CONCERTED ACTION
ENERGY EFFICIENCY
DIRECTIVE

2nd Plenary Meeting CA EED

Summary of Proceedings

Date: May 2023

Contents

1 Opening Plenary Session

In the course of the second Plenary Meeting of the CA EED over 110 experts, policy makers and implementers gathered together in Madrid 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, CINEA and Coordinator

Opening speech from Ministry for the Ecological Transition and the Demographic Challenge

Keynote speech Climate Strategy & Partners

Coordinator opening presentation 2nd PM

News from DG Energy, 2nd Plenary Meeting

News from CINEA, 2nd Plenary Meeting

2 Parallel Sessions

The Parallel Sessions of the 2nd Plenary Meeting covered the following topics: Energy efficiency first principle and the EED In practice Refurbishment and green transition of existing DHC & CHP, Demonstrating the exemplary role of public authorities in the energy crisis, Energy savings monitoring system development.

2.1 Energy efficiency first principle and the EED In practice

The Energy Efficiency 1st (EE1st) principle was defined in the Governance Regulation (EU) 2018/1999. In the current EED EU 2018/2002, amending Directive 2012/27/EU, Article 1 only mentions that EED contributes to the implementation of the EE1st principle. In the upcoming recast of the EED EE1st principle will play a bigger role. A separate article, Article 3, is dedicated to it, and it is also connected to other articles. Despite recommendations and guidance meant to support EE1st implementation so far, it seems to be somewhat unclear to many MS what and how the implementation is expected to take shape in practice.

This working group aimed to give information on the Commission's expectations, recommendations and examples of how to apply EE1st principle in practice in the different contexts in the EED - now and also looking ahead. Furthermore, the aim was to gather and share information from MS on how they, in practice, have addressed EE1st in their EED implementation and if they already have some plans related to the topic, looking ahead.

The working group was structured into two sessions. In the first session, **DG ENER**, presented information from the Commission on expectations on how to apply EE1st principle in practice in different contexts, especially in the frame of the coming EED recast. In the presentation, three main requirements were highlighted:

1. apply EE1st in planning, policy and major investment decisions in energy systems & non-energy sectors with significant impact on energy consumption
2. verify the application of EE1st
3. a) promote cost-benefit assessments (wider benefits of EE, societal perspective),
   b) identify monitoring entity,
   c) report in NECP progress reports

It was also noted that the implementation of an energy-efficient solution is one of the possible outcomes following the application of the principle, but it does not always have to be the case if the cost-benefit assessment of options proves so. New guidance by the Commission is planned to be out in September.

In addition to the Commission presentation, **IEECP**, presented some outcomes/learnings from the H2020/ENEFIRST – 'Making Energy Efficiency First principle operational' -project. One of these was to keep in mind that implementing EE1st is not a new area of policy intervention, but it is about changing the mindset. EE1st is a cross cutting overarching principle for decision processes and is also about promoting more integrated approaches. Final results of the project are available in the ENEFIRST final report. In addition, a brief introduction was given to the LIFE/REGIO1ST project – Implementing the EE1st Principle in Regional Planning, which started end of 2022, and had a recorded launch event 23.2.2023.

The second session focused on sharing concrete examples from MS, how they have so far implemented EE1st in practice in their countries, and discussions in the tables on the topic. The session started with three short pitch presentations. The pitches aimed to provide food for group discussions at the tables. **France**, presented briefly the French environmental code, including requirements for EE impact assessment of projects and plans/programs and a regional program for energy efficiency (PREE) targeting to elaboration of an operational regional strategy on EE policy. , **Ireland**, gave a pitch about their 'Fabric First'-programme, which applies to grant schemes which support heat pump installation where the eligibility for the grant depends on achieving a minimum envelope (fabric) EE performance, and the process includes technical assessment of fabric performance. The third pitch presentation was made by **Italy**, and covered examples of EE1st implementation and measures in the private sector in Italy. Presented examples were National Plan for Awareness Raise in SMEs (PS-PMI) and National Information and Training Campaign (PIF).

