



3rd EAC meeting

9 February 2016, Brussels, Belgium

Agenda

EUROPEAN ADVISORY COMMITTEE (EAC) MEETING

9 February 2016

Renewable Energy House
Rue d'Arlon 63, 1040 Brussels

13:30 Buffet lunch

14:00 Overview of FROnT activities since previous meeting

14:15 Validation of success criteria for RHC support schemes

14:45 Estimating RES Heating and Cooling costs

- Final consultation on calculation methodology
- Review of initial results of Levelized Cost of Energy Calculation (LCoHC)

15:45 Revision & validation of end-user centred tools

16:15 Revision & consultation on recommendations on promoting transparency on energy costs

16:45 Closing of the meeting

- Review of recommendations & next steps

17:00 End of meeting

1. Overview of FROnT activities since previous meeting

Pedro Dias opened the meeting, welcomed the participants and asked to have a round of introduction before presented the agenda. Participants introduced themselves. Pedro Dias provided a brief introduction on the FROnT project and explained that the aim is to discuss/validate/plan beyond its consortium and therefore national and European Advisory Committee meetings are being organized regularly. This meeting is the 3rd one at the EU level.

Since the previous EAC meeting several milestones have been reached in the FROnT project:

- The assessment on Key Success Factors was extended, updated and revised, following the instructions of the Advisory Committees at the national and EU levels;
- Additional online consultation started in order to validate the project's findings about the Key Success Factors of support schemes;
- The final brochure on support schemes is being developed;
- The results of the market survey in 5 EU countries assessing the awareness of different energy sources was compiled in a report and was presented at several external meetings/events;
- The trial version of the user-friendly electronic estimation tool for LCOHC (Levelized Costs of Heating and Cooling), comparing different technologies, was further improved;
- The development of end-user centred tools started.
- High level events will take place in Brussels during the EUSEW.

2. Validation of the success criteria for RHC support schemes

Andrew King explained that the review of best practices looking at design, setting-up & operation of schemes was done (27 RES-HC support schemes addressing residential, non-residential and industrial applications in Germany, France, Italy, Austria, Spain, UK, Netherlands, Poland & Portugal), as well as the Key Success Factors were identified internally. The external validation is on-going, including the present, EU level meeting, national meetings and the online consultation. After the validation the key deliverable, the “Manual of good practice” to support the designing of future RHC schemes will be publicly available.

The main criticisms in relation to the different support schemes were: low funding, too much red tape, long time lapse, lack of professional structures, low public confidence on the technology, long decision term.

The definition of KSF was shared and approved by the EAC: *„Key Success Factors (KSF) are factors that characterise a scheme (policy), making it accountable, ensuring its cost effectiveness and helping boost end-user confidence in supported technologies.“*

The 5 identified KSF was explained one by one: 1. Appropriate consultation 2. Quality and performance 3. Transparency and measurability 4. Financial adequacy 5. Predictability and stability.

The feedbacks of industry stakeholders to the energy agencies (in the framework of National Consultation Platforms) from the NL, UK and PT were shared.

The top level findings were the followings:

- Participants from all three countries agreed with the definition of the KSF
- Participants across each country agreed with the Key Success Factors.
- Results: contrasting views on the level of importance attached to each KSF

The national feedbacks were shared in more details going through the KSFs one by one.

The importance of periodic monitoring was highlighted (e.g. through an open source performance platform).

The next steps will include 2 NCP consultation: in PL and ES and the [online consultation](#).

Feedback

The EAC was asked to share their opinion on the KSF.

Burkhard Sanner suggested to include historical analysis as well (e.g. in the case of RHI it would be important) and to consult the different projects addressing the same issue. It was explained that the final assessment report will also include the relevant findings from other projects (namely: RES-H Policy, STRATEGO, RESCUE, SPRED, DIACORE, EcoHeatCool, CLEAR, Heat Roadmaps, REFUND, K4RES-H).

Pedro Dias explained that in line with the outcomes of the consultations an additional chapter on financing instruments was added to the report, also 3 support schemes will be deeper analysed and the opinion of the industry will be better reflected, concerns will be addressed.

Philippe Dumas suggested to outline the objectives/role of the support schemes regarding 2020 goals.

Gaia Stigliani shared the recent issues in the UK in relation to the review of the RHI which includes major changes (especially regarding solar thermal technology) and is in contrast with the RES targets, and jeopardizes to tackle energy poverty. Gaia Stigliani advised to broaden up the scope of the analysis and address other benefits of RES RHC, not only CO2 savings. This feedback was given by the UK NCP as well and will be taken into consideration.

