

I SETTING THE TARGETS

Part I: provides an overview of the EED and its objectives and targets. It explains how targets should be established and used to drive efficiency measures.

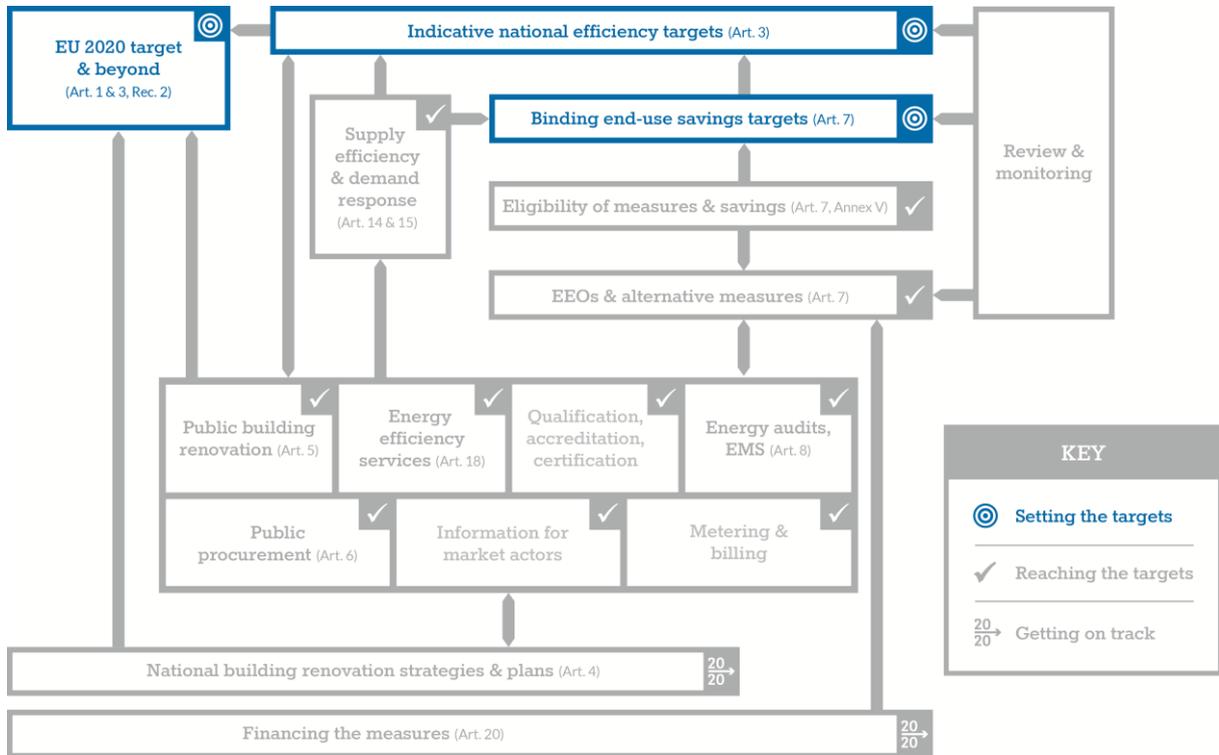


Figure 2 – Guidebook Overview Map: Objectives and targets

I.1 Summary of Coalition recommendations

Setting robust and coherent targets in a transparent way, as required by the EED, is essential to drive the EED measures, realise the saving potentials and pave the way beyond 2020. Therefore we recommend the following actions:

1. Verify that the 2020 indicative national target (Article 3, reported to the European Commission by 30 April 2013) is:

- Building on existing national energy and climate policies for 2020 and beyond;
- Adequate to realise the national cost-effective potentials of energy savings;
- Making a clear and adequate contribution to the EU 20% target in 2020; and
- Considered a first step towards 2030 and 2050 targets.

Note: By the end of June 2014 the Commission will assess whether the EU's 2020 target is likely to be met (Article 3.2). If the Commission concludes that this is not the case, it will make further proposals to ensure the gap is closed (Article 24.7).

