CONCERTED ACTION
ENERGY EFFICIENCY
DIRECTIVE

9th Plenary Meeting CA EED

Summary of Proceedings

Date: November 2021

Contents

1 Opening Plenary Session

In the course of the ninth Plenary Meeting of the CA EED over 220 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, CINEA and Coordinator

Keynote speech from Secretary-General of UN World Meteorological Organisation, Petteri Taalas,

News from DG Energy 9th Plenary Meeting, Claudia Canevari

News from CINEA 9th Plenary Meeting, Martin Eibl, Ulrike Nuscheler

Coordinator opening presentation 9th Plenary Meeting, Lucinda Maclagan

2 Working Group Parallel Sessions

The Parallel Sessions of the 9th Plenary Meeting covered the following topics: Art 7 measures for industry, Energy upgrading as a criterion in the renovation of public buildings, Lessons learnt from the 2nd Comprehensive assessment of potential for efficiency in heating and cooling, Mutual recognition of QACs.

2.1 Art 7 measures for industry

The share of industrial final energy consumption in the EU has fallen by more than 4 percentage points from 30% in 2000 to 25.5% in 2018. However, industry remains one of the three largest sectors regarding final energy consumption, alongside transport and residential sectors. For nine Member States, the industry is the largest consumer. Thus, in many Member States energy saving measures and related M&V in industry play an essential role in EED Article 7 implementation during the new obligation period 2021-2030.

The sessions aimed to present practical MS case examples of measures in the industrial sector that MS will use for Article 7 implementation during the obligation period 2021-2030. In addition, the aim was to discuss possible issues/topic(s) related to the policies/measures to implement Article 7 and its M&V requirements in the industrial sector during the obligation period 2021−2030.

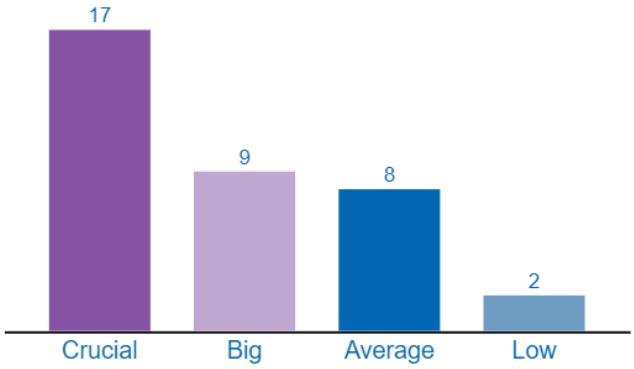
The Public Service of Wallonia, Department of Energy, Direction for Promoting sustainable Energy, presented a toolkit for enterprises that the Walloon region in Belgium has in their energy strategy towards a low carbon economy. One of the tools in the toolkit is Voluntary Agreements which was explained in the presentation. 'Wallonia Voluntary Agreements' are sectoral agreements under energy efficiency law, and their role in achieving EED Art. 7 energy savings obligation has been substantial. Voluntary Agreements can be seen, as economic policy as well as climate policy. Involved companies get energy taxes reduction and become aware of the need for energy efficiency and low carbon transition if they want to keep their competitiveness. Energy management system, including energy audits, in companies and monitoring and verification of the results hold a key position in the implementation of the agreements. The second Voluntary Agreement period is ending 2023 and the third period is in the planning phase to meet the growing energy and low carbon challenges and demands. The aim in Wallonia is that correctly shaped and supported voluntary agreements will be used in Art. 7 implementation also after the current period, instead of mandatory legislation with sanctions. The presentation also included lessons learnt from M&V and energy management system implementation with links to EED Art 7.

