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ABSTRACT

The EU Clean Energy Package (CEP) was finalised in June 2019 after the publication of its final texts in the Official Journal of the European Union, following trilogue negotiations between the European Commission, Council, and Parliament. It includes eight legislative texts - four directives and four regulations - on the electricity market and consumers, energy efficiency and the energy efficiency of buildings, renewables and bioenergy sustainability as well as governance of the Energy Union. In this report, we will focus on three of the eight legislative texts. First is the Regulation on the Governance of the Energy Union and Climate Action (Regulation (EU) 2018/1999). Second is the directive on the promotion of the use of energy from renewable sources (Directive (EU) 2018/2001) that is commonly referred to as RED II. Third is the directive on common rules for the internal market in electricity (Directive (EU) 2019/944). We will assess the impact of this legislation on the European internal electricity market rules compared to the framework established by the Third Energy Package. In this report, we present the background to the CEP provisions and weigh the possible implications of these measures.

Keywords: Governance of the Energy Union, Paris Agreement, internal energy market, energy efficiency, GHG emissions, decarbonisation, NECP, climate law, EU Green Deal, Renewable Energy Directive, RES support schemes, renewable energy communities, transport, heating and cooling, EU sustainability criteria, active customers, smart metering, dynamic pricing, aggregators, citizens energy communities, collective self-consumption, peer-to-peer energy trading.

Note: This report is the third edition of "The EU Clean Energy Package" reports. It complements the previous edition with the addition of discussion on the governance of the Energy Union and the new framework for renewable energy in the EU.

The first edition was Meeus and Nouicer (2018), The EU Clean Energy Package. FSR Technical Report. July 2018. It focuses on the initial proposals of the European Commission and Council for the Electricity Directive and Regulation. It also included the positions of the different stakeholders of the EU electricity sector.

The second edition is Nouicer and Meeus (2019), The EU Clean Energy Package (2019 ed.). FSR Technical Report. October 2019. It focuses on the final provisions of the Electricity Directive and Regulation of the Clean Energy Package. In particular, it presents the provisions on public interventions in electricity prices, network tariffs, capacity mechanisms, bidding zones, interconnectors capacity, EV charging infrastructure, electricity storage, DSO planning, DSO active network management and the procurement of flexibility services.

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Abbreviations

ACCC: Aarhus Convention Compliance Committee

ACER: European Union Agency for the Cooperation of Energy Regulators

Art: Article

BRP: Balance Responsible Party

CBA: Cost Benefits Analysis

CBAM: Carbon Border Adjustment Mechanism

CEC: Citizens Energy Community

CEER: Council of European Energy Regulators

CEP: Clean Energy for all Europeans Package

CoP: Conference of the Parties

DER: Distributed Energy Resource

DR: Demand Response

DH&C: District Heating and Cooling

DSO: Distribution System Operator

EC: European Commission

EP: European Parliament

EPBD: Directive 2010/31/EU on the Energy Performance of Buildings

EU: European Union

EU ETS: European Emissions Trading System

FiT: Feed-in Tariff

FiP: Feed-in Premium

GC: Green Certificate

GHG: Greenhouse gas

GO: Guarantees of Origin

GST: Global Stocktake (Paris Agreement)

GW: Gigawatt

GWP: Global Warming Potentials

ILUC: Indirect Land Use Change

IPCC: Intergovernmental Panel on Climate Change

JRC: Joint Research Centre

kW: Kilowatt

kWh: Kilowatt-hour

kWp: Kilowatt-peak

LCOE: Levelized Cost Of Energy

LULUCF: Land Use, Land-Use Change and Forestry

MW: Megawatt

Mtoe: Million Tonnes of Oil Equivalent

NDC: Nationally Determined Contribution

NECP: National Energy and Climate Plan

NREAP: National Renewable Energy Action Plan

OJ: Official Journal

PCI: Projects of Common Interest

pp: percentage point

PPA: Power Purchase Agreement

PV: Photovoltaic

P2P: Peer-to-Peer

REC: Renewable Energy Community

RED I: Renewable Energy Directive 2009/28/EC

RED II: Renewable Energy Directive (EU) 2018/2001

RES: Renewable Energy Sources

SET-Plan: Strategic Energy Technology Plan

TEU: Treaty on European Union

TFEU: Treaty on the Functioning of the European Union

TSO: Transmission System Operator

TWh: Terawatt hours

UNFCCC: United Nations Framework Convention on Climate Change

URDP: Union Renewable Development Platform

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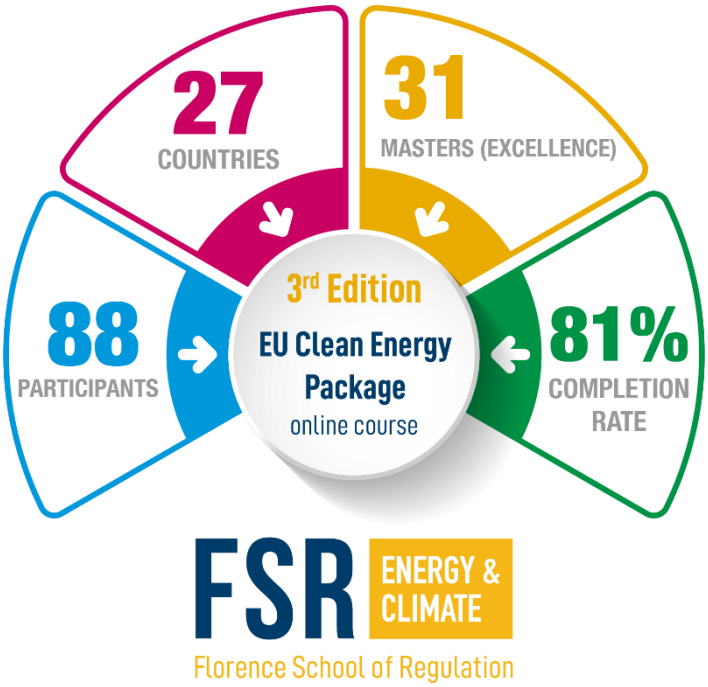

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Chapter 1: Governance of the Energy Union

By Anne-Marie Kehoe and Leigh Hancher

1. Background

The Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action (Governance Regulation) entered into force on 24 December 2018 as part of the Clean Energy for all Europeans Package (CEP). This piece of legislation is the first attempt to introduce an integrated governance mechanism for the Energy Union.

The need for such a regulation emerged soon after the concept of an Energy Union began to take shape in the latter half of 2014, under the Jean-Claude Juncker Commission. For an Energy Union to develop and act effectively, it needed a coherent Union-wide governing framework. Adding to this was the growing EU determination to be at the forefront of energy and climate action on the global stage, with a coordinated, collective response from the EU as an entity. Thus, in its first iteration, the Governance Regulation is intended as a unifying framework which integrates and harmonises collective action, primarily to safeguard the ambition and delivery of the EU 2030 energy and climate targets and the goals of the Paris Agreement. However, there are limitations to the legal basis for EU intervention in Member State's affairs with respect to energy. In addition, the 2030 framework for climate and energy policy established that the 2030 targets are legally binding at Union level but largely non-binding at Member State level.

With these limiting conditions and in a climate of heightened Euro-scepticism, the Commission was tasked with developing a regulation which would allow flexibility for the Member States to shape their own energy and climate policies, but nevertheless, ensure the sufficient response and accountability of the Member States toward reaching Union-wide targets. Accordingly, the main tool the Governance Regulation resorts to is rather meticulous reporting and monitoring measures. It requires the development of rigorous short and long-term national plans detailing each Member State's contribution to the Union's collective energy and climate objectives, cohering a multi-dimensional and multi-tiered response. Through a series of regular reporting requirements, the Commission will closely monitor the progress of each Member State and the collective outcome and enter into a more elastic, interactive and dynamic form of governance.

In the past, energy and climate have not always been fully aligned under EU legislation with separate reporting requirements currently in place for all key legislation under the energy and climate acquis. The Governance Regulation aims to integrate, simplify and streamline existing overlapping obligations in planning and reporting, to minimise administrative burdens, while also promote collaboration among the Member States in achieving Union-wide goals. At its core, the governance mechanism is built to bridge gaps and facilitate the transparency and coherence of energy and climate action at EU level. Nevertheless, in practice, the largely non-binding nature of the targets at Member State level versus the binding Union-level targets and the relatively 'soft' approach to governance may challenge the effectiveness of the measures to close the gaps and fulfil these EU-wide ambitions.

In this text, we will look at the context and legal basis of the regulation, examine the terms it lays out and how these measures are expected to work in practice, before considering whether the regulation can be deemed fit for purpose. We will then consider the recent proposals put forth by the Commission as part of the European Green Deal and examine the implications of these proposals. In particular, we will look at the plans for a European Climate Law, which will amend the Governance Regulation, and the potential use of 'delegated acts' signalled in the proposal.

Throughout this chapter, we encourage you to consider some of these questions:

- With non-binding targets, what recourse does the Commission have should a Member State fail to reach their individual targets or if the collective EU-wide target is under threat?
- Will there be an equal or fair level of commitment across the Member States? Are the measures and safeguards of the regulation sufficient to address this issue?
- How vulnerable are the national targets to the winds of politics?
- By virtue of the transparent and public nature of the planning and reporting requirements set out in the regulation, is it paving the way for private enforcement of energy and climate action?
- Is it transparent enough?
- Can the EU be held accountable should it fail to reach the targets? And by whom? What is the role of the international legal and political context?
- Is what is expected of Member States realistic or feasible? Is the EU being too ambitious or not ambitious enough?
- The national circumstances and energy mix of each Member State vary considerably, does the regulation sufficiently account for these different starting points?
- With coordinated action required at European, regional, national, and local level, how are Member States expected to sufficiently mobilise, implement, and account for the delivery of climate and energy action through such multi-tiered and polycentric governance models?
- The EU Green Deal proposals have heralded sweeping changes to the goals of the Energy Union and escalated the level of ambition of the energy and climate targets. Amendments to the Governance Regulation are already on the horizon. Will the core approach of the regulation still be fit for purpose or do new governing mechanisms need to be devised?
- Does the potential use of delegated acts, proposed by the European Climate Law, undermine the 'soft' governance approach of the Governance Regulation or the right of Member States to determine their own energy mix?
- What will be the impact of the coronavirus pandemic on these plans? Given the radically different economic outlook of Member States at present compared to the time of drafting their ten-year plans, are the plans still relevant? Are they still deliverable? Can the Member States be expected to prioritise energy and climate action in the face of such economic turmoil? And are there enough safeguards in the regulation against such wildly unpredictable conditions?

2. The Regulation in Context

Against a backdrop of mounting Euro-scepticism, the Governance Regulation is a response to three mutually reinforcing aims; the EU energy and climate policy goals for 2030, the commitments of the Paris Agreement (2015),[1] and the development of the Energy Union policy. In an effort to step outside of the silo thinking typically associated with the EU's approach to energy policy, the Governance Regulation attempts to harness the objectives of each to provide harmonised, coherent EU action in energy and climate across a range of policy measures, instruments, and levels of government.

In the next sections, we will give a brief overview of the background to the Governance Regulation and how these priorities, combined with some limiting factors, shaped its development.

[1] Accessible here: https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf

2.1. The Energy Union

Motivated by the need for the EU to divest of its dependency on Russian gas following the annexation of Crimea in 2014, Donald Tusk, then president of the European Council, first proposed the notion of an Energy Union as a method to undermine Russia's monopoly in the EU energy market and restore free-market competition.[2] However, this idea soon morphed into something quite different and more all-encompassing.[3] By 15 July 2014, Jean-Claude Juncker had appropriated the term to launch a reorganisation of the EU's energy policy and its relation to climate policy, which would build upon the EU energy market liberalisation and integration strategy.[4]

In parallel, in October 2014, the European Council endorsed a 2030 Climate and Energy Framework, which set out four key Union-level targets in the area of GHG emissions, energy efficiency, renewable energy, and electricity interconnection. Significantly, after a lengthy debate between Member States in a sensitive political climate,[5] the 2030 targets were for the most part set as collective targets that are binding at Union level only, unlike the nationally binding targets of 2020. To allay fears that this less prescriptive approach would mean there is no legally enforceable way to ensure Member States meet the EU's goal, the Commission introduced the concept of an EU energy governance mechanism in the 2030 framework which would act as an umbrella legislation, streamlining obligations and setting the terms through which Member States could be kept on track. In its conclusions of 23 and 24 October 2014, the European Council agreed that a governance mechanism should be developed to help ensure that the Union meet its 2030 goals. It noted that the mechanism should allow for the *"necessary flexibility for Member States, […] fully respecting their freedom to determine their energy mix."*[6]

Furthering the agenda, at the 2015 United Nations Climate Change Conference (COP 21), Parties to the United Nations Framework Convention on Climate Change (UNFCCC) reached the landmark Paris Agreement on 12 December 2015 to combat climate change and to accelerate and intensify the actions and investments necessary for a sustainable low carbon future. The ultimate goal it set out is to keep the global temperature rise well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the increase to 1.5 degrees Celsius. Voluntary Nationally Determined Contributions (NDCs) form the centrepiece of the agreement, which we will discuss further below in section 2.1.2., and set the scene for the ensuing Governance Regulation. The Paris Agreement entered into force on 4 November 2016 under the UNFCCC with 195 members signing it and 185 party to it.

With the development of the EU 2030 Climate and Energy Framework, the nature of which presented its own governance challenges, the build-up to the commitments of the Paris Agreement, and the recognition that a collective, cross-sectoral approach was necessary, the concept of a coordinated, integrated EU-wide strategy which would coalesce these strands, began to gather pace in 2014-2015 and, with it, the need for a Union-wide mechanism to manage it.

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[2] For more on this, see Tusk, D., 2014. A United Europe can end Russia's Energy Stranglehold, 24 April 2014, Financial Times. Accessible here: https://www.ft.com/content/91508464-c661-11e3-ba0e-00144feabdc0

[3] Tusk's interpretation was more in line with a concept put forward by Jacques Delors and Jerzy Buzek in 2010.

[4] See Juncker, J-C., A New Start for Europe. 15 July 2014, Strasbourg. Accessible here: http://europa.eu/rapid/press-release_SPEECH-14-567_en.htm

[5] Countries such as Germany, France, Portugal, Denmark and Sweden were strongly in favour of nationally binding targets for 2030, whereas the UK and several East European Member States were opposed to this and argued for the flexibility of non-binding targets.

[6] The full conclusions can be accessed here: http://data.consilium.europa.eu/doc/document/ST-169-2014-INIT/en/pdf

Tying together these complementary objectives, the Energy Union strategy, 'A Framework for a Resilient Energy Union with a Forward-Looking Climate Change Policy'[7] was adopted on 25 February 2015. Combining energy and climate action, it takes a holistic approach, setting out five integrated and mutually reinforcing dimensions for the Energy Union, namely:

- Energy security;
- A fully integrated energy market;
- Energy efficiency;
- Decarbonisation;
- Research, innovation, and competitiveness.

The strategy includes plans to establish a governance and monitoring process for the Energy Union with the purpose of ensuring that actions at European, regional, national and local level collectively contribute to the Energy Union's objectives. The goals set out for the governance framework were to integrate energy and climate action, as well as other relevant policy areas, in order to improve policy coherence at EU level and, in so doing, provide long-term certainty and guidance for investors. The mechanism should also secure the implementation of the internal energy market and delivery of the 2030 targets, streamline current planning and reporting requirements and minimise administrative burdens. Another key aim was to engage stakeholders in managing the energy transition and deepen the cooperation between Member States, regions, and the Commission. In line with this, the mechanism should aim to improve the data, analysis and intelligence necessary to support the Union by sharing relevant knowledge and making it easily accessible, and establish annual reporting to the European Parliament and the Council on the State of the Energy Union.

The European Parliament's resolution of 15 December 2015, 'Towards a European Energy Union', called for the governance mechanism of the Energy Union to be ambitious, reliable, transparent, democratic and fully inclusive of the European Parliament, and to ensure that the 2030 climate and energy targets are achieved.

In the following sections, we will detail the targets set by the 2030 Climate and Energy Framework and the Paris Agreement as well as the Commission's long-term strategy.

2.1.1. The 2030 Climate and Energy Framework

As mentioned above, in October 2014, the European Council endorsed a policy framework for climate and energy for the period 2020-2030[8] based on four key Union-level targets: a reduction of at least 40% in economy-wide greenhouse gas (GHG) emissions, an indicative target of improvement in energy efficiency of at least 27% (to be reviewed in 2020 with a view to increasing it to 30%), a share of renewable energy consumed in the Union of at least 27%, and electricity networks interconnection of at least 15%. It specified that the target for renewable energy is binding at Union level and that it will be fulfilled through the contributions of Member States, guided by the need to deliver the Union target collectively. The recast of Directive 2009/28/EC on Renewable Energy, Directive (EU) 2018/2001 brought in under the CEP, introduces a new, binding Union target for 2030 of at least 32% share of renewables with a provision for review with a view to increasing the Union-level target by 2023. Amendments to Directive 2012/27/EU on Energy Efficiency, set out in Directive (EU) 2018/2002, have set the Union-level target for improvements in energy efficiency by 2030 of at least 32.5%, including a provision for review with a view to increasing the Union-level targets.

To summarise, as illustrated in Figure 1, this means that the current targets for 2030 are:

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[7] Accessible here: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1550659521438&uri=CELEX:52015DC0080

[8] For more on the policy framework, see COM(2014) 15 final. Accessible here: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014DC0015&from=EN

- A Union-wide target to reduce the economy-wide greenhouse gas emissions by 40% as compared to 1990. This is divided into two strands: The EU emissions trading system (ETS) sectors will have to cut emissions by 43% compared to 2005. **Non-ETS sectors** will need to cut emissions by 30% compared to 2005 levels, which has been translated into individual **binding targets for Member States.** Note that, on 17 September 2020, in the 2030 Climate Target Plan, the Commission proposed a more ambitious target - to reduce GHG emissions by at least 55% below 1990 levels by 2030,[9] setting in train the legislative process for the first escalation of ambition since the initial targets were set.
- To aim for an indicative target of at least a 32.5% improvement in energy efficiency with a provision to review this with a view to increasing the Union-level targets.
- To increase the share of renewable energy consumed in the Union to at least 32%, again including a provision for review with a view to increasing the Union-level target by 2023.
- To have a level of electricity interconnection of at least 15%.

It is upon these targets that the first iteration of the Governance Regulation is modelled.

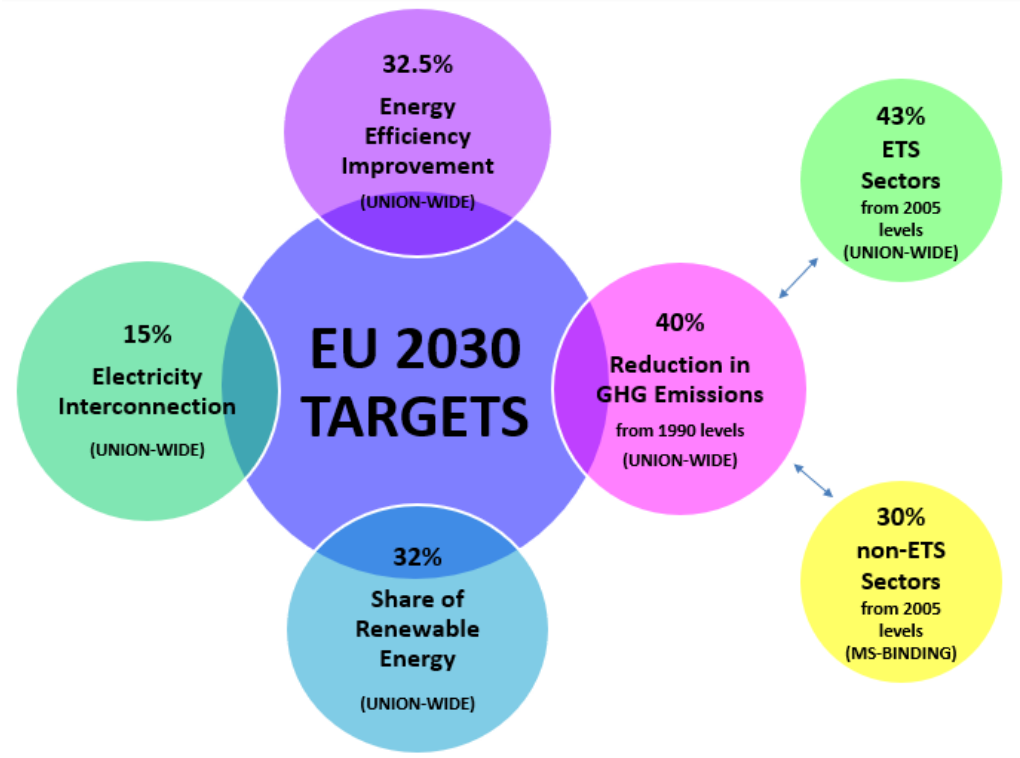

Figure 1: Current EU 2030 Targets, source: FSR Energy Union Law Area

How do these targets compare to the 2020 targets? See Figure 2 below for an illustration of the 2030 targets versus those of 2020. Was the increase in ambition sufficient? We will discuss in section 4 how the achievement of these targets is faring thus far, and the recent proposal to increase the level of ambition for 2030.

[9] The Communication of The Climate Target Plan can be accessed here: https://ec.europa.eu/clima/sites/clima/files/eu-climate-action/docs/com_2030_ctp_en.pdf

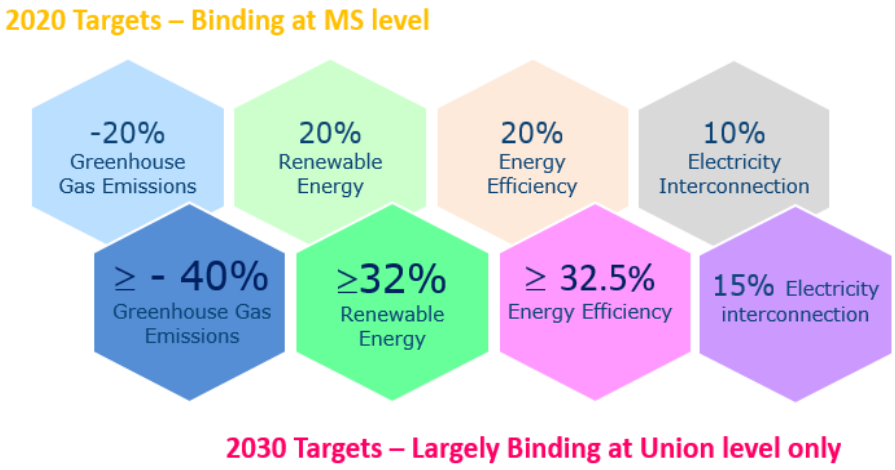

Figure 2: The 2020 targets versus the current 2030 targets, Source: FSR Energy Union Law Area

On 28 November 2018, the Commission adopted its long-term energy and climate strategy,[10] 'A Clean Planet for All', with the key goal being to reach a climate-neutral economy by 2050,[11] in line with the Paris Agreement. Set across seven strategic areas, it aims to:

- maximise the benefits of energy efficiency, including zero-emission buildings;
- maximise the deployment of renewables and the use of electricity to fully decarbonise Europe's energy supply;
- embrace clean, safe and connected mobility;
- develop a competitive EU industry with the circular economy as a key enabler to reduce GHG emissions;
- develop an adequate smart network infrastructure and interconnections;
- reap the full benefits of the bioeconomy and create essential carbon sinks;
- tackle remaining CO2 emissions with Carbon Capture and Storage (CCS).

While this strategy does not revise the 2030 targets, it sets the course of EU energy and climate transition policy and the EU's long-term plan toward achieving the Paris Agreement objectives, in line with the UN Sustainable Development Goals. And it formed the basis of the long-term European strategy, submitted to the UNFCCC in March 2020,[12] which set forth the EU's objective to achieve climate neutrality by 2050.[13] It is relevant to our purposes here insofar as it sets the tone for the expectations of Member States' long-term vision and contribution toward the collective goal required by the regulation. It also paves the way for the European Green Deal and signals the amendments to the Governance Regulation proposed by the European Climate Law.

2.1.2. The Paris Agreement

At the centre of the Paris Agreement are Nationally Determined Contributions (NDCs), which detail national climate action plans to mitigate GHG emissions. The contribution of each nation is voluntary. These plans are to be submitted to the UNFCCC Secretariat every five years, with the next new or

[10] Accessible here: https://ec.europa.eu/clima/policies/strategies/2050_en

[11] This supersedes the Commission's 2011 publication of its long-term energy strategy, 'A Roadmap for Moving to a Competitive Low Carbon Economy in 2050', which set out the ambition of reducing greenhouse gas emissions by 80%-95% by 2050 compared to 1990 levels.

[12] Accessible here: https://unfccc.int/sites/default/files/resource/HR-03-06-2020%20EU%20Submission%20on%20Long%20term%20strategy.pdf

[13] The European Green Deal roadmap was intended to form part of the EU's long-term strategy to be presented at the next UNFCCC (COP26) in 2020. Originally planned to be held in Glasgow in November 2020, the UNFCCC has since been postponed to November 2021 in light of the coronavirus pandemic.

updated NDC required by 2020.[14] A global stocktake (GST) of the collective progress will begin in 2023 and take place every five years thereafter. The outcome of the GST will inform the preparation of the subsequent NDC to allow for increased ambition and climate action. Parties to the Agreement are invited to communicate their 2050 GHG emission development strategies by 2020.

Central to the mechanism is that the Parties are expected to report to each other and the public on their progress, ensuring there is a robust transparency and accountability system in place. Furthermore, the Agreement acknowledges the significant role of cities, regions, and local authorities in reaching these goals. It also recognises the need for cooperation and support among Parties, especially with developing countries.

Several of the mechanisms it employs are echoed in the Governance Regulation and, in many cases, the planning and reporting obligations are synchronised with those of the Paris Agreement.

2.2. Devising a 'Hard' Soft Governance Mechanism

The Energy Council conclusions of 26 November 2015 set out detailed guidelines for the forthcoming legislation.[15] These reiterate much of what had already been put forward, as detailed above, and lay the foundations of the ensuing regulation. With these ambitions and a limited toolbox, the Commission set forth.

The Juncker Commission placed greater scrutiny on the principles of good governance and better regulation, with the core criteria being the need for a more evidence-based approach to policy and law-making, transparency throughout the process, and the participation of citizens and stakeholders in the process.

At a practical level, the regulation needed to address the lack of coherence across energy and climate regulation. Under the current obligations for 2020, the planning, reporting and monitoring requirements are dispersed across a wide range of legislation, each with its own set of obligations, and approved at different times in order to meet various objectives. Additionally, there was a lack of policy coherence with different frequencies and levels of stringency in submission requirements. Furthermore, as noted earlier, energy and climate issues were not always aligned under existing EU legislation, at odds with the Energy Union strategy to integrate these fields. And, in the Impact Assessment[16] and Fitness Check[17] carried out by the Commission on existing obligations in preparation for the governance mechanism, it was found that the cross-national dimensions of Member States' energy policies were often either poorly coordinated or the potential therein was untapped.

By choosing a regulation rather than a directive, the obligations laid down are directly binding on Member States at the time of adoption. The Member States would need to abide by this legislation without having any leeway in transposition. This ensures that all Member States are on the same timeline and thus safeguards the important aspect of comparing national energy and climate plans and synchronising action.

[14] These are still due to be submitted, despite the postponement of the convention.

[15] Accessible here: https://www.consilium.europa.eu/en/press/press-releases/2015/11/26/conclusions-energy-union-governance/

[16] Based on a public consultation and fitness check. Accessible here: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016SC0394&from=EN and the Executive Summary: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016SC0395&from=EN

[17] Accessible here: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016SC0397&from=EN

However, perhaps the most significant element that shaped the Governance Regulation is the limitations with respect to EU intervention. While Articles 191 and 192 of the Treaty of the Functioning of the European Union (TFEU) provide the legal basis of the regulation with respect to the competences of the EU on climate change, when it comes to energy, the legal basis for EU measures is provided for in Art. 194 TFEU. Art. 194(2) enshrines the right of Member States to determine their own energy mix,[18] seriously curtailing the EU's powers, especially with carbon neutrality in sight and non-binding targets at national level. The governance mechanism needed to ensure an adequate response from Member States toward reaching the targets and, indirectly, create a degree of accountability in the midst of growing anti-EU sentiment.

ARTICLE 194 TFEU

1. In the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, **in a spirit of solidarity between Member States**, to:

(a) ensure the functioning of the energy market;

(b) ensure security of energy supply in the Union;

(c) promote energy efficiency and energy saving and the development of new and renewable forms of energy; and

(d) promote the interconnection of energy networks.

2. Without prejudice to the application of other provisions of the Treaties, the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, shall establish the measures necessary to achieve the objectives in paragraph 1. Such measures shall be adopted after consultation of the Economic and Social Committee and the Committee of the Regions.

Such measures shall not affect a Member State's right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply, without prejudice to Article 192(2)(c).

3. By way of derogation from paragraph 2, the Council, acting in accordance with a special legislative procedure, shall unanimously and after consulting the European Parliament, establish the measures referred to therein when they are primarily of a fiscal nature.

This led to a regulation which promotes a more elastic, two-way form of governance between the Member States and the Commission, and a 'bottom-up' approach, with the Commission seemingly less heavy-handed. However, in many ways, the legislation allows for greater involvement of the Commission in the Member States' affairs. Unlike the 2020 targets, the rigorous legally-binding obligations in planning, reporting, and monitoring at regular, short intervals set out in the Governance Regulation creates further dialogue with the Commission – and greater scrutiny. In turn, it lessens the risk of the collective goals not being met and, at the very least, promptly signals failures allowing for

[18] Despite these limitations, it is important to bear in mind that the principle of solidarity is also foreseen in Art. 194(1) TFEU. This principle can counterbalance the Member States' right to determine its own energy mix by calling for the interests of other Member State and the EU as a whole to be taken into account, thus preventing Member States from acting in an entirely free way. We will discuss this notion further in section 3.5.2. alongside a significant case, the OPAL Case (Case T-883/16 Poland v Commission of 10 September 2019) which signalled a new interpretation of this principle.

remedies to be put in place within the 10 year period of the plans, perhaps better reflecting the urgency of the climate agenda than the approach to the 2020 targets.

Through the lengthy consultation and legislative processes, the obligations were further tightened.

The European Economic and Social Committee (EESC) and the Committee of the Regions (CoR) were consulted and delivered opinions on the proposed regulation. The EESC broadly supported the regulation but suggested that it needed strengthening, in order to ensure that the energy transition is both politically achievable and democratically accountable while the CoR recommended that the regulation require national authorities to involve local and regional authorities in the planning and monitoring, and explicitly include local or regional commitments (including initiatives such as the Covenant of Mayors) as part of national energy and climate plans. The CoR proposed the establishment of a permanent Energy Dialogue Platform to support the active engagement of local and regional authorities, civil society organisations, business, other stakeholders and the general public.

The regulation was also scrutinised at national parliamentary levels. Some concerns were expressed with respect to the stated timelines and the sovereignty of Member States in determining its own energy mix. At the stakeholders level, the response was largely positive from environmental NGOs. However, it was observed that the proposed regulation failed to compensate for the lack of nationally binding targets beyond 2020 and to ensure that Member States adequately contribute to the EU target. Industry stakeholders echoed these concerns, noting that Member States are mostly unprepared and could not be relied upon to deliver such results.

The draft regulation then entered the legislative process. More than 1700 amendments to the initial proposal were tabled.[19] The concerns largely centred around three areas: how to raise the '**ambition gap'** for 2030; how to close the '**delivery gap'**, particularly in the case of new governments that may renege on the commitments of the previous government; and how to close the **'trajectory gap'** which, without interim targets, would allow Member States to delay action and potentially increase the burden for other Member States more advanced in areas such as renewables.

