# EHPA Position Paper

EHPA's written comments on the draft Regulations (EU) 814/2013 & (EU) 812/2013 for water heaters and storage tanks – Review ENER Lot 2

## Executive summary

EHPA would like to thank the European Commission and the study team for the work already carried out and welcome the opportunity given to comment on the proposals part of the review of the Ecodesign Regulation 814/2013 and Energy Labelling Regulation 812/2013 for water heaters and storage tanks. Please find below EHPA positions and recommendations on the different requirements and information defined in the draft regulations.

### Chapter 1: Ecodesign Regulation

- **Definition:** EHPA would like to clarify some definitions further below in this paper.
- **Ecodesign minimum energy efficiency limits:** EHPA recommends that minimum energy efficiency performance (MEPS) limit for electric heat pump water heaters (HPWH) at tapping profile L should not be higher than 95%. EHPA suggests aligning the two MEPs tables for Thermally Driven Heat Pump (TDHP), adopting the proposed values indicated in Lot 2 also for lot 1 combi TDHP.
- **Requirements on Material efficiency:** EHPA supports the inclusion of material efficiency requirements but has several comments and recommendations. In line with the revision of Lot 12 or Lot 10, EHPA would like to suggest an exhaustive list of spare parts to be defined, referring to the most critical spare parts. This list of spare parts should not be displayed on the public website and should only be accessible to professional repairers. Professional repairers must be defined. Finally, on the maximum delivering time of spare parts, EHPA would recommend limiting the scope to appliances ≤ 70 kW. Please read our detailed comments.
- **Calculation methods & Tpeak:** EHPA does not support the proposal for heat pumps regarding the peak temperature. Heat pumps would be penalised for not reaching a temperature (55°C) which is not realistic. We would like to reiterate our compromise on peak temperature sent to the European Commission in July 2021, in which we proposed to reduce the peak temperature to no more than 50°C with the current load profile which reflects today usage and ensure more energy savings. This would create a level playing field for all technologies, while delivering the necessary sufficient hot water to meet consumer needs today.
- **Test Conditions:** EHPA does not support the V40 measurement and calculation as proposed. Additionally, it should be clearly stated that Fcrtl factor is equal to 1 for the storage water heater.
- **Calculation of equivalent volume V:** The proposed calculation method of $V_{eq}$ based on V40 is oversimplified and creates an unlevel playing field to the detriment of PCM thermal stores. This is

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because the calculation method incorrectly adapts a formula from EN12897:2016 and thus ignores the fact that to provide a given hot water volume $V_{hot}$ a storage volume $V > V_{hot}$ is required. To enable the calculation of $V_{eq}$ from V40, a correct factor $V_{cor}$ must be introduced to account for the above discrepancy. Based on experience and market analysis a factor $V_{cor}$ of 0.85 is proposed.

- **Sound Power Level Measurements:** EHPA would like also to suggest some technical corrections to the sound power level measurements.
- **Temperature Regime for PCM Thermal stores:** EHPA would like to raise some concerns regarding prescriptive target temperature for PCM thermal stores.

## Chapter 2: Energy Labelling Regulation

- **Rescaling of the label:** EHPA fully supports the single step rescaling as proposed in the draft working documents. We support the introduction of the new conversion coefficient 2.1, a rescaling to A-G, a definition of energy classes boundaries in a way that increases the differentiation between the different type of water heaters, the display of the water heating energy efficiency (eta - $\eta_{wh}$) for average climate on the label, and the provision of a full 2-year transition period.
- **Energy efficiency classes:** EHPA has some concerns regarding the proposed energy efficiency classes for hot water storage tanks and multivalent tank correction mvc.
- **Energy Label:** The energy label should be as simple, clear, and understandable as possible for the end-user. EHPA would like to highlight that the label for heat pump water heater is missing. EHPA supports the proposal to display the seasonal energy efficiency ηs on the label. Please read our detailed comments below.

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# CHAPTER 1: Ecodesign Regulation

## I. Main Act (articles 1 to 10)

### Definitions

EHPA would like to clarify the following definitions. We would like to recommend aligning the terms in the draft regulations and avoid alternative definitions of the following categories.