BAFA (Germany's Federal Energy Efficiency Center, BfEE), presented an overview on the package of 28 alternative measures, of which eight are targeted at the industrial sector. These are used in EED Art. 7 implementation in Germany. The subsidy programme 'Federal Subsidy for an Energy Efficient Economy' was presented in more detail. It is also the programme that is expected to deliver the largest cumulative energy savings in the industrial sector to fulfil EED Art. 7 energy savings obligation. The subsidy programme has a four module structure: cross-disciplinary technologies, process heat from renewable energy, process measuring, control and regulation technology, facility and process-/system optimisation. Each module has its own defined requirements and subsidy rates, and some of the modules can be used in parallel. Subsidy rate differs in the modules from 30% to 45% (+10% SME-bonus) as well as possible maximum subsidy per measure. There will be some changes in the programme in November 2021 related to compliance with EED. The validation of the energy savings and CO_2 savings related to the programme is conducted by an independent authority verifying the calculations of the energy consultants. Compliance with the double counting rule is achieved though the utilisation of interaction factors for each measure, which are estimated based on evaluations and expert estimations. The distinction between replacement investments and new investments will facilitate the determination of the baseline.

SEAI (Sustainable Energy Authority of Ireland), gave an overview of the measures Ireland uses for EED Art. 7 implementation. Ireland has opted for the alternative measures approach which includes a supplier obligation. 40% of their EED Art. 7 cumulative target is allocated to alternative measures, 60% to the obligated parties. 'Large Industry Energy Network (LIEN)' which was presented more in depth in the session was one of the notified alternative measures for the previous obligation period, 2020 scheme. LIEN will also run during the current obligation period, 2030 scheme. LIEN members have many commitments to be fulfilled, where the senior management commitment plays the most important role. Companies set their targets on voluntary basis and not through a benchmark approach, because it is not easy to set a fixed reduction rate for any company as it depends on its starting point. Compared to obliged parties, LIEN member companies are supported by many means: mentoring support and advice from SEAI expert advisor, support to ISO 50001, training, special working groups

and sectoral study tours, workshops and networking. Live networking is one of the key features in LIEN for the companies. Were there an obligation to be imposed on companies, the "good will" would be lost.
Annual reporting is required and there is an audit on reported project data. In future plans there are e.g. improved project data collection, using public sector monitoring and reporting system for LIEN reporting as well as sampling of statistically significant percentage of LIEN members via data analysis, interview and survey to validate savings attributable to network and advisory support.

The figure below summarises the session participants' views on how important they think the role of industrial energy savings is in many MS to achieve EED Art. 7 cumulative energy savings target.



During the session, participant views were gathered through an interactive exercise, this showed that; subsidies, taxation, voluntary agreements, energy savings obligation for non-ETS sector, energy audits, and information measures, often combined with other policies, were considered the most successful. Energy networks, targeted workshops and encouragement and support of ISO 500001 certification were on the other hand considered the most replicable aspects in the policies and measures targeting the industrial sector. Participants also found obstacles using industrial policies/measures in Art. 7 implementation. The most highlighted challenges in the session were EED Art. 7 additionality requirements and strict, demanding and costly M&V requirements. Those were followed by cost-effectiveness requirements in companies.

In a second interactive exercise, participants expressed that monitoring of implemented EE measures and their energy savings in industrial companies and implementing the Art. 7 additionality requirements in practice were again the most challenging when using policies / measures for Art. 7 implementation. Those were closely followed by challenges to raise awareness of the importance of EE in companies, identifying the most cost-effective measures and combining and aligning national EE targets and policies with national RES and GHG targets in the industrial sector.

2.2 Energy upgrading as a criterion in the renovation of public buildings

The aim of the sessions was to analyse the different aspects of energy criteria in the renovation of public buildings. What influence the decisions of energy upgrading, and how are the decisions taken in the renovation of public buildings.

Session 1

The session, included speakers from Italy and Belgium.

Fostering the Energy Renovation of Public Buildings in Italy

The renovation of public buildings is crucial for the achievement of climate objectives. Towards 2030 the building environment has to reduce 50.98 Mtonne CO_2 and renovate 4.0% of the building stock each year. What triggers the local authorities is the bad technical state of the buildings and the high energy costs involved. It is not a surprise, because half of the building stock is more than 50 years old and are located within old city centres. The minimum energy requirements since 2019 give authorities financial support and incentives for renovation. To achieve the renovation rate of the public building stock Italy has set up different measures.

