CONCERTED ACTION
ENERGY EFFICIENCY
DIRECTIVE

10th Plenary Meeting CA EED

Summary of Proceedings

Date: May 2022

Contents

1 Opening Plenary Session

In the course of the tenth Plenary Meeting of the CA EED over 150 experts, policy makers and implementers gathered together in Lisbon and virtually 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 João Pedro Correia Bernardo, General Director, Directorate General for Energy and Geology of Portugal

Keynote speech from Isabel Apolinário, Head of Tariffs, Prices and Energy efficiency Division, ERSE

Coordinator opening presentation 10th PM, Lucinda Maclagan

News from CINEA 10th Plenary Meeting, Christian Strasser, Head of LIFE Energy and LIFE Climate Unit, CINEA

Opening presentation 10.1 – Tackling energy poverty via energy efficiency measures

Opening presentation 10.2 - Energy systems integration – role of heating and cooling, DHC infrastructure, energy storage

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Opening presentation 10.4 - The role of databases when MS demonstrate the exemplary role of the public sector

2 Working Group Parallel Sessions

The Working Group Parallel Sessions of the 10th Plenary Meeting covered the following topics: Tackling energy poverty via energy efficiency measures, Energy systems integration – role of heating and cooling, DHC infrastructure, energy storage, Monitoring, planning, reporting – requirements in EED and the Governance regulation on energy efficiency, The role of databases when MS demonstrate the exemplary role of the public sector.

2.1 Working group 10.1 - Tackling energy poverty via energy efficiency measures

The working group aimed to help MS get a picture of specific programmes that deliver support and energy efficiency measures to homes in energy poverty. Are the impacts of these programmes/measures short- or long-term and how are the impacts monitored?

During the first session the main report findings were presented pinpointing the contradictory findings, such as the effectiveness of financial measures being higher compared to energy efficiency measures and the lack of monitoring procedures for assessing impacts.

Dr João Pedro Gouveia explained the main objectives of the Poverty Advisory Hub (EPAH) focusing on the applied approach and the provided services, such as the EPAH Atlas, the identified local solutions and the energy poverty courses. Moreover, he focused on the technical assistance to municipalities.

Dr Vlasios Oikonomou analysed the main policies and measures to combat energy poverty within the framework of EED Article 7 as reported in the National Energy and Climate Plans. He argued that the problem of energy poverty is structural focusing on the role of energy prices. Finally, he concluded that Energy Efficiency Obligation Schemes can facilitate the alleviation of energy poverty and noted the lack of specialised measures in private-rented sector and that the existing funding stream is inadequate to tackle energy poverty.

In the round table discussions, participants identified the most effective measures to tackle energy poverty highlighting the main advantages and disadvantages and proposed approaches for monitoring and quantifying the impacts. Half the discussion groups found that simultaneous initiation of financial and energy efficiency measures is required while two groups preferred energy efficiency measures and one social welfare measures. Energy efficiency measures have meaningful long-term impacts, but require 100% financing. There should be an emphasis on MEPS, to facilitate quick renovation and to achieve acceptable minimum energy class of buildings. Required funds must be ensured and proposed measures be accepted unanimously by all involved parties. In contrast, financial measures lead to short term impacts mitigating high energy prices. Nevertheless, they do not result in any structural changes, as no energy savings are delivered and the user behaviour isn´t altered. EEO´s should be combined with subsidies. Furthermore, energy vouchers can be initiated as an alternative short-term measure since they are easy to distribute but should not be misused.

Even if monitoring of implemented policies and measures is difficult, specific initiatives can be launched to assess impacts of implemented policies using both ex-post and ex-ante surveys. The estimation of the actual energy savings should be the main pillar of the monitoring procedure, but Energy Performance Certificates can also be utilized to assess impacts.

Session 2

In the second session four different best practices from across European Member States were introduced. The first set of projects were from the Netherlands which included, subsidies for municipalities, small energy saving measures and activities such as LED lights as well as free insulation. Belgium described a bullet loan for renovation targeted at those in energy poverty. The payback time is 20 years at the time of sale.

There was a presentation on the German Energy Saving Checks, where trained energy-saving advisers are sent to households which receive basic income support for job-seekers, housing benefits or social assistance. Another service is energy counselling for low-income households. Italy described the different tax deduction schemes for alleviating energy poverty used in the country.

