



# **Position Paper on the Study for the Review of Fan Regulation n°327/2011**

CECED SG Fans & SG Hoods

## ▢ General comments (1)



The interim report stated at several positions that there was no or limited reaction to several questions. This might also have the following root causes:

1. Complexity of the topic – only few experts are able to understand the topics and the inferences of the decisions
2. Limited timeframe available to answer
3. Questionnaire submitted during the holiday season with limited access to experts
4. Not sufficient data collection and inclusion of SMEs in the report – some of the cases mostly address SMEs
  - > the acceptance by default if no negative comment was given cannot hold (e.g. 3.5.ff)
  - > due to the complexity of the subject – which is mentioned several times – simple inclusion may result in serious risks for these businesses. Thus a careful and justified process including the targeted stakeholders is necessary.

In contrary lot of positive comments may also be a sign of clustered stakeholders.

## ▣ General comments (2)



CECED position:

- SMEs need to have the same chances of accessing parts and components even if they cannot develop them themselves.
- Importers of appliances need to have the same requirements as EU based manufacturers.
- A general and strict market surveillance can only be maintained if only end products are considered using adequate testing methods the amount of products to be checked is calculable.
- Double regulation may lead to functional and performance losses of the target appliance.
- A general and easy to understand approach for fans for special purposes is necessary.
- The transition periods for component and end product regulations needed to be aligned.
- The decisions made should be coherent and reliable.
- Unnecessary information requirements need to be avoided in order to limit additional burdens on the industry and MS

## ▢ 1.1 Subject matter and scope

Splitting up the regulation into specific regulations applicable to specific fan types

### CONCLUDING REMARKS FROM 1st INTERIM REPORT

Such an approach may be able to solve some of the problems currently experienced, but developing this will require much time, and will introduce a need for further discussion on where boundaries between market segments lie, and how possible misuse can be avoided, etc. We believe it would require an effort that extends beyond the available time and resources allocated to this study.

### CECED position:

- A short timeframe and limited capacities should not be a reason that detailed analysis and impact scenarios for the targeted products cannot be carried out.

## ▣ 1.1.1 Fans incorporated into products (1)



### CONCLUDING REMARKS FROM 1st INTERIM REPORT

Although many stakeholders do not like the idea that products are subject to double regulation (cascading) they also do not want to open up the EU market to unregulated fans.

Other stakeholders state that regulating at end product level ensures that fans, being part of overall energy efficiency of the regulated product, would not be of low efficiency.

The current inclusion of fans incorporated into products shows the preference of the Regulatory Committee in 2011.

### CECED position:

- If products are already subject to Ecodesign and/or energy labelling regulation, their efficiency is already controlled and optimized and therefore the component in such products should not be regulated.

## ▣ 1.1.1 Fans incorporated into products (2)



- Applying the product regulations guarantees that they are optimized for the targeted end product and work efficiently in their confined area and within their surrounding conditions.
- Multiple regulations on the same product generate complexity and inconsistencies.
- If multiple regulations on products and their components apply there are several uncoordinated introduction dates/tiers that add additional burdens to industry and sales and may confuse the consumers.
- The approach for the least life cycle cost guarantees the general optimum of the end product, which in general has a higher energy consumption compared to the single component.

## ▣ 1.2.1 Impellers for cooling electric motors (1)



### CONCLUDING REMARKS FROM 1st INTERIM REPORT

Most agree that the exclusion of the 'impeller' placed on a motor shaft for motor cooling purposes should remain<sup>6</sup>.

We would like to receive opinions whether the motor power boundaries (>3kW) should remain the same / be enlarged / be reduced.

#### CECED position:

- The exclusion should be maintained
- With respect to the position on 1.1.1 the main target function of the impeller / fan is not comparable to that of a “standard” fan. Thus the minimum requirements cannot be applied
- These fans are needed to assure the functioning and safety of the electrical motor.
- The 3kW boundary is not related to the function and therefore no boundary should be used

## ▣ 1.2.2 Fans <3kW for tumble dryers (1)



### CONCLUDING REMARKS FROM 1st INTERIM REPORT

The main discussion is whether fans in products that are already regulated under Ecodesign (or also Energy Labelling) should be covered by the reviewed Fan regulation.

