

Implementing Energy Efficiency Obligations – What Does Article 7 Require and How Are Savings Measured?

RAP Europe Policy Memorandum

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In October 2012, the European Parliament and Council adopted the Energy Efficiency Directive (EED)¹ to provide a stronger legal framework for Member States, energy companies, businesses, and consumers to capture a growing fraction of the cost-effective energy efficiency potential still untapped in European economies. Well-crafted energy savings programs and policies will provide substantial economic benefits, energy security benefits, and environmental benefits across the EU. A large portion of the energy savings sought in the EED will need to be delivered through Energy Efficiency Obligations (EEOs), or equivalent alternative measures, which Member States must create on terms set out in Article 7 of the Directive.

This Policy Memorandum addresses some of the leading questions Member States and the European Commission will face in interpreting and applying the Energy Efficiency Obligation provisions in the EED. Here we set out how energy savings arising from Energy Efficiency Obligations should be credited to the incremental annual 1.5% targets, and clarify the differences between the flexibility provisions and the early action credit provisions contained in Article 7 and Annex V of the Directive. Our approach draws on the experience of many jurisdictions that have administered energy savings schemes and conforms to both the central intentions of the Directive and its plain language.

To summarise we conclude that:

- Certain interpretations of the Directive could be very damaging to its effectiveness, and thus to the ability of Member States and the EU as a whole to meet long-established energy savings goals. In particular, allowing obligated parties to count savings obtained in the years 2010-2013 and 2021-2023 as though they were all obtained during the obligation period of 2014 to 2020 could cut overall energy savings from such obligations

¹ Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2012/30/EU and repealing Directives 2004/8/EC and 2006/32/EC, OJ L 315/1, 14.11.2012, pp. 1-56



under the Directive by around 50% (see Annex below). RAP believes this undesirable result is not authorised in the Directive as enacted.

- There is a clear distinction between *the quantity of energy savings* to be attained between 2014 and 2020 [in Article 7 paragraph 1 and in Annex V paragraph 2 (e)] and the flexibility provisions affecting *the manner* in which those energy savings can be obtained and attributed [set out in Article 7 paragraphs 2, 7, and 9].
- The provision in Article 7 paragraph 7 (c) permits a Member State to allow an obligated party some flexibility in assigning energy savings to particular years within an obligations scheme. This does not allow Member States or obligated parties to count energy savings occurring *before* January 1, 2014² or predicted to occur *after* December 31, 2020 to reduce the total cumulative energy savings required to be obtained *during the term* of the Directive.

These conclusions are based on the analysis set out below.

The EED Requires Definite Cumulative Energy Savings Within a Defined Compliance Period, With a 25% Cap on Quantitative Flexibility:

As a starting principle, the Directive is clearly focused on ensuring that a meaningful minimum cumulative quantity of energy savings will be attained by the policies and programs instituted in each Member State, specifically between the given years of 2014 to 2020. This absolute savings goal is stated several times in the Directive:

- “Each Member State shall set an indicative national energy efficiency target ...in terms of an absolute level of primary energy consumption and final energy consumption in 2020...” (Article 3 paragraph 1) And, in doing so,
- “When setting these targets, Member States shall take into account: (a) that the Union’s 2020 energy consumption has to be no more than 1474 Mtoe of primary energy or not more than 1078 Mtoe of final energy...” (Article 3 paragraph 1).

Given the central importance of the European Union’s 2020 quantitative targets in this Directive, interpretations of its provisions that would significantly undermine reaching those energy saving targets, or that would delay realised savings until the years past 2020 are not consistent with its intent. A precedent has been set by the EU Court of Justice which stated in several cases³ that Member States “may not apply national rules which are liable to jeopardise

² To the extent that early action savings are credited against the 2020 target, they are governed by the definitions in paragraph 2 and the 25% cap in paragraph 3, not separately authorised in paragraph 7.

³ See, e.g., Commission v. Netherlands, C 508/10, paragraph 65, and El Dridi, C 61/11 PPU, paragraph 55

the achievement of the objectives pursued by a directive and, therefore, deprive it of its effectiveness.” The achievement of the Directive’s objective can also be jeopardized by interpretations of specific articles of the Directive that are not consistent with the objective of the Directive. Accordingly, in cases in which several alternative interpretations are possible, no interpretation can be chosen that would render an achievement of the objective of the Directive impossible. As the objective of the EED Directive is to reach the European Union’s 2020 quantitative energy saving targets, interpretations of its provisions that would significantly undermine reaching these targets, or that would delay realised savings until the years past 2020 are not consistent with the EED’s objectives and should be avoided.