PREPAC is a national financing programme, started in 2014, aimed to cover up to 100% of energy upgrading expenses of the existing building of the Central Public Administration. The objective is to renovate 3% of the total heated floor area each year. This program financed 231 proposals with a funding of 314 million euros.

ESPA is instead a 5-year EU funded project specifically aimed to train local public administrations on several energy-related topics. It helps to tackle one of the main issues that jeopardise the full implementation of energy efficiency in the public sector, i.e. the lack of information and training on these topics in public offices. Training

includes organising seminars/webinars, manuals, operational guidelines, and many other activities to support local public administrations.

For further information visit the ESPA website.

Driving the energy renovation of public buildings in Flanders

To fulfil the requirements, as mentioned in the EED art. 5, 3% yearly renovation of useable floor area Flanders made an alternative approach with the implementation of the climate plan. In 2019 the new government sharpened the targets resulting in:

- 40% reduction of CO2.
- Annual reduction in primary energy consumption by 2.5%.
- Annual reduction of energy budget by 2.5%.
- Mandatory use of green electricity.
- Funding, with the money from the former energy budget.

Nothing comes easy. Besides the climate plan, there are supporting actions to unburden the authorities.

- All office buildings of the Flemish government are managed by one body, Het facilitair Bedrijf
- Long term real estate strategies by Facilitair Bedrijf towards 2050.
- Framework, standards of contracts, energy scan, EPC-facilitation.
- Terra database, energy-use. With this data, simulations can be made. What happens when?

Besides the national climate plan, they also worked on a local plan called: Local energy and climate pact with similarities with the national plan.

- 40% reduction of CO2.
- Annual reduction in primary energy consumption by 2%.
- Mandatory use of green electricity.
- Funding, local authorities have full responsibility for spending their resources. Planting trees is also possible with the same resources as energy reduction of public buildings.

Success factors of Belgium are the precise targets and the financial support. Besides the clear guidelines and other information to unburden public bodies. If the public bodies don't know how to reach the targets, it won't happen.

Session 2

During the second session participants were asked their views on some key questions, the results are summarised in the figures below.

Is the awareness on energy upgrading sufficient to make the large scale building renovation possible?

What can positively influence the decision making in your member state on the large-scale renovation of public buildings?

What initiatives on energy upgrading of public buildings are taken to support and unburden the public sector?

Conclusions from the virtual round table discussions

MS would like to get more examples, how to do large scale renovations, how to get the private sector in the renovation wave (the payback time is too long for them).

Awareness is the starting point for energy upgrading. Fulfilling the set targets requires practical steps to support, and sufficient funding for housing costs and deep energy renovation. Funding can be a mix of private and public money. Sharpening the national regulations can help, but it should not lead to a loss of support from the local community.

2.3 Lessons learnt from the 2nd Comprehensive assessment of potential for efficiency in heating and cooling

Twenty Member States and the UK have notified the Comprehensive assessments (CA) so far, and 4 more are expected till the end of 2021. First observations show improvements in data availability, particularly data on the use of RES for heating, better coverage of potential heat sources, more information on waste heat sources and availability of several advanced heat maps. The different CAs still have considerable variation in analyses and reporting approach. More detailed individual evaluation and assessment of the CAs will be implemented by the JRC. Energy efficiency and renewables deployment will be key avenues of the heating and cooling (HC) decarbonisation within the Fit for-55 process where share of RES in HC needs to be around 40 %. Key planned changes of HC provisions in EED and RED were briefly presented, one them that CA will be part of the NECPs in the future.

Germany's Federal Office of Economics and Export Control (BAFA) presented that HC in Germany accounts for the 56 % of total final energy consumption (FEC) where HC supply is still dominantly based on the fossil fuels (81 %), similarly the district heat supply with high 72 % share of CHP heat but only 20 % RES and 2 % waste heat share. Detailed mapping of heating and cooling enabled comprehensive analysis of several alternative scenarios (6 different technological systems were analysed for each of the 1.640 municipalities with high heat density) compared to the baseline NECP scenario with 40 % share of RES and waste heat in all alternative scenarios. CBA proved cost benefits on micro and macro economic perspective of alternative scenarios with higher usage of local heat sources (solar thermal energy, geo thermal energy and waste heat) and natural gas till the year 2030 (use of biomass is expected to decrease). Support scheme for efficient district heating systems and measures to foster the implementation of local heat planning (e.g. competence centre to support municipalities) are just two of several identified new strategies and measures in the CA.

