EVIA Comments on the Review Clause for the Revision of Ecodesign and Energy Labelling for Ventilation Units

5 March 2021

EVIA continues to support the EU's implementation of ecodesign and energy labelling requirements for ventilations. Indeed, we have welcomed the opportunity to contribute to the ongoing review and forthcoming revision of the existing measures, Regulation (EU) 1253/2014 setting ecodesign requirements, and Regulation (EU) 1254/2014.

Whilst the current review and revision are not yet finalised, EVIA would like to take this opportunity to look forward to the next revision. The below are a number of proposals for issues that should be considered in the review clause of the successors to Regulation (EU) 1253/2014 and Regulation (EU) 1254/2014, to further improve the legislation, to deliver additional ambition towards the European Green Deal's decarbonisation ambitions and to deliver on sustainability and Indoor Air Quality (IAQ)/health and comfort priorities.

Review clause proposal for the successor to ecodesign Regulation (EU) 1253/2014:

Article X

Review

The Commission shall review this Regulation in the light of technological progress and present the results of this review to the Consultation Forum no later than 1 January 202X.

The review shall include an assessment of the following:

(a) advanced operation/monitoring information for energy efficiency and maintenance;

Justification

The controls aspect of ventilation units is linked to their energy efficiency performance. Examples are demand controlled air volume flows including detection of ventilation needs, energy recovery and interaction with optional heating, cooling, humidification, and frost protection strategies.

Monitoring functions like fan data observation, filter pressure measurements and interactions from air-handling units (AHU) with heat and cold recovery ensure an energy efficient lifetime operation of the ventilation unit. These functions are increasingly prevalent elements of ventilation products and must be further specified within the ecodesign regulation.

(b) minimum control functionality and interoperability requirements;

Justification

Ventilation units were not included in the scope of the ecodesign preparatory study on smart appliances. However, EVIA is convinced of the need to set specific definitions for the smart residential and non-residential ventilation units to prevent fragmented approaches at Member State level from creating barriers in the Single Market. This is also particularly important to protect consumers by preventing 'smart-washing' as a result of misleading claims as to contributions to improved energy efficiency and IAQ performance, and to ensure a competitive level playing field.

Ultimately requirements under ecodesign and energy labelling, that account for the specificities of residential and non-residential ventilation, should be set for minimum control functionalities and interoperability requirements. For residential ventilation this would be expressed via a smart icon on the energy label and for non-residential ventilation in the product information, in line with the suggestion in the smart appliances preparatory study.

(c) part-load aspects of non-residential ventilation unit energy efficiency;

Justification

Part-load aspects have a significant impact on the energy efficiency of non-residential ventilation systems, but the wide range of applications makes it difficult to specify a typical part-load function, which is representative for most applications. A fixed indexing system might be unhelpful. The next revision should investigate other options to provide better information on part-load aspects of a ventilation unit and how this might lead to more energy efficient system selection options.

(d) any additional components which affect the energy efficiency of the air-handling unit;

Justification

The current regulation covers the ventilation function, including air transportation (fan), energy recovery and filtration. Most AHUs contain additional functional components which are currently not regulated but might influence the energy performance of the unit.

As the improvements for fans and heat recovery might reach physical or application limitations, further improvements might be possible by considering further functions. This is already needed in the case of multifunctional units. This aspect should not consider energy generation aspects which are already provided for in cooling/heating generation regulation but should consider all aspects linked to ventilation.

(e) residential and non-residential multifunctional units providing, in addition to ventilation, heating and cooling using built in heat pumps;

Justification

EVIA as part of the European Platform on Multifunctional Units (MFU) supports regulating MFUs under the revision of regulation (EU) 1253/2014, in respect to assessment of the energy efficiency of the ventilation function as the leading function. As a first step the Platform has proposed the introduction of information requirements[1] for residential MFUs in the current revision. In the longer term, the Platform has proposed that the Commission pursue a standardisation request to revise EN 16573 to better address the performance of MFUs additional functions beyond the lead ventilation function[2]. Such a basis could be used to set minimum energy performance requirements.

Work is less mature on non-residential MFUs, but such commercial equipment should be considered in the next review, using the process for residential MFUs as a template. Consideration could also be given to assessing the specific material/resource efficiency performance of resident and non-residential MFUs.

(f) share of generated renewable energy from non-residential and residential ventilation units.

Justification

Energy recovery in ventilation units provides a significant share of renewable energy (heat and cold). Based on the data available in the ecodesign regulation for ventilation units, a typical amount of renewable energy from heat recovery from a ventilation unit can be calculated and would be a useful basis for further regulation and statistical needs for example in under the Renewable Energy Directive (RED).

