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Integrating Diversity in the European Union (InDivEU)

WORKING PAPER

**Flexible Implementation and the Energy
Efficiency Directive**

Sebastiaan Princen, Alexander Hoppe, Michael Hübner,
Martin Svec, Elaine Mak, Anna Taimr

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Integrating Diversity in the European Union (InDivEU) is a Horizon 2020 funded research project aimed at contributing concretely to the current debate on the 'Future of Europe' by assessing, developing and testing a range of models and scenarios for different levels of integration among EU member states. InDivEU begins from the assumption that managing heterogeneity and deep diversity is a continuous and growing challenge in the evolution of the EU and the dynamic of European integration.

The objective of InDivEU is to maximize the knowledge of Differentiated Integration (DI) on the basis of a theoretically robust conceptual foundations accompanied by an innovative and integrated analytical framework, and to provide Europe's policy makers with a knowledge hub on DI. InDivEU combines rigorous academic research with the capacity to translate research findings into policy design and advice.

InDivEU comprises a consortium of 14 partner institutions coordinated by the Robert Schuman Centre at the European University Institute, where the project is hosted by the European Governance and Politics Programme (EGPP). The scientific coordinators of InDivEU are Brigid Laffan (Robert Schuman Centre) and Frank Schimmelfennig (ETH Zürich).

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**Integrating
Diversity in the
European Union**

Abstract

This paper analyses patterns of differentiated implementation in four member states (Czechia, Germany, Ireland and the Netherlands) under the 2012 Energy Efficiency Directive (EED). Differentiated implementation occurs when member states makes use of the discretion given to them in EU legislation. This paper seeks to analyse whether differentiated implementation occurred under the EED and what this means for the effectiveness and legitimacy of the Directive. The EED offers broad discretion to member states in choosing and specifying targets and measures related to energy efficiency. The four member states have made extensive use of this discretion. The dominant pattern in this regard is that member states have used the discretion to retain domestic measures that were already in place. This pattern is driven by a combination of inertia and the wish not to disrupt well-working approaches. Overall, the pattern of differentiated implementation that resulted has arguably had a positive effect on goal-achievement under as well as domestic acceptance of the EED. At the same time, the Directive's impact on domestic policies and approaches has been limited.

Keywords

Differentiated integration; flexible implementation; European Union; Energy Efficiency Directive

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1. Introduction

1.1 Background

This case study report was written as part of Work Package 7 of the Horizon 2020 project InDivEU ('Integrating Diversity in the European Union'). WP7, entitled 'differentiation through flexible implementation', studies whether flexible implementation can be used to cope with heterogeneity among Member States, as a complement or alternative to forms of differentiated integration. Whereas under differentiated integration, some Member States are excluded from a part of EU law or policies altogether, under flexible implementation (all) Member States are given room to make further choices during the implementation process.

Flexible implementation may be a way for Member States to tailor EU-wide standards to domestic conditions.¹ At the same time, the resulting variation between Member States may also lead to more fragmented and less effective policies.² The aim of WP7 is to find out if and under what conditions these potential positive and negative effects of flexible implementation arise.

The work package is divided into two parts. The first part consisted of the development and creation of a dataset that mapped the scope for flexible implementation in EU directives in the period 2006-2015, the Flexible Implementation in the European Union (FIEU) dataset.³ This dataset was used to analyse overall patterns in the discretion offered to Member States during implementation.⁴

The second part of the work package consists of three case studies, in the fields of environmental law, justice and home affairs, and the internal market, respectively. The aim of these case studies is to analyse the actual implementation of a specific directive in four Member States (Czechia, Germany, Ireland and the Netherlands), in order to find out to what extent and in what ways Member States make use of the flexibility offered to them in directives and what effects the resulting differences in implementation (if they occur) have on the effectiveness and legitimacy of the directive.

This report discusses the implementation of the 2012 Energy Efficiency Directive (EED), a directive in the field of EU environmental law.⁵ In the remainder of this introductory section, we will explain why this directive was selected and what methods were used to study its implementation in the four Member States. Subsequently, we outline the further structure of this case report.

1.2 Selection of the Directive

The selection of the Energy Efficiency Directive builds on the FIEU dataset. The dataset measures the degree of discretion given to Member States in 164 directives adopted between 2006 and 2015. This timeframe was chosen because patterns of (differentiated) implementation take time to materialise after adoption of a directive. This initial coding exercise revealed a number of key characteristics that make the EED a good case for studying differentiated implementation.

To begin with, the EED offers a relatively large degree of discretion to Member States. In the Directive, 45 out of 117 substantive provisions (or: 38.5%) include a form of discretion for Member States. This is well above the mean of 26% and median of 22% in the dataset. For the purpose of this case study, it was important to select a directive that offered wide discretion, since the aim of the case study is to find out what use Member States make of the opportunity for flexible implementation, when it arises, and what consequences the resulting variation has. Given this purpose, the case study was best served by a directive that offers a relatively large degree of discretion.

1 Hartmann, 2016; Thomann, 2019; Zhelyazkova and Thomann, 2021.

2 Cf. Versluis 2007.

3 Princen et al., 2019.

4 Zbiral et al., 2020.

5 EU, 2012.

The relevance of the EED is further enhanced by the fact that it uses a range of different types of provisions and associated types of discretion. On the one hand, it requires Member States to draw up overall national strategies, an approach that is also used in some other (environmental) directives. On the other hand, the EED includes a range of specific legal requirements, usually accompanied by room for Member States to adapt or adjust them to national preferences. The flexibility offered to Member States is often accompanied by substantive and temporal constraints as well as reporting requirements. Finally, the EED includes an overall minimum harmonisation clause, which allows Member States to go beyond the requirements of the Directive.

The EED therefore presents a mix of flexibility and harmonisation that potentially allows for a fruitful analysis of the way Member States use possibilities for differentiated implementation and the consequences of that differentiation (if and to the extent that it occurs).

1.3 Analytical framework

The central question we seek to answer is: what use have Czechia, Germany, Ireland and the Netherlands made of the flexibility in implementation offered to them by the EED and what effects has that had on the effectiveness and legitimacy of the Directive? We answer this question in four steps, which form the analytical framework behind the case study:

1. What room for differentiated implementation does the Directive offer?

Although the scores of the EED in the FIEU dataset show that it allows for a large degree of discretion, an analysis of implementation practices requires a further, more qualitative analysis of the precise scope for flexibility in the Directive. This analysis also includes EU-level measures taken beyond the EED itself, as well as CJEU case law that specifies the room for manoeuvre that Member States have during implementation.

2. How do Member States make use of the room offered by EU law?

Discretion is a necessary but not a sufficient condition for differentiation in implementation to occur. Only if Member States make use of the room offered to them, will flexibility lead to actual differences between Member States. This requires an in-depth analysis of implementation practices, which has been undertaken for four Member States.

3. What are the motives behind the choices made in the domestic implementation process?

If and to the extent that differences in implementation occur, the next step is to analyse their implications. Do they lead to better or worse outcomes in terms of effectiveness and legitimacy? As a first step towards answering this question, we look at the motives behind the choices made in the four Member States. This may shed an initial light on the question whether differences in implementation are a result of attempts to tailor EU-wide standards to domestic conditions or of other considerations.

4. What effects does the variation in implementation practices have?

Under this final question, we explore what effects variation in implementation practices between the Member States has had. This is the final step towards answering the overall central question.

1.4 Methods and sources

The case study combines methods and approaches from law and political science/public administration. Legal tools were used to determine the scope for flexible implementation and map the formal transposition in the four Member States. Tools from political science and public administration were used to analyse underlying political and administrative processes.

The analysis relies on four types of sources. First, legal documents at the EU-level were used to analyse the scope for flexible implementation under the EED. Besides the EED itself, these included rulings on the EED by the Court of Justice and guidance documents produced by the European Commission.

Second, legal documents from the Member States were used to trace the transposition of the EED in domestic law. To that end, notifications from the Member States to the Commission as well as the original transposing measures within the Member States were used. Additionally, the National Energy Efficiency Action Plans (NEEAP), which Member States are required to send to the Commission to give an overview of their Energy efficiency efforts, were a valuable source of information. In this way, an overview was obtained of the choices made in transposing the provisions in the EED. We also looked at domestic case law in order to see how domestic courts applied the EED. This, however, yielded only a limited number of cases, which did not add new insights to the transposition documents and the case law by the Court of Justice on this directive.

Third, non-legal documents, such as reports and (academic) studies on the EED were used to obtain more insight into the background of the EED and the way it is implemented in the Member States. These documents also contributed towards assessing the effects of variation in implementation.

Fourth and finally, a number of interviews were done with policy experts in the four Member States. These experts worked partly inside and partly outside of government. In total, five interviews were done with eight interviewees in Czechia, Germany, Ireland and the Netherlands. All interviews were done online through MS Teams and lasted around one hour. The interviews were used to gain more insight into the choices made in implementing the EED, the motives behind these choices and their effects. As a general aim, the interviews were meant to go beyond the ‘paper reality’ of the documents, in order to include the processes that took place in the backstage. As some interviewees had also been involved in the preparation of the EED, these interviewees were also used to obtain a better understanding of the background to the choices made in the EED itself.

Table 1 gives an overview of the relationship between the four sources and the four questions in the analytical framework, indicating for which questions each source was used.

Table 1. Relationship between sources and research questions

| Source | RQ1: Scope for flexible implementation | RQ2: use made of flexibility offered | RQ3: motives behind domestic choices | RQ4: effects of variation |
|------------------------------|---|---|--------------------------------------|-------------------------------------|
| EU-level legal documents | Analysis of precise scope for flexibility | Analysis of Member State notifications to the Commission | | |
| Member State legal documents | | Analysis of transposition measures | | |
| Reports and studies | Background to the EED | | Background to Member State choices | Effects and implications of the EED |
| Interviews | Background to the EED | Overview of enforcement strategies, clarification of domestic law | Reasons for domestic choices | Consequences of domestic choices |

1.5 Structure of the report

The remainder of this report is structured as follows. Sections 2 through 5 discuss the four research questions that are central to our analytical framework. Section 2 presents the background to and content of the EED. It also provides an assessment of the flexibility offered to Member States by the EED. Section 3 describes the use the four Member States have made of the flexibility offered to them in implementing the EED. Section 4 zooms in on the drivers and motives behind the choices made in the Member States, while section 5 assesses the effects of the resulting differentiation. Section 6 formulates a number of conclusions and implications on the basis of the analysis.