The Council's position was closely aligned with the Commission's original proposal, but amendments were proposed. Among these, the regulation should include benchmarks on progress throughout the ten-year period to allow for additional measures to be taken. Furthermore, progress on the Energy Union would be monitored by the Council and the EU Parliament. The EU Parliament (EP) adopted a set of amendments on 17 January 2018 including the introduction of long-term energy and climate strategies in the governance framework (through a standardised template), and measures to meet the GHG emissions reduction targets according to the commitments to the Paris Agreement. These should be submitted every five years and adapted to meet changing circumstances and commitments. The EP proposed higher targets for renewable energy and energy efficiency, and an annual ceiling in 2030 with respect to the million tonnes of oil equivalent (Mtoe) in primary and final energy consumption. The EP also proposed that:

- a Union-level strategy on methane toward curbing emissions be put forward;
- the NECPs include a timeframe to phase out capacity remuneration mechanisms;
- the provisions on public consultation, access to data, and a multi-level climate and energy dialogue be strengthened;
- a greater role in energy governance be given to cities and regions - to take a multi-level approach to governance (though this was met with reluctance from some Member States over concerns it would dilute national authority);

[19] For the purposes of this text, we will not go into greater detail on the amendments introduced through this process. However, the amendments can be traced here: https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2016/0375(COD)&l=en

- macro-regional partnerships be established in place of the more generic provisions on regional cooperation;
- and energy poverty would be accounted for in the regulation.

Each of these amendments was taken into consideration and are reflected in the final version of the regulation.

Trilogue negotiations began in February 2018 and concluded with a provisional agreement on 20 June 2018. One issue to note from the trilogues, is that the Commission proposed to boost the powers of ACER so that it acts fully as an EU regulator. However, ACER is entirely absent from the final text. The agreed text was formally adopted by the European Parliament on 13 November 2018[20] and by the Council on 4 December 2018. The legislative text was published in the Official Journal of the EU on 21 December 2018 and entered into force 3 days later.

The Governance Regulation sits among the eight pieces of legislation of the Clean Energy Package and, given the focus of the regulation, closely corresponds with the objectives of the other directives and regulations in the package, especially the terms of the recast Energy Efficiency Directive and recast Renewable Energy Directive. It is also worth mentioning that, although the CEP is aimed primarily at electricity, the Governance Regulation equally impacts gas supply.

In the following sections, we will look at the terms of the Governance Regulation itself.[21]

Figure 3: The Eight Legislative Components of the Clean Energy Package, source: FSR Energy Union Law Area

Highlights

- The Governance Regulation is the first attempt at a governance mechanism for the Energy Union. It entered into force on 24 December 2018.

- The regulation is intended as a unifying framework which streamlines and coheres existing and new obligations, and brings together the goals of the Paris Agreement, 2030 Climate and Energy Framework, and the Energy Union policy.

- The regulation was designed against a backdrop of Euroscepticism. Its governing tools are shaped by certain conditions, most notably, the Union-level targets for 2030 as opposed to binding Member States targets, and the limitations of Art. 194(2) on the right of the Member States to determine their own energy mix.

[20] With 474 votes in favour, 100 against, and 33 abstentions

[21] **Note:** Given the nature of the regulation as a governing tool, it primarily operates as an overarching framework or umbrella piece of legislation. It therefore heavily references the provisions of multiple, parallel pieces of legislation that are based on sectoral policies (including those of the CEP, illustrated in Figure 3, above). For the purposes of this text, we will only focus on the regulation itself in its function as a governing mechanism. We will not go into substantial detail on the obligations and measures set out in corresponding legislation.

3. The Substance of the Regulation

3.1. The Scope of the Regulation

The Governance Regulation sets out a legislative foundation for the governance of the Energy Union and Climate Action to ensure that strategies and measures are designed and implemented at national level to deliver the objectives and targets of the Energy Union and the long-term Union-level greenhouse gas emissions commitments of the Paris Agreement.

The regulation puts forward a planning template spanning the five dimensions of the Energy Union and a series of reporting processes, closely monitored by the Commission, to manage and facilitate the achievement of these targets. These mechanisms aim to be reliable, transparent, inclusive, cost-efficient, and support timely delivery. The regulation strongly promotes cooperation between the Member States and at regional level, encouraging it at each stage – in the planning, implementation, and progress reports. This is facilitated by the mandated use of standardised planning and reporting templates, which support comparability as well as the aggregation of results. These plans and reports will also be made publicly accessible and, in the preparation of these strategies, each Member State must account for public participation. The Commission will establish an e-platform to further support this approach and cultivate a sense of collective responsibility and accountability. In the first iteration, the regulation is to focus primarily on achieving the Union's 2030 targets for energy and climate, but with a view to a longer-term strategy.

In the following sections, we will take a closer look at the details of these provisions before examining the implications of these measures.

3.2. Integrated National Energy and Climate Plans (NECPs)

At the centre of the Governance Regulation are the integrated National Energy and Climate Plans (NECPs), as outlined in chapter 2 of the regulation. These require Member States to develop ten-year plans that detail national objectives for each of the five dimensions of the Energy Union along with corresponding policies and measures to meet those objectives, all of which should be geared toward the collective achievement of the Energy Union's targets. The NECPs are intended to further the stability, transparency and predictability of national policies and measures in order to ensure investment certainty.

The first plan covers the period 2021 to 2030 and every ten years thereafter with the first (final) NECP to be notified to the Commission by 31 December 2019. The subsequent ten-year plan should be notified to the Commission by 1 January 2029. Each NECP should be developed according to a longer-term strategy of 30 to 50 years, in line with the long-term ambitions of the Energy Union.

These plans shall present the current national energy system and policy situation across the five dimensions and develop the ten-year national plan accordingly. The national objectives, targets and contributions must be set on the basis of the achievement of the 2020 nationally binding targets.

The plans must provide:

- an overview of the process and assessments through which their projections have been made, including a description of the public consultation and involvement of stakeholders, and the steps taken toward regional cooperation with other Member States in preparing the plan;
- a general overview of the appropriate financing at national and regional level and the investment required to achieve these results and the sources of that investment;
- a calculation of the impact of the planned policies and measures across the five dimensions in accordance with the Energy Union's objectives, including the long-term greenhouse gas emission reduction objectives of the Paris Agreement and long-term Energy Union strategies, as well as evaluate the impact of these steps on competitiveness;

- an annex which shall map the Member State's methodologies and policy measures for achieving the energy savings requirements in accordance with Art. 7 of the recast Energy Efficiency Directive (EU) 2018/2002;
- assess the level of energy poverty in its national context and, where necessary, outline policies and measures which will address it as well as include an indicative national objective based on EU guidelines to reduce energy poverty.[22]

Each Member State must follow a standardised template set out in the regulation (provided in Annex 1 of the regulation). The aim of this is to ensure that all national plans are sufficiently comprehensive while also facilitating the comparison and aggregation of the plans. According to Art. 3, each Member State shall make its submitted integrated national energy and climate plan publicly available.

In the following sub-sections, we will take a closer look at the various dimensions of the NECPs.

3.2.1. National Objectives, Targets and Contributions across the Five Dimensions

The aims for each dimension, as provided in Art. 4 of the regulation, are set out below.

Decarbonisation

In order to achieve the economy-wide targets for greenhouse gas emissions and removals at Union level, each Member State should plan to achieve:

- The Member State's binding national target for greenhouse gas emissions and the annual binding national limits pursuant to Regulation (EU) 2018/842 (the regulation on binding annual GHG emission reductions by Member States from 2021 to 2030);
- The Member State's commitments pursuant to Regulation (EU) 2018/841 on the inclusion of GHG emissions and removals from LULUCF in the 2030 climate and energy framework;
- Where applicable, the objectives and targets of the Energy Union and the long-term Union greenhouse gas emissions commitments consistent with the Paris Agreement, or other objectives and targets, including sector targets and adaptation goals.

This means it should abide by the EU-wide binding target to cut emissions in the EU by at least 40% below 1990 levels by 2030, in line with the commitments of the Paris Agreement. As mentioned earlier, this will be broken down in two ways. EU emissions trading system (ETS) sectors will have to cut emissions by 43% compared to 2005. Non-ETS sectors will need to cut emissions by 30% compared to 2005, a commitment which has been translated into individual binding targets for the Member States. As mentioned earlier, on 17 September 2020, the Commission adopted a proposal to raise the overall target to a 55% reduction compared to 1990 levels by 2030, via The 2030 Climate Target Plan as part of the European Green Deal. We will discuss this proposal in section 4.3. below. For now, we will assess the plans on the basis of the current targets.

In order to reach the Union-level binding renewable energy targets of at least a 32% share of renewable energy sources in gross final consumption by 2030,[23] each Member State must set out an indicative trajectory of their contribution from 2021 onwards. This trajectory must reach certain benchmarks set out in the regulation. By 2022, the indicative trajectory must reach 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, this should reach at least 43%. By 2027, it must be at least 65% and, by 2030, it should reach at least the Member State's planned contribution. The Member States' indicative trajectories, taken together, should add up to the Union reference points in 2022, 2025 and 2027 and to the Union's binding target of at least 32% renewable

[22] More details on these indicators can be found here: https://www.energypoverty.eu/guidance-policymakers
[23] As stated in Art. 3, Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources.

energy in 2030. Should a Member State wish to indicate higher ambitions for national policy purposes, they are free to do so.

For the duration of the first NECP (2021-2030) and, in the final year, when preparing subsequent national plans, Member States shall take into account the measures provided for in the recast Renewable Energy Directive, the measures adopted to reach the energy efficiency target pursuant to the recast Energy Efficiency Directive, the binding 2020 national target for energy from renewable sources in gross final consumption, as well as any other existing measures to promote renewable energy at national or Union level.

They shall also take into account any relevant circumstances affecting renewable energy deployment. Each Member State must indicate how they have considered and accounted for these factors, listed in Art. 5, in their NECP. They must collectively ensure that the sum of their contributions amounts to at least 32% of energy from renewable sources in gross final energy consumption at Union level by 2030.

Energy Efficiency

The Member States must set out an indicative national energy efficiency contribution toward the Union-level targets of at least 32.5% by 2030, relative to 'business as usual projections',[24] based on either primary or final energy consumption, primary or final energy savings, or energy intensity.

Member States shall state their contribution in terms of their absolute level of primary energy consumption and final energy consumption in 2020, and in terms of the absolute level of primary energy consumption and final energy consumption in 2030, with an indicative trajectory for that contribution from 2021 onwards. Note, the projected Mtoe for 2030 has been revised to reflect an energy consumption target for the remaining 27 Member States following the UK's withdrawal (as detailed in footnote 24).

They must detail the cumulative amount of end-use energy savings to be achieved over the period 2021-2030 on the energy-saving obligations pursuant to Art. 7 of the Energy Efficiency Directive (EU) 2018/2002.

Member States shall provide indicative milestones within a long-term strategy for the renovation of the national stock of residential and non-residential buildings, both public and private, the roadmap with domestically established measurable progress indicators, an evidence-based estimate of expected energy savings and wider benefits, and the contributions to the Union's energy efficiency targets in accordance with the recast Directive on the Energy Performace of Buildings, Directive (EU) 2018/844.

Member States shall take into account that the Union's 2020 energy consumption, in accordance with the Energy Efficiency Directive, is to be no more than 1128 Mtoe of primary energy and no more than 1 086 Mtoe of final energy. The Union's 2030 energy consumption is to be no more than 1 128 Mtoe of primary energy and/or no more than 846 Mtoe of final energy. Each Member State shall take into account the measures provided for in the Energy Efficiency Directive and any other measures to promote energy efficiency within the Member State and at Union level, if any.

[24] These 'business as usual' projections refer to an EU-28 primary energy consumption of 1887 Mtoe by 2030 and to an EU-28 final energy consumption of 1416 Mtoe by 2030. However, due to the withdrawal of the UK from the EU, the Decision (EU) of 19 March 2019 on Amending Directive 2012/27/EU on Energy Efficiency and Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action amended the EU projected energy consumption figures. Therefore, the EU-27 primary energy consumption and final energy consumption by 2030 should respectively be no more than 1128 Mtoe and 846 Mtoe. In 2018, according to Eurostat, the EU-27 primary energy consumption and final energy consumption were respectively 1375.7 Mtoe and 989.5 Mtoe. The full decision can be accessed here: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CONSIL:PE_19_2019_REV_1&qid=1553522135987&from=EN

Energy Security

In terms of energy security, according to Art. 4 of the regulation, within the NECP each Member State must outline their national objectives with regard to;

- increasing the diversification of energy sources and supply from third countries, the purpose of which may be to reduce energy import dependency;
- increasing the flexibility of the national energy system, and;
- addressing constrained or interrupted supply of an energy source, for the purpose of improving the resilience of regional and national energy systems.

For each of these, they must include a timeframe for when the objectives should be met.

Internal Energy Market

In view of the Union-level target of electricity interconnection of at least 15% by 2030, each Member State should set out a strategy in close cooperation with the relevant Member States on the basis of the 2021 level. This should take into account the 10% interconnection target for 2020 and the indicators of the urgency of action based on price differential in the wholesale market, the nominal transmission capacity of interconnectors in relation to peak load and to installed renewable generation capacity.[25]

The NECP should detail key electricity and gas transmission infrastructure projects, and, where relevant, modernisation projects that are necessary for the achievement of objectives and targets of the Energy Union.

Finally, Member States should outline national objectives related to other aspects of the internal energy market. This could amount to increasing system flexibility, in particular through policies and measures related to market-based price formation in compliance with applicable law; market integration and coupling, aiming to increase the tradeable capacity of existing interconnectors, smart grids, aggregation, demand response, storage, distributed generation, mechanisms for dispatching, re-dispatching and curtailment and real-time price signals. A timeframe for the realisation of these national objectives must be provided.[26]

Research, Innovation and Competitiveness

The Member States must outline their national objectives and funding targets for public and private research and innovation relating to the Energy Union, including, where appropriate, a timeframe for when the objectives should be met, reflecting the priorities of the Energy Union Strategy and, where relevant, the SET-Plan. If possible, Member States should also set out their 2050 national objectives related to the promotion of clean energy technologies.

3.2.2. The Legal Basis of the NECPs

According to Art. 8, in their NECP, Member States must describe the current situation at national and, where applicable, regional level, according to each of the five dimensions, including the energy system and greenhouse gas emissions and removals at the time of submission. They must also set out the expected results of existing policies and measures over the course of the plan and, where possible, detail their longer-term outlook for the five dimensions beyond the duration of the NECP.

These projections should be set on the assumption of the achievement of their 2020 binding targets.

As stated in Art. 8, in the NECP, Member States should describe at national and, where appropriate, regional level, the impact of the planned policies and measures on the development of the energy

[25] This is set out in further detail in the NECP template, point 2.4.1. of Section A in Part 1 of Annex I, Regulation (EU) 2018/1999

[26] As set out in point 2.4.3. Section A, Part 1, Annex I, Regulation (EU) 2018/1999

system and greenhouse gas emissions and removals for the duration of the plan and for a period of ten years following the latest year covered by the plan. In this, they must compare these projections with those of existing policies and measures until at least 2030 and detail how they will interact. *"Projections concerning security of supply, infrastructure and market integration shall be linked to robust energy efficiency scenarios"* (Art. 8). The NECP must also describe the manner in which existing and planned policies and measures are to attract the investment necessary for their implementation.

Significantly, *"Member States shall make available to the public comprehensive information concerning the assumptions, parameters and methodologies used for the final scenarios and projections"* (Art. 8(3)).

3.2.3. The Draft Integrated NECPs (2018)

The regulation requires that by 31 December 2018 (note, that the regulation only entered into force on 24 December 2018), and subsequently by 1 January 2028 and every ten years thereafter, each Member State shall prepare and submit to the Commission a draft of their integrated national energy and climate plan. The Commission shall assess the draft and may issue country-specific recommendations to the Member States no later than six months before the deadline for submission of the final NECP.

As Art. 9 of the regulation states, those recommendations may address:

- The level of ambition of objectives, targets and contributions with a view to collectively achieving the Energy Union objectives and, in particular, the Union's 2030 targets for renewable energy and energy efficiency as well as the level of electricity interconnectivity that the Member State aims for in 2030, taking due account of relevant circumstances affecting the deployment of renewable energy and energy consumption, as indicated by the Member State, and the indicators of the urgency of action for interconnectivity;
- policies and measures relating to Member State and Union-level objectives and other policies and measures of potential cross-border relevance;
- any additional policies and measures that might be required in the integrated NECP;
- interactions between and consistency of existing and planned policies and measures included in the integrated NECP within one dimension and among different dimensions of the Energy Union.

Each Member State *"shall take due account of any recommendations from the Commission*" in its final NECP (Art. 9). If the Member State concerned does not address a recommendation or a substantial part thereof, that Member State should provide and make public its reasons. Each Member State must make available to the public its draft integrated national energy and climate plan.

The purpose of the draft NECPs is mostly to align methodologies to ensure effectiveness and foster a collective approach to reaching the common objectives. While the regulation requires that Member States *"shall take due account of any recommendations"*, it is not detailed in the regulation exactly what this might mean or to what extent. It also does not outline the consequences should the Member State fail to adequately take these into account. Art. 288 of the TFEU states that recommendations issued to the Member States are not legally-binding: *"recommendations and opinions shall have no binding force."* Does this mean the Commission has no legal recourse? In section 3.5.2 and section 4, we will discuss in more detail the role of these recommendations and their effectiveness as well as how this first phase of the regulation has played out so far.

3.2.4. Open Dialogue and Regional Cooperation

A key component across the Governance Regulation is transparency and cooperation, both of which are central to the success of a poly-centric and 'bottom-up' governing model. With respect to the NECPs, each Member State must ensure that the public is informed and given *"early and effective*

opportunities to participate in the preparation of the draft" NECP as well as the long-term strategies (Art. 10). In keeping with this, each Member State must provide in their submission a summary of public opinion, and maintain an active dialogue with local authorities, civil society organisations, the business community, investors and other relevant stakeholders and the general public. There are no obligations set out in the regulation as to the extent to which this should be accounted for or a timeframe by which the public should be informed and invited to participate and express its views.

While Recital 29 of the Governance Regulation states: *"when carrying public consultations, and in line with the Aarhus Convention, Member States should aim to ensure equal participation, that the public is informed by public notices or other appropriate means such as electronic media, that the public is able to access all relevant documents, and that practical arrangements related to the public's participation are put in place",* the regulation has been criticised for its failures to adequately account for public participation and guide Member States in this respect. The Aarhus Convention Compliance Committee (ACCC), a UNECE initiative, which was established to ensure the rights of the public with regard to environmental information, environmental decision-making and access to justice information, levelled criticisms at the Governance Regulation for its vague terms with respect to public consultation processes. It found that the regulation failed to fully comply with the Aarhus Convention in both the requirements for the NECPs and the long-term strategies. It stated that the public authorities of each Member State must ensure that public participation is compliant with the following terms:

- it must be open to all interested individuals and organisations – not only a selected stakeholder group;
- the authorities will actively disseminate all necessary information to the public, including the draft plans and any other information relevant to the decision-making
- the public will, ideally, be given an initial six-week period to consider the information followed by another six-week period to allow for public participation;
- the authorities must take account of the outcome of the public participation process;
- the authorities must prepare and issue a document which sets out how the public's comments have been considered.

It is important to note that all Member State are parties, in their own right, to the Aarhus Convention.[27]

In section 4.1.1. we will look again at how this played out in the draft NECPs.

The regulation promotes regional cooperation as key to ensuring the Union-wide targets are met in an effective and cost-optimal manner. In support of this, each Member State is required to identify opportunities for regional cooperation and consult neighbouring Member States, including in regional cooperation fora, well in advance of submitting their draft NECP. This may also include third countries.[28] Member States may also jointly draft parts of their integrated NECPs and progress reports. In the period between the submission of the draft NECP and final NECP, Member States are required to present the relevant parts of their plans in regional cooperation fora to facilitate market integration and cost-efficient politics and measures. The Commission will facilitate such cooperation and consultation among the Member States. In the final submitted NECP, Member States must again illustrate how comments from other Member States have been considered and, for the duration of the plan, continue to cooperate at regional level (Art. 12).

[27] Accessible here: https://ec.europa.eu/environment/aarhus/

[28] Member States are encouraged to take into consideration existing regional cooperation (such as BEMIP or CESEC) and envisage cooperation with signatories to the Energy Community. In the draft NECP, each Member State shall include results of such consultations and how the comments of Member States or third countries have been taken into account, where applicable. Art. 12(2), Regulation (EU) 2018/1999

Again, the exact nature of this cooperation or the extent to which it can be used, is not fully stipulated in the regulation. For example, if cooperation is set up between a Member State and third country, could it indirectly create a flexibility mechanism and mask the real state of national targets? In section 3.5.2 and section 4, we will also consider the principle of solidarity, as it was recently interpreted in the Judgment of Case T-883/16 *Poland v Commission*.

3.2.5. Update of the NECP

To allow for significant changes to circumstances, Member States will be given the opportunity to amend their NECP once in the course of the ten-year plan. The objectives, targets and contributions shall only be revised upwards to reflect an increase in ambition. Art. 14 states that by 30 June 2023, and subsequently by 1 January 2033 and every 10 years thereafter, each Member State shall submit to the Commission a draft update of the latest notified integrated NECP or provide reasons justifying why the plan does not require updating. By 30 June 2024, and subsequently 1 January 2034 and every 10 years thereafter, each Member State shall submit the final version of this update to their NECP, unless they have provided reasons as to why it is not necessary.

In the final version of the update, the Member State shall also consider the latest country-specific recommendations issued in the context of the European Semester[29] as well as the obligations deriving from the Paris Agreement. Given both the impact of the coronavirus crisis and the European Green Deal plans, which have already proposed significant changes, including to the targets, the opportunity to revise these plans will likely be a significant point for both Member States and the Commission. If the Governance Regulation is still deemed fit for purpose, the Commission will want to roll out its new policy measures ahead of this deadline.

To briefly recap, the planning and reporting deadlines for the NECP are as follows:

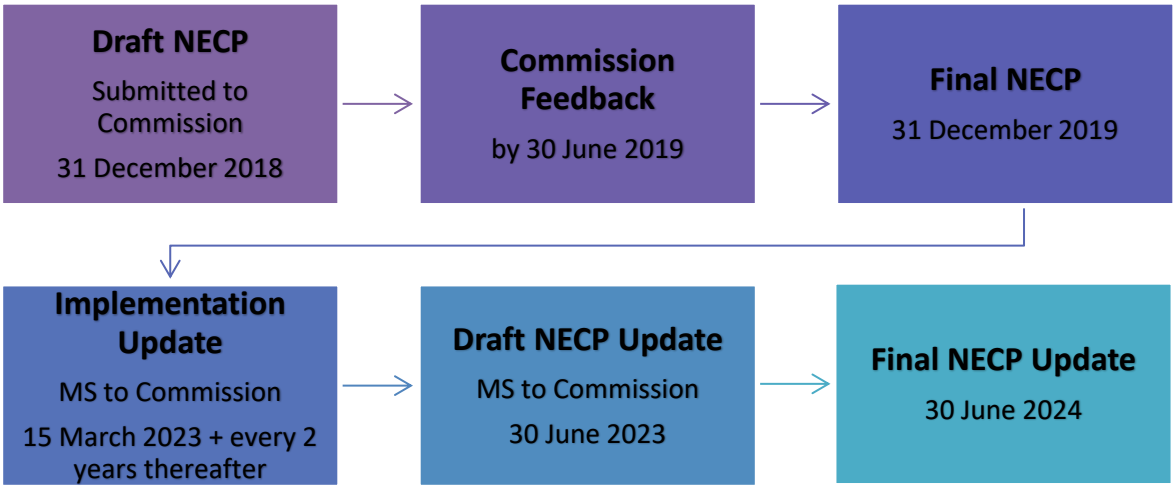

Figure 4: The NECP Planning and Reporting Deadlines, Source: FSR Energy Union Law Area

3.3. Long-term Strategies

Another, separate plan required by the regulation is the long-term strategy, which should go hand-in-hand with the NECPs. In addition to furthering the progress of the Energy Union and the economic transition as well as fostering transparency, the long-term strategies are also a component of the Paris Agreement. Parties to the Paris Agreement are invited to communicate by 2020 their long-term low GHG emission development strategies.

[29] The European Semester, set up in 2010, coordinates macro-economic, budgetary and structural policy between the Commission and Member States, on an annual basis. For the 2020 targets, it was required that Member States submit National Reform Programmes to the ES with the Commission responding with Country-Specific Recommendations

Art. 15 of the regulation requires that by 1 January 2020 and subsequently by 1 January 2029 and every 10 years thereafter, each Member State shall submit to the Commission its long-term strategy with a perspective of at least 30 years and, where necessary, update these strategies every five years. Annex IV of the regulation provides a standardised framework for this. As of September 2020, 12 Member States (including the UK) have yet to submit their long-term strategies. We will discuss this further below in section 4.1.

The regulation states that by 1 April 2019,[30] in pursuit of the overall climate objectives, the Commission shall adopt a proposal at Union level for a long-term strategy for greenhouse gas emissions reduction in accordance with the Paris Agreement. This shall take into account the draft NECPs of Member States. It will include an analysis of various scenarios toward achieving net-zero greenhouse gas emissions within the Union by 2050 and negative emissions thereafter.

As outlined in section 2.1.1., ahead of COP24, in November 2018, the Commission adopted its long-term strategic vision, 'A Clean Planet for All',[31] calling for a climate-neutral Europe by 2050, detailing possible cost-effective pathways toward achieving this goal through a societal, industrial and economic transition across seven strategic building blocks.

According to Art. 15, both the Member States' and the Union's long-term strategies shall include:

- total greenhouse gas emission reductions and enhancements of removals by sinks;
- emission reductions and enhancements of removals in individual sectors, including electricity, industry, transport, the heating and cooling and buildings sector (residential and tertiary), agriculture, waste and land use, land-use change and forestry (LULUCF);
- expected progress on the transition to a low greenhouse gas emission economy, including greenhouse gas intensity, CO2 intensity of gross domestic product, related estimates of long-term investment, and strategies for related research, development and innovation;
- to the extent feasible, the expected socio-economic effect of the decarbonisation measures, including, inter alia, aspects related to macro-economic and social development, health risks and benefits and environmental protection;
- links to other national long-term objectives, planning and other policies and measures, and investment.

The regulation requires that integrated NECPs be consistent with the long-term strategies.

As with the NECPs, the Member States and the Commission are required to inform the public of their long-term strategies and any updates thereof, and make the information publicly available, including by means of the e-platform. The Commission shall make relevant data from the final results of the long-term strategies available to the public.

The Commission shall assess whether the long-term national strategies are adequate for the collective achievement of the objectives and targets of the Energy Union and provide information on any remaining collective gap. The regulation does not suggest that recommendations will be issued to the Member States in response to this strategy.

However, in the next step toward achieving the 'strategic vision' outlined above,[32] in December 2019, the Commission presented The European Green Deal, a roadmap to reach climate neutrality by 2050. As part of the Green Deal, the Commission proposed the draft Climate Law on 4 March 2020 which

[30] Access the in-depth analysis here: https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_analysis_in_support_en_0.pdf

[31] Accessible here: https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_en.pdf. This supplants the EU's 2011 Roadmap for Moving to a Competitive Low Carbon Economy by 2050

[32] And in March 2020 the EU submitted its long-term strategy to the UNFCCC to make the EU climate-netural by 2050.

would enshrine the climate neutrality target into law. The draft states that *"the Commission should… regularly assess relevant national measures, and issue recommendations where it finds that a Member State's measures are inconsistent with the climate-neutrality objective or inadequate"* (Preamble, 18) suggesting that long-term strategies may be subject to recommendations should the draft law enter into force.

3.4. Reporting

While either harmonising, replacing or withdrawing multiple existing planning, reporting and monitoring obligations, the regulation still sets forth substantial, frequent reporting obligations for the Member States, including annual reporting and biennial progress reports. The progress reports are a key mechanism of the governing process, not only in ensuring proper implementation and greater transparency, but also act as a vital resource for fellow Member States, regional and local authorities, market actors including consumers, and the general public.

3.4.1. Biennial Progress Reports

Biennial progress reports are required for:

- Integrated NECPs;
- Policies, measures and projections on GHG emissions (divided into two reports), and;
- Information on national adaptation actions, financial and technical support provided to developing countries and auctioning revenues (all of which is to be contained within a single report).

A mandatory template for each of these is provided in annexes of the regulation.

Integrated NECP Progress Reports

As outlined in Art. 17, by 15 March 2023 and every two years thereafter, each Member State shall report to the Commission on the status of implementation of its NECP by means of an NECP progress report covering all five dimensions of the Energy Union, and energy poverty. The progress report should mirror the elements set out in the NECP template.[33] The report must cover the information contained in the annual reports as well as on GHG emissions. The report should mark the differences between the projections set out and the progress achieved thus far with regard to the objectives, targets and contributions, as well as across all of the other required criteria set out for the NECP. This includes the progress in terms of financing and implementing the policies and measures necessary to meet them, a review of the actual investment versus the initial investment assumptions, and the multilevel energy and climate dialogue. These should also include updates in accordance with the binding national target for GHG emissions and Member States' commitments in accordance with the LULUCF Regulation (Regulation (EU) 2018/841).

The progress reports should also quantify the impact of policies and measures on air quality and on the emissions of air pollutants. If the Commission has issued recommendations to the Member State for insufficient progress, these must be addressed in the progress reports including, where applicable, a detailed timetable for implementation. If the Member State has failed to address these recommendations, it must provide its reasoning.[34] All of these submitted reports must be made available to the public.

Within the NECP progress report, specific and detailed reporting requirements on progress in the areas of energy poverty, research, innovation and competitiveness, the internal energy market,

[33] A template for the progress reports will be detailed in subsequent implementing acts.

[34] Once again however, there is no legally binding obligation to follow these recommendations. The regulation also does not detail the extent to which the recommendations should be accounted for or any consequences to either poor uptake or disregard of these recommendations.

energy security, energy efficiency, and renewable energy is required by the regulation. Furthermore, with respect to renewable energy and energy efficiency, additional more detailed reporting obligations are set out with a standardised template.[35] To give a sample of what these reports must include, we will look at the requirements for one of these areas.

With respect to **renewable energy**, in each NECP biennial progress report, Member States must issue updates on the objectives and trajectories in terms of the:

- Indicative national trajectory for the overall share of renewable energy
- Estimated trajectories for the sectoral share of renewable energy in the electricity, heating and cooling, and transport sector
- Estimated trajectories on renewable energy technology
- Trajectories on bioenergy demand and biomass supply
- Other national trajectories and objectives, including those that are long-term and sectoral, and energy recovered from sludge acquired through the treatment of wastewater.

With respect to the implementation of the following policies and measures:

- Implemented, adopted and planned policies and measures to achieve the national contribution to the 2030 binding Union target for renewable energy and review the implementation of measures laid down in Articles 23 to 28 of the Renewable Directive (EU) 2018/2001, with respect to heating and cooling, transport, biofuels, bioliquids and biomass fuels
- Measures for regional cooperation
- Detail measures on financial support toward promoting the use of renewable energy, without prejudice to Articles 107 and 108 TFEU
- An assessment of the support for electricity from renewable energy sources pursuant to Art. 6(4) of Directive (EU) 2018/2001, with regard to support schemes for electricity from renewable sources
- Measures to fulfil the provisions of Articles 15 to 18 of Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources, related to issues such as grid connections, permit granting processes, and administrative processes
- Specific measures to assess, make transparent and reduce the need for must-run capacity that can curtail energy from renewable sources
- A summary of the enabling framework Member States are to put in place in accordance with Directive (EU) 2018/2001 to promote and facilitate the development of renewables self-consumption and renewable energy communities[36]
- Measures promoting the use of energy from biomass
- Measures in place to increase the share of renewable energy in the heating and cooling and transport sector
- Policies and measures facilitating the uptake of power purchase agreements

In addition to the above details, Member States must report on the further criteria set out in the dedicated biennial reporting template for renewable energy and energy efficiency especially required for these two areas as part of the NECP biennial report, which is provided in Annex IX of the regulation.

