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To bind or not to bind?

A legal analysis of the EU energy targets

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Abstract

European Union is an incontestable leader in environmental matters. Its climate change framework includes high ambitious with ramifications beyond purely environmental concerns. The increasing concerns regarding the greenhouse gases emissions, led the European Union to strengthen the policies of the most impactful sector, namely the energy sector. The Energy industry became the reason for climate, but the energy framework can become the solution, and the energy targets its most valuable tool. The targets as a legal instrument were introduced by the climate legislation, but they were fully adapted and became an indispensable tool for obtaining the renewable energy and energy efficiency goals. However, the energy goals cannot be achieved without effective energy target. Their effectiveness is mostly determined by their legal nature (binding or non binding force). But does a binding force predicts effectiveness? Or establishing non binding targets will determine the Member States to set higher energy ambitious? Do we want to bind or not to bind?

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I. Introduction

Combating climate change became one of the main goals and challenges of the 21st century. Various sectors and industries that contribute to the increase of greenhouse gas (GHG) emissions are being held accountable and pressured to contribute to tackling climate change. Being responsible for more than 70% of total GHG emissions,¹ the energy sector is obliged to show leadership in combating the climate crisis. The European Union (EU) is one of the three biggest emitters of GHG,² with the energy sector accounting for over 30% of the total EU emissions.³ Revolutionising the energy system is a priority and it cannot be done without efficient legislation.

The Clean Energy for all Europeans package (CEP) was adopted after a dialog between the European Commission, Council and Parliament, as a set of four Directives⁴ and four Regulations⁵ on the energy performance of buildings, renewable energy, energy efficiency, governance and electricity market design. The CEP is the fourth package of its kind⁶ building further on the energy policy framework set by the Third Energy Package and paves the way for a gradual transition away from fossil fuels and towards a carbon-neutral economy. More specifically, the CEP updates the GHG emission⁷, renewable energy⁸ and energy efficiency

¹ Hannah Ritchie and Max Roser, “CO2 and Greenhouse Gas Emissions” (2020). COM(2019) 640 final.

² <https://www.c2es.org/content/international-emissions/>

³ Chara Karakosta, ”The Role of Industrial Emissions within the European Union: Trends and Policy” *Climate Policy Info Hub* (2016).

⁴ Renewable Energy Directive (EU) 2018/2002; Energy Efficiency Directive (EU)2018/2002; Energy Performance in Buildings Directive (EU) 2018/884; Electricity Directive (EU) 2019/944.

⁵ Governance of the Energy Union Regulation (EU) 2018/1999; Electricity Regulation (EU)2019/943; Risk Preparedness Regulation (EU) 2019/941; ACER Regulation (EU) 2019/942.

⁶ The First Energy Package contained two Directives; the Electricity Directive 96/92/EC adopted in 1996 and the Gas Directive 98/30/EC adopted in 1998. The Second Energy Package was adopted in 2003 and contained two Directives and one Regulation; the Electricity Directive 2003/54/EC, the Gas Directive 2003/55/EC, and Regulation (EC) No 1228/2003 on conditions or access to the network for cross border exchanges in electricity. The Third Energy Package was adopted in 2009 and contained two Directives and three Regulations. The two Directives are the Electricity Directive 2009/72/EC and the Gas Directive 2009/73/EC. The three Regulations are: Regulation (EC) No 713/2009 establishing an Agency for the Cooperation of Energy Regulators, Regulation (EC) No 714/2009 on conditions for access to the network for cross-border exchanges and Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks.

⁷ 40% cut in GHG emissions compared to 1990 levels.

⁸ 32% for renewable energy sources (RES) in the EU’s energy mix.

EU targets⁹ for 2030.¹⁰ The smart integration of renewables, energy efficiency and other sustainable solutions across sectors will help to achieve decarbonisation at the lowest possible cost.¹¹

Driving the ambition further, the European Green Deal (EGD), adopted in 2019 by the European Commission, established a new growth strategy that aims to transform the EU into a resource-efficient and competitive economy with zero net GHG emissions in 2050 and where economic growth is separated from resource use.¹² In order to deliver the European Green Deal, The EU must rethink its policies for a maximum energy supply from renewables across the economy, industry, production and consumption. In the same line, the Commission declared that it plans to ‘review and propose to revise, where necessary, the relevant energy legislation’.¹³

Both the EGD and the CEP, identified the renewable energy and energy efficiency as the essential pillars in achieving the energy and climate goals in EU. In 2001, was adopted the directive regulating renewable energy and the electricity market.¹⁴ When choosing the specific legal instruments at the time, the Commission did not consider the proposal made by the Parliament to include binding and ambitious renewable energy targets at national level for the consumption of electricity. Instead, it mandated the Member States to set national indicative targets consistent with the global indicative target of gross national energy consumption and in particular with the indicative share of electricity produced from renewable energy sources in total Community electricity consumption.¹⁵

When the new directive was adopted in 2009¹⁶ it changed the narrative by introducing binding national targets for Member States. Today, more than 170 countries in the world have such

⁹ 32.5% energy efficiency target, relative to a baseline scenario established in 2007.

¹⁰ FSR, “The Clean Energy for all Europeans Package” (2020).

¹¹ COM(2019)640 final. Ch.2.1.2.

¹² Ibid.

¹³ Ibid.

¹⁴ Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market, *OJ L 283*, 27.10.2001, p. 33–40.

¹⁵ Ibid., Article 3(1),(2).

¹⁶ Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, *OJ L 140*, 5.6.2009, p. 16–62.

established energy targets. The new mandatory national targets were consistent with a target of at least a 20 % share of energy from renewable sources in the Community's gross final consumption of energy.¹⁷ Finally, the Revised Renewable Energy Directive (hereafter 2018 RES Directive)¹⁸ set, for the first time, a Union's binding target, where the Member States national contributions must meet, collectively, the binding overall Union target.¹⁹

Following a similar path, the energy efficiency legislation adopted national indicative targets to promote energy end-use efficiency. The Energy Efficiency Directive²⁰ adopted in 2006 set a target figure of 9% but stressed out that the national saving target is indicative in nature and entails no legally enforceable obligation for Member States to achieve it.²¹ In 2012 a new Energy Efficiency Directive²² was adopted but the nature of the energy targets was broadly maintained. Using a somewhat ambiguous language, the Directive states that it would be preferable for the 20% energy efficiency target to be achieved as a result of the cumulative implementation of specific national and European measures promoting energy efficiency in different fields. Member States were required to set indicative national energy efficiency targets, schemes and programmes.²³ Finally, the amending Directive on Energy Efficiency (hereinafter 2018 Energy Efficiency Directive)²⁴ stated that there will be no binding targets at Member State level in the 2020 and 2030 perspectives, and Member States will maintain the freedom to set their national contributions.²⁵

The energy legal framework was reviewed and amended multiple times through the years. As EU embraces stronger climate ambitions, the energy regulations must implement more effective tools to achieve energy goals. The main legal tool used in both, renewable energy

¹⁷ Ibid., Article 3(1).

¹⁸ Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources, *OJ L 328*, 21.12.2018, p. 82–209

¹⁹ Ibid, Article 3(1),(2).

²⁰ Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services and repealing Council Directive 93/76/EEC, *OJ L 114*, 27.4.2006, p. 64–85.

²¹ Ibid., Preamble 12.

²² Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC, *OJ L 315*, 14.11.2012.

²³ Preamble 12 of the Directive 2006/32/EC.

²⁴ Directive 2018/2002 of the European Parliament and of the Council of 11 December 2018 amending Directive 2012/27/EU on energy efficiency, *OJ L 328*, 21.12.2018, p. 210–230.

²⁵ Ibid., Preamble 6.

and energy efficiency, regimes is the energy targets. As illustrated above the legal nature of the energy targets varies based on their legal force (binding or indicative) and their area of applicability (national or union).

The purpose of this research is to analyse the renewable energy and energy efficiency EU legislation, with a focus on the legal nature of their respective energy targets. In this context legal nature must be understood as the legal force, namely binding and non binding, that is established by the relevant legislation. The legal nature will be assessed based on several criteria, such as the wording/ language of the provision instituting the target, the enforcement mechanisms, the placement within the directive and other relevant criteria.

The research will assess the effectiveness of the energy targets in achieving the established energy goals. The effectiveness, in this context, must be understood as the ability of the legal instrument in achieving its established targets and/or goals, as well as creating rights and obligations on national level, in particular regarding their enforcement. Determining the effectiveness of the energy related legal instruments will benefit to combating the climate crisis, while ensuring energy security.

Therefore, the main questions of this paper is regarding the legal nature of the energy targets and what, if any type is more efficient than others. The results of the study are important since the debate surrounding the legal nature and the effectiveness still exists and this findings will bring some clarity to the matter. In answering the main questions it is important to clarify the concept of the target in general, and energy target in particular. Additionally, a brief inquiry into the history of energy efficiency and renewable energy targets. As the research will represent an overall assessment of the energy targets, it is important to look into their evolution over time.

The research method applied to this paper is doctrinal legal research. By using descriptive doctrinal research in answering the main question, the concept of energy target will be defined and the legal nature of the energy targets determined. The descriptive doctrinal research will be performed by analyzing the existing law. When identifying the differences between the targets, elements of the comparative method will be applied. The normative doctrinal research will be used to assess the effectiveness of the energy targets.

The research paper will be structured in five chapter. The second chapter will include the definition and development of the concept of energy target. The concept of the energy targets

will be analysed as described by the relevant legal instruments, as well as by legal scholars. As stated above the research will focus on two specific targets, the renewable energy and energy efficiency target. Additionally, the second will illustrate how the energy targets were developed and their evolution over time. The third chapter will aim to perform an in-depth analysis of the legal nature of the energy targets. The relevant legislative documents will be used as the main source of information. The fourth chapter will address the question of effectiveness of the energy targets. First the effectiveness will be addressed at the EU level, and then at national level, taking Swedish national legislation as the research object.

The concept of effectiveness will have two dimensions. First, it will be reflected in the reports and communications issued by European Council, Commission and other EU authorities, related to the achievement of the energy targets set by the energy laws. Second, the effectiveness as determined by ECJ, in particular the *effet utile* concept²⁶ understood as justiciability, practical effect and/or enforceability of clear, precise and unconditional rights for the citizens who may invoke those rights before the national courts.²⁷ For this purpose, the Swedish national energy framework will be used. And in the last chapter, the concluding remarks and comments will be included.

The main sources for this research will represent the EU legislative and policy acts, various reports and articles. The energy law related sources will primarily be used, however, auxiliary sources related to climate change or other sectors of energy beside energy efficiency and renewable energy will be utilised as seen fit.

II. Definition and development of the concept of energy target

The first chapter of the research paper will answer the question related to the definition and the historical developments of the target concept as a legal tool.²⁸ In the first part of the chapter an analysis of the possible definition of targets will be presented, while the second part will delve into the evolution of the renewable and energy efficiency targets.

Although the concept of target is used for decades within the legal framework of various fields, no legal document incorporated a formal definition. This is due either to a generally

²⁶ For more details see M. Elvira Mendez-Pineda, “The principle of effectiveness of EU law: a difficult concept in legal scholarship” *Juridical Tribune* (2021).

²⁷ *Ibid.*, p.11.

²⁸ For the purpose of this research paper the terms *legal instruments* and *legal tools* are used interchangeably.

accepted perception of what a legal target means, or to an intentional prolongation of its ambiguous but flexible nature. Either way, the legal sources are not helpful if one seeks to define the concept of targets as a legal instruments. Additionally, the inclusion of other tools such as goals or objectives can create confusion as to their differences and similarities.

Consequently, the main sources for the research on the first part this chapter will represent books and articles written by legal scholars.

Regarding the second part of this chapter, concerning the development of the energy targets, the analysis will reflect a historical overview of the renewable energy targets and the energy savings targets. In order to illustrate an accurate historical development of the energy targets, the relevant EU energy laws and policy acts will be analysed. This chapter does not aim to deliver an in-depth inquiry into the types of energy targets or their legal nature, which will be covered by the third chapter of this paper.

Definition of the energy targets

When considering energy targets, it is important to clarify what we mean by targets and what is the difference between them and other legal instruments. We acknowledge that a coordinated mixture of all legal instruments can be lead to the efficiency of an energy law, but for the purpose of this research we will focus on the energy targets, as the main tool.

The energy legal framework and its legal instruments are dependent, to a certain extend, on the development of environmental law. As stated above this is the result of the huge impact that energy sector is having on climate change, which currently is one of the biggest threats to the global environment. As the fight against climate change became of paramount importance, climate change legislation took the leading position in determining the manner in which the environmental legal framework is shaped. The development of environmental protection legislation, starting in particular with the results of the Rio Conference²⁹, lead to an increased preference of the use of targets as a legal tool over other instruments such as goals, objectives,

²⁹ The United Nations Conference on Environment and Development (UNCED) was a United Nations conference held in Rio de Janeiro from June 3 to June 14, 1992. An important achievement of the summit was an agreement on the The United Nations Framework Convention on Climate Change (UNFCCC) which in turn led to the Kyoto Protocol (entered into force on 16 February 2005) and the Paris Agreement (entered into force on 4 November 2016).

measures etc.³⁰ The UNFCCC³¹ and the Rio Declaration³² did not establish any targets, though it included principles³³ and objectives.³⁴ On the other hand, the Kyoto Protocol³⁵ signed in 1997 set binding emission reduction targets for 37 industrialized countries and economies in transition and the European Union. It is important to note that Kyoto Protocol does not use the term ‘targets’, referring to them as ‘commitments’ which are expressed in a certain percentage of base year or period.³⁶ In the Kyoto Protocol Reference Manual on accounting of emissions and assigned amount³⁷ the term ‘target’ is used when discussing the commitments inscribed in Annex B.³⁸ Therefore, in the context of Kyoto Protocol, the concept of target and commitment is used synonymously. This is the first international legal act that established targets as legal tools, though it did not provide any definition. Later on, the Paris Agreement³⁹ set a concrete and measurable temperature target⁴⁰ and encouraged developed country Parties to continue ‘taking the lead by undertaking economy-wide absolute emission reduction targets’.⁴¹ Again, similar to the Kyoto Protocol, the Paris Agreement does not bring any clarity as to what the concept of target means.

With the development of the climate legislation, the use of targets spread to other areas as well, including the energy regulations. Their mainstream popularity was established by a number of high-profile climate change litigation cases that involved bringing governments to

³⁰ This is not to be understood as that the measures and the objectives are not used as legal tools by the environmental legal framework. The measure and objectives are directed towards the achievement of the targets, which places the targets in a leading position.

³¹ United Nations Framework Convention on Climate Change, entered into force on 21 March 1994.

³² Rio Declaration on Environment and Development, Rio de Janeiro, 3-14 June 1992. A/CONF.151/26 (Vol. I).

³³ Rio Declaration include 27 principles.

³⁴ Article 2 of the UNFCCC formally describes itself as an objective.

³⁵ Kyoto Protocol to the United Nations Framework Convention on Climate Change, adopted on 11 December 1997, entered into force on 16 February 2005.

³⁶ *Ibid.*, Annex B.

