



CONCERTED ACTION
ENERGY EFFICIENCY
DIRECTIVE

Core Theme Series Report:
Concerted Action Energy
Efficiency Directive

1

NEEAPs and annual reports and measuring progress in energy efficiency

Ulla Suomi, Motiva Oy, Finland

May 2014

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1 Introduction and context

The Concerted Action for the Energy Efficiency Directive (CA EED) supports implementation of the Directive 2012/27/EU (EED) by fostering the exchange of information and experiences among Member States with regards of the implementation of the Directive.

This report summarises work carried out between January 2013 and March 2014 by the CA EED on the topic 'NEEAPs and annual reports and measuring progress in Energy Efficiency'. The work sought to provide a comprehensive overview and timeline for all reporting requirements as well as notifications, assessments, publishing etc. mentioned in the Energy Efficiency Directive (EED). The aim was also to provide an overview of target setting required by the EED in the first annual report and the methodologies planned for reporting achievements in the 1st EED National Energy Efficiency Action Plans (NEEAPs). Behavioural measures in energy efficiency used across the Member States (MS) and methods for measuring energy savings from soft measures were also covered.

The EED has a very broad scope and includes several reporting, notification and other reporting-related requirements. In addition to annual reports and National Energy Efficiency Action Plans every three years, there are many other reporting and/or notification requirements in different articles and annexes.

The EED required MS to set their indicative national energy efficiency targets by 30th April 2013 and to include the indicative national target according to Article 3(1) in their 1st annual reports.¹ In addition, the 1st EED National Energy Efficiency Action Plan of 2014 requires the reporting of energy savings to show progress towards the 2016 national target for final energy savings set by the Energy Services Directive (ESD).

In EED Articles 12 and 17, behavioural measures are highlighted as a way of promoting efficient use of energy through instruments and policies. Behavioural measures are also eligible Article 7

measures and, in Annex V, one of the methods for calculating energy savings is dedicated to so-called "soft measures", meaning behavioural measures related, for example, to consumers' responses to advice, training, information campaigns, labelling or certification schemes, or smart metering. This cross-cutting topic was processed in a joint working group with two other CA EED Core Themes: 'Consumer information programmes, training and certification of professionals' and 'Energy efficiency obligation schemes, monitoring impacts of eligible measures'.

This report gives an overview of all reporting/notification/publishing/assessment requirements and their timelines in the EED; this information was provided to CA EED participants in spring 2013. The information was based on the EED or draft versions of the European Commission implementation decision establishing a template for NEEAPs under EED² and on discussions in the plenary meeting in spring 2013. The report also provides an overview of the ways MS set targets in their 1st annual reports and gives an

¹ The target shall be notified to the European Commission either as part of the National Reform Programme referred to in Council Recommendation 2010/410/EU of 13 July 2010 on broad guidelines for the economic policies of the Member States of the Union, or in the EED 1st annual report.

² Final version: www.eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:141:0048:0053:EN:PDF [published 22.5.2014]

insight into how MS were planning to utilise the energy savings calculations and reporting within the 2nd ESD NEEAP in 2011, when preparing their 1st EED NEEAP for 2014. A summary of the results of the joint working group in spring 2014 covering the topic 'Measuring energy savings from soft measures' can be read in the corresponding Core Theme Series Report for 'Energy efficiency obligation schemes, monitoring impacts of eligible measures' (www.ca-eed.eu/reports/core-theme-series-reports).

Representative from 27 of 28 MS (including Croatia) provided input in summer 2013 related to national

target setting in the 1st annual report and their plans for producing their 1st EED NEEAP. Data gathered in January 2014 for the joint working group covered all 29 CA EED participant countries. Active and broad participation in discussions and plenary meetings, combined with high response rates to questionnaires, means that the results give a good overview of the topics and the views from CA EED participants from all MS.