After the three MS pitch presentations, the second session was dedicated to sharing information and discussing the EE1st theme in groups in the tables. Discussions were moderated around the questions; lessons learned, possible challenges and issues still to be answered and how participants saw planning of EE1st implementation should be started/continued in their country.

Discussion in the tables was active and a lot relevant issues were raised from the summaries of seven tables like: guidance from the Commission is needed and waited; sharing more practical concrete examples from MS in future would be beneficial; One Pager of EE1st would be useful to make it easier to communicate different actors what applying EE1st means; a lot of discussion and increasing awareness with all stakeholders is needed; practices and tools required e.g. for assessing multiple benefits (hoping e.g. MICAT – Multiple Impacts Calculation Tool -project will help); more concrete practical information how to do CBAs, monitoring, verification is needed; conditions in MS are very different, flexibility needed in implementation; how to manage to get everybody on board and e.g. assess private sector investments; training is needed for different actors (for administrative level and other public and private actors); will affect also existing policies and regulations; also how to find balance with other principles e.g. climate targets; what is the cut-off line for the EE1st - how life-cycle is taken into account; how current economic uncertainties can and should be taken into account e.g. in CBAs. At the end of the session, MS (33/42 participants) indicated positively the sessions and strongly voted continuation of discussions in future on the EE1st implementation in practice in the context of EED in coming CA EED.

The two sessions were well attended; in both sessions, there were over 40 participants representing ministries, energy agencies, energy authorities, and a Commission, CINEA and IEECP representative. Based on Mentimeter exercise conducted in the 1st session, the majority of the participants in the room were aware of the topic but have not yet been involved in considering practical implementation in their country. One fourth of the participants will be experts involved in planning the implementation of the EE1st provisions in their country, and a couple of them have already been in that position in their country.

2.2 Refurbishment and green transition of existing DHC & CHP

In District heating and cooling (DHC) systems there is a significant cost justified potential for energy savings. Decarbonisation of DHC systems is a priority, as the cost of GHG reduction in this sector is lower than in others, stressed DG ENER. This is why the EED recast, with its new definition of the efficiency of DHC systems and the obligation of local planning, will further support this process.

Lowering the operating temperature of DHC systems pays-off as it dramatically increases their efficiency and allows for the integration of waste heat and RES and their bidirectional operation (integration of customer resources), are the main presented conclusions of the Atelier and Related projects. DHC development should be harmonised with urban development which is usually performed in phases and should be well supported by long-term regulation and provisions to avoid competition with other heating alternatives.

Climate urgency requires more stringent and faster action where transitioning urban heating and cooling is key. Long life cycles mean urgency to start planning now, facing successfully with many uncertainties and lack of high-level of skills, knowledge and planning capacity in local communities. Replacing fossil fuels - especially natural gas - is a major challenge, which represents a great potential – strong push for development of DHC and requires systematic planning - geospatial zoning, finding appropriate transitional solutions and quality legal framework. That it is possible already by 2040 was well demonstrated on Dacrb city pipes 2050 project showcases of cities Vienna, Winterthur, Munich and Bilbao.

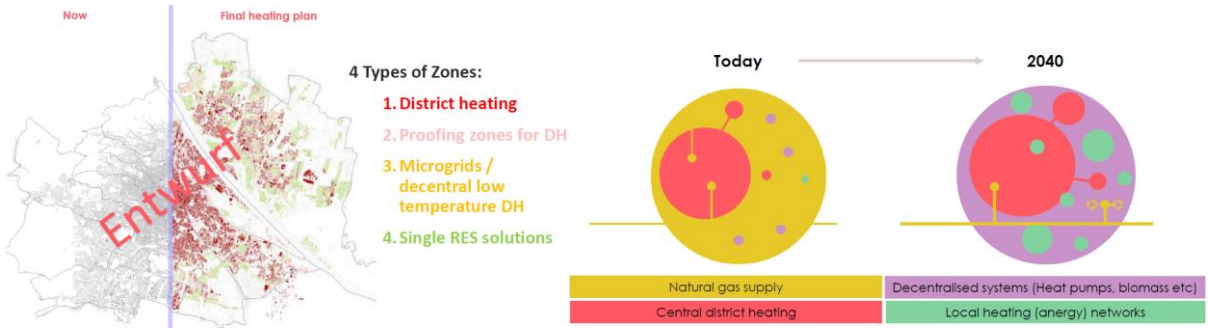


Figure: Dacrb city pipes 2050 project roadmap to decarbonize heating in Vienna by 2040 - planning for all cities zones, they want to replace 500.000 gas boilers, 50% will be connected to DH and the other 50% will be heating by heat pumps.