Most stakeholders would like to see drier fans covered. However, we should learn more about the actual performance and differences to standard fans. For this we would like to hear arguments whether these fans are indeed different, requiring special treatment, or can be treated as standard fans.

#### CECED position:

- The exclusion should be maintained
- With respect to the position on 1.1.1 the main target function of the fan is not comparable to that of a “standard” fan. Thus the minimum requirements cannot be applied
- The 3kW boundary is not related to the function of the fan and therefore no boundary should be used. If a boundary is used it should only target the power input of the fan, not that of the end product.



## ▣ 1.2.2 Fans <3kW for tumble dryers (2)

- Fans for tumble dryers are special purpose fans as they are designed to be efficient for the intended use. The fans have to withstand fluff accumulation in a wet environment over life time of a tumble dryer.
- The preparatory study for the EcoDesign measure on tumble dryers documented these facts.
- The inlet and outlet of the fan housing is optimized to avoid turbulences in an appliance cabinet with restricted space (60x60x85 cm).
- Turbulences will cause lint accumulation and noise. Lint accumulation has to be avoided in order to ensure the overall efficiency and safety of the appliance. Noise of household appliance should be reduced as far as possible. All of these factors do require special design of the fan that that might lower the efficiency of fan.
- Fans in tumble dryer have to fulfill following requirements:
  - Flow rate is more important than pressure. The designed fan has provide enough pressure to overcome the pressure variations caused by the air channels, filters, heat exchanger, etc. but has not to provide additional air pressure.
  - The fan has to work as efficiently as possible under working points with big hydraulic variation (as loading, temperatures, pressure drops, etc.).
  - The fan has to provide airflow in both directions. One main direction and counter direction with a reduced airflow to enable a reversing of the drum.
  - The airflow (process air and cooling air) has to be realized and optimized within a limited space.
  - The temperatures of the gas being moved exceeds 100°C.
  - The same motor shaft is used to drive the fan and the drum.

## ▣ 1.2.3 Kitchen hood fans <280W & 12.1 (1)



### CONCLUDING REMARKS FROM 1st INTERIM REPORT

The main discussion is whether fans in products that are already regulated under Ecodesign (or also Energy Labelling) should be covered by the reviewed Fan regulation.

Here, even if the main application is already covered by 66/2014, many stakeholders agree with double regulation.

#### CECED position:

- The exclusion should be maintained and only the just introduced regulation 66/2014 should apply.
- With respect to the position on 1.1.1 and the “DGTREN, Final Report – Study on residential ventilation, Feb .2009” hood fans are special purpose fans and have functions and properties that are beyond the functions of a “standard” fan. The fans used in hoods have to merge the requirement to provide high pressure (up to 600Pa because pressure lost due to installation are unknown), high air flow (up to 900-1000 m3/h) and Low Noise with very restrictive dimensional constraints due to the space available in the product and the kitchen furniture.
- The measurement of the hoods FDE is carried out with filters in place, whereas the single fan measurement is not. Thus a direct comparison bears the risk of misinterpretation.

## ▣ 1.2.3 Kitchen hood fans <280W & 12.1 (2)



CECED position:

- Moreover, range hoods' fans are only used in average 1 h per day and thus bear a low potential for energy savings.
- The requirement to use high efficient fans restricts the availability of range hoods in medium price segment on the market. Only expensive range hoods with the EEI classes A+, A++ and A+++ will be available. Looking from environmental requirements this has to be avoided. If only expensive range hoods are available on the market numerous consumers will not be able to buy and use these appliances.