2. The Directive

2.1 The development of the EU's energy efficiency policy

The EED was adopted on 25 October 2012.⁶ Its purpose was to improve energy efficiency throughout the EU, with a view to achieving a combined 20% reduction in energy use within the EU by 2020. It was adopted on the basis of Article 194 TFEU, the treaty base for measures in the field of energy policy. The EED succeeded the earlier Directive 2006/32, known as the Energy Services Directive (ESD).⁷

The ESD and EED built on previous EU efforts in the area of energy efficiency.⁸ In the late 1980s and early 1990s, these efforts had started with the (fairly modest) 1989 Community Action Programme for Improving the Efficiency of Electricity⁹ and the 1991 SAVE programme, which provided (co-)funding for projects in the field of energy efficiency.¹⁰ In addition, specific pieces of legislation on energy efficiency were adopted, such as directives relating to energy labelling of household appliances¹¹ and energy efficiency requirements for hot-water boilers.¹²

In 1998, a Commission Communication and Council Resolution on energy efficiency called for a more comprehensive approach to the issue.¹³ Following this, in 2000 the first EU Energy Efficiency Action Plan (EEAP) was adopted. It mainly contained voluntary measures on the part of the Member States. This first EEAP was followed by other EEAPs in 2006¹⁴ and 2011.¹⁵ The 2006 EEAP included a 20% energy savings target by 2020, which would have to be achieved through a series of measures and initiatives.¹⁶ The ESD was adopted in the same year. It required each member state to set an indicative (non-binding) savings target of at least 9% for the year 2016. In order to achieve that objective, Member States were required to submit National Energy Efficiency Action Plans.

In EU documents, energy efficiency was linked to a number of underlying objectives, including the reduction of import dependency, enhanced energy security, and the reduction of CO₂ emissions.¹⁷ After 2006, the case for energy efficiency gained further impetus from the rise on the agenda of the fight against climate change, which had become a hot topic in EU politics by that time.¹⁸

6 EU, 2012.

7 EU, 2006.

8 For an overview, see Zgajewski, 2014: 11ff.

9 EU, 1989.

10 EU, 1991.

11 EU, 1992b.

12 EU, 1992a.

13 Council, 1998; European Commission, 1998.

14 European Commission, 2006.

15 European Commission, 2011a.

16 Zgajewski, 2014: 12-14.

17 See e.g. Council, 1998: point 2; European Commission, 1998: 1; European Commission, 2006: 3.

18 Princen, 2012: 191.

In March 2007, as part of the drive for an integrated climate and energy policy, the European Council endorsed the so-called '20-20-20' targets, which aimed for a 20% decrease in greenhouse gas emissions, 20% use of renewable energy and a 20% reduction in energy use by the year 2020.¹⁹ These targets were later also embedded in the 'Europe 2020 Strategy'.²⁰

A Commission assessment from 2008 and the third EEAP (now renamed 'Energy Efficiency Plan') from 2011 both noted that actual progress in improving energy efficiency fell short of what was needed to arrive at the 20% reduction objective by 2020.²¹ It is against this background that the Commission issued the proposal for the EED in 2011.²² It was adopted a year later.²³

2.2 Background to and structure of the EED

The EED took a broader approach to energy efficiency than earlier initiatives, by setting higher targets for energy efficiency and by specifying more precisely what instruments could or should be used to achieve them.²⁴ In doing so, it replaced the 2006 ESD as well as the 2004 Cogeneration Directive,²⁵ and amended the 2009 Directive on ecodesign requirements for energy-related products²⁶ and the 2010 Directive on energy labelling.²⁷ At the same time, the EED operates alongside other energy efficiency-related instruments, such as the labelling and ecodesign directives and, for instance, the Energy Performance of Buildings Directive.²⁸

After the Commission presented its proposal, as is conventional in the ordinary legislative procedure, national parliamentary chambers had the opportunity to react on the Commission's proposal. Among the Member States that we focus on in this case study, the Irish House of Oireachtas,²⁹ the German Bundesrat,³⁰ and the Czech Senate³¹ made use of this opportunity. In content, these contributions all raised similar points. While all three called for flexibility of both targets and measures in order to be able to adapt the Directive to national circumstances and ambitions, especially the German Bundesrat strongly focused on the competitiveness of the industry which should not be endangered through the Directive. This again demanded high degrees of flexibility. All three chambers in general agreed on the need to increase efforts on energy efficiency but concurred that flexibility for Member States would in the end deliver the best results. The negotiations both in the Council and between the Council and the European Parliament were heated.³² While in the end the majorities in Parliament were comfortable (632/25/19), two Member States in the Council, Spain and Portugal, voted against the Directive, with Finland abstaining.

The EED takes a more ambitious approach to energy efficiency than previous EU instruments, and offers considerable flexibility to Member States. This is borne out both in the Directive's end targets and in the policy measures it contains. In terms of targets, the EED establishes the goal of a 20% reduction in energy use in the EU by 2020 (compared to 2007 projections of energy use in that year). In the Directive, this is translated in levels of primary and final energy use (expressed in 'Megatonnes of Oil Equivalent' or Mtoe).³³ Based on the overall EU target, Article 3 EED requires Member States to set national energy efficiency targets. These, however, are only indicative, not legally binding.

19 European Council, 2007.

20 European Commission, 2010.

21 European Commission 2008: 3; 2011a: 2.

22 European Commission 2011b.

23 EU, 2012.

24 Rosenow et al., 2016: 45-46.

25 EU, 2004. Cogeneration is aimed at utilising the heat that is generated during electricity production rather than letting it go to waste. This contributes to a more efficient use of energy. Cogeneration is also known as 'Combined Heat and Power' (CHP); hence the 2004 Cogeneration Directive is also known as the CHP Directive.

26 EU, 2009.

27 EU, 2010a.

28 EU, 2010b.

29 House of Oireachtas, 2012.

30 Bundesrat, 2011.

31 Senate of the Parliament of the Czech Republic, 2011.

32 Thurmes, 2017.

33 According to Article 3(1)(a) EED, in 2020, the EU's energy use should not exceed 1474 Mtoe of primary energy or 1078 Mtoe of final energy.

The national energy efficiency targets are part of National Energy Efficiency Action Plans, an instrument that was already part of the 2006 ESD. Member States are required to draw up NEEAPs and renew them every three years. The NEEAPs 'shall cover significant energy efficiency improvement measures and expected and/or achieved energy savings'.³⁴ Moreover, Member States need to report each year on the progress towards their targets.³⁵

In addition, the EED contains a range of specific policy measures that Member States should take or consider. In the Directive, they are divided into measures relating to energy use (Chapter II), measures relating to energy supply (Chapter III), and horizontal measures (Chapter IV). Measures relating to energy use include:

- Strategies to mobilise investment in building renovation (Article 4 EED);
- Minimum energy performance standards for government buildings (Article 5 EED);
- Energy efficiency requirements in government purchasing (Article 6 EED);
- 'Energy efficiency obligation schemes', which require energy distributors and retail sales companies to achieve certain levels of energy savings (Article 7 EED);
- Energy audits and energy management systems for final customers (households and firms) (Article 8 EED);
- The use of 'smart meters' and billing techniques that raise awareness of energy use (Articles 9, 10 and 11 EED);
- Consumer information and promotion programmes (Article 12 EED).

In relation to energy supply, the EED includes the following measures:

- The promotion of efficiency in heating and cooling (which follows up on what was previously covered by the Cogeneration Directive) (Article 14 EED);
- Measures relating to energy transformation, transmission and distribution (Article 15 EED).

Finally, in terms of 'horizontal' measures, the EED includes measures relating to:

- Qualification, accreditation and certification schemes (Article 16 EED);
- Information and training programmes for consumers, builders, installers and others involved in energy efficiency (Article 17 EED);
- The market for energy services (Article 18 EED);
- The creation of Energy Efficiency National Funds, which give financial support to energy efficiency initiatives (Article 20 EED).

Overall, the Directive contains three core provisions, as was also confirmed by our interviewees. Article 3 requires Member States to set national energy efficiency targets. Articles 5 and 7 introduce the central instruments for reaching those targets. Additionally, the Directive contains three other types of provisions. First, provisions that set out in detail obligations for the Member States and leave minor aspects for them to regulate. Second, provisions that require the Member States to set a certain target or establish a strategy, but do not connect any other obligations to it. Third, provisions of a 'supportive' nature, which require the Member States to take certain policy action but leave it (more or less) up to them to choose.

³⁴ Article 24(2) EED.

³⁵ Article 24(1) EED.

2.3 The scope for flexible implementation under the EED

Long though the list may be, most of the measures in the EED are either non-compulsory or allow Member States a lot of flexibility in choosing the specific approach they take. In several provisions, the Directive offers a ‘default’ option, which Member States may either choose to follow or replace by an alternative policy measure to be determined by themselves, as long as specific criteria as laid down in the Directive are met.³⁶ In addition, the EED is a minimum harmonisation directive. Article 1(2) of the Directive includes an overall minimum harmonisation clause, which allows Member States to maintain or introduce more stringent standards, as long as they are notified to the Commission.

According to our interviewees, the choice for a default option while allowing Member States to opt for alternatives was the result of a compromise between the Commission and (most) Member States during the negotiations leading up to the Directive. Whereas the Commission wanted to mandate the use of certain preferred options across the EU, most Member States wanted the freedom to retain existing national approaches. This resulted in including the Commission’s preferred option as the default, while at the same time allowing Member States to opt for an alternative if it achieved the same objective.

The flexibility offered in the EED was confirmed in three preliminary rulings by the Court of Justice of the European Union (CJEU). In the Spanish case *Saras Energía* (on Articles 7 and 20 EED)³⁷ and the Bulgarian case *EVN Bulgaria Toplofikatsia and Toplofikatsia Sofia* (on Article 9 EED),³⁸ the Court stressed that the EED ‘deliberately left the Member States a broad margin of discretion in the choice of methods suitable for fulfilling the energy efficiency objectives laid down in [...] that directive.’³⁹ Member States have a lot of room to make choices within the framework of the Directive, as long as the objectives of the Directive are met and Member States use objective and non-discriminatory criteria. As a result, the complaints raised against the national measures were rejected in these cases.

A similar, yet contrasting, approach was taken in the Finnish case *Oulun Sähkömyynti* (on Article 11 EED).⁴⁰ Here, an electricity sales company complained about an interpretation of the EED by the Finnish Energy Agency that exceeded the requirements of the Directive. In response, the CJEU stressed the minimum nature of the Directive, as long as national measures are not contrary to the objectives of the Directive.

Member State therefore have considerable room for making their own choices, as long as they stay within the objectives in the EED and the parameters set by general EU (internal market) law.

