CONCERTED ACTION
ENERGY EFFICIENCY
DIRECTIVE

# 8th Plenary Meeting CA EED

# Summary of Proceedings

**Date: April 2021**

# Contents

# 1 Opening Plenary Session

In the course of the eighth Plenary Meeting of the CA EED over 240 experts, policy makers and implementers gathered together to discuss issues related to the implementation of the EED in Member States. The Plenary Meeting was designed to give Member States and Norway the opportunity to exchange experiences and learn from each other.

## 1.1 Presentations by DG ENER, EASME and Coordinator

Coordinator opening presentation 8th PM, Lucinda Maclagan

News from DG Energy 8th Plenary Meeting, Claudia Canevari

News from EASME 8th Plenary Meeting, Martin Eibl

# 2 Working Group Parallel Sessions

The Working Group Parallel Sessions of the 8th Plenary Meeting covered the following topics: Tracking implementation of energy saving measures resulting from energy audits (WG8.1), Efficiency and de-carbonisation of heating and cooling (WG8.2), Role of central and local authorities in public building energy up-grading (WG8.3).

## 2.1 Working Group 8.1 – Tracking implementation of energy saving measures resulting from energy audits

**Session 1**

Three Member States shared their experiences of tracking implementation of energy saving proposals:

- The German system was a bespoke system designed for both non-SME and SMEs to upload audit data and get value add data relevant to their sector. Germany has an online audit declaration form in use to collect the relevant data (same as the reports contain). There were questions on the data privacy issues and the cost of the system. The data remains confidential in the hands of the authorities and the cost of the system lies in a 6-digit area.
- The Finnish system has been in operation since their audit programme began in the early 90s. It has grown over the years. It was built with the core objective to measure the benefits and impacts from energy audits and justify ongoing subsidy supports for auditing. Energy efficiency agreements, energy audit programmes and energy efficiency investment subsidy schemes are closely interconnected
- The Irish is quite new and built on 'out of the box' software, MS CRM. Ireland has an online reporting system in use for audit compliance notification. The system enables a lot of capabilities for data usage and future potential for further data breakdown

A number of MS expressed an interest in duplicating or licencing existing systems, or at the least sharing experiences further on developing such platforms.

**Session 2**

Attendees discussed barriers & solutions to tracking, what MS have done that works and their ideas for solving problems that don't work. Attendees also discussed the role different incentives play to increase the rate of implementation, what incentives work, what ones didn't work, and generally where are the gaps and how to address them.

**Session 3**

There are a number of H2020 and EASME projects relevant to the topic. A number of H2020 project leaders shared their experiences of encouraging and supporting non-SME and SMEs to implement energy saving proposals from energy audits.

Most of the H2020 projects were aimed at supporting SMEs to undertake energy audits and to implement energy saving actions. Due to Covid most hadn't progressed as much as planned. However, they all shared their core insights gained to date, namely:

- Sell an energy audit service, not just the energy audit. SMEs have a fear an energy audit is just another paperwork exercise that will sit on a shelf. Not only do they need good quality audits, but they need mentoring and support to implement actions. The SPEEDIER project is attempting to test if SMEs will implement more as part of an ongoing subsidised audit and implementation service

- Many of the projects focus on training and particular supports aimed at specific sectors i.e., cold storage, retail etc. Training and mentoring is seen as a key support needed for these sectors

- SMEs typically engage with local or specific suppliers for solutions. The supply chain must also be engaged so as to ensure quality audits and implementation supports are provided. Especially important is to ensure EE is addressed as SMEs tend to look to the 'sexy' RE option and can ignore quick EE measures as they are 'invisible' to customers. The EEOS can help.

The links to the presentations can be found in Chapter 6.