³⁷ Kyoto Protocol Reference Manual on accounting of emissions and assigned amount, United Nations Framework Convention on Climate Change November (2008)

³⁸ *Ibid.*, p. 13.

³⁹ Paris Agreement, signed on 22 April 2016, entered into force on 4 November 2016.

⁴⁰ *Ibid.*, Article 2(1)(a). Although Article 4(1) of the Paris Agreement refers to this target as a ‘long-term temperature goal’ some scholars counts it as a target because of its concrete numeric element (for more details see ⁴⁰ Chris Hilson, “Hitting the Target? Analysing the Use of Targets in Climate Law”, *Journal of Environmental Law*, Volume 32 (2020) 195-220.

⁴¹ Article 4(4) of the Paris Agreement.

court regarding climate targets.⁴² Cases such as the Urgenda case⁴³ familiarised the general public with the concept of climate targets that the governments must achieve. The *Milieudefensie et al v Royal Dutch Shell*⁴⁴ was the first climate change case to be ruled against a corporation that raised questions of energy transition from fossil fuels to renewables in the context of states and companies obligations to align the composition of their energy supply with the CO₂ reduction required for countering global warming.⁴⁵ While no direct claims of noncompliance with the energy targets were made, Royal Dutch Shell tried to argue that the company implemented an energy portfolio that satisfied national and international energy obligations therefore it did everything on its part to comply with the climate and energy requirements.⁴⁶ The Court ruled that due to the business operations and sold energy-carrying products of the Shell group, the company must limit the aggregate annual volume of all CO₂ emissions into the atmosphere to such an extent that this volume will have reduced by at least net 45% at end 2030, relative to 2019 levels.⁴⁷ Consequently, the energy production was made directly responsible for failing to fulfil the climate obligations and compliance with the relevant energy regulations⁴⁸ was not sufficient to be considered as fulfilling the climate obligations. And while no climate regulation requires perfect alignment when determining the relevant energy policies, the fact that even the courts require the adjustment of the energy obligations in order to reach the climate targets indicates a growing need for coherence between climate change and energy legal frameworks. This is not an explicit requirement to use energy targets as a legal instrument but such use will definitely make it easier to assess the necessary compliance with the climate obligations.

The need to have a clear understanding of the meaning of targets is directly proportional with the growing attention from the public, judicial system and the legal framework to the use of

⁴² Climate Change Litigation Databases; For a review on the key global developments in climate litigation over the period May 2020 to May 2021 see Joana Setzer and Catherine Higham, “Global trends in climate change litigation: 2021 snapshot”, *London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy*, London School of Economics and Political Science (2021).

⁴³ *State of the Netherlands v. Urgenda Foundation*, ECLI:NL:HR:2019:2007. Supreme Court of the Netherlands (2019)

⁴⁴ *Milieudefensie et al v Royal Dutch Shell*, ECLI: ECLI:NL:RBDHA:2021:5337, Hague District Court,(2021)/

⁴⁵ *Ibid.*, para 4.4.43.

⁴⁶ *Ibid.*, para.4.4.

⁴⁷ *Ibid.*, para.5.3.

⁴⁸ For the applicable law and the reduction of obligation for Royal Dutch Shell see para. 4.3-4.4. of the *Milieudefensie et al v Royal Dutch Shell* case.

targets. Although, the work of legal scholars covered various aspects of energy law, not much research was done on the definition of energy targets. This research aims to contribute to this drawback.

Some legal scholars defined targets as the end result which one wishes to achieve.⁴⁹ In the context of laws and policies, a target is often expressed in concrete terms, typically as a number to be achieved by a certain date.⁵⁰

When a certain target is established in order to directly affect a specific aspect of the energy sector, it can be defined as an energy target. In this regard, the energy law provides a definition to both, renewable energy⁵¹ and energy efficiency,⁵² making it easier to differentiate renewable energy targets, energy efficiency targets and other types of targets. For example, such definition is consistent with the target of 20 % share of energy from renewable sources in the Community's gross final consumption of energy in 2020 established by the 2009 RES Directive⁵³ or the 32,5% energy efficiency target for 2030 set up by the 2018 Energy Efficiency Directive.⁵⁴ Finally, the energy targets are categorized based on their legal nature, namely legally binding⁵⁵ and indicative targets, as well as based on their scope of application, such as national and Union targets.

Targets v. other legal tools

As stated above, in order to have a good understanding of the meaning of energy targets, one must differentiate them from other legal tools, such as goals, aims and objective. While all these tools are oriented at achieving a future end result, targets are established in a more concrete way compared to the others. An energy target will always be determined in a numeric figure, in particular as a percentage, to be achieved by a certain date.

⁴⁹ Chris Hilson, "Hitting the Target? Analysing the Use of Targets in Climate Law", (2020) 195-220.

⁵⁰ Ibid.

⁵¹ Renewable energy means energy from renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas, and biogas (Article 2(1) of the 2018 RES Directive).

⁵² Energy efficiency means the ratio of output of performance, service, goods or energy, to input of energy (Article 1(4) of the Directive 2012/27/EU)

⁵³ Directive 2009/28/EC

⁵⁴ Article 1(1) of the 2018 Energy Efficiency Directive.

⁵⁵ Which create rights and obligations, that can be legally enforced.

Goals, distinguished from targets, must be understood as being ‘non-operational overarching objectives that usually require targets to achieve them’.⁵⁶ Morseletto explains the difference between goals and targets, he does not distinguish between goals and objectives. Hilson brings clarity to the matter, explaining that while aims and goals can be used interchangeable, the objectives are specific ‘steppingstones’ to be achieved in order to comply with the more abstract goals.⁵⁷ Lastly, targets are concrete and measurable tools, additional to being presented in numeric or quantitative terms.⁵⁸

On the international level, energy goals can be found among the United Nations’s Sustainable Developments Goals (SDG).⁵⁹ The goal to ensure affordable and clean energy to all is covered by SDG 7, which is supplemented by several more concrete targets⁶⁰ and indicators.⁶¹ Specific and/or numeric targets were not included by SDG 7 in order to avoid conflict and overlap with the relevant legislation, which has the special purpose of establishing such targets.

The EU energy laws and policies contain a variety of goals, objectives and targets. In accordance with Article 194(1) of the Treaty on the Functioning of the European Union (TFEU)⁶², promoting renewable forms of energy and energy efficiency are the main goals of the Union energy policy, which were further incorporated by the relevant renewable energy legislation. The goal of giving EU consumers secure, sustainable, competitive and affordable energy is at the core of a resilient Energy Union.⁶³

⁵⁶ Piero Morseletto, Frank Biermann and Philipp Pattberg, “Governing by Targets: Reductio ad Unum and Evolution of the Two-degree Climate Target”, IEAs (2017) 657.

⁵⁷ Chris Hilson, “Hitting the Target? Analysing the Use of Targets in Climate Law”, (2020) 198.

⁵⁸ Ibid.

⁵⁹ <https://sdgs.un.org/goals>.

⁶⁰ Indicators: 1. By 2030, ensure universal access to affordable, reliable and modern energy services; 2. By 2030, increase substantially the share of renewable energy in the global energy mix; 3. By 2030, double the global rate of improvement in energy efficiency; etc.

⁶¹ Indicators are established for every target individually. For example, for target no.1 the indicators are the proportion of population with access to electricity and the proportion of population with primary reliance on clean fuels and technology. For all targets and indicators for SDG 7 available at <https://sdgs.un.org/goals/goal7>

⁶² Treaty on the Functioning of the European Union, OJ C 326, 26.10.2012, p. 47–390.

⁶³ A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy, COM/2015/080 final

The Governance Regulation⁶⁴ determines the common rules for planning, reporting and monitoring for EU to reach its 2030 climate and energy targets in the field of GHG emission reduction, energy from renewable sources and energy efficiency.⁶⁵ The main goal of the Governance Regulations, on which the objectives and targets are based, is the need to preserve and protect the environment, while promoting a prudent and rational utilisation of natural resources.⁶⁶ Furthermore, the objectives have a more concrete nature oriented either towards Union⁶⁷ or internal energy market of the Member States.⁶⁸ Lastly, the targets are set as numeric indicators of at least 32,5 % for energy efficiency and 32 % for renewable energy to be achieved by 2030.⁶⁹

All the tools that were described above, while showing clear differences are characterised by some similarities. For example, the condition that they all must fulfil in case of modification is the increased overall.⁷⁰ Additionally, in case insufficient progress towards the achievement of objectives and targets is identified, the European Commission should, in addition to issuing recommendations, propose measures (on EU or national level) and exercise its powers at Union level or Member States should take additional measures in order to ensure achievement of these objectives and targets.⁷¹ Such provision illustrates that the Commission can intervene when the energy law can present itself as ineffective in achieving its objectives and targets. Analysing the specific directives, it was determined that the 2018 RES Directive pursues the same overarching energy goals as the ones provided by Article 194(1) of the TFEU,⁷² while the objective is to achieve the energy target of 32 % share of the energy from renewable sources in the Union's gross final consumption by 2030.⁷³ On the other hand, the 2018 Energy Efficiency Directive does not mention any goal per se, but it makes a reference to the

⁶⁴ Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council, OJ L 328 21.12.2018, p. 1.

⁶⁵ Ibid., Preamble 18.

⁶⁶ Ibid.

⁶⁷ Ibid., Article 1.

⁶⁸ Ibid., Article 3-4, Annex 1.

⁶⁹ Ibid., Article 4.

⁷⁰ Ibid., Preamble 34.

⁷¹ Ibid., Preamble 56.

⁷² Preamble 2 of the 2018 RES Directive.

⁷³ Ibid. Preamble 128.

important role of the energy savings obligation in achieving Union energy and climate objectives.⁷⁴ The specific objective of the 2018 Energy Efficiency Directive is to achieve the Union's energy efficiency targets of at least 32,5 % by 2030 and to pave the way towards further energy efficiency improvements beyond those dates.⁷⁵

Therefore, we can observe that the goals are illustrating the general direction and aspirations of the energy laws and policies. The targets are specific desired outcome expressed in a numeric figure that must be achieved before a deadline, which must be aligned with the main energy goals, as well as other laws and policies, such as climate change regulations. Lastly, the objectives are set to aim towards achieving the targets and clarify how that path should look.

Renewable energy target and energy efficiency target

Having an understanding of the concept of targets and the difference between targets and other legal tools such as goals and objectives, we must examine the types of energy targets based on their aim, in particular the targets provided by the relevant EU law. Broadly speaking, the most important energy targets are the renewable energy targets and energy efficiency targets. The energy union strategy⁷⁶, published in 2015, identified that the energy efficiency and the decarbonisation of the economy, primarily achieved through transitioning to renewable energy sources, are two of the dimensions the Energy Union is build upon.⁷⁷ Arguably the most important step towards implementing the energy union strategy was the adoption of the Clean energy for all Europeans package, which comes to strengthen the central position of energy efficiency and renewable energy in achieving the EU energy and climate goals.⁷⁸

As part of the Clean energy for all European package, the EU legislator adopted the Energy Efficiency Directive and RESD irective as the main legal acts regulating these areas. The directives include energy targets as the primary legal tool set up to achieve the energy

⁷⁴ Preamble 10 of the 2018 Energy Efficiency Directive.

⁷⁵ Ibid. Article 1(1)

⁷⁶ COM/2015/080 final.

⁷⁷ The energy union builds five closely related and mutually reinforcing dimensions: 1. Energy security, solidarity and trust; 2. A fully integrated European energy market; 3. Energy efficiency contributing to moderation of demand; 4. Decarbonising the economy; 5. Research, Innovation and Competitiveness.

⁷⁸ https://energy.ec.europa.eu/topics/energy-strategy/clean-energy-all-europeans-package_en

objectives and goals.⁷⁹ Therefore, the Energy Efficiency Directive established an energy efficiency target for 2030 of at least 32.5%. The target, to be achieved collectively across the EU, is set relative to the 2007 modelling projections for 2030.⁸⁰ Energy efficiency means the ratio of output of performance, service, goods or energy, to input of energy.⁸¹

Similarly, the 2018 RES Directive set an Union's gross final consumption⁸² of energy in 2030 is at least 32 % share of energy from renewable sources, while Member States shall set national contributions to meet, collectively, the binding overall Union.⁸³ The energy from renewable sources was defined by the directive as meaning energy from wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.⁸⁴

Historical evolution of energy targets

Renewable energy targets

In the mid 1980s, the EU energy system started a restructuring process with a new interest in renewable energy sources. With the approval of the European Commission proposal on New Community Energy Policy Objectives for 1995⁸⁵, the promotion of renewable energy was introduced as one of the Community's energy objectives. Based on the new Community policy, Member States were expected to accelerate the development of new and renewable energy sources that would replace conventional fuels, contributing significantly to the total energy balance.⁸⁶ In addition, the European Council advocated for the development of renewable energy sources in the EU in its 1988 Recommendation.⁸⁷

⁷⁹ Article 1(1) of the 2018 Energy Efficiency Directive; Article 3(1) of the 2018 RES Directive.

⁸⁰ https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-directive_en

⁸¹ Article 2(4) of the 2018 Energy Efficiency Directive.

⁸² 'Gross final consumption of energy means the energy commodities delivered for energy purposes to industry, transport, households, services including public services, agriculture, forestry and fisheries, the consumption of electricity and heat by the energy branch for electricity, heat and transport fuel production, and losses of electricity and heat in distribution and transmission' (Article 2(4) of the 2018 RES Directive)

⁸³ Article 3 of the 2018 RES Directive.

⁸⁴ *Ibid.*, Article 2(1).

⁸⁵ Council Resolution of 16 September 1986 concerning new Community energy policy objectives for 1995 and convergence of the policies of the Member States, OJ C 241 of 25.9.1986, p.1-3

⁸⁶ *Ibid.*

⁸⁷ Council Recommendation 88/349/EEC of 9 June 1988 on developing the exploitation of renewable energy sources in the Community Official Journal L 160, 28 June 1988, pp. 46-48

However, such policy acts did not have a big practical impacts, having more of a declarative relevance. On the other hand, the technological progress occurring over the years, supported by various research and technical development (RTD) Framework Programmes,⁸⁸ such as JOULE - THERMIE,⁸⁹ specific RTD programme in the field of cooperation with third countries and international organizations⁹⁰ and others,⁹¹ shaped the European renewable energy industry and facilitated Europe to become world-wide leaders in the field.⁹²

Regardless, the legal framework regulating the renewable energy remained rather rudimentary. In the field of energy efficiency, the European Council adopted SAVE programme in 1991⁹³ and SAVE II programme in 1996 for the promotion of energy efficiency in the European Community.⁹⁴ Three key energy policy objectives were prioritised, namely improved competitiveness, security of supply, and protection of the environment. Promotion of renewables is identified as an important factor to achieve these aims.⁹⁵

The growing attention towards environmental concerns taking place in the early 1990s, together with the shift from supporting technological development to the promotion of market deployment of renewables, started to influence the energy policies. On national level these changes were implemented rapidly, with several countries introducing a series of market-

⁸⁸ Since 1984, European Community research and technological development activities have been defined and implemented by a series of multi-annual Framework Programmes (FP); The 4th RTD FP (1994-1998), the 5th FP (1998-2002), the 6th FP (2002-2006), the 7th FP (2007-2013) and currently Horizon 2020 (2014-2020) (More information available on <https://ec.europa.eu/eurostat/cros/content/research-projects-under-framework-programmes-0_en>)

⁸⁹ More information on the JOULE and THERMIE programmes for the period of 1990-1994 available at <<https://cordis.europa.eu/programme/id/ENG-THERMIE-1>>; for the 1994-1998 period - available at <<https://cordis.europa.eu/programme/id/FP4-NNE-THERMIE-C>>

⁹⁰ In accordance with the provisions in Title XV of the TEU, international cooperation activities in the area of RTD are carried out under multi-annual framework programmes. For the period 1994-1998, these activities are conducted under a single specific RTD programme in the field of cooperation with third countries and international organizations (INCO) (more details are available on <<https://cordis.europa.eu/programme/id/FP4-INCO-COPERNICUS>>).