This is not to say that anything goes when it comes to correct transposition. In a ruling on an infringement procedure against Spain, the CJEU made it clear that the minimum requirements of the Directive had to be met. In the case, Spain had transposed the requirement to install individual energy meters contained in Article 9 EED in such a way that most existing buildings were not covered. The Spanish government defended its approach by arguing that in practice the application of the Spanish rules was much broader and additional measures had been taken to increase energy efficiency, so that substantively the requirements of the EED were almost fully met. The CJEU ruled, however, that administrative practices are not sufficient to transpose the Directive. The requirement of Article 9 had to be incorporated in law.⁴¹

36 Zgajewski, 2014.

37 CJEU, 2018.

38 CJEU, 2019b.

39 CJEU, 2018, para. 24.

40 CJEU, 2019a.

41 CJEU, 2020, in particular para. 30.

In 2018, the EED was amended by Directive 2018/2002,⁴² one of eight legislative acts that together formed the 'Clean Energy for all Europeans' package.⁴³ Other acts in this package covered, among other things, directives on renewable energy and the energy performance of buildings, as well as regulations on the governance of energy within the EU. The main addition of Directive 2018/2002 to the EED was to include a 32.5% energy efficiency target for 2030 (relative to the 2007 modelling projections for energy use in that year). In addition, the Directive updated a number of provisions from the EED, in particular those relating to metering and billing. While these amendments introduced some structural changes, such as the removal of Article 4, basically the 2012 EED remained intact and the EED is still in force, with the 2018 amendments.

In addition to the EED itself, the European Commission has issued a range of Guidance Documents and Recommendations on the implementation of specific provisions in the Directive. Our interviewees indicate that these documents have had little impact on domestic implementation practices, at least in the four Member States that we analyse. Implementing authorities from the Member States exchanged and discussed implementation experiences in a Concerted Action of the Energy Efficiency Directive, which had already been created in 2008 under the ESD and only renamed after the adoption of the EED in 2012.

3. Use of discretion in the implementation of the Directive

This section sheds light on the different choices the four Member States made in making use, or not, of the discretion offered in the Directive. To do so, all the provisions offering discretion will be analysed as to the transposition and implementation in the four different Member States.

A generally interesting factor in this regard, especially concerning the legitimacy of the choices made by the Member States and also in light of possible limits to the discretion offered, are possible infringement proceedings opened by the European Commission. In the course of the second semester of 2014, the Commission launched infringement procedures for non-transposition of the Energy Efficiency Directive against 27 EU Member States (all except Malta). By October 2015, with Czechia being the last, all four of the Member States analysed here had received reasoned opinions from the Commission concerning the lack of full transposition of the Directive, yet in all four cases the case was closed again by 2016 or, in the case of Ireland, already 2015.⁴⁴ The infringement proceedings hence had no severe impact on the transposition of the Directive in the four Member States under consideration and will not be considered further in this report. The transposition of the different Articles offering discretion will now be detailed for each Member State.

3.1 Energy efficiency targets (Article 3 EED)

The main goal of the Directive is to promote energy efficiency in the EU and achieve saving 20% of the EU's primary energy consumption by 2020 compared to projections.⁴⁵ This goal is specified in Article 3 EED, which sets an overarching energy efficiency target which the Member States together, as an overall objective, should achieve with their respective individual efforts.⁴⁶ Therefore, Article 3 EED provides that the energy consumption of all the Member States together should not be more than 1474 Mtoe of primary energy or 1078 Mtoe of final energy in 2020.⁴⁷ With the accession of Croatia in 2013, the numbers were adapted to 1483 Mtoe and 1086 Mtoe respectively.⁴⁸

42 EU, 2018.

43 European Commission, 2016.

44 European Commission, 2015b.

45 Recital 2 EED.

46 Recital 10 and 13 EED.

47 Final energy means that only supplies of energy as such can be counted, primary energy means that energy consumption which is associated with the production and supply of electricity is also included.

48 Zgajewski, 2014.

This target needs to be achieved through the individual efforts of the Member States. However, rather than imposing a 20% reduction on each Member State, Member States are left to determine indicative (hence, non-binding) national energy efficiency targets themselves, subject to coordination by the European Commission.⁴⁹ When setting this target the Member States must take into account various factors, in particular that the national target is set in relation to the overall EU target, but also the measures the Member State has taken pursuant to the precursor of the EED, the Energy Services Directive.⁵⁰ More importantly, the Member States are allowed to take into account national circumstances affecting primary energy consumption. The Directive provides a non-exhaustive list of examples of such circumstances, such as GDP evolution and forecast.

Member State discretion led to a sum total of primary energy consumption targets which was 43.9 Mtoe higher than the EU target, thus falling short of the EED's energy savings ambitions.⁵¹ By contrast, the sum total of final energy consumption targets was 8.5 Mtoe lower than the EU target.⁵² These totals are for all Member States combined, not just the four in our case study.

The national targets had to be reported in the National Energy Efficiency Action Plans, which was done in varying ways and provided numbers that are difficult to compare. However, the European Commission translated/calculated the numbers into Mtoe units. An overview of the different targets can be found in table 2.

Table 2. National projections and 2020 targets of energy consumption in the Member States

| | Projected primary/final energy use for 2020 ⁵³ | Primary / Final energy consumption (percentage of EU target 2020) | Reduction of Primary/ Final energy consumption target in % | Population on 1 January 2015 (percentage of EU total) |
|--------------------------|---|---|--|---|
| Czechia | 45.6 / 31.6 | 39.6 (2,7%) (adjusted: 44.3 (3,0%) ⁵⁴) / 25.3 (2,3%) | Pr. reduction of 13,2% / Fin. reduction of 20% | 10.538 275 (2,1%) |
| Germany | 299.9 / 229.5 | 276.6 (18,7%) / 194.3 (17,9%) | Pr. reduction of 7,8% / Fin. reduction of 15,3% | 81.197 537 (16%) |
| Ireland | 18.7 / 15.1 | 13.9 (0,9%) / 11.7 (1,1%) | Pr. reduction of 25,7% / Fin. reduction of 22,5% | 4.677 627 (0,9%) |
| Netherlands | 75.7 / 57.6 | 60.7 (4,1%) / 52.2 (4,8%) | Pr. reduction of 19,8% / Fin. reduction of 9,4% | 16.900 726 (3,3%) |
| EU-28 target 2020 | | 1483 / 1086 ⁵⁵ | | |

Source: European Commission, 2015a, Annex I

49 Ministry of Industry and Trade of the Czech Republic, 2017, p.11. Czechia adjusted their national target on the basis of objections provided by the Commission to the NEEAP 2014.

50 EU, 2006.

51 Sum of indicative primary energy target set in 2015: 1526.9 Mtoe.

52 Sum of indicative final energy target set in 2015: 1077.5 Mtoe.

53 Capros et al., 2008.

54 Revised in 2017, European Commission, 2017, p. 3.

55 Higher than mentioned in EED, due to accession of Croatia in 2013.

The targets set by the Member States illustrate the diversity of the Member States and the use they make of the opportunities for flexible implementation. On the one hand, this is shown by the fact that certain Member States aim to contribute relatively more than others to achieving the EU 2020 target. On the other hand, the differences between the foreseen reduction of primary and final energy consumption indicate that the savings that can be achieved in the Member States may differ. For instance, a Member State with less energy industry can also achieve less savings there. Having said that, at least in terms of primary energy use the sum of initial Member State targets fell short of the overall EU objective (1542 Mtoe instead of 1483 Mtoe)⁵⁶, which might imply that flexibility led to less ambition. Yet, this is not the case for the targets of primary energy use.

Alongside the flexibility in setting national targets, to a certain extent it is left up to the Member States to determine how to achieve this target they have set. Nonetheless, the other provisions of the EED guide the Member States in different fields and sets priorities. Below, we will discuss the provisions that are most relevant in this regard and offer most discretion to Member States.

3.2 National renovation strategy (Article 4 EED)

The first field in which the Member States should become active to achieve the energy efficiency target is the renovation of – public and private – residential and commercial buildings. In particular, the Member States should establish a long-term strategy for mobilising investment in the renovation of these buildings. This strategy should contain certain aspects, such as the identification of cost-effective approaches to renovations and policies and measures to stimulate these renovations. The Member States are free to decide what kind of policies and measures they use, but also more broadly the strategy adopted is mainly determined by the Member States themselves.

The Member States have adopted seemingly similar long-term strategies. In particular, Germany and the Netherlands have explicitly spelled out a strategy strongly resembling their respective approaches. The policy in Germany exists of three parts: ‘Fordern - Fördern - Informieren / Marktkräfte stärken’ [Demand, incentivise and inform/ strengthen market forces].⁵⁷ Whereas, the Dutch strategy contains three activities: 1. Own responsibility; 2. Facilitating and encouraging; 3. Financing and subsidising.⁵⁸ In Czechia and Ireland the governments did not adopt such a clear three-pronged approach, yet in practice they do the same. This comes forward in varying aspects. In the first place, the Irish government requires each energy supplier to work with their customers to deliver energy savings each year.⁵⁹ Moreover, it tries to encourage consumers and organisations with awareness programmes. Finally, it provides financial incentives, e.g. by the launch of an energy efficiency fund. The Czech government, in particular, adopted an energy efficiency awareness campaign, supplemented with information centres as well as financial support from the State.⁶⁰ Furthermore, Czechia already had legislative measures in place to support various energy-efficient construction measures.⁶¹ In sum, all four Member States made similar use of the discretion, with the measures adopted (or already in place) putting a high emphasis on private actors and merely the provision of information and funding by the state.

⁵⁶ Economidou et al, 2016.

⁵⁷ Government of the Federal Republic of Germany (2014), p. 19.

⁵⁸ Ministry of Economic Affairs and Ministry of the Interior and Kingdom Relations, 2014, p. 20.

⁵⁹ Department of Communications, Energy and Natural Resources of Ireland, 2014, p. 75.

⁶⁰ Ministry of Industry and Trade of the Czech Republic, 2020, p. 64-65.

⁶¹ Ministry of Industry and Trade of the Czech Republic, 2020, p. 63.

3.3 Energy savings in public body buildings (Article 5 EED)

More concrete, and binding, targets for the Member States are set in Article 5 EED. This provision requires them to achieve energy savings in buildings owned by the central government. The Directive gives the Member States two options how they could achieve energy savings: (1) renovate 3% of the total floor area of these buildings to meet at least the minimum energy performance requirements that the Member State sets on the basis of the Energy Performance of Buildings Directive;⁶² or (2) take an alternative approach, whereby the Member State takes other cost-effective measures which achieve the equivalent amount of energy savings compared to the renovation program.

In providing these two options the Directive provides one default approach with option 1, which seems to be the preferred approach, but leaves the Member States free to take other measures as long as they provide the same amount of energy savings. All four Member States chose the alternative approach.