The round table discussions were vibrant. The participants agreed that the introduced practices were applicable to all Member States. However, political commitment is needed. The challenges to implement the measures were

how to find the energy poor households. Social welfare workers, municipalities, energy advisors are important collaborators in implementation. It is important to show multiple benefits such as health benefits, which can help to find funding through insurance companies.

2.2 Working group 10.2 - Energy systems integration – role of heating and cooling, DHC infrastructure, energy storage

Based om the Energy System Integration Strategy European commission revise regulatory framework to empower energy system integration through the revision of the EED and RED, especially reuse of waste heat from industry and data centres in smart high efficient renewables-based district heating and cooling networks, stated DG ENER. Revised definition for the efficient district heating and cooling, lower thresholds for Cost-benefit analysis and collection of information on its implementation are key measures linked to energy system integration in the EED recast.

Identification and presentation of **key success factors** for successful RES and waste heat integration in DHC systems projects was the key purpose of the study Integrating renewable and waste heat and cold sources into district heating and cooling systems from which the JRC presented case studies Taarnby (DK) and Paris-Saclay (FR) that integrated RES.

1. Supportive Danish regulatory and policy framework for DHC
2. Mainstreaming long-term H&C planning in cities through transparent and nation-wide share methodology, taking into account externalities
3. Valuing cross-sector synergies with DHC to foster local decarbonisation
4. Integration of DC in the DH offer
5. Mix of technologies
6. Flexible and modular approach
7. New forms of public-private collaboration

1. National support schemes for low-carbon DHC system
2. Strong and long-term political buy-in
3. DHC is integral to urban development
4. Flexible organisation with empowered public authority
5. Long-term stable working relationship with holistic team
6. Modular architecture of the DHC and associated contractual arrangements

Two demo sites from **COOL – DH project** proves, that low temperature district heating (LTDH) networks enable successful integration of the low-grade waste heat sources. Reto M. Hummelshøj demonstrated that enabling innovative technologies like large heat pumps, smart controlled electric heaters or micro booster heat pumps at consumer premises, water treatment technologies as prevention of Legionnella, optimised network design using zero loss plastic heat pipes are already available and with innovative business models enable gradual transition of DHC systems toward LTDH systems. Usually only 10% of the buildings are not appropriate for LTDH systems, but by energy efficiency measures and presented solutions this is not an insurmountable obstacle to implement LTDH now.

»Net zero« plans for the decarbonization of heating network in Warsaw provided innovative but realistic approach toward decarbonisation of Poland capital. Suggested comprehensive list of solutions and actions are uniform and applicable in DHC systems all over EU.

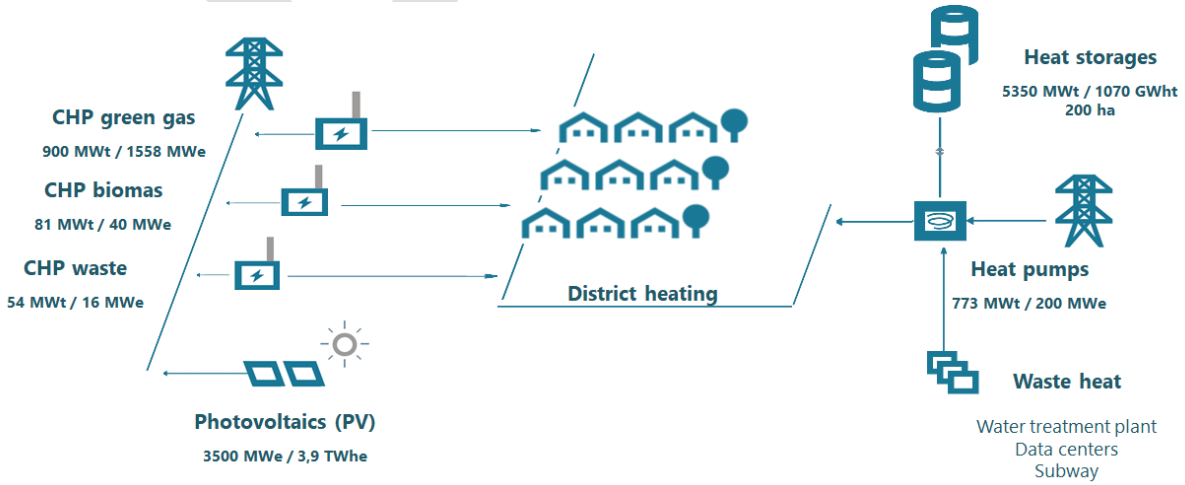


Figure 1: Supply - recommended scenario for the decarbonization of heating network in Warsaw

We are leaving fossil fuels and are increasingly moving to waste heat and heat generated by heat pumps in the next generation of more flexible, cleaner and more rapidly evolving district heating, emphasised Antti Hartman in his presentation of advanced solutions and heating and cooling services developed and implemented in Finland.