General information on the Concerted Action for the Energy Efficiency Directive and on the other topics included in CA EED can be found at www.ca-eed.eu

2 Overview of EED reporting-related requirements

Due to its broad scope, the Energy Efficiency Directive includes a lot of reporting, notification, publishing and other assessment obligations for MS in different articles and annexes. The reporting timelines for all these obligations and some other specific implementation provisions are not the same. The work described below focused only on the obligations that require developing, publishing and/or delivering documents with defined special contents and purposes to the European Commission. Separation of reporting-related obligations for the Energy Efficiency Directive makes it easier for CA EED participants to keep track of them and their due dates.

Under the aim of the work done during spring 2013 was to help the national implementing bodies get a concise overall picture of reporting requirements and a timeline for reporting in the EED. In addition to annual reports and the National Energy Efficiency Action Plan every three years, there are several specific notifications and/or assessment or publishing requirements related to specific issues in articles and annexes. Some of these are optional depending on whether MS choose to implement certain provisions.

A comprehensive overview was produced, covering all reporting/notification/publishing/assessment requirements and their timelines in the EED. An overview of all reporting-related requirements in the articles or annexes was provided (Table 1). To provide a straightforward, quick look at all reporting and notification requirements, a graphic timeline over the EED period was also created (Figure 2 at the end of this document). In addition, the work also looked at each article and annex in detail (not covered in this report).

Table 1: Overview of different reporting-related requirements in EED articles and annexes

Article/ Annex	Title	Reporting, notification or other reporting related provisions in EED		
		Annual report	NEEAP ³	Notification or other reporting
Article 1	Subject matter and scope	-	-	✓
Article 2	Definitions	-	-	-
Article 3	Energy efficiency targets	✓	✓	-
Article 4	Building renovation	-	✓	-

³ In some articles, requirements apply only for some NEEAPs (e.g. "first NEEAP 2014" or "from the second NEEAP 2017 and thereafter every three years").

Article/ Annex	Title	Reporting, notification or other reporting related provisions in EED		
		Annual report	NEEAP ³	Notification or other reporting
Article 5	Exemplary role of public bodies' buildings	✓	✓	✓
Article 6	Purchasing by public bodies	-	✓	-
Article 7	Energy efficiency obligation schemes	✓	✓	✓
Article 8	Energy audits and energy management systems	-	✓	-
Article 9	Metering	-	✓	-
Article 10	Billing information	-	✓	-
Article 11	Cost of access to metering and billing information	-	✓	-
Article 12	Consumer information and empowering programme	-	✓	-
Article 13	Penalties	-	-	✓
Article 14	Promotion of efficiency in heating and cooling	-	✓	✓
Article 15	Energy transformation, transmission and distribution	-	✓	✓
Article 16	Availability of qualification, accreditation and certification schemes	-	✓	-
Article 17	Information and training	-	✓	-
Article 18	Energy services	-	✓	-
Article 19	Other measures to promote energy efficiency	-	✓	✓
Article 20	Energy Efficiency National Fund, Financing and Technical Support	-	✓	-
Article 21	Conversion factors	-	-	✓
Article 22	Delegated acts	-	-	-
Article 23	Exercise of the delegation	-	-	-
Article 24	Review and monitoring of implementation	✓	✓	✓
Article 25	Online platform	-	-	-
Article 26	Committee procedure	-	-	-
Article 27	Amendments and repeals	-	-	-
Article 28	Transposition	-	-	-
Article 29	Entry into force	-	-	-

Article/ Annex	Title	Reporting, notification or other reporting related provisions in EED		
		Annual report	NEEAP ³	Notification or other reporting
Article 30	Addressees	-	-	-
Annex I	General principles for the calculation of electricity from cogeneration	-	-	✓
Annex II	Methodology for determining the efficiency of the cogeneration process	-	-	-
Annex III	Energy efficiency requirements for purchasing products, services and buildings by central government	-	-	-
Annex IV	Energy content of selected fuels for end use – conversion table	-	-	✓
Annex V	Common methods and principles for calculating the impact of energy efficiency obligations schemes or other policy measures under Article 6(1) and (9) and Article 15a(6)	-	✓	✓
Annex VI	Minimum criteria for energy audits including those carried out as part of energy management systems	-	-	-
Annex VII	Minimum requirements for billing and billing information based on actual consumption	-	-	-
Annex VIII	Potential for efficiency in heating and cooling	-	-	✓
Annex IX	Cost-benefit analysis	-	-	-
Annex X	Guarantee of origin for electricity produced from high-efficiency cogeneration	-	-	-
Annex XI	Energy efficiency criteria for energy network regulation and for electricity network tariffs	-	-	-
Annex XII	Energy efficiency requirements for transmission system operators and distribution system operators	-	-	-
Annex XIII	Minimum items to be included in energy performance contracts with the public sector or in the associated tender specifications	-	-	-
Annex XIV	General framework for reporting	✓	✓	-
Annex XV	Correlation table	-	-	-