- **Heat pump water heater:** EHPA would like to highlight a mistake in the definition of heat pump water heater (HPWH). Exhaust air is considered as waste heat which is wrong. Part of the energy contained in exhaust air when used by a HPWH is also renewable (energy contained in the exhaust air when its temperature gets below the outdoor temperature, as described in the commission decision of 1/03/2013 with regards renewable energy directive).
- **Thermally driven heat pumps water heaters:** EHPA would propose the following definition for thermally driven heat pumps water heater (TDHPWH): "Thermally driven heat pump water heater means a heat pump water heater using heat or an engine to drive the sorption or compression cycle". We would like to confirm that GAHP (gas absorption heat pump EN12309) and GEHP (gas engine heat pump EN16905) are both considered as TDHP. A TDHP could be coupled with an auxiliary boiler to become a hybrid system. In the current draft regulations, this hybrid category is not properly included.
- **Back-up immersion heater:** the definition of back-up immersion heater is now linked to multivalent tank. However, some products, such as HPWH, have such back-up immersion heater when the main heat source is disrupted. EHPA would recommend deleting "in a multivalent tank" from the definition.
- **The definition of energy efficiency of the water heater without solar-assistance** (etawh,prod) is missing.

### Scope

EHPA would like further clarifications on the scope of the regulations. How does the combination work between the capacity of storage and the rated heat output? Would it be possible to create a table for a better understanding of the scope?

## II. Annexes relating to requirements (Annexes I & II)

### Ecodesign Minimum Energy Efficiency Limits

EHPA recommends that the minimum energy efficiency performance (MEPS) limit for electric heat pump water heaters (HPWH) at tapping profile L should not be higher than 95%. EHPA does not understand why MEPS for TDHP 'combi space heaters' (lot 1), for load profiles 2XL-4XL, should be higher than the ones defined for TDHP 'dedicated water heaters' (lot 2); we suggest aligning the two MEPs tables for Thermally Driven Heat Pump (TDHP), adopting the proposed values indicated in Lot 2 also for lot 1 combi TDHP.

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## Functional requirements

EHPA would like to propose some editorial comments:

- For the functional requirements on water heaters for load profile 3XS to S, we would suggest adding the word "and" at the end of item c). The definition of 'indoor air' does not make clear if the requirements are cumulative.
- We would suggest replacing "maximum" by "minimum" in the title of the table page 12. The wording "maximum" is not in line with target of the clause. It should be replaced by "minimum" as we define the minimum amount of mixed water at 40°C

## Product Information requirements

Ventilation air flow rate is defined for all products. However, this value should be defined only for HPWH and TD_HPWH. Consequently, EHPA would suggest replacing the "x" by a dash "-" for all appliances except for HPWH/TD_HPWH. For these appliances, we propose to add a star to have the link with the note. We also propose to replace "ventilation air" by "ventilation exhaust air".

Secondly, off-peak and energy smart functionality are not linked to packages of water heater, storage tank or solar devices, therefore EHPA recommends moving these items out of the package category.

## Requirements on material resource efficiency

EHPA supports the inclusion of material efficiency requirements but has several comments and recommendations:

- **Scope limitation:** The scope of Lot 2 is wide and includes different capacity limits products. Spare parts for larger units are not always in stock as there are fewer numbers sold. These products are often custom-made and rely on maintenance contracts for repair. EHPA would therefore recommend limiting the scope to appliances ≤ 70 kW.
- **Availability of spare parts:** In line with the revision of Lot 12 or Lot 10, EHPA would like to suggest an exhaustive list of spare parts to be defined, referring to the most critical spare parts to repair the function of the heat pump. Manufacturers, importers or authorised representatives shall make available to professional repairers at least the following spare parts: compressors*, heat exchangers*, pressure* and temperature switch and sensors, printed circuit boards, fan motors, circulators/circulation pump, expansion devices* and four-way valves* (*Except for monobloc HPWH). For thermally driven heat pumps, we recommend the following list of spare parts: heat exchangers, pressure and temperature switch and sensors, printed circuit boards, fan motors, circulators/circulation pump, expansion devices and four-way valves, burner, gas valve, electrodes, and combustion control (if present). Please note that it is a generic list, some parts are required for GAHP and others for GEHP.
- **Access to repair and maintenance information:** The references/ parts numbers and purchases procedure should not be displayed on the public website. Together with the repair and maintenance information, it should be only accessible to the professional repairers. It should be on a secured platform of the manufacturer and handled as confidential data by the recipient.
- **Acceptance and refusal criteria to obtain the data information:** There should be no immediate access to the information. A clear set of rules and procedures need to be established between the

manufacturer and the professional repairers registering to get the repair and maintenance information and the list of spare parts: i.e., eligibility status, creating user accounts, verification procedure, acceptance, and refusal criteria (manufacturers should have the possibility to grant deny request based on fulfillment of defined criteria). Manufacturers should have the possibility if certain criteria are not met to deny the request.