1. Quantitative Flexibility

The most important mechanism by which energy savings are to be achieved under the EED is through energy savings schemes set up by Member States and delivered by obligated energy companies or entrusted parties. Article 7 paragraph 1 sets out the means of calculating the quantity of savings that must be achieved in each Member State. There are, however, a limited number of *quantitative flexibility provisions*, including the “early action” provision, recognising the energy savings resulting from certain early policy actions taken by Member States during the period 2009 to 2013, and which continue to cause individual actions “newly implemented” in the period 1 January 2014 to 31 December 2020. [Article 7 paragraph 2]. However, all of these “quantity” provisions together may not lower the total energy savings to be attained during the scheme by more than 25% of the calculated total energy savings required.⁴ Note that under paragraphs 1 and 9 the responsibility to set up the energy savings scheme and/or alternative measures rests with Member States, so it is the responsibility of Member States to ensure that obligated or entrusted parties meet the overall cumulative energy savings targets. The flexibility provisions in Article 7 paragraph 2 permit *Member States* to include additional energy savings in the scheme, up to the 25% cap.

2. Policy Flexibility

The Directive also contains a number of flexibility provisions that give discretion to Member States as to the *manner* in which energy savings are achieved. Article 7 paragraph 9 and Article 20 allow Member States to establish National Energy Efficiency Funds, to impose consumption taxes, regulation or voluntary agreements, and so forth.

⁴ Note that if paragraph 2 were used to allow Member States to claim “early action” credits for savings obtained before 2014, and if paragraph 7(c) were interpreted to allow obligated parties to claim credits for savings obtained between 2010 and 2013, the result could violate both the 25% cap and the rule against double counting.

These provisions go to *the manner* in which creditable energy savings can be earned, but do not affect the *total quantity* that must be delivered. None of these “policy” provisions enables Member States, obligated parties, or entrusted parties to count savings that occur outside of the savings period (2014-2020) against the overall national target that must be met within the savings period.

3. With this framework in mind, what is the meaning of paragraph 7(c)?

Paragraph 7 states, in part: “*Within the energy efficiency obligation scheme, Member States may:(c) allow obligated parties to count savings obtained in a given year as if they had instead been obtained in any of the four previous or three following years.*”

Viewed in isolation, the language is a bit ambiguous, so it’s possible to see how differing interpretations could arise. In context, however, the clause is best understood as an optional *flexibility device within the compliance period*, full stop. We have been somewhat surprised by the suggestion that this paragraph would allow obligated parties to count energy savings estimated to have occurred physically in years before the obligation period, or projected to occur after the obligation period, as though they were occurring within the obligation period, and thus be counted towards meeting the overall national targets and deadlines. This is not consistent with the internal logic of the Directive, nor as is discussed below, with the plain reading of the provision itself, nor with the requirements of Annex V that explicitly detail how energy savings are to be measured for both EEO schemes and the “other policy measures” allowed as the equivalent to the EEO schemes in paragraph 9.

4. Looking at the exact language of paragraph 7:

In relevant part, paragraph 7 states: “*Within the energy efficiency obligation scheme, Member States may:(c) allow obligated parties to count savings obtained in a given year as if they had instead been obtained in any of the four previous or three following years.*”

- a. Note first that the provision addresses “obligated parties” not Member States. It permits a Member State (if it so chooses) to grant some crediting flexibility to *obligated parties* under the national scheme. It does not permit the Member State to waive the overall national target, which is set in paragraph 1, and modifiable only by the limited provisions in paragraph 2. Thus, any application of 7(c) that would permit pre- and post-2020 energy savings to be credited against the cumulative energy savings target up to 2020 for some obligated parties would have to be offset by other actions in the Member State to make

up for those lost energy savings , so that the overall national target will still be met.⁵