[35] The additional reporting obligations for both energy efficiency and renewable energy are set out in Annex IX of the regulation

[36] As set out in Art. 21(6) and Art. 22(5) of Directive (EU) 2018/2001

Integrated Reporting on GHG Emissions

As set out in Art. 18, by 15 March 2021, and every two years thereafter, Member States are obliged to report to the Commission on their national policies and measures with respect to the reduction of greenhouse gas emissions as well as their national projections of anthropogenic GHG emissions by sources and removals by sinks with their most up-to-date projections. These reports shall be made publicly available as well as any relevant underpinning technical reports.

Integrated Reporting on National Adaptation Actions, Financial and Technology Support Provided to Developing Countries and Auctioning Revenues

Following a dedicated template (Annex VIII), according to the provisions of Art. 19, by 15 March 2021, and every two years thereafter, Member States shall report to the Commission information on their national climate change adaptation planning and strategies, outlining their implemented and planned actions to facilitate climate change, in accordance with the reporting requirements agreed upon under the UNFCCC and the Paris Agreement. By 31 July 2021 and every year thereafter, Member States shall report to the Commission on the use of revenues generated by auctioning allowances. Furthermore, by 30 September 2021 and every year thereafter, Member States shall report to the Commission on the support given to developing countries. Assisted by the Climate Change Committee, the Commission (as with Art. 18) shall adopt implementing acts to set out the structure, format and submission process for compliance with this Article. Again, Member States must make these reports publicly available.[37]

3.4.2. Annual Reporting

On top of these biennial reporting obligations, each year, Member States will be required to submit annual reports on certain areas.

By 15 March 2021, and every year thereafter, Member States shall report to the Commission on emergency stocks, and on safety and environmental impact.

By 31 July 2021, and every year thereafter, Member States shall report to the Commission their approximated greenhouse gas inventories for the previous year. From 2023, Member States shall determine and report to the Commission final greenhouse gas inventory data by 15 March every year and preliminary data by 15 January each year. Within three months, the Commission shall make the information available to the Climate Change Committee. Member States shall submit to the UNFCCC Secretariat national inventories containing the information submitted to the Commission on the final greenhouse gas inventory data by 15 April each year. In line with this, the Commission shall, in cooperation with the Member States, annually compile a Union greenhouse gas inventory and prepare a report, both of which shall be submitted to the UNFCC Secretariat by 15 April each year.

Member States will also be required to submit preliminary and final national inventory data, by 15 January and 15 March respectively, in the years 2027 and 2032 for their LULUCF accounts for compliance reports in accordance with Art. 14, Regulation (EU) 2018/841.[38]

In examining each of these reports, the Commission is empowered to adopt **delegated acts** to amend the requirements and to detail the conditions of the greenhouse gas inventories, as well as issue a timescale of coordination between the Member States and Commission in preparing the Union inventory report.[39]

[37] As detailed in Art. 19, Regulation 2018/1999

[38] Regulation (EU) 2018/841 of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework. Accessible here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.156.01.0001.01.ENG

[39] We will discuss delegated acts in more detail in section 4 below.

Finally, as detailed in Art. 27, with respect to the 2020 targets, by 30 April 2022, each Member State shall report to the Commission on the achievement of its 2020 energy efficiency national target as per Art. 3(1) of Energy Efficiency Directive (Directive 2012/27/EU),[40] as well as the overall national targets for the share of energy from renewable sources in 2020 as set out in Annex I of Directive 2009/28/EC, the 2009 Renewable Energy Directive.[41] This should detail sectoral and overall shares of renewables, the measures taken to achieve the 2020 national renewable targets, the share of energy from biofuels, bioliquids, and biogas.

3.4.3. Reporting Platform

The regulation stipulates that the Commission shall establish an online platform (an e-platform) to facilitate communication and promote cooperation between the Commission and the Member States and separately among the Member States themselves. The platform is also intended to facilitate public access to information. All reports, as well as the final integrated NECPs and long-term strategies, will be made publicly available through this resource. The platform aims to limit the administrative burden and help with the timely submission of reports, as all reports shall be submitted to the Commission through the platform.

Art. 28 states that by 1 January 2020 the platform will be operational. However, there is limited detail in the regulation as to how exactly it shall operate – if it will function as an interactive platform for a multi-level, cross-national dialogue or if it will be more akin to a repository for plans, reports and strategies, as is currently the case.[42] In any case, such a transparency mechanism facilitates investment and promotes the comparison of national contributions as well as a degree of 'name and shame' should certain Member States fail to do their fair share. This access to information may also open the door to a greater level of private enforcement of environmental and climate action.

3.5. Commission Monitoring

Central to the functioning of the regulation is how all of this information will be monitored, what instruments can be used should there be failures and the effectiveness of these remedies. At EU level, the Commission will be the leading body responsible for this. It is worth noting again that there is no mention of ACER in the regulation and that no direct responsibilities have been handed to them.

3.5.1. The Assessment of Progress

Art. 29 is devoted to the Commission's role is assessing the progress being made.

By 31 October 2021 and every two years thereafter, the Commission will evaluate progress on the basis of the NECP progress reports and additional reporting obligations outlined in the regulation. The focus of this will be on the Union level progress, especially to avoid gaps in reaching the targets for renewable energy and energy efficiency, the progress of each Member State and the overall impact on the operation of the Union's climate and energy policy measures.

The Commission will evaluate whether the Union and its Member States have made sufficient progress towards meeting the following requirements:

- commitments under Art. 4 of the UNFCCC and under Art. 3 of the Paris Agreement, or by the Conference of the Parties to the UNFCCC;
- obligations set out in Art. 4 of Regulation (EU) 2018/842 on GHG emissions and in Art. 4 of Regulation (EU) 2018/841 on LULUCF;

[40] By providing the information set out in Annex IX of the Governance Regulation
[41] According to the version in force on 31 December 2020
[42] As of July 2020, all of the submitted draft NECPs and final NECPs submitted thus far, as well as Commission recommendations are available on the Commission's website: https://ec.europa.eu/energy/topics/energy-strategy/national-energy-climate-plans_en

- the objectives set out in the NECP with a view to achieving the Energy Union objectives and, for the first ten-year period, with a view to fulfilling the 2030 targets for energy and climate.

In its assessments, the Commission will take into consideration the latest country-specific recommendations issued in the context of the European Semester. The Commission shall report on its assessment in accordance with Art. 29 as part of the annual State of the Energy Union report.

3.5.2. What Happens if there is Insufficient Ambition or Progress?

Should the Commission conclude that the objectives, targets and contributions of the Member States' draft NECPs are inadequate to achieve the collective targets, as noted in Art. 31, the Commission shall issue (non-binding) **recommendations** to the Member States whose contributions it deemed insufficient. The Commission shall immediately make such recommendations publicly available. According to Art. 34 of the regulation, the Member State concerned *"shall take due account of the recommendation in a **spirit of solidarity** between Member States in the Union and between Member States."* The Member State shall set out in their next NECP progress report, how it has taken due account of the recommendation. If the Member State concerned decides not to address the recommendations or a substantial part thereof, the Member State shall provide its reasoning.

It is important to note again here that these recommendations have no legal status. While the Member State must indicate in their NECP progress report how they have taken these recommendations into consideration or provide reasoning for its failure, there is no obvious legal recourse should this not translate into action on the part of the Member State.

One may envisage recourse to the sincere cooperation obligation enshrined in Art. 4(3) TEU. Conversely, the legal nature of the recommendation prevents an effective legal remedy open to Member States disagreeing with the Commission's recommendations.[43] We will now turn to a recent development which may offer another path to the enforcement of action.

The Solidarity Principle: A Silver Bullet?

The principle of energy solidarity made headlines on 10 September 2019, as it was used as the basis of a judgment of the EU General Court in Case T-883/16 *Republic of Poland v. European Commission* (hereafter the OPAL case). This was the first time the principle had been interpreted in such a light and been given concrete legal significance.

In brief, the judgment annulled an earlier Commission decision relating to the OPAL pipeline, one of the onshore extensions of the Nord Stream pipeline, which carries Russian gas from the Baltic Sea into the German grid, on the grounds of it having been adopted in breach of the principle of energy solidarity. The Commission had previously enabled Gazprom to utilise more than 50% of the OPAL pipeline's capacity, in effect giving Gazprom a monopoly despite the Third Energy Package regulations which limit ownership of both infrastructure and transmission by the same entity in order to support fair competition between the EU and third countries. The Nord Stream pipeline has long been a bone of contention as it facilitates Russia's plans to limit transit through Ukraine and Poland – thus impacting their economies - and increases the EU's dependence on major energy suppliers such as Gazprom. Drawing on the "spirit of solidarity" in Art. 194 TFEU, the General Court held that the *"principle of energy solidarity requires the European Union and the Member States to endeavour, in the exercise of their powers in the field of energy policy, to avoid adopting measures likely to affect the interests of the EU and other Member States as regards security of supply, its economic and political viability, the diversification of supply or of sources of supply, and to do so in order to take account of their interdependence and de facto solidarity"* (para 73). The judgment noted that there should be a "balance" of interests in the face of such a conflict (para 77).

[43] See for example A. Arnull. 'EU Recommendations and Judicial Review. Case note ECJ 20 February 2018, Case C-16/16 P. Kingdom of Belgium v European Commission', European Constitutional Law Review, 14: 609-621, 2018.

While this judgment is currently under appeal,[44] such an interpretation could have far-reaching consequences for energy governance, paving the way for Member States and the EU to take legal action against fellow Member States for failure to act in the spirit of solidarity, for example by jeopardising the achievement of Union-wide targets, as Art. 34 of the Governance Regulation (coincidentally) invokes. In turn, this interpretation also casts doubt on the rights of Member States to determine their own energy mix, as in Art. 194(2) TFEU, should their own interests conflict with those of other Member States and the European Union as a whole. Does such an interpretation of the principle jeopardise these rights? Could the pursuit of 'solidarity' supersede the sovereign rights of Member States?

Failing this, according to Art. 31(3), the Commission *"shall propose measures and exercise its powers at Union level"* in order to ensure the collective achievement of those objectives and targets. No further detail is provided as to what these measures may be or indeed what powers may be exerted by the Commission, should this be the outcome. However, it should be noted that Article 43 does state that, with this regulation *"the power to adopt **delegated acts** […] shall be conferred on the Commission for a period of five years from 24 December 2018 […] The delegation of power shall be tacitly extended for periods of an identical duration, unless the European Parliament or the Council opposes such extension."*[45] The draft Climate Law has shown the extensive scope these delegated acts may reach under the Commission's interpretation (see section 4.3.2 below).

Similarly, Art. 32 states that on the basis of the Commission's aggregate assessment of Member States' integrated NECP progress reports as well as supporting information, should the Commission conclude that the Union as a whole is at risk of not meeting the objectives of the Energy Union or, particularly for the first ten-year period, the targets of the Union's 2030 Framework for Climate and Energy, it may issue recommendations to all Member States to mitigate such risk. While these recommendations are not legally binding under 288 TFEU, Member States must take them into due account. In other words, the Member States must 'comply or explain'.

In the two key areas of energy efficiency and renewable energy, the Governance Regulation specifies additional measures that may be taken upon a lack of progress or ambition. In the area of energy efficiency, the regulation broadly states that such additional measures may focus on improving the energy efficiency of;

- products (pursuant to Directive (EU) 2009/125/EC on the ecodesign requirements for energy-related products and Regulation (EU) 2017/1369 on energy labelling)
- buildings (pursuant to Directive (EU) 2018/844 and Directive (EU) 2018/2002) and,
- transport.

However, it does not provide details as to what this may entail.

The Case of Renewables[46]

In the case of renewable energy, if the Commission concludes that one or more of the reference points indicative of the Union trajectory were not met, the Member States that have fallen below one or more of their national reference points *"shall ensure that additional measures are implemented within one year of receiving the Commission's assessment in order to cover the gap"* (Art.32(3)). These may include;

- national measures to increase the deployment of renewable energy

[44] On the grounds that 'the principle of energy solidarity is not a legal criterion, and does not impose on executive bodies an obligation to act' (https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:62019CN0848&from=EN).
[45] We will discuss delegated acts in more detail in Section 4 below
[46] For a detailed discussion of the provisions for renewables, see chapter 2 below.

- adjusting the share of renewable energy in the heating and cooling sector set out in Art. 23(1) of Renewable Energy Directive (EU) 2018/2001
- adjusting the share of renewable energy in the transport sector set out in Art. 25(1) of Directive (EU) 2018/2001
- making a **voluntary** financial payment to the Union renewable energy financing mechanism, contributing to renewable energy projects, managed directly or indirectly by the Commission, as set out in Art. 33 (detailed in the next section)
- using cooperation mechanisms set out in Directive (EU) 2018/2001.

The Member States concerned shall include those measures as part of their integrated NECP progress report. Both the voluntary nature of the financial payment option and the suggested use of the cooperation mechanisms as a means to side-step accountability further underline the 'soft' governance approach of the regulation. It also raises questions as to the burden-sharing between Member States.

According to Art. 32(4), from 1 January 2021 onwards, if the share of energy from renewable sources in each Member State's gross final consumption of energy is lower than a baseline share equal to the mandatory national target for 2020, the Member State concerned shall take, within one year, additional measures to cover the gap. Member States fulfilling the obligation to cover the gap shall be deemed to be in compliance with the obligations set out in the regulation throughout the period where the gap occurred. With respect to making a voluntary financial payment to the Union renewable energy financing mechanism, Member States may use their revenues from annual emission allowances under Directive (EU) 2018/410. If a Member State falls below one or more of its national reference points for the share of energy from renewable sources, it shall include in the next integrated report an explanation of how it will cover the gap.

The Case of Energy Efficiency

Similarly, with respect to energy efficiency, if the Commission concludes the progress towards collectively achieving the Union's targets is insufficient, it shall propose measures and *"exercise its power at Union level"* in addition to those set out in Directive (EU) 2018/844 and Directive (EU) 2018/2002 to ensure that the Union's 2030 energy efficiency targets are met. Each Member State concerned shall detail the additional implemented, adopted, and planned measures as part of its following progress report.

With respect to interconnections, if the Commission concludes that progress is insufficient, the regulation states that the Commission shall cooperate with the Member States concerned by 2026 with the aim of addressing the issue. However, what corrective action could be taken, if any, is not detailed.

3.5.3. Union Renewable Energy Financing Mechanism

As briefly mentioned above, according to Art. 33, by 1 January 2021, the Commission shall establish the Union renewable energy financing mechanism to tender support for new renewable energy projects in the Union with the aim of bridging the gap in the indicative Union trajectory, as a "gap-filling function". On 15 September 2020, the Commission adopted the Implementing Regulation (EU) 2020/1294 on the mechanism, due to be in operation by January 2021.[47]

[47] Draft rules of this mechanism were disclosed by the Commission on 6 May 2020 in the context of a feedback procedure: https://ec.europa.eu/info/news/commission-outlines-plan-eu-financing-mechanism-support-new-renewable-energy-projects-2020-may-06_en and, on 15 September 2020, adopted a Commission Implementing Regulation (EU) 2020/1294, accessible here: https://eur-lex.europa.eu/eli/reg_impl/2020/1294/oj

The financing mechanism shall contribute to the enabling framework pursuant to Art. 3(4) of the Renewable Energy Directive (EU) 2018/2001 with the aim of supporting renewable energy deployment across the Union irrespective of a gap to the indicative Union trajectory. Payments from the Member States may be complemented by additional sources, such as Union funds, private sector contributions, or additional payments by the Member States in order to contribute to the achievement of the Union target. The financing mechanism may provide support in the form of low-interest loans, grants, or a mix of both and may support joint projects between the Member States in accordance with Art. 9 of Directive (EU) 2018/2001 and Member States' participation in joint projects with third countries.[48]

At the moment, Member States primarily rely on the amount of energy from renewable sources deployed on their own territory and on national RES schemes to achieve their 2020 binding targets although there is an option to use cooperation mechanisms with other Member States. The adopted implementing regulation outlines how this new financing mechanism will allow contributing Member States to pay voluntary financial contributions into the scheme, which will be used to tender support for new renewable energy projects in all Member States willing to host such projects. Thus, the contributing country struggling to meet their targets can finance renewables projects elsewhere, and count toward their targets, and are potentially more cost-effective than renewables produced on their own territory. For the hosting Member State, the advantage is that it receives the additional local investment in renewables projects. The rules stipulate that the Commission will run the process and allocate the statistics to the participating Member States with the benefits split between participants to reflect participation/ relative payments. There is no direct negotiation between the contributing and hosting Member States.

The Member States shall also retain the right to decide whether and, if so, under which conditions, they allow installations located on their territory to receive support from the financing mechanism. It is worth noting here that EU state aid rules would still apply in this scenario.

Projects supported by this financing mechanism that are financed by other sources than Member States payments shall not count towards Member States' national contributions but towards the Union binding targets pursuant to Art. 3(1) of Directive EU 2018/2001.

To what extent may this mechanism come to operate as a kind of flexibility/ gap-filler mechanism? Could it be a perverse incentive to do less so that a Member State can rely on EU funds to catch up?

3.5.4. State of the Energy Union Report

According to Art. 35, by 31st of October every year, the Commission shall submit to the European Parliament and the Council a State of the Energy Union report, that shall include the following elements:

- An assessment on the progress and policy response
- Where appropriate, the recommendations that have been made
- A report on the functioning of the carbon market
- Biennially, from 2023, a report on Union bioenergy sustainability
- Biennially, a report on voluntary schemes in respect of which the Commission has adopted a decision pursuant to Article 30(4) of Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources with respect to the production of biofuels, bioliquids, or biomass fuels
- An overall progress report on the application of Directive (EU) 2019/944 on the common rules of the internal market

[48] As referred to in Art. 11 of Directive (EU) 2018/2001

- An overall progress report on the application of Directive 2009/73/EC concerning common rules for the internal market in natural gas
- An overall progress report on energy efficiency obligations schemes and alternative policy measures set out in the Energy Efficiency Directive (EU) 2018/2002
- Biennially, an overall progress report on the renovation of the national stock of residential and non-residential buildings, both public and private, in line with the roadmaps set out in the long-term innovation strategies that each Member State shall establish, according to Directive (EU) 2018/844 on the energy performance of buildings
- Every four years, an overall progress report on Member States' increase in the number of nearly zero-energy buildings in accordance with Directive (EU) 2018/844
- An overall progress report on Member States' progress in creating a complete and operational energy market
- Actual fuel quality in the different Member States and geographical coverage of fuels with a maximum sulphur content of 10 mg/kg, aiming to provide an overview of the fuels quality data in the different Member States pursuant to Directive 98/70/EC
- A progress report on competitiveness
- Member States' progress towards phasing out energy subsidies, in particular for fossil fuels
- Other issues of relevance to the implementation of the Energy Union including public and private support
- By 31 of October 2019, and every four years thereafter, an assessment of the implementation of Directive (EU) 2018/844 on the geological storage of carbon dioxide

The State of the Energy Union report for 2020 has yet to be issued.[49]

3.5.5. Monitoring of the Governance Mechanism

In the context of the State of the Energy Union report, the Commission shall inform the European Parliament and the Council on the implementation of the integrated NECPs according to Art. 36. On an annual basis, the European Parliament and the Council shall address the progress achieved by the Energy Union on all dimensions of Energy and Climate policies.

The European Parliament and the Council will likely play a strong role in monitoring the governance mechanism. Member States are expected to closely involve the European Parliament on the progress of their implementation. More significantly, given the need for additional measures to the Governance Regulation as well as potentially higher targets, the role of the EU Parliament will be central to the approval of these amendments.

According to Art. 45, the Commission shall report to the European Parliament and the Council within six months of each global stocktake agreed under the Paris Agreement, on the operation of the Governance Regulation, its contribution to the governance of the Energy Union, its contribution to the long-term goals of the Paris Agreement, progress towards the achievement of the 2030 climate and energy targets, additional Energy Union objectives and the conformity of the planning, reporting and monitoring provisions laid down in the regulation with other Union law or decisions relating to the UNFCCC and the Paris Agreement. The Commission reports may be accompanied by legislative proposals where appropriate.

[49] While the State of the Energy Union report is not expected until 31 October, we will discuss below, in section 4, how the EU State of the Union address issued by Ursula von der Leyen on 16 September 2020 signalled significant changes, primarily to the 2030 targets.

3.6. Union and National Systems on GHG Emissions and Removals by Sinks

Here we will briefly outline the tracking measures with respect to GHG emissions and removals by sinks, as required by the regulation.

3.6.1. Union and National Inventory Systems

By 21 January 2021, Member States shall establish, operate and seek to continuously improve national inventory systems to estimate anthropogenic emissions by sources and removals by sinks of greenhouse gases to ensure the timeliness, transparency, accuracy, consistency comparability, and completeness of their greenhouse gas inventories. Member States shall ensure that their competent inventory authorities have access to the information provided through this regulation, make use of reporting systems established to improve the estimate of fluorinated gases in the national greenhouse gas inventories and are able to undertake the annual consistency checks detailed in Annex V of the Governance Regulation. Furthermore, according to Art. 37, a Union inventory system shall be established, which will be managed and maintained by the Commission.

3.6.2. GHG Emissions: Inventory Review and Reporting

With a view to monitoring Member States' greenhouse gas emission reductions or limitations, in 2027 and 2032, the Commission shall carry out a comprehensive review of the national inventory data submitted by the Member States according to the annual reporting requirements set out in the Governance Regulation. The Member States shall participate fully in the process.

By 1 January 2021, the Member States and the Commission shall operate and seek to continuously improve national and Union systems for reporting on policies and measures and for reporting on projections of anthropogenic GHG emissions by sources and removals by sinks.

3.6.3. Establishment and Operation of Registries

According to Art. 40, the Union and the Member States shall set up and maintain registries to accurately account for the Nationally Determined Contributions pursuant to Art. 4(13) of the Paris Agreement and for internationally transferred mitigation outcomes pursuant to Art. 6 of that Agreement.

3.7. Cooperation and Support between the Member States and the Union

As has been underlined throughout the regulation, Art. 41 reiterates the obligation upon Member States to cooperate and coordinate fully with each other and with the Union in meeting the requirements of the regulation. In particular with regard to;

- The process of preparing, adopting, notifying and assessing the NECPs, progress reports and annual reports
- Addressing Commission recommendations
- Compiling the Union GHG inventory and preparing the Union GHG inventory report
- Preparing the national communication pursuant to Art. 12 of the UNFCCC and the Union biennial report or subsequent relevant decisions adopted by the bodies of the UNFCCC
- The review and compliance procedures under the UNFCCC and the Paris Agreement in accordance with any applicable decision under the UNFCCC as well as the Union's procedure to review Member States GHG inventories
- Any adjustments following the GHG inventory review process or other changes to inventories and inventory reports submitted or to be submitted to the UNFCCC Secretariat
- Compiling the Union approximated GHG inventory under the annual reporting obligations.

What will happen if a Member State fails to meaningfully participate in the spirit of cooperation? While Member States will have to detail their efforts to cooperate, should a Member State be unwilling, this obligation may amount to a box-ticking exercise.

Highlights

- Central to the regulation is the NECP, a detailed 10 year national plan which addresses the five dimensions of the Energy Union with a view to achieving the Union-wide 2030 energy and climate targets. Each of these plans are set to a standardised template. Regular reporting on these plans, specifying progress made, are closely monitored by the Commission. The plans are also expected to be regularly updated and revised (upwards).

- There are special provisions in the regulation to ensure that the targets for the share in renewables and energy efficiency are met.

- The Governance Regulation coalesces and streamlines several existing planning and reporting requirements across legislation, and sets out new stringent planning, reporting, and monitoring obligations.

- Member States are required to prepare long-term strategies for energy and climate action.

- The regulation allows for a more interactive form of governance between Member States and the Commission.

- The non-binding nature of the targets at Member State level may pose challenges if faced with a Member State who is uncooperative or unwilling to make meaningful efforts toward achieving the targets. There is no obvious legal recourse for the Commission should a Member State fail to act.

- The regulation promotes cooperation between Member States, with the Union Renewable Energy Financing Mechanism acting as a flexibility mechanism.

4. The Regulation in Practice: Ambition V Reality

In this section, we will take a look at the regulation in action thus far and weigh its merits as a governing framework. We will also turn to the new developments with the EU Green Deal and coronavirus crisis, and consider what these may mean for the Governance Regulation.

4.1. The First Steps: Right on Time?

While the regulation is still in the first phase of implementation, early indications have cast some doubt on the efficacy of the mechanism.

All 28 Member States, including the UK, were required to submit their **draft NECP** by 31 December 2018. Seven Member States – Bulgaria, the Czech Republic, Greece, Spain, Luxembourg, Hungary and Cyprus – failed to meet this deadline. In some cases, as with Spain, the delay was due to a change in government, with apparently no groundwork on the draft NECP having been done by the previous government. For Luxembourg, the delay was attributed to the desire to improve the plan. The delays with the draft NECPs were perhaps the first signal of an overly ambitious timeframe. The regulation entered into force on 24 December 2018 and by 31 December 2018 Member States were expected to submit their draft NECP. While Member States had been given notice of the expected requirements of the NECP as far back as November 2015,[50] the exact timeframe for such a plan was not confirmed until June 2018 when political agreement among the institutions was reached. Throughout the

[50] As an annex to the State of Union report, accessible here: https://eur-lex.europa.eu/resource.html?uri=cellar:ebdf266c-8eab-11e5-983e-01aa75ed71a1.0008.03/DOC_5&format=HTML&lang=EN&parentUrn=CELEX:52015DC0572

regulation, the timeframe is tightly wound – for good reasons – but the late submissions of the draft NECPs have been the first in a series of delays on the part of Member States, raising doubts as to whether the deadlines are feasible. Furthermore, given the nature of the regulation, there is little the Commission can do to oblige the Member States to be more responsive.

While all Member States eventually submitted their draft NECP (including the UK),[51] the deadline of 31 December 2019 for the submission of the **final NECP** was also missed by several Member States, among them, France, Germany, Luxembourg, Spain, Romania, Sweden, and Ireland with some submitting them several months after the deadline. Ireland was among the last Member States to submit its final NECP, not publishing it until 4 August 2020, partly owing to a protracted process surrounding the formation of a new government. In any case, these delays thwarted a full assessment of the revised plans and their collective outcome. As of 20 September 2020, the only remaining Member State still to submit its final NECP is the UK, which according to the Withdrawal Agreement is still obliged to submit a final NECP.[52] However, the EU has now issued an EU-wide assessment of the NECPs, which we will discuss further below, in section 4.1.2.

Similar to the delays with the NECPs, the long-term national strategies, which are expected to give an overview of each Member States' plans up to 2050 have not yet been submitted by all Member States, despite the deadline being 1 January 2020. As of 20 September 2020, the long-term strategies of Bulgaria, Croatia, Cyprus, Ireland, Italy, Luxembourg, Malta, Poland, Romania, Slovenia, Spain (and the UK) were still outstanding.

While these series of missed deadlines raise concerns and highlight the susceptibility of the process to national politics, there are also many reasons that justify such delays – and do not necessarily point to a failure of the mechanism. The requirements of such a plan, especially for its first iteration, are enormous and time-consuming - requiring multi-level, cross-sectoral action and systemic changes. Similar to the previous approach of the EU, at national level, there also often tended not to be a cross-sectoral, integrated approach to policy development. The requirements of the NECPs impel a coordinated approach focused toward the targets, requiring a structural overhaul. Given the urgency of the cause, the tight deadlines impose a necessary time pressure on the Member States. And, while there have been considerable delays, the plans do not take effect until 2021, which means that all Member States (bar the UK) have, by now, a course of action in place. But are these plans adequate?

We will first take a brief look at the content of the draft NECPs before considering the final NECPs.

4.1.1. The Draft NECPs: Worth the Wait?

More significant than the delays, the draft NECPs[53] were generally deemed to be underwhelming in their ambition by both the EU and various NGOs,[54] with the aggregated contributions failing to meet the collective targets.

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[51] The UK submitted its draft NECP in line with its then current obligations as an EU Member State. However, as of September 2020, the UK had not submitted a final NECP, in breach of its obligations set out in the Withdrawal Agreement. While the UK formally left the EU on 31 January 2020, according to the Withdrawal Agreement, in this respect it is still subject to EU law until 31 December 2020. The Commission has not, to date, taken any action against the UK for this failure. The UK has, in any case, indicated that it intends to pursue similar objectives, in parallel. But, what happens to their planned contribution to the collective targets? Will the Union be expected to absorb the gap, and Member States pick up accordingly? A Decision issued by the European Parliament and the Council on 19 March 2019 confirmed that targets will be revised upwards to account for the loss of the UK's contribution, which will be put into effect depending on the circumstances of their departure. The energy consumption targets have already been revised to reflect this, as noted in fn 24.

[52] See fn 51above.

[53] All of the plans can be accessed here: https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/governance-energy-union/national-energy-climate-plans

[54] Several NGOs issued reports on the draft NECPs, including CAN Europe, which can be found here: http://www.caneurope.org/docman/climate-energy-targets/3477-time-to-pick-up-the-pace-insights-into-the-

Table 1: A Selection of the Draft NECPs

Country	Renewable Energy Target	Renewable Electricity Target	Transport Fuel Target	Res Heating Target	Energy Efficiency Target
Austria	45-50%	100%	X	X	X
Bulgaria	25%	17%	14%	44%	27%
Hungary	20%	19.10%	15%	26.90%	8-10%
Ireland	23.7-27.7%	53.8-55%	9.30%	18.3 - 26.3%	24.7%-25.1%
Italy	30%	55.40%	21.6%	33%	-43% consumption of primary energy as compared to 2007 PRIMES scenario
Poland	21%	29.50%	15.50%	25.50%	23%
Portugal	47%	80%	20%	38%	35%
Romania	27.9%	39.60%	17.60%//	31.30%	-37.50%
Slovakia	18%	25%	14%	17.60%	X
Slovenia	27%	47.40%	10.10%	30.50%	X
Spain	42%	74%	22%iii	No pledge, - RES in residential buildings from 2,607 to 3123 ktoes; RES in industry from 1,721 to 2,585 ktoe.	39.60%
Sweden	65%	85%	46%	69%	X
Belgium	Federal: 18.3%	Federal: 40.4%	Federal: x	Federal: x	Federal: (12%-17%) - (22%-26%)
Denmark	55%	Expected above 100%	0.9% advanced biofuels blend	Expect 90% of district heating consumption based on energy sources other than coal, oil or gas by 2030	X
France	32%	40%	25% (with double counting)	38%	X
Germany	30%	65%	TBD	27%	TBD
Netherlands	27-35%	~ 66%	X	X	35%
Finland	50%	45%	30%	63%	X

While Member States such as Sweden, France, Portugal, Denmark, the Netherlands, and Finland each set long-term targets to reach net-zero emissions by 2045 or 2050 at the latest, a number of submissions from other Member States fell short of what was expected. Furthermore, several draft plans were either incomplete or incompatible with the EU-wide targets, such as those of Germany, France and Austria, while others were vague in their commitments, as with Poland, or the Member State merely complied with the minimum required - as was the case with Italy's draft plan - and did not fully engage with the call for an ambitious national strategy.

draft-national-energy-and-climate-plans/file and a further later report here http://www.caneurope.org/publications/reports-and-briefings/1847-new-report-on-draft-necps-progress-the-clock-is-tucking

Several Member States wholly failed to make any real gesture toward the targets. For example, Romania's increase in the share of renewables was set at 27.9% from the initial 25% while Slovakia set its target at 18% up from 14%. And, as noted in a report by Climate Action Network Europe,[55] in some cases, Member States marked the starting point of their projections at lower figures than the current rate. For example, Bulgaria set a renewable energy contribution of 25% by 2030 on the basis of a starting point in 2020-2021 of 16%, which was the mandated target for Bulgaria for 2020. This starting point is, however, lower than the 18.8% the country had already achieved by 2016.

Moreover, once again, the draft NECPs reflect the susceptibility of the process to national political circumstances. In the case of France, their efforts to increase funding for solar and wind, to reduce final energy consumption and increase the share from renewables was hampered by the Gilets Jaunes protests. Germany's draft plan was also wrangled through government in the midst of infighting over its coal phase-out. While late, Spain's submission was praised for its ambitious targets in renewables. Again, however, an imminent general election cast doubt on the stability of such a plan. While the ten-year plans are intended to provide a level of predictability, without legal certainty, it's questionable if they can fulfil this expectation in reality.

