list-style-type: none"> • Law 15/2014, of September 16, on the rationalization of the Public Sector (Public procurement)(SER-ES1920) • Ecological Public Procurement Plan (PCPE)(SER-ES4099)
Reference(s)	<ul style="list-style-type: none"> • Directive 92/75/EEC of 22 September 1992 on the indication by labeling and standard product information of the consumption of energy and other resources by household appliances • Royal Decree 275/1995, dated 24th February, relating to the performance requirements for new hot water boilers fed with both liquid and gas fuels. • Royal Decree 1062/1998, dated 29th May, establishing the energy performance requirements for fridges, freezers and household electric appliances. • Royal Decree 838/2002, dated 2nd August, establishing the energy efficiency requirements for fluorescent lamp ballasts. • Directive 2005/32/EC of the European Parliament and of the Council of 6 July 2005 establishing a framework for the setting of ecodesign requirements for energy-using products and amending Council Directive 92/42/EEC and Directives 96/57/EC and 2000/55/EC of the European Parliament and of the Council • Royal Decree 1369/2007, dated 19th October, on the establishment of an ecodesign to be applied to EuPs • IEA. (2023). Policies database. Available at https://www.iea.org/policies?country%5B0%5D=Spain&q=electric%20motor (filter: "electric motor", "Spain")
Other	
Thoughts, comments, considerations ...	

Table 1: National Policy Measure Overview – SPAIN

#	Measure Title	Short Description	Type of Measure	Start Year	End Year	Duration	Target Groups	Source link / Reference	Case Level Impact of the measure
1	EU-related: Recast Ecodesign Directive for Energy-related Products (Directive 2009/125/EC) - Ecodesign requirements for energy-using products	This Royal Decree considers a series of enforcement measures establishing the ecodesign requirements needed for specific EuPs or their environmental features.	Ecodesign requirements	2007	-	In force (15 years)	Large Enterprises; SMEs; Local Authorities; Professional Associations	https://www.measures.odysseemure.eu/energy-efficiency-policies-database.html#/measures/1912 / Royal Decree 1369/2007, dated 19th October, on the establishment of an ecodesign to be applied to EuPs	High
2	Circular Economy Action Plan			2021		In force		Circular Economy Action Plan	

