



EU Energy Efficiency Directive (2012/27/EU)

Guidebook for Strong Implementation



The Coalition for ENERGY SAVINGS

The Coalition for Energy Savings is the voice of energy efficiency in Europe, bringing together business, professional, local authorities, civil society and trade union associations. Its aim is to put energy efficiency economic policy.

Coalition members represent more than 400 associations, 150 companies, 15 million supporters, 2 million employees, 1,000 cities and towns in 30 countries in Europe.



EU Energy Efficiency Directive (2012/27/EU) Guidebook for Strong Implementation

Published by

The Coalition for Energy Savings

April 2013

Editor responsible

Stefan Scheuer

Contributing authors and organisations :

Andoni Hidalgo (EURIMA)

Andrea Marandino (E3G)

Arnaud Duviolguerbigny (COGEN Europe)

Brook Riley (Friends of the Earth)

Dan Staniaszek (BPIE)

Dora Petroula (Climate Action Network Europe)

Eoin Lees (Regulatory Assistance Project)

Erica Hope (European Climate Foundation)

EuroACE

Fran McCrae (Stefan Scheuer Consulting)

Ingrid Holmes (E3G)

Katarzyna Wardal (European Federation of Intelligent Energy Efficiency Services)

Marta Toporek (Client Earth)

Matthieu Ballu (Stefan Scheuer Consulting)

Randall Bowie (eceee)

Renée Bruel (European Climate Foundation)

WWF European Policy Office

CONTENTS

CONTENTS.....	5
GLOSSARY OF MAIN TERMS.....	6
FOREWORD.....	7
INTRODUCTION.....	8
CHECKLIST FOR STRONG IMPLEMENTATION OF ENERGY EFFICIENCY DIRECTIVE.....	10
I SETTING OBJECTIVES AND TARGETS.....	12
I.1 SUMMARY OF COALITION RECOMMENDATIONS.....	13
I.2 BACKGROUND.....	14
I.3 THE EU ENERGY SAVINGS TARGET FOR 2020 AND BEYOND (ARTICLES 1 AND 3 AND RECITAL 2).....	16
I.4 INDICATIVE NATIONAL ENERGY EFFICIENCY TARGETS (ARTICLE 3).....	19
I.5 BINDING ENERGY END USE SAVINGS TARGET (ARTICLE 7).....	23
II REACHING THE TARGETS.....	30
II.1 ELIGIBILITY OF MEASURES FOR THE ENERGY END USE SAVINGS TARGET (ARTICLE 7, ANNEX V).....	31
II.2 ENERGY EFFICIENCY CERTIFICATION SCHEMES AND ALTERNATIVE (ARTICLE 7).....	37
II.3 PUBLIC BUILDING RENOVATIONS (ARTICLE 5).....	44
II.4 ENERGY EFFICIENCY IN PUBLIC PROCUREMENT (ARTICLE 6).....	49
II.5 ENERGY AUDITS (ARTICLE 8).....	54
II.6 ENERGY EFFICIENCY SERVICES (ARTICLE 8).....	59
II.7 SUPPLY SIDE EFFICIENCY AND DEMAND RESPONSE (ARTICLES 4 AND 15).....	65
III GETTING ON TRACK.....	75
III.1 NATIONAL BUILDING RENOVATION STRATEGIES AND PLANS (ARTICLE 4).....	76
III.2 FINANCING THE MEASURES (ARTICLE 20).....	83
IV REFERENCES.....	89
ANNEXES.....	90
A. TIMELINE OF THE ENERGY EFFICIENCY DIRECTIVE OBLIGATIONS.....	90
B. ELIGIBILITY OF MEASURES AND SAVINGS TO CONtribute TOWARDS THE ENERGY END USE SAVINGS TARGET.....	92
C. BUILDING RENOVATION CONCEPTS.....	100
D. GOOD PRACTICES IN PROMOTING THE ENERGY SERVICES MARKET.....	101
E. CASE STUDIES ON INNOVATIVE USE OF STRUCTURAL FUNDS FOR EFFICIENT FINANCING.....	102
F. OVERVIEW OF MAIN EU ENERGY EFFICIENCY LEGISLATION.....	103

GLOSSARY OF MAIN ACRONYMS

CA	Comprehensive assessment
CBA	Cost-benefit analysis
CCS	Carbon capture and storage
CHP	Combined heat and power
COM	European Commission
DHC	District heating and cooling
DSO	Distribution system operator
EEAP	Energy Efficiency Action Plans
EED	Energy Efficiency Directive (2012/27/EU)
EEO	Energy efficiency obligation
EMS	Energy management system
EPBD	Delegated Regulation (EU) No 244/2012 supplementing Directive 2010/31/EU on the energy performance of buildings
EPC	Energy performance contracting
ERDF	European Regional Development Fund
ESCO	Energy service company
ESD	Directive 2006/32/EC on energy end-use efficiency and energy services (soon to be repealed with the approval of EED)
GDP	Gross domestic product
GHG	Greenhouse gas
HE	High efficiency
LCCA	Life-cycle cost analysis
Mtoe	Million tonnes of oil equivalent
NEEAP	National Energy Efficiency Action Plans, first required under the ESD and now the EED
NEEF	National energy efficiency fund
MS	Member State of the European Union
PP	Public procurement
RES	Renewable energy source
SAVE	Council Directive 93/76/EEC of 13 September 1993 to limit carbon dioxide emissions by improving energy efficiency
SME	Small - to medium -sized enterprise
TSO	Transmission system operator

FOREWORD

With the Energy Efficiency Directive the EU has given itself a legal framework to put energy efficiency in the limelight. Reaching the 20% energy savings target by 2020 and paving the way for ongoing energy efficiency improvements will help to embed energy savings and efficiency improvements in energy and economic policies.

In a world of finite resources where we are already straining ecological, financial and societal boundaries, the EU should abandon the habit of exploiting the remaining dangerous, polluting energy resources. The time is right to adopt new norms and establish a new economic balance by stepping up efforts to reduce our energy consumption. Investing in domestic energy efficiency improvements will create new and local jobs, reduce our €400 billion energy trade deficit and boost competitiveness in the green economy, all while improving the quality of our environment. In this way we can ensure that we pursue our climate objectives in overcoming the economic crisis, not in spite of it.

