EUROPEAN INTEGRATION AND ENERGY POLICY: THE INCLUSION OF NUCLEAR ENERGY AND NATURAL GAS IN THE EU TAXONOMY

Touko Närhi
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Political Science
Department of Social Sciences and Philosophy
University of Jyväskylä
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Tiivistelmä – Abstract

Tutkimuksen päätavoitteena on analysoida, miten ydinvoiman ja maakaasun integroiminen EU-taksonomiaan heijasteli jäsenvaltioiden, erityisesti Saksan ja Ranskan, preferenssejä, sekä selvittää Euroopan komission rooli tässä prosessissa. Tutkimuksessa tarkastellaan myös EU-taksonomian ja EU:n energiapolitiikan välistä suhdetta, jonka komissio on kieltänyt.

Gradun aineiston muodostavat pääasiassa EU:n lainsäädäntötekstit, erityisesti Taksonomia-säädös (2020/852) ja -ehdotukset, komission delegoitu asetus (Complementary Climate Delegated Act) (2022/1214), sekä muut relevantit EU-asiakirjat ja jäsenvaltioiden kannanotot.

Tutkimuksen teoreettinen viitekehys pohjautuu Andrew Moravcsikin liberaaliin intergovernmentalismiin, joka selittää EU:n päätöksentekoa jäsenvaltioiden preferenssien ja neuvotteluiden kautta. Teorian mukaan taloudellisten suurvaltojen vaikutusvalta EU-päätöksenteossa tulisi olla korostettua taloutta koskevissa asioissa. Tämän vuoksi tutkimuksessa painotetaan Saksaa ja Ranskaa. Käytän Mark A. Pollackin kuvausta komission itsenäisestä toimijuudesta ja sitä edistävistä tekijöistä. Lisäksi käytän venue shopping -käsitettä kuvailemaan komission toimijuutta. Gradun tutkimusmenetelmä on kvalitatiivinen ja pohjautuu asiakirja-analyysiin.

Tulosten perusteella maakaasun ja ydinvoiman sisällyttäminen EU-taksonomiassa oli vahvin preferenssi jäsenvaltioiden keskuudessa, sekä myös komissio edisti näiden aktiviteettien sisällyttämistä proaktiivisesti. Komission kriteerit ydinvoimalle ja maakaasulle eivät kuitenkaan heijastaneet Saksan, Ranskan, tai muiden jäsenvaltioiden preferenssejä, mikä indikoi komission itsenäistä toimijuutta. Tähän vaikuttivat jäsenvaltioiden poikkeavat preferenssit, päätöksentekomenettely, sekä komission strateginen toimijuus. Tulosten valossa ydinvoiman ja maakaasun sisällyttäminen EU-taksonomiaan tietyillä ehdoilla tukee EU:n energiapolitiikan tavoitteita.

Asiasanat – Keywords EU Taxonomy, European Integration, Energy Policy, Nuclear energy, Natural Gas

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Muita tietoja – Additional information

List of Abbreviations

CCDA	Complementary Climate Delegated Act
CDA	Climate Delegated Act
COM	The European Commission
Council	The Council of the European Union
CRM	Capacity Remuneration Mechanism
CSRD	Corporate Sustainability Reporting Directive
DG ENV	Directorate-General for Environment
DG FISMA	Directorate-General for Financial Stability, Financial Services and Capital Markets Union
DNSH	Do No Significant Harm
EP	European Parliament
JRC	Joint Research Centre
LCA	Lifecycle Assessment
LI	Liberal Intergovernmentalism
MFF	Multiannual Financial Framework
MSEG	Member States Expert Group
PSF	Platform on Sustainable Finance
QVM	Qualified Majority Voting
RES	Renewable Energy Source
RQVM	Reinforced Qualified Majority Voting
RRQVM	Reversed Reinforced Qualified Majority Voting
SFDR	Sustainable Finance Disclosure Regulation
TEG	Technical Expert Group
TSC	Technical Screening Criteria

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1 INTRODUCTION

1.1 Research Outline and Thesis Objectives

The European Green Deal is EU's overarching green growth strategy for making Europe the world's first carbon-neutral block by 2050. Set out as the first political priority of Ursula von der Leyen's Commission, the Green Deal also targets of at least 55% reduction of emissions by 2030 compared to 1990 levels, as set out in the EU's Climate Law. (COM 2019; Von der Leyen 2019; COM 2021;)

The Commission has committed to mobilize at least €1 trillion in sustainable investments over the next decade. The EU's Sustainable Finance Framework plays a key role in achieving this. According to the Commission's 2018 communication, a common language is needed for sustainable finance, "to define what is sustainable and identify areas where sustainable investment can make the biggest impact." (COM 2018).