Irrespective of the option chosen by the Member States, the Directive provides that the energy savings should be achieved in buildings owned and occupied by central governments (with a total useful floor area over 500/250 m²). Additionally, a Member State may opt to extend the obligation to buildings owned and occupied by administrative departments at a level below central government. Which buildings fall under these terms is up to the Member States to determine, while the total amount of buildings determines the energy saving effort they have to undertake. In that respect, the interpretation given to these concepts may be of importance. For example, Germany excluded social security institutions from the ‘owned by central government’ concept.⁶³ This exclusion does not conform to the information given in a Commission guidance on the implementation of this provision. It is rather founded upon the use of a similar, yet marginally different, definition in Council Regulation 479/2009/EC, which excluded the administration of social security funds.⁶⁴ The Netherlands gave an autonomous interpretation to offices and barracks of the army, selecting only those buildings which are used mainly (more than 50%) as office and barracks.⁶⁵

The Member States may also determine that when calculating the renovation requirement, buildings defined as protected structures or historic buildings, buildings with an army or defense purpose (except living quarters and office buildings) or buildings with a religious purpose are not considered.⁶⁶ In this respect they have certain calculation discretion in setting their own target. Table 3 shows how the four Member States in our study used these possibilities.

Table 3. Types of buildings excluded when calculating the renovation requirements

| | Historic buildings | Army buildings | Religious buildings |
|-------------|--------------------|-----------------|---------------------|
| Czechia | | X | |
| Germany | X | X ⁶⁷ | |
| Ireland | X | | |
| Netherlands | X | X | |

62 Article 4 of Directive 2010/31/EU (EU 2010b).

63 Federal Ministry for Economic Affairs and Energy, 2014, p. 55.

64 European Commission, 2013a, par. 2.

65 Menkveld and Jablonska, 2013, par. 2.3.

66 Article 5(2) EED.

67 The German option does not become completely clear from the NEEAP 2014 – Federal Ministry for Economic Affairs and Energy, 2014, p. 55-56.

Apparently, none of our selected Member States opted to exclude religious buildings, though it may be assumed that perhaps none of them owns and/or occupies such a building as a public body building. Moreover, Czechia opted not to exclude historic buildings.⁶⁸ Also, Czechia had initially planned also to exclude prison buildings, arguing they would fall under the categories of buildings serving the national security, but the Commission intervened to make clear that prison buildings do not fall under any of the categories warranting exclusion. It is important to note that just because certain types of buildings are not included in the calculation, that does not mean that they cannot be the target of measures to improve energy efficiency.

The alternative approach entails that the Member States take other cost-effective measures, which according to the EED may include deep renovations and measures for behavioural change of occupants.⁶⁹ The essence is that they are free to take every measure for reducing energy consumption in central government buildings, as long as the equivalent of energy savings compared to renovation is achieved.⁷⁰ For example, Czechia opted for the alternative approach out of economic efficiency reasons and because many of the central government buildings have historical facades, which are difficult or impossible to renovate with comprehensive measures.⁷¹ Ireland already had behavioural campaigns in place and hence opted for keeping these.

To a great extent the approaches taken in the Member States are a continuation of existing measures.⁷² Such measures entail behavioural campaigns, including raising awareness and installing energy monitoring equipment in Czechia, Germany and Ireland.⁷³ Other measures in Czechia and Germany are the refurbishment of buildings, while the Netherlands opted for a mix of measures: sustainable procurement, optimising and tuning of energy installations or the deployment of Energy Service Companies and energy performance contracting.⁷⁴

Article 5 allows for flexible implementation in reaching the obligations set in the article, as the provision sets a target which Member States must achieve and provides a default approach, but allows other approaches to reach the same end. The Member States have made full use of the room to use other approaches.

3.4 Energy savings amongst final customers (Article 7 EED)

In line with Article 5 EED, Article 7 EED sets a binding target for the Member States and also provides them with different options to achieve this target. In the period 2014-2020 the Member States must achieve 1.5% cumulative annual end-use energy savings compared to the average energy consumption in the period 2010-2012.

The Member States have the discretion to reduce this target or to achieve some of it in other ways. In the first place, they may decide to partially or fully exclude energy sales for the transport sector from the calculation of the overall amount of savings required.⁷⁵ All four Member States made full use of this discretion. Second, the Directive provides four possibilities to take into account national circumstances when calculating the amount of savings and these may lead to a lower target.⁷⁶ The four possibilities are: (1) calculation based on a lower annual saving rate; (2) full or partial ETS industry exclusion; (3) counting certain energy savings from energy transformation and transmission sectors; (4) counting early actions after end-2008 that still deliver savings in 2020.⁷⁷ The Member

⁶⁸ Ministry of Industry and Trade of the Czech Republic, 2014, p. 33.

⁶⁹ Article 5(6) EED.

⁷⁰ European Commission, 2013a, par. 13.

⁷¹ Ministry of Industry and Trade of the Czech Republic, 2014, par. 3.3.1.

⁷² In particular, the Netherlands, Menkveld and Jablonska, 2013.

⁷³ Department of Communications, Energy and Natural Resources of Ireland, 2014b, par. 3.3.1.3; Federal Ministry for Economic Affairs and Energy, 2014, p. 32.

⁷⁴ Ministry of Industry and Trade of the Czech Republic, 2014, par. 3.3.1; Federal Ministry for Economic Affairs and Energy (2014), p. 32; Menkveld and Jablonska, 2013.

⁷⁵ See the last sentence of the second paragraph of article 7(1) EED.

⁷⁶ European Commission, 2013b, par. 17.

⁷⁷ Article 7(2) EED; European Commission, 2013b, par. 18.

States may use one single possibility or combine the various possibilities. However, the possibilities used may not amount to a reduction of more than 25% of the total target.⁷⁸ All four Member States made full use of the possibility to reduce the target by 25%, albeit with different (combinations of) possible exemptions (see Table 4).

Table 4. Exemptions applied in the calculation of the energy savings on the basis of Article 7(2) EED

| | Lower annual saving rate | ETS industry exclusion | Energy transformation and transmission | Early action |
|-------------|--------------------------|------------------------|--|--------------|
| Czechia | x | | | x |
| Germany | | | | x |
| Ireland | x | x | | |
| Netherlands | x | x | | |

The provision gives three options to achieve the cumulative annual end-use energy savings target: (1) setting up an energy efficiency obligation scheme; (2) taking other policy measures, which achieve the equivalent amount of new energy savings as required for the energy efficiency obligation scheme; or (3) a combination of both options, provided that equivalence is maintained.

Irrespective of the option chosen by the Member State, the energy savings target remains the same, yet the means of achieving it may differ. Czechia, Germany and the Netherlands all chose to take other – alternative – measures, whilst Ireland opted for a combination of an energy efficiency obligation scheme and other measures.⁷⁹

An energy efficiency obligation scheme is set up on the national level and entails obligations for energy utilities (energy distributors and/or retail energy sales companies) to achieve energy savings amongst final customers.⁸⁰ The Directive provides Member States the flexibility to take into account national specificities, such as the organisation of market actors, the context of the energy sector and customer habits.⁸¹ Ireland already had voluntary agreements with energy suppliers, which they transformed into a scheme obliging them to achieve savings amongst commercial and residential final energy consumers, but also providing the possibility of buyouts and trading of energy credits.⁸²

As to the alternative measures, the Directive provides a non-exhaustive list of possible measures, such as taxes, funding or other fiscal incentives, but also training and education.⁸³

⁷⁸ Article 7(3) EED.

⁷⁹ Department of Communications, Energy and Natural Resources of Ireland, 2014b; Federal Ministry for Economic Affairs and Energy, 2014; Ministry of Industry and Trade of the Czech Republic, 2014; Ministry of Economic Affairs and Ministry of the Interior and Kingdom Relations, 2014.

⁸⁰ See European Commission, 2013b, par. 23.

⁸¹ Recital 20 EED.

⁸² Department of Communications, Energy and Natural Resources of Ireland, 2014b, par. 1.3.

⁸³ Article 7(9) EED.

Table 5. Alternative policy measures applied on the basis of Article 7(9) EED

| | Czechia ⁸⁴ | Germany ⁸⁵ | Ireland ⁸⁶ | The Netherlands ⁸⁷ |
|---------------------------------|-----------------------|-----------------------|-----------------------|-------------------------------|
| Taxes | x ⁸⁸ | x | x | x |
| Fiscal instruments | x | x | x | x |
| (soft-)law promoting technology | x ⁸⁹ | x | x | x |
| Standards and norms | x ⁹⁰ | x | x | x |
| Energy labels | | x | | x |
| Training and education | x | x | x | x |
| Other | | x | x | x |

The Member States mostly took all the measures mentioned in the EED, except for Czechia, which initially only adopted fiscal measures and training and education (see Table 5).⁹¹ The measures adopted within a certain category also differ in content. For example, under 'tax measures', Ireland has a VRT/Motor tax, while Germany has an air traffic surcharge.⁹² Moreover, the Member States adopted a variety of other measures, such as the set-up of networks, stronger enforcement, as well as measures to influence the modal split.⁹³ Measures taken also vary across time. For example, Czechia only applied financial incentives in 2014 and (mostly) 2015 while from 2018 onwards also including other measures in the policy mix, especially also taxes, while Germany, the Netherlands and Ireland applied at least two different instruments from the beginning.⁹⁴

Similar to Article 5, Article 7 allows for flexible implementation of the obligations set by it, as the provision sets a target which Member States must achieve and guides these Member States to a default option but allows them to take another approach. The four Member States have made full use of the possibility to take another approach.

3.5 Energy Audits (Article 8 EED)

Energy efficiency should also be achieved by making natural and legal persons aware of their energy consumption profile and identifying potential cost-effective energy saving opportunities with so-called energy audits.⁹⁵ Article 8 EED is aimed at enterprises as well as households; however, the focus of this provision lies on the former.⁹⁶

The Directive obliges the Member States to subject enterprises that are not SMEs to an energy audit every four years.⁹⁷ Essentially they must adopt this obligation in their national legislation. However, this still results in different rules on the Member State level.

84 Ministry of Industry and Trade of the Czech Republic, 2014, p. 16-17.

85 Government of the Federal Republic of Germany, 2014; Federal Ministry for Economic Affairs and Energy, 2017, p. 42.

86 Department of Communication, Energy and Natural Resources of Ireland (2017), p. 63.

87 Menkveld and Jablonska, 2013.

88 Not initially, added later.

89 Not initially, added later.

90 Not initially, added later.

91 Ministry of Industry and Trade of the Czech Republic, 2014, p. 17.

92 Department of Communications, Energy and Natural Resources of Ireland, 2014b, par. 1.3; Government of the Federal Republic of Germany, 2014, p. 19.