- **Professional repairers must be defined:** For safety and quality insurance reasons, only partner, duly trained and qualified, are allowed to maintain and repair heat pumps. We do not want to see that any installers can have access to spare parts and repairability information and thus claim to be in the position to be able to maintain and repair the heat pump. For this reason, the term professional repairers should be defined as proposed in the draft regulation.
- **Maximum sending time of spare parts:** Ensuring availability of all spare parts within 15 working days may be challenging in some cases. We have concerns on potential non-compliance being found in case 'once' spare parts do not arrive within the time defined due to extraordinary consequences or post/shipping services failure or failure not due to manufacturer's behaviour. Additionally, the requirement could be further clarified when it comes to its verification by market surveillance authorities. It is not clear how they will verify compliance with such requirement. Even though these clarifications might not be necessary into the legislative text, it should be further clarified by the Commission in the FAQ afterwards.

  Finally, when considering such requirement, the European Commission should take into account that ensuring availability of spare parts within 15 working days will already be challenging; increase the product costs and waste, and is not in line with the principles of material resource efficiency. Manufacturers will have to create more stock locations to be more flexible and be able to react fast, as Europe covers a very large geographical area (from well-connected locations to remote ones). It should be kept in mind that many areas are difficult to access e.g., many islands across the EU or remote Nordic regions. For those reasons, we urge the European Commission not to lower the delivery time obligations as proposed by some stakeholders during the Consultation Forum meetings. We should keep it align with other existing Lots at 15 days.

In conclusion, we support the inclusion of material efficiency requirements. However, we strongly advise to distinguish units by their size (limiting the scope to appliances ≤ 70 kW), develop an exhaustive list of spare parts, and to contact logistics consultants and experts, who have knowledge on existing logistics models and are able to provide a detailed overview on the complexity on the logistic planning for spare parts and what are the levels of existing key performance indicators commonly used in the industry.

## III. ANNEXES RELATING TO TEST AND CALCULATION METHODS (ANNEXES III & IIIA)

Before going in more details regarding the test methods, EHPA would like to share some general recommendations. The legal texts contain too many details on measurements and calculations, which should be left to the standards. This may create some unexpected loopholes. Learning from the winter package, it will increase the number of errors and the need for amending regulations. For this reason, we recommend removing the details on test methods/test conditions from the regulation. EHPA has already sent a detailed analysis of inconsistencies and comments on these two Annexes to the Commission and consultant.

## Tpeak

EHPA does not support the proposal on the peak temperature. Heat pumps would be penalised for not reaching a temperature (55°C) which is not representative of today's domestic hot water usage. Heat pump is a key technology to decarbonise the heating and cooling sector. We need a wide range of heat pump technology and capacity to support the Commission's targets to reduce energy consumption and carbon emissions towards 2050.

- **State of play & Impacts of the proposal on Tpeak on EU market - the French example**

The domestic hot water needs are very different across Europe. The European Commission proposal on Tpeak would have a considerable impact mainly on Southern European markets. We can take as example the French market, and more specifically the new building market with heat pump and heat pump water heaters.

In 2021 in France the Thermodynamic domestic hot water market (combination HP and HP water heaters) was estimated at almost 200 000 Heat pump water heaters and almost 150 000 combination heat pumps (heat pumps producing space heating and domestic hot water). Since 2012 and the entry into force of the French EPBD tool RT2012, 75% of the new houses are equipped with thermodynamic domestic hot water. As RT2012 requires that the heat pumps and heat pump water heaters are certified, most of these appliances are tested according to EN16147 and certified by accredited certification body. The French heat pump market is the first market in Europe. From an estimation made at the end of 2020, the combination heat pump stock reaches more than 650 000 units and the heat pump water heaters stock more than 680 000 units. We estimate at about 45% the number of products put on the market not achieving a mean temperature of 52°C during the two draw-off at 55°C and less than 10% of them if this mean temperature is lowered to 50°C.