## 2.2 Working Group 8.2 – Efficiency and de-carbonisation of heating and cooling

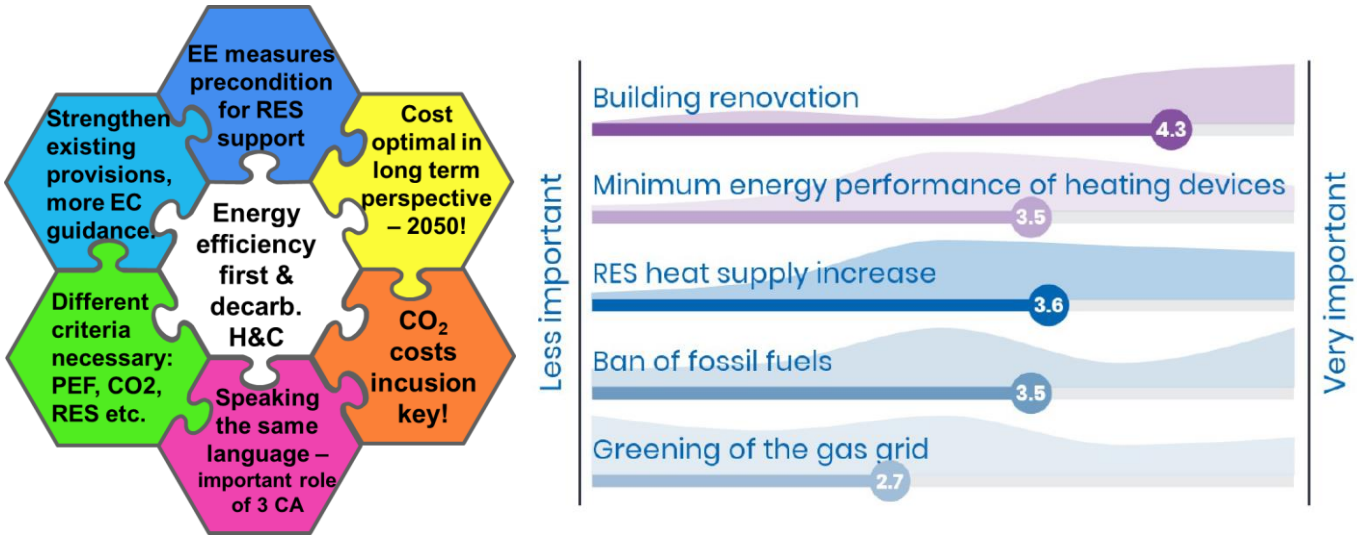
NECPs made it possible to assess the status of the European heat and cool (H&C) market and its development and are providing an opportunity to compare the Member States and link the current situation and national targets to policies and measures. For the next NECPs, several areas could be improved considering H&C, especially to increase the level of ambition, better link to the comprehensive assessment of Article 14 of EED and to provide more details regarding measures. Reduction in heating demand until 2030 is foreseen in most MSs and although the share of RES in H&C should reach 43 % in 2030, many NECPs do not meet the target specified in Art 23 of REDII. CHP seems to be important for several MS whereas other MS expect a decrease of CHP generation mainly due to RES integration and ban of fossil fuel.

Luxembourg approved advanced energy performance of building regulation by introducing reference building methodology which set highly efficient minimum energy performance for building elements and set air source heat pump as a reference heating technology. Fossil based heating is not “forbidden” but practically impossible to use by set reference energy performance of heat pump. Natural gas is a transition resource, the gas grid will not be developed further although fossil fuels are very cheap in comparison with other energy sources and the recently introduced $CO_2$ tax (20 €/t$CO_2$) is the first step toward more accurate price signals for consumers.

Approximately 50 % of the total heat consumption in the Czech Republic is supplied by district heating (DH), where gradual substitution of the current dominant role of coal is the key goal of the Czech Republic Strategy of stabilization and development of district heating. Several new policies and measures have been established to support faster transformation and modernisation of DH systems.

More than one indicator is required to establish the energy efficiency first principle in H&C. Differentiation between buildings connected to DHC systems and buildings which are not connected is necessary and request different efficiency criteria for each building group. All criteria should be displayed, aggregation does not make much sense because different indicators address different target groups - must avoid going only for primary energy and/or $CO_2$ alone.

Several very interesting opinions and proposals on how to strengthen and upgrade the role of energy efficiency in the decarbonization of H&C have been summarised in the figure below. How to establish long-term cost-optimal conditions for efficient sustainable solutions is one of the key challenges facing current very low fossil fuel prices, where effective $CO_2$ cost inclusion could be one of the most important drivers.




The links to the presentations can be found in Chapter 6.

## 2.3 Working Group 8.3 – Role of central and local authorities in public building energy up-grading

The session aimed to analyse the roles of central and local authorities and how they complement each other. The work concentrated on topics of common interest, areas, and forms of cooperation, gaps and overlooked areas, and communication. It was also considered how to improve co-operation.