Highest population density in Europe, hot and dry summers and cool winters, predominant service sector with small share of industry are key characteristics taken into account in the Malta case study. Solar water heaters and heat pumps are key alternatives for efficient HC supply in the residential sector. In service sectors they are complemented by high efficient condensing boilers and heat recovery systems from cooling chillers used for water heating, especially in hotels. High efficiency electrification is key preference where applicable whereas interim energy efficiency solutions can also reduce fossil LPG consumption in the meantime, where the same technologies could eventually run on renewable fuels as well.

Sustainable Energy Authority Ireland (SEAI) presented Ireland's detailed CA approach as a part of the National Heat Study which aims to deliver a comprehensive assessment of the options available to decarbonise the heating and cooling sectors in Ireland till 2050. Comprehensive methodology and used models were presented for the evaluation of four alternative scenarios.

Some of the main insights: potential for energy efficiency is important but reduced in comparison with previous estimates, electrification can play an important role across all sectors, strong district heating potential, sustainable biomethane resource is smaller than previous estimates, but in conjunction with other indigenous biomass can be an important resource. Green hydrogen is a potential solution for gas based industry and power generation (available in 2030's).

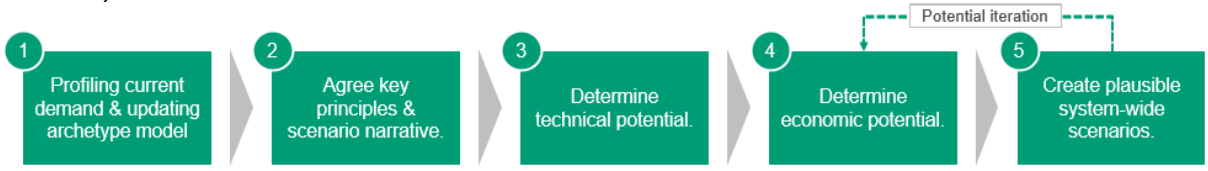
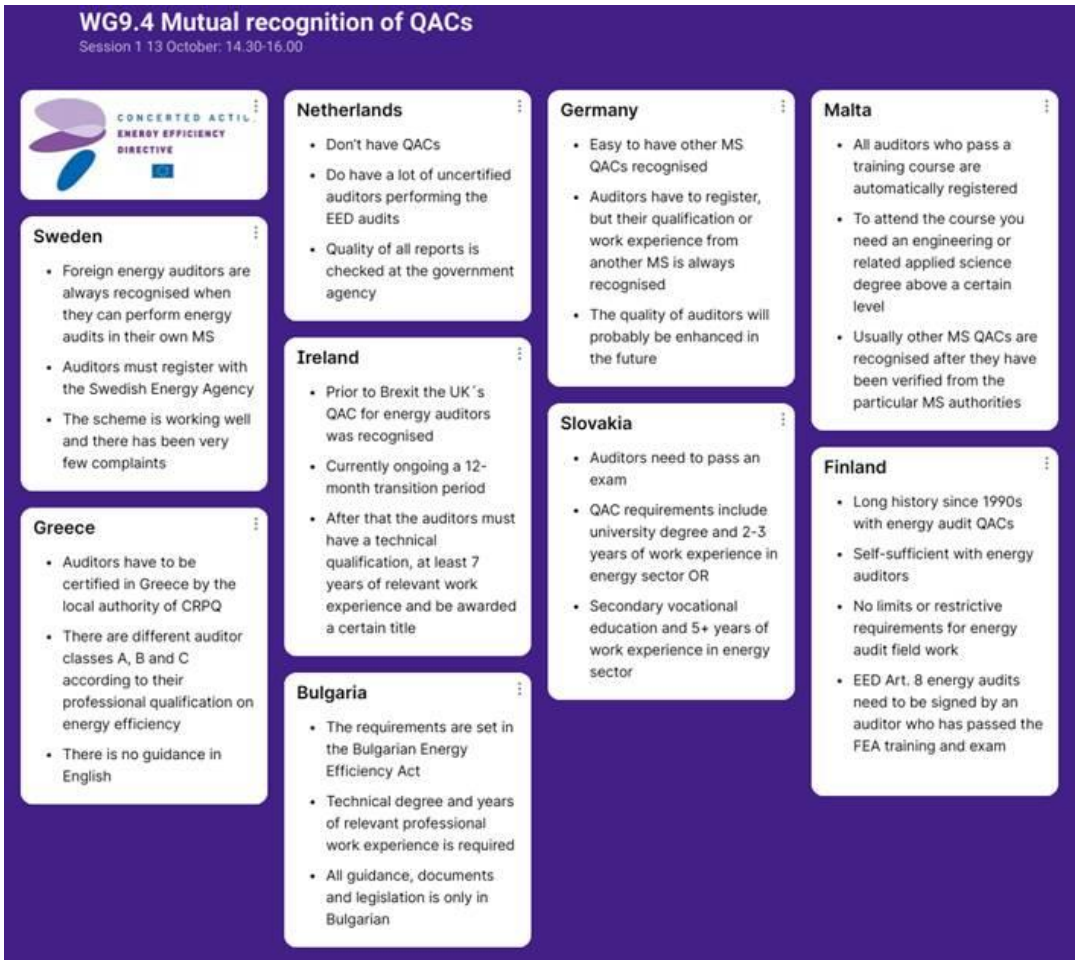