A lot of small DHC systems in Poland are currently not efficient and based mainly on coal. Feasibility analysis of two alternatives that the system would become efficient - switch to CHP on natural gas or wood biomass boiler and heat pump, demonstrated a high dependency on the future energy prices and the costs of technologies. Sensitivity analysis proved that the CHP alternative seems to be more robust and profitable solution at the moment and phased system modernization was recommended in current very uncertain conditions where available support programs are key.

Estonia presented results of a comprehensive study "Transitioning to a carbon neutral heating and cooling in Estonia by 2050" where several integrated scenarios – based on regional approach have been assessed. Combined approach of electricity and DHC scenario seems to provide the best results, where sustainability criteria for the use of wood biomass will have a major impact on the country's future heat supply.

The Netherlands demonstrated ambitious plans for expansion of DHC based mainly on geothermal energy, waste heat, heat pumps (surface and ground source water and ambient air) and E-boilers. Reporting methodology on sustainability criteria of DHC, based on CO_2 and primary fossil energy per unit of delivered heat and share of RES heat, provides good incentive for green transition of existing DHC systems and future development of DHC.

The presentations prompted an interesting debate, which revealed a pressing problem of finding proper alternatives to the natural gas, since most do not see hydrogen as suitable for heating. Therefore, more attention will need to be paid to the preparation of appropriate transitional strategies and regulatory support to this process in current very uncertain and unpredictable energy markets. Efficiency increase of current DHC grids, more comprehensive local heat planning (supported by GIS data) and good support instruments seems to be key for a successful green transition of DHC.

2.3 Demonstrating the exemplary role of public authorities in the energy crisis

The main objective of the "Demonstrating the exemplary role of the public authorities in the energy crisis" discussions was to identify the national success stories of the public sector's actions to show leadership in the time of energy crises, demonstrate solidarity with the citizens and communicate these actions. The focus of the questionnaire and the resulting report was on four main areas: 1) the impact of the energy crisis on the public authorities; 2) actions aimed at a reduction of energy consumption in public buildings (art. 5); 3) actions concerning public procurement (art. 6) and 4) methods of communication of the actions to the citizens to demonstrate exemplary role.

The sessions were designed to cover both actions implemented by the public sector to reduce its energy consumption and those taken to motivate and encourage wider communities and citizens to bring their own actions.

Session 1 The actions undertaken by the public sector to save energy they use

There was a presentation on the actions taken in the MSs in the public sector. Most of these measures were short-term actions aimed at immediate energy consumption reduction. The main conclusion of the report is that the public sector played its exemplary role in energy crises well. Demonstration and continuous information and communication are needed to trigger actions in other sectors as well. However, long-term plans need to be prepared to improve resilience to crisis events. An overview of MSs schemes and actions to reduce energy usage this winter period was presented. The examples of the Netherlands, Slovakia, Hungary, Belgium and Ireland were briefly introduced.

The session continued with two presentations of good practice examples. Poland presented short- and medium to long-term measures implemented in Poland. Short-term measures included a price cap on electricity for households, SMEs and local authorities. An interesting feature of this measure is the reward for the households that manage to reduce electricity use by 10% with a 10% price cut as an incentive to save energy. The public

sector is obligated to cut its consumption by at least 10%and report to the regulator. A broad communication campaign was also implemented. Medium to long-term measures presented are regulations to enable EPC implementation in the public sector and a central register of final energy savings, allowing local authorities to contribute to the achievement of national targets. There was a presentation on Ireland's programme for reducing energy consumption in 350 public organisations, which included a strong awareness campaign for the employees and weekly actions to ensure the delivery of energy savings. It was demonstrated that in some organisations, energy consumption reduction was even 30%, achieved by simple measures like reduced temperatures, improved controls, reduced space occupied, etc.