2. Ensure that the binding energy end-use savings target (Article 7, which should be defined by 5 December 2013):

- Demonstrates how it will help achieve the indicative national target for 2020 in combination with other measures (Article 3);
- Uses the minimum number of exemptions, namely the exclusion of transport or discounting savings realised in the past (early actions); and
- Takes into account the benefits of putting in place progressively increasing annual energy savings and the targets that are likely to be set for after 2020.

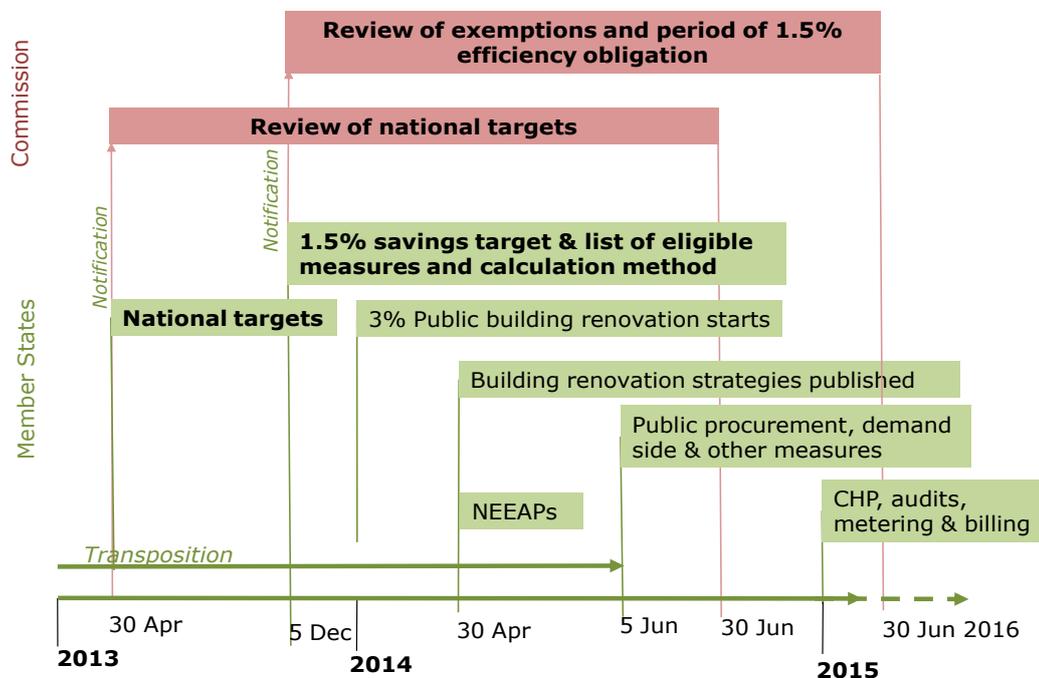


Figure 3 – Relevant deadlines regarding targets (in bold)

I.2 Background

Measures put in place for implementing the specific EED requirements must, in addition to fulfilling the specific minimum legal requirements for those measures, ensure in their totality that objectives and targets are achieved.

Targets in EU policies and legislation play an important role in:

- Creating high level accountability;
- Allowing benchmarking and monitoring of results;
- Sending long-term signals to investors; and
- Providing guidance for further policymaking.

The EED contains several targets and sets for the first time in its Article 7 a binding energy end-use savings target for MSs. This complements the EU's climate and energy package, which so far only includes legally binding greenhouse gas (GHG) and renewable energy (RES) targets, and goes beyond the 2006 Energy Services Directive (2006/32/EC)¹.

The EED's three main cross sectoral targets² are:

1. **The 20% EU energy savings target.** The EED's overarching objective (Article 1.1) is "to ensure the achievement of the Union's 2020 20% headline target on energy efficiency and to pave the way for further energy efficiency improvements beyond that date". The 20% target is defined in Article 3.1(a) as a maximum of 1483 Mtoe primary energy or 1086 Mtoe final energy consumption in 2020³.
2. **The indicative national efficiency targets.** In terms of making this operational, the EED stipulates that MSs must set their own overall indicative national energy efficiency targets, which the Commission will assess as sufficient or not to reach the EU target and thereafter consider proposing a binding target (Article 24.7).
3. **The national binding target for end-use savings.** Article 7 sets a general binding target to deliver 1.5% cumulative annual energy end-use savings.