The timeframe for the first EED reports and notifications was considered demanding; concern was expressed by many CA EED participants about their ability to produce the quality of information required by the EED. Reports and notifications in 2013 comprised the notification of the national indicative target and 1st Annual Report by 30th April 2013, and the notification of opting for the alternative approach to the energy efficiency obligation scheme and the methodology for the purpose of energy efficiency obligation schemes, Article 7(9) and Article 20(6) by 5th December.

CA EED participants indicated that the EED reporting requirements would require considerably more resources than reporting under the Energy Services Directive (ESD). Resource availability within a short time frame also caused difficulties in the comprehensive target setting process.

The majority of participants did not have any problems with the indicators required in EED annual reporting or in the availability of statistical data for 2011 which needed to be reported in the first EED annual report. The requirement within EED Article 3 to include all measures when setting the target in spring 2013 was considered problematic in practical terms. Many MS did not yet have a clear picture of the exact measures and policies that would be adopted or needed in order to move towards the achievement of their energy efficiency target. In addition, one major problem seemed to be the expression of targets in absolute primary and final energy consumption.

At the time of the work (March 2013), the different EED targets and how these were related and connected remained a challenge for many MS. For example, the indicative target referred to in Article 3, the obligatory target set in Article 7 and the Article 5 targets on central governmental buildings, as well as the ESD target, were considered difficult to separate. Organisations responsible for implementation in MS were entrusted with the task of informing and explaining the EED to relevant stakeholders at national level; this was seen as challenging.

In order to fulfil the reporting and notification requirements set by the EED, CA EED participants indicated that their resources would be stretched to their limits and go beyond those earmarked for ESD reporting. Furthermore, according to the experiences gained during the CA ESD, limited human and financial resources in most MS mean that there is a fear that reporting detracts resources from implementation. Thus it is desirable that MS, supported by the CA and the European Commission, can find practical and cost efficient ways of complying with the challenging reporting requirements.

3 Overview of the 1st annual report and processing the 1st EED NEEAPs for 2014

The EED required the Member States to set their indicative national energy efficiency targets by 30th April 2013, to include the indicative national target according to Article 3(1)⁴ in their 1st annual reports and to submit their 1st EED NEEAP by 30th April 2014. The work in CA EED aimed at supporting the CA participants in the fulfilment of these requirements.

More specifically, the aim of the work carried out during summer and autumn 2013 was to provide MS with an overall picture of target setting in the Member States and its relation to other EED requirements and targets and measures previously set under the ESD. It also gave an insight into how MS are planning to utilise the energy savings calculation methods from their 2nd ESD NEEAP in 2011 when preparing the 1st EED NEEAPs for 2014, and if they already have methods and descriptions for the primary energy savings calculations. Measures that were introduced after the 2nd ESD NEEAP were also mapped.

In addition to the Core Theme's own work, a session was held within a CA EED plenary meeting in autumn 2013 to present the results of a Joint Working Group with CA EPBD and CA RES related to the preparation of long term building renovation strategies (EED Article 4): "Towards MS strategies for mobilising investment in building energy renovation".

1st annual reports – national target setting, EED Article 3(1)

The majority of MS (25 out of 27) had set their national indicative targets to 2020 by June 2013. When expressing the targets, over half (13 MS) used some combination of options allowed under Article 3(1). The most utilised option was final energy consumption, used by 15 MS, followed by primary energy consumption, used by 13 MS. This is easily explained by the fact that MS needed to express their targets in absolute levels of primary and final energy consumption in 2020.

