SPIUG’s comments after 1st WG1 meeting in Brussels on 13.02.2020

Warsaw, 10th of March 2020

Dear Colleagues,

The detailed statement concerning presented topics on the 1st WG meeting concerning Technical and Impact Assessment Assistance Space and Water heaters in Brussels on 13.02.2020 is prepared by SPIUG (Association of Heating Appliances and Manufacturers and Importers in Poland).

Therefore we would like to concentrate ourselves on following topics:

1.3 Ecodesign and energy labelling requirements in support of the decarbonisation of the gas-grid:

Based on today’s technical, economic and environmental knowledge, do we recommend to leave to keep—as a precautionary measure— the policy option to support use a hydrogen gas-grid on the table.

We are for promoting future greening of all energy carriers. In case ‘H2 ready’ bonus – or a pictogram – according to SPIUG, it should be explored further, but it cannot be used as a reason to downgrade efficient technologies on the EL scale. It has to be taken under consideration compatibility analysis of appliances to other gas qualities in progress. The future greening of energy carriers (including gases, via hydrogen, biomethane (as defined in EN 16723-1 and EN 16726) and synthetic methane is a crucial development towards the decarbonisation of buildings and of the EU economy.
Together, as Poland's representative as an EU member in WG 1, we believe that different national / regional approaches to gas decarbonisation (hydrogen in mixtures or 100%, biomethane, synthetic methane ...) should be taken into account.

According to SPIUG's opinion, the future greening of energy carriers (including gases, via hydrogen, biomethane and synthetic methane) should be promoted by policies at EU level, e.g. the Intelligent Sector Integration Strategy.

Grounds:
The departure from natural gas as a fuel in heating technology in the next 10-20 years is a foregone conclusion, taking into account economic and climatic factors. Given the technical possibilities for thermomodernization of existing buildings, and their modulation for the use of renewable energy, it seems logical to support fuels alternative to natural gas, which will be able in the future to use all or part of the infrastructure for the transmission and distribution of natural gas. One such solution is the use of hydrogen for heating purposes. The presentation during the WG 1 meeting showed that there are still a number of technical problems to overcome to achieve this goal, which will require several years of research and experience. Therefore, we recommend a solution when the boiler should be ready or able to handle intermediate stages between 30% (probably possible without adjusting the standard gas boiler) or 100% hydrogen, but with the goal of using 100% hydrogen. This can be important if utilities want to phase hydrogen in the 30-100% range during the transition period.

Gas boilers already work with up to 100% biomethane and some condensing boilers placed on the market today can accommodate a variable share of hydrogen (H2) up to 20%. Best available technologies up to 30% H2. However consumers are not aware of it. There is the question: how to promote their awareness and this type of appliances?

This approach is important because of the diversification of energy sources and the security possibilities of providing heating. Any monoculture in energy supply is disadvantageous due to different operating conditions and the possibility of obtaining energy at the local level.

Possible inclusion of the option "readiness for hydrogen" or another function supporting a decarbonised gas network in any form or another to the new energy label and / or - possibly at a later date - introduction of mandatory ecodesign regulations for radiators used for space heating and water heating, we suggest to leave, until it is possible to use hydrogen for heating purposes at a commercial level.

1.4 Primary energy factor, impact on limits

SPIUG agree with the the PEF revision in the EED. Before introducing a new CC in ErP-EL the exact assessment is required. We cannot agree with down- / up- grading appliances in EL scale due to a lower CC.

Discussed ecolabelling rescaling for space heaters could be done first after 2026 review, not now. In our opinion, condensing boilers should remain in the A EE class. Promoting the modernization of old and inefficient conventional boilers by replacing them with condensing boilers has only been successfully implemented since the ecodesign requirements came into force at the end of 2015. Condensing heating boilers are a technology developed in EU countries. A lot of companies invested a short time ago a lot of money to change their production profile to fulfill the ecodesign requirements. This is an important product group due to the industrial strategy of EU member states, which is paving the way for decarbonisation (biomethane, admixtures of hydrogen, hydrogen) and currently has a major contribution to reducing low emissions, as in Poland.
Grounds:
“For the Energy Labelling there is the consideration that after implementation of the Ecodesign limits several classes are now empty, while at the same time some stakeholders have asked for a larger differentiation in classes in the broad current A+ classes, which now covers a seasonal efficiency range from 98 to 125% with many competing technologies.”