93 Department of Communication, Energy and Natural Resources of Ireland, 2017, p. 63; Daniëls et al. 2013, p. 14-19.

94 Zangheri et al. 2019: 10.

95 Article 2(25) EED.

96 Recital 24 EED.

97 Article 8(4) EED.

In the first place, some Member States decided to extend the obligation to a small group of SMEs on the basis of specific criteria related to energy use. For example, in Czechia an energy audit is also mandatory for enterprises where the sum of total annual energy consumption of all its buildings and energy management systems exceeds 35,000 GJ.⁹⁸ A similar extension exists in Ireland, where the obligation applies to a public body with individual buildings with a total useful floor area of more than 500 m² or an annual energy spend of more than € 35,000.⁹⁹

In the second place, voluntary agreements may extend the scope to SMEs. The Netherlands has been promoting energy efficiency within enterprises with voluntary agreements for a long period.¹⁰⁰ In these agreements, enterprises – large and SMEs – agree to conduct an energy audit every four years.¹⁰¹ Therefore, they are excluded from the legal obligation.¹⁰²

The content and quality of these audits is left to the Member States, yet the Directive sets some minimum requirements.¹⁰³ The quality of these audits is primarily assured by a set of ex-ante criteria which must be fulfilled to become an energy auditor, as well as by ex-post checks conducted by varying authorities in the Member States.¹⁰⁴ The content of the audits differs in detail on the legislative level.¹⁰⁵ Whereas the Dutch legislator at first opted to refer only to the minimum requirements in the Directive, after consultation with the Commission it elaborated these requirements further on the national level.¹⁰⁶

In addition to the measures for large enterprises, the Member States must also encourage programmes for SMEs to undergo energy audits and to implement the recommendations that follow from these audits. Such programmes may consist of support schemes to cover the costs of the audit and the subsequent implementation of recommendations.¹⁰⁷

To this extent, Member States have adopted varying measures. Czechia and Ireland have adopted regulatory measures, by extending the scope of the obligation. The voluntary agreements have a similar effect. Additionally, Ireland, the Netherlands and Germany have adopted measures aimed at strategic support, training funding and advice.¹⁰⁸ Czechia and Germany have also introduced financial instruments. Whereas Czechia has only funding available, Germany also introduced incentives in the form of reductions of energy-related taxes.¹⁰⁹

The discretion used by the Member States comes from the minimum harmonisation of the Directive. As the audit obligation in the EED is rather straightforward, some Member States chose to have stricter requirements for the enterprises active on their territory.

3.6 Billing information (Article 10 EED)

The EED also contains provisions on energy efficiency aimed at natural persons. Article 10 EED is one of these provisions and entails requirements for access to information and fair and accurate billing, which should enable natural persons to become aware of their energy use.¹¹⁰ Most of these requirements in the EED are binding, but there is some discretion for the Member States.¹¹¹

98 Ministry of Industry and Trade of the Czech Republic, 2017, p. 34; Ministerial Decree 213/2001.

99 Section 7(1) S.I. No. 426/2014 - European Union (Energy Efficiency) Regulations 2014. An exemption for schools fulfilling certain criteria has been added, S.I. No. 646/2016 - European Union (Energy Efficiency) (Amendment) Regulations 2016.

100 Hirzel et al. 2016, p. 135.

101 See Meerjarenspraak energie-efficiëntie 2001–2020 (MJA3) or Meerjarenspraak energie-efficiëntie ETS-ondernemingen (MEE).

102 Article 3 Tijdelijke regeling implementatie artikelen 8 en 14 Richtlijn energie-efficiëntie.

103 Article 8(1), 8(5) and Annex VI EED.

104 Serrenho et al. 2015, p. 22-25.

105 Article 8a EDL-G; Sustainable Energy Authority of Ireland, 2019; Decree no. 213/2001.

106 Ministry of Economic Affairs and Climate Policy, 2019.

107 Article 8(2) EED.

108 Department of Communications, Energy and Natural Resources of Ireland, 2014b, par. 3.1.2.1; Ministry of Economic Affairs and Ministry of the Interior and Kingdom Relations, 2014, p. 11; Government of the Federal Republic of Germany, 2014.

109 Government of the Federal Republic of Germany, 2014.

110 Recital 33 EED.

111 See Articles 9-11 EED.

In the first place, the Member States have the possibility to exempt gas used only for domestic cooking purposes from the requirement to provide billing information at least twice a year (or quarterly on request).¹¹² However, none of the four Member States deemed this exemption necessary and adopted national legislation on this matter.¹¹³

In the second place, the Member States have the option to legislate that, at the request of the final customer, the information in a bill shall not be considered a payment request.¹¹⁴ If a Member State opts for this, it must ensure that energy suppliers offer flexible arrangement for actual payments. Czechia has not made use of this discretion, while Germany, Ireland and the Netherlands have done so. In Germany and the Netherlands there is the practice of monthly advance payments for the use of energy, and in Ireland the legislator delegated the task to the Commission for Energy Regulation to ensure that flexible arrangements are in place.¹¹⁵

3.7 Consumer information and empowering programme (Article 12 EED)

The efficient use of energy by consumers should, according to the EED, be achieved through measures which promote and facilitate this use.¹¹⁶ Thereby, the Directive prescribes that these measures should include one or more of the following elements: (1) measures to promote behavioural change, which entail fiscal incentives, access to finance, grants or subsidies, information provision, exemplary projects or workplace activities; (2) consumer engagement during the roll-out of smart meters through communication of cost-effective and easy-to-achieve changes in energy use or information on energy efficiency measures.¹¹⁷

Table 6. Measures taken by the Member States on the basis of Article 12 EED

| | Czechia ¹¹⁸ | Germany ¹¹⁹ | Ireland | Netherlands ¹²⁰ |
|---|------------------------|------------------------|---------|----------------------------|
| Behavioural change | | | | |
| Fiscal incentives | x | x | | x |
| Access to finance | | x | | x |
| Information provision | x | x | | x |
| Exemplary projects | x | | | |
| Workplace activities | | | | |
| Consumer engagement through communication | | | | |
| Changes in energy use | | | | |
| Information | | | | |

112 Article 10 in conjunction with Annex VII (1.1) EED.

113 Ministry of Economic Affairs and Ministry of the Interior and Kingdom Relations, 2014, p. 14.

114 Article 10(3)(d) EED.

115 Section 41(2) EnWG; Ministry of Economic Affairs and Ministry of the Interior and Kingdom Relations, 2014, p. 14; Section 19(6)(d) S.I. No. 426/2014 - European Union (Energy Efficiency) Regulations 2014.

116 Article 12(1) EED.

117 Article 12(2) EED.

118 Ministry of Industry and Trade of the Czech Republic, 2014, p. 14-26.

119 Government of the Federal Republic of Germany, 2014, p. 22-24.

120 Ministry of Economic Affairs and Ministry of the Interior and Kingdom Relations, 2014, p. 14.

The Member States took a variety of measures to empower consumers on the national level, though none related to consumer engagement during the roll out of smart meters (see Table 6). Providing information in its broadest terms includes awareness campaigns, the provision of advice and consultation as well as the use of certification marks and energy labelling.¹²¹ In Ireland, no information has been provided on the measures taken, except that the national legislation provides that the Sustainable Energy Authority of Ireland should implement behavioural change measures and the Commission for Energy Regulation should engage consumers during smart meter roll-out.¹²²

3.8 Enforcement of the EED (Article 13 EED)

The enforcement of the national rules implementing the Directive is left to the Member States. The Directive only provides that they should provide for penalties which are effective, proportionate and dissuasive, to ensure compliance with the rules on the energy efficiency obligation scheme, energy audits, metering and billing information and the competition rules in the energy services market.¹²³

On the national level there are a variety of penalties in place in respect to the rules. Among our four Member States, Ireland is the only one with an energy efficiency obligation scheme and, accordingly, the only Member State with penalties on this rule. Where an energy supplier does not deliver the energy saving obligation the Minister may direct the energy supplier to pay a sum, determined by the Minister, into the Energy Efficiency National Fund.¹²⁴ Moreover, the failure to comply with provisions on control and verification systems of the energy efficiency obligation scheme may be sanctioned with a fine of € 5 000 on summary conviction.¹²⁵

In contrast, the energy audit obligation had to be implemented in all Member States and subsequently penalties were laid down in all four, though with different heights. The fine that the responsible authority in Czechia can impose is the highest: non-compliance with the audit obligation can be sanctioned with a fine of up to € 200 000.¹²⁶ Under German law non-compliance is an 'Ordnungswidrigkeit' (violation of administrative law), which may result in a fine up to € 50 000.¹²⁷ In Ireland, the fine is considerably lower, as non-compliance can be sanctioned with a fine of € 5 000 on summary conviction.¹²⁸ However, under Irish law certain people, such as a director, can be held liable for the non-compliance when the non-compliance is attributable to him or her. The Dutch penalties are a bit different compared to the other Member States. Enforcement of the audit obligation is decentralised in the Netherlands and the competent authorities have the option to impose either an administrative enforcement order ('last onder bestuursdwang') or an administrative order subject to a periodic penalty payment ('last onder dwangsom').¹²⁹ Under circumstances non-compliance may also lead to criminal sanctions, depending on whether the non-compliance was committed intentionally. Imprisonment up to 6 years or a fine of € 87 000 is possible.¹³⁰

The provisions on metering and billing information are sanctioned differently in Ireland and the Netherlands. In Ireland the responsible supervisory authority can issue a direction or determination, when the authority is of the opinion that a company does not satisfactorily comply with the requirements in the law.¹³¹ Non-compliance with such a direction or determination can be enforced by a Court order. The Dutch supervisory authority has the power to give binding directions to companies,

121 Government of the Federal Republic of Germany, 2014, p. 22-24; Ministry of Industry and Trade of the Czech Republic, 2014, p. 14-26.

122 Regulation 38 S.I. No. 426/2014 - European Union (Energy Efficiency) Regulations 2014.

123 Article 13 EED.

124 Regulation 7 S.I. No. 131/2014 - European Union (Energy Efficiency Obligation Scheme) Regulations 2014.

125 Regulation 12a S.I. No. 634/2016 - European Union (Energy Efficiency Obligation Scheme) (Amendment) Regulations 2016.

126 5 million Kč; 12a Zákon č. 406/2000 Sb.

127 Article 12 EDL-G.

128 Regulation 16 S.I. No. 426/2014 - European Union (Energy Efficiency) Regulations 2014.

129 Article 6 Tijdelijke regeling implementatie artikelen 8 en 14 Richtlijn energie-efficiëntie; Article 5:21 and 5:31d Algemene wet bestuursrecht.

130 Article 1a(1) Wet op de economische delicten.

131 Regulation 20-21 S.I. No. 426/2014 - European Union (Energy Efficiency) Regulations 2014.

to impose an administrative order subject to a financial payment or a fine up to € 450 000 (nowadays € 900 000).¹³² However, while all Member States regulate potential fines, our interviews indicate that fines do not seem to play an important role in the enforcement of the Directive.