Today, most of the appliances are set so that the water temperature reaches 50°C over the 2 draw-offs where $T_{peak}$ is equal to 55°C and no comfort issue has been reported. Indeed, a peak temperature of 55°C is not representative of today's domestic hot water usage; the majority of today's domestic hot water usages are around 40°C (kitchen 45 °C and 40 °C for other comfort applications). Combination heat pumps and heat pump water heaters placed on the French market are adapted on technical and economic aspects for a large development as shown by the above French data. These products are necessary to achieve a mass market with replacement of other products.

- **Health aspects**

Health issues in relation with sanitary/domestic/drinking water are regulated by various pieces of legislation which are for most of them established at member state level; it is also important to remind that national health aspects also covers many issues, such like the need to avoid burning at the usage point; in this case the legislation usually recommends (or prescribes) that water temperature shall not overcome 50°C.

The combination heat pumps and heat pump water heaters adopting the water warming method against legionella are equipped with dedicated programs (automatic cycles) allowing for periodical water warming up; the warm up frequency (monthly, weekly etc.) depends on specific national indications. For what here mentioned, EHPA recommends to not include health aspects in the eco-design and labelling regulations

- **Comfort aspects**

Thermodynamic domestic hot water testing method recommended within regulation 813/2013 and 814/2013 is largely inspired from EN16147 testing standard. This testing standard aims as assessing the

energy efficiency of heat pump water heaters and combination heat pumps while providing comfort in adequation with the end-user's need. In particular, tapping profiles and their draw-off mimic domestic hot water daily usage and aim at ensuring that both the water temperature is high enough and sufficient energy is available to fulfil the hot water need.

There are two draw-offs where Tpeak shall reach 55°C. These draw-off were initially named: bath draw-off and corresponded to dish washing draw-offs which logically occur at 12h45 and 20h30. At the time where EN16147 was originally developed on the basis of Mandate 324 describing the load profiles for all water heaters, it was commonly accepted by experts that 55°C water temperature is not essential to comfort as water at 55°C is generally far too hot to be used without mixing it with cold water. As a consequence, the option for a virtual backup heater was introduced in EN16147 for the dish washing draw-off, and exclusively for the dish washing draw-off.

Water tanks are generally heated up overnight and may be re-heated once during the day. The water temperature where the heating period is completed needs to be high enough so that each and every draw-off of the tapping profile can be successfully completed. Heat losses and a couple of draw-offs occur in between the tank heating period and the dish washing draw-off. As a consequence, in order to achieve an average temperature being 55°C over draw-off occurring at 12h45 and 20h30 the water is to be heated up to 58 or 59°C, or the water tank has to be heated more often. The vast majority of heat pump water heaters and combination heaters can easily reach 55°C while maintaining a high energy efficiency level and unless specifically required by national laws, factory setting of domestic hot water temperature is set to 55°C or below. Increasing the water temperature by 3 to 4°C, or increasing the tank heating period frequency will dramatically reduce the overall energy efficiency of the heat pump water heaters and combination heat pumps without bringing any additional comfort. More evidences have been provided in EHPA position paper issued on 16th July 2020.

- **Environmental & Economical aspects**

A hot water storage temperature higher than 55°C (necessary to comply with a Tpeak of 55°C) generates higher standby losses and lower efficiencies; the consequence will be an increase of CO2 emissions (in contrast to EU decarbonisation targets) and higher end user energy costs.

Considering the above-mentioned reasons, EHPA recommends that regulations 813/2013 and 814/2013 should not deviate from their primary objectives which are to promote energy efficiency and to help end-users choose the more efficient product**. In that prospective we recommend reducing the peak temperature to not more than 50°C with the current load profiles so that heat pump can achieve the temperature without the virtual back-up heater.** This minimum value to the reference hot water temperature should be the same for all technologies. This option would allow for a fair comparison in between products without destroying the COP of heat pumps.

During the consultation forum meetings, we understood that there are hesitations from Member states, the European Commission, and the consultant regarding the proposed Tpeak reduction to 50°C. EHPA believes that our compromise would be an easy and clear approach which leaves no room for misinterpretation or grey areas of the legislation. All technologies will be able to reach 50°C which would create a fair and level playing field between heat pumps and between all products. The comparability from heat pumps with other technologies will also increase as all products can be tested under same conditions. Secondly, all discussions about technical feasibility and correction calculations will stop. The technology is too complex to come to correction factors which represent all different technology approaches. This huge hurdle is just prevented because it is not needed.