As these targets are closely linked, MSs will have to account for their interaction and ensure that the measurement and verification methods used for the different targets are coherent and compatible with one another as much as possible. In addition, the setting of the indicative national target must be framed so that the MS makes its full, proportional contribution to the overall EU goal for 2020. The setting of the binding element required by Article 7 can cover a significant percentage of the volume of savings that the indicative national target must deliver.

Efficiency, savings, consumption targets?

Different terms are used, often with little precision or accuracy, to express targets in the area of energy efficiency policy. The Coalition adheres to the definitions provided in the EED, which establish a clear relation between 'energy savings' and 'energy efficiency'. Specifically, energy savings are defined as the result of improvements of energy efficiency. Savings are measured as the difference in energy consumption before and after the efficiency improvement has taken place, taking into account the impact of external factors such as weather or level of economic activity. Using these definitions, the Coalition calls for a binding energy savings target, as an absolute amount of energy saved, to be achieved principally through efficiency improvements that will result in a reduction of energy consumption compared to a baseline.

¹ The energy savings target set out in Article 4 of Directive 2006/32/EC requires MS to "adopt and aim to achieve" an overall national indicative energy savings target of 9% for the ninth year of application of the Directive. The Article thus requires MS to take measures intended to meet the target. Because most of this Article has not been repealed by the EED, the 9% target for 2016 is still in effect, and the measures adopted to reach it shall be taken into account when implementing the EED.

² There is also a quantified sectoral target for central government buildings set in Article 5. MSs must ensure the renovation to minimum standards of 3% of the useful floor area on an annual basis of these buildings, or, alternatively, take other measures providing at least the equivalent energy savings in the buildings.

³ The target, how it is derived and the remaining gap are illustrated in Figure 5.

Important definitions

The following definitions from Article 2 of the EED are worth recalling here as they are relevant to this section of the Guide:

'Primary energy consumption' means gross inland consumption, excluding non-energy uses (*Article 2.2*).

'Final energy consumption' means all energy supplied to industry, transport, households, services and agriculture. It excludes deliveries to the energy transformation sector and the energy industries themselves (*Article 2.3*).

'Energy efficiency' means the ratio of output of performance, service, goods or energy to input of energy (*Article 2.4*).

'Energy savings' means an amount of saved energy determined by measuring and/or estimating consumption before and after implementation of an energy efficiency improvement measure, whilst ensuring normalisation for external conditions that affect energy consumption (*Article 2.5*).

I.5 Binding energy end-use savings targets (Article 7)