- b. Second, the provision begins with the limiting language, “within the energy efficiency obligation scheme.” This is the scheme mandated in paragraph 1 of Article 7, which uses the same phrase. The obligation period of the Directive and each mandated scheme begins on January 1, 2014 and ends December 31, 2020; thus the energy savings “obtained in a given year” and “within the [EEO] scheme” can only refer to the energy savings actually occurring in the years 2014 to 2020. Energy savings obtained outside of those dates are not “within” the mandated schemes and are simply not addressed.
- c. Moreover, as paragraph 1 clearly states, national schemes “shall ensure” that “obligated parties...*achieve a cumulative end-use savings target by December 31, 2020.*” The target must be met by the end of 2020, which is the end-date of the mandate and of the mandated schemes. Energy savings that may occur earlier or later are just not “within” the schemes as they are defined within this Directive, whether or not a Member State created a scheme earlier or chooses to continue it into the future. [Again, “early action” energy savings may be credited, but they are governed by paragraph 2, not paragraph 7(c).]⁶
- d. Presumably, an obligated party would not want the flexibility to count energy savings occurring in an obligation year (e.g., 2015) as though they had occurred instead in an earlier or later non-obligation year (e.g., 2012 or 2022) since they would not count towards meeting the overall cumulative target. But an

⁵ For reasons set out herein, we conclude that under the Directive, savings occurring outside the compliance period simply do not count towards meeting the 2020 targets. Nevertheless, if a decision is taken to permit use of these “extra credits” for some obligated parties for some reason, the Commission’s guidance should point out the statutory consequences. Beyond the 25% quantitative flexibility provision, neither the Commission nor the Member State can waive the overall savings levels required at the national level; so the Commission’s guidance should at least notify Member States that relaxing the cumulative 2014-2020 savings obligations on certain obligated parties would have to be made up for by verified savings from other obligated parties or entrusted parties or another eligible method, and those “make up” savings would themselves have to be obtained during the compliance period.

⁶ The need for programmatic energy savings will not end in 2020, so these programmes are likely to be extended in time, as they have been in virtually all of the jurisdictions globally that have instituted them. When that happens, we would want to ensure that savings obtained in future compliance periods have not already been prematurely counted, or double-counted, as savings occurring in the 2014-2020 period. Avoiding this consequence of energy efficiency “deficit spending” is another reason to avoid an overly permissive interpretation of paragraph 7(e). Article 7 paragraph 12 flatly forbids double counting across all aspects of the required efficiency programmes and policies: “Member States shall ensure that when the impact of policy measures or individual actions overlaps, no double counting of energy savings is made.”

obligated party might attempt to claim energy savings obtained in an earlier year (e.g., 2012) “as if” they had been delivered in an obligation year (e.g., 2015); or it might wish to claim energy savings predicted to occur in a later year (e.g., 2022) “as if” they had occurred in an obligation year (e.g., 2019). If all such choices are possible under 7(c), Member States could end up crediting *energy savings* obtained in a total of 14 years (2010 to 2023 inclusive) against a *quantity energy savings target* calculated on *consumption* over only 7 years (2014 to 2020). This result is not at all consistent with the percentage savings goals set out in the Directive.

5. Structure and Logic of the Directive; the Importance of Proportionality

The internal logic of the Directive is straightforward: The mandate on Member States in Article 7 is to create an “energy savings scheme” that will deliver a cumulative level of energy savings in each Member State between the *beginning of 2014 and the end of 2020*. The size of the mandate is expressed in proportional terms, and it grows each year across the obligation period. The essential mandate is to achieve new energy savings each year of 1.5% of average annual energy consumption for the most recent 3-year data period prior to 2014 (Across the 7-year compliance period, the cumulative savings will add up to a number that equals 42% of the total consumption in one year of the baseline period.).⁷ Energy savings occur in the real world; they must be monitored and verified, which means they occur and are credited in real time periods. While an individual action can produce energy savings that occur in multiple years, under the formula set out in Article 7 paragraph 1, the energy savings that count against the 2020 cumulative target are those that occur in the real world in the time period up to 31 December 2020.⁸

Thus, counting energy savings in years outside of the obligation period as though they occurred within the obligation period would undermine the ratio of cumulative energy savings to total consumption, by allowing estimated *energy savings* in pre- and post-scheme years to count in the numerator, but not requiring *consumption* in pre- and post-scheme years to count in the denominator. There is carefully-crafted language permitting a lower *percentage* of savings (see Article 7 paragraph 2) but the base period

⁷ Commission non-paper: calculation of the quantity of savings to be achieved, and attribution of lifetimes to savings, for the purposes of Article 6 {now 7} of the proposed Energy Efficiency Directive, The non-paper was prepared based on the questions raised by the Members of the Energy Demand Management Committee – Energy Services Formation at the meeting of 29 March 2012.

⁸ Paragraph 2 permits Member States to lower this calculated savings target via a limited set of quantitative flexibility methods, but all such reductions are capped at an amount equal to 25% of total savings.

and compliance period remain the same, the rule of proportionality is maintained, and the potential reduction in savings is limited to 25% of the total requirement.