⁹¹ More information on research programmes and funding is available at <<https://cordis.europa.eu/projects/en>>.

⁹² Some scholars argue that the investment programmes, such as JOULE and THERMIE were too small to make a significant difference to the status quo (for more details see Andy Jordan, et.al. (Eds.), "Climate Change Policy in the European Union: Confronting the Dilemmas of Mitigation and Adaptation?" *Cambridge University Press*, (2010).

⁹³ Council Decision of 29 October 1991 concerning the promotion of energy efficiency in the Community (SAVE programme)

⁹⁴ Decision 1996/737 - 96/737/EC: Council Decision of 16 December 1996 concerning a multiannual programme for the promotion of energy efficiency in the EC - SAVE II

⁹⁵ *Ibid*, Preamble 13

based mechanisms.⁹⁶ While the energy related innovations happening on national level were important, a coordinated effort at EU level was needed in order to avoid uneven development of energy laws.⁹⁷ Harmonisation on EU level would provide transparency and predictability for the renewable energy industry to fully benefit from public policy incentives and to establish long-term stable business prospects within the EU.⁹⁸

In 1993 the Council adopted the ALTENER programme⁹⁹ concerned with the promotion of renewable energy sources, that introduced a ‘Community's indicative objectives relating to the renewable energy sources’ of 8 % from the coverage of total energy demand by 2005¹⁰⁰ to which Member States were expected to contribute in their energy policies.¹⁰¹ In addition, the production of the electricity from renewable sources was set to increase three times compared to the 1991 level.¹⁰² At this stage, the energy targets were used tentatively and considered a potential effective legal tool. Their non-binding nature is an indicator to an incipient phase. Binding targets require a different implementation, monitoring and compliance mechanism that did not exist at the time.

By 1996 it became clear that the energy targets are becoming the central element of the energy law. Subsequently, questions related to the types of targets and their efficiency were raised and various options were proposed. In the Green Paper on Renewables, the European Commission sought comments on the proposal of the indicative target of 12% for the contribution by renewable sources of energy to the European Union's gross inland energy consumption by 2010.¹⁰³ The White Paper, “An Energy Policy for the European Union”¹⁰⁴ followed up on the Green Paper, presenting an overwhelmingly positive response to the proposed target of 12% in the Green Paper. It was agreed that a non legally binding target is a

⁹⁶ Portugal was the first country to introduce feed-in tariffs schemes in 1988, followed by Germany in 1990 and Denmark in 1992. Similarly, at the beginning of the 1990s, the Scandinavian countries introduced energy/carbon taxes and investment subsidies.

⁹⁷ Andy Jordan, et.al. (Eds.), “Climate Change Policy in the European Union: Confronting the Dilemmas of Mitigation and Adaptation?” (2010). p. 106.

⁹⁸ COM(96) 576 final.

⁹⁹ Council Decision of 13 September 1993 concerning the promotion of renewable energy sources in the Community (Altener programme), p.41.

¹⁰⁰ Ibid, Annex I.

¹⁰¹ Ibid.

¹⁰² Ibid.

¹⁰³ COM(97) 599 final, p.9.

¹⁰⁴ COM(95)0682, p. 279.

good policy tool, giving a clear political signal and impetus to action.¹⁰⁵ Therefore, the strategy and action plan in the White Paper, were directed towards the goal of achieving a 12% penetration of renewables in the Union by 2010.¹⁰⁶

In an effort to cement the power of energy targets within the EU legal framework, the European Parliament, in its resolution of 30 March 2000 on electricity from renewable energy sources and the internal electricity market,¹⁰⁷ stated that binding renewable energy targets at the national level are essential for achieving the Community targets and goals.¹⁰⁸

Nevertheless, the first EU Directive on the promotion of electricity produced from renewable energy sources adopted in 2001 (2001 RES Directive), did not mandate binding targets, claiming that setting national indicative targets¹⁰⁹ would ensure increased market penetration of electricity produced from renewable energy sources in the medium term.¹¹⁰ As a compromise, the directive considered possible to include mandatory targets at the European Parliament and the Council's proposal.¹¹¹

The European Commission communication entitled 'Renewable Energy Roadmap — Renewable energies in the 21st century: building a more sustainable future'¹¹² stated that the share of renewable energy is unlikely to exceed 10% by 2010. The main reason for the failure to reach the agreed targets was the lack of a coherent and effective policy framework throughout the EU.¹¹³ The European Commission proposal included setting a legally binding EU target and raising its share to 20 % of the overall share of energy from renewable sources reflected in mandatory national targets.¹¹⁴ This was the basis for the 2009 RES Directive to establish mandatory national targets consistent with a 20 % share of energy from renewable sources to be met by 2020.¹¹⁵

¹⁰⁵ Ibid, p.9-10..

¹⁰⁶ Ibid, p.10.

¹⁰⁷ OJ C 378, 29.12.2000, p. 89

¹⁰⁸ Preamble 4, Directive 2001/77/EC

¹⁰⁹ Directive 2001/77/EC demanded that the national indicative targets were consistent with the Union indicative target of 12 % of gross national energy consumption by 2010 (Article 3(4)).

¹¹⁰ Ibid., Preamble 5, Article 3

¹¹¹ Ibid., Preamble 7.

¹¹² COM/2006/0848 final.

¹¹³ COM(2007) 1 final, p.13.

¹¹⁴ Renewable energy road map, p. 10.

¹¹⁵ Preamble 9-13 of the Directive 2009/28/EC.

With the developments of the environmental law, in particular the climate change regulations and the growing pressure to cut the GHG emissions, more ambitious efforts were expected from the energy sector. In 2014 the European Commission released a Communication entitled ‘A policy framework for climate and energy in the period from 2020 to 2030’¹¹⁶ proposing a binding Union target for the share of renewable energy of at least 27 % for 2030.¹¹⁷ The European Council endorsed that proposal and indicated that Member States should be able to set their own national targets in order to deliver their contributions to the Union 2030 target.¹¹⁸ With the adoption of two resolutions,¹¹⁹ the European Parliament stressed that, in light of the Paris Agreement and the recent renewable technology cost reductions, it was desirable for the targets to be significantly more ambitious.¹²⁰

Consequently, the 2018 RES Directive established a binding Union share of at least 32 % of renewable energy for 2030.¹²¹ The EU legislator considered that a target defined at Union level would leave greater flexibility for Member States to meet their GHG emission targets in the most cost-effective manner, taking into account their specific circumstances, energy mix and capacity to produce renewable energy.¹²²

In 2021 the European Commission proposed to revise the 2018 RES Directive in order to fulfil the energy and climate requirements under the European Green Deal (EGD). The EGD aims at reducing the GHG emissions by 55% in 2030, which in turn requires significantly higher shares of renewable energy sources in an integrated energy system.¹²³ The current EU target of at least 32% renewable energy by 2030 needs to be increased to 38-40%. Regarding the nature of the target, maintaining the EU binding target and national voluntary contributions is the preferred option.¹²⁴ As it can be noticed, the new amendments will effect the energy target but only regarding the percentage and not its legal nature, denoting confidence in the existing form of the renewable target.

¹¹⁶ COM(2014) 15 final.

¹¹⁷ Ibid, p. 18..

¹¹⁸ Preamble 5 of the 2018 RES Directive.

¹¹⁹ 2016/2041(INI).

¹²⁰ Preamble 6 of the 2018 RES Directive.

¹²¹ Ibid., Article 3.

¹²² Ibid., Preamble 9

¹²³COM/2021/557 final.

¹²⁴ Ibid, p. 5

Energy efficiency targets

When the EU energy sector started its transformation in the 1980s, issues of energy efficiency were raised. In the beginning, the energy efficiency policies were developed in a fragmented manner, compared to the renewable energy regulations that followed quite a straightforward path. It seemed that applying a one form of energy savings to the complex energy system would be unwise and inefficient.

In 1980, the increase of efforts to save energy and reduce oil consumption and imports was addressed by the European Council.¹²⁵ In the same year, the European Commission discussed the rational use of energy in industrial enterprises.¹²⁶ In an attempt to consolidate the energy efficiency actions, the Council adopted in 1985 a resolution¹²⁷, in which it invites the Member States to increase their efforts towards rational use of energy by integrating energy-saving policies.¹²⁸

Seeking more concrete energy saving tools, the European Council considered that the Community should establish objectives, which would be regarded as indicative quantitative guidelines. The proposed objective was the achievement of an efficiency energy target of at least 20% by 1995.¹²⁹

The following years a series of directives were adopted that regulated specific aspects of energy efficiency, such as the promotion of cogeneration,¹³⁰ end-use efficiency and energy services,¹³¹ energy performance in buildings,¹³² ecodesign requirements for energy-related product¹³³ and labelling and standard product information of the consumption of energy.¹³⁴

¹²⁵ OJ No C 149, 18.6. 1980, para.1,3.

¹²⁶ OJ No L 239, 12.9. 1980, p.26.

¹²⁷ Council Resolution of 15 January 1985 on the improvement of energy saving programmes in the Member States (85/C 20/01).

¹²⁸ Ibid, para.1

¹²⁹ Ibid, para. 6(a).

¹³⁰ Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC.

¹³¹ Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services and repealing Council Directive 93/76/EEC.

¹³² Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings.

¹³³ Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products.

¹³⁴ Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products.

While such regulations contributed to establishing an energy efficiency system, more coherence and consolidation was required.

In 2006 the EU legislator agreed on a 9% energy savings target to be reached by 2015 by way of energy services and other energy efficiency improvement measures.¹³⁵ Even though Member States accepted this overall national target, the indicative nature of it entailed no enforceable obligation for Member States to achieve it.¹³⁶ Regardless, the impact assessment of the 9% target found that the Member States were on track to achieve it but it was not ambitious enough.¹³⁷

Later on, a consensus on the effectiveness and feasibility on a increased Union target of 20% of energy efficiency by 2020, was reached.¹³⁸ Therefore, it was necessary to update the Union's legal framework for energy efficiency with a Directive¹³⁹ pursuing the 20 % Union target.¹⁴⁰ The 2012 Energy Efficiency Directive required Member States to set indicative national energy efficiency targets based on either primary or final energy consumption, primary or final energy savings, or energy intensity in order to collectively achieve the 20% Union target.¹⁴¹

In 2014, the European Council proposed to raise the Union energy efficiency target to 27 % by 2030.¹⁴² The target should have been reviewed by 2020 having in mind a Union-level target of 30 %.¹⁴³ The European Parliament, having more ambitious vision, called on the Commission to assess the viability of a 40 % energy efficiency target for the same timeframe.¹⁴⁴ In 2019, the EU agreed on the Clean energy for all Europeans package¹⁴⁵ to help move away from fossil fuels towards renewables and ensure energy efficiency. Based on these assessments and proposals it was decided to amend the 2012 Energy Efficiency Directive, in order to adapt it to the 2030 perspective.¹⁴⁶

¹³⁵ Article 4 of the Directive 2006/32/EC.

¹³⁶ Ibid, Preamble 12.

¹³⁷ Preamble 56 of the Directive 2012/27/EU.

¹³⁸ 2007/2106(INI); 7224/1/07 REV 1.

¹³⁹ Directive 2012/27/EU.

¹⁴⁰ Ibid., Preamble 10, Article 1.

¹⁴¹ Ibid., Article 1,3.

¹⁴² European Council (23 and 24 October 2014) – Conclusions, EUCO 169/14, CO EUR 13 CONCL 5

¹⁴³ Preamble 5 of the 2018 Energy Efficiency Directive.

¹⁴⁴ In resolution of 15 December 2015 entitled 'Towards a European Energy Union'.

¹⁴⁵ More information on the clean energy for all Europeans package available on <https://energy.ec.europa.eu/topics/energy-strategy/clean-energy-all-europeans-package_en>

¹⁴⁶ Preamble 5 of the 2018 Energy Efficiency Directive.

Consequently, the new amendments adopted in December 2018 maintained the 2020 energy efficiency target at 20%, while setting an additional Union target for 2030 at 32,5%.¹⁴⁷ At the same time, there were no binding targets at Member State level in the 2020 and 2030 perspectives and their freedom to set national targets based on primary or final energy consumption, primary or final energy savings, or energy intensity was not restricted.¹⁴⁸ The adoption of EGD put additional pressure on the energy efficiency efforts and required amendments to the relevant legislation. The goal of transforming EU into a prosperous society, with a resource-efficient and competitive economy where there are zero GHG emissions in 2050 implies a prioritised energy efficiency structure.¹⁴⁹ Accordingly, the European Commission put forward a proposal for a new directive¹⁵⁰ on energy efficiency, as part of the package ‘Delivering on the European Green Deal’¹⁵¹ claiming that energy efficiency is a key area of action, without which the full decarbonisation of the Union economy cannot be achieved¹⁵²

The proposal maintains the binding Union level energy efficiency target which must be met collectively and cost-effectively by the Member States. A coordinated approach at Union level will lead to reliability, trust and continuity. Policies at Union level can also create a just and fair transition for countries and regions significantly burdened by the transition to renewable energy and decarbonisation.¹⁵³ The new way of expressing the level of ambition for the Union’s efficiency targets corresponds to a reduction of 36% for final and 39% for primary energy consumption for 2030.¹⁵⁴ Correspondingly, Member States are required to define their own contributions based on national circumstances and context. The non binding nature of national level targets respects the principle of subsidiarity.¹⁵⁵

Conclusions

As it was explained in this chapter the energy targets are end results expressed in concrete terms (numbers or percentage) to be achieved by a certain date. Energy targets are those

¹⁴⁷ Ibid., Article 1.

¹⁴⁸ Ibid., Preamble 6.

¹⁴⁹ COM(2021) 558 final, 2021/0203(COD)

¹⁵⁰ Ibid.

¹⁵¹ More information on the proposals part of the package available on <https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en>.

¹⁵² COM(2021) 558 final, 2021/0203(COD).

¹⁵³ Ibid., p.10.

¹⁵⁴ Ibid., p.33.