The EU Taxonomy is a classification system that sets out criteria for sustainable economic activities needed for the climate transition, and it plays an integral part in achieving the climate and energy objectives of the European Green Deal (COM 2020). The EU Taxonomy is used to steer private and public investments into sustainable economic activities.

The eligibility of controversial energy sectors, such as nuclear energy and natural gas in the EU Taxonomy inflicted massive political turmoil amongst the EU institutions, epistemological community, and a wide range of stakeholders. While some recognized the importance of nuclear and natural gas in the energy transition, others viewed it as a textbook case of

greenwashing. This debate reflects the varying perspectives on the role of these energy sources in transition process.

This thesis focuses on the political procedures governing the implementation of nuclear and gas activities within the EU Taxonomy. More specifically, it seeks to examine the roles played by both the Member States and the Commission in this process. This study is centered on European integration, with a specific focus on whether the incorporation of nuclear and gas activities within the EU Taxonomy aligns with the preferences of Member States, notably Germany and France, or reflects independent agency by the Commission.

The linkage between the EU's energy policy and the EU Taxonomy is also explored in the research. As shown in the last section of this paper, the Commission repeatedly denied policy dimension of the EU Taxonomy, while many of the Member States insisted that the Commission should not exceed its mandate over the energy article in the treaty of the European Union (article 194(2) TFEU). My aim is to establish a connection between EU's long-term energy policy objectives and the Taxonomy project. The last research question provides potential motives for the Commission's adopted approach in regards with the treatment of nuclear and gas activities in the EU Taxonomy.

The purpose of this research is twofold: to study European integration in the context of the EU Taxonomy and to assess its links to EU's energy policy.

The aims and foci of the thesis are pursued through three interlinked research questions:

1. **How did the outcome of the EU Taxonomy legislative process leading up to the Complementary Climate Delegated Act (CCDA) reflect the preferences of Member States?**

2. **If the Commission demonstrated independent agency apart from Member States' preferences, what factors contributed to the realization of that agency?**

3. **Does the EU Taxonomy have implications to the EU's energy policy?**

1.2 Research Data and Statement of Methods

The data for this research is primarily based on official EU documents and legislative texts. The main corpus consists of the legislative proposals by the Commission and the Council for the Taxonomy Regulation and the final adopted regulation; the draft and final version of Climate Delegated Act (CDA); and the draft and final version of Complementary Climate Delegated Act (CCDA), which introduced technical screening criteria (TSC) for specific nuclear and gas activities to be eligible under the EU Taxonomy. These sources are complemented by inter-institutional documents and press releases from the EU institutions, statements by the Member States, the Commission's expert groups (HLEG, TEG, PSF) and the Member States expert group on sustainable finance (MSEG). The secondary sources consist of various news articles. The data and analysis used in this study focuses on the EU Taxonomy process up to the inclusion of nuclear and natural gas and will not analyze the impact of Russia's war of aggression against Ukraine on EU's energy policy.

My research method is qualitative and based document analysis, which involves systematical examination and interpreting wide range of materials, such as legislative proposals and official statements, to derive insights and patterns. (Bowen 2009, p.29). The material will be analyzed through theoretical framework established in chapter 3, which makes my analysis deductive. A case study methodology, employed in this research, focuses on an in-depth investigation of the EU Taxonomy process, in order to uncover nuanced power dynamics between Member States and the Commission. (Priya 2021, p.7-8.) The combination of these methods allows for a comprehensive exploration of the EU decision-making in the context of EU Taxonomy.