6. Equivalence between EEO schemes (paragraph 7) and alternative policies (paragraph 9), and the applicable provisions of Annex V

Further support for the conclusion that paragraph 7(c) provides only a flexibility option and not a quantitative erosion of the EEOs, is found by reference to paragraph 9 of Article 7, and the provisions of Annex V, which apply to both kinds of energy saving programmes. Article 7 paragraph 9 authorises Member States to employ a wide range of “other policy measures to achieve energy savings among final customers.” However those policy measures taken as a whole must meet the same quantitative energy savings goals as the EEOs mandated in Article 7 paragraph 1:

“The annual amount of new energy savings achieved through this approach *shall be equivalent* to the amount of new energy savings required by paragraphs 1, 2, and 3. *Provided that equivalence is maintained*, Member States may combine obligation schemes with alternative policy measures, including national energy efficiency programmes” (Article 7 paragraph 9, emphasis added).

Since attainment under the three kinds of approaches (Article 7 paragraph 1 EEOs, paragraph 9 alternatives, and hybrids) must be “equivalent”, the quantitative mandate is logically the same in all of them. As explained in the next sentence, it is clear that energy savings attained under paragraph 9 individual actions occurring beyond December 31, 2020 do not count towards attainment. Energy savings are creditable in paragraph 9 only if they satisfy the standards set out in Annex V [see paragraph 10 (e) and (f)]. Annex V states quite clearly (twice) that the “lifetime savings” of creditable actions may be calculated “by counting the savings each individual action will achieve between its implementation date and 31 December 2020.” There is no option here to credit savings that could be obtained in years beyond the end of the obligation period.⁹ The drafters of this provision were clearly aware that many individual actions would produce energy savings beyond the end of 2020 as evidenced by the non-papers; their

⁹ In fact, Annex V does not allow credits for savings occurring past 2020, either for actions under paragraph 9 programmes, or for actions implementing paragraph 1 EEOs. The Annex is titled “Common methods and principles for calculating the impact of energy efficiency obligations schemes or other policy measures under Article 7(1), (2) and (9) and Article 20(6)” and states “In determining the energy saving for an energy efficiency measure for the purposes of Article 7(1) and (2)....” Lifetime savings shall be “the savings each individual action will achieve between its implementation date and 31 December 2020.” The cut-off date for crediting savings is quite clear for each of the program options in Article 7, and is not contradicted by the intra-period flexibility option referenced in paragraph 7(e).

decision not to count those future savings towards attainment of the cumulative targets in 2020 is consistent with the rule of proportionality and with a general understanding that future savings should be credited in whatever energy savings programme is created for the post-2020 period.

Conclusion

The most logical interpretation of paragraph 7(c) is that it permits Member States to allow obligated parties to credit energy savings flexibly across a period of years within the overall compliance period from 2014 to 2020. Borrowing from past or future out-of-scheme years would undermine the cumulative 2020 target, would violate proportionality, and is not consistent with the structure of the obligation in the Directive. Thus, the phrase means what it says – obligated parties may be permitted to assign energy savings within their national schemes from given years “within” the scheme to other years “within” the scheme.

How Should Member States Apply These Quantitative Mandates?

Each Member State will find itself in one of these three categories:

- (a) For those Member States that had active EEOs prior to 2009: Energy savings from policies enacted prior to 2009 and resulting in individual actions “newly implemented” in 2009 or later which will “continue to have an impact in 2020” may be counted towards the 2020 Article 7 paragraph 1 target. This will include both individual actions taken in the period from 2009 to the end of 2013 and also during the obligation period 2014-20; but the savings from these historic measures can only be counted during the period 2014-2020 and are subject to the cap of 25% as outlined in Article 7, paragraph 3.
- (b) For those Member States with existing EEOs started after 1 January 2009, but prior to January 2014: Energy savings attributed to “newly implemented” individual actions that will “continue to have an impact in 2020” will count towards the Article 7 paragraph 1 target; all such savings can only count during the period 2014 to 2020 and are subject to the cap of 25% as outlined in Article 7, paragraph 3.
- (c) For those Member States who introduce EEOs for the first time after 1 January 2014: Individual actions that save energy in the period 2014 to 2020 can be counted towards the target outlined in Article 7 paragraph 1 for the years since their installation to 2020. In this situation, energy savings may only be counted towards the 2020 target where “individual actions” are “newly implemented” and “undertaken as a result of a policy measure”, and only for the years that the individual actions save energy during the period to 2020.¹⁰