Conversion was required to fulfil the Article 3(1) obligation. Conversions were predominantly made from final to primary energy consumption, but there was little information gathered through the questionnaires on exactly how these conversions were made. However, over half (13 MS) reported that they have included explanations of conversions in their 1st annual reports.

The vast majority of MS took into account national circumstances that affect primary energy consumption listed in Article 3(1) when setting their national targets (Figure 1). GDP evolution and forecast seems to be the most important influencing factor, used by 21 MS, followed by the development of energy production options (renewable, nuclear, carbon capture and storage), used by 16 MS.

When setting their targets, practically all MS took into account the effects of measures established under ESD. However, 44% of the respondents explicitly stated that it was too early to include effects of measures to be implemented under EED, specifically Articles 5 and 7, as they were still under consideration at that time. Many participants also pointed out that, in summer 2013, national indicative targets for Article 3 set in the 1st annual report would go through further additional processes of verification and approval, probably resulting in minor or even major adjustments in the future.

⁴ The target shall be notified to the European Commission either as part of the National Reform Programme referred to in Council Recommendation 2010/410/EU of 13 July 2010 on broad guidelines for the economic policies of the Member States of the Union, or in the EED 1st annual report.

Savings to assess progress towards the ESD 2016 target – most use the same methods

According to the CA EED survey, in most of the countries (60%), the work done for the energy savings calculations and their reporting for the 2nd ESD NEEAP in 2011 will be used when preparing the 1st EED NEEAP in 2014. Mainly, the same savings calculation methods will be used for the 1st EED NEEAP that were used for the 2nd ESD NEEAP, although in some countries new methodologies will be introduced as a result of new measures or there will be some minor changes. Less than 20% of the respondents indicated that they will use the option permitted in EED of showing sector level energy reduction from a combination of measures if calculation or estimation of savings per measure is not available. In addition, almost a quarter of the 27 MS had not yet considered this issue or made any decisions.

The results of a survey (June 2013) were confirmed during the CA EED plenary meeting in October 2013, where CA EED participants declared their intention to use existing methodologies as much as possible. However, some doubts were expressed about the applicability of ESD methods in calculating savings

for the purpose of EED Article 7 due to the specific requirements of that article.

Quantification and reporting of primary energy savings – methodologies not widely available

There is no strict obligation to report on achieved primary energy savings arising from measures MS have introduced/will be introducing to implement EED in the 1st EED NEEAP in 2014. As a result, in summer 2013, only 33% of MS had plans to report for all measures when data became available.

9 out of 27 CA EED representatives reported their country has been following and/or estimating energy savings for at least some national measures both in final and primary energy, and thus they will continue to use the same methodology in 2014 for the NEEAP. Another third reported that they had not made a final decision on this issue. The majority also reported that they either do not have a methodology or a description of how to calculate and/or estimate expected primary energy savings in 2020 for the NEEAP or they had not considered the issue or made a final decision when the questionnaire was released.

Figure 1: Use of national circumstances (factors) influencing primary energy consumption in target setting