¹⁵⁵ Ibid., p.10.

targets that concern and have a direct effect on the energy system or a part of it. The main energy targets are the renewable energy and energy efficiency target. Such an assessment is based on their relevance in regards to their impact on the union climate and energy strategy. With reference to their legal nature, the energy targets can be binding and non binding, as well as union and national targets. In the second part of this chapter the evolution of various types of renewable energy and energy efficiency targets were presented.

The EU energy legal framework had quite a dynamic development since its inception, characterised by a growing ambitious of the targets and changing legal nature. As it was presented the energy laws were often amended or replaced by new ones. Renewable energy targets went through more changes compared to the energy efficiency targets. They went from binding national targets, to an overall Union binding target and indicative national targets. On the other hand, energy efficiency targets maintained their non binding nature throughout their development, although this does not mean they did not suffer any changes.

In conclusion, this chapter had the purpose of helping the reader to understand the concept of targets, in general, and energy targets in particular. Additionally, it presented the milestones of the evolution of the main energy targets, namely renewable energy and energy efficiency targets.

III. Legal nature of the energy targets

The target approach to EU energy policy is controversial. There is still much debate on the legal nature of energy targets that should be used. While the legal nature was a topic of dispute from the beginning of the development of the energy legal framework, in this part of the research we will focus on the newest developments, in particular the last directive on renewable energy and energy efficiency and how it addresses the issues of legal nature of the targets.

The question that this chapter will address is regarding the legal nature of the energy targets, particularly the legally binding or non binding nature. The question of legal nature is important to understand in order to ultimately address their regarding their effectiveness. For the purpose of this research, legally binding shall be understood as creating rights and obligations enforceable under EU law. The binding character of the targets can be derived from a series of formal, stylistic, and linguistic features that are normally associated with binding nature. First, the document that incorporates the target can be a regulation, directive,

decision, resolution, recommendation, proposal, etc. A regulation is a binding legislative act with general application and is directly applicable in all Member States.¹⁵⁶ A directive is a binding legislative act that sets out goals that Member States must achieve, but it leaves to the national authorities the choice of form and methods of how these goals will be achieved. A decision is binding in its entirety to whom it is addressed, while a recommendation and opinion has no binding force.¹⁵⁷ This does not mean that a target, that is established by a legislative act with a binding force, automatically has a binding force, but it does require such an act in order to introduce a target that will have a legally binding nature. Regardless, the target will have to fulfil other requirements in order to have a binding force.

Second, where the target is placed inside the structure of the legislative act can indicate its legal nature. Preambles (recitals) to EU laws are not in themselves legally binding in the same way that the operative provisions are. The CJEU stated that ‘the preamble to a Community act has no binding legal force and cannot be relied on either as a ground for derogating from the actual provisions of the act in question or for interpreting those provisions in a manner clearly contrary to their wording’.¹⁵⁸ Therefore, when determining the legal force of a target, we must make sure that there is a corresponding provision in the operative part of the directive, or the reference to a target solely in the preamble will not have the legally binding effect.

Third, the type of terminology that is used to describe the targets can directly indicate or hint to its nature status. For example, the 2018 RES Directive establishes a ‘*binding* [emphasis added] Union target of a share of at least 32 % of renewable energy’¹⁵⁹ or the 2018 Energy Efficiency Directive states that there ‘are *no binding* [emphasis added] targets at Member State level in the 2020 and 2030 perspectives’¹⁶⁰ and that the directive established a framework ‘*to ensure* [emphasis added] the achievement of the Union’s 20 % headline target on energy efficiency’.¹⁶¹ It is clear that the language used in regards to the national energy efficiency targets denotes a non binding force, even though they are instituted by a legally binding legislative act. The Union efficiency target is more confusing in its formulation. This

¹⁵⁶ Article 288 of the TFEU.

¹⁵⁷ Ibid.

¹⁵⁸ Case C-136/04, *Deutsches Milch-Kontor GmbH v Hauptzollamt Hamburg-Jonas*, 24 November 2005, para. 32; Case C-134/08, *Hauptzollamt Bremen v J. E. Tyson Parketthandel GmbH hanse j.*, 2 April 2009, para 16.

¹⁵⁹ Preamble 8 of the 2018 RES Directive.

¹⁶⁰ Ibid., Preamble 6,

¹⁶¹ Ibid., Article 1(1).

is a good example of when the terminology can be more confusing than helpful. Should the lack of use of the word *binding* regarding the Union efficiency target hint to its non-binding nature? Definitely, it is not a call for such an interpretation, but the use of the word in the case of Union renewable energy target or the national energy efficiency (non-binding) can create confusion and doubt as to its legal nature, in particular as one knows how much negotiation goes for each word that ends up in a legislative act.

This chapter will assess the legal nature of the current energy targets,¹⁶² in particular their binding and non-binding nature. The current Union targets have a legally binding force, which will be analysed in detail, while the national targets are non-binding. Additionally, energy targets are different in nature depending on their scope of application. To that end, energy targets are on Union or national level. While this categorisation seems to have a lesser impact on their effectiveness, it is still subject to controversies as it will be presented below.

Binding target

Setting, operating and enforcing binding energy targets has a real impact on those who are obliged, or encouraged, to achieve them, and for all actors that are affected by the economic sectors where such targets apply. Although the Member States appear as subjects of the obligations to attain the energy target, it also has far-reaching implications for industries, consumers and even for political players.¹⁶³

The renewable energy industry and environmental organizations have eagerly advocated the use of targets, while the energy industry has been mostly opposed to it.¹⁶⁴ Still, binding targets continue to be viable for industrialised countries, but they do not seem suitable for many developing countries in the short term. The EU legislator decided to solve this issue in the energy sector by establishing a binding Union target and indicative national contributions. Therefore, the countries may decide on their contributions based on their individual circumstances.

A *binding* legal nature depends on the availability of effective methods of its enforcement.

Such enforcement is ensured at EU level, although the EU law-making process preserves a strong role for Member States (in the Council) in approving any application and enforcement

¹⁶² The current target must be understood as the targets established by the 2018 RES Directive and 2018 Energy Efficiency Directive. While the proposals for the new directives were briefly mentioned in the second chapter, the third chapter will not address the targets recommended in them.

¹⁶³ Angus Johnston and Eva der Marel, "How Binding are the EU's 'Binding' Renewables Targets?", (2016), p.177.

¹⁶⁴ *Ibid.*, p.612.

measure.¹⁶⁵ The way EU energy law guarantees the enforcement and compliance with the energy targets will be analysed below.

Today, Europe has a binding Union target of 32% of renewable energy in gross final energy consumption for 2030.¹⁶⁶ The Union's binding renewable energy target is of great importance for the Union's energy and environmental policy.¹⁶⁷ The wording used by the 2018 RES Directive, when describing the target, explicitly indicates to a binding nature for the Union target and argues that the binding Union target encourages the development of technologies which produce renewable energy and provide certainty for investors.¹⁶⁸

If regarding the Union target, directive's approach is quite clear and straightforward, that is not the case with the national targets. The 2018 RES Directive explains that the Union binding target must be reached by Member States' national contributions.¹⁶⁹ Interestingly, Article 3 states that the Member States national contributions for 2030 shall not be lower than the baseline share in Annex I and the national contributions must be characterised by an indicative trajectory from 2021 onwards.¹⁷⁰ If they are not on track, the relevant Member States should take appropriate measures as provided for in the Governance Regulation to ensure that that baseline share is regained.¹⁷¹ In case a Member State does not maintain its baseline share over any one-year period, the European Commission shall issue recommendations¹⁷² Such recommendations are issued in 'response to insufficient ambition' and create the impression that the national renewable energy targets have a binding force. But is that actually the case? The answer is most likely no, even though the situation is ambiguous.

In this paper we argue that the national targets do not have a binding force. First, the European Commission's recommendations which are issued in case of insufficient ambitious by the national contributions, are not mandatory. Whereas, Article 288 of the TFEU encourages Member States to take into account such recommendations and explain in

¹⁶⁵ Ibid.,.178.

¹⁶⁶ Article 1 of the 2018 RES Directive.

¹⁶⁷ Ibid., Preamble 2.

¹⁶⁸ Ibid., Preamble 9.

¹⁶⁹ Preamble 6 of the Governance Regulation.

¹⁷⁰ By 2022 - at least 18 % of the total increase in the share of energy from renewable sources between that Member State's binding 2020 national target, and its contribution to the 2030 target. By 2025 - at least 43 %. By 2027- least 65 % (Article 4(2) of Governance Regulation).

¹⁷¹ Ibid., Article 32(4).

¹⁷² Ibid., Article 32(1).

subsequent progress reports how they have done so, recommendations have no binding force. Furthermore, the European Commission ‘shall’ issue recommendations to Member States whose contributions it deems insufficient to increase their ambition in order to ensure a sufficient level of collective ambition for the ‘*achievement of Union's binding target*’ for 2030 for renewable energy.¹⁷³ Second, even if one might see the recommendations as a indication to a binding nature, the fact that it effects concern ultimately the Union target, adds to the argument that only the union target is legally binding with legal consequences in case of non compliance.

As a matter of fact, the explicit reference to the union target as binding and no such wording for the national targets, reiterates our position to qualify the national targets as non binding. The use of the term ‘indicative’ in the Governance Regulation¹⁷⁴ in regards to the national energy efficiency targets, could send a confusing message as to why it did not use the same approach regarding the renewable energy targets if they are similarly indicative. The difference is reflected in the language used regarding the respective Union targets. The national renewable energy targets act like contributions to the legally binding Union target. So it can be possible that the lack of explicitly calling the national renewables targets indicative or non binding is just a consequence of being quite explicit about the Union target and that the former contribute to the achievement of the later.

The situation is quite the opposite with the energy efficiency targets. The national targets are described repeatedly with the term of indicative or non binding,¹⁷⁵ while no explicit reference to the legal nature of the Union target is found in the text of the directive or the Governance Regulation. Interestingly, the Union target is later described as being binding by the proposal to amend the 2018 Energy Efficiency Directive¹⁷⁶ and also non binding by the Impact assessment to that proposal.¹⁷⁷ An analysis of the legal nature will not take into account only the language of the law, or that is a very superficial and insufficient approach. What the research wants to bring to the attention of the reader is that, in this specific case, the language and the terminology used does not give us a full understanding of the legal nature of the targets, but it cannot be ignored and deemed unimportant.

¹⁷³ Ibid., Article 31(1)

¹⁷⁴ Ibid., Article 6.

¹⁷⁵ Preamble 6, Article 1(1), (2) of the 2018 Energy Efficiency Directive.

¹⁷⁶ COM(2021) 558 final, p.12.

¹⁷⁷ SWD(2021) 623 final, p. 16.

The Governance Regulations established national energy and climate plans which includes all the policies and measures contributing to achieving the energy targets.¹⁷⁸ Subsequently, Member States report on the status of implementation of its integrated national energy and climate plan by means of an integrated national energy and climate progress report covering renewable energy and energy efficiency.¹⁷⁹ Member States are mandated to include in these reports information on the implemented, adopted and planned policies and measures to achieve the national contribution to the 2030 binding Union target for renewable energy.¹⁸⁰ Again, the tool through which the Commission ensures compliance are addressing the goal of achieving the Union target. In this context the national contributions are considered means, measures, tools of achieving the Union targets, but they are not the main goal of the national plans.

Lastly, one must understand that the obligation to set national targets, which is indeed binding on Member States, does not automatically mean that the targets themselves are binding. As it was explained in the first chapter, a target is the desired end result expressed in a numeric form, which should be differentiated from the obligation to set such target by the states on national level.

Assuming full compliance, the binding energy targets seem to provide the highest possible level of energy security and certainty in achieving climate goals, as well as good protection against incoherence in the EU energy legal framework.¹⁸¹ Although compliance in the case of energy targets is a complex issue. As it was discussed above the Commission shall issue recommendation in case of non compliance with the energy targets. Member State concerned shall take due account of the recommendation, shall report on its progress in implementing the recommendations and in case of refusal to complying with the recommendations, it shall present its reasoning.¹⁸² While questions of effectiveness of this mechanism can be raised, it is indisputable that it was created in order to ensure the achievement of the Union energy targets.

¹⁷⁸ Article 2(1) of the Governance Regulation.

¹⁷⁹ *Ibid.*, Article 17(1).

¹⁸⁰ *Ibid.*, Article 20(b)(1).

¹⁸¹ Cédric Philibert, Jonathan Pershing, “Considering the options: climate targets for all countries”, (2001) 211–227.

¹⁸² Article 34 of the Governance Regulation.

Non binding targets

The second chapter of this research paper presented the evolution of the energy targets. It was shown how the renewable energy targets changed through the years, while the energy efficiency targets design was not altered much. Currently, the energy targets established at national level are non binding for both, energy efficiency and renewable energy sector. The non binding targets are those in which there are no legal consequences if energy goals are not reached.¹⁸³

Even with calls for making the targets binding, the EU maintained the non binding legal force for the national energy efficiency targets, but strengthened their position by establishing measure of ensuring their achievement. Does this alter their non binding nature? Most likely yes, but as it will be explained further on, the non binding or indicative legal nature is not absolute.

The abandonment of binding targets¹⁸⁴ is the result of the bargaining strategy and a matter for negotiations.¹⁸⁵ In order to raise the Union energy target, the Member States gained the right to decide their own contributions in the most cost-effective manner in accordance with their specific circumstances.¹⁸⁶ When determining the national targets, Member states can also take into account the energy-saving potential, changes in energy imports and exports, development of renewable sources, nuclear energy, carbon capture and storage, and other national characteristics.¹⁸⁷ Therefore, the EU legislator reserved the right to set the Union target, but forfeited the right to decide the nature of national targets for the Member States.

The Union target being established by the EU does not mean that the target has a binding nature but it does give it an upper hand over the national targets. In order to understand how that be the case, one must look at the legislative process within the EU. The principle of the primacy of EU law is based on the idea that where a conflict arises between an aspect of EU

¹⁸³ Cédric Philibert, Jonathan Pershing, “Considering the options: climate targets for all countries”, (2001) 211–227. p. 212.

¹⁸⁴ This is the case of renewable energy targets during the first till the last generation of EU energy legislation. While the energy efficiency targets were never binding, the bargaining strategy was still used during the negotiations for the amendments of the Energy Efficiency Directives.

¹⁸⁵ Alexander Bürgin, “National binding renewable energy targets for 2020, but not for 2030 anymore: why the European Commission developed from a supporter to a brakeman”, *Journal of European Public Policy*, (2015),690-707, p. 690.

¹⁸⁶ Preamble 9 of the 2018 Renewable Energy Directive.

¹⁸⁷ Preamble 13 of the 2018 Efficiency Directive.

law and that of national law of a Member State, EU law will prevail.¹⁸⁸ This principle explains the manner in which two targets with, apparently the same legal nature have different legal force. For example, the ambiguous Union energy efficiency target is set at 32,5% by the Energy Efficiency Directive. The Directive, as previously stated, is an EU legislative act that sets out goals for Member States to achieve, but it leaves to the national authorities the choice of form and methods of how those goals will be achieved. If a directive, which has primacy over national laws, is mandatory and sets goals for Member States, establishes energy targets, then they have primacy over national legislation. Therefore, even if a target is not binding but is included in the operative part of a directive has a certain level of primacy for the Member States.