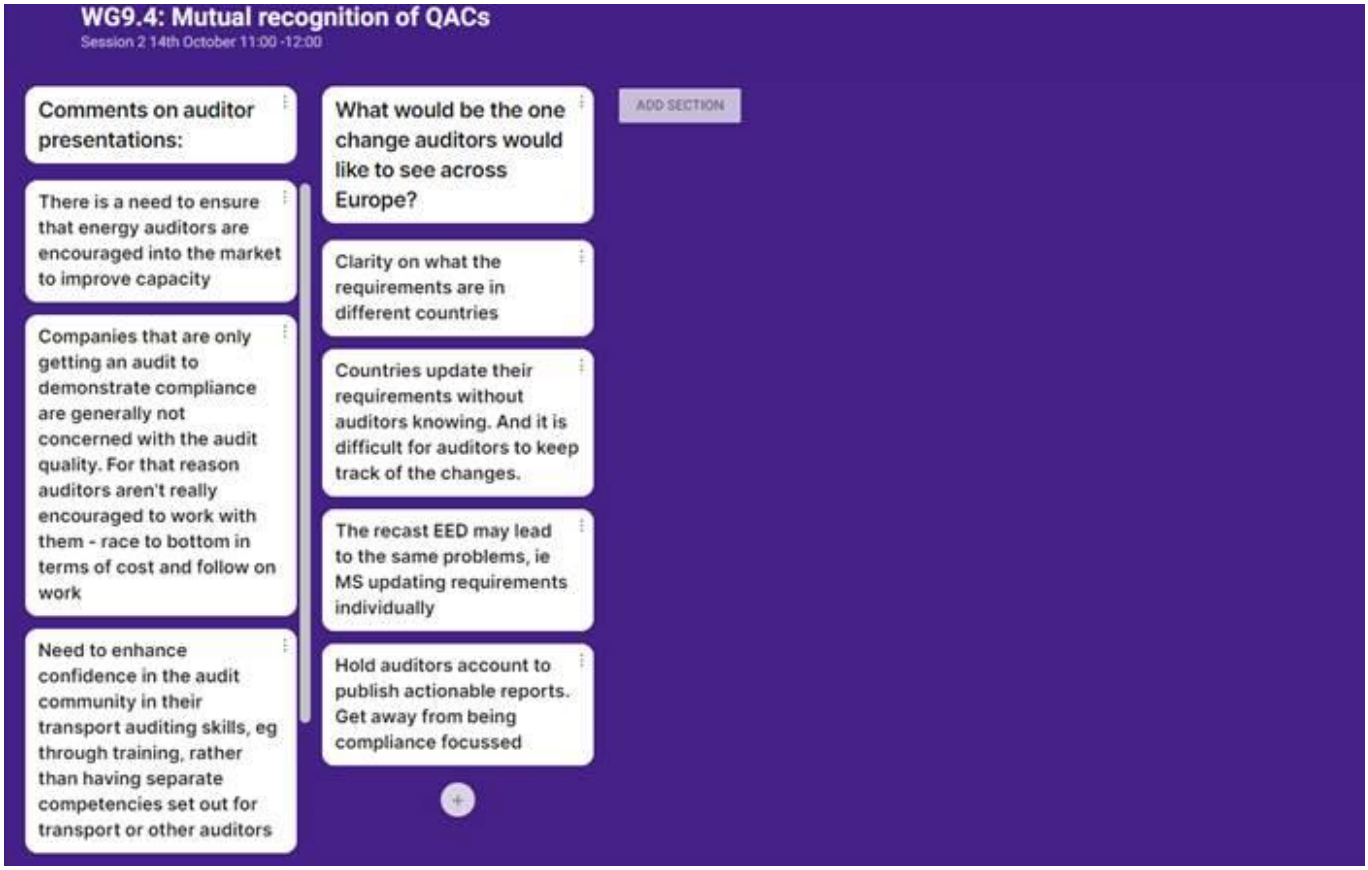
Figure 1: High level methodology and proposed scenarios of the Ireland's CA