To conclude, EHPA believes that reducing the peak temperature to not more than 50°C with the current load profile is a fair compromise to ensure a level playing field with all technologies.

Please note that if EHPA proposal goes forward, there are two side effects to take into consideration. First of all, the manufacturers will have to re-test all the products which will require time and additional costs. This is why we would kindly ask some flexibility in terms of time to re-test all the products. Secondly, this change might have an impact on the minimum energy efficiency and we consequently might need to adapt the minimum efficiency requirements. After an assessment of the impact of the agreed new peak temperature, we would come back to you with adapted minimum energy efficiency values.

## Test conditions

EHPA does not support the V40 measurement and calculation as proposed. We do not see the reason neither for introducing yet a new factor nor changing the test and calculation methods. The introduction of this new method is in contradiction with the reference to EN 16147 standard cited in Annex IIIa for the determination of mixed water@40°C.

EHPA would like to recommend that the draft regulation clearly states that Fcrtl factor is equal to 1 for storage water heaters.

## Calculation of equivalent volume V

Both the draft Regulation for energy labelling of water heaters (Annex VIII, 4, sub (d)) and for ecodesign (Annex III, 4, sub (e)) include new provisions for the calculation of an equivalent storage volume $V_{eq}$ for PCM tank or other storage facility capable of producing hot water at temperatures of 65°C.

$$V_{eq} = V40 \times \frac{30}{(\theta_p - 10)}$$

The formula is then further simplified by assuming a linear degradation of temperature during draw- off from $T_{set}$ = 65°C to the end of the draw-off at $T_{out}$ = 40°C, leading to an assumed normalised draw- off temperature of $\Theta_p$ of 52.5°C and thus a simplified default formula of

$$Veq = V40 \times 0.706$$

This approach to the calculation of $V_{eq}$ is leading to an unlevel playing field to the detriment of PCM thermal stores and water heaters, due to several reasons:

1. *Disregard of "inaccessible" storage volume in water-based thermal stores*

The simplified default formula assumes that the energy required to deliver a given V40 is equivalent to the energy stored in a smaller volume of water heated to a higher temperature ($T_{set}$) and declares this smaller volume to be $V_{eq}$. This ignores the fact that the storage volume V of a hot water cylinder is not equivalent to the hot water volume $V_{hot/V40exp}$ that can be drawn from this cylinder at 40°C or above because

- of the mixing of incoming cold water with hot water inside the tank during draw-off leading to a degradation of water temperature at the bottom of the tank during draw-off and thus a volume of water previously heated to >40°C becoming inaccessible for the V40 test;
- unheated volumes of water beneath the lowest point of the heat exchanger or heating element inside the tank that do not reach a temperature of >40°C from the outset;

- of a non-linear stratification inside a hot water cylinder during both static and hot water draw-off conditions.

This fact is clearly recognised in the relevant standards:

EN12897:2016 clearly differentiates between the rated storage volume V (Clause 3.1.2), actual volume as measured (Clause 3.1.3) and $V_{hot}$, the "Volume of water drawn off at ≥($\Theta_C$ +30)°C" (Clause 3.2). The standard furthermore recognises that $V_{hot}$ < V, as it sets out a minimum hot water draw-off performance for $V_{hot}$ of 75% of the cylinder's actual capacity (Clause A.4.1). The same approach is being used in EN50440:2015, which uses the term V40_exp instead of Vhot.

It is furthermore important to note that the formulas for calculating V40 in EN12897:2016 and EN50440:2015 (and which are being repeated in the draft regulations and being adapted to calculate $V_{eq}$) are referring to $V_{hot}$/V40_exp as the input and not V (A.4.3). They can therefore not be used to calculate V without further correction.