Correct and strong implementation of EU Directives, particularly when local action is required, has always posed a colossal challenge. History has shown us that two factors largely determine their success: clear targets and public participation.

Much remains to be done. Though a first step, the binding end-use target must be completed with a binding economy-wide energy savings target for 2020 and within the EU energy and climate package for 2030. Public participation in energy policy and decision making needs to increase. Though public debates on topics like electricity prices help expose problems they do not empower citizens in energy system decisions.

For the strong implementation of the Energy Efficiency Directive. It will enlarge the group of EU and national stakeholders to participate in and constructively influence national and EU implementation decisions, so that energy savings targets will be reached in the face of the economic, financial and ecological crises at hand.

The Friends of the Coalition for Energy Savings

Caroline Lucas (UK Member of Parliament)

Anders Wijkman (Co-president of the Club of Rome)

Prof. Owen Lewis (Former CEO of the Sustainable Energy Authority of Ireland)

Gianni Silvestrini (Director of the Kyoto Club)

Prof. Diana Ürge-Vorsatz (Director of the Centre for Climate Change and Sustainable Energy Policies)

INTRODUCTION

About the Energy Efficiency Directive

The Energy Efficiency Directive (EED) entered into force on 4 December 2012 and repeals the Cogeneration Directive (2004/8/EC) and the Energy End-Use Efficiency and Energy Services Directive (2006/32/EC).

The EED is as close as the EU comes to an EU-wide energy efficiency strategy anchored by legislation. It is a framework directive which sets overarching objectives and targets to be achieved by a coherent and mutually reinforcing set of measures covering virtually all aspects of the energy system: from supply, transformation, transmission and distribution to consumption. Member States (MSs) must transpose the EED into national law by 5 June 2014 within their own legal, social, environmental and economic culture.

Why energy efficiency matters

The European Union has three climate and energy targets to be reached before 2020: a 20% reduction in greenhouse gas emissions, 20% of energy derived from renewables and a 20% increase in energy efficiency. If these 2020 targets are not met, a sustainable, secure and affordable energy system will be exceedingly difficult and expensive to achieve.

The Coalition believes that the quality of implementation of other directives has been relatively poor. MSs often transpose EU directives with a view to meeting only the minimum levels of ambition, avoiding complexity or changes to existing national law, even though going beyond minimum requirements can often bring numerous economic advantages and other types of benefits. All actors within the value chains of the sectors covered in the EED, be it industry, buildings, appliances, transport or energy supply, have a vested interest in supporting good implementation. MSs have made a political commitment to the 2020 targets and the Coalition will work to help them follow through on that commitment. The Coalition wants to stress that this guidebook is part of a long-term endeavour, rather than a one-off attempt that will end with its publication.

About this guidebook

This document is a detailed guide book for a strong and effective implementation of the EED.

The Coalition hopes that compiling all the elements of the EED in one easy-to-use guide will help an ambitious implementation of the legislation, achievement of the 91% energy savings target and paving the way for increasing energy efficiency beyond 2020.

The Coalition understands that other and similar forms of support exist for administrations. The Commission is planning to provide its understanding and interpretation of various articles. MSs also have access to a network funded by the Commission to allow officials to meet and share experiences, find common solutions to specific challenges and identify best practices.

This guide is not intended to replace much needed actions, like a common implementation strategy led by the Commission, but rather be a valued and useful tool in this area. Moreover, we hope it will foster greater transparency of the implementation process and improve the understanding and accessibility of this complex piece of EU legislation by providing additional clarifications, comparisons, recommendations and best practice examples.

Who should use this guide?

This guidebook is intended for members of the Coalition and other national, regional and local implementers and stakeholders of the EED, including industry, manufacturers, utility companies and non-profit organisations.

The Coalition also welcomes government officials at all levels to use this guide, which clarifies many aspects of the EED, puts them in the context of overall energy efficiency policies and provides recommendations for good practices.

It is lastly important to note that this guide reflects the perspective of the Coalition as a whole, rather than that of its individual members, and that its recommendations are based on our own legal interpretation of the legislation.

How the guidebook is structured

Instead of taking on the legislation article by article, the guidebook is broken down into themes, as many appear in multiple parts of the EED. The chapters contain legal checks, or ensuring that requirements of the legislation have been fulfilled, and/or good practice recommendations that the Coalition has developed to facilitate the most ambitious and effective implementation of the EED. Note that three themes are in gray; this designates that they are not covered in this guide.

Part I provides an overview of the EED and its objectives and targets (see orange circles in figure below). It explains how targets should be established and used to drive efficiency measures.

Part II provides details about the main efficiency measures of the EED (see orange boxes in figure below). The chapters provide a background for each of the subject areas, the requirements of the EED and recommendations for effective transposition, implementation and monitoring.

Part III considers the overarching measures which bring all the pieces together and lead beyond 2020 (see blue boxes in figure below). It includes recommendations on how to use financing strategies and national building renovation strategies.

The below figure will appear at the beginning of each chapter to show how it fits into the book and into the EED as whole. Please note that information for market actors, metering and billing and qualification, accreditation and certification are not covered in this guidebook for capacity reasons, but should be covered in future updates.