The Commission's country-specific responses to the draft NECPs were issued in June 2019 with a detailed report, factsheet, and series of recommendations issued to each Member State. This was followed by an overall assessment issued on 18 June 2019, which noted that the ambitions should be more far-reaching, that *"these targets are not ceilings but rather floors…"* (COM (2019) 285 final).[56] This sentiment was echoed by multiple environmental groups which noted that the 2030 targets and objectives are set at the minimal threshold and that the Member States should be setting far more ambitious targets. Despite myriad issues with the draft plans, the Commission's assessment took a positive tone, aiming for "*a continued spirit of collaboration"*, and noting that *"the Commission will work with Member States to help them take due account of the Recommendations in a spirit of solidarity between Member States and the Union but also among Member States."* According to the Commission's analysis, in all areas, the aggregated targets were below the level needed. For example, while roughly a third of Member States, including Spain, Lithuania, Portugal, and Denmark submitted ambitious plans to reach a greater share of renewable energy, overall the aggregated draft plans indicated the target of 32% would be closer to 30.4%. Similarly, according to the draft plans, the energy efficiency target of 32.5% was set to reach between 26.5% and 30.7%, while in the case of the target for GHG emissions reduction set at 40%, the aggregated results of the plans suggest it would be closer to a 28% reduction. Throughout, there was an unequal response from Member States to the targets.

While highlighting the areas for improvement, the Commission also outlined 'good practice examples'. For instance, the draft NECPs of Austria and Spain provided good examples of how to combine emission reduction objectives for the transport sector with the necessary policies and measures to achieve them, while they welcomed the coal phase-out plans of France, Ireland, and Italy.

With the ACCC having already issued a report on its concerns with respect to the regulation's shortcomings with respect to public participation, several NGOs further found that the draft NECPs did not comply with the terms of the convention. According to PlanUp's findings,[57] France, Germany, and Portugal failed to involve multiple stakeholders, including the general public in the drafting of their NECPs. Spain and Sweden did not make timelines for the consultations publicly available, so citizens and stakeholders did not receive enough notice or the relevant information to contribute to the consultation process. In the case of Italy, only very limited groups of stakeholders were involved in the consultation process. And, finally, in the draft NECPs of Italy, Germany and Sweden, there was no indication of a multilevel dialogue or any form of a broader, open dialogue with multiple stakeholders.

[55] See fn above on their report 'Time to Pick Up the Pace' from April 2019.
[56] Accessible here: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52019DC0285
[57] Accessible here: https://www.planup.eu/en/resources

On 28 May 2019, the ACCC issued advice[58] to the Member States on the public consultation process for the final NECPs, advising that Member States make sure that:

- arrangements are transparent and fair;
- the necessary information is provided to the public;
- the requirements of the Article 6(3), (4) and (8) of the Aarhus Convention are met with reasonable timeframes, and ensure that due account is taken of the outcomes of public participation;
- all options considered at the time of the preparation of the draft 2021-2030 NECPs are open at the time of the public participation procedure.

The repercussions of poor public engagement would be significant for several reasons. First and foremost, public participation is key to advancing societal buy-in of the transition, which is especially relevant in the context of such a governance framework which, without binding national targets, relies on public acceptance and public pressure at national level to reach climate neutrality. It is also essential to capture the wealth of information available in order to develop solid and coherent plans.

Were the shortcomings of the draft NECPs a first sign of what may become a wider issue with the mechanism, or can it be considered a false start? It could also be argued that the draft NECPs functioned as expected, as working drafts, and that given the nature of such a task, it was inevitable that there would be failings – something which the regulation accounts for by having such a process. In any case, the often vague and incomplete descriptions of policies and measures risk the financing and investment opportunities such plans were intended to support.

4.1.2. The Final NECPs: Any Better?

Following significant delays in the submission of the final NECPs, on 17 September 2020, the Commission issued an EU-wide assessment of the final NECPs[59] on the basis of the submissions of the 27 Member States (without a submission from the UK).[60] The Commission is due to publish an in-depth assessment of each individual NECP in October 2020 together with the State of the Energy Union report, including country-specific guidance on how Member States can make further progress in implementing the plans and an assessment of how each Member State took account of the recommendations issued to their draft NECP.

In the meantime, what was the overall assessment?

The assessment is largely positive in tone and notes a significant increase in the level of ambition of the plans compared to the draft versions, especially in the key areas of GHG emissions reductions and renewables targets. Under existing and planned measures, the level of GHG emissions would decrease by 41% in the current EU target scope, excluding the LULUCF sink. The plans indicate that almost all Member States are phasing out coal or have set a phase-out date.[61] The use of coal is projected to decrease by 70% compared to 2015, with renewable electricity set to reach 60% of electricity produced by 2030. The assessment also shows that the share of renewable energy could reach a range of 33.1-33.7% by 2030 at Union level under existing and planned measures, going well beyond the current 2030 target of at least a 32% share of renewable energy. However, when it comes to energy

[58] Accessible here: https://www.unece.org/fileadmin/DAM/env/pp/compliance/Requests_from_the_MOP/ACCC-M-2017-3_European_Union/Advice_to_Party_concerned/M3_EU_advice_to_the_Party_concerned_28.05.2019_final.pdf

[59] COM(2020) 564 final, accessible here: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=COM:2020:564:FIN&from=EN

[60] See fn 51 with respect to the UK's NECP.

[61] Only Poland, Croatia, Romania and Bulgaria have not planned to phase out coal yet.

efficiency, an ambition gap for 2030 remains. While better than the draft plans, the gap still stands at 2.8 percentage points for primary energy consumption and 3.1 percentage points for final energy consumption, compared to the target to increase energy efficiency by at least 32.5% by 2030. Additionally, the assessment notes that the plans do not detail with sufficient precision issues related to investment needs, mobilising funding, research and innovation, competitiveness, regional cooperation, LULUCF, a just transition, or energy poverty. Furthermore, the Commission calls for greater efforts from the Member States to phase out fossil fuel subsidies. In each of these areas, recommendations from the Commission were not fully taken into account. The assessment states that the plans were *"the outcome of wide consultation and participation at national and subnational level"*, but does not detail what measures were taken and what, if any, were not achieved with respect to public participation.

The assessment also suggests the next course of action for the Commission to address these gaps. For example, in the case of energy efficiency, it notes that "*the Commission plans to review and possibly revise the Energy Efficiency Directive and, if needed, specific targeted provisions of the Energy Performance of Buildings Directive."* Plus, overall, the report comments that; *"action at national level will be reinforced and complemented by further policy measures at EU level, to close the remaining gap and increase the ambition level."*

The report notes that; *"this first exercise shows that a well-designed governance framework matters for delivering a common effort at European level. Building on the existing framework centred around the NECPs, will nonetheless require adaptations to evolving needs and policy priorities under the Green Deal and the recovery and resilience plans. In its review by mid-2021 of the energy and climate legislation to reflect the increased greenhouse gas emissions reduction ambition for 2030, the Commission will also review the Governance Regulation and ensure that it remains fit for purpose."*

In section 4.3 below we will take a look at the EU Green Deal plans, some of the new measures which have recently been adopted as part of this, including revisions to the targets, and the implications for the Governance Regulation. However, before we turn to these new developments, we will take a brief further look at the governing tools of the regulation itself.

As illustrated by the draft and final NECPs, there are vulnerabilities to the Governance Regulation. At present, the Commission's power to enforce action or an appropriate level of ambition on the part of Member States is limited under the terms of the regulation. The functioning and viability of the regulation is also susceptible to the vagaries of national politics, and the regulation relies on a sense of collective duty on the part of Member States. In such a volatile political and now economic climate, can the regulation be deemed a reliable model? And would binding national targets be any more robust?

4.2. From Enforcer to Moderator? The 2020 v 2030 Governance Models

It is worth briefly considering how the current 2020 targets are faring.

While being binding at national level allows the Commission to take a heavy-handed approach and launch infringement proceedings should a Member State fall short of their obligations, there are also shortcomings to such a method. Any infringement procedure against a Member State can only occur after the deadline by which the targets were due to be met has passed, which does not fit with the urgency of the issue at hand and has led to a more 'hands-off' approach for the duration of the plan in terms of its scrutiny at EU level. For example, it was found that the recommendations issued to Member States by the Commission in the course of the implementation of the 2020 national obligations were often flouted without follow-up action.[62] It is possible that Member States will again

[62] For more on this notion, see Johnston, A., Van der Marel, E., 2016. 'How Binding are the EU's 'Binding' Renewables Targets?'. Cambridge Yearbook of European Legal Studies, 18, pp. 176-214

ignore recommendations for the duration of the NECPs. However, with this new model of governance, the Commission will be quickly alerted to it via the frequent reporting requirements and thus be in a position to take remedial action. In addition, a more penal approach by the EU would likely not sit well at national level in a climate of Euro-scepticism. Instead, the Governance Regulation flips the responsibility onto the shoulders of Member States and, in turn, allows Member States greater ownership over their national transition. Furthermore, the focus of the Governance Regulation is placed on the delivery mechanisms rather than simply the targets.

Formerly, Member States had limited responsibilities or incentives to coordinate with fellow Member States. And, crucially, did not have a full picture of each Member States' energy system or their future plans, which the NECPs now provide. The transparency of the plans and the more integrated system of targets facilitate cooperation and greater coherence of action between the Member States while simultaneously offering clearer signals to investors. The regulation also broadens the scope of energy and climate action well beyond the energy sector, taking a far more holistic approach than the 2020 targets allowed. Furthermore, the rigorous level of plan-making introduced by the Governance Regulation embeds a culture of plan-making at the national administrative level – an invaluable tool which, in the current circumstances, will also aid recovery plans at national and EU level.

The binding targets of 2020 required unanimity across the Member States in the legislative process, something which could not be achieved in determining the 2030 targets. However, this has in fact allowed the EU to be more ambitious in its collective targets, which are agreed through a qualified majority.

Unlike the 2020 targets which imposed a to-do list on the Member States, the Governance Regulation is more nuanced, acknowledging the different and unequal national contexts of each Member State – allowing for the realities of the different socio-economic structures and characteristics that are the starting point for the NECPs. The collective nature of the targets also allows the Member States to feed into their strong suit and cooperate and negotiate with fellow Member States accordingly, rather than the blanket approach to targets of the former model.

While the Governance Regulation allows for a degree of flexibility in terms of the way in which Member States overhaul their energy systems, as mentioned above, the level of scrutiny has been escalated and considerably tightened. Contrary to the expectation that non-binding targets would preserve a greater level of sovereignty for the Member States, the Commission is far more involved in each Member States affairs. As Ringel and Knodt argue, the Governance Regulation could be deemed a "hard" form of soft governance.[63] While not directly in conflict with Art. 194 TFEU, the course of a Member State's future energy mix is heavily directed, and with binding planning and reporting obligations deepening the dialogue between the Commission and the Member States, it could be called into question if the Member States still retain autonomy over their choice of energy mix. Furthermore, as opposed to the targets alone being used as a governing tool, the idea of the Energy Union as an entity has also piggybacked into existence on the notion of collective targets.

Given the urgency for action and the long-term nature of these goals, the Governance Regulation may be more effective in monitoring implementation, allowing for preventive and corrective actions to be taken throughout the duration of the plan and a greater degree of scrutiny. The frequency of these requirements and the resulting ongoing dialogue between the Commission and the Member States may produce better results. And, crucially, the close monitoring and transparency of the reporting also gives clearer signals to investors, which in turn allows the market to take over and support the transition.

Should the mechanism repeatedly fail to produce results, what will happen?

[63] Ringel, M., Knodt, M., 2017. 'The governance of the European Energy Union: Efficiency, effectiveness and acceptance of the Winter Package 2016'. Energy Policy 112, pp. 209-220.

As mentioned earlier, throughout the regulation, it is indicated that measures may be taken at Union level to resolve failings. However, aside from Art. 43 stating the Commission's power to adopt delegated acts, the regulation does not provide further detail as to what shape these measures may take. Together with the new agenda of the European Green Deal, several of the 2030 targets are expected to be revised upwards for 2023.[64] The European Commission has already proposed to increase the 2030 target for GHG emissions reduction to at least 55%[65] and significant further changes not only to the energy sector, but multiple related sectors are in the pipeline, underlining the determination of the EU to meet these goals. However, if the EU fails to reach the 2030 targets, what happens? Who is ultimately held accountable? Can the EU be held to task?

It may be that private enforcement of environmental and climate law will be bolstered by the transparency of the planning, reporting and consultation obligations of the regulation. With this information publicly available, it may indirectly pave the way for private enforcement. It may be worth noting a landmark case from 2015, *Urgenda Foundation v. The State of the Netherlands*, in which a Dutch environmental group along with 900 Dutch citizens successfully sued the Dutch government for its failure to take sufficient action to curb global climate change. The court in the Hague ruled that the Dutch state's efforts to reduce emissions by 17% was insufficient to meet the state's fair contribution toward the UN's goal on global temperature. The lower court's ruling was confirmed by the Supreme Court in Dec 2019.[66]

In another important ruling, on 31 July 2020, the Supreme Court of Ireland ruled in favour of an Irish advocacy group, Friends of the Irish Environment, in a case they brought against the government of Ireland, *Friends of the Irish Environment v Government of Ireland*, for the failings of the government's National Mitigation Plan, the centrepiece of the Irish government's climate mitigation policy. The court determined that the plan was unlawful and should be quashed, as it failed to comply with the requirements of Ireland's Climate Action and Low Carbon Development Act of 2015. The plan failed to adequately specify the manner in which it would achieve the national transition objective to *"transition to a low carbon, climate resilient, and economically sustainable economy"* by 2050, as defined in the 2015 Act. In its ruling, the Supreme Court provided guidance on the level of detail required of policy measures on climate action to ensure compliance. The Supreme Court determined that such a plan was subject to review by the courts, with Chief Justice Frank Clarke observing that *"what might once have been policy has become law by virtue of the enactment of the 2015 Act."*

Could these cases be a precursor to similar actions stemming from the 2030 targets? The high level of transparency in the Governance Regulation will likely also produce a kind of public 'naming and shaming' of underperforming Member States and may be a key tool in encouraging action, especially given the current level of public interest. Furthermore, as discussed earlier, the principle of solidarity could also be drawn upon as a legal criterion and not just a political statement, thus counterbalancing the Member States' right to determine its own energy mix. Could one Member State take action against another deemed to be violating the principle of solidarity? While counter to the ethos of the regulation, it may be a course of action, should some Member States continually fail to make a meaningful contribution to the targets. It is already evident from the NECPs that not all Member States intend to participate in an equal or fair way.

A further key shift from the 2020 governance model to that of the Governance Regulation stems from the 'bottom-up' approach of this new model. While the regulation invites a multi-level dialogue on the implementation of energy and climate action, there are a multitude of informal coordination mechanisms that exist in parallel which are implicitly affected by the regulation. The regulation does

[64] These revisions were initially expected in September 2020, however it is likely there may be some delays to this owing to the coronavirus crisis. We have already seen an increase in the emissions reduction target.
[65] We will discuss this further below.
[66] For an English language version of this case see:
https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:HR:2019:2007

not detail or sufficiently account for the enormity of the task of mobilising the multi-level actors and poly-centric governance models that will be instrumental in ensuring effective action within the Member States and across regions. To cohere and coordinate action across the spectrum of players presents considerable challenges. Beyond putting forward a public discourse and publicly accessible information, the regulation does not provide a model to tackle this.

Perhaps to bridge this gap, as part of the European Green Deal, in March 2020 the Commission launched a public consultation, on the European Climate Pact, which aims to foster cooperation between national, regional and local authorities, businesses, unions, civil society organisations, research and innovation institutions, consumer groups and individuals in designing new climate action.

We will now turn to the European Green Deal plans, giving a brief overview of the main developments thus far before looking in more detail at one of its more controversial elements - the European Climate Law Proposal.

4.3. A New Horizon? The European Green Deal and COVID-19 Crisis

On 11 December 2019, the new von der Leyen Commission adopted its Communication on the European Green Deal,[67] a bold new growth strategy which, first and foremost, aims for the EU to reach zero net emissions of greenhouse gases by 2050. In the succeeding months a series of proposals of new strategies have been rolled out under the Green Deal, including a European Industrial Strategy, a Circular Economy Action Plan, a Farm-to-Fork Strategy, an EU Biodiversity Strategy for 2030, as well as new strategies for energy system integration and hydrogen. In the following sections we will take a closer look at some of the recent developments with respect to the proposed financial frameworks and support mechanisms for the transition, the European Climate Law proposal, and the steps ahead in light of the coronavirus crisis.

4.3.1. Money Matters

Among the new proposals rolled out as part of the EU Green Deal, on 14 January 2020, the Commission launched the European Green Deal Investment Plan and the Just Transition Mechanism, which will be the investment pillar of the Green Deal. In an effort to “leave no one behind”, the funding plan aims to support the realisation of the European Green Deal through a series of targeted funding and enabling programmes.

The Just Transition Mechanism will provide financial support to the regions most affected by the socio-economic impact of the transition. At least €150 billion for the period 2021–2027 is expected to be directed toward this cause. Within this, there will be a new Just Transition Fund, which will broadly support economic diversification, clean energy, as well as environmental rehabilitation and an overhaul of carbon-intensive infrastructures; a dedicated investment scheme, InvestEU, which aims to attract private investments; and a public sector loan facility supported by the EIB. However, what will the fund mean for the Member States not contributing to the targets? Will they be given equal access? Some Member States expected to receive significant funding from the schemes, such as Poland, have signalled their plans to continue to invest in coal, for example. In effect, could these funds inadvertently ‘reward’ Member States for ‘bad behaviour’ or should this be viewed as part and parcel of the transition? Is it a fair way forward or will it enable some Member States to slack on their targets and still be compensated?

Despite the unfolding economic crisis, the EU has, thus far, been determined to align the changing outlook with the transition to a low carbon future. On 21 July 2020, EU leaders agreed to an overall EU budget of €1824.3 billion for the period 2021-2027, composed of a multiannual financial framework of €1074.3 billion and a special recovery package known as Next Generation EU of €750 billion to help the EU rebuild after the COVID-19 pandemic in line with the green and digital transitions.

[67] COM(2019) 640 final, Brussels, 11.12.2019

In her first State of the Union address, on 16 September 2020, President of the European Commission Ursula von der Leyen promised that 37% of Next Generation EU's funds would be spent directly on European Green Deal objectives and that 30% of the budget would be raised through green bonds.

On 4 March 2020, as part of the European Green Deal, the Commission launched the creation of a Carbon Border Adjustment Mechanism (CBAM)[68] to reduce the risk of carbon leakage. The aim of the mechanism is that the price of imports would reflect more accurately their carbon content to ensure that the EU's green objectives are not undermined by production relocated to countries with less ambitious climate policies. It follows from this that the CBAM would tax companies that heavily pollute outside of the EU single market at a level that is at least commensurate with the tax applied within the EU. These plans sit alongside a revision of the Energy Taxation Directive, which aims to modernise the directive and align it with environmental objectives by restructuring energy taxation and reducing fossil fuel subsidies. On 22 July 2020, the Commission opened public consultations for each of these initiatives.

The Inception Impact Assesment Report for the CBAM puts forth a few possible policy instruments to prevent carbon leakage: a carbon tax on selected products - both imported and domestic products; an extension of the EU ETS to include imports; or a new carbon customs duty or tax of imports applicable at EU level. The report argues for the measures to be first introduced on select energy-intensive sectors where carbon leakage is highest.

With each of these options, the Commission needs to contend with the validity of the measure under WTO rules, as well as a corresponding revision of the Energy Taxation Directive to admit the introduction of a carbon tax and a revision of the existing EU ETS scheme. The most challenging element of such a proposal may lie in compliance with WTO rules, which not only require that a tax must be applied on a product, not a process, but also that a tax must be levied and impose an equivalent burden on the products that are produced domestically as those imported from abroad. The tax cannot impose an undue burden on the foreign-derived product, under the penalty of being classified as a discriminatory measure under the General Agreement on Trade and Tariffs of the WTO rules. In other words, there must be equal treatment of similar products and no discrimination between domestic and foreign producers. Therefore, an equivalent tax ought to be applied on a like-domestic product. This suggests that the import levy may be matched by a carbon tax on all goods, including those produced in the EU, though such a move could hamper the competitiveness of EU products abroad.

While the development of the proposal is still in its infancy, the first sign of the plans suggest such a mechanism could have radical implications for the EU and global market. Is it feasible? Unlike most EU decisions which are decided by a majority, an EU-wide tax would require unanimous backing by all EU Member States, which has often scuppered previous attempts to introduce EU-wide levies. If the taxation were to be two-way, in compliance with WTO rules, it would have a serious impact on the same Member States that have thus far been less willing to contribute to the energy transition efforts while handing a competitive advantage to those that have already invested in energy efficiencies and eco-friendly production. Nevertheless, in her State of the Union Address, Ursula von der Leyen re-affirmed her pledge to introduce such a mechanism; *"this Carbon Border Adjustment Mechanism should motivate foreign producers and EU importers to reduce their carbon emissions, while ensuring that we level the playing field in a WTO-compatible way."*[69]

In von der Leyen's same speech, she also announced that the EU would escalate its near-term efforts to reach climate neutrality by 2050, proposing that the EU should cut greenhouse gas emissions by

[68] The Commission published, in March 2020, an Inception Impact Assessment Report, accessible here: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12228-Carbon-Border-Adjustment-Mechanism

[69] Accessible here: https://ec.europa.eu/info/strategy/strategic-planning/state-union-addresses/state-union-2020_en

"at least" 55% by 2030 compared to 1990 levels, formally setting the new target for the European Climate Law. We will now turn to this proposal.

4.3.2. The European Climate Law Proposal

On 4 March 2020, the Commission adopted a legislative proposal for a European Climate Law Regulation,[70] as part of the European Green Deal strategy. The proposal aims to strengthen measures toward reaching climate neutrality in the EU by 2050 and thus puts forth amendments to the Governance Regulation. This initial proposal was followed, on 17 September 2020, by the 2030 Climate Target Plan,[71] a package composed of a Communication 'Stepping up Europe's 2030 Climate Ambition', an accompanying Impact Assessment, an EU-wide assessment of the NECPs, and an amended proposal on the initial draft European Climate Law to set the new EU-wide net greenhouse emissions reduction target of at least 55% by 2030, compared to 1990 levels.

In the detailed Impact Assessment[72] (which followed an Inception Impact Assessment)[73] of which the climate law is the centrepiece, it notes that *"climate change is a trans-boundary problem. For trans-boundary problems, individual action is unlikely to lead to optimal outcomes. Instead, coordinated EU action can effectively supplement and reinforce national and local action. Coordination at the European level enhances climate action, and EU action is thus justified on grounds of subsidiarity in line with Article 191 of the Treaty on the Functioning of the European Union."* Similarly, the Inception Impact Assessment noted that *"action at the EU level is therefore indispensable and coordinated EU policies have a much bigger chance of leading to a true transformation, particularly in light of the global dimension of the challenge, while taking into account different capabilities to act among Member States and the EU single market as a strong driver for cost-efficient change and upward convergence."* The Communication anticipates that the revised target will require further revised policy measures, which will be adopted by the Commission by June 2021.

The legal basis for the proposals are Articles 191 to 193 of the TFEU which confirm EU competence in the area of climate change, *"the European Union shall contribute to the pursuit, inter alia, of the following objectives: preserving, protecting and improving the quality of the environment, promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change."* Note that energy legislation, including the CEP, takes a different legal basis – Art. 194. Unlike this latter article, Articles 191-4 do not defer to a Member States' right to determine its own energy mix.

The proposed European Climate Law intends to enshrine the pledge to climate neutrality in EU law, in the form of a regulation. Importantly, while a review of the Governance Regulation will take place to assess whether it is still deemed fit for purpose, the draft climate law is intended to fit within the

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[70] The initial proposal, COM(2020) 80 final Proposal for a Regulation of the European Parliament and of the Council establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law) can be found here: https://ec.europa.eu/info/sites/info/files/commission-proposal-regulation-european-climate-law-march-2020_en.pdf. The amended proposal, COM(2020) 563 final Amended proposal for a Regulation of the European Parliament and of the Council on establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law) can be found here: https://ec.europa.eu/clima/sites/clima/files/eu-climate-action/docs/prop_reg_ecl_en.pdf

[71] Accessible here: https://ec.europa.eu/clima/policies/eu-climate-action/2030_ctp_en#:~:text=The%20Commission's%20proposal%20to%20cut,becoming%20climate%20neutral%20by%202050%20.

[72] The Inception Impact Assessment is accessibe here: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12265-2030-Climate-Target-Plan and the full Impact Assessment is accessible here: https://ec.europa.eu/clima/sites/clima/files/eu-climate-action/docs/impact_en.pdf

[73] In preparation of the 2030 Climate Target Plan, the Commission carried out a public consultation from 31 March to 23 June 2020, receiving more than 4000 replies from a wide range of stakeholders. An accompanying synopsis report summarises the consultation activities on the plan.

framework established by the Governance Regulation and should be aligned with its reporting and monitoring mechanisms. The Climate Law proposals do not introduce binding national obligations on the 2030 targets, and the 2050 objective of climate neutrality remains binding at Union-level only. There are few changes to the amended proposal, with the exception of setting the target.

However, some criticisms have been levelled at the addition of 'removals' to the amended proposal in case it is a potential get-out clause, as in the following line *"by 2030 greenhouse gas emissions should be reduced and removals enhanced, so that net greenhouse gas emissions,* ***that is emissions after deduction of removals are reduced economy-wide and domestically****, by at least 55% by 2030 compared to 1990 levels."* In the first draft proposal, no mention of removals in this context were made. In place of that line, the Commission had promised to *"explore options for a new 2030 target of 50 to 55%."* The suggestion is that the 2050 net-zero target would be met via carbon sinks. However, the current 2030 target of 40% emissions reduction compared to 1990 levels does not include offsets. Is the new target thus less ambitious than it appears and more a case of creative accounting? The Commission has responded to the criticisms to state that the baseline for 1990 is also being adjusted retrospectively, meaning there would be no "free" emissions reductions.

Perhaps the most significant, and controversial, feature of both versions of the proposal is the Commission's intention to use delegated acts to raise mandatory targets every five years from 2030.

What are Delegated Acts?

Delegated acts are legally binding acts adopted by the Commission on the basis of a delegation granted in the text of an EU law to supplement or amend non-essential parts of EU legislative acts in order, for example, to define detailed measures. The Commission's power to adopt delegated acts is subject to strict limits. The delegated act cannot change the essential elements of the law; the legislative act must define the objectives, content, scope and duration of the delegation of power; and the EU Parliament and Council may revoke the delegation or express objections to the delegated act.

According to Art. 290(1) TFEU *"a legislative act may delegate to the Commission the power to adopt non-legislative acts of general application to supplement or amend certain non-essential elements of the legislative act."* Essential elements are considered as the rules which are essential to the subject matter envisaged.

Delegated acts are adopted following a consultation with expert groups composed of representatives from each EU country. It is important to note that while the Commission will actively seek out the advice of experts from Member States, these experts have a consultative rather than an formal role in the decision-making process. Ordinarily, over the course of four weeks, citizens and stakeholders can provide feedback on the draft text of a delegated act. Once the Commission has adopted the act, the EU Parliament and Council generally have two months to formulate any objections. If they do not, the delegated act enters into force. Adopted acts contain an 'explanatory memorandum' summarising the feeback received and how it was used.

The initial proposals were met with mixed opinions, and Member States have been split on the proposals. According to the opinion of the European Parliament's Legal Service from 31 March 2020 on the legality of the use of the delegated acts by the European Commission, issued as a non-paper, the proposal of the Commission goes beyond its competences. The opinion stated that *"the Union's emission reduction targets are indisputably elements which are "essential" to the Union policy on fighting climate change and therefore cannot be a subject to delegated acts".* Further, it states "*It is submitted that the trajectory for achieving climate-neutrality by 2050 is an essential element of the proposal for a Regulation on the European Climate Law and delegating the power to the Commission to set out that trajectory is not in line with Article 290 TFEU*." Given that the Commission's recourse to delegated acts will substantially limit the powers of the European Parliament, as well as the Member

States, this opinion will likely go toward maintaining a certain status quo in the process of "creating" further EU energy and climate policy.

But is the use of delegated acts reasonable? Is the Commission overstepping its mark or is it a necessary way forward?

There are many merits to delegated acts, especially in the context of such a time-sensitive issue. Using delegated acts is more efficient and avoids the risk of time-consuming institutional bargaining or one Member State holding another hostage in the process. Furthermore, there is still democratic oversight - the European Parliament is not entirely side-lined. As mentioned above and outlined in Art. 9 of the proposed law, the European Parliament or Council can object to the delegated act or revoke the delegation of power entirely. There is also the stated consultation process with national experts.

There have also been calls by NGOs for an access to justice provision to be added to the draft amendments to the Governance Regulation, in order to allow for challenges to the EU and Member States should the NECPs and LTSs be deemed inadequate. Articles 5 and 6 of the draft legislation state that the Commission shall adopt relevant measures if the level of ambition is insufficient to reach the targets. However, the assessments of the Commission would not be legally binding, which means they cannot be challenged. What happens if the Commission fails to adopt the "*necessary measures in accordance with the Treaties*" to rectify these failings? According to Art. 263 TFEU, individuals and NGOs do not have standing to directly challenge acts or omissions before the Court of Justice unless they are the addressees of the measure in question. NGOs must therefore rely on the Aarhus Regulation, which allows them to request a review of the act or omission by an EU institution to adopt an administrative act of individual scope. In the case of a climate law, it would be difficult to demonstrate that the act to be adopted would be of individual scope. There have thus been calls for this barrier to be removed by adding an access to justice provision and for amendments to be made to the Aarhus Regulation.

It remains to be seen how the draft proposals will develop through the legislative process.

Much of the initial controversy surrounding these proposals has since been drowned out by the extraordinary circumstances of the coronavirus crisis, and the unprecedented socio-economic and behavioural upheaval which is threatening to impose a new order and, very likely, a new rulebook for energy and climate action.

4.3.3. The Next Steps

On 19 March 2020, with further amendments on 3 April 2020 and 8 May 2020, the Commission introduced an emergency state aid framework,[74] which relaxes state aid controls to help Member States mitigate the effects of the unfolding economic crisis in the face of disruptions to supply chains, radically low consumer demands, the uncertainty of investment plans and the negative impact of liquidity constraints. The framework is set to be in place until December 2020.

Will the relaxation of the state aid framework have an impact on these targets? Are the targets still deliverable? When the current Energy and Environmental Guidelines are revised in 2021, might stricter conditions be introduced - enforced through the mechanisms of state aid clearance - in order to meet the Green Deal ambitions?

COP26 has already been postponed to 2021 and, inevitably, some European Green Deal plans have been delayed. The national plans required of the regulation were drawn up in a very different economic context. Are they still relevant and still achievable? Will energy and climate action be deprioritised by Member States? Many of the assumptions laid out in the plans will, of course, now be wrong or outdated. However, the Commission has made clear moves to support Member States in

[74] https://ec.europa.eu/competition/state_aid/what_is_new/covid_19.html

deploying their NECPs and has explicitly linked the transition with the recovery package. The continued roll-out of EU strategies and proposals in recent months has further underlined the EU's determination to drive the transition forward despite the setbacks of the pandemic. On 16 September, in her State of the Union Address,[75] Ursula von der Leyen reaffirmed the EU's pledge to reach climate neutrality, promising that "*by next summer, we will revise all of our climate and energy legislation to make it "fit for 55*."" As the EU mobilises support measures and financial aid packages, what will be the impact of the crisis on the financing of the green transition, the NECPs of Member States or on EU energy governance? Can there be a fair and equitable transition to a low-carbon Europe in such circumstances? Could this paradigm shift open the door to an entirely new approach to energy and climate action?