Ignoring this difference in the calculations proposed in the draft regulations, which are based on the calculations set out in EN12897:2016/EN50440:2015 is pitching the playing field against PCM thermal stores, as it consistently underestimates the reduction in volume delivered by PCM thermal stores compared to water-based thermal stores. It also leads to the absurd situation that, if applied to a hot water storage vessel, the calculated volume $V_{eq}$ of this vessel is significantly lower than its declared volume, as shown in Table 1 below.

| Storage volume V in litres | 92 | 155 | 199 | 283 |
|---|---|---|---|---|
| Mixed water at 40°C V40 in litres | 78 | 183 | 241 | 359 |
| $V_{eq}$ based on draft regulation (V40 x 0.706) | 55.1 | 129.2 | 170.1 | 253.5 |
| $V_{eq}$/V | 59.9% | 83.4% | 85.5% | 89.6% |

**Table 1: Storage volumes, V40 and their relation to Veq based on data taken from a manufacturer's datasheet**

In order to correctly determine V based on V40, a correction factor $V_{cor}$ must be introduced to account for the "inaccessible" volume of the equivalent water-based storage tank. This factor should be between 75% (the lower boundary set by EN12897:2016) and 95% as a realistic upper boundary and, based on experience and market analysis, EHPA proposes to use a factor of 0.85, resulting in the following formula:

$$V_{eq} = V40 \times \frac{30}{(\theta_p - 10)} \div 0.85$$

2. *Oversimplification of the draw-off temperature Θp*

The proposed default formula assumes a linear drop in temperature between $T_{set}$ and the end of the draw-off. This is overly simplistic and does not correlate with the discharge profiles of either a hot water store (cylinder) or especially for a PCM thermal stores, which go through a phase-change during the discharge. For clarity, there should therefore not be a default formula, and the assessment should be based exclusively on the normalised experimental average draw-off temperature $\Theta_p$ rather than a fixed value.

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## Sound Power Level measurements

In the draft regulation, it is stated that the sound power level of heat pump water heaters is to be measured at maximum heat output. However, the maximum heat output is not defined, we recommend maintaining the current rating conditions. The paragraph does not specify which sound power level(s) is (are) to be measured / declared for all configurations of HPWH. For monobloc units placed outdoors, it is not clear which sound is to be measured? For inlet and exhaust ducted units placed indoors, what shall be measured? Inlet and exhaust duct might provide noise to the neighbour and the occupant respectively: why choosing the highest value for the declaration?

EHPA recommends referring to EN 12102-2 Annex A which describes all possible configurations of HPWH and specifies the corresponding values of sound power level to be measured.

## Temperature Regime for PCM thermal stores

The draft regulation appears to limit its applicability to PCM thermal stores “capable of delivering heated drinking or sanitary water of at least 65°C after being appropriately charged”. There is no clear reasoning in the draft as to why such a limitation should apply to PCM thermal stores.

Mandating such a temperature requirement of 65°C is detrimental to innovations such as the development of lower temperature PCM thermal stores that will improve energy efficiency and compatibility with heat pumps and provide very low legionella risks without being heated to 65°C. In its current wording it is furthermore technology prescriptive, as it rules out a large number of PCMs suitable for hot water production from the field of applicability of the draft regulation.

The V40 test is designed for standardised comparison of the service provided by the appliance. The energy consumed to provide the service and how the appliance is controlled are and should remain a function of the appliance and its characteristics and may change from one type of appliance to another. Therefore, no specific charge temperature of the appliance should be set for PCM thermal stores, as this is also not the case for water-based thermal stores and water heaters. The V40 test should be carried out at manufacturer set points as per the relevant standards.

In our view this condition should therefore be deleted.

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# CHAPTER 2: Energy Labelling Regulation

## I. Main Act (articles 1 to 10)

### Scope

EHPA would like further clarifications on the scope of the regulations (Ecodesign and Energy Labelling). How does the combination work between the capacity of storage and the rated heat output? Would it be possible to create a table for a better understanding of the scope?

## II. Annexes relating to labelling classes (Annexes I & II)

### Rescaling

EHPA is supportive to the current process of re-designing the energy label. Within this process, we ask the European Commission and Member States to take into consideration the administrative and operative consequences which this procedure and changes create for the industry, market surveillance authorities and consumers.

EHPA supports a single step rescaling as a result. It should include:

- the introduction of the new conversion coefficient (currently 2.1) giving a positive signal to end users,
- a rescaling from A-G,
- a definition of energy classes boundaries in a way that increases the differentiation between the different type of water heaters
- the display of the water heating energy efficiency (eta - $\eta_{wh}$) for average climate on the label,
- the provision of a full 2-year transition period.