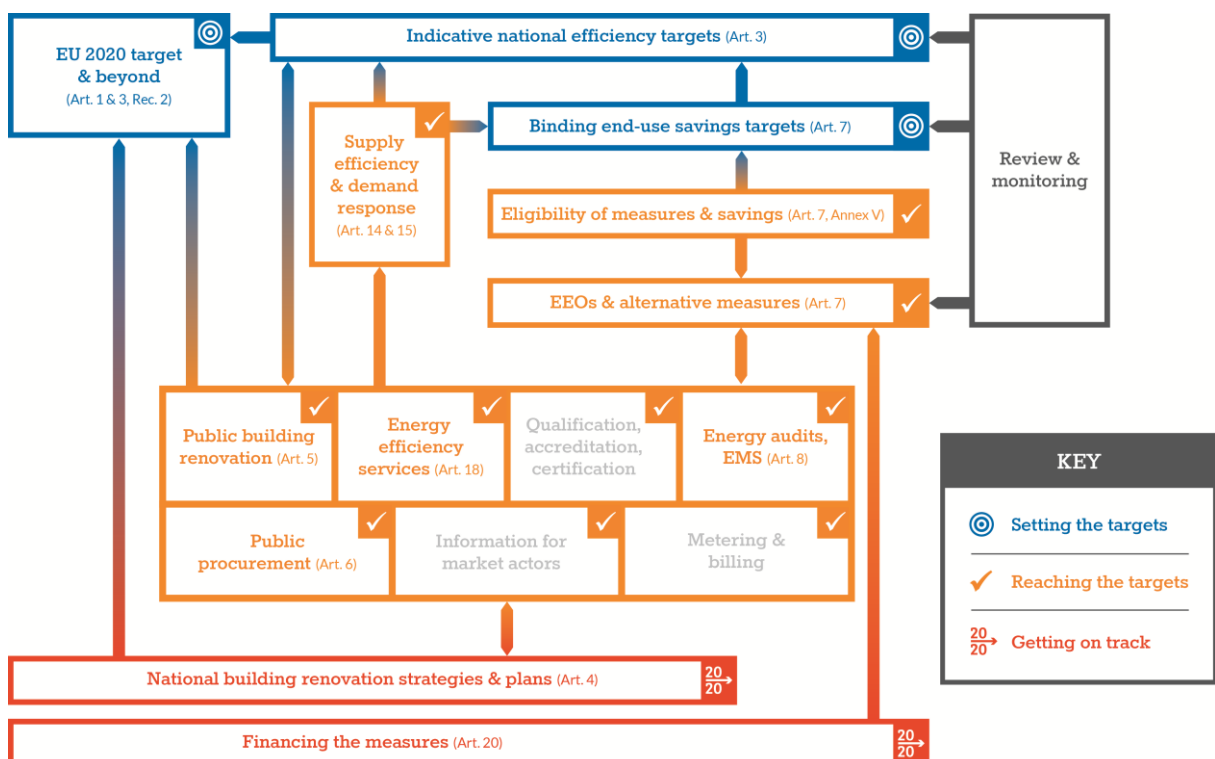


Figure 1 E Guidebook Overview Map

CHECKLIST FOR STRONG IMPLEMENTATION OF THE ENERGY EFFICIENCY DIRECTIVE

This checklist sets out what the Coalition believes are the twenty most important criteria for an ambitious and successful implementation of the Energy Efficiency Directive, which means achieving the EU 2020 target and paving the way for improving energy efficiency beyond that date. The criteria are based on the Commission's recommendations for checking legal requirements and promoting good practices presented in this guidebook.

Ambitious and meaningful targets

1. National energy efficiency targets, which are to be reported at the latest by 30 April 2013, reflect increasing ambition, lead to new actions to reach national energy saving potentials in 2020 and beyond and contribute a fair share to the EU 20% target.
2. An annual 1.5% energy end-use saving target is put in place by end of 2013, securing at least 10.5% savings in the year 2020, and the use of exemptions is kept to an absolute minimum.

Broad mix of robust instruments

Proper counting of savings

3. The methodology for calculating the impact of energy efficiency measures to achieve the binding 1.5% annual end-use energy savings target to be reported by 5 December 2013 does not exaggerate claimed savings. It counts only the savings that are realised during the period 2014-2020, deliver savings until at least the end of 2020 and are additional to a baseline, thus excluding savings from EU product or building standards.
4. The only savings counted result from policy measures that explicitly aim to improve energy efficiency (no general taxation, like VAT, for example) and whose impact is verified. Double counting is avoided.

Energy efficiency obligation schemes

5. Obligation schemes are put in place and are an integral part of the mix of national energy efficiency measures.
6. Their costs to end-use customers and potential market players are made transparent and the value of longer lived energy efficiency measures is fully reflected in the accounting and target design of the energy efficiency obligation schemes.

Public buildings to lead the way for deep renovation

7. The public sector undertakes a comprehensive and accurate inventory of its own building stock, including energy performance and other relevant energy data that will serve as a starting point for renovations and as a model for an equivalent inventory of the national building stock.
8. The public sector leads by example and implements well-planned, high-quality deep renovations (including staged deep renovations) in all of its buildings. This activity should prepare and stimulate the entire market for the long-term deployment of such renovations, as part of the national renovation strategies.

More guidance to enable the efficiency potential of public procurement

9. Additional energy efficiency criteria in public procurement are set in a sufficient level of detail to avoid misunderstandings in their implementation.

Business leadership: from audit to action

10. Energy audits that meet the financial and economic criteria and demands of so-called investment grade audits are promoted. They are based on life-cycle cost analysis and provide guidance for future investments and maintenance.
11. SMEs and households are given clear and strong incentives to undertake audits and implement the recommended measures that result from these audits.

Removing barriers to the market of energy efficiency services

12. Interpretations of accounting rules on public debt and deficit are modified so that investments in energy efficiency under energy service contracts are not necessarily counted as deficits in national and public accounts.
13. Energy performance contracts and other types of overall energy service contracts are included as justified cases in public procurement, to ensure that public bodies are not obliged to divide contracts into separate lots when a holistic approach is more cost-effective and brings more energy efficiency improvements.

Integrating supply and demand

14. Spatial planning rules are linked to national comprehensive assessments of the potential for the application of high-efficiency cogeneration and efficient district heating and cooling systems to meet demand.
15. Cost-benefit analyses for efficient heating and cooling options, particularly those at installation level for power plants and industries, are done in a transparent and participatory manner and explicitly include socioeconomic costs.
16. Distribution and transmission system tariffs are set in a transparent manner and to empower consumers, and those incentives are removed which are detrimental to improving energy efficiency activity, in particular demand response and energy efficiency obligations carried out by energy companies.
17. Clear provisions are provided for demand response actors and those able to provide other energy efficiency services to be included in market design in a non-discriminatory fashion to improve overall net work efficiency.

