



CONCERTED ACTION
**ENERGY EFFICIENCY
DIRECTIVE**

3rd Meeting CA EED
Summary of Proceedings

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1 Opening Session

In the course of the third Meeting of the CA EED over 135 experts, policy makers and implementers gathered together to discuss issues related to the implementation of the EED in Member States. The meeting was designed to give Member States and Norway the opportunity to exchange experiences and learn from each other. In addition, EIB, the Energy Community Secretariat and a Serbian representative from the Energy Community Countries were present as observers.

During the opening session DG ENER and EASME gave an overview of news and updates on current activities.

Following on, each Working Group presented their results on the following topics.

- Challenges in new EED Art. 7 implementation due to EED revision and the Governance Regulation
- Energy Management in central government buildings and private sector (Art. 5) and link with audits
- Ensuring effective energy audits during the 2nd compliance period
- Heating and cooling planning – how to properly address actual MS challenges

2 Parallel Sessions

The Parallel Sessions covered the following topics: Challenges in new EED Art. 7 implementation due to EED revision and the Governance Regulation, Energy Management in central government buildings and private sector (Art. 5) and link with audits, Ensuring effective energy audits during the 2nd compliance period, Heating and cooling planning – how to properly address actual MS challenges.

2.1 Changes in EED Article 7 implementation due to EED revision and the Governance Regulation

The aim of the sessions was to offer up to date information by the Commission on the provisional changes in the revised EED Article 7 and Annex V and its relation to the Governance Regulation. In addition, experiences related to the preparation of the energy efficiency related parts in the 1st draft National Energy and Climate Plans (NECPs) due by the end of 2018 were gathered and shared. The sessions gave Member States also a good opportunity to pose questions to DG ENER on the changes in the provisional revised EED Art. 7 and its linkages to the 1st NECPs.

As expected, the vast majority of the participants were policy makers or EED implementers from MS working in the area of Art. 7 implementation.

MS were asked to fill in a short survey prior to the meeting to share their envisaged open issues or challenges related to the provisional EED revision (Art. 3/7) and the provisional Governance Regulation energy efficiency and NECP related parts. In addition, questions related to the preparation of the 1st draft NECPs were asked.

Over one hundred open issues or challenges were submitted by the MS in their answers to the query. For the EED revision the following categories were identified:

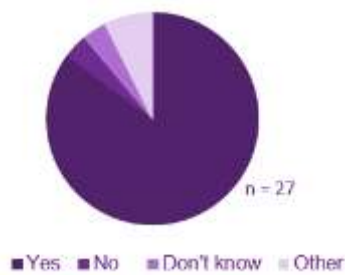
- Art. 7 target calculation and flexibilities/exemptions
- Renewables in Art. 7
- Calculation of energy savings and M&V
- Eligible measures/savings
- What is new in Art. 7
- Art. 3 target
- Art. 7 linkages to GOV regulation
- Energy poverty

Correspondingly open issues or challenges related to the 1st draft NECP preparation were identified for the following categories:

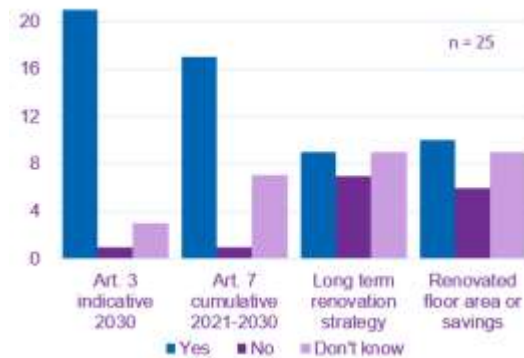
- Resources
- Organisation/coordination of the complex process
- Timeline and time constrains
- Planned policies
- Unclear requirements
- Data availability

Based on the responses, a summary presentation of all questions and answers was presented.

Delivering the 1st draft NECP



Including energy efficiency targets in the NECPs



A representative from DG ENER presented up to date information related to the provisional agreement on the EED regarding especially the energy savings obligation under a revised Article 7 EED and implementation of common methods and principles for calculating the impact of energy efficiency obligation. It also covered the provisional agreements on the revised EED Art. 3 and Art. 7 and the linkages to the Governance Regulation.