The main takeaways from discussions are: 1) when setting the targets, be sure that you can monitor their achievements – monitoring is the key to finding out if something worked or not and, even more important, are the changes sustainable and 2) the aim of all short-term measures was to immediately reduce energy consumption, often with reduced comfort in the buildings – it is thus debatable which actions and to what extent will bring lasting changes in energy consumption patterns.

Session 2 The actions undertaken by the public sector influencing energy savings in other sectors

Greece presented "Public buildings and infrastructures: Financial tools for energy savings and energy efficiency actions". The focus was on the ELEKTRA financing programme, which enables the public sector to benefit from 50% of the total renovation cost subsidy. Web-based platform was developed to monitor the energy performance and energy efficiency actions of all public buildings and Infrastructures, and its use is mandatory. It is used to monitor all activities undertaken by the public sector as a response to energy crises, but also continuously.

France, presented National Sufficiency Roadmap, prepared by nine working groups that identified relevant actions for each sector. In addition, a vast national information campaign was conducted promoting 5 energy-saving tips. In October 2022, the Energy Sobriety Plan was announced to reduce energy consumption by 10% by 2024. Current results show a reduction in electricity and natural gas consumption by more than 11%.

The Netherlands presented public sector activities, focusing on the wide information campaign 'Flip the switch'. The public sector also demonstrated a high level of solidarity with citizens by providing services like 'warm rooms' in local libraries and community centres.

The main conclusion of the discussion was that information campaigns are essential. Still, they also need to be accompanied by demonstrating the actions of the public sector itself. Special attention needs to be given to other support measures as well, especially those targeting the energy poor and preventing the increase of the number of energy poor.

Conclusions

- The public sector has taken a leadership role and led by example.
- National campaigns saved a lot of energy.
- A lot of hard work was done in a short time frame.
- Some MS are planning to replicate or continue measures. However, some MS are unsure if it will be as big a priority this winter.
- Monitoring, data availability and communication key remain a challenge.

Site visit: Vallecas district heating and Ministry of Foreign Affairs building energy rehabilitation in Madrid

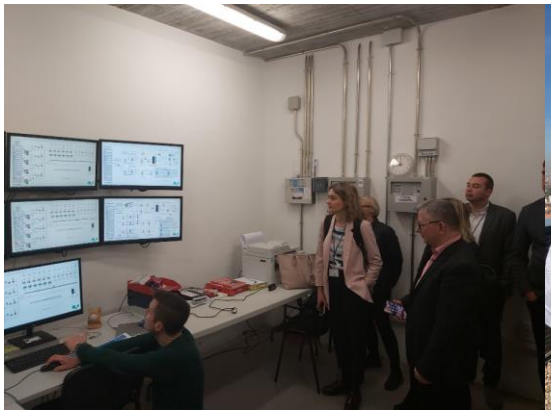
Vallecas district heating

In the neighbourhood of Vallecas, the Social Housing Company of Madrid City Council (emvs) has developed a new social housing neighbourhood, with modern, energy efficient housing and district heating. This urban planning project is a good example of incorporating a district heating system that provides heating and a hot water supply. All the residential apartment blocks in the housing project are built to the highest energy efficiency standards, with low temperature floor heating. All buildings have solar thermal collectors, or air-to-water heat pumps. Buildings have a centralised cooling system, where floor cooling is used; this is feasible due to low air humidity in Madrid. The district heating system and buildings are controlled through an advanced energy management system, operated by emvs, which result in low and reasonable energy costs for tenants. Currently the heat supply is powered by natural gas boilers, which will need an appropriate sustainable alternative in the near future, although the modern design and efficient infrastructure will enable a quick and efficient shift of the whole district. A special feature of the neighbourhood is the central pneumatic waste collection system, which completely replaces waste collection by trucks.