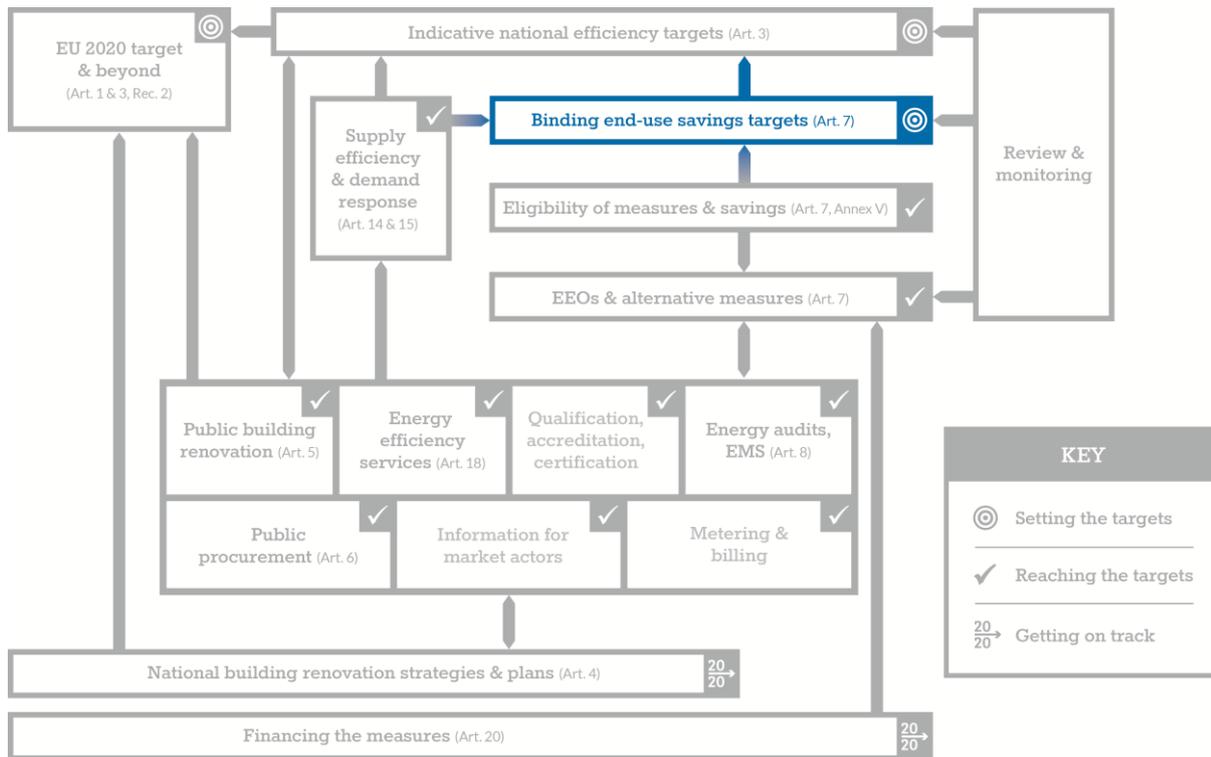


Figure 12 – Guidebook Overview Map: Binding energy end-use savings targets

I.5.1 Main requirements

Article 7 of the EED requires MSs to deliver a certain quantity of final energy savings in end-use sectors, an important aspect to achieving the overarching 20% target.

The target is cumulative, which means that it is based on incremental annual savings that deliver a total volume of savings at the end of the obligation period in 2020.

Article 7 changed considerably during the course of the EED negotiations, beginning as a requirement to set a supplier obligation scheme and becoming a binding national savings target. This followed the decision to allow alternative measures to fulfil the objectives of the supplier obligation scheme. The result is a rather complex legislative text, whose legal interpretation requires reference to other articles in the EED for full comprehension. In particular the Article 7 target requirements must be understood in relation to:

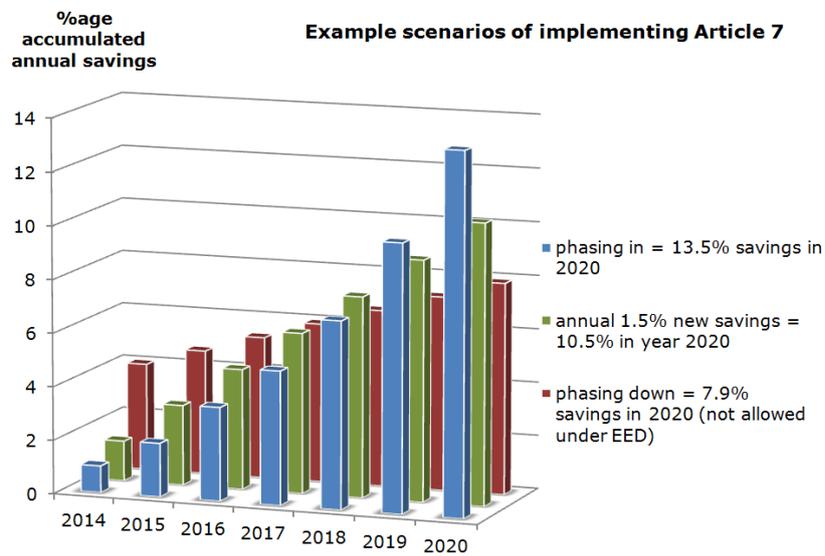
- The EED’s purpose, which is to achieve the EU 2020 20% headline energy savings target and pave the way for further energy efficiency improvements beyond that date (Article 1); and
- The requirement for MSs to set indicative national targets taking into account *inter alia* the EU target and the EED measures.