## ▣ 1.2.3 Kitchen hood fans <280W & 12.1 (3)

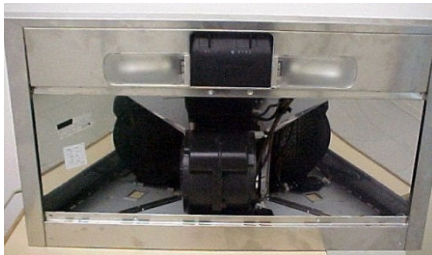
Design and Chimney hoods



Built In and Built Under hoods



Centrifugal Fan double inlet



**BAT:**

BLDC Technology

$\eta_{\text{tot\_max}} < 40\%$

Centrifugal Fan single inlet



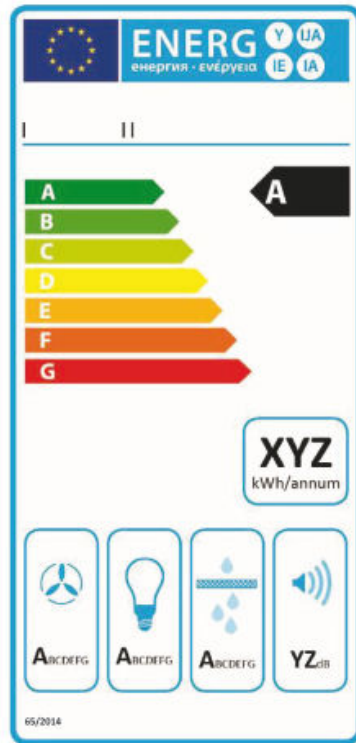
**BAT:**

BLDC Technology

$\eta_{\text{tot\_max}} < 20\%$

Even using BAT technology will not meet minimum requirements

## 1.2.3 Kitchen hood fans <280W & 12.1



### Conclusions

- There are technical and physical constraints that limit the maximum achievable efficiency of fans used in range hoods, in particular in built in and built under hoods using single inlet fan, compared to standard fans.
- Range hoods are already covered by EcoDesign regulation 66/2014 and labelling regulation 65/2014.
- Range hoods' fans are used max 1 hour/day



The minimum efficiency requirements imposed by  
EU Reg. 327/2011 can not be applied

The exclusion of kitchen hood fan < 280W  
has to be maintained

## ▣ 1.3.1 – 1.3.5 Special purpose fans



### CONCLUDING REMARKS FROM 1st INTERIM REPORT

The exclusion of ATEX fans does not cause practical problems, but arguably some saving potential is missed. The size of this saving potential is unknown as no data is available energy consumption and improvement potential of ATEX fans. The limited time to review does not allow a full assessment.

It is suggested to keep the exclusion of ATEX fans from the scope.

Showcase only for ATEX fans

#### CECED position:

- The exclusion should be maintained
- Special purpose fans have a specific design for the end product. They target several functional requirements, work in special ambient or working conditions and do have other constraints like dimensional, safety multi working point optimizations.
- With respect to the position on 1.1.1 and the explanation in the review it is accepted that ATEX fans do have functions or properties that are beyond the functions of a “standard” fan.
- We underline the fact that the exclusion does not cause practical problems and thus exclusions for other special purpose fans can apply the same solution without posing risks.

## ▣ 1.3.6 Replacement fans (1)



### CONCLUDING REMARKS FROM 1st INTERIM REPORT

The industry argues rather unanimously that replacement fans, or replacement parts, (intended for repair) should be allowed to be placed on the market until 5 to 10 years after the sales transaction.

The fan or part should be clearly labelled "for repair purposes only".

#### CECED position:

- Spare parts / repairs are for example mentioned in the Blue Guide 2014, the machinery directive or the ATEX directive 94/9EC
- Parts for exchange do not need to comply as the final product already needed to comply at the time of being placed on the market.
- Replacement fans or fan parts should not be subject to regulation as the original part is already
- The exclusion should be clearly stated
- There is an urgent need for a clarification of the existing 327/2011 as replacement fans are explicitly not excluded from 1.1.2015 on
- With respect to customer expectations, legal requirements for repair and maintenance and the spirit of sustainable, durable and repairable products manufacturers need to have the chance to fulfil these requirements.
- A clear marking „for repair purposes only“ can be applied.
- In order to maintain conformity the repair parts need to be of the same type as the original part as otherwise the final product loses conformity and conformity cannot be maintained for discontinued products in combination with new components.
- The combination of new components with existing products may also result in a different performance