1.3 Outline of the thesis

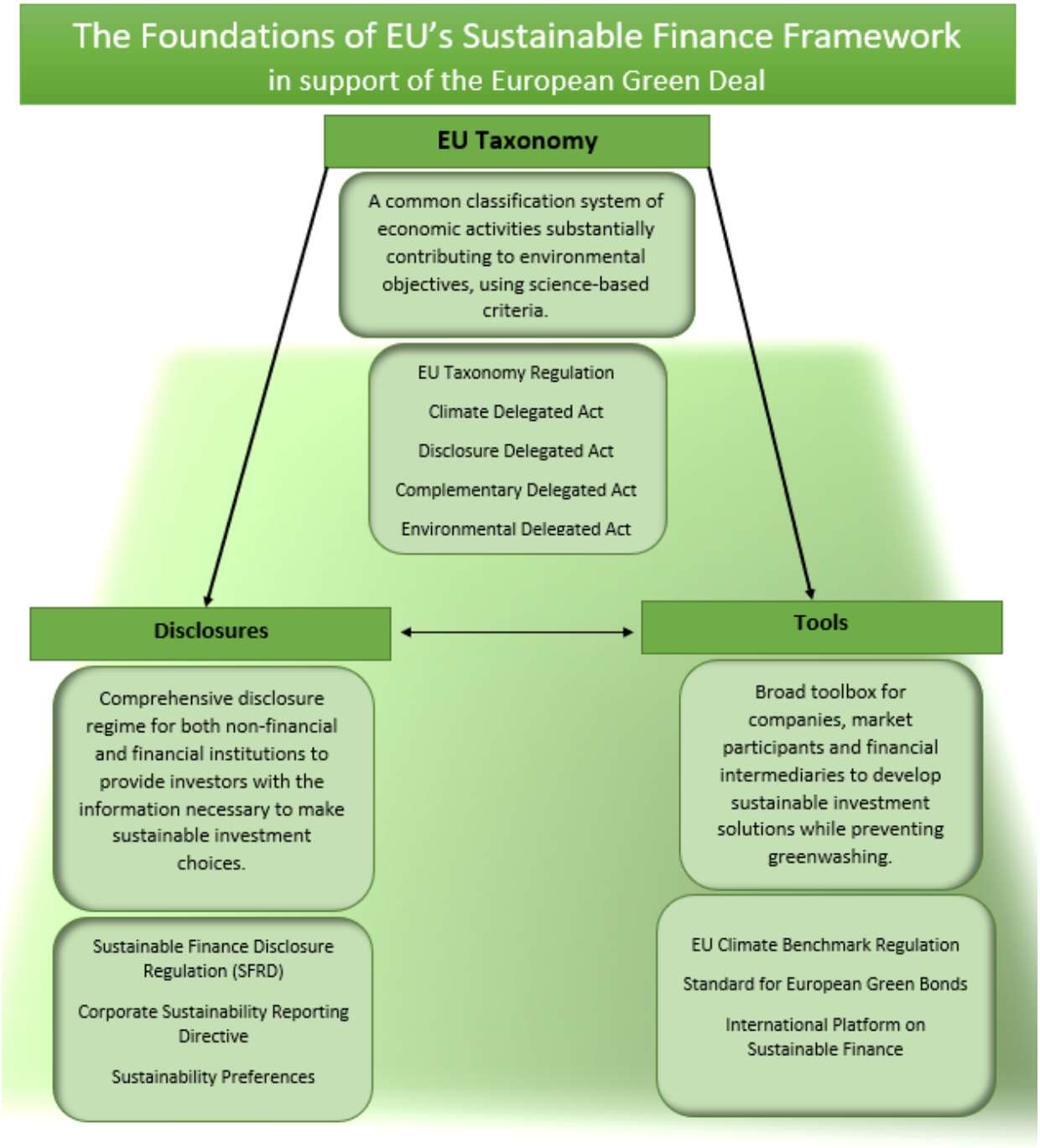
This research paper is organized into four chapters. In chapter 2, I will layout a general overview of the Sustainable Finance Framework for providing necessary context for the thesis. Chapter 3 introduced the theoretical framework used to guide the analysis. Within this framework, I will introduce hypotheses grounded in the theory of liberal intergovernmentalism, which forms the core theoretical basis for this study. Additional theory of the Commission's independent agency and the concept of venue shopping is used to guide my analysis.

In the chapter 4 the legislative process from the initiation of the EU Taxonomy project up until the adopted CCDA will be mapped and analyzed. In chapter 5, the analysis is extended and the answers for the two research questions are provided based on the theoretical framework. The last research question is fully addressed and analyzed in chapter 6. The reason for adopting this multifaceted approach lies in the fact that the preceding research questions establish the essential foundation for the examination of the final research question. The agency of the Commission must be established before potential motives of the Commission related to EU's energy policy can be addressed.