Getting on track

National building renovation strategies for 80% savings

18. National building renovation strategies are in place and aim at an 80% energy consumption reduction target for the entire building stock, to be achieved through the gradual and systemic improvement of the energy performance of all buildings by 2050.
19. The multiple benefits arising from deep renovations are integrated into a policy framework to stimulate deep renovation (including staged deep renovations) of the building stock.

Financing it: Energy Efficiency Funds and public support

20. Energy Efficiency Funds that are capable of blending various streams of financing and backing high quality national energy efficiency investment programmes are in place.

I SETTING OBJECTIVES AND 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.

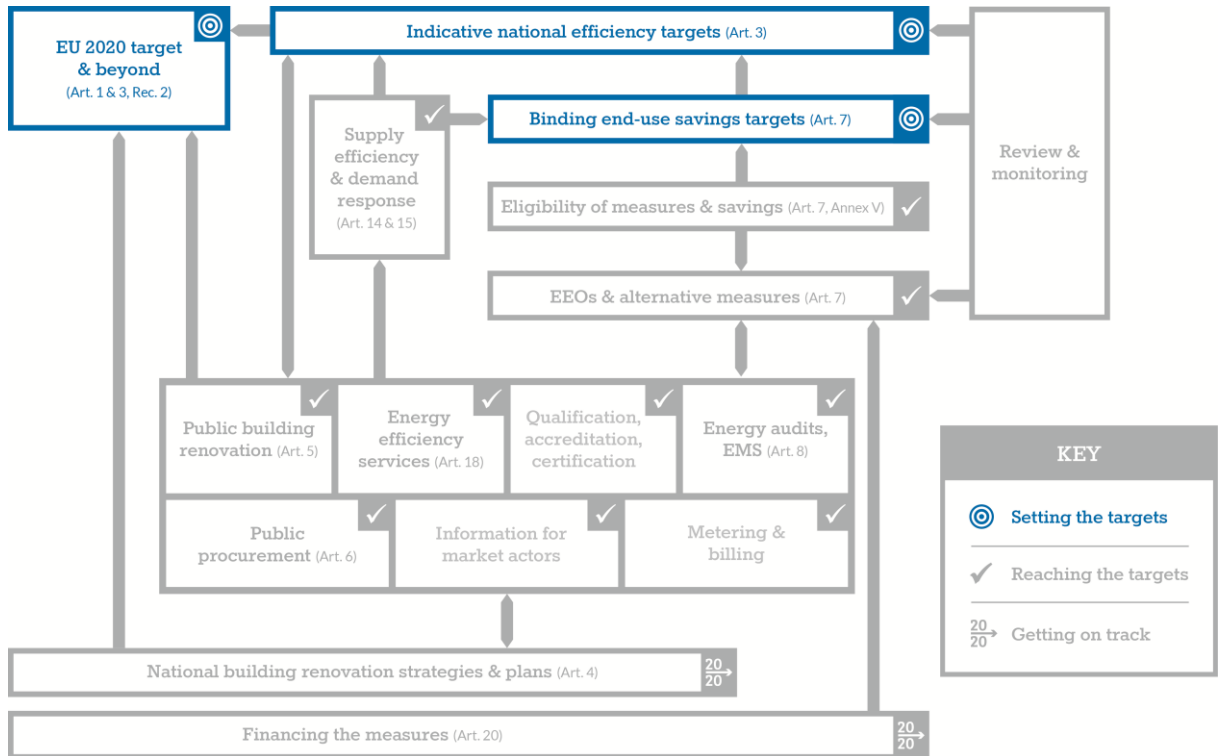


Figure 2 E Guidebook Overview Map: Objectives and targets

I.1 Summary of Coalition recommendation s

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, to be completed 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: The 2020 indicative national 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.

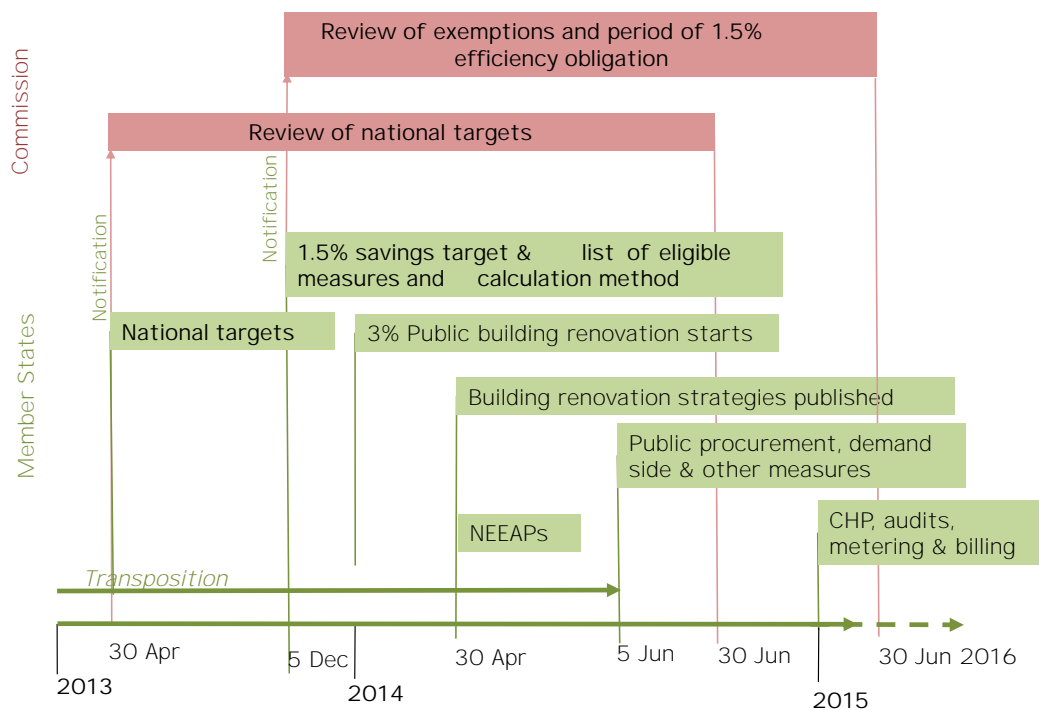


Figure 3 Relevant deadlines regarding targets (in bold)

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 91 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 998 Energy efficiency targets² are:

1. **The 20% EU energy savings target.** The 998 Energy efficiency target (Article 7.1) is *to improve energy efficiency and to pave the way for further energy efficiency improvements*. The 20% target is defined in Article 3.1 (a) as a maximum of 1474 Mtoe primary energy or 1078 Mtoe final energy consumption in 2020. The energy savings gap under current policies is estimated to be around 190 Mtoe³.
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.