[75] Accessible here: https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_20_1655

Chapter 2: The New Framework for Renewable Energy in the EU

By Athir Nouicer, Jana Nysten and Dörte Fouquet

1. Background

One of the essential aims of the Clean Energy Package (CEP) is to enhance the use of renewable energy sources (RES). The revised Renewable Energy Directive (EU) 2018/2001, commonly known as RED II, presents provisions to adapt the post-2020 renewable energy framework to the 2030 perspective. RED II was published in the Official Journal of the European Union (EU) on 21 December 2018, with the requirement that all elements are fully transposed into national laws by 30 June 2021, at which point the original directive on renewables will be repealed. RED II closely interlinks with the other legislative texts of the CEP. For instance, from the Governance Regulation perspective, it links with the National Energy and Climate Plans, the gap-filling mechanisms and the RES financing mechanisms. From the Electricity Regulation (EU) 2019/943 on the internal market for electricity and the Electricity Directive (EU) 2019/944 on common rules for the internal market perspective, it connects with the new provisions organising short-term markets (balancing and intraday), dispatch and balancing rules as well as self-consumption and consumers' intermediaries. In terms of the Energy Efficiency Directive, it links with the energy savings obligations. Finally, it also bridges with the Connecting Europe Facility framework for RES cross-border projects and infrastructure. This interrelated framework aims at reaching the EU-level binding renewables target cost-effectively and at making Europe the world's number one in renewables.

RED II promotes the use of renewable forms of energy upon several sectors to achieve the 32% EU-level binding renewables target. In this chapter, we will start first by presenting the provisions which have been designed to reach the EU binding target on time. Second, we will introduce the provisions enabling the deployment of RES in the electricity sector. Third, we will detail the rules empowering and informing consumers. Fourth, we will highlight the measures which intend to standardise renewables in the heating and cooling sectors. Fifth, we will focus on the RED II provisions on the decarbonisation of the transport sector. Finally, we will present the measures which aim to strengthen the EU sustainability criteria.

2. Binding Overall Union Target For 2030

In this part, we start by presenting the 2020 national targets, and the progress achieved so far by the Member States. Second, we introduce the measures brought in by the 2030 Energy and Climate framework. Finally, we list the specific rules related to the revised binding EU target of at least 32% from the CEP.

2.1. The 2020 RES National Targets

Over the past decade, the EU's target was to achieve a 20% share of energy from RES by 2020 in final gross energy consumption. This was set by the Renewable Energy Directive (EU) 2009/28/EC, (RED I). RED I is a core element of the 2009 EU Climate and Energy Package, known as the 2020 Package, initially proposed by the European Commission in January 2008. The 20% is binding for all Member States together, meaning that 20% of the EU's final energy consumption should be from renewable sources. The binding aspect of this target aims to provide certainty for investors and to encourage the continuous development of technologies that generate energy from all types of RES. The 20% target translates into individual targets for each Member State based on fair allocation and accounting for their different starting points, i.e. the existing level of energy from RES and the Member States potential as well as the nature of the national energy mix. RED I also provides a set of rules for the calculation of the share of energy from RES in addition to the mechanisms that affect target calculation

and target compliance, such as statistical transfers and joint projects between the Member States and also third countries.

As mentioned, each Member State was given a target to achieve by 2020. For instance, Belgium had a 13% target, Denmark 30%, France 23%, Germany 18%, and Finland 38%. Annex I of RED I contains the full list of national targets for the share of energy from RES in final gross consumption of energy by 2020. The Member States had to set out how they planned to reach their national targets in their National Renewable Energy Action Plans (NREAPs), as stated in Art. 4 of the RED I. NREAPs had to follow a standard template considering the minimum requirements. They had to be notified to the Commission by 30 June 2010.[76]

The adopted NREAPs set out Member States' national sectoral targets for the share of energy consumed from RES in transport, electricity as well as heating and cooling by 2020.[77] They were to take account of other measures facilitating the achievement of national targets such as energy efficiency policies and cooperation between local, regional and national authorities. They also could include cost-benefit analyses relating to the required infrastructure investments. Member States were to report, biennially and for a total of six biennial progress reports, on their progress towards the 2020 targets (European Commission 2020). Member States submitted the first progress reports in 2011. The sixth and last report is to be submitted by 31 December 2021. These reports and other available data allow the Commission to measure the overall development of renewable energy in Europe and eventually identify the Member States lagging behind their obligation before 2020.

In 2018, renewable energy represented 18% of the energy consumed in the EU, suggesting it was on track to achieving the 2020 target of 20% (Eurostat 2020c). Twelve Member States had already reached, by 2018, their national 2020 binding targets. Four Member States are close to reaching their goal by less than 1%. The other Member States are further from their targets, with the Netherlands and France being the furthest being respectively 6.6% and 6.4% short of their targets as of 2018. Figure 5 gives an overview of the Member States' individual progress.

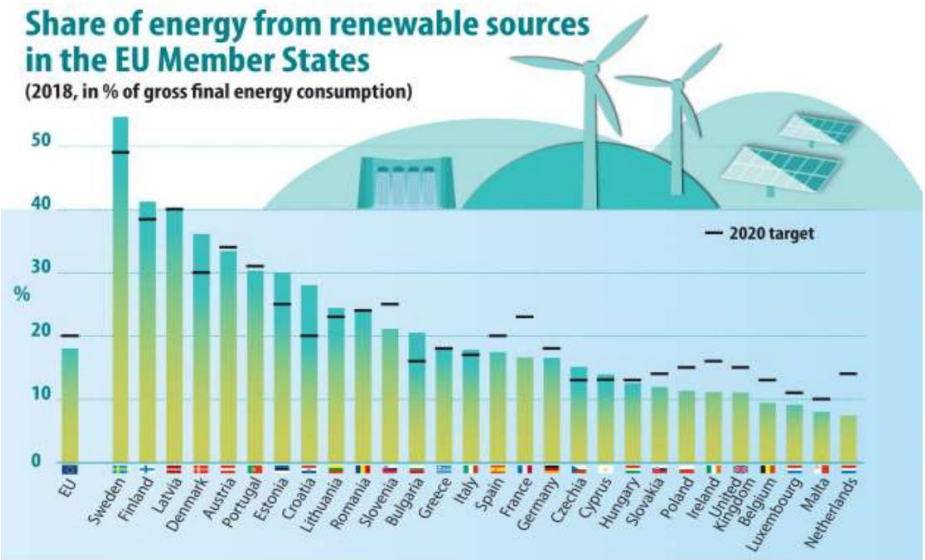


Figure 5: Share of renewable energy in the EU, 2018 data, source: Eurostat (2020c)

2.2. RES Targets in the 2030 Energy and Climate Framework

The 2030 Energy and Climate framework, introduced in Chapter 1, builds on the 2020 climate and energy package. It was political, i.e., entailing political commitments while not being directly enshrined

[76] The different Member States' NREAPs, as well as those of Iceland and Norway, can be found at European Commission (2014)

[77] Please note that the share in transport was foreseen to be the same for every Member State, as explained in 6.1

in any legislation. The framework is also in line with the longer-term perspective of the EU for the 2050 horizon.[78] However, in contrast to the 2020 package and its RED I, the targets are binding at EU level, and there are no binding targets for the individual Member States. They are free to set their objectives to reach the EU target for large industrial installations covered by the European Emissions Trading Scheme (EU ETS). Yet, for most non-ETS installations, such as transport, buildings, agriculture and waste, emissions were broken down into binding national targets by the Effort Sharing Decision. This flexibility for the Member States for individual targets, as provided by the 2030 Energy and Climate framework, is combined with a clear and transparent governance framework. This aims to ensure the achievement of the binding EU targets, as discussed in Chapter 1.

The European Commission (2016c) impact assessment for RED II states that the RED I has facilitated the achievement of the EU energy and climate objectives successfully. However, there are still some existing barriers to further unlock the RES potential. Indeed, there is a need for an integrated energy strategy at national and local levels. Targeted financing and supportive policies are to promote self-consumption and decentralised energy. Also, the heating and cooling, and the transport sectors need to rely less on fossil energy imports.

2.3. The Revised Binding EU RES Target of at least 32%

The RED II revises the EU targets for renewables and energy efficiency[79] upwards, in line with the 2030 Energy and Climate Framework, while the GHG target remains at 40%.[80] Art.3(1) of RED II states that *"Member States shall collectively ensure that the share of energy from renewable sources*[81] *in the Union's gross final consumption of energy in 2030 is at least 32%."* An upward revision is foreseen for 2023, subject to the Commission assessment of the EU level target and to the submission of a legislative proposal regarding such a revision.

RED II follows the 2030 Energy and Climate framework in setting collective, EU level binding targets as opposed to individual targets for each Member State. A key challenge is to ensure that the Member States contribute fairly and cost-effectively to meet the EU target of RES collectively. Member States are to set their national contribution in their integrated national energy and climate plans (NECPs), following the Governance Regulation (EU) 2018/1999 Art. 3 to 5 and Art. 9 to 14. A formula is provided in ANNEX II of the Governance Regulation to calculate the national contributions for the share of energy from RES in the gross final consumption of energy by 2030. If the Commission finds that the national contributions of Member States, as proposed in the NECPs, are insufficient to achieve the EU binding target, the procedure described in Art. 9 and 31 of the Governance Regulation is to be followed[82] (as discussed in Chapter 0). The national policies of Member States are also to include obligations related to mainstreaming RES in the transport sector.

The previously set RES national targets under RED I for 2020 should constitute the Member States' so-called minimum contributions to the new 2030 framework or a baseline to build upon the current framework. Recital 10 of RED II states that *"under no circumstances should the national shares of*

[78] Currently, there is no EU binding target for an emissions reduction for 2050. In November 2018, a vision for EU climate neutrality was set out by the European Commission (2018). This vision is at the heart of the European Green Deal and looks at all the key sectors for CO2 emissions reduction and the possible pathways for climate neutrality. It is in line with the Paris Agreement objective and covers EU policies in related areas.

[79] The energy efficiency target was revised upwards to 32.5%, also with a possible upward revision by 2023.

[80] As part of the Green Deal Roamap, European Commission (2019) announced that it will present a comprehensive plan to increase the EU's goal to at least 50% and towards 55% by 2030, in a responsible way. In September 2020, the Commission adopted a proposal to raise the 2030 GHG emission reduction target, including emissions and removals, to at least 55% compared to 1990.

[81] Energy from renewable sources or renewable energy means, according to Art. 2(1) of RED II, *"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."*

[82] The Commission, following Art. 31(1) of the Governance Regulation, *"shall — as regards the Union's target for renewable energy — and may — as regards the other Energy Union objectives — issue recommendations to Member States whose contributions it deems insufficient to increase their ambition in order to ensure a sufficient level of collective ambition."*

renewable energy fall below those contributions." Thus, Member States are not allowed to go below the national 2020 targets starting from 2021, following Art. 3(4) of RED II. They are to adopt the necessary measures to comply with the baseline share. When a Member State does not maintain its baseline RES share as measured over any one-year period, then the Member State is to take additional measures,[83] as stated in Art. 32(3) of the Governance Regulation. When a Member State fulfils the obligations to cover the gap to the baseline through these specific measures, the Member State is to be considered in compliance with its baseline obligations.

A high level of ambition from the Member States is to be supported by the Commission, including through the greater use of EU funds. It shall be provided, among other things, for RES capital cost reduction, RES integration and system flexibility, the development of grid infrastructure, smart grids storage and interconnections.[84] The Commission shall also facilitate a greater level of regional cooperation between Member States and between Member State and third countries for joint projects and joint RES support schemes.

Highlights

- The overall EU target for RES in gross final consumption by 2030 has been set at 32%.
- Member States are to set their national contribution in their integrated national energy and climate plans (NECPs), following the Governance Regulation (EU) 2018/1999.
- RES national targets under RED I for 2020 should constitute the Member States' minimum contributions to the new 2030 framework.
- If a Member State goes below its baseline share over a 12-month period, it should take additional measures to regain that baseline share.

3. Enabling Renewables in the Electricity Sector

In this section, we show first the background to RES support schemes and cooperation mechanisms. Second, we list the RED II provisions on RES support schemes. Third, we introduce the RED II measures that aim to promote the use of cooperation mechanisms between Member States. Finally, we present the provisions which simplify the administrative procedures and permit-granting processes.

3.1. Background to RES Support Schemes and Cooperation Mechanisms

To achieve their national binding RES targets established by RED I, Member States had to present their strategies in their NREAPs. This includes policies, the related rules regarding participation, administration, as well as the type(s) of support scheme. RED I also aimed to facilitate cross-border support of RES without prejudice to national support schemes. For instance, it introduced optional cooperation mechanisms.

The different Member States opted for a mix of renewable energy support policies, which can be divided into RES support schemes and secondary support tools such as investment grants and tax incentives. They are to follow the European Commission (2013) guidance for the design of renewables support schemes. The guidance suggests, for instance, that support schemes should provide certainty for investors by avoiding retroactive or sudden changes. They should also be limited to what is necessary as RES support. Besides, they shall be flexible and follow the falling technology costs[85]. They

[83] The additional measures of Art. 32(3) of the Governance Regulation are with regard to national measures to increase RES deployment, adjusting the renewable energy share in the heating and cooling and transport sectors, voluntary financial contribution to the EU renewable energy financing mechanism set up at Union level, and using cooperation mechanisms set in RED II and presented in section 3.3 of Chapter 2..

[84] In 2014, the European Council called for a 15% electricity interconnection target by 2030. This aims to increase the integration level among national electricity systems (European Council 2014).

[85] An example is that Feed-in premiums shall replace Feed-in tariffs as technology matures. They provide market signals to producers. Regarding technology maturity, in Finland and Spain, the levelised cost of energy (LCOE) of large-scale solar power is lower than spot electricity prices since 2018 (Vartiainen et al. 2019).

are to be open to the RES potential of other countries via cooperation mechanisms. Also, Member States have progressively adapted their schemes to comply with the Guidelines on State Aid for Environmental Protection and Energy 2014-2020 (European Commission 2014b). Figure 6 points out four main support schemes that are used in the electricity sector in Europe:

• Feed-in tariffs (FiTs): renewable producers are remunerated with a fixed price per MWh for the electricity generated from RES. This remuneration is independent of the electricity market price.

• Feed-in premiums (FiPs): Under FiP, a premium is paid on top of electricity market prices. It could be a fixed or sliding premium. Under a fixed premium, renewable producers are paid a fixed amount per MWh. Under a sliding premium, the amount per MWh varies, typically monthly. It is calculated as the difference between a reference price, that could also be the existing FiT, administratively set, or resulting tender, and the average, technology-specific electricity market price which can be calculated ex-post based on historical electricity prices data.

• Tradable Green Certificates (GCs) or quota: Renewable producers receive a certain amount or level of certificates for their renewable produced electricity. Certificates can be traded separately from the generated electricity. Renewable producers can sell it to other market players that need to comply with the quota obligation and therefore receive an additional revenue on top of the market price.

• Investment grants: There is direct support to investment for renewable producers paid from public money.

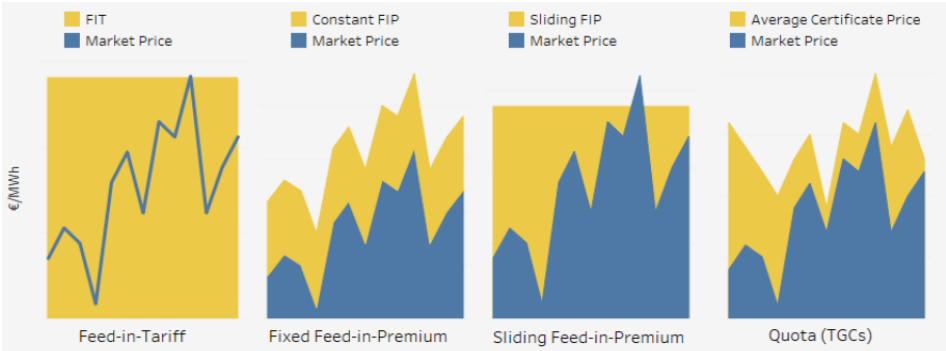


Figure 6: Schematic illustration of main support schemes for the promotion of renewables, source: BANJA et al. (2017)

The allocation of financial support in the form of a renewable support scheme can either be set administratively or through tendering procedures. The tenders can be designed in different ways. The most used ones are the static sealed-bid and the dynamic descending clock auction, or a combination of both (BANJA et al. 2017).

RED I has also set up three types of voluntary cooperation mechanisms that the Member States may adopt. They aim to enhance the use of RES potential in the EU and facilitate the achievement of the 2020 RES target. There are three main cooperation mechanisms set in RED I (European Commission 2014a);

- Statistical transfers: This is an accounting procedure where an RES amount is deducted from the RES target progress of one Member State and added to another one's progress. This cooperation mechanism aims to incentivise Member States to exceed their RES target, as they can be remunerated for energy transferred to the other Member States. It also allows Member States with less attractive RES potential and costs to meet their targets at lower costs.
- Joint projects: This refers to the case where two or more Member States or third countries co-fund a RES project in electricity or heating and cooling. They will then share the resulting renewable energy to meet their respective target. Physical transfer in these projects is possible but not mandatory. When a third country is involved, the resultant energy will count if there is actual energy generation and physical flow of energy into the EU impacting the amount of renewable energy consumed.

- Joint support schemes: This refers to the situation where two or more EU countries co-fund a joint support scheme to incentivise renewable energy deployment in one or both Member State territories. The support can be through common FiTs, FiPs or GCs.

These cooperation mechanisms have not been used to a significant extent by the Member States. The reasons range from administrative burdens to the political considerations of subsidising RES projects in other countries through taxpayers' money. Sweden and Norway have set a joint tradable green certificate support scheme (European Commission 2016e), with a mutual RES expansion goal for 2020 of a total 28.4 TWh. Statistical transfers exist from both Estonia and Lithuania towards Luxembourg since 2017. Germany and Denmark executed a pilot joint PV auction scheme in 2016.

Member States have opted for national RES schemes for target achievement for various reasons. Their use is expected to increase in the future as RES trajectories may become steeper for the 2030 RES target, particularly for the Member States who are the furthest away from their 2020 goals. Nevertheless, the continuation of the development of national RES support schemes would lead to less efficient RES deployment in the EU, as stated in the European Commission (2016c) impact assessment. It will also result in a concentration of RES investment in the Member States with the most attractive schemes. With this trend, electricity prices would increase by 25% in 2030 compared to 2010 levels.

The impact assessment also flags the administrative complexities as significant, based on the public consultations that have taken place with stakeholders. Examples are complex licensing procedures, fragmented or unclear responsibilities, institutional overlaps, etc. There are also differences in the administrative procedures across the Member States that undermine optimal RES development across the EU. The European Court of Auditors (2019) report on wind and solar power investments in the EU also highlights the lengthy administrative procedures that complicate the business environment for RES projects and, in particular, new wind projects. Additionally, the report points to restrictive spatial planning rules and grid insufficiencies. The Öko-Institut et al. (2017) study, prepared for the European Commission, summarises, in Figure 7, the different administrative barriers present across the Member States.

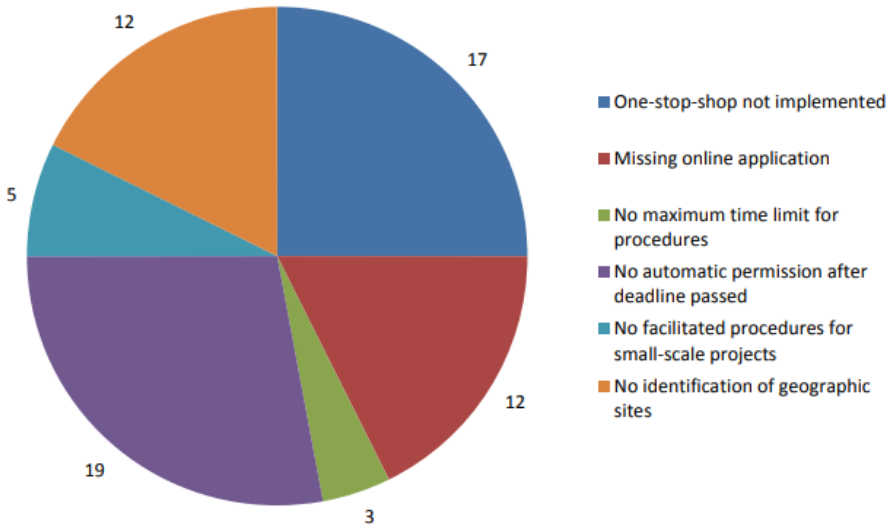


Figure 7: Administrative barriers present in the European Member States in 2014, source: Öko-Institut et al. (2017)

3.2. RED II Provisions on RES Support Schemes

A general statement for RES support schemes in RED II is that they are to be open, where applicable, for renewables self-consumers and their design shall also take into account the specificities of

renewable energy communities. The primary provision from RED II regarding these schemes is that they are to be market-based, i.e. granted through competitive processes. They are to be implemented in a non-distortive way about the functioning of electricity markets. Art. 4(2) of RED II states that *"support schemes for electricity from renewable sources shall provide incentives for the integration of electricity from renewable sources in the electricity market in a market-based and market-responsive way…".* Support schemes are to take into account possible system integration costs and grid stability, without causing unnecessary market distortions. They also have to provide financial security. The allocation of RES support shall be following long-term schedules published by the Member States, as stated in Art. 6(3). These schedules are to cover at least the following five years, or three in case of budgetary constraints. They shall include, for instance, the timing and the frequency of tenders, the expected capacity and budget and, if applicable, the eligible technologies. They are also to be updated annually, or in case of market developments. Member States are to guarantee that the level and conditions of the support schemes are not revised in a way that undermines the rights that have been conferred, as indicated in Art. 6(1). This aims to avoid past experiences like that of Spain in 2010, which broke the installed renewable capacity trend (Gallego-Castillo and Victoria 2015). Nevertheless, an adjustment is possible, if in accordance with objective criteria that were mentioned in the original design of the scheme.

In the presence of RES support schemes, renewable energy producers are to be responsive to market price signals and maximise their electricity market revenues. Thus Art. 4(3) discards direct support schemes that do not transmit market signals to renewable producers, like FiTs. Instead, RES support is to be granted in the form of a market premium, which could be, inter alia, sliding or fixed. However, Member States may exempt small-scale installations from this rule, without prejudice to the applicable Union law on the internal market for electricity. These installations have considerable benefits to increase public acceptance and renewable integration at local levels. Therefore, specific dispositions, among other things FiTs, may still be needed to ensure their profitability. The Guidelines on State aid for environmental protection and energy 2014-2020 define small-scale installations as *"installations with an installed electricity capacity of less than 500 kW or demonstration projects, except for electricity from wind energy where an installed electricity capacity of 3 MW or 3 generation units applies."* In January 2019, the European Commission announced its intention to prolong seven sets of the EU State aid rules[86] for two years, which would be otherwise expiring in 2020. The Commission also launched a "fitness check", involving internal analyses by the Commission and public consultation for the assessment of State aid rules including those seven sets. This will represent a basis for future decisions. Thus, the definition of a small-scale installation might change as the Electricity Regulation (EU) 2019/943 refers to them, context-specifically for priority dispatch provisions[87] and balancing responsibilities' exemptions, as *'power-generating facilities that use renewable energy sources and have an installed electricity capacity of less than 400 kW.*' This maximum capacity is to be limited to 200 kW as of 2026.

RED II sets out other EU high-level principles for support schemes. It aims to guarantee investors' certainty and visibility, moving away from Member States' short-term stop-and-go policies or retroactive actions on the rules of support schemes. Art. 4(4) states that the grating process of support schemes is to be in *'an open, transparent, competitive, non-discriminatory and cost-effective manner.'* An exemption is possible for small-scale installation and also in case of technology-specific schemes, ensuring regional diversification. For projects in the outermost regions and small islands, Member

[86] The seven sets are: General Block Exemption Regulation (GBER), De minimis Regulation, Guidelines on regional State aid, Guidelines on State aid to promote risk finance investments, Guidelines on State aid for environmental protection and energy, Guidelines on State aid for rescuing and restructuring, and Communication on important projects of common European interest.

[87] Market based dispatch regime for installations larger than 400/200 kW will make FiT for such installations impossible (Nysten 2020)

States can opt for financial support schemes to take into account the specific conditions of these regions.

A limitation of the tendering procedures is also possible, as stated in Art. 4(5), where suboptimal outcomes will result from the opening of this scheme in view of:

"(a) the long-term potential of a particular technology;

(b) the need to achieve diversification;

(c) grid integration costs;

(d) network constraints and grid stability;

(e) for biomass,[88] *the need to avoid distortions of raw materials markets."*

At the national level, Member States are to assess, at least every five years, the effectiveness of their support schemes, including their effects on consumer groups and investments, as indicated in Art. 6(4). The assessment is to consider the impacts of future changes in the schemes. The long-term planning of support schemes set out in Art. 6(3) shall also, in turn, take account of the assessment's results. Finally, Member States are to include the assessment in their NECPs, following the Governance Regulation (EU) 2018/1999.

At the EU level, a continuous reporting on the performance of tendered support schemes is foreseen by the Commission. Indeed, by 31 December 2021 and every three years thereafter, the Commission shall report to the EU Parliament and Council on the tendered support scheme performance. The reporting shall analyse, for instance, as stated in Art. 4(8), the role of support schemes in the matter of cost-reduction, technological improvement, high realisation rates, limiting climate impact, ensuring local acceptability, as well as preserving the security of supply and grid integration.

3.3. Cooperation Mechanisms Between the Member States

In this subsection, we present the RED II provisions for the opening of RES support schemes for electricity and their extension to other types of energy. We then introduce the rules related to statistical transfers and joint projects.

3.3.1. Opening of RES support schemes

The RED II encourages Member States to open RES support schemes in the framework of cooperation mechanisms. They are to contribute to reaching or exceeding Member States' contribution to the EU RES target while establishing a gradual and partial non-binding opening of these schemes to the cross-border participation of other Member States in the electricity sector. This coordinated approach aims to further 'Europeanise' renewable policies and set a more balanced integration of RES together with energy system cost reductions.

The Member States, following Art. 7 to 13 of RED II, shall have the right to decide on the level of their support to electricity from RES that is produced in another Member State. Yet, Member States may open participation in their support schemes to RES producers located in other Member States. When opening schemes to cross-border participation of RES producers, Member States, according to Art. 5(1), *"may provide that support for an indicative share of the newly-supported capacity, or of the budget allocated thereto, in each year is open to producers located in other Member States."* It adds that *"such indicative shares may, in each year, amount to at least 5% from 2023 to 2026 and at least 10% from 2027 to 2030, or, where lower, to the level of interconnectivity of the Member State concerned in any given year."* The Member States could organise pilot projects of cross-border support

[88] Biomass, according to Art. 2(24) of RED II, refers to *"the biodegradable fraction of products, waste and residues from biological origin from agriculture, including vegetal and animal substances, from forestry and related industries, including fisheries and aquaculture, as well as the biodegradable fraction of waste, including industrial and municipal waste of biological origin."* It can be used for instance in electricity generation, heating, and transport fuels.

schemes in order to acquire further implementation experience. It is also possible for the Member States, when opening support schemes, to demand proof of electricity of physical import, limiting consequently the participation in support schemes to RES producers located in the Member States with a direct connection. This is not to affect cross-zonal schedules and capacity allocation, according to Art. 5(2).

Furthermore, in case of such cross-border participation, the Member States shall agree on the underlying principles. This is to include at least the rules regarding the allocation of renewable electricity benefitting from cross-border support. The European Commission is to assist the Member States in setting cooperation arrangements, upon request. The assistance can cover the negotiation process of cooperation arrangements, cost and benefits analyses, including quantitative and qualitative data, as well as technical expertise. Art. 5(4) adds that the Commission may develop templates for cooperation agreements facilitating the process. By 2025, it shall assess the costs and benefits of the RES deployment pursuant to the opening of support schemes. In the meantime, and by 2023, the Commission shall evaluate the opening implementation, assessing the need to enforce the partial opening of support schemes *"with a view to a 5% opening by 2025 and a 10% opening by 2030,"* following Art. 5(5).

3.3.2. Joint RES support schemes for other types of energy

Following the principles under the RED I Directive, two or more Member States may also decide to jointly or partly coordinate their national support schemes, on a voluntary basis. This is not only for electricity from RES but also for other types of energy such as heating and cooling. It is to be without prejudice to the provision of Art. 5 on the opening of support schemes for electricity, presented in the previous subsection. In this case, a certain amount of energy from RES produced in one participating Member State territory may count within the RES share of the other participating Member State. According to Art. 13(1), this entails that Member States either make a statistical transfer of energy from RES according to Art. 8 of the RED II, or set up a distribution rule agreed between the participating Member States. This rule is to be notified to the Commission *"not later than three months after the end of the first year in which it takes effect."* After the notification and no later than three months after the end of each year, each concerned Member State *'shall issue a letter of notification stating the total amount of electricity or heating or cooling from renewable sources produced during the year which is to be the subject of the distribution rule.'* Similar to support schemes for electricity from RES, the Commission shall communicate best practices and guidelines, upon Member States' request, facilitating the establishment of joint RES schemes.

3.3.3. Statistical transfers

Member States may also opt for the statistical transfer cooperation mechanism. According to its definition, this translates into the transfer of a specified amount of energy from RES from one Member State to the other. Art. 8(1) states that this amount is to be deducted from the RES share of the Member State from which the energy is coming from and added to the one to which the energy is transferring.

Statistical transfers can also be set through the Union renewable development platform ('URDP'). The Commission shall establish the 'URDP', in accordance with Art. 8(2), to facilitate these transfers and also the achievement of RES targets.[89] Member States may voluntarily include in this platform their data on the contribution to the EU RES target. They may also include the amount they expect to fall short of or exceed and an indication on the price they would accept for statistical transfers from or to another Member State. Statistical transfers' prices shall then be set based on the URDP matching mechanism, on a case-by-case basis. They may have a duration of one or more calendar years. Information regarding the quantity and price of the energy shall be notified to the Commission or

[89] In order to establish the URDP and to determine the conditions for the finalisation of the transfers, the Commission is empowered to adopt delegated acts as stated in Art. 8(3) and in accordance with Art. 35 of RED II.

finalised on the URDP *"not later than 12 months after the end of each year in which they have effect,"* according to Art. 8(4). Once transfers are finalised on the URDP, the related information and parties involved shall be disclosed to the public.

3.3.4. Joint projects

Joint projects can be undertaken between the Member States or between the Member States and third countries, according to Art. 9 and Art. 11. Their effects are set out in Art. 10 and Art. 12, respectively. RED II did not bring fundamental changes with regard to what was stated by RED I. Art. 9 maintains the original provisions allowing Member States to cooperate on joint projects for electricity production, heating or cooling from RES. The cooperation may also involve private operators' participation. The duration of these projects may extend beyond 2030. The participating Member States are to notify the Commission on the proposed installation, the proportion or amount of the produced energy and towards which Member State target it counts. The facilitation role of the Commission set out in Art. 9(6), is a novelty of RED II, by which the Commission can, upon request from the concerned Member States, provide help through technical assistance and project development support.

The provisions on the effect of joint projects between the Member States did not change either (Art. 10). The Member States that have notified the Commission regarding joint projects in their territories shall issue a letter of notification to the Commission and to the Member States in whose favour the notification was made. This is to be done within three months of the end of each year of the period during which the energy produced from/by the joint project is accounted for another Member State.[90] The letter shall state the total amount of energy produced by the installation during that year and the amount of energy produced counting towards the RES share of another Member State. This amount will naturally be deducted in calculating the RES share from the country issuing the letter to the country receiving it, according to Art. 10(3).