### Session 1

There was a presentation from the Netherlands on "Roadmaps to decarbonized public buildings" that gave an overview of the timeline on public buildings and vision and strategy for a cost-effective transition to a $CO_2$ neutral portfolio in 2050. In the Netherlands, there are 12 sectoral roadmaps on public buildings, some supported by guidelines, e.g. "Road to energy-neutral real estate of local governments", "Roadmaps for $CO_2$ emission reduction in real estate of the healthcare sector", "Roadmap for sustainable cultural heritage". At the start to the roadmaps, some assumptions were made, e.g., it shall be a sustainability program but a regular real estate process, renovation and conservation at natural moments, schedule measures with a focus on the final target in 2050 (developing), take advantage of all sustainability opportunities, escalate in the event of a conflict with other project goals, payback time is not an issue when achieving objectives, and financing through increased (all-in) rent. The presentation covered some challenges for public buildings, e.g., lack of administrative urgency, the financial position of the public sector, need for capacity and knowledge, monitoring of energy performance of buildings and energy use of buildings (CO2) emissions.

The next presentation was on the market of public tenders for buildings for education in Italy and the role of EPC.

The presentation covered the Italian non-residential building stock and the level of the market of tenders for public works in the education building sector, and the market of public tenders for construction, maintenance and management of public works. The market was divided into traditional and complex segments. The latter can contain a variety of works and services, e.g., concession for works like PPP, procurement for construction and management, procurement for maintenance and management, services concessions and EPC, involvement of mixed companies.

### Session 2

The next presentation was "Ireland's experience in driving building renovation in public sector". The presentation covered Ireland's energy way to sustainable, secure, affordable and clean energy by 2050. The presentation detailed the strategic objectives of the Public Sector Programme, namely embed energy management and leadership in all public bodies; assistance to public bodies or sectors to establish project pipelines to achieve 2020 and 2030 targets, and continuous energy performance improvement. Then, it detailed the strategic objectives of the "Public Sector Pathfinder" programme – to mobilize sectors – resources and capacity, to delivery models; to create the right structures and processes for projects; to create a "scalable model" and demonstrate best practice; to demonstrate deep retrofit and renewable heating solutions.

Participants then had a discussion on: What are the areas where the central and local authorities can co-operate closer than now? and How to improve that co-operation between central and local authorities?

The discussion proved the importance of co-operation between central and local authorities in public building energy up-grading**.**

When talking about the regional or local level it must be remembered that different authorities have different dimension, experience, and technical, human and economic capacity. It makes it necessary to offer different support for different authorities. Big towns have large potential to carry our energy up-grading in public buildings whereas small ones have less potential and therefore require special treatment in the up-grading building stock. Similarly, the national, regional and local levels need individual, however coherent, approaches and measures. Also, the relevance of topics can vary in different parts/region of a Member State. Regional and local level cases are worth promotion and replication since can bring added value, accelerate, and enhance the process.

As areas for cooperation especially energy poverty was mentioned, but also joint programmes and the one-stop-shop concept. Regarding conditions and areas for improvement, finances and financing schemes, resources and knowledge were mentioned. Various participants also mentioned that the governance structure should be considered, i.e., the division of power between national, regional and local levels and authorities. Repeated issues make the co-operation complex, e.g., legislation, planning and strategies, public procurement, energy poverty, technical and procedure standardisation, tenders, accumulated-knowledge, data, co-financing, PPP, traditional and complex markets.

The links to the presentations can be found in Chapter 6.

# 3 Information Sessions

Information sessions were organised to brief participants about developments on specific topics.

## 3.1 Info session 8.4 H2020 Energy Poverty related projects

The information session aimed to present different approaches adopted by H2020 projects to mitigate household energy poverty through energy efficiency solutions, and to brief participants on the EU Energy Poverty Observatory, as a resource for national and local policymakers.

DG ENER presented the main outcomes of the first EU Energy Poverty Observatory service contract (2018-2020) and the new service contract for an Energy Poverty Advisory Hub, which will be active as of 2022. This Hub aims to activate all levels of governance, with a focus on providing direct support to local authorities through two calls for technical assistance, as well as open to all support via e.g., online trainings and a helpdesk.

EASME gave an overview of the different types of support to mitigate energy poverty provided through H2020 funded projects in the years 2014-2020.

There was a presentation on SocialWatt, a project enabling utilities, suppliers and energy service companies to design and implement schemes and tools to alleviate energy poverty under Art. 7 EED, whilst also facilitating cooperation with e.g., social services. Utility data can contribute to better identification of energy poor households, but more capacity building for utilities is needed in this field. Several recommendations were put forward for MS, including introducing in EEOS a ringfence of a proportion of the savings for energy poor households. This recommendation was supported by the following speakers.

Then there was a presentation on the first results from the STEP project, which is training energy advisors and setting up referral schemes of consumer and frontline organisations to deliver advice to energy poor households in nine MS (BG, CY, CZ, LV, LT, PL, PT, SK and UK). The presentation underlined the need for definitions of energy poverty in national legislation and noted the new challenges for vulnerable households under the COVID-19 pandemic. Other policy lessons mentioned included setting energy efficiency as an infrastructure priority, establishing national platforms of relevant stakeholders and establishing differentiated financial strategies to address needs of energy poor consumers.