After the presentations MS were provided with the possibility to ask questions related to the new still provisional legislation. A good number of open issues and challenges that MS had reported in their query answers were clarified. However, it is obvious that there is still a lot of room to further discuss and clarify several issues related to the EED Art. 3/7 implementation and NECPs like: MS contribution setting Art. 3 target, possible gap filling and recommendations by the Commission, Art. 7 target setting – role and use of exemptions/flexibilities; renewables in Art. 7 target setting and in Annex V savings calculations; dealing with additionality/baselines/lifetimes/decline; eligible measures now and in future; implications for including transport; requirements on energy poverty.

A general conclusion of the two informative, constructive and lively sessions was that besides offering MS a good possibility for questions and answers, there seems to be clear need for future work in the CA EED meetings regarding the topics around the Art. 3/7 implementation and their linkages to the Governance Regulation.

2.2 Energy Management in central government buildings and private sector (Art. 5) and link with audits

The main aim of the session was to discuss the role of energy management in public sector and also identify the barriers and necessary steps in order to improving energy management in public buildings as a part of playing the leading role by the public bodies (Art. 5).

An introduction to energy management in general was given at the start. Then, a representative from SEAI gave a presentation on how to use energy management programmes in the public sector to build a project pipeline. In Ireland there is support for public bodies that want to implement energy efficiency projects. The support from SEAI helps them in every step, from audits, to creating a business case and getting funding for implementing measures.

The discussion was then about how to make energy management essential in demonstrating the leading role of the public sector. Barriers and solutions were discussed. Leadership, whether political or anywhere else in the organisation was pointed out as a barrier. Also lack of continuity of personnel for energy management and barriers and technical capacity in the organisation. Solution identified were constant training, and ongoing case studies of success to encourage adoption and maintenance of energy management. Budget issues and how to get funding was found as a difficulty and it was pointed out that just obligations are not enough. Leadership and governance is needed in order to implement energy management and energy projects.

2.3 Ensuring effective energy audits during the 2nd compliance period

The main aim of the sessions was to discuss learnings from the previous energy audit compliance period and how to apply that learning to the upcoming compliance period. In the sessions energy auditing systems management, and how energy audit programmes can be delivered efficiently and effectively was also discussed. The research results show what the MS thought were good practices in the energy audit system in their country and what needed

enhancing. It was obvious that what some MS thought was good, was then also pointed out as something that needed enhancing for others. The aim of the sessions then became to make these MS find each other and exchange experiences.

Session 1 – learning from the first compliance period

A member from the UK Department for Business, Energy and Industrial Strategy presented a research and evaluation on energy audits in the UK. There were interesting findings on how the legislation has been received by both affected companies and auditors, as well as the results from the control of audits. The main findings were:

- Over 70% of ESOS participants were satisfied with their energy audit report and trusted the recommendations made and ESOS was reported to have led to an increase in interest (including at board-level) in energy efficiency by 40% of compliant organisations.
- Over 900 accredited assessors registered to meet the ESOS requirements. However, delayed compliance activity led to competition in the market for external energy audits and increases in prices.
- Over all, the costs of compliance were in line with those anticipated in the initial Impact Assessment.
- Study pointed to a large number of companies undertaking at least one measure as a result of the audit. But it was unclear what was the measure and its level of savings. More follow up analysis is needed to determine impacts.

The Agenzia Nazionale Efficienza Energetica presented the Italian experience from the first compliance period. Italy has gathered a lot of data from obligated companies and now have an impressive data sheet. The discussions circled around how to produce and use KPIs and other data. KPIs are first and foremost for the companies themselves to trace their own performance improvement.