According to SPIUG: We think defining classes are very wide! Is it difficult to compare devices that have an average annual efficiency 30% lower or higher? Therefore, in our opinion, we should go towards REDEFINING classes. Of course, according to what is in this document, some condensing boilers will go to the lower classes what seems to be wrong, but in turn, low-temperature heat pump technologies that are today in A ++ will better reflect the real difference

Nowhere is there a question about certification in energy classes of entire buildings. Of course, we talk about primary energy, which must be less than ...... In our opinion, however, this does not settle the topic. Because we can use the best heating technologies, heat pumps in the A ++ class, but if the entire building does not meet the specified standards of the technologies used, consumers will eliminate the energy shortages of the building, through additional measures, such as the use of other additional energy sources, e.g. photovoltaic cells. Of course, there is nothing wrong with it, because the more PV cells the better, but why "waste" such energy, in the prosumer system, on which we care the most, "the need for heat loss in an insufficiently insulated building"? and this is not just a matter of "used individual technologies" type A ++, but of their cooperation and appropriate cooperation.

Therefore, in our opinion, comprehensive certification in "A" energy classes will allow wider thinking of building designers and builders, how to use available technologies to achieve the best possible certification effect of a building. Then, reaching the actual minimum value of the EP coefficient will be in the "interest of the investor" who will be able to achieve it with the lowest investment possible.

Concerning heat pumps:

1. HP product cards should always have a set of full parameters for 35º C and 55 º C (except low temperature heat pumps). This will allow you to use the etas data for co-financing programs. This solution is successfully used in Czech Republic.
2. The product data sheets should include the SCOP value for 3 climates and for 35 º C and 55 º C (except low temperature heat pumps)
3. Energy classes in the case of heat pumps for 65 º C do not make sense - design temperature too high
   - the climate is getting warmer and such temperatures will not occur in installations
   - after temomodernizations (even partial), the design temperature powered by the PC is always below 55 º C
   - promote one technology in air / water heat pumps (propane)

Concerning electric heating:
Proposal to change the rules of labelling for electric boilers using energy produced by RES, especially from local prosumer installation. Now, the highest energy efficiency class for such appliances is Class D because of carbon or other fossil resources vestige in the electricity production, The described case as RES production especially from local RES installation is not foreseen in the rules of energy labelling for space heaters what have significant impact on energy efficiency of such installation.
SPIUG’s proposal for a new approach to determining the energy efficiency of electric boilers

Currently, consumers have the option of producing electricity from renewable sources using solar panels. This energy can be used by the consumer at a later time. Thus, it is accumulated in the energy system. When it is used, we use energy from RES.

The current regulations, by which the energy efficiency class is determined, provide for the use of the CC factor characterizing the energy network in which energy comes from various sources, which means that electric boilers, despite their very high efficiency, achieve at most a low D class.

Our proposal is to use a double energy label in the case of electric space heaters, which will show the energy class obtained by the device in the case of power supply from electricity from the energy network classically and the energy class obtained by the device powered by 100% electricity from renewable energy in the case of solar energy accumulation.

The procedure for calculating seasonal energy efficiency will need to be changed, which will differ from the current one by omitting the CC factor (using CC = 1).

In our opinion, the proposed approach will enable the consumer to visualize the possibility of achieving higher energy efficiency, and thus reducing the greenhouse effect in line with Ecodesign.

1.5 Micro-cogeneration metrics

Micro-cogeneration includes various technologies (internal and external combustion engines, fuel cells); Ecodesign and energy label policies should be developed with all of them in mind, rather than discriminating against efficient technologies (e.g. Fuel Cells). It should be remembered that effective heating installations are often based on hybrid systems and an energy mix whose essential element guaranteeing the safe functioning of the whole system is often micro-cogeneration.