The EU energy efficiency legislation introduced a Union target of 32,5 % in 2030.¹⁸⁹ One can argue that the wording of the Article 1 of the Energy Efficiency Directive implies a non binding nature for the Union target, as well as for the national targets. The fact that the directive must ensure that the Union's 2030 headline targets on energy efficiency of at least 32,5 % is met¹⁹⁰ does not denote strong obligations to reach that targets or does not imply any explicit enforcement mechanism. The use of the word *ensure* demonstrates that all the necessary measures for the achievement of the target are being provided, but the target itself may not binding. It was noted above that the Commission referred to it as binding in its proposal, but the terminology is less important compared to the effects it produces.

Member State have the obligation to set non binding national energy efficiency contributions towards the Union's 2030 targets taking into account the Union target.¹⁹¹ Non-binding targets could be politically appealing for developing countries, alleviate fears regarding energy security, but also might burden the developing states regarding the penetration of the renewables into the energy market.

The common characteristics of the non binding national targets for both, renewables and for energy efficiency sector, is the obligation to maintain a baseline share. For the renewable

¹⁸⁸ The principle of the primacy of EU law has developed over time through the Court of Justice of the European Union case law (for example, Case 6/64, Costa/ENEL). The primacy principle is not explicitly stated in the EU treaties (although the Declaration concerning primacy (12008E/AFI/DCL/17), annexed to the TFEU, was adopted specifically with the purpose to clarify the concept of primacy).

¹⁸⁹ Article 1(1) of the 2018 Energy Efficiency Directive.

¹⁹⁰ Ibid., Article 1(1).

¹⁹¹ Ibid., Article 1(2)(5).

energy national targets the share of energy from renewable sources shall not be lower than its mandatory national overall target for the share of renewables in 2020.¹⁹² Furthermore, the national targets must show an indicative trajectory for their contribution from 2021 onwards of at least 18 % of the total increase in the share of energy from renewable sources between that Member State's binding 2020 national target.¹⁹³ For energy efficiency, the national targets' baseline is less stringent,¹⁹⁴ with an indicative trajectory for that contribution from 2021 onwards,¹⁹⁵ which is in line with the idea that the national renewable energy targets have a stronger legal force without them being binding. Such measure, as less flexibility in setting the baseline, enable adequate monitoring and early corrective action by Member States and the Commission,¹⁹⁶ making the targets stronger.

An interesting observation could be made regarding the existence of penalties in the 2018 Energy Efficiency Directive¹⁹⁷, which could be used as an enforcement measure for failure to achieve the energy targets. Some scholars argued that not including penalties was a missed opportunity for the 2018 RES Directive and could contribute to the achievement of the Union binding target.¹⁹⁸ Then why was decided to include penalties for non compliance in case of the non binding energy efficiency targets and not for binding targets?

Member States shall decide on penalties applicable in case of non-compliance with the energy savings obligations, specifically determining the baseline for the national targets¹⁹⁹ and shall

¹⁹² Article 32(2) of the Governance Regulation; Article 3(4) of the 2018 RES Directive.

¹⁹³ Article 4(2) of the Governance Regulation.

¹⁹⁴ Member States are required to achieve cumulative end-use energy savings for the entire obligation period (2021 to 2030), equivalent to new annual savings of at least 0,8 % of final energy consumption. That requirement could be met by new policy measures (adopted from 1 January 2021 to 31 December 2030) or by new individual actions. Additionally, other options (for example, the energy used in transport) can be included in the calculation baseline, whilst ensuring that the required cumulative end-use energy savings equivalent to new annual savings of at least 0,8 % are reached (Preamble 12 of the 2018 Energy Efficiency Directive).

¹⁹⁵ Article 4(b)(1) of the Governance Regulation.

¹⁹⁶ *Ibid.*, Preamble 59.

¹⁹⁷ Article 13 of the 2018 Energy Efficiency Directive

¹⁹⁸ Angus Johnston and Eva van der Marel analysed the binding nature of the renewable targets introduced by the 2009 RES Directive. While the authors do not directly address the current renewable energy targets, nor the 2018 RES Directive, we consider that their arguments on the role of penalties for binding targets can also be applied for the Union binding target established by the 2018 Renewable energy Directive. For more details see Angus Johnston and Eva der Marel, "How Binding are the EU's 'Binding' Renewables Targets?", p.202.

¹⁹⁹ [Member States must to achieve cumulative end-use energy savings at least equivalent to new savings each year from 1 January 2021 to 31 December 2030 of 0,8 % of annual final energy consumption, averaged over the most recent three-year period prior to 1 January 2019.(Article 7 of the 2018 Energy Efficiency Directive).

take the necessary measures to ensure that they are implemented. The penalties shall be effective, proportionate and dissuasive.²⁰⁰ The existence of such mechanism add to the credibility of the legal force for the obligation on Member States to respect the baseline set up in Article 7, but do not invest a binding power onto the targets.

Various policy²⁰¹ and legislative acts²⁰² and legal scholars²⁰³ argue that non binding targets give greater flexibility for Member States to meet their GHG emission targets in the most cost-effective manner, in accordance with their specific circumstances, which will encourage them to set up higher national contributions.²⁰⁴ The European Commission partly disagrees with such an approach.²⁰⁵ It suggests that increase binding energy efficiency targets at EU level will help reduce energy consumption and will bring down emissions and energy costs for consumers and industry. The non binding nature of the national targets is to be preserved, but the national indicative benchmarks for energy efficiency should be calculated with a new formula.²⁰⁶ Perhaps the reasoning behind such approach is the potential for non-binding targets to threaten the environmental integrity system with the increased risk of non compliance.

Enforcement Mechanisms

At EU level, the European Commission is the body charged of ensuring the application of the European law.²⁰⁷ If the European Commission considers that a Member State has failed to fulfil an obligation under the Treaties, it may initiate the necessary pre-judicial phase, which can ultimately lead to a case before the CJEU. This official infringement procedure is prescribed by the Article 258 TFEU. Non compliance with the EU law does not necessarily lead to an infringement procedure in Court. The European Commission (or a Member States) has the discretion of deciding if the actions or inactions of a state are to be considered as not

²⁰⁰ Ibid., Article 13.

²⁰¹ For example, The Commission Communication of 22 January 2014 ‘A policy framework for climate and energy in the period from 2020 to 2030’.

²⁰² For example, 2018 RES Directive.

²⁰³ For example, Cédric Philibert, Jonathan Pershing, “Considering the options: climate targets for all countries”, *Climate Policy* 1 (2001) 211–227.

²⁰⁴ Preamble 9, 2018 RES Directive; Cédric Philibert, Jonathan Pershing, “Considering the options: climate targets for all countries”, *Climate Policy* 1 (2001) 211–227.

²⁰⁵ COM/2021/550 final

²⁰⁶ Ibid, para. 2.2.3; for more details on the proposed formula on calculating the benchmark see Annex I of the COM(2021) 558 final.

²⁰⁷ Article 17(1) of the TEU.

fulfilling its obligations.²⁰⁸ Non compliance with the Court's ruling can lead to further *punishment* in form of financial penalties,²⁰⁹ as provided in Article 260 TFEU.²¹⁰

The first stage of the infringement procedure occurs when the Commission, after deciding that the Member State failed to fulfil an obligation, is sending a letter of formal notice requesting further information from the state concerned. After receiving the information from the states (and acknowledging the failure to fulfil its EU obligations), the Commission may send a reasoned opinion (formal request of compliance with EU law). The reasoned opinion explains why the Commission considers that the country is breaching EU law and requests the state to take the necessary measure to correct the situation. The assessment of whether the Member States has failed to fulfil its obligation is determined by reference to the situation at the end of the period laid down in the reasoned opinion.²¹¹ Most cases are settled at this stage but if the country still doesn't comply, the Commission may decide to bring the case to the CJEU. The Commission can decide a repeated action in court if, despite the court's judgment, the country still doesn't rectify the situation.

As of today, the Commission decided to send letters of formal notice for failing to ensure full transposition of the revised 2018 Energy Efficiency Directive to Denmark,²¹² France²¹³ and Portugal.²¹⁴ The Commission send letter of formal notice to 22 Member States that in November 2020 had not declared full transposition. Although Denmark, France and Portugal had declared full transposition, the Commission considered that the transposition was not complete. Croatia, Luxembourg, Slovakia and Spain, even after receiving letters of formal notice in 2020, failed to fully transpose the Energy Efficiency Directive, which triggered the Commission to send reasoned opinions.²¹⁵

²⁰⁸ Article 257-258 of the TFEU.

²⁰⁹ Angus Johnston and Eva der Marel, "How Binding are the EU's 'Binding' Renewables Targets?", p.202.

²¹⁰ If the Court finds that the Member State concerned has not complied with its judgment it may impose a lump sum or penalty payment on it. When the Commission brings a case before the Court (on the grounds that the Member State concerned has failed to fulfil its obligations) it may, when it deems appropriate, specify the amount of the lump sum or penalty payment. The penalties are calculated taking into account the type of rules breached and the impact of the infringement on general and particular interests, the period of non compliance and the country's ability to pay. Consequently, the Court may impose the lump sum or penalty payment not exceeding the amount specified by the Commission.

²¹¹ Case C-166/97, *Commission v France*, para.18.

²¹² NFR(2022)2038.

²¹³ INFR(2022)2039.

²¹⁴ INFR(2022)2040.

²¹⁵ INFR(2020)0529, INFR(2020)0539, INFR(2020)0564 and INFR(2020)0522.

Regarding the transposition of the 2018 RES Directive, the Commission found that Cyprus, Germany, Greece, Hungary, Ireland, Luxembourg, Portugal and Romania failed to their obligation of full transposition. The deadline to transpose the directive into national law was 30 June 2021. In July 2021, the Commission sent a letter of formal notice to all these Member States. To date, Croatia, Germany, Hungary, Portugal and Romania have failed to provide clear and precise information in relation to which national provisions transpose each provision of the directive; and Cyprus, Greece, Ireland, and Luxembourg have only partially notified national measures transposing the directive.²¹⁶

The issue with the infringement procedure is that the enforcement mechanism is not stringent enough. Based on Article 258 of TFEU, the Commission is not obliged to bring a case before a court, but it *may* do so if it sees necessary. The reason for such an approach is the legal and regulatory diversity among the Member States and the particularities of the EU environmental and energy law. Setting minimum requirements rather than comprehensive harmonisation, causes uncertainty and inconsistency, when trying to integrate the provisions in 27 different national legal systems.²¹⁷ The regulatory diversity creates difficulties for the Commission to assess correctly the level of non compliance. The enforcement of the Renewable Energy and Efficiency Directives is no different. The Member States can decide on the necessary measure and instruments that would help them achieve the binding targets and can use their individual circumstances in deciding on the non binding national targets. Such broad possibilities may lead to different approaches on Member State level. The Commission's obligation to assess the compliance with the directives is further complicated in case of non binding targets, by the reporting process (integrated national energy and climate plans), as it includes a unique set of data.²¹⁸ Arguably, the binding targets create a more transparent and straightforward situation. The problem that a binding target faces is that the enforcement normally occurs at the end of a period, in which case it can be too late for that enforcement to be effective, if the target has

²¹⁶ More information is available at <https://ec.europa.eu/commission/presscorner/detail/e%20n/inf_22_2548>

²¹⁷ Angus Johnston and Eva der Marel, "How Binding are the EU's 'Binding' Renewables Targets?", p.207.

²¹⁸ 'Following the ruling of case C543/17 Commission vs Belgium, Member States must accompany their notifications of national transposition measures with sufficiently clear and precise information, indicating which provisions of national law transpose which provisions of a directive. This must be provided for each obligation, not only at "article level". If Member States comply with this obligation, they would not need, in principle, to send explanatory documents on the transposition to the Commission' (COM(2021) 557 final, p.10).

not been reached. It is well known that environmental cases (between the pre judicial procedures and a Court ruling) last on an average almost four years.²¹⁹ In this case it could be useful to consider measures and mechanisms that can be taken prior the end of the period in order to support and secure the the targets are achieved. Taking early actions is desired and can lead to efficiency, security, cost savings, as well as make the achievement of energy targets easier and more effective in the medium to long term. Therefore, the concerns related to the enforcement and compliance has become an important element in assessing the impact and the effectiveness of EU energy law.

Conclusion

Having a comprehensive understanding of the legal nature of the energy targets will determine our further analysis of their effectiveness. The aim of this chapter was to provide an in-depth review of the two types of targets that the EU energy law establishes, namely binding and non binding targets. Currently, the Union targets are the only EU energy targets invested with binding force, mandating the Member States to achieve an overall Union share of renewable energy of 32% by 2030 and a saving target of at least 32,5%. The binding nature can be determined by assessing the wording the directive uses to describe it (using the term 'binding' in this case), the part of the directive it placed in (operative part - Article 3) and the mechanisms of monitoring and enforcement.

A binding nature for an energy target is not effective if one cannot guarantee its compliance and enforcement. The existing mechanism of monitoring and control, specifically the assessment of the integrated energy and climate plans, and the obligation²²⁰ of the European Commission to issue recommendations to the Member States which failed to report full compliance with the energy targets, can be considered an enforcement procedure in so far as those recommendations have a real impact. The States are expected to comply with the recommendations and take the necessary measure to fully comply with its requirements. If the Member States does not take into consideration the requirements, there is no legal procedure to enforce it. So the binding nature ends, where the mechanisms of its enforcements end.

²¹⁹ Angus Johnston and Eva der Marel, "How Binding are the EU's 'Binding' Renewables Targets?", p.208.

²²⁰ The Governance Regulation used the word *shall* in regards to the Commission's response of issuing recommendations in case it concludes that insufficient progress is made by a Member State towards meeting its objectives, targets and contributions (Article 32).

As Member States decided to be part of the EU, they took upon themselves to respect the EU law and acting in bad faith is not necessary the intention of any EU Member State. Integrating binding provisions into different legislative system, that were formed separately, had an independent development and reflect particular elements, is possible but will lead to divergences as it is the case in many areas. Coherence is desired but it should be shaped to the unique structure of the EU. Additionally, the negotiation for a new EU legislative act implies the appeasement of all the Member States, it is a long and complicated process, and it is not wrong to assume that the end result is the best what could come out of that negotiation.

The problem of partially or incomplete transposition of the Directive in national legislation can be subject to an infringement procedure. This is a more radical measure of enforcement, with a greater impact compared to the recommendations issued by the European Commission. As stated above the majority of infringement cases end before reaching the Court, clearly showing that Member States are ready to comply with the requests from the Commission. Furthermore, if the non compliance case was brought before the Court and a judgement was released, it becomes mandatory for that Member State.

The EU non binding targets are those set at level. Regarding the energy efficiency targets, their non binding nature was constant throughout the years and somehow expected by now. That does not mean that their compliance mechanisms did not improve. The introduction of penalties is a good example of efforts to strengthen the legal force of non binding targets. The national targets in both cases are closely tied to their respective Union target. Thus, the legal nature of the Union target has an impact on the national target, regardless of the legal nature of the later.