The discussion in the first session focused on what were the good practices from this compliance period that MS need to keep on doing. Communication with both companies, business associations and auditors was pointed out by many participants as a successful aspect to continue emphasising. The relationship with the different involved parties is important. Many participants were content with their registry of auditors, that described both competence and what different sectors they operated in. Data collection, case studies, the added value for companies using energy management systems and clear guidance about the legislation were also pointed out as successful aspects. The fact that MS all managed to get a scheme in place in a very short time was also highlighted. One MS mentioned that they had an obligation for companies to implement the three most cost-efficient measures. This highlighted the most important objective is to implement measures after the audit. MS were generally satisfied with compliance, but there is a lack of data on implementation of measures. In summary, there were a lot of good practices to bring into the 2nd compliance period.

Session 2 – effective and efficient audit management systems

The second session focused on what are the gaps in the implementation of audit management systems.

A representative from the Danish Energy Agency presented a study on the cost-efficiency of energy audits in companies with low energy consumption, which concluded that the costs might be too high for companies with low energy consumption.

SEAI presented how Ireland has identified obligated businesses by using several sources of information in different steps.

A member of CRES presented the work done in Greece on an energy audit platform which will be a user-friendly IT-platform where users can find both supporting documents as well as report data from the audit.

In the discussion it was concluded that the handling of data and statistics could be improved, and it could be used and shared so that new policies could be based on facts. It was also concluded that there was a need for focusing on the implementation of measures. The assessment of measures in the audits as well as incentives for implementing measures after the audit was seen as ways to enhance this. Many countries had penalties for non compliance, which has boosted audit compliance. But preliminary research suggests obligated organisations just comply by completing an audit without a view to implementing measures. Phasing of audits was recommended to ensure a steady stream on work to auditors, to maintain quality and interest, and avoid supply and demand issues. In general, more data and research is needed into measuring and incentivising the implementation of measures.

There is still confusion over the non-SME definition, especially multinationals with small offices in some countries. Also, more clear guidance on the level of detail needed in audits and more clarity on the added value of using an energy management system was discussed. The competence of auditors for particular specialist sectors, and the harmonization of auditor requirements among the MS was also seen as a gap to fill.

2.4 Heating and cooling planning – how to properly address actual MS challenges

The JRC presented a very detailed evaluation of technical aspects of previous Comprehensive assessments (CA) in form of a [Synthesis report](#) and provided several recommendations for their updates. The scope of the CA is very large and it was a major effort for MS to execute it (most MS did not perform all elements of the CA, CAs differ significantly in terms of approaches and how data was reported), but they raised conscious of the energy efficiency potentials. The CA update should have broader focus on all relevant heating and cooling technologies. What are real benefits of the CA in heating and cooling policy of MS was the key question raised during discussions beside the expressed need for more flexibility and more adopted approach to very different needs of countries.

A representative of DG ENER gave a presentation on MS compliance with Art. 14. The ongoing process for an update of Annex VIII will provide an improved CA methodology, guidance and reporting template. How the CA will feed into the energy efficiency targets and National Energy and Climate plans preparation was key focus of the discussion.

A member of ADEME provided a very comprehensive presentation on the district heating and cooling (DHC) policies and planning tools in France, where a consistent and goal-oriented legal framework (multiplication by 5 of RES and waste heat until 2030 compared to 2012), wide range of support instruments (reduced VAT, Heat fund subsidies, White certificates, obligatory connection, etc.) and multilevel energy planning (“multiannual energy plan” and local master plans) provide an incentive environment for development of DHC in France.

Heating and cooling strategies for 14 MS prepared within the [Heat Roadmap Europe project](#) were presented by the project partners Aalborg University and ICLEI. The heating and cooling sector can be fully decarbonised (86% level reached) based on technologies and approaches which already exist and are market-ready through the use of renewables and huge excess heat potential. Energy efficiency on both the demand and the supply side are necessary to cost-effectively reach the decarbonisation goals where district energy is technically and economically more viable than other network and individual based solutions in urban areas. With different sector integration, the heating and cooling sector can play an important role by integrating the increasing shares of variable renewable energy and enhance the grid flexibility. Visualization tools like the free available [PAN-European Thermal Atlas 4.2](#) can significantly contribute to better energy planning and implementation of Art. 14 (CA update).