2.4 Working Group 9.4 – Mutual recognition of QACs

MS with different levels of mutual recognition spoke on their experiences. There is a clear spectrum of MS who largely recognise auditors from other MS with minimal local requirements, to those with regional recognition, to those whose QACs mean it's very hard to mutually recognise QACs. See Figure 2 below.



In the second session three energy auditors led a panel discussion on the auditors perspective on the topic. These discussions are summarised in Fig 3 below.



The main conclusions from both sessions were 1) Auditor availability does not seem to be a problem across MS and there is no urgent desire for improved mutual recognition 2) MS and auditors agreed there were benefits to streamlining the process. This could be possibly achieved with cross EU recognition of accredited certification schemes which MS are using, and a common approach to baseline qualifications. Some MS will want flexibility for specific local requirements 3) More emphasis by MS and auditors on the benefits of good quality audits. Moving away from a **compliance** mentality to customers **demanding** quality audits to save costs and achieve emission targets. This will lead to a demand for highly qualified and competent auditors with proven records of producing impactful audits.

3 Information Sessions

Information sessions were organised to brief participants about developments on specific topics: Financing - Sustainable Taxonomy regulation, Energy Efficiency First principle, H2020 Energy Efficiency First related projects.

3.1 Sustainable Taxonomy regulation

The session aimed to give an introduction to the sustainable finance taxonomy regulation and how this impacts the energy efficiency sector and if possible, show some projects and plans connected to the taxonomy in the member states.

DG ENER gave an overview of the EU Sustainable Finance Strategy and the Taxonomy Regulation which establishes an EU framework for classification of sustainable economic activities. It aims to increase transparency in the market and help prevent greenwashing by providing information to businesses and investors. The first set of activities in the draft Delegated act covers climate change mitigation and adaptation objectives. It has the potential to help scale up sustainable investment and implement the European Green Deal.

Germany's Federal Office of Economics and Export Control (BAFA) presented a planned EU-Taxonomy-Project in Germany which will study the Taxonomy as an opportunity or potential to foster green finance in the energy efficiency sector but also to identify areas where the effect of the Taxonomy is unclear. Goals of the project are to identify actors in the energy sector who may use the taxonomy but are not obliged to, identify the requirements that actors must consider in order to align their activities and also assess the finance products in the energy efficiency sector and their possible alignment with the EU Taxonomy.