Following that thee was a presentation on ENPOR, a recent project aiming to support the set-up and adaptation of energy efficiency policies to alleviate energy poverty in the private rented sector (PRS) and help monitor dimensions of energy poverty in this sector through a GIS dashboard. The policy mapping carried out showed a lack of specific support measures in PRS and lack of focus on the specific needs of low-income tenants. The project focuses on 10 policies in seven MS (AT, DE, EE, GR, HR, IT and NL), varying from soft measures and training to renovation grants, EEOS, and programme support.

The links to the presentations can be found in Chapter 6.

## 3.2 Info session 8.5 Examples of the combination of RES and EE measures

The session aimed to present some concrete examples of the combination of RES and EE measures in buildings, and to map interest on possible common topics in future to be covered with CA RES and/or CA EPBD.

There were two MS presentation, one from Finland and one from Spain, in the session. In addition, there was an interactive exercise with all participants.

Granlund Oy presented a multi-objective optimizing tool, how in energy efficiency projects, you can search for the best possible solution from many different options by modelling the property´s renovation need and map out cost-optimal solutions comprehensively. This means renewable energy sources will also be used, where possible and appropriate. A holistic approach and selecting the optimal combination of technologies in the project planning phase makes energy renovation not a cost factor to the property owner but an investment with a reasonable investment return. The method also applies when planning how to build a new cost-optimal nZEB building. The presentation included renovation examples of dynamic calculations for typical Finnish apartment buildings built in the 1960s and 1970s.

IDAE presented an example of a Spanish grants scheme for deep energy refurbishment in buildings covering both energy efficiency and renewable measures, including a case example of a combination of RES and EE measures. Financing for this scheme comes from the national energy efficiency fund, and individual grants vary from small to large (€30.000…€4 million) projects. In addition, IDAE's pilot financing project to support the creation of cooperative energy communities was introduced. The pilot project consists of eight buildings (160 homes) working as one energy community in the renovation project, known as Efficient Islands. The project aims to support the community to go beyond the scope of individual buildings in energy renovation and have a new shared and comprehensive energy renovation management. They are considered to have a high potential for replicability.

The interactive exercise generated some ideas of possible future discussion topics, like how to better plan and promote EE and RES measures together; new possible business models providing EE and RES services to clients; measuring renewable and energy savings; financing deep retrofit of buildings; improving district heating sustainability and EED Art. 5 synergies with EPBD.

The links to the presentations can be found in Chapter 6.

## 3.3 Panel session 8.6 The key role of energy efficiency on the decarbonization of the energy sector

The discussion on the role of energy efficiency in the energy sector decarbonization was held with a panel with experience in energy efficiency. The main messages were the importance of electrification as a tool to change from fossil to decarbonized resources and that energy efficiency should be the first fuel to be considered in this process. As electricity consumption will increase and since not all electricity can be generated from renewable energy sources, it will be essential to ensure efficiency on the consumption. On the other hand, it is fundamental to ensure an efficient market operation with precise price signs to provide the right consumer incentives, with an adequate tax policy.

The principle of energy efficiency first was also addressed and is considered as a good tool for integrated resource planning, in an integrated energy market with options for all actors, and able to dynamically adapt and deal with many uncertainties. There is no single optimum solution, being needed the combinations of different policies and solutions. However, it is necessary to define ambitious goals first and not forget the impact of consumer behaviour throughout the decarbonisation process.

Efficiency must also be ensured at the system level, accompanying the generation of renewable energy sources with energy storage and demand flexibility options. Therefore, energy efficiency is very important to ensure grid stability, enabling efficient integration of renewable energy sources and the reduction of losses in networks. The network regulation will also have an important role in the identification and implementation of the right incentives for investments in cost-optimized solutions.

From a long-term perspective, society is resilient, which will adapt to new realities, creating different opportunities as prosumers. To ensure it, a strong and intelligent electric grid is needed, promoting economic efficiency in a scenario where the cost of renewable energy generation is already lower than the conventional one.

Towards the end of the discussion, the panel of speakers reinforced the need to adopt the principle of energy efficiency first in all decarbonisation processes. Incorporating energy efficiency solutions in all sectors will give shape and size to a more economical "job machine", which leads to more jobs per EUR invested. Digital technologies should be considered for the promotion of an energy market that provides the right price signals. It was highlighted that the Member States must think on a big scale and cooperate in the process to decarbonize the entire energy sector.