The energy end-use savings target must be equal to achieving new savings of at least 1.5% each year from 1 January 2014 to 31 December 2020. This equivalence means:

- The savings delivered by 31 Dec 2020 must be at least 10.5% (1.5% times seven years) stemming from new saving measures since 1 January 2014 (see 11);
- The volume of savings delivered over the whole seven-year period must be at least equal to 1.5% in year 1, 3% in year 2 and so on. In practice this results in a total

savings volume representing 42% of the annual final energy use which makes up the base for calculation (see Figure 13); and

- An incremental effect must be ensured, with new savings being delivered each year on top of those from previous years' measures. This is the only way to obtain meaningful and persistent energy savings, though this may not change the overall savings to be achieved. This means that if one starts slow, one has to do more towards the end of the period leading up to 2020 or apply the limited exemption (see chapter I.5.2.1).



All scenarios would add up over the seven year period to 42% of the annual consumption

Figure 13 – Illustration of the equivalency conditions to be met: the 10.5% savings by 2020

This equivalence is also essential to ensure that Article 7 is coherent with and contributes to meeting the EU 20% target in 2020 (Article 1) and the indicative national targets (Article 3).

MSs may deliver these savings in any end-use sector(s) they wish via an obligation scheme on energy companies or through other means (more details in chapter II.1).

It should be noted that the Article 7 targets, and the means that MSs adopt to reach them, represent by far the largest portion of the elements in the EED towards meeting the EU 20% target (see Figure 14).

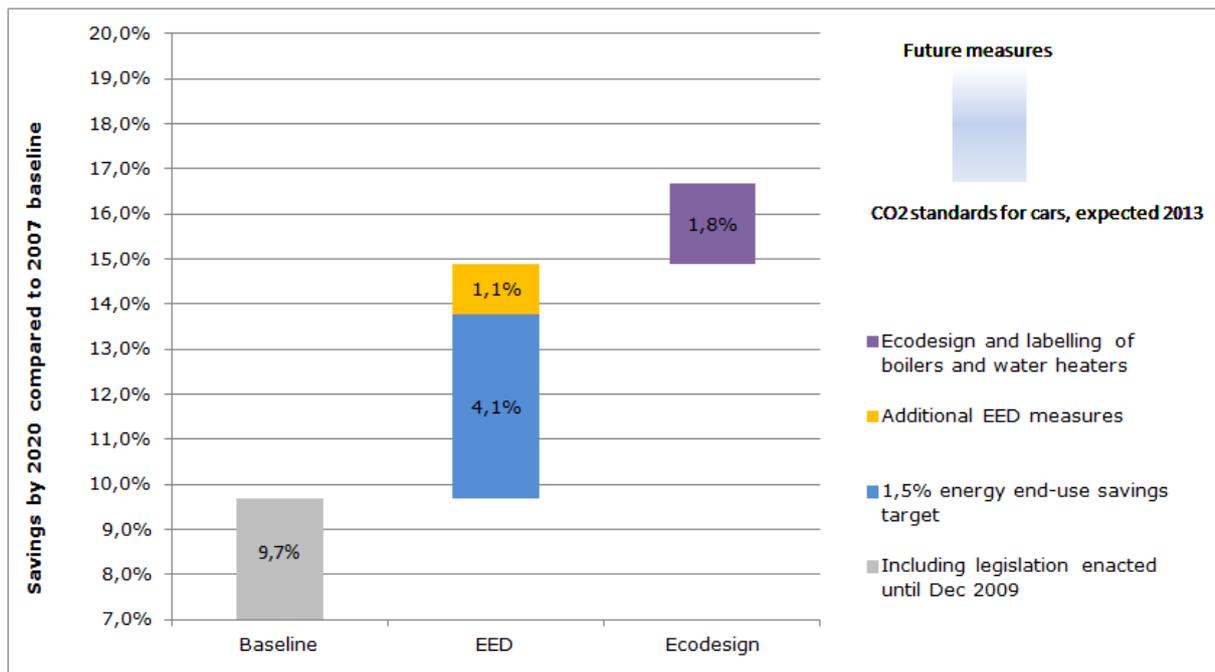


Figure 14 – Relative savings contributions from different elements of the EED and further EU measures in the pipeline in relation to EU 2020 target

I.5.2 Calculation of the energy end-use savings target volume

As laid out in Article 7.1, the scope for calculating the 1.5% target (i.e. the average annual energy sales volume base against which it is calculated) covers all final energy sales to final customers of all energy distributors or all retail energy sales companies, with some exceptions:

- Energy that is not sold (in-house consumption of own energy generated); and
- The sales of energy used in transport (may be partially or fully excluded, as discussed in I.5.2.1).