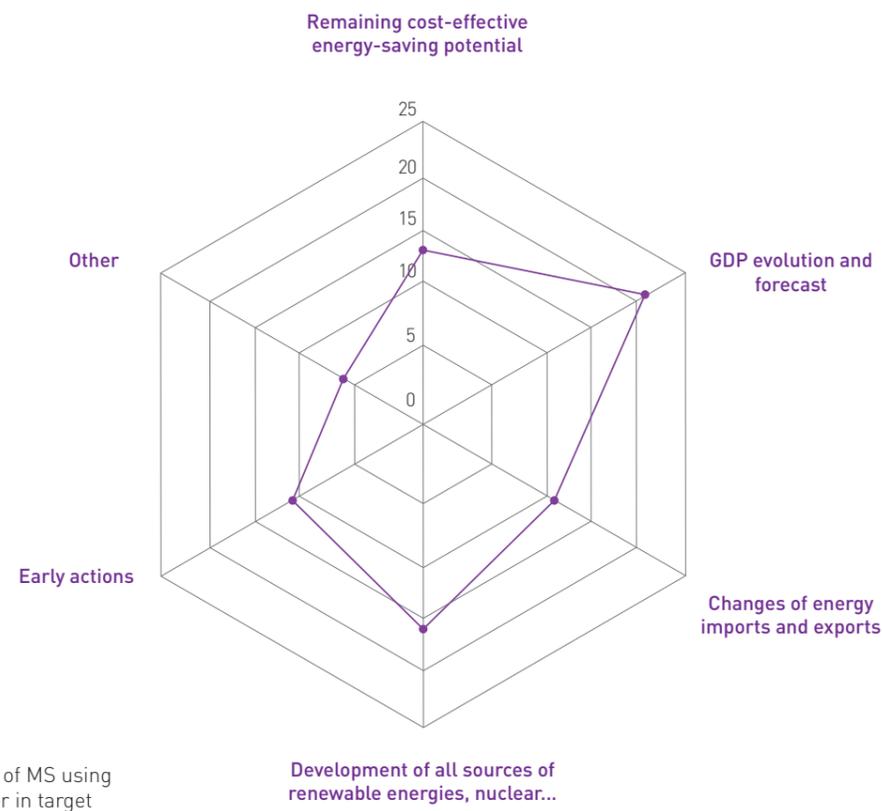
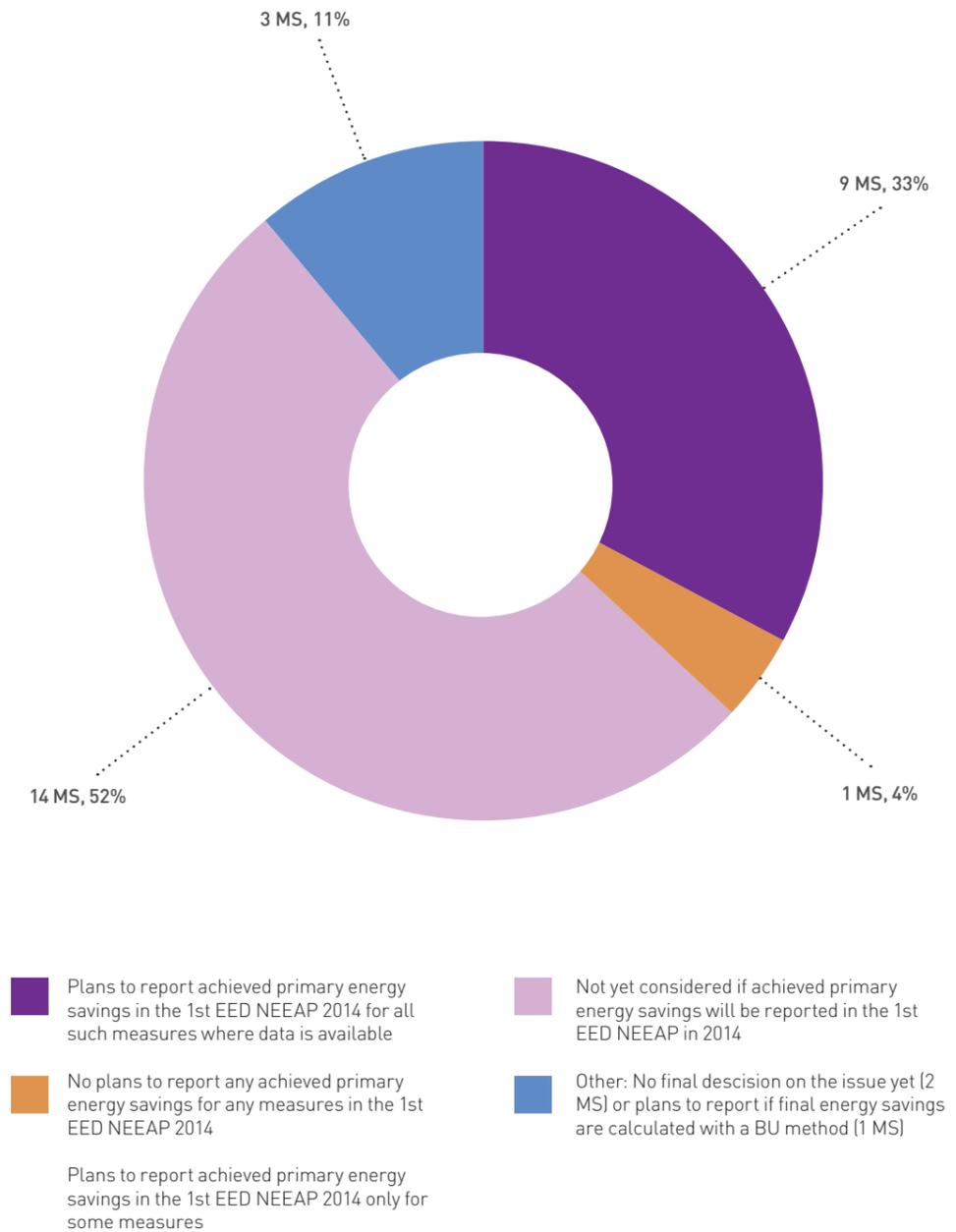