¹⁰ For example a low flow showerhead with a lifetime of 5 years installed in 2014 can only claim energy savings in 2014, 15, 16, 17 and 2018 not the remaining 2 years of the obligation period 2014-20. The same

Annex: Illustration of the Detrimental Effect of Counting Energy Savings from Individual Actions Continuing in the Period 2021-2023

As Member States and the Commission move to implement the EED, it is important to consider the potential consequence of a misinterpretation of Article 7 paragraph 7(c). Our calculations reveal that counting energy savings occurring in the years before and after the obligation period as though they had actually occurred *during* the obligation period could reduce actual cumulative energy savings to 2020 by nearly half depending on the path chosen by the Member State.

In the figures below, the upper (blue solid line illustrates the “straightforward” method outlined by the Commission as to how a Member State can meet its Article 7 paragraph 1 target, assuming an EEO starts in 2014. For simplicity the “straightforward” assumption of achieving 1.5% in new energy savings each year during the obligation period is shown here. This ignores the potential reductions arising from policy measures in paragraph 2 and subject to the 25% cap in paragraph 3. If counting the years from 2021 to 2023 were permitted in addition to the 25% cap, the total savings from the EEO would be even lower.

In Figure 1, the total savings claimed – given by the accumulated area under each curve – is the same for the 2 approaches i.e. the cumulative savings in the period to the end of 2020 are equivalent to 42% of the annual energy consumption averaged over the most recent period prior to 1 January 2013. The difference is that for the shaded area under the upper curve (solid line), the 2020 goal is achieved by savings actually occurring by 2020, whereas for the case where savings from years beyond 2020 are permitted to count against the 2020 obligation (wider red shaded area under the dotted line), the 2020 goal is not actually met until 2023. Under this weaker approach, the annual energy savings that European customers and economies would see in 2020 is just 6% rather than the 10.5% savings sought in 2020 under the approach called for in Article 7, paragraph 1 of the EED. Moreover, and more importantly, the effect is to reduce the rate of improvement in the period from 2014 to 2020 from 1.5% per year to 0.86% each year, cutting the effect of the Energy Efficiency Obligations nearly in half.

showerhead installed in 2019 can earn savings credit towards the 2020 target only for the savings occurring in 2019 and 2020, not those predicted to occur in 2021-23. This is consistent not only with the text of the Directive, but with its intent to “pave the way towards further energy efficiency improvements beyond 2020...” [EED, Preamble, point 60.] See also the definition of “individual action” (Article 2 paragraph 19).