The session brought to light the consensual view amongst participants that the impact of the Regulation remains unclear. It is hoped that as the Regulation is implemented its impact will become clearer. In the meantime, the CA EED community will continue to follow its progress and potentially revisit the topic at a later stage.

3.2 Info session 9.6 Energy Efficiency First principle

The session aimed at presenting the recommendation and guidelines on the energy efficiency first principle adopted on 28 September 2021.

DG ENER explained the context of the recommendation and its link to the new article on energy efficiency first principle in the EED recast proposal. The recommendation lists action that should be followed by Member States to properly implement the principle. The guidelines that are annexed to the recommendation, elaborate on the approach and explain how to implement the principle in various phases of the decision-making process and in the context of different sectors and policy areas. They also provide specific methodologies to be used and examples of measures to be looked at.

The follow-up discussion touched more on the new Article 3 of the EED proposal and mandatory requirements for its application. There was some interest in a concrete example of a cost-benefit analysis incorporating the principle and a more detailed walk through how to conduct it.

3.3 Info session 9.7 H2020 Energy Efficiency First related projects

Two H2020-projects were featured in this session, sEEnergies and EERAdata, both working towards making the energy efficiency first principle more operational and exploring potentials, options and impacts of the principle for specific sectors. The two projects strive to look at the energy efficiency first principle from a broader system-perspective. In that, the project sEEnergies looks at the industry, transport and buildings sector; the project EERAdata targets specifically the building sector.

The sEEnergies project presented the methodology and preliminary results of the mapping and modelling, for example the large untapped energy efficiency potential in the Heating and Cooling Sector through a better use of district heating in combination with heat pumps at building level. The EERAdata project, explained the tools they are developing, notably to support local authorities in their decision making; nevertheless he flagged the difficulty linked to the availability and access to the necessary data to make these tools work.

Accordingly, the discussion centred mainly around sources of data and access to data. A key aspect of the energy efficiency first principle was raised towards the end: to what degree does the existing Energy Efficiency potential need to be realised before demand is covered by (sustainable) energy generation.

4 Bonus session

Update on recent developments and studies (DG ENER)

The aim of the session was to present the text of EED recast proposed by the Commission on 14 July as part of the Fit for 55 legislative package.

DG ENER explained the main changes and elements of the EED recast, starting with the overall context of the proposal and following by the new provisions article by article. This was followed by a short discussion with Member States representatives.

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 – Art 7 measures for industry

Conclusions presentation - Energy upgrading as a criterion in the renovation of public buildings

Conclusions presentation - Lessons learnt from the 2nd Comprehensive assessment of potential for efficiency in heating and cooling

Conclusions presentation - Mutual recognition of QACs

Conclusions from CA EED Coordinator: Coordinator closing presentation 9th 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. Links to the publicly available presentations are below.

Art 7 measures for industry

Shaping the future of voluntary agreements with enterprises in Wallonia – Belgium

Large Industry Energy Network (LIEN) Programme – Ireland

Federal Subsidy for an Energy Efficient Economy – Germany

Good practice factsheet: Federal Subsidy for an Energy Efficient Economy - Germany

Energy upgrading as a criterion in the renovation of public buildings

Fostering the Energy Renovations of Public Buildings in Italy

Driving the energetic renovation of public buildings in Flanders – Belgium

Lessons learnt from the 2nd Comprehensive assessment of potential for efficiency in heating and cooling

2020 Comprehensive Assessments - Heating and Cooling in the Fit for 55 process (DG ENER)

Ireland's comprehensive assessment

Key results and experiences from MS CA update – Germany

Malta's comprehensive assessment

Sustainable Taxonomy regulation

The EU Taxonomy Regulation - Impact on Energy Efficiency

Taxonomy overview

Energy Efficiency First principle

Energy Efficiency First: from principles to practice - DG ENER

H2020 Energy Efficiency First related projects

EERAdata

sEEnergies

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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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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 754521.