



**Answer to the request for input on proposed ecodesign requirements for water pumps
Review study of Commission Regulation EU N. 507/2012**

August 2016

▪ **General**

Due to timetable constraints, stakeholders are invited to provide input on the information given in a Memo, with the draft executive summary of the report in Annex. This means that stakeholders have seen the draft Tasks 1-4 report, but have not received details on Tasks 5-7. By only presenting 1,5 pages on Task 5, 6 and 7, stakeholders cannot evaluate how base cases and design options have been defined and which assumptions were made for the three policy scenarios.

Moreover, the policy scenarios are described as follows:

- for scenario 1 “different levels of requirements are defined for different pump categories”, starting in 2020/2021;
- for scenario 2 “a higher level” of requirements is defined in a second tier, starting in 2023/2024, in addition to the requirements of scenario 1;
- for scenario 3, “the highest level of requirements” is introduced in 2020/2021.

In Section 2, a recommended scenario is mentioned but not specified. It is obvious that the proposed scenario is not scenario 2 as it does not foresee a second tier, but it is unclear whether the higher level of ambition (scenario 3) or the lower level of ambition (scenario 1) was selected.

Due to this lack of information and transparency, the essential basics to ensure a fair stakeholders’ consultation are missing. In particular, it is not clear what was assumed as BAT and why certain pumps were included or excluded in the scenario analysis.

▪ **Section 1 – Scope and definition of self-priming pumps**

For end suction water pumps, the scope definitions proposed are identical to the definitions of Regulation No 547/2012, with the only addition that pumps in the scope do not have a self-priming function and their intended use has to be clean water pumping. No reasoning is provided as to why the scope was not extended to pumps larger than 150 kW. Table 22 of the Final Progress Report of the study team shows that the product group with a shaft power of 150 kW to 1 MW has a saving potential of 0.3-0.4 TWh/a, equivalent to 0.7% of the total energy savings potential at EPA level in EU.

For vertical multistage water pumps, the scope definitions proposed extend the scope of the existing definitions of Regulation (EU) No 547/2012 from pumps up to 25 bar and maximum flow of 100 m³/h to pumps up to 40 bar and a maximum flow of 180 m³/h, also with the addition for clarification, that pumps in the scope do not have a self-priming function and their intended use has to be clean water pumping. We welcome this extension as it was estimated to have a saving potential of 1.6-2.0 TWh/a, equivalent to 3.8% of the total energy savings potential at EPA level in EU (Table 22 of the Progress Report).

For submersible multistage pumps, no maximum shaft power is proposed in the scope definitions. In the Progress Study, the largest category was defined with up to 160 kW (Table 22 of the Progress Report).

For swimming pool pumps with a maximum shaft power up to 2.2 kW, the Progress Report calculated an energy saving potential of up to 0.41 TWh/a, equivalent to 0.8 % of the total energy savings potential at EPA level in EU (Table 22 of the report).

⇒ **We recommend the inclusion of end suction water pumps with a maximum shaft power of 150 kW to 1 MW in the scenarios as well as the inclusion of swimming pool pumps up to 2.2 TWh or ask the study team to at least provide strong justifications for not considering this inclusion.**

- **Section 2 – Requirements and dates of implementation**

The last tier of Regulation (EU) No 547/2012 entered into force on 1 January 2015. Setting the introduction of the next new requirements in 2020/2021 only represents a loss of opportunities, considering that measurement methodologies are available and the requirements are likely to be defined by the first half of 2017.

Regarding the levels of ambition, we lack sufficient information to compare the levels.

Regarding the proposal to assess constant and variable flow, we agree with the proposed approach, but lack background information to evaluate the time profiles of constant and variable flow operation.

⇒ **We believe new requirements could enter into force before 2020/2021. Moreover, we would like the study team to publish the scenario alternatives and related EEI assumptions to allow for a proper assessment of the proposed requirements.**

- **Section 3 – Measurements and calculations**

The proposed way forward seems feasible and reasonable.

- **Section 4 – Verification amendments for market surveillance**

The proposal to substitute the existing product information requirement by an index/coding is not fully elaborated. We suggest using clear abbreviations of the product categories, together with the rated power and nominal speed. The “index/code” should not use numbers, but should enable an easy understanding of the product categories by using abbreviations linked to the product group, like those used in the study (ESOB, ESCC, ESCCi, MS-V, MS-H, MSS, BS) and “SP” for self-priming pumps. The requirement to place the identification durably marked on/near the rating plate should be maintained. We welcome and agree with the proposal to require product information on a freely accessible website, stating whether the product is in the scope, requiring a written explanation for products out of scope, and assuming that products are in the scope if no such explanation is published. Additionally, we propose that the rating plate of the pump shall include a QR-code that links directly to the respective technical documents on the manufacturer’s website. We also welcome and agree with the proposal to specify the C value to be taken if more than one product category is applicable to a pump.

Furthermore, as stated in our comments on chapter 8.4 of the Progress Report covering Tasks 1 to 4, in cases where permanent magnet motors are used for pumps, these can contain rare earth elements which have been identified as critical materials in the medium-term based on supply risk, demand growth and recycling restrictions. Devices with rare earth magnets can hardly be identified as such without having very

specific technical know-how or without conducting quite intensive testing/dismantling of devices. Thus, a mandatory and standardised marking of products containing rare earth magnets above a certain minimum weight can significantly facilitate future recycling practices. We believe that a marking providing information about the presence of rare earth magnet materials as well as information on the applied type (e.g. SmCo, FeNdB) can positively influence the establishment of a European circular economy for rare earth elements. On this background, information should also be provided on copper content of the pump to foster the separation of copper from the pump motors, supporting the objectives of the European circular economy.

Therefore, we propose to:

- a) Introduce an information requirement containing the Bill of Materials and a product description such as an exploded view of the product, enabling to identify the content and localization of rare earths materials and copper, as well as their extraction process allowing a safe and cost-effective recycling.
- b) Consider specific requirements for integration of permanent magnets motors into the pumps to maximise cost effectiveness of reuse and recovery processes (e.g no use of glues or welding that hampers the extraction/recovery of rare earths elements; or maximum amount of non-destructive disassembly time to aim at a reuse of the permanent magnet materials instead of its recycling).

Finally, we also invite the study team to make proposals on how to improve the durability of pumps. In our comments, we have proposed the inclusion of a mandatory availability of repair instructions (including non-destructive disassembly), as well as a mandatory availability of spare parts for 15 years.

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