# 4 Bonus session

During the eighth plenary meeting, DG ENEER ran one bonus session on two EED related studies that had recently been finalised.

**Study on the definition of SMEs for the purposes of Article 8(4) of the EED**

The study aims to contribute to the better implementation of EED Article 8 'Energy audits and energy management system'. In particular, with the definition of SMEs for the purposes of Article 8(4) of the EED. The objectives of the study have been: (i) determine the size of the population of large companies (non-SMEs) in scope of Article 8(4), (ii) identify the key obstacles that national authorities have faced in the full application of the EU SME definition and (iii) identify and assess the impacts of potential alternative definitions for the companies in scope of Article 8(4).

The study identifies and examines eight policy options in terms of the resulted scope (how many companies does the definition cover?), the energy savings (How much potential energy savings does the definition include?), and feasibility (of implementation for the Member States). The eight policy options are then compared, followed by policy recommendations.

The study can be downloaded here.

**Assessment of the potential for energy efficiency in electricity generation, transmission and storage**

The study has the objective to assess the potential for energy efficiency in conversion, transformation, transmission, transportation and storage of energy as it was mandated in Article 24 (13) of the EED 2018/2002.

The study examined the fossil fuel power plants in Europe, all types of available storage technologies and High Voltage Direct Current (HVDC) transmission systems.

The study concluded that electricity generation looks like the sector where efficiency improvement can result in a significant saving of primary energy. Thermal generation presents the highest saving margins compared to HVDC and storage and the study proposes the substitution of older and less efficient technologies with Combined Cycle Gas Turbines that would result in a significantly lower consumption of primary energy (40 to 64%).

The study will be published soon. The links to the session presentations can be found in Chapter 6.

# 5 Closing Plenary Session

The Closing Plenary Session provided participants with an overview of the discussions and results of the Working Group sessions.

## 5.1 Conclusions from Working Group Sessions and CA EED Coordinator

Conclusions presentation 8.1 – Tracking implementation of energy saving measures resulting from energy audits

Conclusions presentation 8.2 - Efficiency and de-carbonisation of heating and cooling

Conclusions presentation 8.3 - Role of central and local authorities in public building energy up-grading

Coordinator closing presentation 8th PM

# 6 Presentations and Good Practice Factsheets

A number of presentations provided participants with valuable insights into Member States' EED implementations as well as examples from EU projects and information from the European Commission. Presentations are available on the CA EED website.

**Working Group 8.1 – Tracking implementation of energy saving measures resulting from energy audits**

Study on the impacts and achievements of 41 Energy Efficiency projects in the Industry and Services sectors, EASME

Tracking implementation of audits – Finland, Motiva

Collecting Audit Data from Non-SME – Germany, BAFA

Energy Audit Scheme Management System – Ireland, SEAI

LEAP4SME project, ENEA

SPEEDIER, Limerick Institute of Technology

SMEmPower Efficiency, Aristotle University of Thessaloniki

INDUCE, CIRCE Foundation

ICEEE, University of Brescia

EUREMnext, IHK

Support from DEESME for National Authorities, KAPE

**Working Group 8.2 – Efficiency and de-carbonisation of heating and cooling**

NECP: Assessment of heating and cooling related chapters - DG ENER

Energy performance of buildings regulation – Luxembourg

Strategy of stabilization and development of district heating - Czech Republic

Heating & Cooling Experience - CA EPBD

**Working Group 8.3 – Role of central and local authorities in public building energy up-grading**

The market of public tenders for education buildings - Italy

Roadmaps to decarbonized public buildings - Netherlands

**Info session 8.4 H2020 Energy Poverty related projects**

SocialWatt, ICCS

**Info session 8.5 Examples of the combination of RES and EE measures**

Optimization of energy performance investments of buildings – Granlund Oy

Examples of the combination of RES and EE measures in buildings - Spain

Good practice fact sheet: Optimization of energy performance investments of buildings – Granlund Oy

Good practice fact sheet: Examples of the combination of RES and EE measures in buildings - Spain

**Bonus session**

Study on the definition of SMEs for the purposes of Article 8(4), CEPS

## Legal Disclaimer



The Concerted Action for the Energy Efficiency Directive (CA EED) was launched in 2013 to provide a structured framework for the exchange of information between the 28 Member States and Norway during their implementation of the Energy Efficiency Directive (EED). Since spring 2017, the CA EED is funded by the European Union's Horizon 2020 in its second phase.

For further information please visit **www.ca-eed.eu** or contact the CA EED Coordinator Lucinda Maclagan at lucinda.maclagan@rvo.nl

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