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.

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.

¹ The energy savings target set out in Article 4 of Directive 2006/32/EC requires MSs to ensure that the energy consumption of buildings is reduced by 10% by 2012 and by 20% by 2020.

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 6.

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:

Article 2(2) means gross inland consumption, excluding non-energy uses (Article 2.2).

Article 2(3) 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).

Article 2(4) means the ratio of output of performance, service, goods or energy to input of energy (Article 2.4).

Article 2(5) means the 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.3 The EU energy savings target for 2020 and beyond (Articles 1 and 3 and Recital 2)

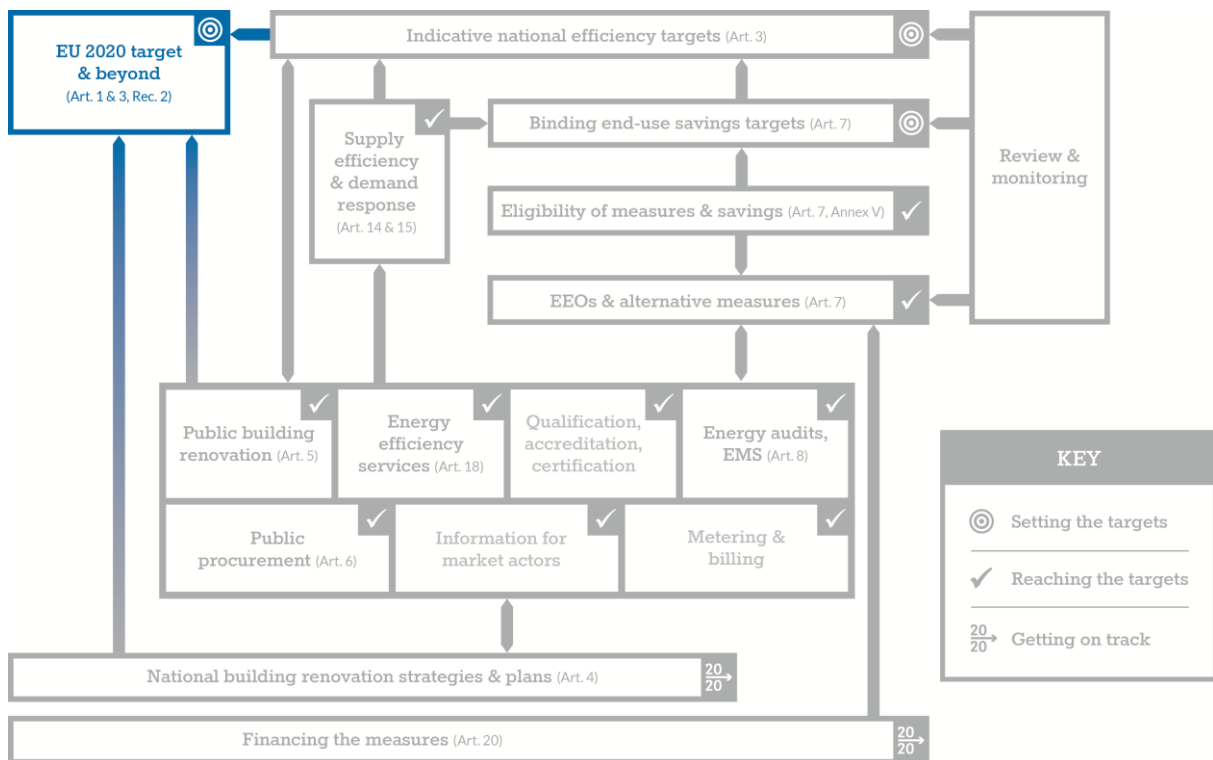


Figure 4 E Guidebook Overview Map: EU energy savings target for 2020 and beyond

The EU energy savings target for 2020 is set in the broader context of a long-term decarbonisation strategy: the EU has committed to an 80-95% reduction of GHG emissions by 2050, and various projections have shown that energy savings have the potential to contribute significantly to this goal. Article 1g of the EED explicitly states that the measures of this directive should pave the way for further energy efficiency improvements beyond 2020.

The 20% target is defined in Article 3.1 of the EED as a maximum of 1474 Mtoe primary energy or 1078 Mtoe final energy consumption in 2020 and according to Article 1, its achievement is the objective of the framework of measures established by the Directive.

The derivation of this figure is explained in Recital 2 as saving 20% primary energy (368 Mtoe) compared to the 2020 projections (1842 Mtoe) made in 2007, when the target was adopted by the EU heads of state and governments. The result of these savings is a maximum primary energy consumption of 1474 Mtoe in 2020.

⁴ European Commission Communication 2011/0885 *Energy Roadmap 2050*, 15.12. 2011.
 Fraunhofer, *Concrete Paths of the European Union to the 2°C Scenario*, 2012.
 Greenpeace, *Energy R[evolution] scenario for EU -27*, 2012.
 Ecofys, *Renewable energy: a 2030 scenario for the EU*; 02.2013.
 = b h Y f b U h] c b U ` ` 9 b Y f [m ` 5 [Y b W m ž ` W o A Z E n e r g y D i r e c t i v e 2 0 1 2 1 2 2 0 1 2 W b U f] c D ž `