## ▣ 1.3.6 Replacement fans (2)



CECED position:

- Recently, Oko-institute performed a study for DG environment<sup>1</sup> on the spare parts provision in the RoHS directive (2011/65/EU)<sup>1</sup>. This study concluded that ‘the impacts of enforcing these legal requirements may result in costs which significantly outweigh the benefits of its implementation. Such costs include costs for the environment, where products reach the end of their service life early, as well as costs for enterprises, where the value of products is affected in light of the limitations to circulation and reparability.’ Most of the products which integrate fans are in scope of the RoHS directive, therefore the conclusions of this study also hold for the replacement fans provision in the fan measure.

<sup>1</sup> Additional Input to the Commission Impact Assessment for a Review of the Scope Provisions of the RoHS Directive Pursuant to Article 24(1) - Report for the European Commission DG Environment under Framework Contract No ENV.C.2/FRA/2011/0020 Final Report - Okoinstitute



## ▣ 2. Definition of a fan



### CONCLUDING REMARKS FROM 1st INTERIM REPORT

The revised regulation should define more clearly the products that are regulated. Parts and complete products should not be covered by the same definitions.

#### CECED position:

- Parts should not be considered as they are not fans
- The energy efficiency of a fan can only be judged if the fan is complete.
- If single parts of a fan are efficient, the end product may not.
- Comparable testing methods (part vs. fan) are not applicable

## ▣ 3.2 Exemptions from 1<sup>st</sup> tier



### CONCLUDING REMARKS FROM 1st INTERIM REPORT

The main discussion is whether fans in products that are already regulated under Ecodesign (or also Energy Labelling) should be covered by the reviewed Fan regulation.

Most stakeholders agree with no longer exempting such fans from ecodesign requirements.

#### CECED position:

- Already regulated end products should not undergo component regulation.
- The overall efficient design of the product enables compliance with challenging EcoDesign limits. The complete system/product has to be energy efficient.
- Component regulation within a product may limit functional, performance and energy efficiency possibilities for the complete product.
- The specific appliance regulations cover all relevant functional and performance aspects of the appliance in a balanced way.
- The appliance regulations are developed according to the needs of the whole product and have a defined process that includes stakeholder and experts and respects the current and future situation of the technologies and markets.

## 3.4 Exemptions & 8.3 Product information requirements



CECED position:

- Fans not in the scope of the regulation should not have documentation requirements
- As the measurement setup for the fans and the end product may not be coherent and thus results differ this may:
  1. lead to confusion in the interpretation
  2. not support the judgment of the final product
  3. add additional burdens to companies and market surveillance and
  4. makes market surveillance more complex

### ▣ 3.4.3 Fans for conveying non-gaseous substances



#### CONCLUDING REMARKS FROM 1st INTERIM REPORT

The exemption of these 'fans' (*8000 rpm, >1.1, non-gaseous*) still seems justified.

Their inclusion in Article 3 of the regulation however means they still need to comply with information requirements, whereas the general perception is these products are not 'fans' as intended to be covered by the regulation.

It is recommended to maintain the exemptions, but move the exemption to the scope definition.

#### CECED position:

- The exemption is supported
- The fans are to be considered as special purpose fans

## ▣ 9.4.2 Minimum requirements for small fans



CECED position:

- The currently applied formulas should be verified for the applicability to fans  $< 750\text{W}$  taking into account the higher impact of effects like friction to smaller fans in comparison to the high power fans.

## ▣ 9.5 Calculating the (target) energy efficiency



CECED position:

- The theoretical efficiency judgements with the different methods (PBER, Cordier, etc) do not seem to be verified for the whole complexity of the subject and thus pose a high risk if applied without deeper analysis and without impact analysis on all targeted end product segments.

-> these methods should be limited to fan constructions where proof of applicability of the methods and the feasible applicability of the minimum requirements is proven.



Thank you

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