Lastly, Ireland and Czechia are the only Member States that have explicitly regulated the enforcement of the competition rules in the energy services market.¹³³ In Ireland, the responsible supervisory authority may apply to the Court for a compliance order against a company in case of non-compliance. If granted, the Court may compel compliance as well as stipulate appropriate and proportionate measures aimed at ensuring compliance. Whether this includes the imposition of a fine is not clear. In Czechia, there is an explicit obligation to refrain from any activities that may impede demand for and delivery of energy services or other energy efficiency improvement measures. If this obligation is breached, a licence holder may be fined 15 000 000 CZK. All in all, the four Member States made different choices in enforcing the Directive. However, overall our interviews showed that penalties seem to not play an important role in the enforcement of the Directive and are often, beforehand, prevented through contact and coordination between the regulatory authority and the respective private actor.

3.9 Chapter III: Efficiency in Energy supply

Article 14: Promotion of efficiency in heating and cooling

Article 14 urges Member States to promote energy-efficient heating and cooling. For that sake, Member States are to conduct an assessment of the potential for high-efficiency cogeneration in district heating and cooling and (partly based on that assessment) should carry out policies promoting efficient heating and cooling systems.¹³⁴

Article 14(2) stipulates that ‘Member States shall adopt policies which encourage the due taking into account at local and regional levels of the potential of using efficient heating and cooling systems.’¹³⁵ All four Member States have opted for non-legislative measures in implementing this provision, mainly different financial incentive schemes. The main differences are, accordingly, in the detail of focus and capacity of these programmes.

In Germany the so-called Act on Combined Heat and Power (‘Kraft-Wärme-Kopplungs-Gesetz’ — KWKG) is ‘the key incentive programme for extending the use of combined heat and power.’¹³⁶ In response to the EED, Germany evaluated the act slightly earlier than originally envisaged. On the basis of this evaluation several support programs by the Federal Ministry for Economic Affairs and Energy (BMWi) and the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) funded the establishment of heating grids and the set-up of small CHP-units.¹³⁷

The Netherlands provides tax incentives and takes other measures in order to promote efficient heating and cooling systems. Examples of tax incentives are the EIA and energy tax, while other measures include the LTA3, MEE, Green Deals, the Nationaal Expertise Centrum Warmte (National Heat Expertise Centre) and the setting of EPC standards.¹³⁸ Similarly, Ireland introduced the renewable heat incentive. Czechia in a first step assessed the potential for efficient heating and cooling systems in order to evaluate the possibilities of fiscal incentives. While Czechia adopted primarily non-legislative measures, several legislative measures are worth mentioning. For instance, under Act No 165/2012, distribution system operators and the transmission system operator are obliged to preferentially connect power plants with high-efficiency cogeneration of heat and power in

¹³² Article 21 and 22 Wet implementatie EU-richtlijnen energie-efficiëntie; Article 77h and 77i Elektriciteitswet 1998; Article 60ac and 60ad Gaswet; Article 18 Warmtewet.

¹³³ Regulation 39 S.I. No. 426/2014 - European Union (Energy Efficiency) Regulations 2014.

¹³⁴ Article 14 EED.

¹³⁵ Article 14(2) EED.

¹³⁶ Federal Ministry for Economic Affairs and Energy, 2014, p. 33.

¹³⁷ Concerted Action Energy Efficiency Directive, 2016, p. 45.

¹³⁸ Ministry of Economic Affairs and Ministry of the Interior and Kingdom Relations, 2014, p. 25.

the specified territory. Under the Energy Act, an authorisation for the construction of a power plant with a total installed capacity of 1 MW or more may be granted only if an obligatory energy assessment is submitted. The authorisation will not be granted if the application does not include an energy assessment to ensure high efficiency combined heat and power generation in accordance with the Energy Management Act. Additionally, since July 1, 2015, a builder or owner of an energy sector undertaking must secure an energy assessment to assess the costs and benefits of providing high-efficiency cogeneration in the case of construction of a new power plant or substantial renovation of an existing power plant with a total thermal input exceeding 20 MW, except for power plants with an operating time of less than 1,500 hours per year, and nuclear power plants.¹³⁹

Article 14(10) regulates the guarantee of origin of ‘electricity produced from high-efficiency cogeneration.’ Member States are left the discretion to lay down the criteria for this guarantee. Except for Germany, where the guarantee of origin was already regulated in the act on CPH,¹⁴⁰ all other three Member States took action to transpose the provision. In the Netherlands, it was regulated in the ‘Regeling garanties van oorsprong voor elektriciteit opgewekt in een installatie voor hoogrenderende warmtekrachtkoppeling,’ which also lays down which aspects should be mentioned on the certificate of origin which is issued by the ministry.¹⁴¹ In Ireland, ‘S.I. No. 426/2014 - European Union (Energy Efficiency) Regulations 2014’ stipulates that the guarantees should be issued by SEMO, the Single Electricity Market Operator in coordination with the Commission for Energy Regulation (CER). In Czechia, the market operator issue the certificates of origin.

Article 15 Energy transformation, transmission and distribution

Article 15 regulates energy transformation, transmission and distribution in smart grids. Member States are to ‘ensure that an assessment is undertaken concerning energy efficiency potentials of gas and electricity infrastructure and that concrete measures and investments are identified for the introduction of energy-efficiency improvements, with a timetable for their introduction.’¹⁴²

Article 15(3) offers Member States the discretion to ‘permit components of schemes and tariff structures with a social aim for net-bound energy transmission and distribution.’ Yet, none of the Member States makes use of this discretion or takes regulatory action with regard to this provision.

Similarly, Articles 15(4-8) EED are already regulated in existing law in the Netherlands (Elektriciteitswet 1998) and Germany (Act on CHP). In Czechia, the provisions are fully transposed except for Article 15 (7).

Overall, chapter III of the EED offers only limited analytical value in terms of flexible implementation. The discretion offered in the chapter mostly concerns technical differences in the Member States’ energy efficiency environments and differences in implementation seem to be limited.

3.10 Chapter IV: Horizontal measures

Article 18 Energy Services

Article 18 concerns energy services. Article 18(2) stipulates that ‘Member States shall support the proper functioning of the energy services market, where appropriate’¹⁴³ and lists different possible measures. Ireland and Czechia are the only Member States which have taken legislative action in accordance with this article. In Germany, the ‘Bundesstelle für Energieeffizienz’ (BFEE) is responsible for ensuring the proper functioning of the market. Czechia ‘support[s] the provision of energy services by specifying particulars of energy supply contracts Act No 406/2000 on management,

139 § 30, Act No 458/2000.

140 Federal Ministry for Economic Affairs and Energy, 2014, p. 29.

141 Ministry of Economic Affairs, 2014.

142 Zgajewski, 2014.

143 Article 18(2) EED.

by creating a list of energy service providers and by creating a methodology for the preparation of energy savings projects.¹⁴⁴ Further, it has legislated obligations for energy service contracts.¹⁴⁵ Ireland has transposed the provision in Regulation 39 of S.I. No 426 of 2014, more specifically in part 7, which stipulates that the Sustainable Energy Authority of Ireland (SEIA) 'shall promote the energy services market and access for SMEs to this market,' enumerating different measures of how it should do so.¹⁴⁶

Article 18(3) requires Member States to 'ensure that energy distributors, distribution system operators and retail energy sales companies refrain from any activities that may impede the demand for and delivery of energy services or other energy efficiency improvement measures, or hinder the development of markets for such services or measures.'¹⁴⁷ In Germany, the NEEAP of 2014 argues that the current functioning of the market is satisfactory and hence no action with regard to Article 18(3) necessary, while Czechia has fully transposed the provision.¹⁴⁸

Article 19 Other measures to promote energy efficiency

Article 19(1) concerns potential (non-)regulatory barriers to energy efficiency, which Member States shall remove 'if necessary.'¹⁴⁹ While Germany does not consider it necessary to take any action in this regard,¹⁵⁰ the Netherlands and Ireland have taken different measures, partly with a focus of overcoming split incentives between owners and tenants concerning efficiency-improving incentives. Czechia implemented the provision under the framework of increasing energy efficiency in its NEEAP.

Article 20 Energy Efficiency National Fund, Financing and Technical Support

Finally, Article 20 concerns possible financial facilities Member States may establish or support in order to 'maximise the benefits of multiple streams of financing.'¹⁵¹ All Member States already had several funding schemes in place or set up new funding schemes with regard to Article 7 EED. Moreover, the four Member States have either adopted new or amended existing schemes, merging under a so-called national fund different financial facilities in accordance with Article 20(4).

3.11 Differences and similarities in implementing the EED in four Member States

Table 7 gives an overview of the choices made by the four Member States and shows the main differences. It shows both that Member States made ample use of the discretion offered in the Directive and that the Directive has been transposed and implemented differently across our four Member States.

One important source of differences is Article 3, in which the four Member States did not only chose different absolute targets, which was to be expected, but also relatively we see large differences in the reduction of targets of up to more than 15%. In Articles 5, 7, 8, 10 and 12, which are about substantive measures to be taken, we again see a wide variety. First, while the overall degree of used discretion is high, not all Member States have actually made use of all the discretion, such as in Articles 8 and 10. Second, especially in Articles 5, 7 and 12 we find that the Member States are using a range of different measures. Further, the Member States differ in the maximum fines possible in enforcing the Directive and under some provisions, such as Article 14, there are differences in the format of transposition: Only Ireland has adopted legislative measures in transposing that Article. Lastly, also in terms of financial support the measures taken and schemes developed vary widely.

144 Ministry of Industry and Trade of the Czech Republic, 2014.

145 Act No 406/2000.

146 Regulation 39 S.I. No. 426/2014 - European Union (Energy Efficiency) Regulations 2014.

147 Article 18(3) EED.

148 Act 458/2000 § 11.

149 Article 19(1) EED.

150 Federal Ministry for Economic Affairs and Energy, 2014, p. 33.

151 Article 20(1) EED.

Hence, two main conclusions can be drawn. First of all, all four Member States made extensive use of the discretion offered. In that sense, they acted quite similarly. Yet secondly, the discretion offered has led to a wide variation in the policy measures taken in the four Member States on the basis of the EED, so indeed we see differentiation in the implementation of the Directive. In the following chapter, the reasons behind the choices made will be elaborated on.