Maarten de Groote proposed to add practical examples on EE monitoring. The consortium agreed that energy efficiency measures have to be mentioned.

Discussion evolved on the practical roll-out of quality assurance, concerns, pros and cons, practical examples have been shared and discussed with the general conclusion that quality assurance is really important but due to its costs can pose a barrier of implementing RES RHC if not well-planned and properly supported.

Riccardo Viaggi requested more information on results of the assessment and initiated deeper discussion both on quality of performance of systems and installers certification. The FROnT consortium explained that both options: prerequisite standards and on-going quality checks are needed to be in place as well provisions for end-user empowerment. Examples from NL (lack of qualified installers) and PT (plan to set up central registration) were shared.

Elaboration started on qualification, standards and certification, following the inputs of Riccardo Viaggi: certification shall be on products and installations not on installers, standard are just part of certification, quality certification requires resources (effect on SMEs), personal qualification is not supposed to be legal, companies should be certified.

Burkhard Sanner shared differences in countries regarding these issues, e.g. companies and individuals can be certified and companies can require to have individuals certified working for them in the different Member States.

Maarten de Groote pointed out the related legislation (Article 14.3. of the RES Directive on renewable installers) which states that individual certification is preferred but both options are allowed.

Elaboration started on whether the EU legislation is adequate in this sense.

Attempts were made to find a common definition on certification since countries define it differently. It was agreed that certification is a proof of quality.

Maarten de Groote summed up the conversation and the agreement was made by the EAC and project consortium that as long as the certification process is equally accessible for small companies, the idea is supported.

Riccardo Viaggi initiated a discussion on the importance of formal training versus work experience and stated that this part of the „Quality and performance” KSF should be defined as qualification and experience of people rather than „Certified equipment/ installers” as suggested by the project consortium. Concerns and arguments were shared by the consortium, such as the fact that the different courses and the provided qualifications are difficult to verify. It could only be a KSF if the education would be EU wide formalized otherwise the quality is not ensured. Maarten de Groote added that the work experience in itself is also not a KSF in itself, brought up a practical example: in Belgium 60% of installers with 54 years of professional experience failed on their courses during the certification process. Conclusion was to keep the KSF definition as it is but change the wording to be more precise regarding certification.

It was also discussed that until now these issues were supposed to be tackled at the national level and member states decides which way to follow as long as the quality was ensured but with the RES Directive now each contry has to agree mutually.

The topic was closed by Pedro Dias with the final remark that the discussion on Certification contra qualification goes beyond the projecct scope and it was noted that even the consorted action is not able to address it. However the concept can not be avoided, it was agreed to placed into Quality framework of the national level.

3. Estimating RES Heating and Cooling costs

Final consultation on calculation methodology

María Jesús Báez explained the role and goals of WP3 of FROnT in order to put in context the recent developments in relation to the estimation tool for LCoHC (Levelized Costs of Heating and Cooling). The process of the development which is now at the final stage, is the following: literature review on RES-E LCOE, setting reference parameters for LCoHC, compiling performance data, applying economic model, review of initial results, consultation, excel tool development, validation, modelling the final online tool which targets primarily the residential consumer, writing final report.

The concept and definition of LCoHC was explained as well as the process of designing the economic model behind the excel tool. It was explained that the calculation is done throughout the life time of the system (including: initial investment, O&M costs, corporate taxes, etc). The tool assumes a constant value per year and is expressed as cost per kWhth, considers the return required from the investment, to discount future costs and energy generation. The main parameters and values within LCoHC were explained and the calculation model was shown.

The user interface and the needed input parameters for demand estimation (DHW consumption, living area, insulation level) in order to define the reference system (to compare it to the RHC solution within the tool) were briefly explained. It was highlighted that guidance will be given to the users according to the most typical situation in the different countries so that the tool can be used by the general public.

The calculation of the tool's specific parameters for RHC system sizing and RHC costs were explained including the initial investment, replacement depreciation and subsidies.

The tool will have 3 outputs:

1. comparison to reference system taking into consideration the results of the sensitivity analysis and with the option to enable/disable residual value (the comparison is shown on a chart as well)
2. financial output including the following parameters: simple payback time, net present value, internal rate of return and additionally, the cumulative cash flow is shown in a chart.
3. environmental output including: green house gases emissions reduction and energy resources consumption. Results are shown both in table and chart.