Neither the binding or non binding nature of the energy targets is absolute. The complexity of it depends on the particularities of the EU law itself (being capable to persuade 27 national Member States with very different legal systems) and the particularities of the environmental law (difficult to express in precise terms). Therefore, when analysing their legal nature all the specific element must be taken into account.

IV. Effectiveness of the energy targets

The EU portrays itself as one of the world leading actors in environmental protection, having the highest environmental standards, developed over decades.²²¹ The EU environment policy is based on Articles 11 and Title XX of the TFEU and the EU energy policy - Title XXI of the TFEU. Article 191 states that the Union policy on energy shall aim at the need to preserve and improve the environment through the promotion of energy efficiency and energy saving and the development of new and renewable forms of energy. Furthermore, such overreaching goals shall be implemented through legislative acts, such as directive. Consequently, a series of directives regulating the energy efficiency and renewable were adopted. The energy directives were built on the main legal tool, namely the energy targets. As it was explained in the previous chapters, the energy targets went through multiple changes in order to find the most efficient form. The two predominant designs for the energy targets were based on the legal nature and categorised them in binding and non binding. Multiple reasons for the amendment of the targets were expressed, primarily related to concerns for the Member States to achieve them, the need to adjust them towards reaching the new climate ambitions and desire of the EU legislator to find the most effective energy targets.

This chapter will address the questions related to the effectiveness of the EU energy targets, or the effectiveness is the end result ultimately sought. The EU positions itself at the centre of the climate and energy transformation and that can only be achieved with an effective legal framework. The unique structure of the EU makes it necessary to address the effectiveness of the targets not only at EU level, but also on national level. For the purpose of this research, the effectiveness on EU level will be assessed based on the reports, communications, recommendations and other policy instruments released by the EU institutions. The proposals for the amendments to the directives (renewable energy and energy efficiency) are the main source for the assessment of the effectiveness of the Union energy targets, as it recommends amendments and provides the relevant arguments and reasoning for such proposals.

The effectiveness on national level will be grounded in the *effet utile* concept as determined by CJEU. The *effet utile* is to be understood as justiciability, practical effect and/or enforceability of clear, precise and unconditional rights for the citizens who may invoke those

²²¹ <<https://eur-lex.europa.eu/summary/chapter/20.html#:~:text=The%20EU%20has%20some%20of,people%20living%20in%20the%20EU>>.

rights before the national courts.²²⁸ Sweden, as a leading state in the EU sphere of renewables,²²² is a perfect example to be analysed for this purpose. Sweden has traditionally aimed at more ambitious climate and energy targets than what is prescribed in EU directives and regulations. Sweden adopted a share of 100% of its electricity to be covered from renewable sources by 2040, which will require innovative solutions to meet such an ambitious policy goal. In order to fulfil such ambitious ambitious, an efficient legal framework must be established. Looking into the national system of Sweden can inform other States what can be adopted by them to be more successful in achieving the energy goals.

EU level

Experiences gained in the early 2000s demonstrated the importance of enabling frameworks for renewables, and such frameworks remain at the heart of the EU's policy process.²²³

Adopting the relevant legislation that will establish the most effective tools to achieve the Union goals is the basis for a strong climate and energy union.²²⁴

At EU level, the shares of renewable energy sources in total²²⁵ have been continuously increasing over the past years. In 2018, the EU reached a share of 18% of renewables in gross final energy consumption.²²⁶ Up to 2018, all EU Member States have been above the indicative trajectory set in the 2009 RES Directive. However, the EU as a whole was slightly below the more ambitious trajectory defined by the Member States themselves in their national climate and energy plans.²²⁷

In 2020, for the first time, renewables surpassed fossil fuels as the EU's main power source (38 % of EU electricity, fossil fuels 37 % and nuclear 25 %).²²⁸ Policy reforms concerning the financial incentives for the promotion of renewable heating and cooling in buildings were enacted and revised in EU in 2020. Ocean power, representing the smallest portion of the renewable energy market, had the biggest presence in Europe (particularly Scotland). The

²²² The criteria for the statements represents Swedens's share of renewables in its gross final energy consumption. For more details see Kate Abnett, "European Commission analysing higher 45% renewable energy target for 2030", Reuters (2022) available at <<https://www.reuters.com/world/europe/european-commission-analysing-higher-45-renewable-energy-target-2030-2022-04-20/>>

²²³ <<https://www.irena.org/europe>>

²²⁴SWD(2020) 176 final.

²²⁵ The share of renewables also increased in electricity, heating and cooling, and to a lesser extent also transport.

²²⁶ The target for 2020 being 20% as defined in the 2009 RES Directive.

²²⁷ ENER/C1/2019-478.

²²⁸ COM(2021) 950 final.

global solar district heating market also diversified into new markets in Europe (Croatia, Kosovo and Serbia). By the end of 2020, European majors BP, Eni, Equinor, Repsol, Shell and Total had all announced net zero emission targets for 2050.²²⁹ These developments show positive developments and it might indicate that EU is doing an excellent job in its energy sector. But the new knowledge on the state of climate change shows a different picture.²³⁰ The conclusion is that the EU is not doing enough to protect the environment and possibly the EU might need to reconsider its approach for renewables and energy efficiency.

The EU Member States adopted NECPs describing how they intend to contribute to the 2030 EU renewables target. The European Commission's assessment of the NECPs found that, at EU level, the combined commitments of the Member States will lead to a total share 33.1 % - 33.7 % in 2030, which is consistent with the 32 % target.²³¹ But such target, while consistent with the 2018 RES Directive target, is not ambitious enough for the achieved of the goals of European Green Deal and 'The Fit for 55' package requiring a share of at least 40 % of renewables.

In line with this idea, the Commission proposal to amend the 2018 RES Directive, found that the targets and measures set in the directive are not sufficiently ambitious to achieve the general and sectoral shares of renewables to fulfil the obligation of reducing the GHG at least 55% in 2030.²³² Therefore, the Commission proposed²³³ to raise the EU target for 2030 for renewables from the current 32 % to at least 40 % of the Union's gross final consumption of energy while setting up a complete framework for renewable energy deployment, addressing all sectors of the economy.²³⁴

This proposal came after an analysis of multiple scenarios. In the first scenario, the Commission considered to provide no changes to the existing renewable energy targets. In this case, the Commission argues that there will be no means of ensuring that the EU-wide renewable energy target will reach at least 38- 40% share in final energy consumption, which is needed to fulfil the climate obligations. However, it is important to note that in the absence

²²⁹ REN21, "Renewables 2021 Global Status Report" 2021 available at <https://www.ren21.net/wp-content/uploads/2019/05/GSR2021_Full_Report.pdf>.

²³⁰ For an in-depth assessment of the 6th Report of the International Panel on Climate Change available at <<https://www.ipcc.ch/assessment-report/ar6/>>.

²³¹ EEA Report, "Trends and projections in Europe 2021", No 13/2021, p.33.

²³² COM(2021) 557 final, p. 11.

²³³ COM(2021) 557 final.

²³⁴ COM(2021) 950 final, p.4.

of an increased overall EU renewable energy target, some effectiveness could be reached through other regulatory instruments, or market based instruments.²³⁵

The second scenario implies a union binding target higher than 40%, with Commission warning that it would potentially lead to overshooting the climate target and lack of coherence with other EU legislative acts. The third scenario, considered to have no drawback, includes a union binding target of 38-40% share of renewables. The Commission, studying the scenario of introducing national binding targets for renewables, recognised that, while it would lead to the most effective results in achieving the increased targets, this would create subsidiarity issues.²³⁶

Interestingly, in the Report of the 1st Stakeholder workshop 11 December 2020,²³⁷ the majority of respondents favoured an overall renewable target that is binding at both EU and national level.²³⁸ Some stakeholders have asked for a higher target – beyond 40% renewable energy shares or renewable electricity share of 100% by 2030.²³⁹ The stakeholders approach differs substantially from the one proposed by the Commission. The Governance Regulations could bring some clarity in this conflicting approaches. The first review process of the NECPs (2020), proved effective the situation when the national contributions were collectively sufficiently ambitious to reach the binding Union 2030 RES target. Thus, the governance process prefers the option of EU binding target and national voluntary contributions.²⁴⁰ Ultimately, the proposal did not include any amendments to the energy targets beyond the share of 40%, maintaining the Union binding target and national non binding contributions.

²³⁵ COM(2021) 557 final, p. 63.

²³⁶ Ibid., p. 4.

²³⁷ The stakeholder workshop was organised in the context of the proposal for the amendment of the RES Directive. A total of 699 people registered for the event. Of these, the total number of attendees was 495, of which 52 were moderators, panellists, and project team members. The remaining 443 participants were public audience. Most of the workshop participants were from within the EU, with the majority connecting from Belgium, followed by Germany, France, and The Netherlands. The workshop was organised in seven sessions. The seven sessions covered the main areas of 2018 RES Directive, with session 1 providing the wider context for the need of renewable energy to achieve EU climate objectives. About half of the participants of the workshop came from various industries, trade associations, lobby groups (26%), as well as government institutions (22%), which includes officers from the European Commission. A large group of stakeholders came from private companies (14%), which was followed by Transmission and Distribution System Operators (10%), science, research and consulting companies (9%) and NGOs (1%) (for more information see COM(2021) 557 final, p. 20-32).

²³⁸ Binding at nations level - 7%; binding at EU level - 24%; binding at EU and national level - 66%.

²³⁹ COM(2021) 557 final, p. 126.

²⁴⁰ Ibid., p. 5.

Once the EU target is being raised, automatically the collective sum of the national contributions reported, till now in the NECPs, are no longer sufficiently ambitious to achieve the EU target.²⁴¹ Thus, Member States will be expected to update their NECPs to indicate their national contribution to a the increased 2030 target and explains how the higher target will be achieved. However, there is no guarantee that the updated national plans will deliver the Union renewables target; it is rather likely that an ambition gap will remain.

In this case, the Commission considers that other measures could be used. For example, the Member State with low national contributions could be requested to either increase the ambition level of their national contributions or make a proportionate payment to the Union Renewable Energy Financing Mechanism.²⁴² The option of national binding targets can be the most effective in filling the gap of ambition of the national targets. However, Member States are not likely to support such changes. because an EU level target has proven to be efficient in reaching the existing 2030 objective.²⁴³

Since the EU energy law lacks efficient enforcement mechanisms, the Commission considered various scenarios in this regard as well. In the current system, enforcement takes place through the annual monitoring of Member States' performance under the Governance Regulation, Commission recommendations to Member States, and infringement proceedings where relevant.²⁴⁴ As an alternative, non-regulatory measures, such as guidance and best practice exchange could be introduced. This would be useful to cover diverging interpretations and implementations by Member States in areas related to target accounting, information provisions for consumers, network access, support schemes and others.²⁴⁵

As stated in the previous chapter, the Commission classified the EU level energy efficiency target as being legally binding, to which Member States are contributing in a collective and cost-effective manner. Member States are required to define their own ambition levels, including trajectories that correspond to their national circumstances. The Commission considers that the nature of the non binding nature of the national respects reflects the

²⁴¹ Ibid., p. 65.

²⁴² Regulation (EU) 2020/1294 on the Union renewable energy financing mechanism, https://ec.europa.eu/energy/topics/renewable-energy/eu-renewable-energy-financing-mechanism_en

²⁴³ COM(2021) 557 final, p. 66.

²⁴⁴ Ibid., p. 33.

²⁴⁵ Ibid.

principle of subsidiarity.²⁴⁶ This is supported by the obligation established by the Governance Regulation for the Commission to act in case of a lack of ambition by the Member States to reach the Union efficiency targets, thus *de facto* recognising the essential role of Union action in this context.²⁴⁷ When decided their national efficiency contributions, Member States will take into account the national context and individual circumstances, in terms of selecting their policy mix, sectors and the approach to achieve the required energy savings by 2030.²⁴⁸ In the energy efficiency sector, essentially the directive sets the overall union target and the Member States will decide the necessary actions to achieve this objective.²⁴⁹

For the achievement of the 2020 efficiency target contributed the Covid-19 pandemic, but the national contributions reported by Member States in the NECPs shows that they will not have the same success with the Union level efficiency target of 32,5% in 2030. The contributions collectively will lead to a reduction of 29,4% for final energy consumption and 29,7% for primary energy consumption for 2030. The remaining gap is a problem that must be solved, in particular as the higher climate ambition call for stronger energy savings policies.²⁵⁰ The Commission determined²⁵¹ that efforts beyond, market mechanisms and development of technologies, are needed to higher levels of energy efficiency.²⁵²

Similar as to the renewable energy, the amendments required by the energy efficiency sector towards achieving more effectiveness is grounded in the reaching the increased climate target for 2030. Working towards the GHG emissions reduction of 55% by 2030, the Commission proposes an increased target of 35-37% reduction from the final energy consumption compared to the 2007 baseline used as a business as usual trajectory for the EU energy efficiency targets.²⁵³

²⁴⁶ The principle of subsidiarity rules out Union intervention when an issue can be dealt with effectively by Member States themselves at central, regional or local level (more information about the principle of subsidiarity in EU law is available at <

²⁴⁷ COM(2021) 558 final, p.10.

²⁴⁸ Ibid.

²⁴⁹ Ibid., p.12.

²⁵⁰ Ibid., p.3.

²⁵¹ SWD/2021/623 final.

²⁵² Ibid, p.72.

²⁵³ Ibid., p.14.

Regarding the legal nature of the targets, similar to the proposals for renewable energy, the Commission notes that indicative national targets could provide increased insurance for delivery of the Fit for 55 package. The drawback of such option is that the indicative national targets will have to be adjusted with an equitable distribution of effort and with the options considered for burden sharing.²⁵⁴ On the other hand, a binding EU level target would trade the flexibility for the reduce the risks of non-compliance. As we assessed in the previous chapter the nature of the EU-level target not explicitly binding. Although the Energy Efficiency Directive sets a target for the EU as a whole, and the Governance Regulation provides for additional reporting and monitoring EU measures if the targets are not met, the indicative nature of the target does not support its achievement.²⁵⁵

The complexity of adopting a more effective energy savings framework is based on the difficulty to design, implement and monitor energy efficiency associated instruments. In essence, an effective legal framework for the energy efficiency sector must combine mutually reinforcing information-based instruments, regulatory instruments, monitoring and reporting mechanisms and economic and financial programmes.²⁵⁶ Furthermore, these elements must address in an effective manner the relevant decision makers, individual consumers, businesses or investors, which requires coordinated policy development at national, regional and local levels.²⁵⁷

In summary, to ensure the effectiveness of their targets, Member States must establish the appropriate frameworks, provide finance and enforce any other measures upon different actors which ultimately will ensure the achievement of energy efficiency goals.²⁵⁸

Sweden

In terms of progress Sweden achieved their national renewable energy shares in 2019 surpassing their 2020 national targets in the RES Directive. Notably, Sweden achieved a high share of renewable energy used in transport in 2020 (estimated at 29 %) in Sweden, which consequently contributed to the countries' emission reductions of 26 % between 2005 and 2020.²⁵⁹ Sweden has also made major emission reductions in its building sector, of more than

²⁵⁴ For a detailed understanding of the benefit distribution and effort sharing see COM(2021) 555 final.