Table 7. Summary of transposition

| Article | Subject matter | Nature of flexibility | Differentiation |
|---------|---|---|--|
| 3 | Energy efficiency target | Member States set national targets | Wide variation in reduction targets (between 7.8% and 25.7% for primary and between 9.4% and 22.5% for final energy consumption) |
| 5 | Energy savings in public body buildings | Choice between default option and other measures | All four Member States chose to take other measures. These vary between them. |
| | | Scope of 'public body buildings' | The four Member States opted to exclude different types of buildings |
| 7 | Energy savings among final customers | Possibility to exclude the transport sector | Used by all four Member States. |
| | | Reduction of target of up to 25% using four possible exemptions | All four Member States reduced the target with 25% but with different (combinations of) exemptions |
| | | Choice between default option and other measures or a combination | CZ, DE and NL chose to take other measures. IE used a combination of the default option and other measures. The specific measures vary between the four Member States. |
| 8 | Energy audits | Extension of obligation | Used by CZ and IE |
| | | Use of voluntary agreements | Used by NL |
| | | Specific content and quality of audits | Small differences between the four Member States |
| | | Support measures | Different measures in the four Member States |
| 10 | Billing information | Exemption of gas for domestic cooking | Not used by any of the four Member States |
| | | Possibility to provide that the bill is not a payment request | Used by DE, IE and NL; not by CZ |
| 12 | Consumer information and empowerment | Choice between types of measures | Different measures in the four Member States |
| 13 | Enforcement | Levels of sanctions | Wide variety of maximum fines (between 5 000 for IE and 200 000 for CZ). Some differences in use of other administrative or criminal sanctions. |

| | | | |
|----|--|--|--|
| 14 | Efficiency in heating and cooling | Measures to stimulate efficient heating and cooling | All four Member States used financial incentive schemes, which differ in specific focus and capacity. CZ also used some legislative measures |
| | | Criteria for the guarantee of origin of electricity | Specific administrative differences between the Member States |
| 15 | Energy transformation, transmission and distribution | Permission of schemes and tariff structures with a social aim | None of the four Member States makes use of this possibility |
| | | Possibility to encourage operators to improve operational rates | None of the four Member States makes use of this possibility |
| 18 | Energy services | Support for the proper functioning of the energy services market | Only IE and CZ has taken legislative action. Existing structures for this purpose in CZ and DE |
| 19 | Other measures | Removal of (non-) regulatory barriers to energy efficiency | No measures in DE; different measures in CZ, IE and NL |
| 20 | Financing | Establishment of financial facilities | Various funding schemes in the four Member States, partly pre-existing and partly newly created |

4. Drivers of differentiation

What determines the choices made when using the discretion offered in the Directive? The answer to this question will help understand how regulatory discretion is used. Our analysis shows that several factors explain the choices made in the four Member States.

The analysis shows that a dominating factor explaining Member States' choices is the existing national energy efficiency regime. Member States, all else being equal, have a preference for keeping in place existing legislation. In the field of energy policy, all Member States had existing policies in place, in part on the basis of existing EU legislation, in part on the basis of national initiatives. The interviews showed that overall, the discretion provided in the EED allowed Member States to fit parts of the provisions into the existing national regimes, while some, such as Czechia, still considered the flexibility in parts to be insufficient and the overall regime as to rigid.

For example, in the important Article 7, existing systems across Member States differed greatly. While the Commission had initially planned for only the default option of obligation schemes to feature in the Directive, the reluctance to change on the part of Member States was the main reason for adding the discretion to use alternative approaches to the Directive. It is no coincidence that the discretion offered in the Directive fits well with existing national approaches. In the negotiations of the Directive, the Commission had not envisaged offering alternatives, favouring uniform implementation. Yet, as one of our interviewees phrased it, with the start of the negotiations, the Commission learned 'the hard way that you don't legislate in a vacuum, but rather that you had already in 2012 many different schemes in place that were not necessarily suitable to be translated into a single scheme.' Already in the negotiations, a main interest for Member States was to allow for existing national regimes to be sustained, which explains not only why Articles 5 and 7 offer alternative approaches to an already very elaborated default option, but also why the possible alternative measures fit so well with the already existing approaches of the Member States. Most of the four Member States

in our analysis favoured alternative approaches. In Germany, subsidy schemes mainly organised around an investment and development bank (KfW) had produced good results. In the Netherlands, the existing liberal approach of voluntary agreements, statement of intent was agreed between the government and industry.

In relation to sticking to existing legislation, two different rationales can be detected. First, these are what our interviewees referred to as 'pragmatic' choices. Changing policy regimes could disrupt existing measures and induce considerable costs. We see this reasoning in the implementation of Article 5 of the Directive, offering alternative measures to annually renovating 3% of public buildings. In Ireland, the reason for choosing the alternative approach was that, for one, renovation would have been costly, and the Irish government still acted under considerable financial constraints after the financial crisis. Moreover, the renovation measures could have led to a disruption in the use of these buildings, public facilities to provide public services, which could equally have been disrupted. Similarly, the fact that in some Member States a lot of publicly owned buildings are historic buildings posed additional constraints. While the effect of renovating these buildings would have been greater than renovations in modern buildings, the costs and length of comprehensive renovation measures made them difficult to accomplish.

Second, the effectiveness of measures was an argument as well. According to our interviewees, those countries which already demanded discretion in the negotiations of the Directive were 'the good students in class,' those countries already doing rather well in Energy efficiency. For example, the Irish experience with the alternatives proposed in Article 5 had been very positive even before the coming into force of the EED. Ireland had already started ambitious campaigns to increase energy efficiency in public buildings, mainly focusing on behavioural change. The idea behind this approach was that behavioural change has to precede any possible large- and small-scale renovation in order for the latter to have the desired impact. Also, Czechia opted for alternative approaches both in Articles 5 and 7 because of the belief that these alternatives increase the chances of reaching the targets. The arguments against changing the existing national approach were all the more convincing in case of policies already working well.

When discussing the reasons for alternative choices in the Member States, it is important to consider the actors involved in the implementation process. In all four of the Member States, the central governmental level and the responsible ministries or departments took a leading role in the implementation process and usually took the first steps in drafting legislation transposing the Directive. The political views of the parties in government also played a role in the decision to use discretionary space in the implementation. Often, this is coupled with the ambition of the government, in this case on energy efficiency. In Germany, the approach of the government was rather non-ambitious, in most aspects wanting to do the minimum to comply with the Directive. This often entailed choosing the alternative approach and trying to make existing national policies fit into what was demanded by the Directive. In Czechia, the government parties actively opposed energy efficiency obligation schemes in Article 7, even though parts of the Energy Efficiency Unit in the Ministry of Industry and Trade preferred them. Yet politically, it was unpopular because it would have led to an increase in energy prices.

The high involvement of semi-public and private actors in the implementation process and the fact that they were targeted in the Directive was an additional obstacle to radical changes in the existing national approaches. The caution to not overburden industry played a role in all four Member States when opting for alternative measures under Article 7. In Czechia, there was strong opposition to obligation schemes from the business side. Similarly, the Dutch, Irish and German authorities were receptive to their demands. In Ireland, while obligation schemes were introduced, alternative measures were added so as not to make 100% of the target dependent on the obligation schemes

and, again, not to overburden the obligated parties. It is interesting to note that the initial choice for the obligation scheme in Ireland also did not mean a radical change of the existing national regime, as it had voluntary obligation schemes in place already prior to 2012.

All in all, our analysis shows that it was mainly three reasons that explained the use of discretion. First, the existing energy efficiency regimes in the Member States played an important role. A general preference for not disrupting existing systems coincided with the belief that existing systems were well-working and changes would have been disruptive, so that when forced to choose the default option, Member States would not have been able to reach the targets in the Directive. Second, 'pragmatic' financial and organisational reasons were considered when choosing alternative approaches. Finally, our interviews stress that in the end the decision is a political decision, and that the political priorities and ambitions of the governments in place play an important role, as well. Especially a lack of ambition on the respective provisions of the Directive leads to choosing alternative approaches and then trying to fit existing regimes into the Directive, rather than changing the existing policy regime.

5. Effects of differentiation

5.1 Impact on national energy efficiency policies

Both the document analysis and the interviews show that in terms of shaping Member State policies, the provisions of the EED had a relatively low impact. Most of the policy measures 'used' to comply with the EED had already been in place. Member States merely had to put some effort into reporting the measures taken to the Commission in a way that would bring them in line with the requirements of the Directive. This was made possible through the large discretion offered by the alternative approaches. Only Ireland adopted the default measure, developing an obligation scheme for energy suppliers. However, a voluntary scheme had already been in place and was merely transformed into an obligation. While this can certainly be considered an important change, it only had limited impact on the actual policy design. All in all, the discretion offered in the EED led to the continuation of existing policies rather than policy change at the national level.

However, this does not mean that the EED has had no impact at all. Especially our interviews reveal indirect influence of the Directive on national policies. First of all, it was seen as an important impetus for energy efficiency policy. The EED emphasised the importance of the policy sector to both policy-makers and industry, and created an increased need and, consequently, awareness, to raise efforts for reaching the energy efficiency targets introduced in Articles 5 and 7. Ambitious policy actors used the Directive and subsequent European pressure to push their policies further. Here it is important to note that the effect of the Directive in general seems to have depended on the political ambition in the respective Member States and that the discretion offered a way out of ambitious policies.

Relatedly, the financial resources provided for energy efficiency policy increased. Hence, while the character of the measures taken by the Member States was not impacted decisively by the EED, the Directive did lead to increased efforts and financing, thereby arguably improving the situation in the Member States and equipping energy efficiency policy with the necessary impetus to reach the targets set in the Directive. However, the degree to which this potential of the Directive unfolded in the Member States differed. In Germany, for example, for reasons of political priorities, the respective political actors decided to settle for the bare minimum in complying with the EED, while for example in Ireland and Czechia, energy efficiency efforts were partly increased significantly. Hence, active policy actors promoting energy efficiency were a necessary condition for the EED to be able to provide impetus for national policies in those cases where discretion allowed for the continuation of national policies.

Overall, while this assessment could be interpreted as the Directive having limited impact only, at the same time it allows for tailor-made solutions at national level and allowed the Member States to comply with EU legislation while at the same time keeping partly well-working national policy regimes intact and providing an impetus for ambitious (actors in) Member States to drive national energy efficiency efforts further. All four Member States in our analysis made abundant use of the opportunity to keep existing policies in place or adapt them slightly only. Hence, the discretion offered can be understood as consideration for the partly widely diverging existing national policy regimes.

5.2 Objectives of the Directive and divergence from targets

Overall, the national energy efficiency targets in terms of primary energy use set by all 28 Member States did repeatedly not add up to the initial overall EU target of 20% reduction of primary energy use in 2020,¹⁵² which is a first indication that discretion for Member States in setting their own targets in addition to a lack of enforcement means by the Commission had in parts negative effects on reaching the Directive's goals. In its latest report published in 2020 and covering the period until 2018, the Commission still notes that 'both indicators [primary energy consumption and final energy consumption] are above the fixed trajectory for the 2020 targets.'¹⁵³ It is difficult to assess to what extent the targets set by the four Member States under analysis have contributed to this situation. Yet, what becomes apparent is the range in ambition between the four Member States, as shown in section 3 of this report. It does show, however, that Czechia was on track to reaching both of its targets in 2018, while for the Netherlands this only applies to the final energy consumption, whereas both Ireland and Germany were not on track for either.¹⁵⁴ The complex calculation and differences in reporting, however, make an assessment of the actual performance and likelihood of reaching the targets difficult.