Ministry of Foreign Affairs building energy rehabilitation in Madrid

A few years ago, the Spanish government decided to completely renovate the old, dilapidated City Palace which housed the Ministry of Foreign Affairs. A specialist public company was responsible for planning, implementing, commissioning the renovation and the energy management of the building in the first years of operation. Particular attention was paid to preserving the original appearance of the palace's picturesque façade, while the rest of the building structure was completely rebuilt, with special emphasis on the proper insulation of all parts of the buildings. The highest standards of efficiency have been achieved in the design of the mechanical installations, with the use of highly efficient central cooling systems, heat recovery for the computer centre and a geothermal heat pump for heating. All lighting is LED, and much of the building's electricity needs are met with the energy generated by a rooftop solar power plant. A special feature of the building is also a green roof with a rainwater harvesting system for watering. A comprehensive sustainable renovation of the building was initially planned as a pilot case, so the knowledge and good experience will be used and transferred to the future renovation's projects.

Site visit photos



Visit of the Vallecas social neighbourhood district heating systems

Visit to the Ministry of Foreign Affairs building

2.4 Energy savings monitoring system development

The new obligation period for Article 7 has started with 2021. Some Member States have used the transition to adapt their existing monitoring systems to new policy instruments or new requirements (i.e., data protection) or to make the monitoring systems more user-friendly.

Session 1

The first session focused on recent and planned changes to be made in monitoring, reporting and verification. Austria presented their planned changes in the context of the energy savings and energy audit monitoring. Greece presented details of their current submission tool for article 7 measures including an energy efficiency obligation scheme.

In group discussions, the Member States were invited to share their experiences of the modifications they have made or are planning to make. The following guiding questions were answered:

What are the main aspects/problems that have to be addressed in the applied MRV schemes?
Most of the discussions focused on administrative burdens of data collection, of the difficulty of gathering actual (real) energy savings and on the challenges of evaluate savings for alternative strategic measures.

Can you identify any areas for improvement in the applied MRV schemes?
Areas to improve are mentioned for the data collection. On one hand, the effort for reporting procedures should be reduced, on the other hand, ex-post verifications are needed to improve the accuracy of reported data.

Can you propose any replicable examples for improving MRV schemes?
Stakeholder involvement, regular updates in the design of calculation methodologies are good examples on facing some of the mentioned issues. Further, awareness raising and training programmes for obligated parties lead to improvements in the quality of data collection.

Session 2

A keynote presentation on general issues on data protection of Austria introduced session 2, followed by a presentation of Italy on cyber security assessments and strategies.

The following questions were part of the group discussions:

In which monitoring processes are sensitive data collected?

The participating MS listed up the following challenges: personal data, company data, technical data, and knowhow protection, energy poverty information, information on health.

… and the following processes: smart metering, energy audits, energy saving actions, energy service provider

In which are they transferred between different institutions? (Identification of obligated companies, energy saving actions, energy audits, ...)

In article 7 between private companies and public institutions to the energy efficiency authority, sometimes to the statistical office (energy consumption of companies).

- What are the main aspects/problems that have to be addressed for data protection?

A balance is needed between needed privacy and requested data for monitoring.

3 Information Sessions

Information sessions were organised to brief participants about developments on specific topics: Horizon 2020. Beyond saving CO2 and energy costs – what is in it for society? The multiple impacts of energy efficiency and their role for consumers (Info2.5), Expert Study Group on the correlation between energy poverty and health (Info2.6).

3.1 Horizon 2020. Beyond saving CO2 and energy costs – what is in it for society? The multiple impacts of energy efficiency and their role for consumers

The session focused on multiple impacts (or multiple benefits) of energy efficiency measures by introducing the concept and by describing the various types of multiple impacts. A special focus was on the presentation on the MICATool developed by the H2020 MICAT project, which allows holistic analyses of multiple impacts of energy efficiency and how those can be estimated and taken into account for policy measures at all governance levels. The tool is especially targeted to policy makers and practitioners who can use it to conduct simplified analyses for different data and policy scenarios, in order to compare and assess their relevance. Important multiple impacts are for example health, comfort and air quality.

The topic of multiple impacts was also approached from the side of consumers, through the presentation of results from the H2020 NUDGE project by Heike Brugger from the Fraunhofer ISI. NUDGE implements and evaluates different behavioural interventions for energy efficiency to inform the development of new policies and human behaviour. NUDGE analyses people's behaviour, and designs and tests nudging interventions in five EU Member States (BE, DE, EL, PT and NL) in households, energy communities and schools.