A workshop on challenges of the CA update demonstrated prevailing MS opinions that the CA preparation is difficult and complicated. However, on the other hand the majority of participants agreed that the CA is helpful for developing national policies for reaching goals of the Paris agreement, the EED and the RED. Key discussion conclusions were:

- **Decarbonisation** is becoming the most important aim and driver in heating and cooling planning;
- Requests for **further flexibility in regards to the approach and technologies** to consider different needs and national contexts – CA should pursue and ensure a technologically neutral and open cost-benefit analysis for the most affordable EE/RE solutions that enable the country/EU to decarbonise the entire and (future) integrated energy system;
- **Focusing on the “key areas” of heating and cooling demand** (applying the 80/20 rule instead of “everything”) could improve the quality and usefulness of the CA;
- **Identifying market failures** is a better way forward for more market-based and deregulated MS;
- **The focus of the CA is on developing national policies for heating and cooling.** There is no need to do it the same way in every country and no need to do a detailed report to the EU in a detailed format.

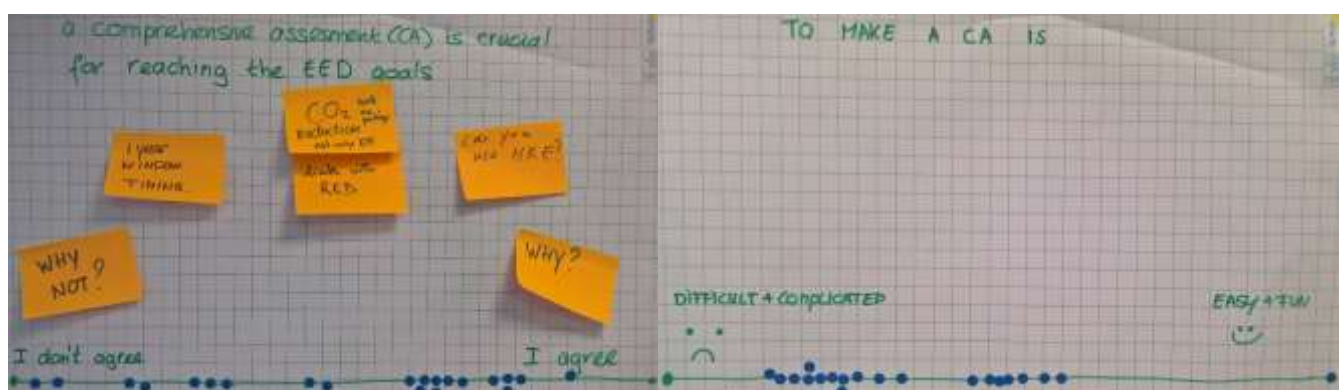


Figure 1: Workshop participant's opinion on the role and difficulties of the CA preparation

3 Other Parallel Sessions

Other Parallel Sessions were organised to inform participants about developments on specific topics: Smart cities and smart consumers; Art. 8 Guidance document and how it meets MS needs; ISO 50001 and links to energy management in governmental buildings; and H2020 projects on Financing and beyond: Integrated services for home renovation.

3.1 Smart cities and smart consumers

This was a follow-up to topics discussed at previous CA EED meetings in October 2017 and in March 2018 which both dealt with consumer feedback through ICT. This time the scope was broadened from consumers to city level and the session also highlighted the environmental challenges with ICT. The objective was to raise awareness among persons responsible for the implementation of the EED of the opportunities and challenges for energy efficiency through new and innovative ICT solutions, mainly linked to EED articles 9-11, 12 and 17.

Smart cities

The session started with a presentation of “Smart city concepts and energy efficiency in Hungarian cities” by a senior research fellow at CERS and WHRD. The concept of smart cities is constantly evolving and is going in the direction from technology-driven to community-driven. Recently, the advantages also for rural communities in using digital technologies have been explored and a concept of “smart villages” is emerging. The smart city attitudes of Austrian and Hungarian cities such as Graz, Linz, Salzburg, Vienna and Gyor were presented and Vienna was highlighted as a good example of a smart city. Among the different areas related to cities, solutions for more energy efficient transports such as intelligent traffic management systems were highlighted.