When it comes to delivering the savings, the target is not sector-specific. MSs and/or obligated parties may choose where to deliver the required amount of end-use savings.

The 1.5% target implies both a total amount of energy savings over the obligation period and a year-on-year accumulation of new savings:

- The total amount of energy savings over the obligation period must be at least equivalent 1.5% savings per year (Figure 13). But Member States are not confined to a linear trajectory and may decide how the calculated quantity of savings will be phased over the period. In practice this allows for the necessary learning period for such large-scale schemes.
- The design of annual targets must ensure that the incremental effect is equivalent to that of adding an additional 1.5% new savings volume each year, i.e. the volume of obligated savings is increasing year after year (“old” savings must keep delivering, be renewed or replaced, which requires considering the lifetime of savings).

Lifetime of savings

When calculating this target, it is essential that savings lifetimes are accurate and do not lead to a reduction of the amount of real savings to deliver.

The goal of the interventions MSs make as a result of the EED should be to deliver long-term structural changes which make their infrastructure, processes and citizens’ lifestyles progressively more efficient. In this respect it is important not to simply consider the savings volume as a one-off

obligation to be achieved as quickly as possible through quick-fix, short-term savings which will stop delivering partway through (or even at the end of) the seven-year period.

I.5.2.1 Exemptions

Partial or full exclusion of energy used in transport from the target volume (Article 7.1)

The EED allows sales of energy to transport to be excluded from the base against which the target is calculated. The impact of this exemption varies considerably from one MS to the other; it is high for insular MSs and low for more central MSs or those with a very energy intensive industry. For instance a full exclusion of sales to transport would have the effect of reducing the savings target by more than 60% for Malta and Luxembourg, by more than 50% for Cyprus, by more than 40% for Greece, Spain, Portugal and Ireland and by less than 30% for most other MSs (see Table 1).

Other exemptions (Article 7.2)

The exemptions listed below (phasing in, exclusion of energy sold to the emissions trading scheme (ETS) industry, supply side savings and early actions) may be combined but cannot lead to a collective reduction of more than 25% of the target as defined in Article 7.1.

For example, a country might choose to exclude energy sold to its ETS sector or count early actions or a combination of both as long as it does not exceed 25%.

Article 7.2 provides several possible exemptions that lower the target volume, to a limited degree:

- MSs may choose to progressively phase in the 1.5% target: 1% in 2014 and 2015, 1.25% in 2016 and 2017 and 1.5% in 2018, 2019 and 2020. In practice this means using a lower percentage to calculate the full amount of savings that must be delivered over the 2014-2020 period (Article 7.2(a)). The full use of this progressive phase-in would result in a target that is equivalent to a 1.29% annual savings, i.e. a 14% reduction of the target⁴.
- Member States may exclude part or all of the energy sold to ETS industries from the calculation (Article 7.2(b)).

The other exemptions set out in Article 7.2 reduce the amount of real end-use savings to be delivered – and therefore further reduce the target:

- The target defined in Article 7.1 is intended to be delivered through end-use energy savings. However there is a limited possibility to count savings achieved in the energy transformation, distribution and transmission sectors towards the target under Articles 14 and 15.
- Savings resulting from energy saving actions newly implemented between 31 December 2008 and the beginning of the obligation period that continue to have an impact in 2020 can be counted against the target.

Watch out!

Article 7.7(c) allows obligated energy companies to bank and borrow delivered savings over a certain period of time. But this must not impact the overall target set by Article 7.1. Since it is effectively another means of counting early action, this provision must not be used by MSs on top of the 25% exemption 'bundle'. Doing so would significantly reduce the amount of actual new, additional savings realised during the 2014-2020 period and undermine the effectiveness of the Article. In the United Kingdom it would reduce the minimum target (after full use of exemptions) by another 2,338 toe to 4,675 toe.