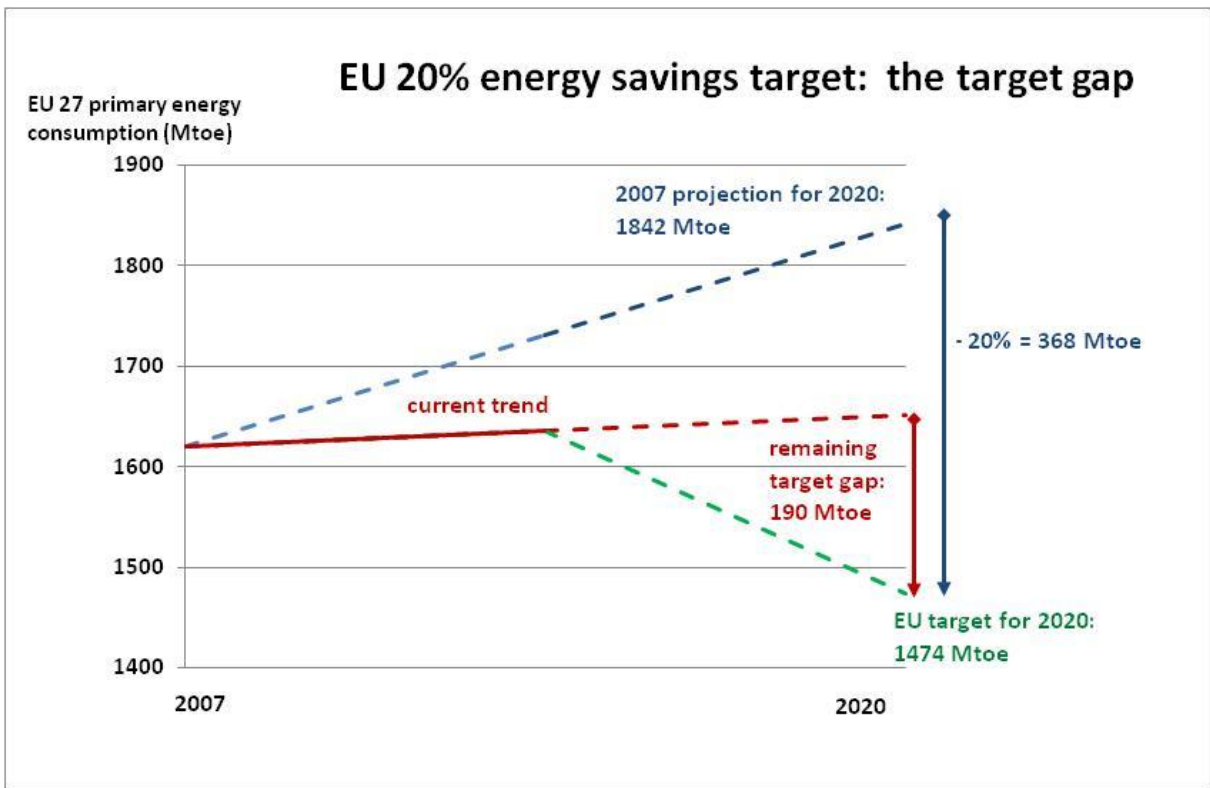


Figure 5 – Illustration of the EU target definition, method and target gap before adoption of the EED (current trend)

The 20% corresponds to the economic savings potential identified in 2007 based on the PRIMES model⁵. Derived from a projected use of energy in 2020 it includes assumptions about economic and demographic developments.

It is important to understand that the minimum requirements for the specific efficiency measures as laid down in Articles 4 to 20 will, according to available assessments, be insufficient to reach these objectives and targets. The Commission shows that a Y h Y f the EED minimum requirements for measures adopted in the EED will not be enough to achieve the EU energy savings target and will, in fact, leave a gap of around 94 Mtoe.

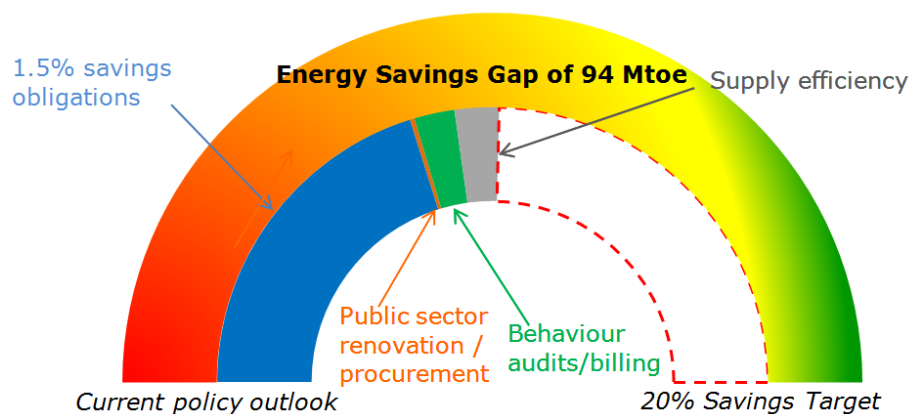


Figure 6 – Coalition for Energy Savings Gapometer showing the impact of the EED on reaching the EU energy savings target for 2020 (energycoalition.eu)

⁵ DF = A 9 G] g h \ Y Y b Y f [m i g m g h Y a a c X Y i i g Y X V m h \ Y 9 i f c d Y U t e 7 c a a] g g] projections were revised in 2009 after it was assessed that the economic crisis would have durable effects. The projections for growth (and energy consumption) were revised down. As a consequence, reaching 1474 Mtoe k U g a U X Y i Although delivering 368 Mtoe of savings became more difficult and expensive, due in part to a lower rate of investment in new, more energy-efficient technologies.

In the EED, MSs are explicitly allowed to go beyond the minimum requirements set for specific measures (see Article 1.2), and they will have to do so, as an adequate and complete implementation of a Directive requires that its objectives and targets are met.

MSs will need other appropriate measures to make sure that the gap between the binding energy end-use savings target and the indicative national energy efficiency target is closed.

This gap is illustrated in Figure 7 below, which shows how the combination of the indicative targets with their measures and the binding savings required by Article 7 must add up to the total amount of savings required by the EU target.