Regarding joint projects between the Member States and third countries, there are also no significant changes with the RED II provisions, apart from a human rights clause added as a condition for the participation of third countries as well as the timelines of the construction of interconnectors. Art. 11(2) lists the different requirements that need to be fulfilled so that the electricity from RES is to be taken into account in the Member States' shares towards the fulfilling of their targets. Among these conditions, we find that when the electricity is produced in a third country, it must be *"a signatory to the Council of Europe Convention for the Protection of Human Rights and Fundamental Freedoms, or other international conventions or treaties on human rights."*

For electricity from RES produced and consumed in a third country, Member States may also apply to the Commission for that electricity to be accounted for. This has to be in the context of the construction of an interconnector with a very long-term arrangement or lead-time between a Member State and a third country. This has also to comply with the conditions set out in Art. 11(3). For instance, the construction of the interconnector has to start by 31 December 2026. In addition, it is not possible for the interconnector to be in operation by the end of 2030, while it is possible to be in operation by the end of 2032. Indeed, after becoming operational, the interconnector will be used to import electricity to the EU.

The amount or the proportion of electricity produced by any installation in a third country territory shall also be notified to the Commission. In case more than a single Member State is concerned, then the proportion of each Member State is to be communicated. The relevant bodies of the Energy Community are encouraged to take the necessary measures in order to allow the Contracting Parties to apply the RED II provisions on cooperation between the Member States, as stated in Art. 11(8).

[90] The letter is to be issued within three months of the end of each year.

The provisions on the effect of joint projects between the Member States and third countries did not change much either, as described in Art. 12. One change is with regard to the timeline of the notification letter submission that has to be *"within 12 months of the end of each year falling within the period"* during which the electricity is considered as counting for the RES share of the Member State. This share shall be stated in the letter as well as the total amount of electricity produced from RES installation during that year of the notification. Evidence of compliance with conditions of the joint projects between the Member States and third countries of Art. 11(2), including the human rights clause, is to be included.

3.4. Simplification of Administrative Procedures and Permit-Granting Processes

The RED II aims at further reducing administrative burden for RES producers, including consumers producing their own RES electricity and heat. Art. 16 of RED II includes provisions for the establishment of a "one-stop-shop" as well as a maximum time limit for the permit granting process, in a similar way to the TEN-E Regulation. This aims to simplify and harmonise the administrative procedures. Art. 16(1) states that *"Member States shall set up or designate one or more contact points"* for the organisation of the permit-granting process. These one-stop-shops are to guide the applicant and facilitate the permit application and granting process, upon request. Applicants are not to be required to contact other contact points during the process. Art. 16(1) adds that *"the permit-granting process shall cover the relevant administrative permits to build, repower and operate plants for the production of energy from renewable sources and assets necessary for their connection to the grid... ."* The contact point has to guide the applicant through all the procedures of the granting process in a transparent way, from the acknowledgement of the receipt of the application to the delivery of the decision outcome. Regarding online reachability, Art. 16(3) adds that *"the contact point shall make available a manual of procedures for developers of renewable energy production projects and shall provide that information also online, addressing distinctly also small-scale projects and renewables self-consumers projects. The online information shall indicate the contact point relevant to the applicant's application."* In the case of multiple contact points, the online information shall indicate the relevant contact point for the application.

The process of permit granting shall be limited in time. Art. 16(4) states that it *"shall not exceed two years for power plants, including all relevant procedures of competent authorities."* This period might be extended by up to one year, if *"duly justified on the grounds of extraordinary circumstances."* For small-scale installations, i.e. with an electrical capacity smaller than 150 kW, the permit-granting process is not to exceed one year. Procedures for dispute settlement regarding '*the permit-granting process and the issuance of permits to build and operate renewable energy plants'* shall be simple and easily accessible, according to Art. 16(5).

For existing installations, there is an increasing need for repowering[91] due to ageing installations and technological developments. Art. 16(6) states that *"Member States shall facilitate the repowering of existing renewable energy plants by ensuring a simplified and swift permit-granting process. The length of that process shall not exceed one year."* In case of extraordinary circumstances, *"such as on grounds of overriding safety reasons where the repowering project impacts substantially on the grid or the original capacity, size or performance of the installation, that one-year period may be extended by up to one year."* Member States may also establish a simple notification procedure for grid connections for repowering projects. When they do so, the repowering is to be permitted, *"where no significant negative environmental or social impact is expected,"* as stated in Art. 16(8). It adds that a decision is to be made on whether this is sufficient within six months of the notification receipt. If considered sufficient by the relevant authority, the permit is to be automatically granted. If not, the

[91] Repowering is defined, in Art. 2(10), as *"renewing power plants that produce renewable energy, including the full or partial replacement of installations or operation systems and equipment for the purposes of replacing capacity or increasing the efficiency or capacity of the installation."*

applicant shall apply for a new repowering permit with the time limits of Art. 16(6) reported in the previous paragraph.

The different deadlines regarding the permit-granting process *"shall apply without prejudice to obligations under applicable Union environmental law, to judicial appeals, remedies and other proceedings before a court or tribunal, and to alternative dispute resolution mechanisms,…"* as stated in Art. 16(7).

RED II also requires Member States to establish a simple-notification procedure for grid connections to the Distribution System Operator (DSO) for small-scale installations, *"whereby installations or aggregated production units of renewables self-consumers and demonstration projects, with an electrical capacity of 10,8 kW or less, or equivalent for connections other than three-phase connections."* The DSO may within a limited period following the notification, reject the grid connection or propose an alternative grid connection point, on justified grounds, according to Art. 17(1), such as safety or technical reasons. In case of a favourable decision by the DSO or in case of no decision within one month, the installation may be connected.

For installation or aggregated production units, *"with an electrical capacity of above 10,8 kW and up to 50 kW,"* Member States may allow a simple notification procedure, provided that grid stability, safety and reliability are maintained.

Highlights

Support Schemes:

- RED II sets out EU high-level principles for support schemes. They are to be market-based and not to cause market distortion.

- RED II discards direct support schemes that do not transmit market signals to renewable producers, like FiTs. Exemptions could be given by Member States to small-scale installations.

- RED II prohibits the retroactive changes to RES support schemes.

- The allocation of RES support shall be following long-term schedules that are published by the Member States. The schedules are to cover at least the following five years, or three in case of budgetary constraints.

- Voluntary opening of support schemes by Member States to producers located in other Member State. The opening could become mandatory to a certain degree by 2025, subject to the Commission assessment due in 2023.

Cooperation Mechanisms:

- The Commission is to establish a URDP where Member States may voluntarily include their data on the contribution to the RES EU target, the amount by which they expect to fall short or exceed as well as an indication of the prices for excess transfer to other Member States.

- Regarding joint projects between Member States and third-countries, a human rights clause was added, i.e. third-countries are to be signatories of an international convention or treaty on human rights such as the Council of Europe Convention for the Protection of Human Rights and Fundamental Freedoms.

Administrative procedures and permit-granting processes:

- RED II includes provisions for the establishment of a "one-stop-shop" as well as maximum time limits for the permit granting processes, depending on projects sizes. Member States may establish a simple notification procedure for grid connections of repowering projects.

4. Provisions Empowering and Informing Consumers

In this section, we describe first the background to renewables self-consumption, renewable energy communities, and consumer information in the EU. Then, we present the RED II provisions for these issues.

4.1. Background to Renewables Self-Consumption, (Renewable) Energy Communities, and Consumer Information

Renewables self-consumption is driven mostly by solar PV deployment. Small wind generation follows to a lesser extent (European Commission 2016b). This was particularly encouraged by the drop in technology costs. The Jäger-Waldau (2019) JRC report states that between the end of 2009 and the first half of 2019, the LCOE from PV system decreased by 80%. There was also a significant decrease in residential grid-connected PV prices. In Germany, where in 2017 private individuals owned 49% of solar capacity and 41% of onshore wind capacity, the residential PV systems (<10 kWp) FiT became lower than the average variable electricity rate the residential consumers pay.[92] Yet the fact that they are still exempted from RES levies makes the self-consumption more attractive. Many of these individuals were organised in communities. Nevertheless, some barriers exist across the Member States. For instance, in Spain, in order to be paid for the electricity fed into the grid, prosumers are to participate in the spot market. This is particularly complicated for small producers due to the number of licences and incurred costs. In Poland, prosumers face some hurdles such as taxation and limitation on the benefits from electricity fed into the grid (European Court of Auditors 2019). As stated in the European Commission (2016c) impact assessment for RED II, there is no common EU framework implemented for renewable energy self-consumption. Member States have adopted different national frameworks. This explains the fragmented situation of consumer empowerment across the EU. National legislations were nevertheless compliant with RED I, i.e. allowing prosumers to produce electricity for self-consumption.

Energy communities are entities where citizens, together with other stakeholders, invest, own and participate in the production of energy. They present a pivotal vector to realise the energy transition. The ownership and proximity factors, present in the community concept, increase the acceptance of RES projects, in particular wind farms. This contributes to Member States' RES target achievement and lowering the costs of RES deployment, as more suitable sites may be available. Nevertheless, there are also issue related to their enabling framework across the Member States. RED I did not include an EU framework that empowers energy communities. Thus, energy communities thrived only in a few countries. The European Commission (2016c) impact assessment for RED II states that about 75% of all energy cooperatives are located in Austria, Germany and Denmark. There are also several barriers to energy communities across the Member States, resulting inter alia in most of them remaining small-scale. These issues are typically grid connection, i.e. for related non-shallow costs. Moreover, there are some design elements of support schemes that may represent some hurdles for energy communities, such as tendering support. This creates difficulties for these type of communities to compete with other projects on a level playing field.

Equally, the right to produce and sell electricity from RES individually or collectively, informing consumers about the energy they buy, as some of them may agree on paying a premium for green electricity, may help to foster RES investments. As no EU framework had been established by RED I, Member States have a different degree of consumers information. RED I did allow the Member States to develop Guarantees of Origin (GO) systems.[93] They were defined *"as an electronic document which has the sole function of providing proof to a final customer that a given share or quantity of energy was produced from renewable sources as required by Art. 3(6) of Directive 2003/54/EC."* In other

[92] As of October 2019, FiT was EUR 0.1018/kWh while the average electricity prices ranges between EUR 0.267 and 0.331/kWh (Jäger-Waldau 2019).

[93] GOs appeared first in the Directive 2001/77/EC, that is the predecessor of the RED I.

words, if a consumer wants his consumed energy to be 100% from RES, he/she needs to choose a supplier offering GOs alongside the sale of energy. Needless to say, it is impossible to track electrons in the grid. In the GO system, the renewable tag of energy is traded separately from the physical flows. The actual electricity delivered will probably still be generated from the power plants located close to the consumption point, which could be from RES or other sources such as coal, regardless of the GOs. This system is not meant to be a support scheme for RES but rather a means to achieving RES targets. RED I established rules clarifying the GO system, the implementation of which is not mandatory. According to the European Commission (2016c) impact assessment, there have been mixed views regarding GO systems implementation across the Member States between those who support it and others who consider that it can result in a greenwashing. The latter term refers to the process of creating or conveying a false impression (in commercial communication, marketing or advertising) that a good or a service is more environmentally sound or that is less environmentally damaging than other competing goods or services. In Norway, for instance, there is a large export of hydropower GOs to EU countries. Many Norwegian consumers have not opted for GOs, resulting in a transfer of these GOs to other countries. Therefore, this translates into the fact that Norwegian consumers are virtually consuming electricity from fossil fuel, which is not the actual case.

Another issue is with regard to information disclosure to consumers. RED I introduced some information disclosures requirements for energy companies regarding the energy bills, information for social, economic and environmental reasons, such as the sources of electricity and the related CO2 emissions. Yet, energy suppliers were not required to use the GO system for disclosure purposes. The result is that the GO system is covering less than half of the total RES production as reported in the European Commission (2016c) impact assessment.

4.2. Enabling Renewables Self-Consumption

RED II introduces the concept of renewables self-consumers. This aims to enable and regulate their contribution to the development of renewable energy and, at the same time, create qualified and local jobs. According to the new legislation, consumers are to be able to self-consume electricity from RES without facing restrictions. They are also to be adequately remunerated for the electricity they inject into the grid. RED II defines a renewables self-consumer as *"a final customer operating within its premises located within confined boundaries or, where permitted by a Member State, within other premises, who generates renewable electricity for its own consumption, and who may store or sell self-generated renewable electricity, provided that, for a non-household renewables self-consumer, those activities do not constitute its primary commercial or professional activity."* The Member States are to ensure that any consumer is entitled to become a renewables self-consumer, according to Art. 21(1) of RED II. Indeed, following their definition and Art. 22(2), renewables self-consumers shall be entitled to store and sell the excess of generated energy *"through power purchase agreements, electricity suppliers and peer-to-peer trading arrangements."* They are not to be subject to excessive or discriminatory charges or fees in relation to the electricity consumed, generated, or fed into the grid. Nevertheless, Member States may apply non-discriminatory and proportionate charges to RES self-generated electricity remaining within their premises, as indicated in Art. 21(3), in the following cases:

(a) in case of effective support via support schemes to the self-generated renewable electricity and only to the extent that it does not undermine the economic viability of the project and the incentive effect of the support scheme.

(b) if, from 1 December 2026, the overall share of self-consumption installations exceeds 8% of the total installed electricity capacity of a Member State. This is to be demonstrated by a cost-benefit analysis, as further explained in Art. 21(3)(b).

(c) if the self-generated renewable electricity is produced in installations with an installed electrical capacity higher than 30 kW.

RED II also defines the concept of 'jointly acting renewables self-consumers.' They are groups of at least two renewables self-consumers collaborating. They are to be located in the same building or multi-apartment block. The Member States, according to Art. 21(4), are to ensure that renewables self-consumers can jointly engage in the activities of individual renewables self-consumers referred to in Art. 21(2). They are also to be, following Art. 21(4), *"permitted to arrange sharing of renewable energy that is produced on their site or sites between themselves, without prejudice to the network charges and other relevant charges, fees, levies and taxes applicable to each renewables self-consumer."* The Member States can differentiate between them and individual renewables self-consumers in a proportionate and duly justified way.

Note that in the case where a third party owns the renewables self-consumer installation or manages its operation, including metering and maintenance, while being subject to consumer's instructions, it is not to be considered as a renewables self-consumer, as stated in Art. 21(5).

In general, the goal of the renewables self-consumption framework, to be implemented by the Member States, is to facilitate the development of renewables self-consumption, by addressing the unjustified existing barriers, as referred to in Art. 21(6). This is with regard to the accessibility of all final customers to renewables self-consumption, including low-income or vulnerable ones. It is also to address project financing barriers, incentives for the owners of building to create renewables self-consumption opportunities, and the access to relevant existing support schemes as well as to the different market segments. However, renewables self-consumers shall contribute to the overall system cost-sharing in an adequate and balanced manner.

4.3. Enabling Renewable Energy Communities

RED II introduces the concept of renewable energy communities (RECs). It is defined, according to Art. 2(16), as an entity:

"(a) which, in accordance with the applicable national law, is based on open and voluntary participation, is autonomous, and is effectively controlled by shareholders or members that are located in the proximity of the renewable energy projects that are owned and developed by that legal entity;

(b) the shareholders or members of which are natural persons, SMEs or local authorities, including municipalities;

(c) the primary purpose of which is to provide environmental, economic or social community benefits for its shareholders or members or for the local areas where it operates, rather than financial profits."

Member States are to ensure that final customers, especially households, are enabled to engage in RECs. They are not to be subject to discriminatory conditions or procedures. The participation of private undertakings in RECs is guaranteed, as long as it *'does not constitute their primary commercial or professional activity,'* according to Art. 22(1). Member States are to ensure, following Art. 22(2), that RECs are to produce, consume, store and sell renewable energy, including through renewables power purchase agreements (PPAs), they are also to be allowed to share the renewable energy, produced by the REC, within its members, with respect to their rights and obligations as final consumers. RECs shall also be enabled to access all suitable energy markets directly or through aggregation.

Member States are to assess the existing barriers and assess the RECs development potential in their territories. They are to provide enabling frameworks that promote and ensure the REC development, according to Art. 22(4). The framework shall, for instance, ensure that there are no unjustified regulatory barriers to community energy. Also, when RECs are supplying or aggregating energy, they are to be subject to the relevant activity's provisions. DSOs are also to cooperate with RECs to facilitate energy transfers within the communities. In addition, no unfair procedures or charges are to be applied on RECs. This aims to allow them to contribute in an adequate way to the distributed energy resources (DERs) deployment objectives.

Moreover, the RECs regulatory framework is to ensure access to finance and information is facilitated. Regulatory and capacity-building is to be provided. These different elements are to be part of the Member States' updates to their NECPs. They are also to take into account the specificities of RECs when designing support schemes. Finally, Member States may also decide to open cross-border participation in these communities.

4.4. Informing Consumers

RED II includes provisions to enhance the quality of the information provided to relevant actors and consumers. This includes, according to Art. 18(1), information on support measures to *"consumers including low-income, vulnerable consumers, renewables self-consumers, renewable energy communities, builders, installers, architects, suppliers of heating, cooling and electricity equipment and systems, and suppliers of vehicles compatible with the use of renewable energy and of intelligent transport systems."* Information on the net benefits, cost and energy efficiency of equipment and systems for the use of electricity from RES as well as heating and cooling, is to be made available either by the equipment or systems' suppliers or by the competent authorities.

Certification schemes are to be established by the Member States for installers of small-scale solar systems, biomass boilers and stove, as well as shallow geothermal systems and heat pumps. Member States are to make public information on certification schemes and recognise certification awarded by the other Member States. They may also publish the list of certified or qualified installers. Besides, guidance is to be made available to all relevant actors, i.e., planners and architects so that they are able to consider optimal combinations of RES, district heating and cooling as well as high-efficiency technologies, *"when planning, designing, building and renovating industrial, commercial or residential areas,"* according to Art. 18(5).

Furthermore, awareness-raising, guidance or training programmes are to be developed for citizens by the Member States in order to inform them of how to exercise their active customers' rights, inter alia through renewables self-consumption or in the framework of RECs.

RED II also consolidates the functioning of the GOs of energy. They demonstrate the quantity of energy from RES in the mix of energy suppliers and within the energy supplied to their customers. GOs, from installations producing energy from RES, are required to be used by suppliers that disclose, to final customers, their energy mix, or those that market their energy as from RES. RED II extends the GOs system to gas, including hydrogen, as referred to in Art. 19(7). It also allows the Member States to issue GOs for energy from non-renewable sources (Art. 19(2)).

RED II confirms the need to distinguish between GOs and green certificates, that are used for RES support schemes. In order to avoid double-counting, energy from RES, whose accompanying GO has been sold separately by the producer, is not to be disclosed or sold to consumers as energy from RES. Art. 19(2) adds that the Member States are to *"ensure that when a producer receives financial support from a support scheme, the market value of the guarantee of origin for the same production is taken into account appropriately in the relevant support scheme."* Also, it is to be presumed that the GO market value has been taken into account appropriately in the following cases:

(a) the financial support is tendered or is a tradable green certificate system,

(b) the market value of the GO is administratively taken into account in the financial support level, or

(c) where the GOs are not issued directly to the producer but to a supplier or consumer who buys the energy from RES either in a competitive setting or in a long-term renewables PPA.

Moreover, the transfer of GOs is not to have any effect on the Member State's decisions to use cooperation mechanisms, i.e. statistical transfers, joint projects or joint support schemes, or on the calculation of the final gross consumption of energy from RES.

GOs are to be valid for 12 months after the production of the relevant energy unit. All GOs that have not been cancelled[94] are to expire, at the latest, 18 months after the production of the energy unit. Member States are to include expired GOs in the calculation of their residual energy mix. The issuance, transfer and cancellation of GOs are to be supervised by the Member States or designated competent bodies. These bodies are to be not geographically overlapping, and independent of generation, supply and trade activities. This, therefore, allows Member States the freedom to decide whether it is a public or private body.

Also, Member States are to recognise the GOs issued by other Member States. Refusal of recognition by a Member State must have *"well-founded doubts about its accuracy, reliability or veracity,"* as stated in Art. 19(9). This is to be notified to the Commission, which may require a Member State to recognise the GO if it finds no basis for the refusal. The recognition of a GO from a third country is subject to an agreement between the EU and that country based on the mutual recognition of the GOs.

Highlights

Renewables self-consumption

- RED II introduces the concept of renewables self-consumers and jointly acting self consumers. This aims to enable and regulate their contribution to the development of renewable energy.

- Renewables self-consumers are not to be subject to excessive or discriminatory charges or fees in relation to the electricity consumed, generated, or fed into the grid. In some cases, the Member States may apply non-discriminatory and proportionate charges and fees to renewables self-consumers.

- The Member States can differentiate between individual and jointly-acting renewables self-consumers in a proportionate and duly justified way.

Renewable Energy Communities (RECS)

- The Member States are to provide an enabling framework for consumers to engage in RECs. They are to ensure that final customers are entitled to participate in a REC without being subject to unjustified or discriminatory conditions or procedures.

- The participation of private undertakings in RECs is guaranteed as long as it does not constitute their primary commercial or professional activity.

- The Member States are to ensure that RECs can participate in available support schemes on an equal footing with large participants. They are to take into account their specificities when designing support schemes, without prejudice to to Articles 107 and 108 TFEU.

Informing consumers

- The Member States are to ensure that information on support measures is made available to all relevant actors, including low-income consumers. Also, information on the net benefits of systems using RES is to be made available.

- The Member States are to ensure that certification schemes or equivalent qualification schemes are available for installers of small-scale biomass boilers and stoves, solar photovoltaic and solar thermal systems, shallow geothermal systems and heat pumps.

- RED II extends GOs to gas, including hydrogen, covering all energy produced from RES.

- It is possible to benefit from both a GO and a support scheme. In this case, the market value of the GO is to be appropriately taken into account in the relevant support scheme.

[94] When issued, a GO is used by cancelling it.

5. Mainstreaming Renewables in the Heating and Cooling Sectors.

In this section, we initially list the background to RES use in the heating and cooling sector in the EU. Then we present RED II provisions which have the purpose of increasing renewable energy shares in heating and cooling.

5.1. Background to RES Use in the Heating and Cooling Sector

The heating and cooling sector accounted for about 50% of the EU's energy consumption in 2016, according to the European Commission (2016a) communication. The shares of Member States in heating and cooling in the energy mix differ, and so does the relative ratio of heating versus cooling. A large share of heating and cooling is produced from non-renewable sources, i.e. natural gas, coal, oil products and non-RES electricity. The EU-average was only about 21% generated from RES in 2018, and it is by far driven by biomass, about 90% of the of all renewable heating (Eurostat 2020d). About 45% of heating and cooling energy is used in households, 37% in industry and 18% in services. Each of these sectors has the potential to reduce demand, increase efficiency and use more RES. That is the challenge to be tackled.

RES share in heating is highest in the Baltic and the Nordic Member States. Sweden, followed by Latvia, are the frontrunners in the EU with about 65% of RES shares in the heating and cooling sector. At the bottom of the list, we find Ireland and the Netherlands with around 6%. Figure 8 gives an overview of the different shares across the Member States. Sweden, where district cooling systems are less significant than district heating systems, uses many kinds of renewables that are biomass, geothermal, solar thermal. It also uses waste, including from industries.

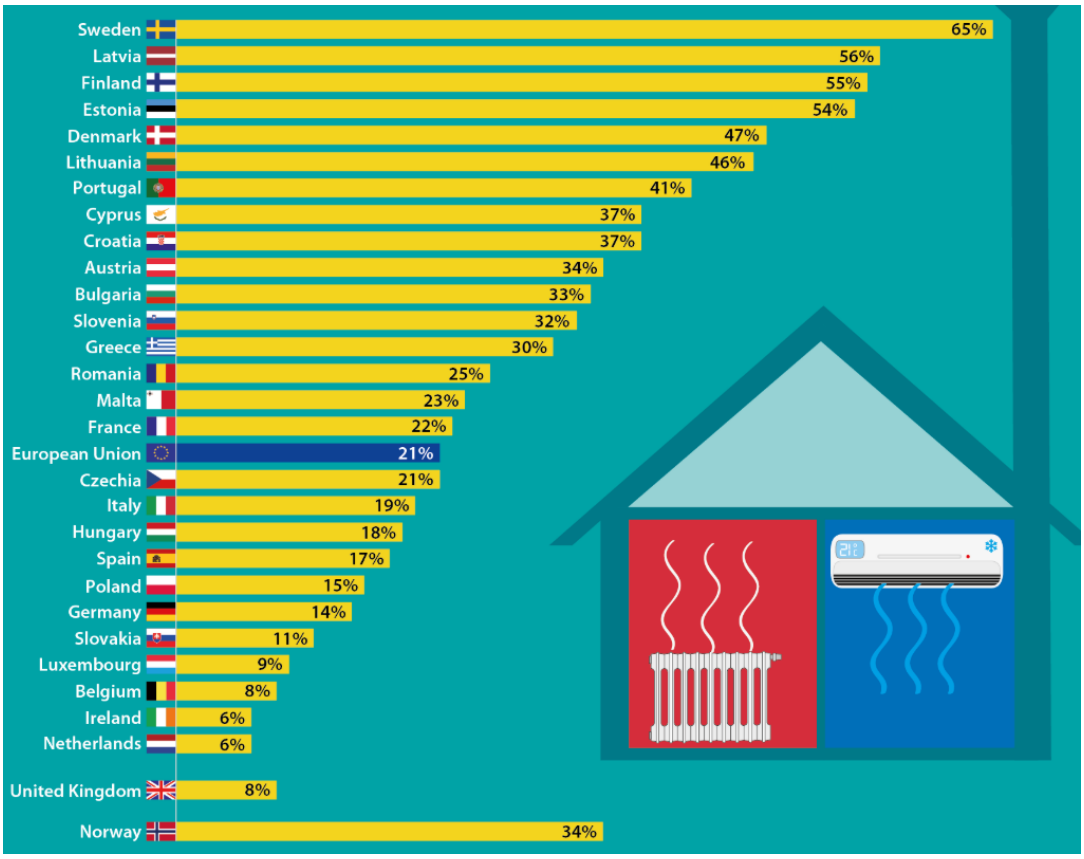


Figure 8: Energy from renewable sources used for heating and cooling in 2018, % of gross final consumption for heating and cooling. Source: Eurostat (2020a)

There were no extensive requirements in RED I to the Member States to foster renewable energy deployment in the heating and cooling sector. Later, Directive 2012/27/EU on energy efficiency

further promoted efficiency in heating and cooling. It states in Art. 14(1) that the Member States are to fulfil comprehensive assessments of the potential for high-efficiency cogeneration and efficient district heating and cooling. When a potential is identified, Member States are to take adequate enabling measures in order to promote the heating and cooling infrastructure as well as to accommodate the development of high-efficiency cogeneration and the use of heating and cooling from waste heat[95] and RES. These assessments are to be implemented every five years. The European Commission (2016a) communication on the EU Heating and Cooling Strategy stresses on the principle of recognising the links between heating and cooling, and the rest of the energy system, as well as exploiting the synergies. The Directive 2010/31/EU on the energy performance of buildings (EPBD) incentivises the improvement of energy performance for new and deeply renovated buildings. Thus, as new buildings will only account for 6% of the building stock between 2020 and 2030, with the same percentage for deep renovations (European Commission 2016c), the EPBD would, therefore, tackle between 6% and 10% of the overall heating and cooling demand. Complementary measures are needed to support the development of RES in this sector. RED I also includes provisions requiring Member States to incentivise the use of RES in buildings and district heating and cooling, specifically in new buildings or existing ones that are subject to major renovations. They are, in accordance with Art. 13, to require the use of minimum levels of energy from RES, where appropriate. This is to be implemented, for instance, in Member States' building codes.

The European Commission (2016d) impact assessment highlights the challenge of the heating and cooling sector's continued heavy reliance on imported fossil fuels. Typical market failures are fossil fuel systems lock-in and consumers lock-out, i.e. they cannot individually change fuels in collective supply. The heating and cooling mix is to be diversified, and RES deployment in this sector is to be accelerated. RES are to have access to existing infrastructure. In addition, sufficient incentives are to be provided for the RES expansion. An EU-level action is necessary due to the weight of this sector in final energy consumption. Consumers are to be at the centre of this strategy for mainstreaming RES in heating and cooling. This could be realised through the use of modern technologies and innovative solutions to shift to efficient and sustainable heating and cooling systems.

5.2. Provisions Increasing Renewable Energy Shares in Heating and Cooling

RED II introduces requirements for the Member States in order to promote the use of RES supplied for heating and cooling. Art. 23(1) states that Member States are to undertake measures increasing the share of energy from RES by an indicative 1.3% as an annual average calculated for the periods 2021-2025 and 2026-2030, starting from the share of RES in the heating and cooling sector in 2020. The increase is to be limited to an indicative 1.1% for the Member States, where waste heat and cold is not used. The best available technologies are to be prioritised, where appropriate. Member States may implement the average annual increase through different options, as referred to in Art. 23(4). This includes; First, physical incorporation of renewable energy or waste heat and cold in the heating and cooling energy or fuel supply. Second, direct[96] and indirect[97] mitigation measures. Third, other policy measures, including fiscal and other financial measures or incentives. Member States are to ensure the accessibility of all consumers, especially low-income and vulnerable ones to these measures.

When calculating renewable energy share in heating and cooling, according to Art. 23(2), Member States may count waste heat and cold, *"subject to a limit of 40% of the average annual increase."* Also,

[95] Waste heat and cold means, according to Art. 2(9), *'unavoidable heat or cold generated as by-product in industrial or power generation installations, or in the tertiary sector, which would be dissipated unused in air or water without access to a district heating or cooling system, where a cogeneration process has been used or will be used or where cogeneration is not feasible.'*

[96] Direct mitigation measures refer to highly efficient renewable heating and cooling systems in buildings, as well as renewable energy use or waste heat and cold in industrial heating and cooling processes.

[97] Indirect mitigation measures refer to measures covered by the use of tradable certificates proving compliance with the RES obligation in heating and cooling, carried out by another economic operator, i.e. independent renewable technology installer.

where the Member State's renewable energy share is above 60% in the heating and cooling sector, they "*may count any such share as fulfilling the average annual increase.*" Where the share is between 50% and 60%, *"Member States may count any such share as fulfilling half of the average annual increase."*

In order to contribute to the average annual increase in renewable energy in the heating and cooling sectors, Member States may, following Art. 23(3), establish and publish a list of measures and their implementing entities, *"such as fuel suppliers, public or professional bodies."* To implement and monitor the rules, Member States may use the structures established under the national energy savings obligations listed in Art. 7 of Directive 2012/27/EU, that has been amended to Directive (EU) 2018/2002.

RED II also introduces provisions regarding district heating and cooling (DH&C), in Art. 24. It represents currently about 10% of the heat demand across the EU, with substantial differences across the Member States, as stated in recital (75) of RED II. Thus, it is therefore essential to enable the fuel-switching to energy from RES. Art. 24(1) says that Member States are to ensure that information on energy performance and the share of RES in their DH&C systems is provided to final consumers, in an easily accessible manner. Customers of DH&C systems that are not efficient, now or *"by 31 December 2025 on the basis of a plan approved by the competent authority,"* are allowed to disconnect by terminating or modifying their contracts in order to produce heating or cooling from RES themselves. If the termination is linked to a physical disconnection, it may be made conditional to compensation for the incurred costs.

Highlights

- RED II introduces the requirement for each Member State to increase the use of renewable energy in heating and cooling by an indicative 1.3% as an annual average calculated for the periods 2021-2025 and 2026-2030.

- The increase is to be limited to 1.1% if waste heat and cold is not used. The starting point is the share of renewable energy in the heating and cooling sector in 2020.

- RED II introduces new provisions for the efficiency of DH&C systems and fuel switching to energy from RES.

DH&C customers that are not efficient are allowed to terminate their contracts in order to switch to producing H&C from RES themselves.

6. Decarbonising the Transport Sector

In this section, we show first the background to RES use in the transport sector. Then we present the RED II provisions which aim to increase renewable energy integration in this sector.