⁴ This would mean that an MS choosing to use this option in full would have to limit their use of the other exemptions permitted in Article 7.2 in order to not lower the target by more than 11%, since the exemptions in Article 7.2 must not reduce the target by more than 25%.

The possible use of exemptions is supposed to help MSs design the most appropriate target to trigger their specific national potentials. Fully using the 25% exemption would, however, prevent an optimal approach to the EED requirements. Article 7 holds the greatest potential to contribute to the Article 3 targets, since it requires a reliable measurement and verification framework to be put in place and may be met using self-financing measures (see chapter II.2). Amongst the flexibility mechanisms that can be used in the context of Article 7, it should be noted that an ambitious implementation of Articles 14 and 15 (the supply side measures) would be less detrimental than the other exemptions, as the actual energy savings resulting from their implementation help reach the indicative national target set under Article 3. Note that the volume of the indicative national target cannot be reduced through exemptions.

I.5.2.2 Energy end-use savings targets and resulting EU savings

Table 1 provides the different energy end-use savings targets in Mtoe final energy with maximum use of exemptions and the resulting savings for the EU in 2020 based on their average consumption between 2009 and 2011.

The data are based on Eurostat figures. The maximum scope of the national Article 7 targets should equate to the total final energy consumption of 1128 Mtoe in all 28 MSs. The sum of the resulting energy end-use savings targets would be equivalent to 119 Mtoe energy savings in the EU by 2020 (10.5% of baseline) and 474 Mtoe of cumulative energy savings over the whole period 2014-2020 (42% of the base line).

The energy end-use savings targets are subject to a series of exemptions that may be used to reduce the actual amount of energy end-use savings to be delivered. If exemptions become the rule (for example, excluding transport energy from the calculation of the target and using the maximum 25% through counting savings from early actions), the overall result for the EU would drop to 60 Mtoe by 2020, which means only 5.3% savings would be realised by 2020 or 245 Mtoe over the whole period (21% of the baseline).

Figure 15 shows the possible effect of using exemptions on closing the gap to the EU 20% energy savings target.

Energy end-use savings in Mtoe final energy by 2020, baseline=average annual consumption 2009-2011							
	Without exemptions	Excluding transport from baseline: see 0			Excluding transport and full use of 25%: see 0		
	Mtoe	Mtoe	% per year	% total	Mtoe	% per year	% total
Austria	2.9	2.0	1.0%	7.1%	1.5	0.8%	5.4%
Belgium	3.9	2.7	1.1%	7.4%	2.0	0.8%	5.5%
Bulgaria	0.9	0.6	1.0%	7.1%	0.5	0.8%	5.3%
Croatia	0.7	0.4	1.0%	7.0%	0.3	0.8%	5.3%
Cyprus	0.2	0.1	0.7%	4.8%	0.1	0.5%	3.6%
Czech Republic	2.6	1.9	1.1%	7.8%	1.5	0.8%	5.8%
Denmark	1.6	1.0	1.0%	6.9%	0.8	0.7%	5.2%
Estonia	0.3	0.2	1.1%	7.6%	0.2	0.8%	5.7%
Finland	2.7	2.1	1.2%	8.5%	1.6	0.9%	6.3%
France	16.1	10.8	1.0%	7.1%	8.1	0.8%	5.3%
Germany	22.3	15.8	1.1%	7.4%	11.9	0.8%	5.6%
Greece	2.0	1.2	0.9%	6.0%	0.9	0.6%	4.5%
Hungary	1.7	1.3	1.1%	7.6%	0.9	0.8%	5.7%
Ireland	1.2	0.7	0.9%	6.3%	0.5	0.7%	4.7%
Italy	12.9	8.5	1.0%	6.9%	6.4	0.7%	5.2%
Latvia	0.4	0.3	1.1%	7.5%	0.2	0.8%	5.6%
Lithuania	0.5	0.3	1.0%	7.1%	0.2	0.8%	5.3%
Luxembourg	0.4	0.2	0.6%	4.0%	0.1	0.4%	3.0%
Malta	0.0	0.0	0.6%	4.3%	0.0	0.5%	3.2%
Netherlands	5.4	3.8	1.1%	7.4%	2.9	0.8%	5.6%
Poland	6.7	4.9	1.1%	7.7%	3.7	0.8%	5.7%
Portugal	1.9	1.1	0.9%	6.3%	0.8	0.7%	4.7%
Romania	2.4	1.8	1.2%	8.1%	1.4	0.9%	6.1%
Slovakia	1.1	0.9	1.1%	8.0%	0.7	0.9%	6.0%
Slovenia	0.5	0.3	0.9%	6.6%	0.2	0.7%	4.9%
Spain	9.2	5.3	0.9%	6.1%	4.0	0.7%	4.6%
Sweden	3.4	2.5	1.1%	7.7%	1.9	0.8%	5.8%
United Kingdom	14.4	8.9	0.9%	6.5%	6.7	0.7%	4.9%
European Union 28	118.5	79.5	1.0%	7.1%	59.6	0.8%	5.3%