Figure 2: Plans to report achieved primary energy savings arising from measures introduced to implement EED in the 1st EED NEEAP in 2014



The discussion in the CA EED plenary meeting in October 2013 revealed that only a minority of MS usually express savings in primary energy terms. The dominant approach will therefore be to use conversion factors. However, some CA EED participants warned that this approach may not be as simple as it seems because of the strong dependency on energy supply mix, which is variable.

Processing the 1st EED NEEAP

Most of the participants in the CA EED Plenary Meeting in October 2013 declared that the process of writing the 1st EED NEEAP had already started, but the level of progress differed across the MS. It was still too early to identify specific questions or problem areas, but it was expected that these would be related to the new requirements of EED that need to be elaborated upon in new parts of the 1st EED NEEAP. MS suggested that the EC could provide support in writing the 1st EED NEEAP, e.g. by publishing Frequently Asked Questions raised by MS.

The final EED NEEAP template and accompanying NEEAP guidance document from the European Commission are available on the European Commission web-site
http://ec.europa.eu/energy/efficiency/eed/need_en.htm

Many new or updated measures since the 2nd ESD NEEAP

Many CA EED representatives (16 out of 27) reported that their country has introduced new or updated existing measures fulfilling EED provisions since the 2nd ESD NEEAP. 7 MS reported both legislative and non-legislative measures; 5 reported legislative measures only; and 4 MS reported they have only introduced non-legislative measures. The scope of the new and updated measures varied considerably and included measures related to funds and other financial instruments, buildings and their heating systems, transport, education and training, agriculture, energy services and solar energy in buildings. Updated measures mainly related to existing obligation schemes.

Long term building strategies

The draft report of the joint working group of CA ESD, CA EPBD and CA RES was presented in the CA EED plenary meeting in October 2013. The work tries to informally assist MS with the practicalities of processing the first version of their EED Article 4 long term building strategies, to be reported by 30th April 2014.

The discussions suggested that progress in developing strategies varied a lot between MS. At the time of the meeting (October 2013), some MS were well under way with the work and some were only just considering how to start. For those MS that were just starting, the optional guidelines were seen as particularly useful. In general, most MS saw the Article 4 renovation strategy as a demanding task with a very short timeframe. The final report can be found on the CA EED web-site www.ca-eed.eu/reports/art-4-guidance-document

Good practice examples

✓ Writing the 2014 NEEAP (France)

France presented their approach to writing the 1st EED NEEAP including time frame, organisation, use of the 2nd ESD NEEAP, writing new parts and methodologies for the evaluation of savings. The NEEAP is seen as important for the ministry of ecology, as it gives a complete overview of energy efficiency policies and measures. It is also a reference document for every stakeholder working on energy efficiency.

More information can be found on the CA EED website: www.ca-eed.eu/good-practices/good-practice-factsheets/neeaps and www.ca-eed.eu/good-practices/member-state-presentations/neeaps/overview-of-the-1st-annual-report-processing-the-1st-eed-neeaps-for-2014.