6.1. Background to RES Use in the Transport Sector

RED I included a provision setting a minimum 10% target of energy from RES in transport by 2020 to be achieved by each Member State. This was considered appropriate and achievable by the European Commission (2007) communication entitled 'Renewable Energy Road Map' and was later endorsed by the European Council. By contrast to the overall national target for energy consumption by 2020, the transport sector target is to be set at the same level for each Member State. This aims to ensure consistency in fuel specifications and availability. Transport fuels are traded easily, compared to electricity. Thus, the Member States with no or low relevant resources could obtain biofuels from elsewhere. Referring to the use of energy from RES in transport is equivalent to relating to the use of renewable fuel which could be liquid or gaseous. Renewable fuel could be from a biological origin that is biofuels, bioliquids and biomass fuels, and they are often grouped under the umbrella of biofuels.

It can also be from a non-biological origin, e.g. hydrogen fuel, when produced from a renewable process. Biofuels can be divided into three categories or generations;

- First-generation biofuels are directly produced from food crops. They generally relate to biomass that is edible and derived from vegetable oil from crops, starch, sugar, or animal fats.

- Second-generation biofuels are biofuels where the feedstock used is generally from non-food crops. They can be produced from various types of non-food biomass, ranging from lignocellulosic feedstock to municipal solid wastes. An exception to the use of food crops as second-generation biofuels is where food crops have achieved their primary purpose (Biofuel 2020). For instance, waste vegetable oil, unlike virgin vegetable oil, is a second-generation biofuel as it has already been used and is no longer fit for its primary function: human consumption.

- Third-generation biofuels are still at a very early stage of research and development. At this point, they relate to biofuel derived from algae and micro-organisms.

Advanced biofuels refer to second and third-generation biofuels (European Parliament 2017). They do not compete directly with food and feed crops. The Baker et al. (2017) report to the European Commission finds that with improving feedstock supply and reducing conversion costs, the contribution of advanced biofuels to achieving EU targets can be significant. Their share could reach almost 50% of the overall transport sector energy mix by 2050.

The EU has adopted measures to incentivise the development of both conventional crops-based food, or first-generation biofuels and advanced biofuels. In 2015, the Directive (EU) 2015/1513 on the EU Indirect Land Use Change (ILUC) amended RED I, introducing a 7% cap on the contribution of first-generation biofuels in the RES transport target.

Since 2009 there has been significant growth in renewable fuels, consolidating the EU position as the largest producer of advanced biofuels (European Commission 2018b). In 2018, the EU share of energy from RES in the transport sector stood at 8%, compared with 7.1% in 2017, 3.9% in 2008 and 1.4% in 2004, the first year for which data is available (Eurostat 2020a). As shown in Figure 9, Sweden is the EU leader for their RES share in transport fuel consumption in 2018, with 29.7%. Finland follows it with 14.1%, and the Netherlands with 9.6%.

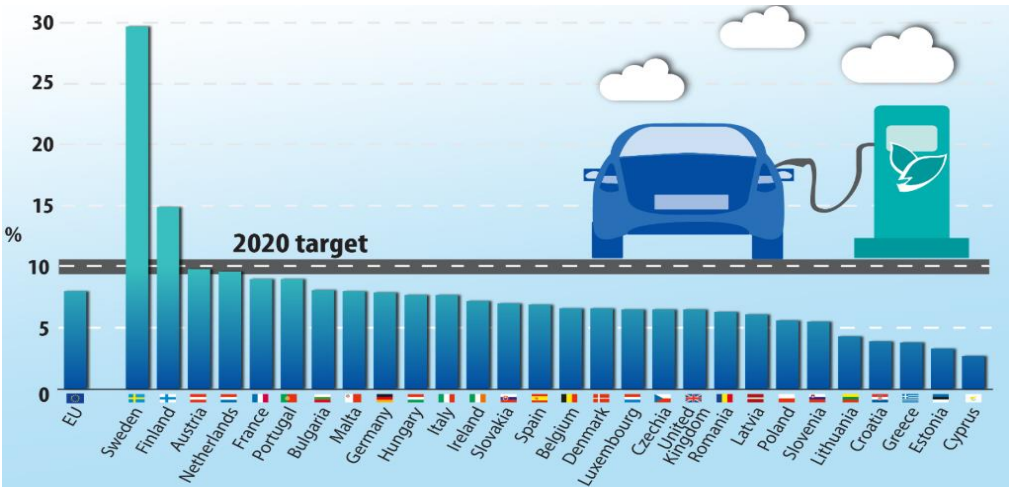


Figure 9: Share of energy from RES in transport in 2018, % of gross final consumption. Source: (Eurostat 2020a)

The European Commission (2016c) impact assessment for RED II highlights that the transport sector continues to rely heavily on imported fossil fuels. The mix is to be diversified, and renewable energy deployment is to be supported by clear market signals for low-carbon and renewable fuels to reduce this dependence. Also, national actions by the Member States alone will lead to an insufficient EU deployment of RES in the transport sector in order to reach the 2030 RES target, as well as the 2050

decarbonisation objective.[98] Indeed, national measures cannot foster the necessary volumes to achieve economies of scale and stimulate manufacturing innovation and cost reduction. An EU-level binding target for renewable fuel in the transport sector is, therefore, more likely to be more effective than national ones, as benefits and costs will be shared across the Member States, and market fragmentation will be avoided.

6.2. Provisions Increasing Renewable Energy in the Transport Sector

RED II increases the binding target of renewable energy within the final consumption of energy in the transport sector to at least 14% by 2030. It is to be passed on by the Member States to fuel suppliers. Also, this is to be in accordance with an indicative trajectory set by the Member States and calculated in accordance with Art. 26 and Art. 27 of RED II. Similar to the EU overall RES target, an upward revision is also foreseen by 2023, subject to the Commission assessment of the EU level target and the submission of a legislative proposal regarding that. Art. 25(1) adds that *"Member States may exempt, or distinguish between, different fuel suppliers and different energy carriers when setting the obligation on the fuel suppliers."* They are to consider different degrees of maturity of the technologies and the related costs. For the calculation of minimum shares, Member States are to take into account transport renewable liquid and gaseous fuels of non-biological origin (e.g. hydrogen fuel). They may also take into account recycled carbon fuels. The share of advanced biofuels and biogas in the transport sector is to be at least 0.2 % in 2022, at least 1% in 2025 and at least 3.5% in 2030, within the 14% minimum share of renewable fuel. Art. 25(1) adds that "*Member States may exempt fuel suppliers supplying fuel in the form of electricity or renewable liquid and gaseous transport fuels of non-biological origin from the requirement to comply with the minimum share of advanced biofuels and biogas produced from the feedstock listed in Part A of Annex IX with respect to those fuels."*

From 1 January 2021, GHG emissions savings from the use of renewable liquid and gaseous transport fuels of non-biological origin is to be at least 70%, following Art. 25(2). By 1 January 2021, the Commission is to adopt a delegated act *"establishing appropriate minimum thresholds for greenhouse gas emissions savings of recycled carbon fuels through a life-cycle assessment that takes into account the specificities of each fuel."* By 31 December 2025, the Commission is to assess whether the obligation, set out in Art. 25(1) relating to minimum shares of advanced biofuels and biogas derived from feedstock listed in Part A of Annex IX of RED II, are stimulating innovation and ensuring GHG emissions savings in the transport sector. If appropriate, the Commission is to submit a proposal to amend this obligation, as stated in Art. 28(7).

By contrast to the minimum shares of advanced biofuels, Art. 26 sets two different caps on the contribution of first-generation biofuels, following Directive (EU) 2015/1513 on the EU ILUC amending RED I. One is regarding 2020 shares (with an extra 1%) and the other is absolute (7% in any case). Indeed, Art. 26(1) states that *"the share of biofuels and bioliquids, as well as of biomass fuels consumed in transport, where produced from food and feed crops, shall be no more than one percentage point higher than the share of such fuels in the final consumption of energy in the road and rail transport sectors in 2020 in that Member State, with a maximum of 7% of final consumption of energy in the road and rail transport sectors in that Member State."* For the Member States with a share below 1%, they may increase their share of first-generation biofuels to a maximum of 2% of the final consumption of energy in the road and rail transport sectors. Member States may set a lower limit and may also distinguish between first-generation biofuels, bioliquids and biomass fuels with regard to their best available evidence on ILUC impact. For instance, they may "*set a lower limit for the share of biofuels, bioliquids and biomass fuels produced from oil crops."*

Art. 26(2) adds that the share of high ILUC risk first-generation biofuels, bioliquids or biomass fuels, for which a significant expansion of the production area into land with high-carbon stock is observed, are not to exceed the Member State's 2019 level of consumption of such fuels in that Member State,

[98] This finding is based on the EU Reference Scenario 2016 (European Commission 2016b).

unless they are certified to be low ILUC risk. From 31 December 2023 until 31 December 2030 at the latest, the contribution of high ILUC risk first-generation biofuels, bioliquids or biomass fuels to EU targets is expected to decrease gradually to zero by 2030.

RED II includes additional provisions with regard to the transparency and traceability of renewable fuels. Member States and the Commission are to strengthen cooperation and the exchange of data, as indicated in Art. 28(1). The Commission is to set a Union database that tracks liquid and gaseous transport fuels, for the calculation of the minimum shares of renewable energy in the transport sector. Member States are to have access to the Union database. They may also continue to use or establish national databases that are linked to the Union database, in order to ensure instant data transfers and data flows harmonisation, and mitigate the risk of fraud, following Art. 28(2).

Highlights

-RED II sets a 14% minimum target of renewable energy within the final consumption of energy in the transport sector by 2030. Each Member State is to pass this obligation to fuel suppliers.

- The share of advanced biofuels and biogas in the transport sector is to be at least 0.2% in 2022, at least 1% in 2025 and at least 3.5% in 2030, within the 14% minimum share of renewable fuel.

- A gradual decrease in the contribution of first generation biofuels to EU targets towards zero by 2030.

-The Commission is to set a Union database that tracks liquid and gaseous transport fuels, for the calculation of the minimum shares of renewable energy in the transport sector.

7. Strengthening the EU Sustainability of Bioenergy and GHG Savings Criteria

In this section, we show first the background to sustainability criteria in the EU. Second, we present RED II provisions regarding this issue.

7.1. Background to Sustainability Criteria

RED I introduced a set of sustainability criteria that includes rules protecting highly biodiverse grasslands[99] with high-carbon stock to avoid some of the direct environmental impacts of biofuels. Member States can only use biofuels certified as sustainable to reach their 10% 2020 target of renewable energy in transport. Compared to fossil fuels, biofuels emit fewer GHG emissions, and in particular less CO2. Nevertheless, biofuels sustainability is compromised by additional emissions due to land-use change. To enforce this, the Commission was to define the criteria and geographic ranges to qualify a grassland as a highly biodiverse grassland. Their definition was established in Regulation (EU) No 1307/2014 and applied from 1 October 2015, although the RED I provision had to be enforced by the Member States by 5 December 2010 (European Court of Auditors 2016).

RED I sustainability criteria applied only to biofuels and bioliquids. For solid and gaseous biomass,[100] sustainability issues were left entirely to Member States' discretion. In 2010, the Commission decided not to set EU-wide binding criteria but rather to provide non-binding recommendations to the Member States, as some had already introduced or were planning to introduce national biomass

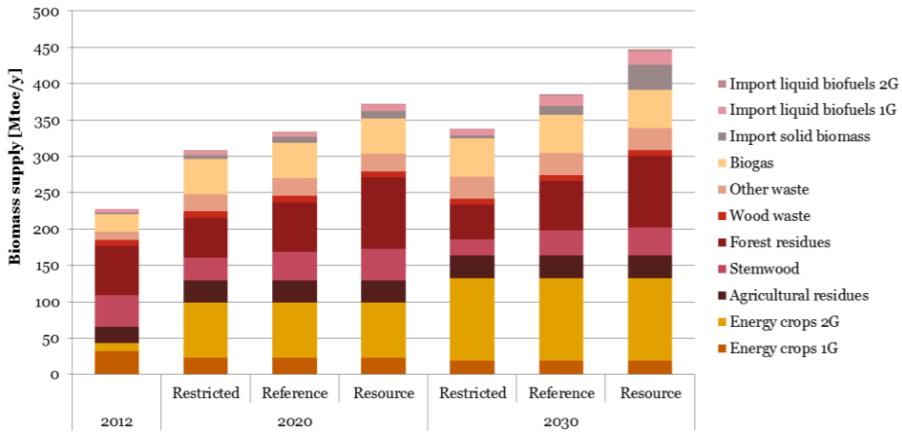
[99] Highly biodiverse grassland that is, following Art. 17(3)(c) of RED I, *"(i) natural, namely grassland that would remain grassland in the absence of human intervention and which maintains the natural species composition and ecological characteristics and processes; or (ii) non-natural, namely grassland that would cease to be grassland in the absence of human intervention and which is species-rich and not degraded, unless evidence is provided that the harvesting of the raw material is necessary to preserve its grassland status."*

[100] Solid biomass refers to biomass in solid form (currently mostly made from wood), by opposition to biomass in liquid form (biofuels and bioliquids) and in gaseous form (biogas).

sustainability requirements. The European Commission (2014d) report reconfirmed this approach on the sustainability of solid and gaseous biomass (VITO et al. 2017).

The biomass biofuels voluntary schemes may be recognised following the Commission implementing decision of 19 July 2011 for a period of five years. Directive (EU) 2015/1513 on the EU ILUC requires from the recognised voluntary schemes to annually report to the Commission on different aspects such as the auditing approach, transparency, monitoring and accreditation of certification bodies. According to the Kampman et al. (2015) RED I mid-term evaluation report to the Commission, the RED I provisions on sustainability criteria have achieved the harmonisation of voluntary schemes in a relatively short period of time. Indeed, Member States can show, in a harmonised way, biofuels compliance with the sustainability criteria. The report adds that the recognised voluntary schemes and default values[101] for GHG emission calculation have reduced the administrative burden and costs for economic operators.

The VITO et al. (2017) report to the European Commission considered different scenarios regarding the biomass supply potential, as shown in Figure 10, for 2020 and 2030. A 'restricted' scenario, with reduced availability and high utilisation restrictions, a business-as-usual "reference" scenario, and a "resource" scenario, with high mobilisation efforts as well as maximum possible sustainable utilisation. The estimated potential of biomass supply in the EU is above today's primary production of biomass for energy, according to VITO et al. (2017). This is also the case in the longer term, for the different scenarios. Figure 10 shows a breakdown of the various biomass supply sources for different scenarios.



Biogas and import of liquid biofuels are shown in final energy units.
1G: food- and feed-based energy crops, biofuels
2G: lignocellulosic energy crops, biofuels

Figure 10: Overview of estimated biomass potential for bioenergy in the EU28 in 2010, 2020, source: (VITO et al. 2017)

Regarding Member States' shares in the biomass supply potential from different sources in 2030, Germany, with 15.1%, has the largest potential of forest biomass supply (stem wood, primary and secondary forest residues). Spain, with 18.4%, has the largest potential of agricultural biomass (energy crops, agriculture residues, manure). While France, with 15.1%, has the largest potential of biomass waste (organic fraction of municipal solid waste, sewage gas, landfill gas).

The 'incoherence' in sustainability criteria, following RED I provisions, between biofuels and bioliquids, on the one hand, and solid and gaseous biomass, on the other hand, can result in a situation where

[101] Default value means a value derived from a typical value through applying pre-determined factors, that may be specified for instance by a legislative text. A typical value is an estimate of the GHG emissions and GHG emissions savings for a specific biofuel, bioliquid or biomass fuel production pathway, that is representative of the EU consumption. Economic operators can use default values to show compliance with the sustainability criterion on GHG savings.

the use of the land for the same feedstock has to comply with different sustainability criteria depending on the final energy use. The VITO et al. (2017) report adds that various stakeholders welcomed the extension of sustainability criteria for biofuels to solid and gaseous biomass. Nevertheless, public administration from the Member States with high domestic forest resources and small forest owners opposed implementing additional EU requirements on forest biomass, raising concerns with regard to EU competence and subsidiarity principles.

The European Commission (2016d) impact assessment for RED II states that some provisions of the sustainability schemes as well as the traceability rules are to be improved in order to facilitate their implementation. This is to prevent overlaps with other policies and to address issues related to climate performance of biofuels that were not captured by the sustainability criteria. Typical issues are the ILUC and the administrative burdens for the implementation of sustainability criteria.

7.2. Provisions Strengthening the Existing EU Criteria for Bioenergy Sustainability

RED II includes provisions to make the biomass used in the EU for energy sustainable. It extends the EU sustainability criteria to cover also solid and gaseous biomass. The fulfilment of sustainability criteria is required to contribute towards the EU RES target, to measure compliance with renewable energy obligation, including the requirement for the transport sector, and to be eligible for financial support for the consumption of biofuels, bioliquids and biomass fuels, as stated in Art. 29(1). RED II also strengthens the role of voluntary schemes for compliance with the sustainability criteria and verification in a harmonised manner. Sustainability criteria for biofuels are improved for advanced biofuels that are to emit at least 70% less GHG emissions than fossil fuels, as previously shown in 6.2.

RED II lays, in Art. 29(2) to (7) and Art. 29(10), the sustainability and greenhouse gas emissions saving criteria that apply irrespective of the geographical origin of the biomass. In order to minimise the administrative burden, solid biomass fuels are to fulfil these criteria if used in installations producing electricity, heating and cooling or fuels with a total rated thermal input equal to or exceeding the 20 MW threshold. For gaseous biomass fuels, the criteria fulfilment applies for installations with a total rated thermal input equal to or exceeding 2 MW. "*Biofuels, bioliquids and biomass fuels produced from waste and residues, other than agricultural, aquaculture, fisheries and forestry residues, are required to fulfil only the greenhouse gas emissions saving criteria,"* as stated in Art. 29(1). This also applies *"to waste and residues that are first processed into a product before being further processed into biofuels, bioliquids and biomass fuels."*

Art. 29(10) includes gradually increasing GHG emission savings from the use of biofuels, bioliquids and biomass. For instance, the savings are to be at least 65% for biofuels, biogas consumed in the transport sector, and bioliquids produced in installations which start to operate from 1 January 2021 onwards. GHG emission savings for electricity, heating and cooling from biomass have to emit at least 70% less compared to fossil fuels GHG emission by 2021 and 80% less by 2026. Biomass fuels GHG savings requirement does not apply to power plants that are already in operation and receive state aid which was already approved by the Commission. The GHG emission savings *"from the use of biofuels, biogas consumed in the transport sector, bioliquids and biomass fuels used in installations producing heating, cooling and electricity"* are to be calculated in accordance with Art. 31. Economic operators have the option to either use default value for GHG in RED II Annexes or to calculate actual values for their pathway. The default values and calculation rules are provided in Annex V for liquid biofuels, and Annex VI for solid and gaseous biomass for power and heat production. The European Commission shall review these values, with a view to adding or revising them, where appropriate such as in case of technological developments. The reviews are also to consider modifying the methodology. Table 2 summarises the different GHG savings thresholds in RED II, including those from the previous subsections.

Table 2: Greenhouse gas emission savings thresholds in RED II, source: JRC (2019)

Plant operation start date	Transport biofuels	Transport renewable fuels of non-biological origin	Electricity, heating and cooling
Before October 2015	50%	-	-
After October 2015	60%	-	-
After January 2021	65%	70%	70%
After January 2026	65%	70%	80%

Finally, new sustainability criteria for forest biomass are specifically introduced, adopting a risk-based approach (Art. 26(6) and (7)). This is to ensure that the production of wood fuel continues to be sustainable and meet the land-use, land-use change and forestry (LULUCF[102]) criteria, in the country of biomass production. Other criteria aim not to cause deforestation or degradation of habitats nor loss of biodiversity and also maintaining or improving the long-term production capacity of the forest. Therefore, operators are to put in place a risk-based approach, taking the necessary steps to minimise the risk of using unsustainable forest biomass. Such an approach relies firstly on showing compliance with national or sub-national laws. If such evidence is not sufficient or cannot be provided, then compliance can be shown with forest management systems in place at the level of the forest sourcing area.

Highlights

- RED II extends the EU sustainability criteria to cover solid and gaseous biomass.
- RED II includes the gradual increase of GHG emission savings from the use of transport biofuels, transport renewable fuels of non-biological origin, as well as biomass fuels used in electricity, heating and cooling production (Table 2).
- RED II provides default values for GHG emission savings and calculation rules.
- New sustainability criteria on forest biomass is introduced, bringing additional safeguards.

[102] The LULUCF Regulation (EU) 2018/841 creates the EU legislative framework for GHG emissions and removals from the land use sector for the period 2021-2030. It integrates emissions credits and debits from agriculture and forestry into the EU 2030 climate and energy framework and establishes, for the first time, a target for this sector.

Chapter 3: The New Deal Consumer Rights and Actors

By Athir Nouicer and Leonardo Meeus

In this chapter, we will introduce the background to the new deal, the new deal consumer rights and the actors that will help consumers to benefit from these rights. The relevant CEP legislative texts are the Electricity Directive (EU) 2019/944 and the Electricity Regulation (EU) 2019/943, as well as some complementary parts of Directive (EU) 2018/2001 (RED II).

1. Background

On average, EU wholesale prices have been steadily decreasing in recent years. However, this reduction was not always passed on to households. During the period 2008-2019, wholesale electricity prices dropped from an average of 60 euros/MWh to 49 euros/MWh. Average EU prices even dropped below 40 euros/MWh in 2016. Yet, the electricity bill increased from an average of 16.4 Eurocent/kWh in 2008 to 21.6 Eurocent/kWh in 2019. The difference between the wholesale electricity prices and the energy component of the retail price for households, called the markup, widens when wholesale prices go down and becomes more narrow when prices go up. Thus, retail markets are more responsive when prices go up. For industrial consumers, the average final electricity prices in the EU had slightly increased from 10.3 Eurocent/kWh in 2008 to 11 Eurocent/kWh in 2019. Figure 11 illustrates the change in electricity prices for household and industrial consumers in the EU.

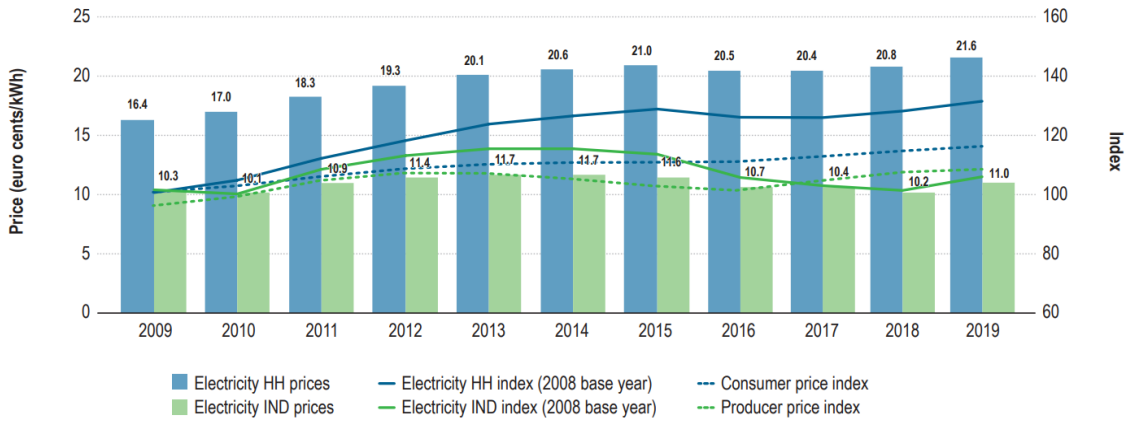


Figure 11: Trends in final electricity prices for household and industrial consumers in the EU – 2008–2019 (euro cents/kWh and index change, 2008 = 100) source: ACER and CEER (2020)

The increase in households electricity prices is due to significant rises in non-contestable charges, namely network charges, taxes and levies (ACER and CEER 2020). The relative share of the energy component, contestable charges, has stabilised over the last couple of years, being at 37% of the final price on average in 2019. The remaining 63% of the electricity bill consisted of non-contestable charges, i.e. the sum of network costs, taxes, levies and other charges. Over the period 2012-2019, while the average EU shares of network charges varied between 27% and 25%, those for renewable energy charges (RES charges), other taxes and charges, and value-added tax (VAT) increased from 32% to 38%. Figure 12 shows the average breakdown of electricity offers for households in EU capital cities.

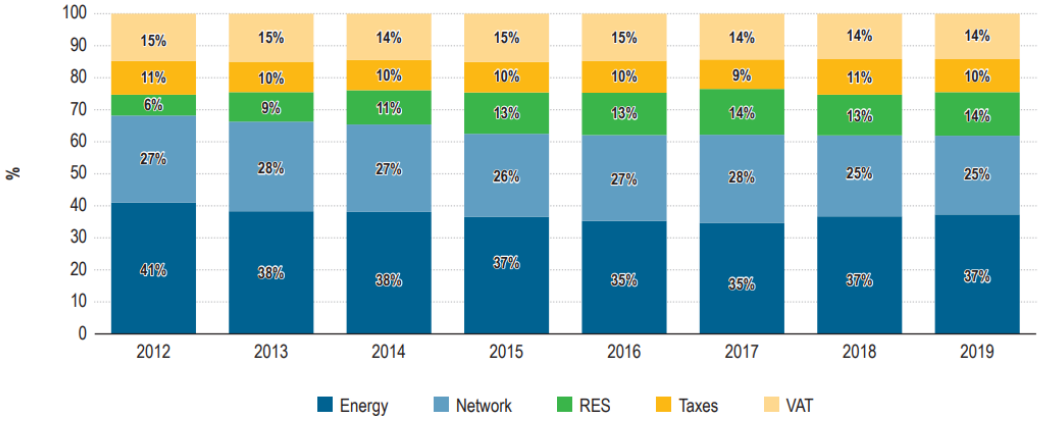


Figure 12: Weighted average breakdown of incumbents' standard electricity offers for households in capital cities – 2012–2019 (%). Source: ACER and CEER (2020)

As illustrated in Figure 13, behind the EU average breakdown of the electricity bill, there are big differences between countries. On opposite sides of the spectrum, we find Malta, where the energy component accounted for 75% in 2019, and Denmark with only 20%. Network charges had the highest share in Luxembourg with 42%, while the lowest shares were in Greece with 13% followed by Portugal and Italy with 15% share each. Germany and Great Britain (GB) had the highest shares of RES charges, being 21% of the electricity bill, while Germany, Hungary and Sweden had the highest percentage of VAT with over 20% of the electricity bill. Finally, Denmark had the highest share of taxes being 35% of the electricity bill.

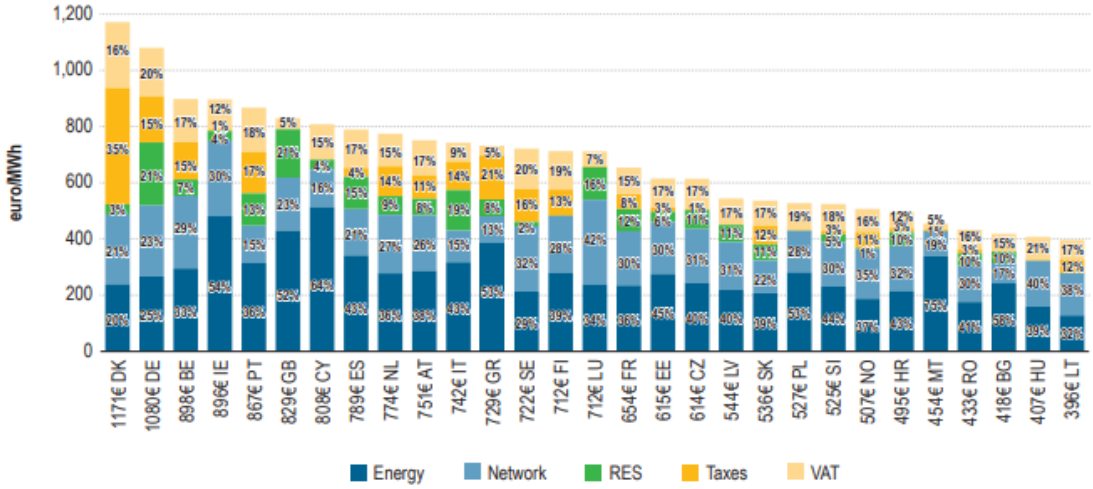


Figure 13: Breakdown of incumbents' standard electricity offers for households in capital cities – November/December 2019, source: ACER and CEER (2020)

In general, the increase in electricity bills for households has affected the annual expenditure on energy for European households. This is particularly crucial for households with low income. This was one of the drivers of the Gilets Jaunes (Yellow Vests) movement in France. Note also that in several EU countries, the industry benefits from exemptions on taxes and levies. For instance, in Germany, the industry is partially exempted from the payment of the EEG surcharge. According to the German Energy Ministry, BMWi (2019), this is a necessary measure to maintain the competitiveness of German companies and to prevent them from migrating to countries with less stringent climate policies (i.e. carbon leakage).

We also experienced the growing climate activists' movement pushing for the acceleration of the energy transition, initiated by young activists and taking the form of school strikes and climate action

marches. The new consumer deal brought by the Clean Energy Package speaks to these activists that want to accelerate the pace of action as well as to those that feel left behind.

2. New Deal Consumer Rights

In this section, we present the framework for self-consumption and the entitlements to a smart metering system and a dynamic price contract. The new rights considered in this section are, in general, contained in Directive (EU) 2019/944 and RED II.[103]

2.1. Framework for Self-Consumption (i.e. prosumers)

In this subsection, we present the background to prosumers in the EU and the provisions for self-consumption (i.e. prosumers).

2.1.1. Background to Prosumers in the EU

The number of prosumers that are active consumers consuming and producing electricity has been increasing in Europe. Industrial consumers are more active participants in electricity markets compared to household ones. They have invested in the co-generation of heat and power, and solar energy systems and wind parks on their industrial sites since the beginning of the liberalisation of the sector. More recently, households also started to invest in these systems. A study prepared by the GfK Belgium consortium (2017) for the European Commission showed that residential solar PV capacity in the EU is expected to reach 32 GW by 2030, which is double the capacity of 2016 (17 GW). Other types of technologies can also be used for self-generation, such as small wind turbines or biomass.

The European Commission (2016f) study on the mainstreaming of RES distinguished between three categories; self-generation, self-consumption and self-consumption that makes use of flexibility. Self-generation is a generation unit placed on the site of a consumer that produces electricity that is fed into the grid. Self-consumption means that the generation unit on the site of a consumer is (partly) consumed on-site. Flexibility can then also come from storage or demand. The study argued that self-consumption could increase the public acceptance of RES and unlock private financing of RES deployment. It also found that there may be benefits stemming from partial independence from the utilities and the consumption of green electricity.

Currently, individual self-consumption is possible in most Member States (CEER 2019). Nevertheless, some barriers may still exist. For instance, the GfK Belgium consortium (2017) study for the European Commission pointed out that the regulatory framework related to compensation for injecting self-generated electricity into the grid varies substantially across the Member States. In 2017, prosumers in some countries were either not allowed to inject electricity into the grid, or not compensated, or under-compensated. Other financial barriers can be related to high capital investments, VAT and possible importation restrictions on enabling technologies. Non-financial barriers could be, for instance, restrictive administrative procedures.

The European Commission (2016d) impact assessment for RED II argued that small scale-self consumption systems need specific support procedures and facilitated access to financing. BEUC (2018) also recommended the simplification of the administrative framework so that consumers can easily decide to invest in small-scale self-generation. For instance, grid connection permitting for consumers can be a complicated process involving waiting time and fees. Where possible, the establishment of a simple notification process for grid connection is particularly supportive.

However, the European Commission (2016d) impact assessment on the market design initiative also reported there had been issues with distribution tariffs. Prosumers have not always paid their fair

[103] The relevant provisions may be deemed to have a 'direct effect' in establishing consumers' rights, at least on a 'vertical' level (e.g. rights of the consumers and suppliers towards Member States/NRAs). These provisions and rights are to be transposed by the Member States by 31 December 2020.

share of distribution network costs, sometimes at the expense of more passive and/or vulnerable consumers.

From a legal perspective, there is a need for a legal definition for the prosumer in EU legislation. The activity is the main criteria to provide a new definition of this type of consumer: the prosumer,[104] an amalgam of the words producer and consumer. So far, the term has been widely used in the electricity sector, focused on the decentralised generation of electricity (Cseres 2018). In this context, it raises the tricky question of whether the prosumer should still be protected by consumer law once they start to produce electricity. According to the European Parliament (2016), an EU definition should distinguish them from other market actors, while preserving their rights as consumers. It adds that the CEP should also include the possibility for collective self- generation schemes.