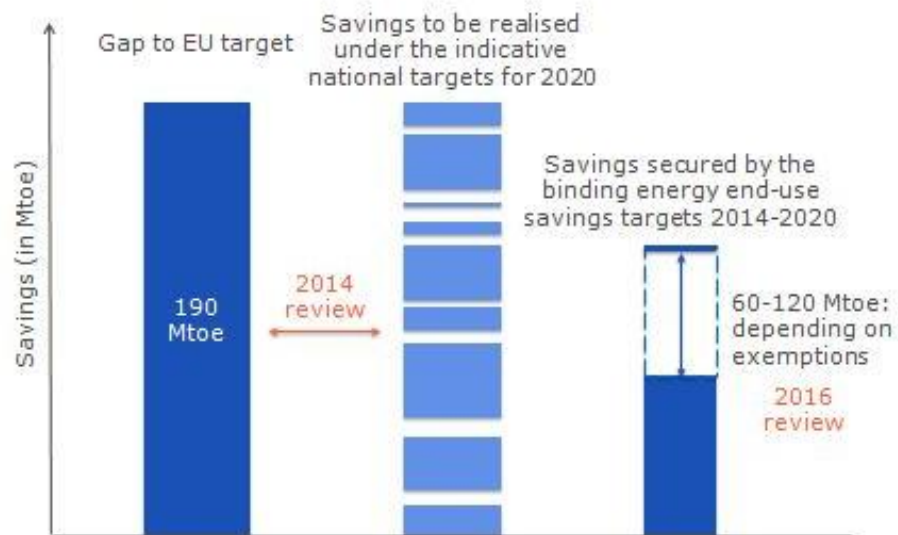


Figure 7 Illustration of the new targets introduced by the EED and their interaction with the EU target (i.e. target gap) and upcoming reviews

I.4 Indicative national energy efficiency targets (Article 3)

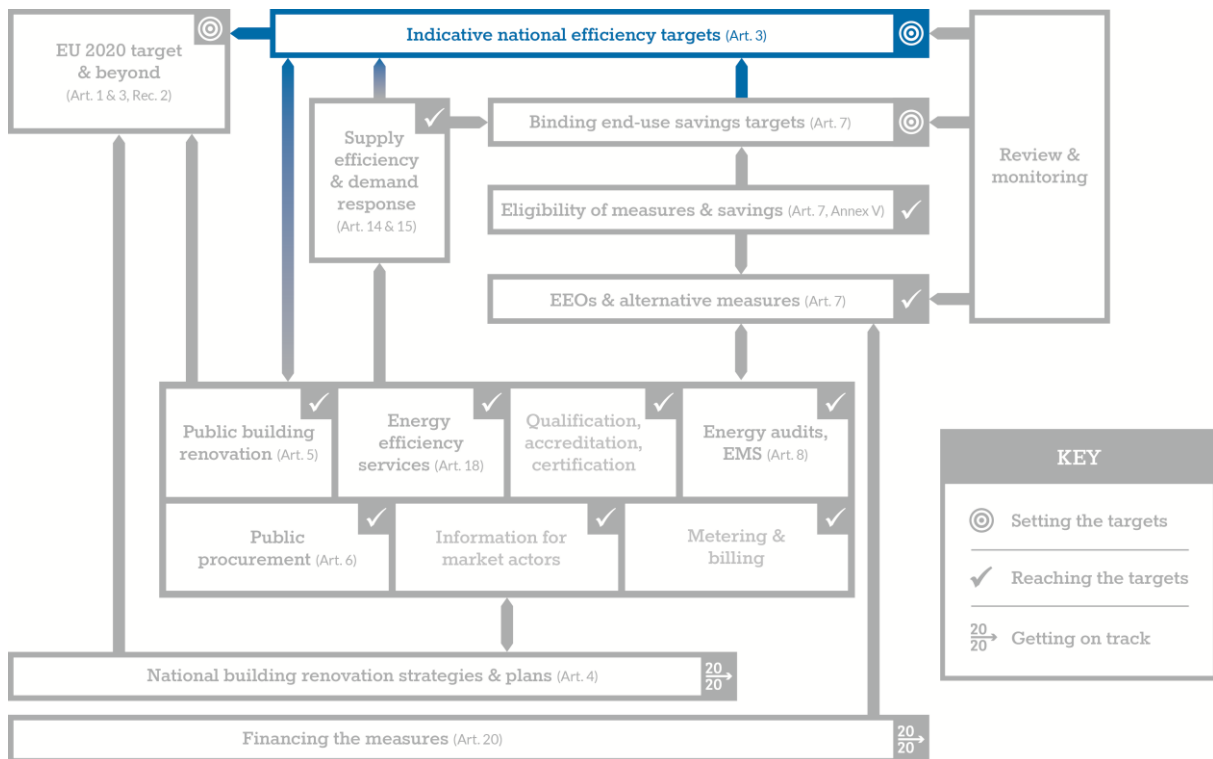


Figure 8 – Guidebook Overview Map: Indicative national efficiency targets

I.4.1 Main requirements

MSs are required to set indicative national energy efficiency targets that are aligned with the EU target. The targets must be expressed in both primary and final energy consumption by 2020 in order for the Commission to be able to assess and compare them with the EU target.

The targets should have been communicated to the Commission by 30 April 2013 under Article 24.1.

When setting their targets, MSs must do the following:

- ◀ Choose a methodology based on primary or final consumption, primary or final savings or intensity.
- ◀ Ensure a alignment with the EU target: the level of consumption resulting from the methodology and level of ambition chosen should account for a maximum of 1474 Mtoe (primary energy consumption) / 1078 Mtoe (final energy consumption) by 2020.
- ◀ Explain how the target was set, why a certain level was chosen and which data were used to define this level.

Among the considerations permitted to account for national specificities are:

- ◀ Remaining cost-effective energy saving potential and early actions, provided the latter can be proven to have a continued impact on energy savings in 2020⁶: MSs can set their target in a way that ensures that the most cost-effective energy savings measures are prioritised.

⁶ This is to ensure coherence with Article 7.2(d).