If we look into the important articles 5 and 7 on energy efficiency in public buildings and energy providers, the numbers are different. In terms of the progress in Article 5, only Ireland had reached the target (and overwhelmingly so), while Czechia struggled to reach the target in most years since 2014. For the Netherlands and Germany, data is not always available. The Netherlands failed to reach the target for 2015, while Germany did so for 2017 but reached it in 2015.¹⁵⁵ The picture is different for Article 7, where Czechia was the only country not on track to reach the target in 2016.¹⁵⁶ Again, the complexity of the calculation and especially the possibility to balance annual numbers with excess savings from other years make estimations difficult. Czechia, for example, aims at reaching the 2020 targets in 2021-22 only, which the Directive also allows for.¹⁵⁷

At the same time, at least our interviews seem to indicate that the discretion actually allowed the Member States to reach more in terms of effective targets. Especially in the Irish and the Czech case, but less explicitly also in Germany and in the Netherlands it seems that the discretion allowed the continuation of successful programmes of which at least the national authorities have the impression that they actually improved performance in terms of energy efficiency.

So overall, it seems when simply considering the effective goal of increasing energy efficiency, the analysis offers mixed results. While the impression in the Member States implies that discretion was helpful in reaching the targets, the overall quantitative data show that the initial EU targets have not been reached. However, especially concerning the specific measures taken, it is difficult to assess whether results would have been better if all Member States had to implement harmonised measures.

152 Economidou et al, 2018.

153 European Commission, 2020, p. 3.

154 European Commission, 2020, p. 15.

155 Zangheri et al, 2019, p.7.

156 Zangheri et al, 2019, p. 9.

157 Interview with Czech energy efficiency policy expert.

5.3 Other effects

A positive effect of the Directive was that, especially in those provisions with a lot of discretion for the Member States, the amount of data available on energy efficiency measures and achievements at the national level increased. This was due to the reporting requirements that came with the alternative measures to be taken. The interviews show that this has also been an overall target of the Directive, and the increase in data had positive impacts on the efficiency of the measures at the national level. For example, Ireland based its behavioural campaigns on comprehensive real-time data, being able to first trace its success and consecutively share its own approach with other Member States in the framework of the Concerted Action between Member State authorities. This contributed to the spread of best practices and possibly a growing harmonisation of policies. In general, the Directive allowed for a strong increase in the data available on the situation in the Member States, independent of the actual policies used at the national level. However, the discretion in reporting these data especially right after the Directive entered into force meant that the comparability was hampered. In addition, the reporting requirements often have not been met, which is why many reports and assessments are fragmentary.

Overall, our analysis does not reveal many disruptive cross-border effects of national differences in the measures chosen. Most measures are mainly domestic in nature and do not affect implementation in other member states or create barriers for trade or business. An exception to this may be the mandatory energy audits of Article 8 EED. As has been shown elsewhere, this requirement has been implemented differently across all member states.¹⁵⁸ This variation could present difficulties for transnational companies that have to work with different requirements in different member states. However, this is not the case for companies that work entirely within one member state. Exactly to how many companies this applies and to what extent it presents actual difficulties are empirical questions that we cannot answer on the basis of our materials.

6. Conclusions and implications

This report analysed what use Czechia, Germany, Ireland and the Netherlands have made of the flexibility in implementation offered to them in the EED and what effect that has had on the effectiveness and legitimacy of the Directive. Based on the legal and empirical analysis presented above, we can now draw a number of conclusions and formulate implications.

The analysis shows that the four Member States have made wide use of the flexibility offered to them in the EED. The EED includes a wide margin of discretion, as is borne out by the content of its provisions and has been confirmed by the CJEU. A key element of this discretion is the fact that Member States can themselves set national energy efficiency targets. These targets show wide variety between the four Member States, with some going beyond and others staying below the EU-wide 20% target. The sum total of all Member State targets (not just the four in our study) fell short of the overall EU-wide total foreseen in the Directive in the case of primary energy consumption, while for final energy consumption the national targets did add up. Yet, current estimations show that in neither of the two the EU reached the 2020 targets.

The other provisions in the EED deal with different aspects and types of measures. Here we see four patterns in terms of differentiation:

- Flexibility provisions that lead to substantive variation between the Member States. Examples include the choice for measures relating to public body buildings, the measures taken to promote energy savings among final customers, and measures aimed at consumer choice and empowerment. A special case in this regard is formed by the type and level of sanctions that are used to enforce obligations under the Directive. Here, we observe large differences

¹⁵⁸ Nabitz and Hirzel, 2019.

between the Member States. However, our interviews indicate that in practice sanctions play a minor role in the enforcement of the EED, which makes these differences less important in practice than they appear on paper.

- Flexibility provisions that lead to minor or relatively technical variation. Examples include the specific requirements relating to energy audits, the financial incentive schemes to stimulate efficient heating and cooling and the criteria for the guarantee of origin for electricity generated through efficient heating and cooling.
- Flexibility provisions that do not lead to variation because they are used in the same way by all the four Member States. An example is the possibility to exclude the transport sector under Article 7 EED.
- Flexibility provisions that do not lead to variation because they are not used by the four Member States. Examples include the possibility to exempt gas for domestic cooking under Article 10, the possibility to permit components of schemes and tariff structures with a social aim, and the possibility to encourage operators to improve their operational rates of efficiency (both under Article 15). It may well be, however, that these provisions were used by (and possibly even written for) other Member States.

The effects of these differences on the effectiveness and legitimacy of the Directive are more difficult to pinpoint. Nevertheless, a number of observations offer a basis for tentative conclusions in this regard. With regard to effectiveness, we observe a mixed set of outcomes. In terms of the overall energy savings targets, the sum of Member State targets falls short of the overall EU target foreseen in the Directive for primary energy use, while for final energy use they initially conformed to the overall EU target. These national targets are only indicative, so the practical consequences of this divergence in the one case and convergence in the other are unclear, as the Commission also lacks any enforcement means. Still, it seems reasonable to say that as a focal point for energy savings policies, the leeway offered to set national targets has allowed for more relaxed ambitions than initially foreseen (and agreed upon) in the case of primary energy use at the EU-level. The effect of discretion on (not) reaching these targets is difficult to assess, especially because the lack of enforcement of nationally set targets might play the bigger role in this regard.

The picture is different for the flexibility offered in adopting measures to achieve energy efficiency improvements. In many cases, this flexibility has led to substantial differences between the four Member States. Most of these differences can be traced back to pre-existing policies in the Member States that were retained under the Directive. To some extent, these choices may reflect a degree of inertia on the part of implementers. We found indications that this played a role in some cases. In those cases, efforts were focused more on complying with the minimum requirements imposed by the Directive than on stepping up ambitions.

At the same, we also find a number of indications that point towards another (more positive) assessment. To begin with, existing practices were in many cases retained because they were seen to work well. Moreover, implementing measures takes time; the flexibility in the EED allowed Member States to further develop existing approaches rather than cutting them off before they had matured. Thirdly, the flexibility offered by the EED allowed for experimentation with different approaches; full harmonisation by prescribing one approach would have reduced these opportunities for learning by experimenting. This dynamic was strengthened by the fact that the use of alternative measures resulted in the production and dissemination of new data on the effectiveness of various energy efficiency measures. Finally, the EED seems to have raised the awareness and priority of energy efficiency policy. This could be used by actors who supported more ambitious policies to bolster their case. To the extent that this was the case, the EED achieved its goal of improving energy efficiency policies while allowing for differences in approach between Member States.

Overall, then, the flexibility offered by the EED seems to have had both positive and negative consequences for effectiveness. Whether these consequences were positive or negative depended on the specific issue at hand and, crucially, on the (political) constellation in a Member State. Arguably and broadly speaking, the process of determining national energy efficiency goals could benefit from a stronger degree of harmonisation, whereas the flexibility allowed in choosing measures facilitated implementation.

In terms of legitimacy, the flexibility in the EED increased support for it under Member State implementers. It set into motion the formulation of common goals, while allowing Member States to opt for their preferred domestic policy approaches. Given the criticism some Member State parliaments initially levelled at elements of the EED, a stronger directive would probably have met with more resistance and could have undermined support for the Directive.

In making these assessments, it should be kept in mind that (the implementation of) the EED is one step in a longer sequence of EU energy efficiency initiatives. The EED was more comprehensive compared to its predecessor. Currently, a successor to the EED is being discussed, which may again step up the level of EU involvement in this area. In light of this longer-term development, the balance between EU-level coordination and national freedom during implementation does not represent a stable equilibrium but only one stage in a longer-term development.

This raises the question whether something can be said about the desirable level of flexibility in Member State implementation in this field. To be sure, such a statement can never be made in an absolute or permanent sense. It will always be contingent on particular circumstances at a given point in time: technological, legal and political developments may all affect the desirable balance between harmonisation and flexibility over time. At the same time, it is not self-evident that further steps in this area should lead to ever-stricter EU standards, which leave less room for Member States.

Whereas the specification of overall energy efficiency targets may be important to achieve underlying economic, environmental and climate change objectives, this issue area shows a number of features that favour leeway for Member States in implementation. One is the fact that energy efficiency measures need to be implemented in specific domestic (often even: local) circumstances, which militates against a fully harmonised approach for all Member States. A second important feature is that the implementation of most measures does not have cross-border effects. Whereas the achievement of overall targets does affect other Member States (in terms of energy markets and environmental effects), the use in one Member State of measures to achieve those targets usually does not (positively or negatively) affect the implementation of energy efficiency measures or the attainment of energy efficiency objectives in other Member States. An exception may be the mandatory energy audits to the extent that they apply to large, transnational companies.

Overall, then, this is an issue area that arguably shows stronger interdependencies between Member States at the level of the overall policy outcomes than at the level of specific measures. For any framework to regulate energy efficiency at the EU-level, this would imply a combination of stronger harmonisation in terms of objectives and more flexibility in terms of instruments, insofar as national differences in the measures chosen to implement these instruments do not create disruptive cross-border effects.

Such flexibility also allows for experimentation, which may lead to the development of more effective policies. In our case study, we have seen examples of this, although overall, the use of the flexibility by Member States is characterised more by attempts by individual Member States to come up with solutions than by widespread dissemination and transfer of 'best practices' across borders. In order to strengthen the innovative potential of flexibility in implementation, it could therefore be helpful to build stronger incentives for innovation into the directive and to facilitate more closely the exchange of best practices among Member States.

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