2.1.2. CEP Provisions for Active Customers

While RED II tackles the legal and administrative barriers for self-consumption, the Electricity Directive (EU) 2019/944, complemented by the Electricity Regulation (EU) 2019/943, address market-related barriers to self-consumption. Together they aim to establish a level playing field for self-consumption.

Directive (EU) 2019/944 provides a new definition for self-consumers, called active customers. Similar to renewables self-consumers, active consumers can participate in wholesale markets to purchase electricity for their own use, and to sell their self-generated electricity. Still, it should not constitute their primary commercial activity.

The active customer definition in Directive (EU) 2019/944 is broader than the definition of renewables self-consumer in RED II, as it includes activities such as the participation in flexibility or energy efficiency schemes. It also covers the jointly acting final customers. Art. 2(8) defines active customers as a *"final customer, or a group of jointly acting final customers, who consumes or stores electricity generated within its premises located within confined boundaries or, where permitted by a Member State, within other premises, or who sells self-generated electricity or participates in flexibility or energy efficiency schemes, provided that those activities do not constitute its primary commercial or professional activity."*

Even though individual and jointly acting final customers fall under the same definition, Member States, following Art. 15(3), may adopt different provisions for the individual and jointly-acting active customers. This is also the case for jointly-acting renewables self-consumers, as introduced in Chapter 2. Any different treatment in national laws is to be duly justified and proportionate.

Regarding billing mechanisms, Art. 15(4) calls for a phase-out of net metering. It is a first step towards more cost-reflective distribution network tariffs. No new rights for schemes that do not account separately for the electricity fed into and consumed from the grid are to be granted after 31 December 2023. In addition, the European Agency for the Cooperation of Energy Regulators (ACER) is to provide a best practice report on transmission and distribution tariff methodologies, according to Art. 18(9) of Regulation (EU) 2019/943. The ACER (2019) practice report on transmission tariff methodologies was published in December 2019.

For active customers owning energy storage facilities, Art. 15(5) sets out specific provisions. They are to have the right to a grid connection within a reasonable time after the request while fulfilling necessary conditions, i.e. balancing responsibility and adequate metering. They are not to be subject to any double charges, including network charges, for the electricity stored and remaining on their premises, or when they provide flexibility services. These customers are also not to be subject to disproportionate licensing requirements. Finally, if technically feasible, they are to be allowed to offer several services simultaneously.

[104] The concept of the prosumer was first developed by Alvin Toffler, arising from the idea that the producer and the consumer tend to merge into the same subject in the technological age (third wave), reducing the classical dichotomy of the industrial age (second wave) between supplier/producer on the one hand and consumer on the other. The first wave (agrarian) was also marked by the prosumer, since people consumed what they produced (Toffler 1980).

Member States are also to foster the demand response (DR) participation of consumers either individually or through aggregation. In the latter case, they are entitled to conclude an aggregation contract without the consent of the customer's electricity supplier, in accordance with Art. 13(1). In addition, Member States are also to ensure that consumers have improved information on electricity bills, suppliers' offers, and options to participate in energy markets. Member States are also to ensure that households and microenterprises, with an expected yearly consumption of below 100 000 kWh, have access to at least one free of charge tool comparing suppliers' offers. Art. 14(1) sets out the requirements to be met by the comparison tools, such as independence from market participants and ownership disclosure, clarity and updated information, as well as accessibility and personal data privacy. This aims to guarantee consumer protection and a consolidation of their position in the electricity supply chain.

Highlights

- An active customer can be both a household and non-household final customer. Also he/she can be final customer, or a group of jointly acting final customers.
- Member States may adopt different provisions for the individual and jointly-acting active customers.
- Any difference in the treatment of jointly-acting active customers is to be proportionate and duly justified.
- Active customer's activities regarding selling self-generated electricity or participating in flexibility or energy efficiency schemes, shall not constitute their primary commercial or professional activities.
- Network tariffs shall be cost-reflective of the system infrastructure, including for active customers.
- Net metering schemes are to be phased out. No new rights for schemes that do not account separately for the electricity fed into and consumed from the grid are to be granted after 31 December 2023.

2.2. New Rights Related to Smart Metering Systems

In this subsection, we present the background and the provisions for smart metering systems.

2.2.1. Background to Smart Metering Systems

Smart metering systems are technological prerequisites that allow consumers to take active control of their consumption. In Annex I to the Electricity Directive 2009/72/EC, we find an obligation for the Member States to roll out smart meters to 80% of consumers by 2020 if positively assessed in the Cost Benefits Analysis (CBA). This was further confirmed by the Energy Efficiency Directive 2012/27/EU and its guidance note, which requires the Member States to consider energy efficiency objectives and household consumers' benefits when setting smart meters minimum functionalities. The Commission's recommendation on energy efficiency 2012/148/EU sets minimum functional requirements for smart meters.

The roll-out of smart metering systems can be pushed by legislation and/or the business models of utilities. In the EU, the roll-out of smart meters has often been driven by the legislation. The roll-out is typically executed by the DSOs. The benefits for DSOs/utilities are improved billing and data collection. DSOs can achieve operational savings from remote readings and the reduction of non-technical losses. DSOs in almost all Member States are in charge of the roll-outs. The benefits for consumers are to be better informed on their consumption, which can lead to changes in behaviour and savings.

Most European countries have performed at least one CBA for the large roll-out of smart meters. According to ACER and CEER (2020) report, nine countries have already reached the 80% target at the end of 2019; Spain, Italy, Malta, Luxembourg, Denmark, Estonia, Norway, Sweden and Finland. Italy is already rolling out the second generation of smart meters, and Finland and Sweden are planning to do so. More than half of the Member States reached a 10% roll-out. However, some Member States postponed their 80% roll-out target from 2020. For instance Austria, that has an 80% roll-out target by the end of 2020, has achieved only a 25% roll-out by the end of 2019. Public acceptance has been an important challenge that may explain such delays in some countries.

Figure 14: Overview of the target periods for a wide-scale rollout of electricity smart meters with at least 80 % of all consumers, source: ACER and CEER (2020)

2.2.2. CEP Provisions Regarding Smart Metering Systems

Directive (EU) 2019/944 paves the way for further smart metering deployment and builds upon the Commission Recommendation 2012/148/EU. It recognises smart metering as a key technology for consumer engagement. Art. 2(23) adds the functionality of measuring the electricity injected in the grid in the smart metering systems definition, being *"an electronic system that is capable of measuring electricity fed into the grid or electricity consumed from the grid, providing more information than a conventional meter, and that is capable of transmitting and receiving data for information, monitoring and control purposes, using a form of electronic communication."*

Smart metering systems can give near real-time feedback on energy consumption or generation. They also facilitate the participation of consumers in electricity markets through demand response schemes. Directive (EU) 2019/944 also underlines the role of smart meters for DSOs, providing them with better visibility on their network and therefore anticipating and reducing operation and maintenance costs. They are also a prerequisite for new services in the future.

Art. 19(2) adds that the Member States are to ensure the deployment of smart metering systems in their territories. Roll-out continues to be subject to a possible CBA. Its principles are laid down in Annex II of the Directive. The Member State or the designated competent authority is to prepare a timetable for up to 10 years. If the CBA is assessed positively, Member States are to ensure that 80% of final customers are equipped with these systems within seven years from the positive assessment date or by 2024 if the Member States have initiated the deployment before 4 July 2019. If the CBA is assessed negatively, Member States are to ensure a revision of this assessment at least every four years, considering technological and market developments. They are to notify to the Commission

about the outcome of their updated CBA. These Member States are also to ensure that every final customer that wants to pay for a smart meter is entitled, upon request, to have one installed or upgraded. The instalment is to be within a reasonable time and no later than four months.

Following Art. 19(6), the Directive provisions regarding smart metering systems apply to future installation and those replacing older ones. Already installed smart meters, or those for which the start of work began before 4 July 2019, may remain in operation if they meet the minimum requirements. If not, they are to be phased out by 5 July 2031.

Highlights

- Directive (EU) 2019/944 highlights the role of smart-meters for both empowering consumers and providing DSOs with better visibility on their network. They are also a prerequisite for new services in the future.

- Member States are to ensure the deployment of smart metering systems in their territories. The roll-out may be subject to a CBA analysis.

- In case of a positive CBA: Member States are to roll-out to at least 80% of final customers within 7 years from the date of the positive CBA, or by 2024 for the Member States that have started the systematic deployment before 4 July 2019.

- In case of a negative CBA: customers are entitled to the installation or the upgrade of a smart meter with a set of defined minimum functionalities on request and under fair and reasonable conditions within 4 months, while bearing associated costs.

2.3. New Rights Related to Dynamic Electricity Price Contracts

In this subsection, we introduce the background and the provisions that promote the development of dynamic electricity price contracts.

2.3.1. Background to Dynamic Electricity Price Contracts in the EU

Dynamic electricity price contracts are closely related to smart metering systems roll-outs and their functionalities. Indeed, smart metering systems pave the way for more advanced forms of pricing electricity in retail markets.

As illustrated in Figure 15, we can distinguish between three types of dynamic pricing:

- Time-of-use pricing: where electricity prices vary depending on the time of day, or the weekday/weekend. These types are used in 13 EU countries.
- Real-time pricing: retail electricity prices are matched more closely with wholesale prices. They are available in 10 EU countries.
- Critical peak prices: a higher electricity price is charged in specific periods that correspond to consumption peaks at the system level. They are available in Denmark, France, Latvia and Slovenia.

Some countries also have products that rely on the remote control of home appliances. Note that remote control also became a functionality that is provided by smart metering systems in some Member States.

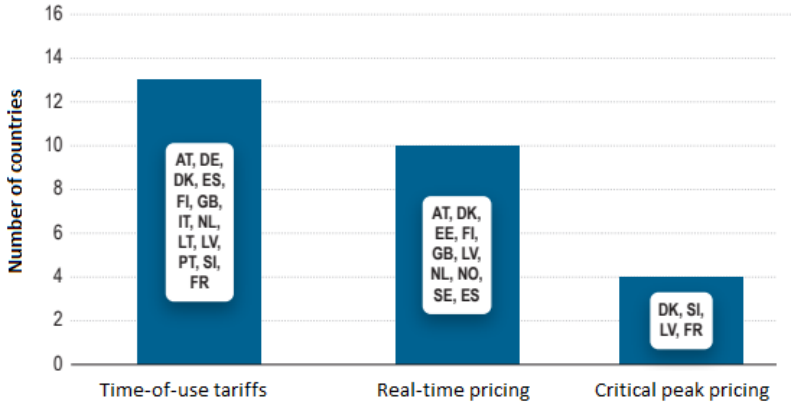


Figure 15: Dynamic electricity contracts available in EU countries – 2019, adapted from ACER and CEER (2020)

2.3.2. CEP Provisions for Dynamic Electricity Price Contracts

Directive (EU) 2019/944 requires Member States to assess the potential for making electricity price contracts more dynamic. Art. 2(15) defines a dynamic electricity price contract according to the most ambitious option; *"an electricity supply contract between a supplier and a final customer that reflects the price variation in the spot markets, including in the day-ahead and intraday markets, at intervals at least equal to the market settlement frequency."* Following Art. 8(4) of Regulation (EU) 2019/943, the market settlement will evolve from hourly or half-hourly settlements towards 15 minutes by 1 January 2021, with possible derogation until 31 December 2024.

Dynamic, therefore, means that retail prices will become closely linked to spot prices in wholesale markets. Of course, consumers will still need to pay a retail margin for the services provided by suppliers, such as balancing responsibility and billing. According to CEER (2020), the add-on can take different forms, such as a fixed sum per month or an amount added to the kilowatt-hour price that is set by the wholesale market.

In accordance with Art. 11 of Directive (EU) 2019/944, all final customers with a smart meter installed are to have the right to conclude a dynamic electricity price contract with at least one supplier in their market and with every supplier with more than 200,000 final customers. Suppliers also need to get consumers' consent before switching them towards a dynamic electricity price contract (Art. 11(3)).

Member States are to ensure that consumers are fully informed by electricity suppliers regarding the opportunities, costs and risks associated with dynamic contracts. This includes information regarding the adequate type of meter needed for customers. Regulatory authorities are to monitor market developments and assess the potential risks that new products and services may entail, as well as possible abusive practices, following Art. 11(2).

Continuous monitoring of the dynamic price contract is foreseen. The Member States, or their regulatory authorities, are to monitor and publish an annual report for at least ten years after the introduction of such contracts. These reports are to contain the main developments of dynamic electricity price contracts as well as the impact on consumers' bills.

Art. 18(7) of Regulation (EU) 2019/943 also states that regulatory authorities are to consider time-differentiated network tariffs when fixing or approving network tariffs in the Member States with smart metering systems.

Highlights

- The Member States are to assess the potential for making electricity price contracts more dynamic.

- The new definition of DP excludes the less granular pricing methods. Retail prices will become closely linked to spot prices in wholesale markets reflecting price variations at intervals at least equal to the market settlement frequency which is to be at 15-minute intervals by 2021.

- The Member States shall ensure that final customers with a smart meter can request to conclude a dynamic price contract with at least one supplier and with every supplier with more than 200, 000 final customers.

- The Member States, or their NRAs, shall publish an annual report on the main developments of DP contracts for at least ten years.

- Incentives are to be provided for the introduction of dynamic time differentiated network tariffs.

3. The New Deal Actors

In this section, we introduce the actors that will help us to benefit from our new consumer rights, i.e. (independent) aggregators, energy communities as well as collective self-consumption schemes and peer-to-peer (P2P) trading platforms.

3.1. (Independent) Aggregators

In this subsection, we introduce the background and CEP provisions for (independent) aggregators.

3.1.1. Background to Aggregation

Aggregators help customers to valorise their flexibility in electricity markets. This can be demand-side flexibility as well as generation or energy storage assets. An independent aggregator refers to an operator combining multiple customers' loads or generated electricity, for its sale or purchase, and that is not affiliated to the customer's main supplier (or a balance-responsible party (BRP)).

Figure 16 illustrates the number of aggregators, including independent aggregators and electricity suppliers that can also offer flexibility services. Among EU countries, the GB market is the most competitive, with circa 45 active players (SmartEn 2019). Suppliers have been slow in taking up the role of aggregator, which is why independent aggregators emerged. Independent aggregators were often in conflict with suppliers because their roles and responsibilities were not clearly defined. They typically needed approval from their customers' supplier (or BRP), and they did not always have access to wholesale markets or balancing markets. France was an early exception. The NEBEF mechanisms in France allowed easy market access for independent aggregators and included a standardised compensation scheme to settle the conflict between BRPs and independent aggregators. In 2020, the financial compensation was 40,81 and 57,20 Euros per MWh to pay for off-peak and peak hours (RTE 2020). In other EU countries, independent aggregators had to acquire the explicit consent of the consumer's supplier to enter into the market. A clear framework for compensation payments was often also missing so that it had to be negotiated between the supplier/BRP and the independent aggregator. Consequently, the traditional supplier could block independent aggregators from entering the market.

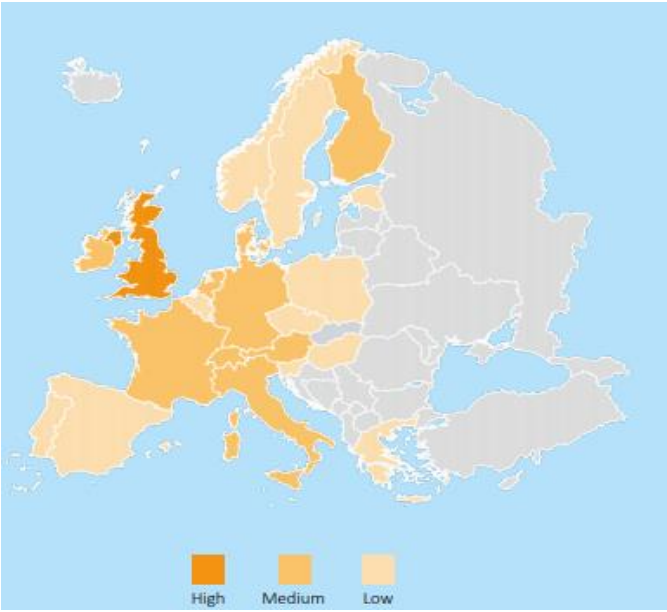


Figure 16: Number of demand-side flexibility stakeholders (aggregators and suppliers), source: SmartEn (2019)

The Smart Grid Task Force (2015) report for the European Commission highlighted the need to remove the obligation for aggregators to negotiate their portfolio with the consumer's BRP or supplier. The European Commission (2016d) impact assessment of the market design initiative also called for the harmonisation of regulatory frameworks for independent aggregators and demand response across the EU. The report underlines the importance of making demand-side flexibility available to TSOs and DSOs to help balance the system and manage congestion in transmission and distribution grids.

3.1.2. CEP provisions for Aggregation

In what follows, we discuss the consumers' rights related to aggregator contracting and the rules for aggregators' market participation.

Consumers' Right for Aggregator Contracting

Art. 13(1) of Directive (EU) 2019/944 says that the Member States are to ensure that *"all customers are free to purchase and sell electricity services, including aggregation, other than supply, independently from their electricity supply contract and from an electricity undertaking of their choice."* In addition, where a final customer wants to conclude an aggregation contract, it is to be done without the consent of the final customer's electricity undertakings or supplier.

Aggregators have an obligation to fully inform customers of the terms and conditions of the aggregation contracts. They are also to communicate to their customers, upon request, *"all relevant demand response data or data on supplied and sold electricity free of charge at least once every billing period."* Finally, Member States are to ensure that customers are not treated in a discriminatory way, concerning technical and administrative procedures or charges by their supplier if they opt for a contract with an independent aggregator.

For aggregation contracts termination, the related rules were included in Art. 12. They are similar to contract termination rules for electricity suppliers. The switching process from an aggregator is to be concluded within a maximum of three weeks. By no later than 2026, the switching process is to take no longer than 24 hours and be possible on any working day. Member States are to ensure that no switching-related fees are charged to at least household customers, microenterprises and small enterprises. Derogation may be given, allowing aggregators to charge contract termination fees to their customers. They are to be proportionate and not higher than the aggregator's direct economic loss from contract termination.

Rules for Aggregators' Market Participation

The rules regarding independent aggregators' market participation are set out in Art. 17 of Directive (EU) 2019/944. Art. 17(1) states that the Member States are to allow and foster demand response participation through aggregation in all electricity markets. TSOs and DSOs are to conduct non-discriminatory behaviour towards market participants engaging in demand response aggregation when procuring ancillary services.

Member States are to ensure, according to Art. 17(3), that their relevant regulatory frameworks include at least the following elements:

- Rights for aggregators to enter all electricity markets, without the consent of other market participants;
- Transparent and non-discriminatory rules for the roles and responsibilities of all undertakings and customers, as well as the procedures for the exchange of data between aggregators and other electricity undertakings;
- An obligation for aggregators to be financially responsible for the imbalances that they cause: they are to be BRP themselves or delegate this responsibility, following Art. 5 of Regulation (EU) 2019/943;
- A provision preventing suppliers from charging final customers undue payments, or penalties if they contract with an independent aggregator;
- A conflict resolution mechanism between aggregators and other market participants that includes responsibility for imbalances.

Art. 17(4) adds that *"Member States may require electricity undertakings or participating final customers to pay financial compensation to other market participants or to the market participants' balance responsible parties, if those market participants or balance responsible parties are directly affected by demand response activation."*

The financial compensation is not to create a market-entry barrier for aggregators. It is to be strictly limited to cover the related costs incurred by the suppliers or the suppliers' BRPs. The method for calculation may take into account the benefits provided by aggregators to the market. The calculation is to be subject to a regulatory authority or other competent national authority's approval.

Finally, the Member States are to ensure that regulatory authorities, or in some cases TSOs and DSOs in cooperation with market participants, set out the technical characteristics of the participation of demand response, in line with Art. 17(5).

Highlights

Consumers contracting rights:

- Where a final customer wants to conclude an aggregation contract, it is to be done without the consent of the final customer's electricity undertakings or supplier.
- Aggregators are obliged to fully inform customers regarding the terms and conditions of the aggregation contracts and to communicate the relevant data to their customers, upon request.
- The switching process from an aggregator is to be concluded within a maximum of three weeks. This will converge towards 24h by no later than 2026.

Rules for aggregators' market participation:

- Aggregators can participate in the market without consent from other market participants, such as the customer's supplier.
- Aggregators are to be financially responsible for the imbalances that they cause. They are to be BRP or delegate this responsibility.
- The Member States may require aggregators to pay financial compensation to other market participants or their BRP, if they are directly affected by demand response activation.

3.2. Energy Communities

In this subsection, we present the background and the CEP provisions for energy communities.

3.2.1. Background to Energy Communities

Energy communities are where citizens take collective actions. Energy communities can be very diverse, yet they usually have some form of a legal entity. A study by RESCOOP estimates that there are about 3400 energy communities in the European Union (Vansintjan 2019). A forecast of the potential of an energy citizen in the EU that is widely referred to is the study developed by Kampman et al. (2016). It states that by 2050, 45% of renewable energy production could be from citizens and 37% of that production could come through from collective projects, such as energy communities. Figure 17 illustrates the distribution of energy community initiatives in leading EU countries.

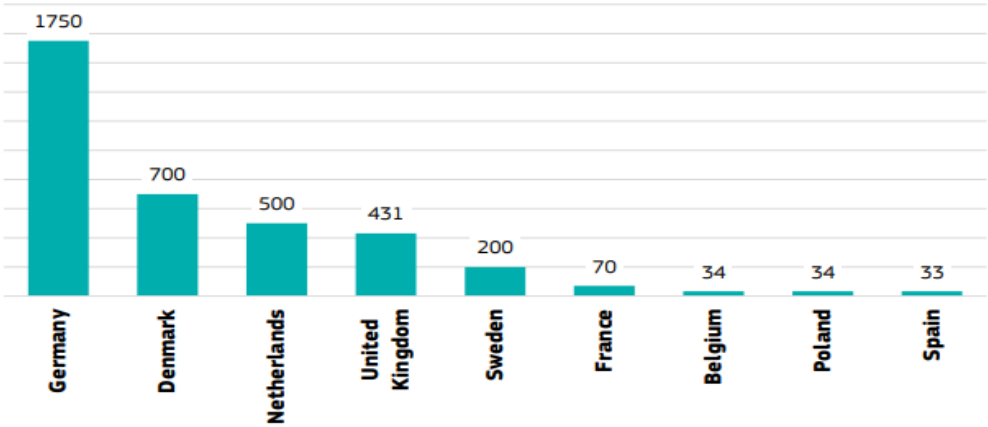


Figure 17: Number of community energy initiatives in nine Member States, source: Caramizaru and Uihlein (2020)

Energy communities are often citizen cooperatives. They typically take up the role of green supplier, and/or investor in renewable energy projects. Some energy communities have also focused on energy efficiency awareness campaigns. In exceptional cases, they have also taken over the ownership of the distribution grid in their community. A famous example is Schönau, where an activist successfully mobilised his community to take control of the distribution grid.

The European Commission (2016f) study on mainstreaming RES explains that the difference in the development of energy communities across Europe can be partly explained by regulatory barriers, but also partly by cultural differences. The study also discusses the benefits of energy communities, such as public acceptance of renewable energy projects, the unlocking of capital, and enabling collective action where individual action is not possible. The study also says that over-incentivising communities at the expense of others should be avoided.

The (European Commission 2016c) impact assessment on RED II states that there are existing barriers for energy communities impeding their development across the EU. The rules, adopted by the different Member States individually, do not enable communities to buy-in into the energy transition. The impact assessment also highlights the need for an EU definition of energy communities.

3.2.2. CEP Provisions for Energy Communities

Directive (EU) 2019/944 defines, in Art. 2(11), a citizen energy community (CEC) as a legal entity that:

"(a) is based on voluntary and open participation and is effectively controlled by members or shareholders that are natural persons, local authorities, including municipalities, or small enterprises; (b) has for its primary purpose to provide environmental, economic or social community benefits to its members or shareholders or to the local areas where it operates rather than to generate financial profits; and

(c) may engage in generation, including from renewable sources, distribution, supply, consumption, aggregation, energy storage, energy efficiency services or charging services for electric vehicles or provide other energy services to its members or shareholders."

RECs and CECs share the requirement of a legal entity to be established with specific governance and control, the voluntary aspect, as well as being value-driven. CEC activities are limited to the electricity sector but may include generation from non-RES, as well as other non-generation activities. Unlike RECs, CECs are not geographically limited. They can be local, but proximity is not part of the definition.[105]

The CEC framework aims to create a level playing field for this new market actor. In accordance with Art. 16 of Directive (EU) 2019/944, Member States are to provide an enabling regulatory framework for CECs, which ensures that:

"(a) participation in a citizen energy community is open and voluntary;

(b) members or shareholders of a citizen energy community are entitled to leave the community, in which case Article 12 applies;

(c) members or shareholders of a citizen energy community do not lose their rights and obligations as household customers or active customers;

(d) subject to fair compensation as assessed by the regulatory authority, relevant distribution system operators cooperate with citizen energy communities to facilitate electricity transfers within citizen energy communities;

(e) citizen energy communities are subject to non-discriminatory, fair, proportionate and transparent procedures and charges, including with respect to registration and licensing, and to transparent, non-discriminatory and cost-reflective network charges in accordance with Article 18 of Regulation (EU) 2019/943, ensuring that they contribute in an adequate and balanced way to the overall cost sharing of the system."

Besides, Member States are to ensure, according to Art. 16(3), that CECs are able to access all electricity markets, directly or through aggregation. They are not to face any discriminatory treatment concerning the different activities they may undertake, i.e. as final customers or in production, supply, system operation or aggregation. They are to be financially responsible for the imbalances they may cause following Art. 5 of Regulation (EU) 2019/943. Finally, they are also to be entitled to share the electricity produced within the community without prejudice to their rights and obligations as final customers.

Additionally, Member States may provide in the CEC regulatory framework the opening of CECs to cross-border participation. Member States may also provide the right to CEC to own, establish, purchase or lease distribution networks and to autonomously manage them.

[105] In short, energy communities are explicitly defined twice in the CEP: in RED II, where RECs cover only renewable energy but are not limited to electricity, and in Directive (EU) 2019/944, where CECs cover only electricity, but are not limited to renewable sources. If the assets owned by a community are located in proximity to its members and generate electricity only from renewable sources, then the community is both a REC and a CEC. However, some opinions question the convenience of having two concepts instead of one, especially bearing in mind the renewable energy targets and the fact that Member States have to transpose such provisions into national laws in a way that provides for the intended "enabling framework." Indeed, you also may have energy communities that do not fully fall under the definition of neither CEC nor REC. For instance, Elektrizitätswerke Schönau (EWS), one of the largest energy community initiatives, is involved in natural gas production, distribution and supply (Caramizaru and Uihlein 2020). These gas activities would not fit with the definitions of a CEC nor of a REC.

Highlights

- Member States are to provide an enabling regulatory framework for CECs, where participation is voluntary and open.

- Members or shareholders of a CEC are not to lose their rights and obligations as household customers or active customers.

- The decision-making power within a CEC should be limited to those members or shareholders that are not engaged in large scale commercial activity and for which the energy sector does not constitute a primary area of economic activity.

- CECs should be subject to appropriate network charges for the electricity consumed from an external network.

- Member States may decide that CECs are open to cross-border participation. They may also provide the right for CECs to own, manage, establish, purchase or lease the distribution network in their area of operation.

3.3. Collective Self-Consumption and Peer-to-Peer Platforms

In this subsection, we introduce the background and the CEP provisions for collective self-consumption and P2P trading.

3.3.1. Background to Collective Self-Consumption and Peer-to-Peer Platforms

Collective self-consumption can, but does not have to, take place in an energy community. Energy communities imply a certain organisation, while collective self-consumption can be organised differently. P2P trading platforms can also enable collective self-consumption.

Frieden et al. (2019) observe that the introduction of regulatory frameworks for collective self-consumption typically started later than frameworks for individual self-consumption, but earlier than frameworks for energy communities in the countries that already have frameworks, such as Austria, France and Germany. The existing regulatory frameworks mostly refer to multi-family houses as well as commercial buildings via private grids, where energy can be shared between the members without the direct involvement of the electricity suppliers (CEER 2019).

P2P trading platforms allow prosumers to exchange their self-generated (renewable) electricity with other prosumers or consumers. There are several initiatives of P2P trading that use different technologies. Blockchain is one of them and is used to certify energy transfers. It is at the forefront of the electricity sector digitalisation. The Benedettini et al. (2019) report for the European Commission argued that more regulatory clarity is needed for these platforms. It also recommends the adoption of a new market design directive for the period 2025-2030 which would address emerging issues arising from the development of P2P trading, virtual power plants and the flexibility services procurement at distribution level.

3.3.2. CEP Provisions for Collective Self-Consumption and Peer-to-Peer Platforms

Directive (EU) 2019/944 includes the jointly acting final customers in the definition of active customers, as stated in 3.2.1, while RED II defines the individual and collective renewables self-consumers separately. Both directives allow Member States to differentiate between these two categories due to their different characteristics and business models (Art. 15(3) of Directive (EU) 2019/944 and Art. 21(4) of RED II). Yet, such differentiation is to be proportionate and duly justified. Indeed, it is somehow understandable as gradual implementation may be needed for collective self-consumption, especially for the Member States that did not have a framework for individual self-consumption. They have to consider the architecture of the market, settlement systems, as well as the state of the electricity networks.

RED II provides the right for renewables self-consumers to engage in P2P energy trading. Indeed, Art. 21(2) of RED II allows renewables self-consumers, individually or through aggregators, to sell their excess production of renewable electricity to electricity suppliers, through renewables power purchase agreements, as well as via P2P trading arrangements. P2P trading of renewable energy is defined, in Art. 2(18) of RED II, as the sale of renewable energy between market participants.[106] In general, the RED II allows a range of market participants to engage in P2P trading of renewable energy. It is therefore not restricted to any type of customers. However, any energy must originate from renewable sources. For renewable electricity trading, this could cause some issues when green and grey electricity is mixed, e.g. in a storage unit.

In addition, remarkably, the definition limits the scope of P2P trading to "*contract[s] with pre-determined conditions governing the automated execution and settlement of the transaction*," colloquially known as 'smart contracts'. This is could be seen as a unique novelty in the renewable energy trading framework. The RED II definition also contains a normative element, i.e. the right to conduct P2P trading shall be without prejudice to the rights and obligations of the parties involved as final customers, producers, suppliers or aggregators.

Moreover, P2P energy trading can take place directly between market participants. Alternatively, this activity may be outsourced to a third party, such as an aggregator. In this case, this third party must be certified, under conditions to be set by the Member States. One wonders, however, how this P2P trading would be different from other activities performed by market participants. A separate certification, therefore, seems burdensome, especially when RED II puts no general certification requirements in place.

Considering the extensive scope of the rights established by the fourth Electricity Directive, it is difficult to determine the added value of the concept of P2P renewables trading included in the RED II. Particularly, the notion of P2P does not seem to limit the eligible parties to engage in such a transaction. Only the reference to smart contracts introduces a unique novelty to the renewable energy trading framework.

Highlights

- Member States may differentiate between individual and collective self-consumption in a proportionate and duly justified way.
- RED II provides the right for renewables self-consumers to engage in P2P energy trading. Renewables self-consumers can also sell their excess production of renewable electricity to electricity suppliers or through renewables power purchase agreements.
- RED II allows a range of market participants to engage in P2P trading of renewable energy. It is therefore not restricted to any type of customers.

[106] A market participant, according to Art. 2(25) of Regulation (EU) 2019/943, means *"a natural or legal person who buys, sells or generates electricity, who is engaged in aggregation or who is an operator of demand response or energy storage services, including through the placing of orders to trade, in one or more electricity markets, including in balancing energy markets."*

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