²⁵⁵ SWD(2021) 623 final, p. 15.

²⁵⁶ Ibid.

²⁵⁷ Ibid.

²⁵⁸ Ibid., p. 16

²⁵⁹ EEA Report, "Trends and projections in Europe 2021", No 13/2021, p.24.

50 % in 2005-2020 period. Sweden also indicated high share of renewables in the heating and cooling sector, which accounted for 66 % in 2019 and increased to 69 % in 2020.²⁶⁰

However, in 2019, Sweden had not reduced their final energy consumption enough to reach levels below their 2020 indicative efficiency targets.²⁶¹ Based on the preliminary data for 2020 and as a result of the COVID-19 pandemic, in particular, Sweden was expected to reach their final energy consumption targets in 2020.²⁶²

The structure of the Swedish decision making and implementation of energy and climate policies is diverse, which is needed in order to make sure an effective implementation of the energy legislative and policy instruments. The Swedish Energy Agency deals with various sectors of society to support effective and sustainable energy consumption and to ensure cost-effective supply of energy in Sweden. The Swedish Environmental Protection Agency plays is responsible for driving, supporting and coordinating environmental policy. The Swedish Energy Markets Inspectorate supervises all issues related to the electricity, natural gas and district heating market. The Swedish National Grid is in charge of the national electricity network. County councils²⁶³ ensure the implementation of the Government's national goals and play an important part in drafting national energy and climate plans and allocating state aid for energy and climate purposes. Municipalities play an important role in town and country planning contributing to climate targets.²⁶⁴

As it was stated above, the effectiveness of the energy law depends on the rights and obligations it creates for the individuals. For this reason, the Swedish Energy Agency mandates municipalities (financed by Government funds) to provide local climate and energy advice to private individuals and small businesses. That will be realised through a local climate and energy advisor, who provides objective information adapted to the locality and advises on energy efficiency and energy consumption measures, as well as climate-related issues in buildings and households.²⁶⁵ The energy and climate advisers are coordinated by the regional energy offices, which initiate and participate in many energy efficiency and renewable energy

²⁶⁰ Ibid., p.25.

²⁶¹ Ibid., p.34.

²⁶² Ibid.

²⁶³ Sweden is divided into 21 counties, each of them acting as a public coordinating authority, a service authority and an appeal body and has supervisory responsibility.

²⁶⁴ Sweden's Integrated National Energy and Climate Plan, 2020, p. 8-9.

²⁶⁵ Ibid., p. 45.

projects funded by the EU, the county councils, regional associations and other organisations.²⁶⁶

An important element for the achievement of renewable energy target is related to non-discriminatory participation of renewables on the energy market. In this regards, Sweden introduced a provision²⁶⁷ in the Electricity Act²⁶⁸ forbidding grid operators from establishing technical requirements or other conditions that makes it more difficult to enter the market.²⁶⁹ In an effort to ensure that consumers participate in the energy system and benefit from self-generation and new technologies, the Measurement Ordinance²⁷⁰ was adopted, which allows consumers to obtain information helping them to save energy and have an active role in the electricity market, and promote reliable and effective grid operation making it easier integrate electricity from renewable sources.²⁷¹

In 2016, Sweden launched the ‘Fossil-Free Sweden’²⁷² initiative as platform for dialogue and cooperation between the Government and business, municipalities, other public operators and civil society with a focus on a competitive climate transition.²⁷³ The participants to the initiative must commit to take certain specific actions to reduce emissions.

This types of measure and initiative are aimed at involving different actors (from consumers to Government) in to the energy system. Only having free access to the energy sector, one can benefit fully from the rights it creates. Beside obtaining energy rights one must be able to protect those rights. In this sense, the states obligation is to provide free access to justice and sufficient and effective domestic remedies.

On this basis, Sweden provides a dispute resolution framework that typically applies in the renewable energy sector, including procedures for disputes between any government authority and the private sector. The permitting authority for hazardous activities or water operations are awarded by the relevant authority of a competent public court.²⁷⁴ The Energy Market Inspectorate²⁷⁵ can decide in cases regarding the terms of access to a transmission or distribution network. Such decisions may

²⁶⁶ Ibid., p. 46.

²⁶⁷ Chapter 3, Section 16.

²⁶⁸ Electricity Act (1997:857).

²⁶⁹ Sweden’s Integrated National Energy and Climate Plan, 2020, p. 36

²⁷⁰ Ordinance on the Measurement, Calculation and Reporting of Transmitted Electricity (1999:716)

²⁷¹ Sweden’s Integrated National Energy and Climate Plan, 2020, p. 37.

²⁷² <http://fossilfritt-sverige.se/>

²⁷³ Sweden’s Integrated National Energy and Climate Plan, 2020, p. 45.

²⁷⁴ The exact authority or court will depend on the particularity of the activity that the permit is required.

²⁷⁵ <https://ei.se/ei-in-english>

be appealed in the public courts. Public courts and arbitration will decide in cases concerning private actors.²⁷⁶ National Board for Consumer Disputes will resolve disputes between consumers and companies from the energy sector.²⁷⁷

When discussing the energy targets and how they can generate rights on national level, one must look into that state's energy legal framework. Beside committing itself to the renewable energy and energy efficiency targets reported in NECPs, that are submitted to the Commission, Sweden adopted an agreement representing the main policy act establishing energy targets. In March 2015, the Energy Commission, created by the Swedish Government, prepared the agreement²⁷⁸ on energy policy, concerning the electricity supply after 2025–2030.²⁷⁹ The agreement reported a 50% target of final consumption of energy to be covered by renewable sources and 100% renewable electricity generation by 2040.²⁸⁰ In regards to the energy efficiency, Sweden has set a target in terms of energy supplied in relation to GDP. Set as a cross-sectoral target, it will reduce the energy intensity by 20% between 2008 and 2020. By 2030, the energy consumption has to reduce with at least 50% compared to 2005.²⁸¹ As Sweden's 2030 target is an energy intensity target there is no fixed target for primary and final energy consumptions to meet.²⁸²

In general, the Swedish energy framework is mostly based on policy documents, rather than legislative acts. For example, the Government bill 2017/18:228,²⁸³ Government Report 2017/18: NU22,²⁸⁴ Government communication 2017/18:411²⁸⁵ and 2018/19:153.²⁸⁶ The soft

²⁷⁶ The same procedure is applied when a public authority acts in its private capacity.

²⁷⁷ Rudolf Laurin and Aaron Coster, "Renewable Energy. Sweden" available at <[²⁷⁸ <https://www.regeringen.se/artiklar/2016/06/overenskommelse-om-den-svenska-energipolitiken/>](https://iclg.com/practice-areas/renewable-energy-laws-and-regulations/sweden#:~:text=The%20Swedish%20Law%20on%20Electricity,wind%20power%3B%20and%20wave%20energy.></p>
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²⁷⁹ Sweden's Integrated National Energy and Climate Plan, 2020, p. 6

²⁸⁰ In 2016, Swedish Energy Agency released a long term plan scenario and it included a renewable energy target of 65% for 2030 (The Swedish Energy Agency – Scenarier över Sveriges energisystem 2016 (ER2017:6).

²⁸¹ Sweden's Integrated National Energy and Climate Plan, 2020, p. 24.

²⁸² Ibid.

²⁸³ Determines political roadmap for energy transition to a completely renewable electricity system setting new energy policy goals.

²⁸⁴ Approves the renewable energy target for 2040 and established a series of goals toward sustainability, competitiveness and security of supply.

²⁸⁵ https://www.riksdagen.se/sv/dokument-lagar/dokument/riksdagsskrivelse/riksdagsskrivelse-201718411_H50K411

²⁸⁶ https://www.riksdagen.se/sv/dokument-lagar/dokument/riksdagsskrivelse/riksdagsskrivelse-201819153_H60K153

approach regarding the energy targets has the benefit of being more flexible in terms of amendments and in taking less time for their implementation. A less rigid form a policy document has, more freedom has the decision making authority in choosing the most accurate form of drafting the targets and the measures of achieving those targets. However, the lack of a legislative enforcing the energy targets can lead to less possibilities of enforcement mechanisms case of non compliance and weaker protection of the rights the individuals gain from those target. Following the logic of the climate change dispute, one must consider that his rights are violated by the actions or inaction from the state that let to a failure to reach the energy targets. Clearly, the energy targets are as significant for the people living in a certain state, as the climate targets, in particular as the energy targets and the climate targets are completely intertwined concepts nowadays.

Unlike the environmental rights, that are often protected by the national constitutions,²⁸⁷ including the Swedish Constitution,²⁸⁸ the energy rights do not have a similar protection. Although, the relation between the energy targets and climate targets is well established by now, it will be basically impossible to prove the causality in this case. If the infringement of a constitutional right cannot be claimed, then Swedish judicial system offers the civil case procedure that one could persuade in case an individual considers his energy rights were infringed.

There are three kinds of courts in Sweden: the general courts, which comprise district courts, courts of appeal and the Supreme Court; the general administrative courts, comprising, administrative courts, administrative courts of appeal and the Supreme Administrative Court; and also the special courts, such as the Labour Court.

When a public authority adopted a policy act that infringes someones right, that person can bring a claim against the state based on Chapter 10, Section 2(1) of the Swedish Code of Judicial Procedure.²⁸⁹ The dispute is considered by the district court with jurisdiction over the place where the authority that speaks on the behalf of the state is located. A claim against the a municipality is considered by the district court with jurisdiction over the place where the municipality is located.²⁹⁰

²⁸⁷ Constitution of Bolivia, Bangladesh, Columbia, Portugal, etc.

²⁸⁸ Chapter 1, Article 2 of the Constitution of Sweden (available at <<https://www.riksdagen.se/globalassets/07.-dokument--lagar/the-constitution-of-sweden-160628.pdf>> last accessed on 10 June 2022.

²⁸⁹ <https://wipolex-res.wipo.int/edocs/lexdocs/laws/en/fi/fi156en.html>

²⁹⁰ Chapter 10, Section 2(2) of the Swedish Code of Judicial Procedure.

Another possibility for an individual to protect its energy rights is to review the administrative acts. With regard to the possibility of review (executed by the administrative courts), there is a substantial difference between administrative decisions on one hand concerning a particular case and thereby decided about individual rights or obligations, and on the other hand where the authority has decided on general policies. The former, but not the latter, can be an object of review by the courts. Insofar as certain physical acts of an administrative authority are considered contentious, they cannot be the object of appeal. The decisions of the administrative court can be appealed to the Administrative Court of Appeal and respectively, the Supreme Court of Appeal.²⁹¹

As stated above, the lack of a legislative act to institute the energy targets can lead to less available means for individuals to protect their infringed energy related rights. Even more difficult is to prove that a certain right is effected by the failure to achieve a target. But as climate change proved, the stance towards targets and their impact changed in the last couple of years. The Courts are less strict and willing to consider cases where the facts are not that straightforward.

Should one consider that the Swedish legal system implementing the energy targets is less efficient? Certainly not. All the data presented above of its accomplishments proves the opposite. The initiatives and projects of engaging and involving different actors in the energy sector, makes it easier to tailor the energy policies, measures and instruments (including targets) to specific sectors and activities, making it less likely to infringe anyone's rights. Lastly, the Swedish approach is a consequence of their national practice in general, and environmental system, in particular. They have a long, documented tradition with soft law, which is fully accepted by the society. This helps Sweden to have an efficient transposition of the EU energy law, without having to adopt actual laws for that. Clearly such model is not suited for all countries, but it is a great example for those who advocate for stronger laws.

IV. Conclusion

The EU is notorious for having a strong stance in climate issues and in promotion of renewable energy. Such reputation was earned through years of intense negotiations and

²⁹¹ ACA Europe, "Administrative Justice in Europe. Report for Sweden" available at <https://www.aca-europe.eu/en/eurtour/i/countries/sweden/sweden_en.pdf>.

debate. Having 27 State agreeing on a single matter is an almost impossible task, in particular when those matters are not obviously economically viable. Even though there is a big body of data concerning the effects of climate change on our planet, there is still no clear consensus of its gravity or the necessary and cost effective measures that must to be adopted. But one thing is clear, the energy sector has the biggest impact on the environment. This simplifies, at least to some degree, the legislator's task in the process of decision making. But that does not mean that the agreement exist in all matters.

The subject matter of this research represented the energy law's main tool, namely the energy targets. And indeed, even after a couple of decades of polishing the energy law, there is still no consensus on what is the desirable form of the energy targets.

The targets are set in order to achieve something, preferable an end result expressed in a precise form. The energy targets, for the most part, are expressed in a numeric form, as a percentage. This is a huge success for the EU, as very precise goals are hard to agree upon, and normally such form of regulations fail.

The next issue that the EU had to solve was the legal nature of the targets. Its started tentatively with non binding targets, and after a couple of years gambled with the binding ones. Unfortunately, its rare when a law can be tested in a vacuum, thus it will have to be applied in practice in order to correctly assess its impact. When the 2009 RES Directive implemented the national binding targets, it was a novelty and a test, at the same time.

However the 2018 RES Directive did adopt the binding force for the national targets, neither does the proposal the the last amendment. This is an indicator that, at least, with the national energy targets, there is an understanding among the Member States. Regarding the Union target, the situation is slightly more confusing. A tendency towards binding Union targets definitely exists, at least in regards to the Union renewable energy targets.

The legal nature of the union efficiency target is quite interesting. In various policy acts it is defined differently, either binding or non binding, while in essence it is not significantly different than the renewables binding targets. The Governance Regulation established the same monitoring and reposting system (NEPCs) for all types of targets, stating that the national target are aimed at achieving the Union level target. Therefore, there is a primacy of the union targets over the national contributions, similar to how the EU law has primacy over the nation legislation.

The EU, acting through its competent body, is in charge of determining the content and the form of Union targets, while the Member State will have to adopt the necessary measures, instruments and targets in order to achieve the union energy goal. This is the model of decision making that the EU built, and based on the various reports and studies, it is a successful one. Evidently, the new climate ambitions will put a strain on the energy sector, but the Member States should be up for the challenge.

Demonstrating great ambition, Sweden pledged a 100% share of electricity from renewables by 2040. Sweden had big successes in integrating renewables into the energy market and setting effective market-based systems and well as policy measure. As it was observed the decision making process regarding the energy sector in general, and energy targets in particular, is based on soft law. Whilst, it does not seem to fit everyone, the soft law approach is preferred in Sweden. Arguably, the protection of the individuals rights can suffer as a consequence of a weak enforcement mechanism. Idealistically thinking, one might say that if the law or policy is created effective enough, there will be no use for enforcement mechanisms, responses to non compliance and a need for dispute settlement. Nevertheless, Sweden does provide for ways to protect individuals infringed rights, but not the same procedure that would be applied in case a target would have been enforced by a law. Perhaps, Sweden made a similar trade, as EU did with Member States. The individuals gave up stronger protection for their right, for more flexible, adaptive and project oriented policies. At the beginning of the research we wondered to bind or not to bind? The aim of the research was to gain sufficient knowledge to be able to have an answer. But in law, as in other complicated matters, things are not that simple. At times, one must make decisions even when lacking sufficient information to make an informed choice. Thankfully, currently we have sufficient data to make choices as close to a concept of efficiency as possible. The proposals for amendments that the Commission approved, presents comprehensive data on the most efficient model of energy targets, that will be consistent with the climate ambitions, economically viable, sustainable in long term and will ensure energy diversity and energy security. EU was on track with its 2030 energy targets, and that experience should benefit to have similar results in 2040.