Participants were also guided through the H2020 ENSMOV Plus project, which offers support for the design, monitoring and evaluation of energy efficiency policies, considering their multiple impacts. The multiple impacts of energy efficiency will - and this became clear also in other sessions, notably session 2.1 - will gain a new significance with the introduction of the Energy Efficiency First Principle in the EED by encouraging Member States to take into account multiple impacts when assessing the costs and benefits of energy efficiency measures, see also the project ENEFIRST,

CINEA manages a number of projects through H2020 and LIFE CET on defining and integrating multiple impacts of energy efficiency, behavioural change and consumer engagement, and policy support for MS on evaluating, monitoring and implementing energy efficiency policies.

3.2 Expert Study Group on the correlation between energy poverty and health

The goal of the workshop was to present the first findings of the study group on the links between energy efficiency and health, to discuss the research questions with the participants and to ask them about their expectations concerning the desired output.

The participants saw direct links with art. 8 and 28 of the EED. They saw possibilities to alleviate health issues linked to poor energy-efficiency in schemes that focused on referral through various actors such as housing companies and health professionals. In this case it would be important to inform these actors on the links between bad housing quality and health, and to give them additional training and resources to recognize these problems. The health sector could also be involved in financing energy efficiency schemes. This would require closer collaboration between health and energy departments, and a higher focus on preventive health care, which some participants saw as unlikely to succeed in the short term in their country. A general remark for the study group was to take into account the large differences between member states when formulating recommendations.

As desired output the participants wanted clear, hands-on information that can serve as inspiration for their own policy. The majority of the participants would prefer a report with good practices and fact sheets, preferably with infographics. A webinar would also be appreciated.

4 Closing Plenary Session

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

4.1 Conclusions from Working Group Sessions and CA EED Coordinator

Conclusions presentation 2.1 – Energy efficiency first principle and the EED In practice

Conclusions presentation 2.2 - Refurbishment and green transition of existing DHC & CHP

Conclusions presentation 2.3 - Demonstrating the exemplary role of public authorities in the energy crisis

Coordinator closing presentation 2nd PM

5 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.

Energy efficiency first principle and the EED In practice

Putting Energy Efficiency First into practice – Insights from ENEFIRST-project

Implementing the Energy Efficiency First Principle in Regional Planning – Regio1st-project

Energy Efficiency 1st principle - 2 examples in France

Example of applying EEFP in Ireland

EE1st implementation and measure in the private sector: Examples from Italy

Refurbishment and green transition of existing DHC & CHP

Retrofitting District Heating Systems - Lessons learned from the Planning, Engineering and Data perspectives - RELaTED & Atelier projects

Showcasing How To Phase Out Fossil Fuels From Urban Heating & Cooling - Decarb City Pipes 2050

Practical experiences and financial supporting schemes, role of natural gas, biomass and CHP – Poland

Transitioning to a climate-neutral heating and cooling – Estonia

Sustainability of DHC - Methodology and policy – Netherlands

Demonstrating the exemplary role of public authorities in the energy crisis

Public buildings and infrastructures: Financial tools for energy savings improvement and energy efficiency actions

The French energy sufficiency plan: a one-size fits all approach

Overview of the typical measures undertaken by Irish public bodies as part of the national Reduce Your Use campaign and indicative results to date - Ireland

Role of the public sector in the Energy crisis – Poland's examples of measures taken

Energy savings monitoring system development

IT Security – Energy Efficiency Authority, Austria

Security of IT Systems, main frameworks available with a special focus on some security issues related to the smart metering

Monitoring, Reporting and verification activities of the EEOs in Greece

Energy savings monitoring system development – Austria

Horizon 2020. Beyond saving CO2 and energy costs – what is in it for society? The multiple impacts of energy efficiency and their role for consumers

MICAT, Nudge and ENSMOV Plus projects

Expert Study Group on the correlation between energy poverty and health

Expert Study group on EE and HEALTH

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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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