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**COMMISSION STAFF WORKING DOCUMENT**  
**EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT**

*Accompanying the document*

**COMMISSION REGULATION (EU) .../... laying down ecodesign requirements for  
electric motors and variable speed drives pursuant to Directive 2009/125/EC  
of the European Parliament and of the Council**

**and repealing Commission Regulation (EC) No 640/2009**

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## Executive Summary Sheet

Impact assessment for the regulation laying down ecodesign requirements for electric motors and variable speed drives and repealing Commission Regulation (EC) No 640/2009

### A. Need for action

#### Why? What is the problem being addressed?

The existing Commission Regulation (EC) No 640/2009 for ecodesign requirements on motors ('motor regulation') provides a substantial contribution to the EU's policy goals in the fields of energy efficiency, climate change and promoting the single market. The motors in the scope of the regulation consume close to a third of the EU's electricity production. Their minimum energy efficiency is regulated in many major economies, including Asia, the Americas and Australia. While the existing motor regulation has had a considerable positive impact, technological progress warrants an update of the existing requirements in line with international developments. This will help European end-users realise further economic savings, help the EU achieve its energy and climate targets for 2030 and safeguard the EU's competitiveness. Further, specific issues that became apparent during the implementation of the motor regulation should be addressed at the same time to increase its effectiveness, such as the closing of potential regulatory loopholes.

#### What is this initiative expected to achieve?

The general objectives are to ensure free circulation of efficient motor systems within the single market, increase energy efficiency, contribute to energy security in the Union, implement the energy efficiency first principle established in the Energy Union strategy, and promote competitiveness of the EU motor and variable speed drives (VSD) industry. More specifically it is intended to achieve additional cost-efficient energy savings for the motors already within scope by adjusting the ambition level in line with international and technical developments, achieve new cost-efficient energy savings for motors currently out of the scope, achieve further cost-efficient energy savings by regulating variable speed drives and finally address the issue of exemptions and potential loopholes.

#### What is the value added of action at the EU level?

The motors in scope are globally traded goods, based on International Electrotechnical Commission (IEC) standards. Regulating these on a national level would be less efficient and effective, and an unjustified burden for manufacturers and importers, thus effectively undermining the free movement of products. This option is therefore not desired by any stakeholder. Continuing to regulate these products at the level of the EU is necessary to preserve a functioning single market while contributing to the energy efficiency objectives and increasing the energy savings for the end-users.

### B. Solutions

#### What legislative and non-legislative policy options have been considered? Is there a preferred choice or not? Why?

Apart from the BAU-scenario, where the EU takes no action, five other policy options were considered:

1. Voluntary agreement from industry;
2. Energy labelling, which would improve the transfer of energy efficiency information to consumers;
3. ECO1 scenario with an updated motor regulation where the current product scope is maintained but the efficiency targets are set at a higher level.
4. ECO2 scenario, which is similar to ECO1, but the scope is extended to include larger motors and some motors excluded in the current regulation (single phase motors, 8-poles motors and several special purpose motors). In addition, variable speed drives (VSDs) used with motors are in scope.
5. ECO3 scenario, which extends the scope of ECO2 towards smaller motors.

No industry proposal came forward for a voluntary agreement and very few private consumers, for which the energy label is designed, actually buy motors. Therefore the first two options were discarded from further analysis. Of the remaining options (BAU, ECO1, ECO2, ECO3) the preferred option is ECO3, because it yields the highest environmental savings, closes all foreseeable loopholes, realises the highest economic gains for customers, has the highest positive job impact, and raises efficiency requirements to a more appropriate level in line with international regulatory trends.

#### Who supports which option?

Updating the motor regulation received broad support from stakeholders represented in the Ecodesign Consultation Forum. The ECO2 and ECO3 options both provide a balanced outcome of the sometimes diverging views of the various industry segments, the NGOs and the Member States. In particular regarding smaller, single

phase and 8-poles motors scenarios industrial stakeholders expressed concerns about potential economic difficulties for smaller companies, while NGOs actively supported their inclusion. Consideration of the greater energy savings and associated environmental gains, and the larger benefits for the end-users, including households and industry, leads to the conclusion that ECO3, which delivers the highest impact, is the most attractive scenario, provided that sufficient time is provided for the industry to adapt. This is why a staged implementation is proposed. The issue of motors in end-products that are themselves regulated through ecodesign has also been debated. On the one hand, producers of end-products where motor efficiency is important in meeting performance requirements of the end-product (fans, pumps, compressors, ventilation units, etc.) consider that requirements on motors are essential. On the other hand, manufacturers of end-products for which efficient components are not critical tend to have a different view and believe that there are cheaper ways to comply with requirements for their products and are opposed to a practice where both components and end-products are regulated. However, introducing this type of exemption would create large loopholes and potential legal uncertainty for motor manufacturers or importers, and seriously hamper market surveillance. It would reduce the benefits in other segments of the value chain, as well as for motor users. For these reasons, the exclusion of motors in end-products is not considered a preferred option.

### **C. Impacts of the preferred option**

#### **What are the benefits of the preferred option (if any, otherwise main ones)?**

The Impact Assessment shows that an updated motor regulation along the ECO3 scenario can achieve net electricity savings of up to 10 TWh/yr, greenhouse gas emission reductions of up to 3 Mton CO<sub>2</sub>eq/yr. The business turnover for manufacturers, traders and installers will increase by up to €0.6 billion, translating in up to 10 000 extra jobs by 2030 compared to a business-as-usual (BAU) scenario. The outcome is also positive in terms of affordability: motor users including households and industry also benefit of the proposed measure through annual monetary savings amounting to €1.3 billion in 2030. Other benefits include improved EU energy security and positive impact on health associated with reduced electricity generation.

#### **How will businesses, SMEs and micro-enterprises be affected?**

SMEs using motors in the course of their activities will benefit from the new regulation through reduced costs over the lifetime of the motors. SMEs active in the motors business as re-sellers/importers, or in customizing, installing and servicing motors will benefit from the new regulation through increased business revenue. SMEs producing electric motors in the current scope are rare but the scope extension towards certain types of motors envisaged in ECO2 or ECO3 would involve a greater number of SMEs directly active in motors production. As stated above, stakeholders pointed out that smaller companies could face difficulties in making the needed investments, with the risk that their production would cease. The impact on SMEs needs to be considered along the whole value chain, taking into account the benefits for the segments of trading, customizing, installing and servicing motors, as well as motor users, balancing the difficulties for some specific market segments. This leads to the conclusion that ECO3 may be an advantageous option for SMEs. The overall effect on EU industry's competitiveness is positive. The EU motor systems industry is a world leader with a relatively high share of exports. Having appropriate and up-to-date efficiency requirements in their home market is thus an important asset and compensates possible inconvenience motor for buying industry that has to comply with the new rules.

#### **Will there be significant impacts on national budgets and administrations?**

The form of the legislation is a Regulation directly applicable in all Member States. This ensures no costs for national administrations linked to transposition. Administrative costs for enforcing the measure are difficult to estimate. Member State authorities already check compliance under the current motor regulation, and hence the equipment and resources are mostly in place. An extension in scope increases the extent of surveillance activities as for any ecodesign regulation but does not create specific challenges. To the contrary, the proposed regulation addresses several problems encountered by MSAs in the context of the current regulation.

#### **Will there be other significant impacts?**

No negative impacts are expected on functionality, health, safety, the environment or affordability.

### **D. Follow up**

#### **When will the policy be reviewed?**

The revised motor regulation is to be reviewed by 2024 in the light of achievements, experience gained in implementation, international developments and technological progress.