✓ Experiences of generating Article 4 long term strategies (Ireland, UK)

Ireland and UK have collated a lot of existing data for use in the EED Article 4 long term building renovation strategy. Ireland has combined previous work and existing data with new data for the commercial and public sectors to build a more detailed understanding of the existing stock. In the UK, surveys are being used to enhance non-domestic sector data.

The presentations are available at the CA EED web site: www.ca-eed.eu/good-practices/member-state-presentations/neeaps/article-4-long-term-renovation-strategy

✓ Describing the market for energy services in the NEEAP (Germany)

In the 2nd ESD NEEAP, Germany set up a chapter on the market for energy efficiency. For the new NEEAP 2014, Germany plans to continue the description of the market for energy services. They also plan to deepen the insights into the market and to improve the evidence base. At the Plenary meeting, the results of a German energy efficiency service market study and preliminary plans for how it will be used for the 1st EED NEEAP were presented.

More information can be found on the CA EED website: www.ca-eed.eu/good-practices/good-practice-factsheets/neeaps and www.ca-eed.eu/good-practices/member-state-presentations/neeaps/overview-of-the-1st-annual-report-processing-the-1st-eed-neeaps-for-2014

4 Measuring energy savings from soft measures

Measuring the impact of soft measures in energy units proved to be a challenge for all Member States during the roll-out of the ESD. Under the EED, implementation of behavioural measures is highlighted as a way to promote an efficient use of energy through instruments and policies. Behavioural measures are also eligible Article 7 measures and, in Annex V, one of the methods for calculating energy savings is dedicated to so-called “soft measures”, meaning behavioural measures related, for example, to consumers’ responses to advice, training, information campaigns, labelling or certification schemes, or smart metering.

This topic was processed in the joint working group with two other CA EED Core Themes: ‘Consumer information programmes, training and certification of professionals’ and ‘Energy efficiency obligation schemes, monitoring impacts of eligible measures’.

The aim of the work was to provide an overall picture of behavioural measures in energy efficiency across the MS as well as highlighting any existing examples

of national methods used to calculate energy savings, or otherwise evaluate different types of soft measures. A summary of the results of the joint working group in spring 2014 covering the topic ‘Measuring energy savings from soft measures’ can be found in the corresponding Core Theme Series Report for ‘Energy efficiency obligation schemes, monitoring impacts of eligible measures’ on the CA EED website: www.ca-eed.eu/reports/core-theme-series-reports

