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Editorial

Dear Members of the RHC-ETIP,

2016 was an exciting year for RHC technologies. In February 2016, the Heating and Cooling strategy was published. This was a great step forward, since it was the first time that the European Commission highlighted our sector. We can regard this as a success also of our continuous promotion work on renewable heating and cooling. 2016 ended with the publication of the Winter Package “Clean Energy for all Europeans” by the European Commission with the goals “Putting energy efficiency first”, “Demonstrating global leadership in renewables” and “Delivering a fair deal for consumers”.

The general message is great, but what the winter package really means for our sector is not clear yet. We have to be aware, that on one hand the renewable energy goals are not very ambitious and on the other hand, in the heating and cooling sector we are in competition with the efficiency sector and the generation of heat by electricity.

We highly welcome the increase of the efficiency of buildings and of heating and cooling infrastructure, and we know, that the share of (renewable) electricity in the

heating sector will grow, since it is partly more cost-effective and it makes sense in regard to the overall energy system.

However, we also have to fight for our position that there is a relevant part of the heating and cooling demand remaining, which can neither be avoided by efficiency measures, nor efficiently delivered by electricity, but supplied most cost-effectively by RHC technologies. This is the reason, why the development of RHC technologies must be strengthened.

In contradiction to the progress in political awareness of the heating and cooling sector, most of the RHC markets in Europe are suffering and the EU-funding for R&D of RHC technologies in the framework of Horizon 2020 is still not adequate to the relevance of our sector. This means, that we were not able yet to convince the politicians sufficiently and have to continue our work.

Also 2017 will become an important year, since not only the Renewable Energy Directive, the Energy Efficiency Directive and the Energy Performance of Buildings Directive will be revised or the revision prepared based on the guidelines provided by the winter package, but

also the work programme of the Horizon 2020 calls 2018 – 2020 will be adopted. We very much hope, that the programme will be structured in a way, that RHC technologies are able to benefit more than in the past from it.

Since the Member States will decide on the work programme together with the European Commission, we would highly appreciate, if you are able to talk to your national representative and underline the importance of a strong position of RHC research in the work programme.

Our first message, that heating and cooling is a sector of high relevance, is in meantime consensus in the policy, however, our second message, that RHC technologies must play an important role in the future energy system and need a stronger support to become competitive, is not sufficiently heard yet. This is why we will work hard also in 2017 and why I am very happy and grateful, that the board and the secretariat of the RHC-ETIP is highly engaged in our work.

With warm regards,



Gerhard Stryi-Hipp
President of the European Technology and Innovation Platform on Renewable Heating & Cooling



RHC-ETIP's input to H2020 Energy Work Programme 2018 - 2020

In H2020, all renewable energy technologies have to compete for the same budget in the related LCE calls, including electricity against the heating technologies. The analysis of the results of the H2020 calls 2014 – 2016 shows the unintended result of this concept: RHC technologies receive significantly less funding than technologies related to Renewable Electricity.

The only way to overcome this shortcoming for the RHC technologies in H2020 funding and to create a level playing field between the sectors is to separate, starting from the WP2018-2020, the H2020 LCE calls in calls for RHC technologies and calls for Renewable Electricity technologies. This approach would pay due respect to the fact that the RHC sector is, in contrast to the Renewable Electricity sector, much more diverse in technological applications and in markets, is mainly dominated by SMEs and has much smaller R&D capacities in industry as well as in universities and research institutes. This is the result of continuously neglecting the huge innovation potential of RHC technologies and the low R&D funding of RHC technologies both at European as well as at national level.

The competition between RHC technologies and Renewable Electricity technologies in the same call is a systematic fault. If non-electricity RHC technologies are needed to decarbonize the H&C sector (as shown above), it is not constructive to allow that almost only R&D projects on electricity technologies are funded (which is not intended, but obviously almost the case). The continuation of this mechanism will never enable the RHC technologies to regain the leeway of technological development in comparison to Renewable Electricity technologies. This is why it is absolutely necessary to separate the RHC from Renewable Electricity related topics in H2020 calls and allocate separate budgets for them in order to create a level playing field.

[This document](#) presents selected priorities by the experts of the RHC-ETIP related to the different fields which are covered by it: biomass; district heating and cooling; geothermal; heat pumps; hybrid systems; solar thermal; thermal energy storage.

For more information, please contact the [RHC-secretariat](#).

Missing integration of RHC technologies in the SET-Plan and insufficient R&D funding for RHC technologies within H2020

On 25th October 2016, the RHC-ETIP reacted to the missing integration of RHC technologies in the SET-Plan and insufficient R&D funding for RHC technologies within H2020 by sending letter to Commissioner Moedas, in charge of the research and innovation portfolio, as well as to Vice-President Šefčovič requesting actions to overcome the shortcomings for Renewable Heating & Cooling technologies in H2020 and the SET-Plan.