Table 1 – Result of target calculations for each MS considering the possible exemptions

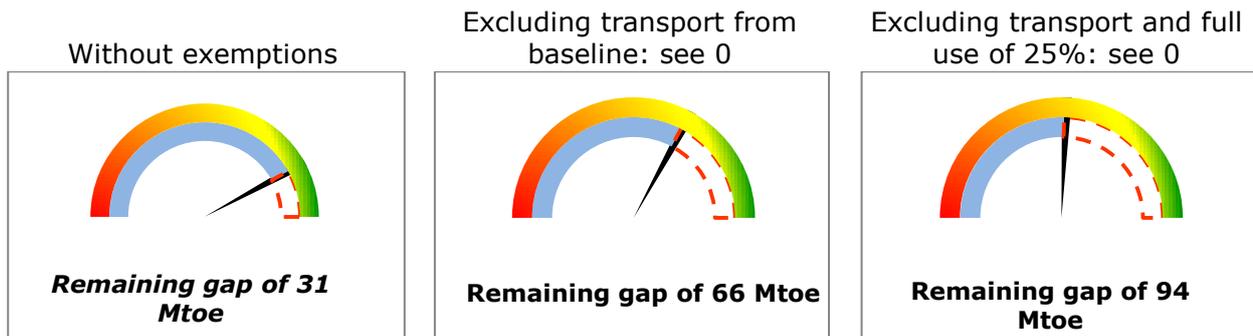


Figure 15 – Impact of use of exemptions on closing EU target gap in Mtoe primary energy⁵

I.5.3 Reporting and enforcement

MSs must calculate their target upfront and submit both the target and their plans to deliver it to the Commission by 5 December 2013. They must also note whether and which of the exemptions under the 25% flexibility clause they intend to use by 5 June 2014 (Article 7.3).

This target will be legally binding for each MS. If they fail to meet it the Commission will be able to launch infringement proceedings.

MSs are required to put in place measurement, control and verification systems under which at least a statistically significant proportion and representative sample of the energy efficiency improvement measures is verified.

MSs already had a 1% annual indicative target under the 2006 Energy Services Directive. In effect this target is a continuation of that up until 2020, with a similar volume (the ETS industry is included but transport is excluded, and each represent a similar portion of EU energy use) but made legally binding.

I.5.4 2016 Review

The Commission will submit a report to the European Parliament and Council on the implementation of Article 7 by 30 June 2016. If appropriate this will be accompanied by legislative proposals to change or extend the lifetime of the target, review the provisions on how to calculate the target and which exemptions are allowed and propose new measures.

I.5.5 Legal checks and recommendations

Legal checks

1. Challenge a possible use of the banking and borrowing possibilities for Energy Efficiency Obligation schemes (see Article 7.7(c)) which would reduce the energy end-use savings target but be in breach of the law, in the Coalition's opinion.

Good practice recommendations

1. Request the minimum use of exemptions, namely the exclusion of transport from the base against which the savings volume is calculated or discounting savings realised in the past (early actions).
2. Ask for information on how the target contributes to meeting the national target in 2020 (see Article 3.1) and realises remaining cost-effective potentials (see Article 3.1(a)).

⁵ This figure is based on published data as of 19 August 2013, and therefore excludes Croatia for which PRIMES projections have not been published.

3. Stress the benefits of putting in place progressively increasing energy savings, thereby keeping an outlook on energy end-use savings targets that are likely to be set for after 2020.