LITERATURE

International legislation

United Nations Framework Convention on Climate Change, entered into force on 21 March 1994.

Rio Declaration on Environment and Development, Rio de Janeiro, 3-14 June 1992. A/CONF.151/26 (Vol. I).

Kyoto Protocol to the United Nations Framework Convention on Climate Change, adopted on 11 December 1997, entered into force on 16 February 2005.

Paris Agreement, signed on 22 April 2016, entered into force on 4 November 2016.

European legislation

Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community, signed on 13 December 2007.

Declaration concerning primacy 12008E/AFI/DCL/17.

European Directives

Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity, OJ L 27, 30.1.1997, p. 20–29.

Directive 98/30/EC of the European Parliament and of the Council of 22 June 1998 concerning common rules for the internal market in natural gas, OJ L 204, 21.7.1998, p. 1–12.

Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market, OJ L 283, 27.10.2001, p. 33–40.

Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings, OJ L 1, 4.1.2003, p. 65.

Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC - Statements made with regard to decommissioning and waste management activities, OJ L 176, 15.7.2003, p. 37–56.

Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in natural gas and repealing Directive 98/30/EC, OJ L 176, 15.7.2003, p. 57–78

Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC, OJ L 52, 21.2.2004, p. 50–60

Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services and repealing Council Directive 93/76/EEC, *OJ L 114*, 27.4.2006, p. 64–85.

Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC, OJ L 140, 5.6.2009, p. 16–62

Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC, OJ L 211, 14.8.2009, p. 55–93.

Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC, OJ L 211, 14.8.2009, p. 94–136.

Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products, OJ L 285, 31.10.2009, p. 10–35.

Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products, OJ L 153, 18.6.2010, p. 1–12.

Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC, OJ L 315, 14.11.2012.

Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources, OJ L 328, 21.12.2018, p. 82–209.

Directive (EU) 2018/2002 of the European Parliament and of the Council of 11 December 2018 amending Directive 2012/27/EU on energy efficiency, OJ L 328, 21.12.2018, p. 210–230.

Directive (EU) 2018/844 of the European Parliament and of the Council of 30 May 2018 amending Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency, OJ L 156, 19.6.2018, p. 75–91.

Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, OJ L 158, 14.6.2019, p. 125–199.

European Regulations

Regulation (EC) No 1228/2003 of the European Parliament and of the Council of 26 June 2003 on conditions for access to the network for cross-border exchanges in electricity, OJ L 176, 15.7.2003, p. 1–10.

Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators, OJ L 211, 14.8.2009, p. 1–14.

Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003, OJ L 211, 14.8.2009, p. 15–35

Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005, OJ L 211, 14.8.2009, p. 36–54.

Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action), COM(2021) 950 final.

Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council, OJ L 328, 21.12.2018, p. 1–77.

Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity, OJ L 158, 14.6.2019, p. 54–124.

Regulation (EU) 2019/941 of the European Parliament and of the Council of 5 June 2019 on risk-preparedness in the electricity sector and repealing Directive 2005/89/EC, OJ L 158, 14.6.2019, p. 1–21.

Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators, OJ L 158, 14.6.2019, p. 22–53.

Commission Implementing Regulation (EU) 2020/1294 of 15 September 2020 on the Union renewable energy financing mechanism, OJ L 303, 17.9.2020, p. 1–17

Court Judgements

State of the Netherlands v. Urgenda Foundation, ECLI:NL:HR:2019:2007. Supreme Court of the Netherlands (2019).

Milieudefensie et al v Royal Dutch Shell, ECLI: ECLI:NL:RBDHA:2021:5337, Hague District Court (2021).

Case C-136/04, Deutsches Milch-Kontor GmbH v Hauptzollamt Hamburg-Jonas, 24 November 2005.

Case C-134/08, Hauptzollamt Bremen v J. E. Tyson Parketthandel GmbH hanse j., 2 April 2009.

Case C-166/97, Commission v France, EU:C:1999:149

Policy acts

European Parliament resolution of 5 February 2014 on a 2030 framework for climate and energy policies (2013/2135(INI) .

European Parliament resolution of 23 June 2016 on the renewable energy progress report (2016/2041(INI).

European Parliament resolution of 31 January 2008 on an Action Plan for Energy Efficiency: Realising the Potential (2007/2106(INI).

Proposal for a Directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 of the European Parliament and of the Council, Regulation (EU) 2018/1999 of the European Parliament and of the Council and Directive 98/70/EC of the European Parliament and of the Council as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652, COM/2021/557 final.

Proposal for a Directive of the European Parliament and of the Council on energy efficiency, COM(2021) 558 final, 2021/0203(COD).

Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement, COM(2021) 555 final.

Communication from the Commission Energy for the future: Renewable Sources of Energy Green Paper for a Community Strategy (1996), COM(96) 576 final.

Communication from the Commission Energy For the Future: Renewable Sources of Energy White Paper for a Community Strategy and Action Plan, COM(97) 599 final.

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions A policy framework for climate and energy in the period from 2020 to 2030, COM(2014) 15 final.

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality, COM/2021/550 final.

Communication from the Commission to the Council and the European Parliament - Renewable energy road map - Renewable energies in the 21st century: building a more sustainable future, COM/2006/0848 final.

Communication from the Commission to the European Council and the European Parliament an Energy Policy for Europe, COM(2007) 1 final.

Council Resolution of 15 January 1985 on the improvement of energy saving programmes in the Member States (85/C 20/01).

Council resolution of 9 June 1980 concerning Community energy policy objectives for 1990 and convergence of the policies of the Member States, OJ C 149, 18.6.1980.

Council Resolution of 16 September 1986 concerning new Community energy policy objectives for 1995 and convergence of the policies of the Member States, OJ C 241 of 25.9.1986.

Council Recommendation 88/349/EEC of 9 June 1988 on developing the exploitation of renewable energy sources in the Community Official Journal L 160, 28 June 1988.

Council Decision of 29 October 1991 concerning the promotion of energy efficiency in the Community (SAVE programme), Official Journal L 307 , 08/11/1991 P. 0034 - 0036.

Council Decision of 13 September 1993 concerning the promotion of renewable energy sources in the Community (Altener programme), OJ L 235 of 18.9.1993.

Council Decision of 16 December 1996 concerning a multiannual programme for the promotion of energy efficiency in the EC - SAVE II, Official Journal L 335 , 24/12/1996 P. 0050 - 0053.

Resolution on the Commission White Paper on an Energy Policy for the European Union (COM(95)0682 - C4-0018/96), OJ C 362, 2.12.1996.

80/823/EEC: Commission recommendation of 29 July 1980 on the rational use of energy in industrial enterprises, OJ L 239, 12.9.1980, p. 26–37

The European Green Deal, COM(2019) 640 final.

A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy, COM/2015/080 final.

Presidency conclusions of the Brussels European Council of 8/9 March 2007, 7224/1/07 REV 1.

European Council (23 and 24 October 2014) – Conclusions, EUCO 169/14, CO EUR 13 CONCL 5.

Commission Staff Working Document Impact Assessment Accompanying the document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Stepping up Europe's 2030 climate ambition Investing in a climate-neutral future for the benefit of our people, SWD(2020) 176 final.

Impact Assessment Report Accompanying the Proposal for a Directive of the European Parliament and of the Council, SWD(2021) 623 final.

Partial transposition by Denmark of Directive (EU) 2018/2002 amending the Energy Efficiency Directive, NFR(2022)2038.

Partial transposition by France of Directive (EU) 2018/2002 amending the Energy Efficiency Directive, INFR(2022)2039.

Partial transposition by Portugal of Directive (EU) 2018/2002 amending the Energy Efficiency Directive, INFR(2022)2040.

Partial transposition by Croatia of Directive (EU) 2018/2002 amending the Energy Efficiency Directive, INFR(2020)0529.

Partial transposition by Luxembourg of Directive (EU) 2018/2002 amending the Energy Efficiency Directive, INFR(2020)0539.

Partial transposition by Luxembourg of Directive (EU) 2018/2002 amending the Energy Efficiency Directive, INFR(2020)0539.

Partial transposition by Slovakia of Directive (EU) 2018/2002 amending the Energy Efficiency Directive, INFR(2020)0564.

Partial transposition by Spain of Directive (EU) 2018/2002 amending the Energy Efficiency Directive INFR(2020)0522.

National legislation

Electricity Act (1997:857).

Code of Judicial Procedure (4/1734).

Ordinance on the Measurement, Calculation and Reporting of Transmitted Electricity (1999:716).

Sweden's Integrated National Energy and Climate Plan (2020)

The Swedish Energy Agency, Scenarier över Sveriges energisystem 2016 (ER2017:6).

Riksdagsskrivelse (2017/18:411).

Riksdagsskrivelse (2018/19:153).

Reports

Hannah Ritchie and Max Roser, "CO2 and Greenhouse Gas Emissions",
OurWorldInData.org

(2020), COM(2019) 640 final. Available at <<https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>> last accessed on 10 June

2022.REN21, "Renewables 2021 Global Status Report" 2021 available at <https://www.ren21.net/wp-content/uploads/2019/05/GSR2021_Full_Report.pdf> last accessed 10 June 2022

EEA Report, "Trends and projections in Europe 2021", No 13/2021

ACA Europe, "Administrative Justice in Europe. Report for Sweden" available at <https://www.aca-europe.eu/en/eurtour/i/countries/sweden/sweden_en.pdf> last accessed on 10 June 2022.

Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, State of the Energy Union 2021 – Contributing to the European Green Deal and the Union’s recovery (pursuant to ENER/C1/2019-478, “Technical assistance in realisation of the 5th report on progress of renewable energy in the EU” 2020

Kyoto Protocol Reference Manual on accounting of emissions and assigned amount, United Nations Framework Convention on Climate Change November (2008) available at <https://unfccc.int/resource/docs/publications/08_unfccc_kp_ref_manual.pdf> last accessed on 31 May 2022.

Articles

Angus Johnston and Eva van der Marel, “How Binding are the EU’s ‘Binding’ Renewables Targets?”, *Cambridge Yearbook of European Legal Studies* (2016).

Chris Hilson, “Hitting the Target? Analysing the Use of Targets in Climate Law”, *Journal of Environmental Law, Volume 32* (2020) 195-220.

Chara Karakosta, "The Role of Industrial Emissions within the European Union: Trends and Policy" *Climate Policy Info Hub* (2016). Available at <<http://climatepolicyinfohub.eu/role-industrial-emissions-within-eu-trends-and-policy>> last accessed on 10 June 2022.

M. Elvira Mendez-Pined, “The principle of effectiveness of EU law: a difficult concept in legal scholarship” *Juridical Tribune* (2021).

Joana Setzer and Catherine Higham, “Global trends in climate change litigation: 2021 snapshot”, *London: Grantham Research Institute on Climate Change and the Environment and Centre for Climate Change Economics and Policy*, London School of Economics and Political Science (2021) available at <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2021/07/Global-trends-in-climate-change-litigation_2021-snapshot.pdf> last accessed on 30 May 2022.

Piero Morseletto, Frank Biermann and Philipp Pattberg, “Governing by Targets: Reductio ad Unum and Evolution of the Two-degree Climate Target”, *IEAs* (2017).

Andy Jordan, Dave Huitemaan, Harro Van Asselt and Tim Rayner (Eds.), “Climate Change Policy in the European Union: Confronting the Dilemmas of Mitigation and Adaptation?”, *Cambridge University Press*, (2010).

Anne Therese Gullberg, “Pressure or Information? Lobbying for Binding Renewable Energy Targets in the European Union”, *The Review of policy research*, (2013).

Cédric Philibert and Jonathan Pershing, “Considering the options: climate targets for all countries”, *Climate Policy 1* (2001) 211–227.

Alexander Bürgin, “National binding renewable energy targets for 2020, but not for 2030 anymore: why the European Commission developed from a supporter to a brakeman”, *Journal of European Public Policy*, (2015),690-707.

Rudolf Laurin and Aaron Coster, “Renewable Energy. Sweden” available at <<https://iclg.com/practice-areas/renewable-energy-laws-and-regulations/sweden#:~:text=The%20Swedish%20Law%20on%20Electricity,wind%20power%3B%20and%20wave%20energy.>> last accessed 10 June 2022.

Kate Abnett, “European Commission analysing higher 45% renewable energy target for 2030”, *Reuters* (2022) available at <<https://www.reuters.com/world/europe/european-commission-analysing-higher-45-renewable-energy-target-2030-2022-04-20/>> last accessed on 10 June 2022.

FSR, “The Clean Energy for all Europeans Package” 2020, available at <<https://fsr.eui.eu/the-clean-energy-for-all-europeans-package/>> last accessed on 10 June 2022.

Websites

Center for Climate and Energy Solution <<https://www.c2es.org/content/international-emissions/>> last accessed on 10 June 2022

Climate Change Litigation Databases <<http://climatecasechart.com/>> last accessed on 20 May 2022

Sustainable Development Goals <<https://sdgs.un.org/goals>> last accessed 03 May 2022.

Clean energy for all Europeans package <https://energy.ec.europa.eu/topics/energy-strategy/clean-energy-all-europeans-package_en> last accessed 12 May 2022.

Energy Efficiency Directive <https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-directive_en> last accessed 12 May 2022.

Research Projects under Framework Programmes <https://ec.europa.eu/eurostat/cros/content/research-projects-under-framework-programmes-0_en> last accessed on 6 June 2022

CORDIS <<https://cordis.europa.eu/projects/en>> last accessed on 6 June 2022.

Delivering European Green Deal <https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en> last accessed 6 June 2022.

Environment and Climate Change <<https://eur-lex.europa.eu/summary/chapter/20.html#:~:text=The%20EU%20has%20some%20of,people%20living%20in%20the%20EU>> last accessed on 6 June 2022

IRENE < <https://www.irena.org/europe>> last accessed 6 June 2022.

6th Report of the International Panel on Climate Change available at <<https://www.ipcc.ch/assessment-report/ar6/>> last accessed on 10 June 2021.

Principle of Subsidiarity <<https://www.europarl.europa.eu/factsheets/en/sheet/7/the-principle-of-subsidiarity#:~:text=When%20applied%20in%20the%20context,central%2C%20regional%20or%20local%20level.>> last accessed on 10 June 2022).

Agreement on Swedish Energy Policy < <https://www.regeringen.se/artiklar/2016/06/overenskommelse-om-den-svenska-energipolitiken/>> last accessed on 6 June 2022.

The Swedish Energy Markets Inspectorate <<https://ei.se/ei-in-english>>last accessed on 13 June 2022