These letters were drafted with a view to raising awareness amongst the two Commissioners that the current European energy policy framework still hampers the Renewable Heating and Cooling (RHC) sector to unlock its technological and market potential. If this situation is sustained, the RHC sector will not be able to deliver its contribution needed to achieve the European energy and climate goals.

More specifically, the RHC-ETIP requested the following:

1. Provide separate budget lines in the Horizon 2020 LCE calls 2018-2020 for RHC technologies and for Renewable Electricity technologies.
2. Develop and publish Issue Papers on RHC technologies in the framework of the SET-Plan and publish separate Priorities for RHC technologies within Actions 1&2 and, consequently, work on related Declarations of Intent with the RHC stakeholders.

The letter to Commissioner Moedas is [available here](#).

The letter to Vice-President Šefčovič is [available here](#).

The Background Paper is [available here](#).

News from the RHC Tender

The secretariat of the RHC-ETIP, composed of EUREC (European Association of Renewable Energy Research Centres), AEBIOM (European Biomass Association), EGEC (European Geothermal Council), ESTIF (European Solar Thermal Industry Federation), EHPA (European Heat Pump Association), together with VITO, EURAC and Fraunhofer-ISE, has been awarded by DG RTD the tender to support the activities of the European Technology and Innovation Platform on Renewable Heating and cooling (RHC-ETIP), since November 2015.

In 2016, the consortium prepared several documents, which were submitted to the European Commission:

- Monitoring of the implementation of the Technology Roadmaps, which collects information related to ongoing EU co-funded projects dedicated to renewable heating and cooling, and analyses to what extent they support the achievement of the Key Performance Indicators, as identified in the Technology Roadmaps
- Intermediate analysis of the heating and cooling industry, which aims at:
 - Providing qualitative information on the structure of the heating and cooling industry in terms of marketed technologies, employed energy sources and types of companies involved.
 - Delivering initial quantitative data on the installed stock and sales of systems using the different technologies made available on the markets, and on turnover and employment related to such markets.
- Intermediate analysis of the heating and cooling consumers, which presents a first analysis of: primary clients of RHC technologies; countries with a strong foothold in the RHC market; perceived added values & risks by the clients in regard to RHC technologies; typical barriers for fast technology diffusion; main gatekeepers for RHC technology.

These documents will be made available on the RHC-ETIP's website as soon as approved.

The work foreseen in 2017 focuses on the update of the monitoring of the implementation of the Roadmaps, in order to include privately funded projects, as well as projects from third EU countries. In order to collect as much information as possible, an online survey will be published on the RHC-website.

A workshop dedicated to the collection of additional information is also scheduled to take place in Brussels, during EUSEW2017, on 20th and 21st June 2017.



News from the Solar Thermal Technology Panel

On January 23rd, the Steering Committee of the European Solar Thermal Technology Panel (ESTTP) held its first meeting for 2017, in Brussels. The meeting focused on the main issues at stake for this year, namely the RHC-ETIP, the debate on the SET-Plan, and the policy framework for the sector, following the release of the Commission Clean Energy Package.

Participants extensively discussed the role of H&C in the SET-Plan with DG RTD representative Piero de Bonis, expressing their concerns regarding the low representativeness of RHC technologies in the plan, particularly regretting that renewable heating and cooling sources are not addressed under actions 1 & 2, related to making the EU number 1 in renewable energy, more concretely aiming at “performant renewable technologies integrated in the system” and to “reduce costs of technologies”.

Furthermore, the Steering Committee debated the perspective of the industry’s role in the 2050 EU energy mix, in order to feed into the current policy debate, focusing in particular on the technology potential to achieve 100% market-ready solutions in the run up to 2050. Particular technological advancements in the sectors of storage and hybrid systems have been discussed.

Participants also received a policy update on the Commission’s Clean Energy Package, and commented some specific measures that could positively impact on the solar thermal sector.

Finally, the Steering Committee debated goals and organisation of activities for the new year.



News from the Biomass Technology Panel

The biomass panel of RHC ETIP co-organized with COGEN and ETN an event during the European Sustainable Energy Days in June 2016. The topic was “Micro Gas Turbine: A sustainable technology towards a decarbonized energy production”. Ludwig Van Wonterghem was the key note speaker from biomass technology who presented the newest micro CHP boiler running on wood pellets and PV developed by his firm, Ökofen.

In November, the biomass panel of the RHC-ETIP contributed to define research and innovation priorities of two issues papers of Strategic Energy Technology Plan (SET-plan): for heating and cooling in buildings and Renewable fuels and Bioenergy. In these issues papers, the biomass panel of RHC-ETIP platform emphasized on the fact that bioenergy has the potential cost competitive renewable solution to replace fossil fuels in heating and cooling if sufficient budget is invested in R&I activities identified by the panel.