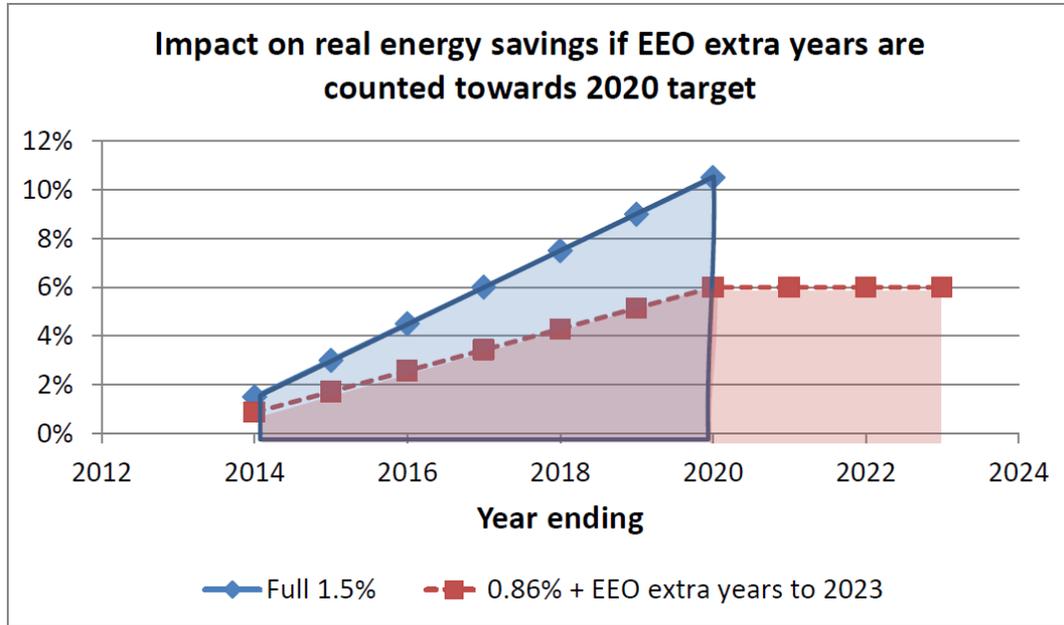


Figure 1: The impact of counting an extra 3 years of EEOs energy savings assuming that a Member State opts to lower their annual saving target from 1.5% to 0.86%. In both cases, the energy savings *claimed* are identical, but the savings *achieved by 2020* are not. The actual energy savings achieved during the obligation period are reduced by 43% from the straight forward method set out by the Commission, and the annual energy savings in 2020 are reduced from 10.5% to 6%.

Figure 2 shows a different approach. It assumes that the Member State decides to meet their objectives under Article 7 paragraph 1 through EEOs, and to claim energy savings from years 2021-2023 inclusive -- but this time it is assumed that the Member State follows the 1.5% annual saving trajectory until it reaches a point where the Member State could stop implementing new energy-saving individual actions altogether.

As Figure 2 shows, after running an EEO scheme for just over three years, the Member State would be able to stop introducing any new measures, as the individual energy saving actions taken by early 2017 would be sufficient to meet the 2020 target if savings to 2023 are permitted to count against the 2020 target. Actual new energy savings that European customers and economies would see in 2020 is just 4.7% rather than the 10.5% energy savings sought to be achieved under the approach called for in Article 7, paragraph 1 of the Directive. Meanwhile, the total new energy savings achieved during the obligation period are reduced by 34% from the straight forward method set out by the Commission.

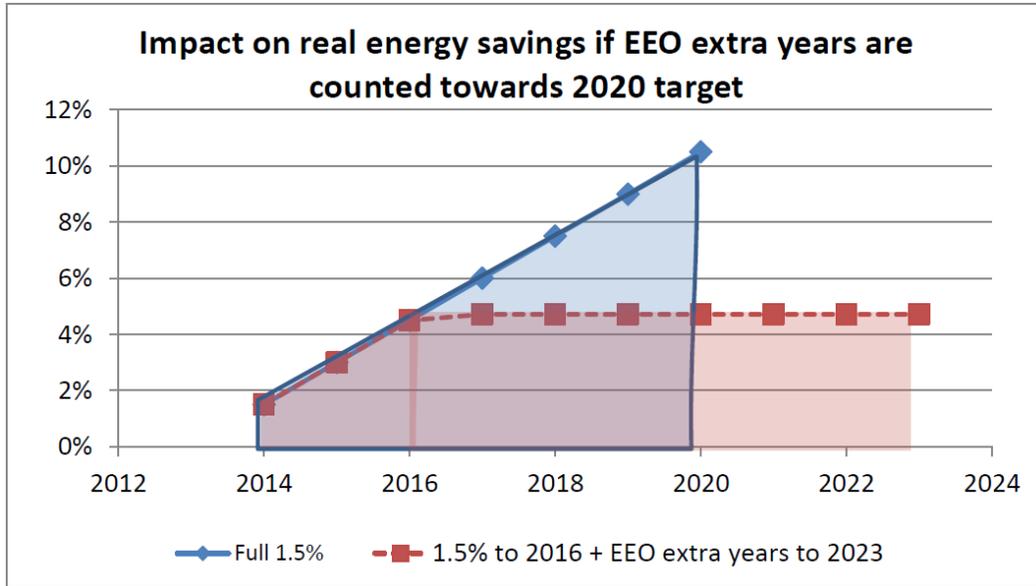


Figure 2: The impact of counting an extra 3 years of EEOs energy savings assuming that a Member State opts to start with 1.5% annual energy savings but to freeze their new annual energy savings as early as 2017. In both cases, the energy savings *claimed* by 2020 are identical but the *savings achieved* by 2020 are not. By counting future savings against the target, the total energy savings achieved by 2020 are reduced by 34%, and the level of savings in 2020 is just 4.7% rather than the 10.5% anticipated in the Directive. (Note between 2016 and 2017 the annual energy savings rise from 4.5% to 4.7%).

This has important implications, not just for 2020, but also for the level of savings Europe will be able to capture in the years beyond 2020, as all programs would be starting from a lower achieved base, and a lower energy efficiency activity level, and some of the savings available in 2021, 2022, and 2023 will already have been counted towards the target for 2020.