Smart consumers

Following this presentation, the project [USmartConsumer](#) (funded under the Intelligent Energy Europe programme) was presented. The roll-out of smart meters across Europe gives opportunities for energy saving, and particularly in this project, electricity savings of around 5% have been reported as a result of consumer information based on smart meter data. Also 55% of consumers in a field test had changed their behaviour based on information from smart meters. The field test was carried out in Spain and an important enabling factor is the wide-spread use of dynamic tariffs (hourly prices) for electricity in Spain. The conclusion was also that even if there are electricity savings reported among consumers, the biggest advantages of the smart meter roll-out is for the electricity distributors.

Environmental impact of ICT

The third presentation was given by a member of Ademe and focused on conclusions from the Smart Grids demonstrators in France and the results from a study from 2015 on the environmental impact of ICT. Several recommendations for policymakers on how to minimize the environmental impact from ICT use related to energy efficiency were given. The conclusion from the session was that we need to “consume less, consume better and consume at the right time” when it comes to energy.

3.2 ISO 50001 and links to energy management in governmental buildings

In this session, an expert on ISO 50001 was invited to go through the steps to energy management. Also the project leader of Steam up presented.

ISO 50001 and links to energy management governmental buildings

A representative of Optien explained the basics of energy management and why it should be used. He linked it to the results from the discussion in the parallel session on *Energy Management in central government buildings and private sector (Art. 5) and links with audits* where he could see that most of the barriers identified in the previous discussion could be handled within an energy management system.

Implementing a management system could also be seen as trying to change the culture in an organisation, to get people to think about the consequences for energy use in their daily work. Commitment from leadership and

pointing out someone who is responsible for each and every part is crucial in management systems. Also making sure that the whole organisation is participating is needed.

Getting records are always difficult, but when you have them, identify the 10 largest energy users and then ask why, why, why? Do we need this process at all should be the first why.

Third party verification of the energy management system then makes sure that the goals are met, and performance and resources are maintained

The Project *Steam Up*

As an example of energy management, the project [Steam Up](#) (funded under the H2020 programme) was presented, which builds upon the pillars of energy management. In the project, steam systems in 44 SMEs and 33 large enterprises from several different sectors and countries were audited and business cases were created. It also included technical training and capacity building and since it was scaled up expertise could be created among these different companies. Non-energy-benefits were also identified.

3.3 Art. 8 Guidance document and how it meets MS needs

A representative of DG ENER gave a detailed presentation on the New guidelines and recommendations on the implementation of certain aspects of Article 8 and Annex VI of the Energy Efficiency Directive.

An interactive discussion took place on various aspects of Article 8, not just the guidance document. The guidance document provides detailed guidance on the 'cost effectiveness', 'representativeness', and 'proportionality' aspects of Article 8 of the directive. In particular, there is more clarity on clustering and sampling, de minimis, DG ENER pointed to important areas for MS to consider in their planning of their audit management systems. Data gathering and analysis to fully assess effectiveness (what % cost savings identified) and cost effectiveness (especially for smaller obligated organisations) was recommended by the representative to focus on for upcoming audit compliance. This was a particular area of discussion for participants; what data, who can collect, and who will analyse and act on the data. MS have different arrangements.

The guidelines were welcomed but many MS have already issued their revised guidance anticipating another wave of 4 year audits in 2019.

There was discussion as to the methodology DG ENER could use to assess the non SME definition. Participants however jumped straight to a solution, suggesting perhaps an assessment wasn't required, just harmonise the assumptions already employed by MS into one EU definition. MS prefer clarity sooner.

In conclusion to the *Ensuring effective energy audits during the 2nd compliance period* sessions and this session

- there is a lot to be proud of across all MS regarding their audit systems
- more research and ongoing data analysis is needed to assess the effectiveness (% cost saving identified and also measures implemented), and cost effectiveness for obligated organisations. This is an opportunity for holistic and interlinked policies under the NECP (i.e. audits linked with other policies to encourage implementation). But resources to undertake is of course limited.
- 'A little bit of everything' was the answer when asked, what areas of your audits systems need improvement! Generally good progress and satisfaction with audit programmes, but MS recognise their audit programmes do need tweaks, and they can all learn from elements of audits systems working in other MS, to become more effective and efficient.