In the upcoming months, the newly formed issue group is going to address smart system integration of biomass in the energy system in order to increase the synergies between different RES. It is becoming a necessity that in the future the focus has to be directed away from individual plants and onto their systemic integration in order to effectively phase out fossil fuels from the energy system. This issue group will aim to bring into light good examples of hybrid systems constituted of bioenergy and other RES and show how the storability and flexibility of bioenergy can strengthen the grid stability.

During the Sustainable Energy Week in June 2017, the steering committee of biomass panel will join in Brussels to validate the ongoing work for the tender and discuss the future priorities of the biomass panel for the period 2017-2018.



News from the Geothermal Technology Panel

During 2016, the Geothermal Panel activities centered on the revision of the Geothermal Technology Roadmap, on the promotion of ongoing Horizon 2020 geothermal projects results, and on the potential collaboration with the newly created ETIP on Deep Geothermal. The Geothermal Panel had a meeting in June, when the RHC sector met in Brussels to state the need for a level playing field in the Heating and Cooling sector at a meeting with European officials. The main issue was to review the status of implementation of the geothermal R&D-roadmap, both in terms of projects and of the key performance indicators (KPIs) stated in the roadmap.

A Geothermal workshop was organised in September 2016 in Brussels. The event covered the next stages of the Horizon 2020 programme, feedback from ongoing R&D projects, a brokerage event for future consortia, a review of the Geothermal roadmap, and presentations from the IMAGE project.

In September, the geothermal panel was also present at the European Geothermal Congress (EGC) 2016, which took place in Strasbourg, France, on September 19-23. During the event, which saw the participation of more than 1000 people from 34 countries, the RHC-ETIP was promoted at the EGET booth and through presentations (e.g. on the Geothermal Roadmap).



During 2016, the geothermal sector also created an European Technology and Innovation Platform on Deep Geothermal (DG ETIP) in March 2016, and the European Commission, DG RTD, officially recognised it as an ETIP in July 2016. This is an important step forward to support the research and development of technology for geothermal power production and heat from deep resources, which opens to many opportunities for collaboration with the shallow sector.

In the upcoming months, the panel will focus on relaunching activities for shallow geothermal, including the update of the implementation roadmap and the KPIs, the monitoring of ongoing research, and liaising with other groups in the shallow geothermal sector (Geotrained, CEN Standards (CEN/TC 451), ...). Another important step will be combination of synergies with the DG ETIP for the deep geothermal heating and cooling group.





News from the Cross-cutting Technology Panel

The Cross-Cutting Technology Panel focuses its work on the following research topics:

- District Heating and Cooling
- Thermal Energy Storage
- Hybrid Systems

Its Steering Committee is currently composed as follows:

Research and other entities

- Michael Monsberger – TU Graz
- Michel Haller - Institut für Solartechnik SPF, University of Applied Sciences Rapperswil
- Luisa Cabeza - University of Lleida
- Johan Desmedt – VITO/Energyville
- Burkhard Sanner – EGEC
- Maurizio Repetto - Politecnico Torino

Industry

- Franck Salg – Vaillant
- Bertrand Guillemot – Dalkia
- Pietro Brevi – Robur
- Basilio Guerra – Enerconsult
- Hakki Tigli - Mitas Digas Enerji

Focus Group Leader – Hybrid Systems

- Wolfram Sparber - SEL Group, EURAC Research

Focus Group Leader – Thermal Storage

- Wim van Helden –AEE Intec

Focus Group Leader – District Heating and Cooling

- Alessandro Provaggi - Euroheat & Power / DHC+ Technology Platform

The Cross-Cutting Panel assisted the RHC-tender consortium in the drafting of the Monitoring of the Implementation of the Roadmaps, and in defining the research priorities for HORIZON2020 WP2018-2020.

The next meeting of the Cross-Cutting panel is scheduled on 20th and 21st June 2017 in Brussels. More information will be circulated as soon as available.



News from the Heat Pump Technology Panel

The Heat Pump Panel have hosted a dynamic mind-mapping exercise last September, where the participants were asked to identify and crossing barriers to heat pump deployment.

Dave Person (Chair of the Heat Pump Panel) led the discussion around 5 main focus areas:
-Political –Human –Commercial -Technical – Environmental.

Experts from both heat pump and energy sector gave their contributions to the discussion, bringing different angle and prospective to the main focus areas. This ensured a lively and constructive debate, which brought a number of new key elements and ideas to the wall.



The participants have identified the following points as the biggest opportunities to boost the heat pump market:

- The importance of having a strong regulation that “force” member states to retrofit their existing building stock, setting ambitious efficiency targets.
- Make polluters pay on fossil fuel – tax on CO2
- Smooth working fluid barriers
- ESCO business model
- EU institution should lead the way - refurbishing their building with the best available technologies
- Focus on repeating existing best practices

The next step for Panel will be to host another meeting to discuss and draft policy and investment recommendations based on the priorities identified during the meeting.