(g) life-cycle, climate and environmental impacts shall be considered in the minimum requirements;

Justification

EVIA notes the Commission's intention to deliver sustainability requirements for products under the Sustainable Products Initiative. For ventilation units EVIA recognise that these requirements should be set under the Ecodesign Directive via the implementing regulation that caters specifically for the product category. EVIA does not prejudge discussions methodological discussions on how to deliver technical requirements, but notes Product Environmental Footprints and Least Life Cycle Cost (LLCC) as options being discussed in the review of the Methodology for the Ecodesign of Energy related Products (MEErP). Looking ahead the next review should begin initial assessment of sustainability for ventilation units on the basis of a revised MEErP.

(h) sensor/control performance aspects;

Justification

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[1] European Platform for Multifunctional Units – Proposal for Information Requirements for Multifunctional Residential Ventilation Units

[2] European Platform for Multifunctional Units – Proposal for a Standardization Strategy for Multifunctional Residential Ventilation Units

EVIA recognises the need and would support the development of sensor/controls test standards for the different types of sensors/controls. Sensor/controls performance depends significantly on the application in which the sensor/controls is deployed in a given building. As such sensor/controls test standards must be established by expanding ventilation standards to ensure that the testing is conducted in a manner that reflects the ventilation use/application against a series of reference building use-cases. The Commission should pursue a standardisation request (sReq) for a ventilation sensor/control accuracy performance testing standard.

(i) extension of the scope of the regulation to consider certain process air applications;

Justification

The current regulation excludes many process applications because the application is not directly linked to the ventilation needs of people, but to the needs of a process. This does not automatically mean, that existing minimum requirements would not be appropriate, but the operational condition to for a process application may be totally different.

Further considerations on climate, operation time and extract air conditions are already needed in the ventilation application. These impact parameters might also be valid for specific other applications. Further analysis might lead to options including such applications, for example process air applications.

(j) confirm the shift of UVUs to Regulation (EU) 327/2011 or successor;

Review clause proposal for the successor to energy labelling Regulation (EU) 1254/2014:

Article X

Review

The Commission shall review this Regulation in the light of technological progress and present the results of this review to the Consultation Forum no later than 1 January 202X.

The review shall assess in particular rescaling the classification for individual product categories within the label to provide a more accurate comparison of performance.

Justification

The ventilation unit market is segmented between unidirectional ventilation units (UVUs) and bidirectional ventilation units (BVUs). Both UVUs and BVUs are covered by a single energy label under Regulation (EU) 1254/2014 to the relative disadvantage of UVUs, which score below BVUs from an energy efficiency perspective. From the energy label it could be suggested that public and private financing conditionality or public procurement criteria, should be geared towards BVUs due to their higher efficiency, as illustrated via the energy label.

However, UVUs are widely considered to be easier to install mainly in residential building retrofits and renovations, and incur lower investment costs, often due to structural legacies arising from requirements in national building

regulations. UVUs are also in general less expensive than BVUs, but nevertheless ensure appropriate air renewal when operating properly.

Demand controlled UVUs do represent real added value in reducing energy consumption and in maintaining good indoor air quality, compared to buildings with no mechanical ventilation or buildings with units/systems pre-dating the ecodesign for Ventilation Units. Disqualification of UVUs on the basis of relative energy label performance would disincentivise their use in retrofit or renovation projects with technical or tighter budgetary constraints.

Conditionality favouring only BVUs would hinder the retrofitting or installation of new more energy efficient UVUs in the existing residential building stock, where there is no structural alternative or where the higher cost of BVUs represents an economic barrier to retrofitting or installation of a ventilation unit/system. This could lead to long-term negative lock in effects preventing the replacement of old ventilation units/systems by newer more energy efficient ones or their implementation in buildings from which they are absent. This would also be detrimental to Indoor Air Quality.

Therefore, EVIA requests a fundamental change of the labelling for residential ventilation. It is not understandable why it is proposed to split the label between unducted and ducted units, which perform similarly, but a split label for UVUs and BVUs is not being considered. Labelling for residential units must remain based on a common SEC calculation for all types of ducted and non-ducted BVUs and UVUs. On that basis a split labelling scaling is a possibility.

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About EVIA

The European Ventilation Industry Association (EVIA)'s mission is to represent the views and interests of the ventilation industry and serve as a platform between all the relevant European stakeholders involved in the ventilation sector, such as decision-makers at the EU level as well as our partners in EU Member States. Our membership is composed of more than 40 member companies and 6 national associations across Europe, realising an annual turnover of over 7 billion euros and employing more than 45,000 people in Europe.

EVIA aims to promote highly energy efficient ventilation applications across Europe, with high consideration for health and comfort aspects. Fresh and good indoor air quality is a critical element of comfort and contributes to keeping people healthy in buildings.