We are all already in the intensive process of decarbonisation of DHC systems where case studies presented and new advanced technical solutions for waste heat and RES integration are a useful source of information in the process of exploring appropriate individual solutions, was an important message from the group discussions. Natural gas is becoming a problem, heat pumps will play more important role, low temperature and joint planning of data centres are enabling conditions for their waste heat utilisation were the key conclusions of our discussions.

2.3 Working group 10.3 - Monitoring, planning, reporting – requirements in EED and the Governance regulation on energy efficiency

The planning, monitoring and reporting requirements changed in 2018 when the revised Energy Efficiency Directive (EU) 2018/2002 and the Governance Regulation (EU) 2018/1999 came into force. Many previous monitoring and reporting provisions in the Art. 24 of the EED 2012/27/EU were amended and consolidated in the Governance Regulation. MS have to adapt these changes that will change the former EED planning and reporting cycle, partly the content and the way to report.

For the first time in April 2022, MS need to report based on the Governance Regulation (Art. 27) in energy efficiency, reporting is related to the 2020 targets. The first biennial integrated national energy and climate progress report (NECPR) which includes reporting on energy efficiency is due in 2023.

The sessions aimed to help MS to get a concise overall picture of energy efficiency planning, monitoring and reporting requirements and timelines for reporting under the EED and the Governance Regulation and the linkages between these two pieces of legislation.

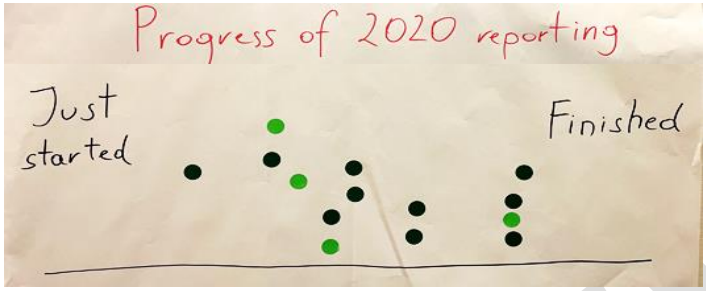
The working group sessions included a presentation by the Commission on the upcoming reporting and a case example of Slovenia as building up a climate reporting system. In addition, MS had a possibility to discuss questions on the WG10.3 theme in the sessions.

DG ENER, Unit A1, had a presentation on progress reporting under the Governance Regulation. The presentation included the provisions both of the Governance Regulation on 2020 reporting on renewable energy and energy efficiency (Art. 27) and 2023 integrated energy and climate reporting (Art. 17). DG ENER also presented the template and guidance for 2020 targets reporting. This reporting, as all reporting related to the Governance Regulation (Art. 28), needs to be delivered to the Commission via the e-platform. In addition to the reporting Excel template MS can upload also other documents linked to the reporting. Questions on e-reporting can be addressed to ENER-2020-361-ENERGY-UNION-REPORTING@ec.europa.eu. A recorded demo is available upon request from the same email address. Related to 2023 biennial reporting the work in the Commission is still in progress and the Commission must adopt an implementing act to set out the structure, format, technical details and process for these progress reports. This act is planned to be adopted Autumn 2022. The preparation work has been ongoing since October 2021 via working groups under both the Energy Union and Climate Change Committees.

The Jožef Stefan Institute (JSI), Slovenia, presented how they have within a Life ClimatePath2050 project (2017-2020) developed a comprehensive common monitoring climate and energy policy implementation system – the Climate Action Mirror – in Slovenia. Main objectives of the system are to: ensure coherent, transparent, and high-quality information; improve access to the information to be used in decision-making; implement a 'plan–do–check–act' (PDCA) cycle for short-term corrective actions; provide specific guidelines for mid- and long-term planning; reduce the administrative burden. The main elements of the Climate Action Mirror are: to follow achievement of national and sectoral targets; catalogues of measures in sectors; preparation and coordination process; financial data by source of funding and detailed analysis on selected lagging behind the plans. All indicators are available in Slovenian and English. Importance to prepare the system in close consultation with stakeholders and including a wide network of experts was highlighted. The main future challenge is seen, how to develop the NECP reporting and monitoring in a way to further stimulate the use of results as the basis for future decisions.