"Assessment of compliance with EN 40465 is not accepted by the Commission services, but mCHP deserves credit as a key tool for distributed (local) power generation, especially with H2, also because fuel cells can also be used the other way round, i.e. conversion power to H2; "

The solution may be to take into account the specific energy consumption (SEC) of EN 50465 Annex K for the assessment of mCHP calculation methods. Further you can base a comparison of a cogeneration block including an additional space heater. Setting the proposed conversion rate of 2.65 will not reflect potential savings resulting from the use of micro-cogeneration.

1.6 Shared chimney problem B1, C4 and C8

Currently in Poland, like our colleagues from Central and Eastern Europe and other requesting countries, there are many installations that are several years old or more, where non-condensing boilers with a closed combustion chamber are used. In these installations, chimney systems were used that corresponded to the requirements used for this type of boilers, i.e. air-flue pipes made of aluminum or ceramic systems, but without resistance to the effects of condensate from flue gases. Modernization of such a system to replace an existing conventional boiler with a condensing boiler, due to "technical death", after years of operation of a traditional boiler, in a way FORECTS to change the chimney system! This in some cases may require a major reconstruction of the chimney system! Of course, this is technically feasible, but it is often associated with high costs and labor costs.
Proposal:

In our opinion, the possibilities of financial support from the EU or member states' budget should be determined, as our neighbors from the region suggest. The goal of such action would be to modernize this type of systems, but so that the costs of necessary modernization do not dramatically exceed the cost of savings resulting from the use of condensing boilers. Of course, given the development of technology going towards the combustion of hydrogen.

Additional remark concerning solar thermal (WG4):

1. There is need for a simplification of the installer label
2. Since 2015-09-09, an EU Directive applies, according to which most marketed Heating Devices must be provided with energy labels. Currently, according to the EU Directive concerning the Europroject and labelling, introduced by the Orders 811 and 812/2013, solar collectors in this scope occur only in the case of labelling a set consisting of more than one device, where thanks to the application of solar collectors, the energy efficiency of these devices is increased. Solar collectors as such, in accordance with the current regulations, are not subject to the obligation of providing them with energy labels. An exception to this rule are thermo-siphon systems with integrated electric energy supply—a relevant order defines these devices as water heaters. According to the procedures concerning solar calculations for water heaters, the highest energy class is defined as A, taking into account that electric water heaters have a pre-defined efficiency of 40% and thanks to connecting to a solar collector systems, electric water heaters classified as C and D have the chance for an A-class label. Whereas independent solar collector systems for preparing hot utility and heating water, which according to the DIN CERTICO guidelines can be granted energy class A++, are not visibly classified, which negatively influences section of this sort of systems at the investment planning stage.

Grounds:
The reason of such an approach to solar collectors was that the European Committee adopted the assumption that solar collectors as such do not require an external electricity supply, which is why they are not classified in terms of energy, like other devices which consume power supplied from the outside.

According to SPIUG, the European Committee should introduce the obligation to label solar collectors, taking into account the following factors:
- the Energy labelling should not cause additional financial burdens for the manufacturers.
- similarly to other heating devices, the labels should be created by the manufacturers themselves, based on received and paid for tests in an accredited laboratory or assigned free of charge as part of the license fee for Solar Keymark. The entire label should be based on use of date from the Solar Keymark certificate, the conversion of which is easy and, if needed, can be extended with additional tests as part of the Keymark certification. It should also be noted that the label data are to come from the attachments to the Solar Keymark certificates, which often include incorrect data, which should be eliminated by appropriate guidelines and procedures. Failure to do so may cause distortions in specification of the heating efficiency, even by the certifying bodies themselves, which should be avoided at all costs.
- as in the case of boilers or heat pumps, a free solar collector label generator should be available, and the manufacturers should be able to issue such a label, as in the case of heat pumps, boilers, etc.
- from the perspective of the end users, it would be advantageous to move from comparing the collectors only in terms of optical efficiency to comparison of efficiency, that is the actual heat yield, which is the basis for specification of the collectors’ energy efficiency.
- due to the collectors’ principle of operation, the labelling should take into account the climate zones in the form of a closed climate base, as in the case with heat pumps. This will make it possible to create a transparent and comparable base of solar collectors’ technical properties.

Yours faithfully,

Janusz Starościk,
Charman of the Board SPIUG