The residual values was explained as well as the sensitivity analysis. It is the estimated monetary value that the system has at the end of the project economical life. It has been estimated as the total, discounted income (economic savings) the system would provide between the end of the economical lifetime and the end of the technical lifetime. The sensitivity analysis has been done for all four technologies considering relevant parameters. After their analysis, the two most influencing parameters have been selected and used to create a high and low scenarios for both RHC and reference systems LCoHC.

The next steps are to fill in the guidelines that will help the users to understand better the use of the online tool by each country. After that validating the excel tool and programming the online version.

Eventhough the online tool will include guidance, the concern of the FROnT project consortium regarding making it as userfriendly as possible was shared and inputs were requested from the EAC.

Feedback

As a first input a suggestion was made to simplify more the message at the output stage. It was agreed that the 1st and 3rd output is quite easy to understand but the different parts of the 2nd one should be explained better. It was also agreed to add explanation to the outputs in the final tool, with simple messages like: „the results of this charts shows that your RHC system will be cheaper than your current one”.

EAC members shared their knowledge and showed some good examples of different calculation tools addressign the consumer.

It was also requested to share with the EAC the latest version of the tool in which their previous suggestions were already included. The template for providing guidance in different languages will be circulated.

It was also made clear that the excel version of the tool is part of the development process and not the final output. Inputs were asked regarding the logic behind the tool.

Gaia Stigliani shared her concers regarding energy savings since that can be significantly different under the different conditons. The consortiuml explained that the tool provides values for average conditions taking into account best and worst case scenarios in order to be as precise as it can be.

The EAC members agreed that it is important to not to mislead the consumers, for instance if they expect to save 200 EUR beacue of the tool and they will not gain it due to circumstances, it would be an unfortunate situation. The consortium agreed and explained that their approach is to balance simplification and reliability in order to be easy to understand but reliable at the same time. It was also noted that the users can check the results in different locations which will provide them with additional understanding.

It was requested to explain again the discount rate and discount factor and afterwards the calculation behing was approved.

EAC members suggested to give flexibility in the part with constant data because there as well national differences could be important. After discussion it was agreed that this would complicate the tool therefore only will be suggested in the case of high expert users, not in the case of consumers.

The climate effect calculation was elaborated.

It was suggested to include hybrid heat pumps, gas heat pumps for industrial use.

Review of initial results of Levelized Cost of Energy Calculation (LCoHC)

Pedro Dias shared the values used for the reference cities in order to enable the tool to compare different locations. 5 reference locations have been chosen by the consortium representing different climates and all of them were tested in terms of energy costs.

It was explained that for identifying system costs the options need to be narrowed down and the project consortium would like to receive feedback from the EAC on this (e.g. only taking into account one building type (new build / refurbished single family house, new build / refurbished multifamily house) and one type of use (hot water, heating and cooling). The aim is to choose the most representative options in order to tackle this limitation in the best way.

The reference values (hot water, heating, cooling) for each reference city (Stockholm, Vienna, Wurzburg, Madrid, Athens) for each technology (heat pumps, solar thermal, biomass, geothermal) were shown as well as the schematics of the different reference systems.

Feedback

One suggestion was to make deviation for each technology however it was then agreed that in this case additional comparison would be needed. Elaboration started whether the output needs to be a strictly economical study. It was also questioned whether a limitation to 1-2 options applied to every technology or to choose 1 specific for each technology is the better way to go. If the consortium will choose the second option the results will not be comparable.

The agreed idea coming from the consortium was to ask installers for quotes to tackle the issue. It is a difficult data to be obtained so it was agreed to have at least one quotation for each technology. The EAC and the consortium agreed that it does not necessarily have to be comparable.

Elaboration started on which type of building shall be used for the simulation. Concerns were shared that differences between old and new buildings have to be reflected so it is not suggested to only choose one building. However it was also agreed that the differences between single and multi-family houses are not significant therefore this comparison could be left out. It was also noted that not all technology suitable for all type of buildings which fact makes the decision easier since the consortium needs to take into consideration all technologies. It was noted that this will be reflected in the end-users tools as well that are currently being developed in WP4 including a decision tool for consumer helping them choosing the best RHC option in their circumstances. The EAC suggested to keep the differentiation between water and space heating and it was agreed that cooling has to be kept too. However according to the EAC Vienna and Wurzburg could be merged since they have pretty similar climate. The consortium explained that these cities were used with different types of building in the simulation.

It was asked whether different options could be considered for the different technologies or if it is better to always compare with reference location only. The majority agreed to go for the second option because it would be more user friendly and easy to understand. It was suggested that in this case single family houses have to be used as type of building. The EAC was not able to agree on this since multi-family houses represent a major part of the building stock therefore cannot be left out from the simulation.