- ◁ GDP evolution and forecast: MS s can take into account their specific economic developments , in particular their GDP if they choose to set energy intensity targets. If energy intensity is used, it must be calculated on a disaggregated level in order to be able to correct for structural effects, such as the increased or decreased share of less energy -intensive goods and services.
- ◁ Parameters related to the energy mix structure , including changes in energy imports and exports and CCS: MS s are allowed to take these into account when designing targets and their expression in terms of energy consumption. For example, a generalised adoption of CCS technologies would deliver GHG cuts but also considerably decrease the efficiency ratio of electricity generation. The proportion of fossil fuel, nuclear or renewable electricity generation directly influences the conversion factor between final and primary energy.

I.4.2 The 2014 review of indicative national targets

By 30 June 2014 the Commission has to assess the progress and the likelihood of achieving the EU target of 1474 Mtoe primary and 1078 Mtoe final energy consumption .

The details of this review are laid down in Article 3.3 stating that the Commission shall:

- ◁ Add up the reported indicative national targets (as given in primary and final consumption);
- ◁ Assess the reliability of these targets to evaluate overall progress towards the EU target based on MS reports under Articles 24.1 (target progress report) and 24.2 (NEEAP);
- ◁ Carry out its own complementary analysis based on an assessment of energy statistics and modelling exercises for future energy trends; and
- ◁ Compare the results (aggregation of indicative national targets once verified as robust and made comparable) with the linear trajectory towards a 1474/1078 Mtoe consumption in 2020.

I.4.3 Setting the targets

Indicative national target setting is already part of the National Reform Programmes that MSs are required to submit under the European Commission Communication *Europe 2020: A Strategy for Smart, Sustainable and Inclusive Growth*⁷. As Table 1 shows, by 2011 all countries except the UK, the Netherlands, the Czech Republic and Slovenia had declared a target, though several targets were unclear or in a non-comparable format . Only a few of the MSs that provided a comparable target format set ambition levels similar or above the EU target ambition.

⁷ [European Commission, Europe 2020 – Key Documents, 01.06.2012.](#)

Country	Target				
UK	No target	Comparability			
Netherlands					
Slovenia					
Czech Rep					
Bulgaria	Not clear	Not assessable / comparable			
Luxembourg					
Ireland					
Poland					
Hungary					
Slovakia					
Lithuania					
Sweden					
Spain	Clear	Comparison with EU 20% target *			
Finland				Not clear	Around 10% energy savings
Estonia				Comparable with EU method	
Denmark					
Italy				Not clear	Around 15% energy savings
Cyprus					
Austria					
Greece					
Germany				Comparable with EU method	Over 20% energy savings
Belgium					
Malta				Not clear	
France					
Romania				Comparable with EU method	
Portugal					
Latvia					

* Based on own calculations using data provided by the National Reform Programmes 2011, Eurostat and Primes 2007

Table 1 E Review of 2011 national efficiency targets, Stefan Scheuer, May 2011

1.4.4 Legal checks and recommendations

Legal checks

- Request information on how the indicative national energy efficiency target is set by the 30 April 2013 deadline, and check whether the following minimum information is available and adequate:
 - Explanation of how the target is converted into absolute final and primary energy consumption levels in 2020 (see Article 3.1, first paragraph). MSs have to provide at least the projections of GDP and energy demand, if the national target is expressed in energy saving volumes or energy intensity improvements.
 - Explanation of how the target contributes to achieving the EU 2020 20% energy savings target (see Article 3.1(a)). In order to assess whether this contribution is appropriate we recommend a Y b X i g] b [h \ Y ' 7 c a-a] g g] c

paper⁸, the relevant proposals for effort-sharing [COM(2011) 112] and the ENVI¹⁰ H F 9 committees (Figure 9 illustrates the effort sharing concept) as well as the latest EU reference projections for energy demand for the MS until 2020¹¹.

- ◁ Explanation of how the different EU and national efficiency improvements measures are contributing to achieve the target (see Article 3.1 (b)-(d)).

Good practice recommendations

1. Ask for the indicative national target to:

- ◁ Be at least as ambitious as existing national objectives;
- ◁ Be adequate to realise the national cost-effective potentials of energy savings;
- ◁ Make a clear and adequate contribution to the EU 2020 target; and
- ◁ Be considered as a first step towards 2030 and 2050 targets.

2. Remind implementers that the Commission will review indicative national targets likely to be met and whether to propose binding national targets.

The EED does not impose a legal obligation on the level of indicative national targets. However the requirement is that the national targets should take up its fair share of the 20% so that the levels of consumption resulting from the 27 targets add up to the level of EU target. One possible way of sharing the effort is to set for each country a target equivalent to 20% energy savings in 2020 compared to specific national projections from 2007 (see Figure 9).

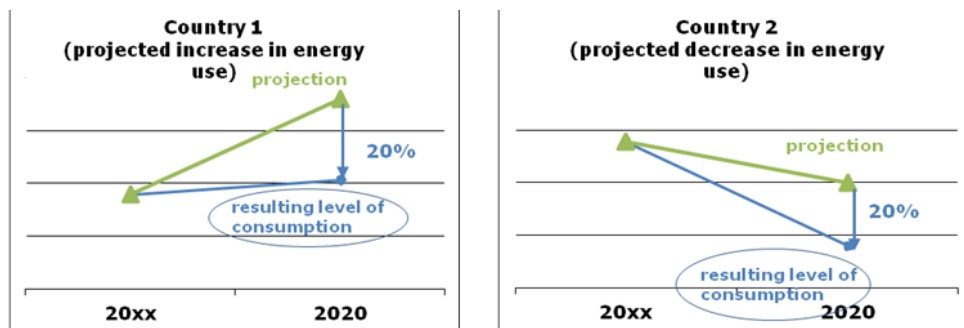


Figure 9 – Illustration of an implicit effort-sharing of the EU target methodology

⁸ European Commission Non-paper, *Achieving 20% energy efficiency*, 2011.

⁹ European Parliament Committee Industry, Research and Energy (ITRE) Committee, Amendments, 28.02.2012.

¹⁰ European Parliament Environment, Public Health and Food Safety (ENVI) Committee, Draft Opinion, 5.10.2011.

¹¹ European Commission, *EU energy trends to 2030 – Update 2009*, 04.08.2010.

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

Figure 10 E 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 998 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 11); and