2 EU SUSTAINABLE FINANCE FRAMEWORK

This chapter outlines the EU Sustainable Finance Framework in order to establish the connection of EU Taxonomy to other interrelated legislations. This demonstrates the impacts of the EU Taxonomy on the financial sector and to companies. The overview provides the basis for a theoretical assumption used in the first research question.

Table 1. Sustainable Finance Framework.



1. Own illustration based on (COM 2021a) and (COM n.d)

For a working definition of sustainable finance, I adopt explanation provided by Oliver Guersent in 2018. Guersent acted as then as the directorate general in the Commission's department (DG FISMA) charged with the EU Taxonomy:

> Sustainable finance means basically two things we have to do: mobilize investments and reorientate them to more sustainable investments. We also must mainstream sustainability, we have to embed climate and environmental risks into the risk management of companies, particularly financial companies. We need to give investors, meaning you, me, everybody, a more reliable information about these risks. This is where we intervene and facilitate through appropriate framework. [transcription edited for clarity] (Oxford-SmithSchool 2018, 16:44-17:38.)

2.1 EU Taxonomy

According to the Commission, the EU Taxonomy is a science-based green classification system that "translates the EU's climate and environmental objectives into criteria for specific economic activities for investment purposes". (COM 2021b, p.1.; COM 2022, p.1.) It establishes criteria for economic activities to be considered sustainable under the scope of EU Taxonomy (COM 2023).

The political objective for EU Taxonomy is to support the objectives of the European Green Deal and help scale up investment in green projects necessary for its implementation. Its purpose is to create a framework for investors and companies to support their climate and environmental transition, and to raise finance for the transition, while avoiding greenwashing. (COM 2021b, p.1-2.; COM 2022, p.1.)

The EU Taxonomy Regulation came into force on 22 June 2020. The environmental objectives set out in the article 3 of the EU Taxonomy Regulation (2020/852) are:

a) Climate change mitigation.
b) Climate change adaptation.
c) The sustainable use and protection of water and marine resources.
d) The transition to a circular economy.
e) Pollution prevention and control.

f) The protection and restoration of biodiversity and ecosystems.

For economic activity to be considered eligible under EU Taxonomy, it must fulfill the following requirements:

- Contributes substantially to one or more of the environmental objectives.
- Does not cause significant harm to any of the environmental objectives.
- Is carried out with the set of minimum safeguards.[1]
- Complies with the technical screening criteria (TSC) established by the Commission. (ibid.)

The Commission is empowered to adopt delegated acts by which the TSC for the substantial contribution to the environmental objectives, and for the do no significant harm (DNSH) principle are put in place. The TSC are subject to reviews based on scientific and technological developments (Article 19). Thus far, the Commission has adopted four delegated acts which are:

- Climate Delegated Act (adopted on 9. December 2021)
  - Defines the TSC for economic activities that can make a substantial contribution to climate change mitigation and climate change adaptation.
- Disclosure Delegated Act (adopted on 10. December 2021)
  - Sets out the reporting obligations and timelines for financial and non-financial undertakings.
- Complementary Climate Delegated Act (adopted on 15. July 2022)
  - Defines the TSC for the specific gas and nuclear activities.
- Environmental Delegated Act (adopted on 27. June 2023)
  - Adds additional activities to the EU Taxonomy and proposes new rules for Environmental, Social and Governance (ESG) rating providers (COM 2023a).

In this research, I focus on the Taxonomy Regulation, and on the Climate Delegated Act (CDA) and the Complementary Climate Delegated Act (CCDA), which incorporated nuclear

[1]Economic activity must be aligned with "OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights…" (Article 18).

and gas activities in the EU Taxonomy. Next, I will provide short overview of how the EU Taxonomy Regulation is related to other sustainable finance legislation and actions.

2.1.1 Disclosures

Within the sustainable finance framework, there are two disclosure legislative acts that work together with the EU Taxonomy: Sustainable Finance Disclosure Regulation (CSRD) and Corporate Sustainability Reporting Directive (CSRD). These legislations set mandatory disclosure obligations for the financial sector and to companies to disclose alignment of their activities or investments with the criteria set out in the EU Taxonomy. (COM 2023b, p.7.)