In addition to the presentations, both sessions involved active participation structured around related discussion topics and exercises. were activated in both sessions with some group discussions, to where participation was active. Based on the discussions in the first session, progress in MS regarding April 2022 reporting on 2020 targets was well on the way in most MS and is also seen in the picture below. A limited number of MS indicated that new

measures had been undertaken in 2019 or 2020 to close the gap referred to in the guiding reporting template. Some MS also mentioned that they already have reached their targets on the national level and therefore there was no need for additional measures for 2020 targets although new measures after that are planned or implemented.



MS were asked if they had open questions/issues related to the upcoming reporting in April 2022 or the 1st biennial reporting 2023. Based on the answers it was clear that most MS were concentrating on the reporting in April 2022 based on the Governance Regulation article 27. Most of the questions were related to practical or unclear issues in reporting with the template and especially to the new Policies&Measures sheet in the guiding excel-template the Commission had provided for the reporting (template is optional).

In the beginning of the second session participants were given an exercise on EED Article 7 savings reporting, as requested in the Commission template (new annual savings/total annual savings/cumulative savings). How to report Article 7 cumulative savings for each year has and continues to raise questions indicating that this remains a subject open to interpretation.

Regarding the upcoming 1st biennial NECP progress reporting including all five dimensions – energy security, solidarity and trust; the internal energy market; energy efficiency as a contribution to the moderation of energy demand; decarbonisation of the economy; and research, innovation and competitiveness – delegates seemed to have questions. Especially highlighted were questions relating to totally new way the five dimension reporting has to be organised, administrative burden, workload, resources, savings calculations and especially data availability and ambiguity how to collect data. All these are areas yet to be clarified. In addition, reporting and role in practice on EE1st and energy poverty were seen as highly challenging where information on what is expected is lacking.

2.4 Working group 10.4 - The role of databases when MS demonstrate the exemplary role of the public sector

The objective of the session was twofold; to analyse the role which the building databases play when demonstrating the exemplary role of the public sector, and to discuss how data possession can support MSs in determining and assessing their public body buildings for compliance with Art. 5.

Session 1

The session started with a presentation of the highlights of the survey results answered by 20 Member States.

The main findings of the report were summarised as follows:

- Public buildings databases are considered of high importance.
- The EC should establish a reporting methodology and provide guidance and support.
- Central authorities and legal obligations are crucial for establishing such databases, and data delivery should be compulsory.
- Several barriers to establishing databases can be overcome by providing an apparent strategic reason for their establishment to justify the effort, time, and expenses.
- Databases should cover a wide range of secured data - 1) low quality and reliability of input data and 2) insufficient and irregular inflow of input data are considered the biggest problems related to data.

Then there were two national presentations from Ireland and the Netherlands.

The chairperson asked the participants to discuss at tables two questions on the building databases already in place in the context of Art. 5:

1. What building databases are already in place in your MS?
2. What elements are specific to Art. 5 and help demonstrate the public sectors are exemplar?

Session 2

There were three presentations during the second session from Italy, Estonia and the BuildHub project.

Discussion in this session was focused on the future vision and development of building databases. Therefore, the participants at tables were asked to find answers to the following questions:

1. Future needs and attributes of databases
    - What are the future core needs and objectives MSs must address in any database?
        - Develop existing databases or build new ones?
2. What issues are expected, and how these can be overcome?

The presentations and table discussions brought the following conclusions and comments:

- Reporting as required by the EC needs the right data on the buildings. Data format and reach must be standardised across the EU.
- Data collected must be useful for different purposes except for pure statistics, e.g. data must enable tracking of sustainable indicators, alleviate asymmetry between energy users and the energy sector.
- Stakeholders involved in the data gathering must see benefits and incentives. Public and individual gains should be specified. More public discussion on building databases is needed.
- Database systems must be well thought out and designed before building any database in a country. In this way, stranded costs of databases can be avoided.
- Building databases should have market value for those who use them commercially, e.g architects, buildings owners, real estate agencies, and be publicly available for non-commercial use.
- Significant differences across databases in MSs were identified. This suggests that further analysis of their content and the technology used are required to secure EU interoperability. A clear vision of a targeted system of databases at the EU and national levels is urgently needed.
- Up to now, the databases on Energy Performance Certificates dominate in the Member States; only a few are suitable to demonstrate the leading role of the public sector as Art. 5 stipulates.
- Linking and merging existing in a country database is a challenge and should consider different criteria, e.g. technical and economic viability.
- Different types of energy used, e.g. electrical energy, heat, gas, biomass, may make the energy data gathering difficult. Additionally, Smart Metering Systems are operated by different utilities which may be unwilling to share the data publicly.
- Setting targets for energy savings in the public sector can catalyse and accelerate database creation.
- Modern technologies enable effective and relatively cheap data gathering and processing, e.g. Artificial Intelligence, Big Data.
- Building Management Systems should be mandatory for public buildings to enable adequate energy management, among others, to demonstrate the exemplary role of the public sector.
- Guidelines and practical training on different aspects of building data gathering, processing, and utilisation are needed and should be initiated at the EU level.

3 Information Sessions

Information sessions were organised to brief participants about developments on specific topics: H2020 projects StreamSAVE and ENSMOV, Member State measures to alleviate high energy prices in the context of energy efficiency, Feedback from the CA EED workshop on Data Centres.

3.1 Info session 10.5 StreamSAVE and ENSMOV

The title of this info session "*New resources for the implementation of Article 7 EED: discussing lessons learnt about savings calculations and M&V*" already describes very well the main aims of the session.

As a background, the project StreamSave supports Member States in the calculation of energy consumption and savings to meet their obligations under Articles 3 and 7 of the EED. The project ENSMOV goes into a similar direction but focuses specifically on measurement & verification and reporting.

An ad hoc survey towards the beginning of the session showed that almost all of the session participants work on the implementation of Articles 3 and 7, the audience thus represented the main target group of StreamSave and ENSMOV.

The project teams, addressed the participants in two ways: a) by familiarising the audience with the projects, project outputs and working methods and b) by inviting participants to flag typical difficulties and complexities and by offering technical support and resources for Member States to deal with these.

The round table discussions - facilitated by one project representative for each table – resulted in a lively exchange across Member States representatives and project teams about the specific challenges and issues they come across every day in their work towards implementing the EED.

The project teams took the opportunity to have confirmation on the pertinence of the aspects the projects are addressing and to explain in detail what concrete support they can offer to policy implementers, notably by providing tailor-made tools and direct help via dedicated national contact points in most of the countries.

As a conclusion, the audience was encouraged again to make use of the support and the resources that the projects offer. Another finding was that data, and specifically buildings data, is again a core issue for the implementation of Articles 3 and 7, which becomes increasingly a crosscutting exercise.

3.2 Info session 10.6 MS measures to alleviate high energy prices in the context of energy efficiency

The session aimed to trigger participants to think about energy efficiency in the context of high energy prices and to present examples from two MS on their energy efficiency measures to alleviate the high energy prices. Another important question is what we need to do today to be prepared for an energy crisis in the future?

France gave a presentation on the energy efficiency measures implemented in France and the related environmental/social/economic benefits. Examples of measures presented were; subsidies for households to replace fossil fuel heating with heat pumps; and support for investment in the production of heat from renewable or recovered energy and the deployment of heat networks

Greece presented energy efficiency measures implemented in Greece such as the Exoikonomo program to renovate 105 thousand buildings and to install photovoltaic stations through energy communities. In the long run there is a need to reduce the exposure of the end-users to the increased energy prices in the future. Challenges to achieve this target are the availability of public funds, sufficient supply of energy services and to increase awareness of the end-users etc.

In the round table discussions that followed useful measures for the MS were discussed. It is evident that the energy crisis has created an additional opportunity for ambitious measures. A need was expressed to distinguish between measures as short-, medium- or long-term regarding response time and impact on energy efficiency.

Among the short-term measures listed were social tariffs, VAT reduction for energy efficiency work and material, energy vouchers and regulated gas/power prices for households were mentioned. Suggestions for long-term measures were grants for renovation, 0% interest loan guarantees and to work on independency. It was also noted that the role of municipalities is important as they are in a good position to implement measures and that there is a need to collect data on measures.

3.3 Info session 10.7 Feedback from Workshop on Data Centres

On 24-25 November 2021 a workshop 'Data Centres and Energy Efficiency' was held in Brussels. This workshop addressed the policy context for data centres, specifically why and where data centres are relevant to the EED and wider energy and climate policy. In addition, it included a couple of MS good practices and presentations of studies and projects relevant to energy efficient data centres and related energy and climate policy in EU.