5 Concluding remarks

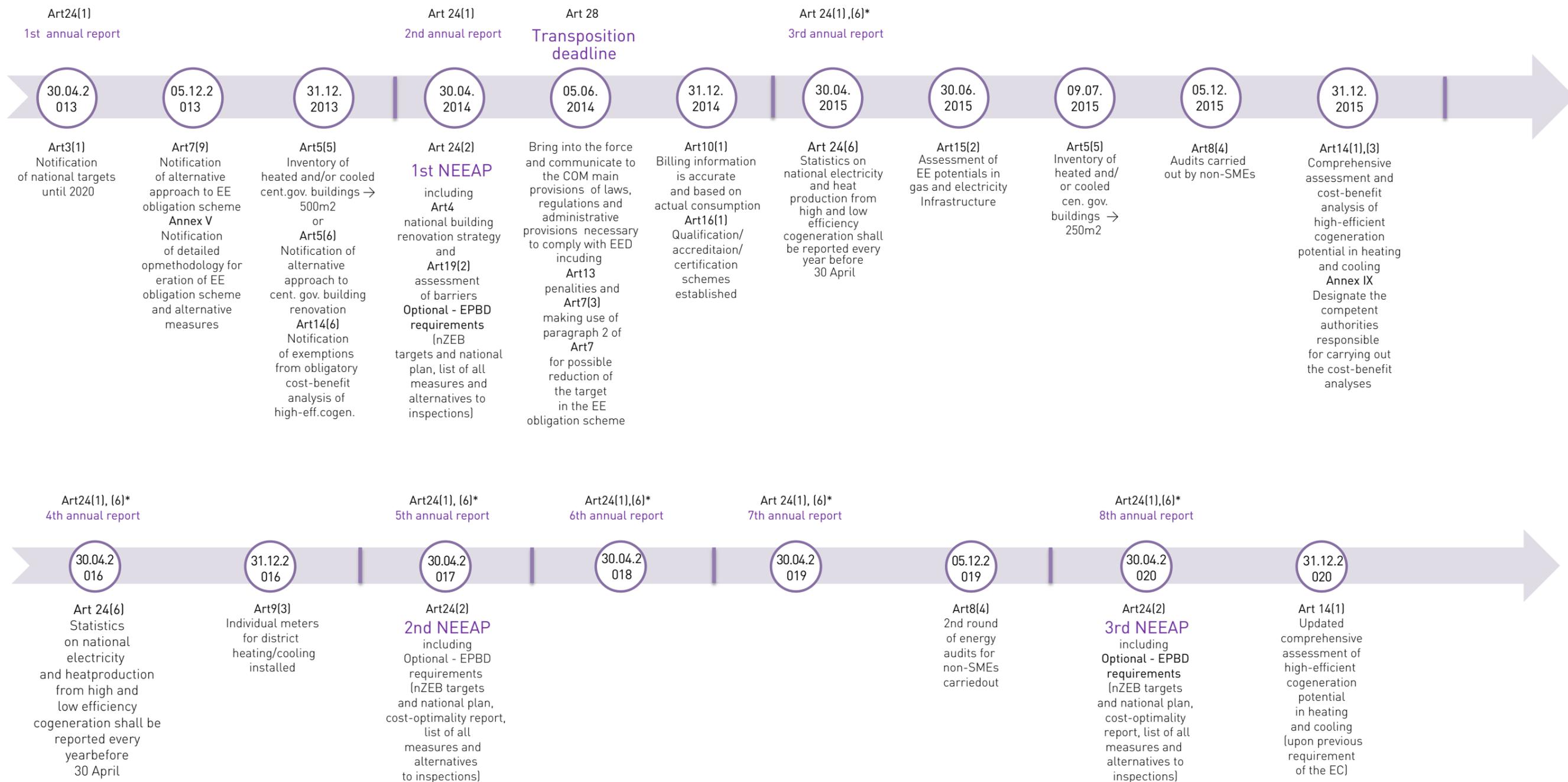
By presenting the reporting-related obligations of the EED in one report and making a visual reporting timeline, the CA EED has helped the participating implementing bodies and ministries keep track of the numerous reporting-related requirements and their due dates. This tool has been very well perceived and it received very positive feedback from CA participants. This work also produced an insight into EED Article 3 target setting as well as a view of how to compare and find a link between ESD/EED methodologies when reporting energy savings for the 1st EED NEEAPs.

CA EED participants indicated that the EED reporting requirements would require considerably more resources than reporting under the Energy Services Directive. Resource availability within a short time frame also caused difficulties in the comprehensive target setting process. Many MS seemed to have fear that limited human and financial resources means that reporting detracts resources from implementation.

This work has provided the first overview of existing and planned methodologies to calculate primary energy savings resulting from measures set under the EED. In addition, new measures set after the 2nd ESD NEEAPs to cope with EED requirements were also

mapped. It enables ministries and implementing bodies alike to find options to use work already performed under ESD in the most effective and efficient manner, to make more informed decisions on new measures under EED and to start developing or improving their methodologies for both primary and final energy saving calculations

Material covered in spring 2014 is included in the corresponding Core Theme Series Report for ‘Energy efficiency obligation schemes, monitoring impacts of eligible measures’ which can be found on the CA EED website: www.ca-eed.eu/reports/core-theme-series-reports



*Art 24(6) Statistics on national electricity and heat production from high and low efficiency cogeneration shall be reported every year before 30 April starting 2015

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The Concerted Action for the Energy Efficiency Directive (CA EED) was launched by Intelligent Energy Europe (IEE) in spring 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).

For further information please visit www.ca-eed.eu or email caeed@ca-eed.eu



Co-funded by the Intelligent Energy Europe
Programme of the European Union