Another suggestion was to merge cities and only run the simulation for 1-2 cities for all technologies however this option was not supported neither.

The final agreement was to keep both single and multi-family houses but leave out cooling since mostly it is for commercial use and the aim is to address mainly the residential sector.

4. Revision & validation of end-user centred tools

The end-user centred tools will be shared with the EAC members later, in April 2016. Comments will be welcomed regarding the factsheets, decision tree and 10 steps guide that are currently being developed in the framework of the FROnT project.

5. Revision & consultation on recommendations on promoting transparency on energy costs

Ryszard Wnuk shared the aim behind the document. The purposes of the FROnT consortium is to provide a better understanding on how to deploy RHC in the market, to improve transparency about costs of heating and cooling options (using RHC or fossil fuels), RHC support schemes and end-user key decision factors, to support the industry in engaging more effectively their prospective clients and to help developing Strategic Policy Priorities for RHC to be used by public authorities.

As the given document is based on different outputs of the project, additional background information was presented. Among these the results of the survey which identified end-users decision making factors in the 5 participating countries (NL, PL, PT, ES, UK), focusing on awareness about RHC, perception of RHC, key purchasing criteria and “willingness to pay”.

It was shared that 48% of the respondents who are familiar with RHC (70%) would be willing to pay more money, 36% would not pay more and 16% did not answer this question. It was also highlighted that 28% of the respondents familiar with RHC (70%) think that there is not any renewable energy technology suitable for heating and DHW systems and 35% of the respondents familiar with RHC (70%) do not support any incorporation of renewable energies in cooling systems. The main reasons behind this attitude are according to the survey: high initial investment and the structural changes required in buildings. The results of the survey strengthen the need for being transparent on energy costs and provide information on cases in which RHC is a good option.

The target group of the document will be wide including industry (e.g. food, textile, chemical industry, factories), services (e.g. schools, offices, hospitals, sport facilities, hotels, etc) and households. Other stakeholders will be addressed as well: public authorities (including the municipal, regional and national levels), environmental protection funds, ESCOs, NGOs, associations (construction, heating and cooling systems producers, consumers), universities, industry (marketing departments, national trade associations, consumer bodies) and others such as building administrators, engineers, architects, etc.

Since the content of the message depends on national and local circumstances it should be able to be easily adoptable. The key message should be about profitability according to the consortium and the main message has to be clear: even though building or renovation with RES technologies may be more expensive than standard methods, these additional costs may be quickly balanced by lower bills. Additional information will be provided including comfort, health, energy security, environment, etc.

The required communication style was elaborated and the planned promotional channels were shared.

Discussion

Instructions were given from the EAC on how to present information on costs with short, easy to understand messages. It was agreed to put to main focus on profitability add strengthen the communication efforts with different project tools such as the LCoHC calculation tool and the different tools for end-consumers.

It was decided that visual elements will be added to the report to tackle the challenge of being understandable and reliable at the same time. Examples of good practices will be added as well. Comperability between options is also an important part of the issue which will be tackled in a visual way, most probably with graphics.

The meeting already run over its planned time so the discussion was shorter than expected. It will contiune at the next EAC meeting.

6. Closing of the meeting

Review of recommendations & next steps

It was agreed to send the notes of the meeting after approved by the project consortium to the EAC members together with the presentations / documents of the meeting, the most recent version of the calculation tool and the end-user centred tools.

Pedro Dias thanked the EAC members for their inputs and closed the meeting.

End of meeting.

Participants: FROnT European Advisory Committee: Burkhard Sanner – EGEC; Gaia Stigliani – Ecuity; Maarten de Groote – BPIE; Riccardo Viaggi – EBC; Sergio Diaz – CENER (attended online)

Project partners: Andrew King - EST; Eva Flora Varga – ESTIF; Gundula Weber - AIT; Johannes van Steenis – NL Agency; Luca Angelino - EGEC; Madalena Martins – Quercus; Margarita Ortega – IDAE; Maria Jesus Beas – Creara; Nathalie Hemeleers - AEBIOM; Pascal Westring – EHPA; Pedro Dias – ESTIF, Philippe Dumas – EGEC; Ryszard Wnuk – KAPE

Files:

- Agenda_Overview-activities_FROnT-EAC3.pdf
- Success-criteria-support-schemes_FROnT-EAC3.pdf
- Calculation-methodology-tool-LCoHC_FROnT-EAC3.pdf
- Estimating-RHC-energy-costs_FROnT-EAC3.pdf
- Transparency-energy-costs_FROnT-EAC3.pdf