3.4 H2020 projects on Financing and beyond: Integrated services for home renovation

The refurbishment of residential homes remains one of the biggest challenges for energy efficiency policy. This session discussed enabling frameworks for large-scale home renovation schemes and presented concrete examples of innovative financing mechanisms and integrated services that accompany the whole customer journey.

Three projects funded under H2020 and Intelligent Energy Europe were presented:

The [project Energies Positif](#) has set up a public-private ESCO in the Ile-de-France region with the aim to upscale the deep refurbishment of 1 million multi-family buildings in the region which are usually of poor energy standards

(classes E, F, G). Energies Positif acts as a one-stop-shop with an all-inclusive offer spanning from audits, planning, finance, operations to maintenance. The scheme successfully has a credit line of €100m with the European Investment Bank. The project has managed to renovate 48 buildings with over 2,800 households with average energy savings of 50%.

The project coordinator emphasised the importance of one-stop-shops as facilitators for large-scale renovation of multi-family buildings. The national legal framework has to accommodate for Third Party Finance has to enable long-term financing solutions. It also has to set the right incentives for deep renovation.

The [project INNOVATE](#) promotes the concept of integrated home renovation services and aims to set up one-stop-shops for deep renovation of single and multi-family buildings at local level in BE, UK, LV, NL, DK, SE, CZ, IT, ES and CY. The integrated service offer includes energy renovation and financial plans, long-term affordable financing, coordination of the whole process and guarantee of results. The starting point is the identification of the market gap. Member States can support the development of one-stop-shops by:

- Providing national guidance on legal structure of one-stop-shops
- Providing Public funding to allow for long-term financing products enabling deep renovations and decreasing the perceived risks.
- Organise national awareness raising campaigns to stimulate demand and coordinated approach between different levels of governance
- Providing guidance on quality of works and structuring energy efficiency data to increase visibility, trust and de-risking for investors.

The [project EuroPACE](#) showed that finance is not the most important barrier; but motivating home owners to renovate their building whilst minimising interruption and ensuring a smooth customer journey. EuroPACE is set to deploy private capital as up-front financing to homeowners and have the costs repaid over time as a special charge added to the existing property tax bill. By doing this, EuroPACE is looking to de-risk energy efficiency investment. The project will also design standard requirements and project performance guidelines and train energy service contractors to better assist homeowners with their decisions on how to optimise the energy use of their houses.

A pilot will be deployed in the city of Olot in Catalunya, Spain. The project team has assessed the readiness of national tax systems for on-tax financing in several EU countries and now aims for the adoption by leader cities in Austria, Belgium, Italy, Poland and Romania.

4 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 Management in central government buildings and private sector (Art. 5) and link with audits

[What is Energy Management, Ireland](#)

Ensuring effective energy audits during the 2nd compliance period

[Audit and reporting evaluation, United Kingdom](#)

[The first compliance period, Italy](#)

[Energy audits cost-efficiency, Denmark](#)

[Identifying obligated business, Ireland](#)

[The energy audit platform, Greece](#)

Heating and cooling planning – how to properly address actual MS challenges

[Synthesis report on notifications related to Art 14](#)

[DHC planning and supporting measures, France](#)

[Discussion on EED policy recommendations](#)

[Heat Roadmap Europe](#)

[Good practice factsheet: Policies and planning for DHC](#)

Smart cities and smart consumers

[Smart city concepts and energy efficiency](#)

[USMARTCONSUMER project](#)

[Supporting document: Usmart Consumer project](#)

ISO 50001 and links to energy management in governmental buildings

[ISO 50001 in government buildings](#)

H2020 projects on Financing and beyond: Integrated services for home renovation.

[Energies POSIT'IF project](#)

[EuroPACE Integrated Home Renovation Platform](#)

[Innovate project](#)

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