The Info Session firstly summarized the main results of the workshop. Then France presented their proposal for the development of target values for data energy consumption, which includes the efficiency of both the cooling infrastructure and the servers (utilization, idle mode) in a data centre. The target values depend on the type of data centre and can be modulated according to the intensity of the activities Finally, Peter Radgen (University of Stuttgart, Germany) presented the project Public Energy Efficiency Register for Data Centres (PEERDC) This project develops in cooperation with stakeholders amongst others the content for a register, including the software to assess the required data in a data centre. Both presenters linked aspects of the projects to the proposals on data centres in the recast of the EED and at the end of the session DG ENER provided a short update on the general status of the recast regarding data centre energy efficiency.

3.4 Bonus session

Representatives from DG ENER.B2 presented the role of energy efficiency in the REPowerEU joint action plan and in the framework of the Versailles Declaration (10 and 11 March 2022) and in the framework of high energy prices.

The representatives invited attendees to join an exchange of experiences and identified needs, guided by questions presented to the auditorium.

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 10.1 – Tackling energy poverty via energy efficiency measures

Conclusions presentation 10.2 - Energy systems integration – role of heating and cooling, DHC infrastructure, energy storage

Conclusions presentation 10.3 - Monitoring, planning, reporting – requirements in EED and the Governance regulation on energy efficiency

Conclusions presentation 10.4 - The role of databases when MS demonstrate the exemplary role of the public sector

Conclusions from CA EED Coordinator: Coordinator closing presentation 10th PM

Invitation to the 1st Plenary Meeting CA EED 3 in Stockholm

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. All presentations are available on the CA EED website.

Working Group 10.1 – Tackling energy poverty via energy efficiency measures

Energy poverty: The "efficiency" of energy efficiency measures in Italy, Alessandro Fiorini

Energy poverty Projects in the Netherlands, René Schellekens

Tackling energy poverty with EE-measures – Belgium, Roel Vermeiren

Poverty Energy Efficiency Measures in Germany, Sebastian Widmuch

EED policies to address energy poverty, Vlasios Oikonomou

The EU Energy Poverty Advisory HUB, João Pedro Gouveia

Working Group 10.2 – Energy systems integration – role of heating and cooling, DHC infrastructure, energy storage

Energy systems integration role of DHC systems - DG ENER, Madis Laaniste

Pioneers of Smart Energy, Antti Hartman

Decarbonisation plans for large DHC networks – Poland, Wojciech Stańczyk

Demonstration of innovative solutions and business models, Reto M. Hummelshøj

Integrating renewable and WHC sources into DHC systems, Johan Carlsson

Working Group 10.3 – Monitoring, planning, reporting – requirements in EED and the Governance regulation on energy efficiency

Progress reporting under the Governance Regulation – Guus van de Schouw

Monitoring climate and energy policy implementation in Slovenia – Barbara Visočnik

Good practice fact sheet: Monitoring climate and energy policy implementation in Slovenia – Barbara Visočnik

Working Group 10.4 – The role of databases when MS demonstrate the exemplary role of the public sector

Possession and access to data for building renovation a Dutch perspective – Netherlands, Thomas Wellink

The BuiltHub project and relevance to public sector buildings, Ulrich Filippi Oberegger

Irish building databases relevant to Art 5 of the EED – Ireland, Alan Ryan

Databases and public building renovation – Consumer Protection and Technical Regulatory Authority, Riina Tamm

The Italian National Portal on Building Energy Performance PNPE 2 as support to evaluate and monitor the renovation of public buildings, Francesca Pagliaro

Info session 10.5 StreamSAVE and ENSMOV

New resources for the implementation of Article 7 EED Lessons learnt about savings calculations and M&V, Nele Renders, StreamSAVE

Insights on MRV schemes, Vlasis Oikonomou, ENSMOV

Info session 10.6 MS measures to alleviate high energy prices in the context of energy efficiency

Addressing high energy prices in Greece, Christos Tourkolias

End-use sectors: Accelerating energy efficiency improvements in the context of high energy prices, Josephine Izard

Info session 10.7 Feedback from Workshop on Data Centres

Consumption reference values per data center type – Bruno Lafitte, Ademe

Public Energy Efficiency Register of Data Centres – Peter Radgen, University of Stuttgart

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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