The implementation of this "all-in-one" relabeling and rescaling should happen at a pace compatible with market reality, considering technical and commercial processes of the industry and leaving sufficient time to the industry and market, especially consumers, to adapt to all the changes. Therefore, we would like to flag that it is necessary to inform the manufacturers of the foreseen measures as early as possible and to provide a full 2-year transition period between the entry into force and the applicability of the new label.

### Energy Efficiency Classes

EHPA would like to highlight two major concerns regarding the proposed energy efficiency classes for hot water storage tanks:

- There is no provision for an empty class and therefore no incentive for hot water tank manufacturers to further improve the performance of their products. The best hot water tanks and PCM thermal stores on the market today achieve an energy label of A+ under the current Regulation, which is to be rescaled to A under the draft regulations. This means that there is no incentive to further improve the energy performance of hot water storage tanks.
- The introduction of the multivalent tank correction mvc is even more detrimental to further promoting energy efficiency improvements in the hot water tank industry. Based on its current

wording, the inclusion of the mvc is going to lead to an improvement by one label class for all hot water storage tanks with an indirect heating coil and a back-up heater on the market today. This means that the proposed factor will lead to a narrowed label gap between the current average of products on the market and the leading products, further disincentivising manufacturers with average performing products from investing in any further improvements in their energy efficiency.

## III. ANNEXES RELATING TO INFORMATION REQUIREMENTS (ANNEXES III & IV)

### Energy Label

As explained in previous positions, EHPA believes that we should maintain the label as simple, clear, and understandable as possible for the end-user. Even though the installer plays a key role, some products are sold directly to consumer (e.g. DIY market). Consequently, all information on the label should be understandable by the consumers. We also believe that too much information could water down the value of the label for end-users. The QR code is a very easy bridge for customers to retrieve more detailed data when needed.

We would like also to remind that EHPA supports the proposal to display the water heating energy efficiency ηwh for average climate on the label. Due to the rescaling, many products will be situated in the same label class. If the etas value is added, it will provide more differentiation for products within the same class and in between classes.

The label thresholds for higher classes are very ambitious for profile M and above and a very different approach is used for class width in the same tapping profile and between the different tapping profiles that we doubt could ensure a fair competition between technologies.

Finally, EHPA would like some clarification on how to treat appliances without outdoor noise.

### Product Information Sheet

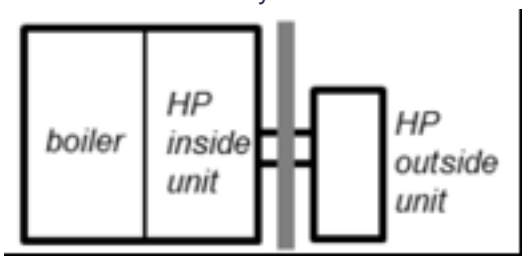
As explained in our position paper on Lot 1, It is understood in both energy labelling regulations that the product fiche template as provided in the drafts shall be used. However, EHPA believes that template should remain free.

Finally, the boundary in between product and package is not clear, neither with regards the label nor the product fiche.

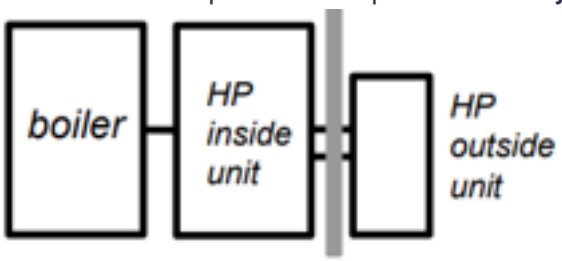
# ANNEX 1: Description of TDHP solutions

EHPA would recommend that the European Commission to clearly include these solutions in the regulations.

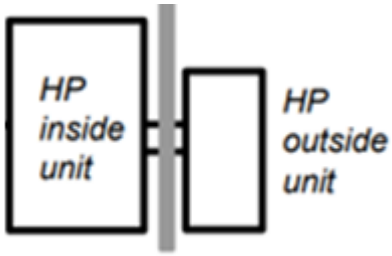
- PRODUCT 1 : As an Integrated combination heater : A thermally driven heat pump + an auxiliary boiler




- PRODUCT 2 : As an un-integrated combination heater : A thermally driven heat pump coupled with a separated auxiliary boiler.




- PRODUCT 3 : A thermally driven heat pump

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