Additionally, amendments have been introduced to the European Union Markets in Financial Instruments Directive II (EU MiFID II), which regulates EU's financial markets with the aim to standardize practices across the EU (Kenton 2023). The amendments require investment advisers and investment managers to obtain the sustainability preferences of their clients, to inform their clients about the concept of sustainability preference, and to advise on the sustainability of their products. (ESMA 2022.) The clients may set minimum sustainability requirements for their investments, with the possibility to submit them in relation to the taxonomy-alignment of products. (COM 2023c, p.7.) These investment firms must assess their client's sustainability preferences in order to identify products that match these preferences. (ESMA 2022.)

Furthermore, the Member States and the European Parliament have agreed on EU Regulation for European Single Access Point (ESAP), which establishes an EU-wide digital platform for individuals and companies to freely access financial and sustainability-related information about European companies**.** (COM 2023c, p.7; Allenbach-Ammann 2023.)

2.1.1.1 Sustainable Finance Disclosure Regulation (SFDR)

The definition of sustainable investment in SFRD should include investments in economic activities that are be aligned with the EU Taxonomy's rules on environmentally sustainable economic activities according to the recital 19 of the EU Taxonomy Regulation. (EP and Council 2022)

The SFDR lays down transparency rules for financial market participants and financial advisers concerning how they should integrate sustainability risks and take into account adverse sustainability impacts in their procedures. Additionally, it outlines their responsibilities in

providing sustainability-related information with respect to financial products. (ibid., article 1.) In the SFDR, all financial market participants that offer financial products with sustainable investment as their objective or have environmental and/or social characteristics are required to assess and report the alignment with the EU Taxonomy. (COM 2023b, p.7.)

2.1.1.2 Corporate Sustainability Reporting Directive (CSRD)

The article 8 of the Taxonomy Regulation sets requirements for any undertakings (meaning companies and entities) that are defined in the CSRD's articles 19a and 29a to disclose non-financial information on "how and to what extent the undertaking's activities are associated with economic activities that qualify as environmentally sustainable under Articles 3 [criteria for environmentally sustainable economic activities] and 9 [the environmental objectives"] of the Taxonomy Regulation.

According to the CSRD, undertakings under articles 19a and 29a must comply with article 8 of the Taxonomy Regulation. The articles 19a and 29a require, that large undertakings, small and medium-sized undertakings, (SMEs) and parent group undertakings (consists of parent and subsidiary undertakings), which are public-interest entities, must include sustainability reporting in their management reports, which are necessary for understanding "the undertaking's impacts on sustainability matters, and information necessary to understand how sustainability matters affect the undertaking's development, performance and position". (EP and Council, p.33.) Public-interest entities are undertakings that are governed by the law of a Member State and whose transferable securities (i.e., financial instruments) are admitted to trading on a regulated market of any Member State. (ibid., p.8.)

The categories for large, medium-sized, small and parent undertakings are presented in Table 2.

Table 2. Categories under CSRD required for providing sustainability reporting.

Large undertakings exceed at least two of the three following criteria:	**Medium-sized undertakings shall not exceed these conditions:**	**Small undertakings shall not exceed these conditions:**	**Parent undertakings of a large group shall not exceed these conditions:**

balance sheet €20 million,	balance sheet €20 million,	balance sheet €4million	balance sheet €20 million,
net turnover €40 million	net turnover €40 million	net turnover €8 million	net turnover €40 million
250 employees.	250 employees.	50 employees	250 employees.
Source: Article 3 of the CSRD (EP and Council 2022)			

A derogation is provided for SMEs under paragraphs 6 and 7 of Article 19a. As an exemption, SMEs have the option to disclose limited sustainability information or to decide not to include sustainability information in their management report before January 1, 2028, requiring the undertakings to disclose why the sustainability reporting was not provided. (ibid., p.29.)

The Disclosures Delegated Act (DDA) of 6. July 2021 supplements article 8 of the Taxonomy Regulation. It specifies the reporting obligations and methodologies for the key performance indicators[2] for financial and non-financial undertakings. Furthermore, the article 9 of DDA states, that by 30. June 2024 the Commission will assess the need for extending the scope of the act. The Commission will review whether exposures of undertakings to central governments and central banks, and undertakings that do not publish non-financial statements in line with articles 19a or 29a of SFDR should be considered. Moreover, the possible extension for covering SMEs exposures is also reviewed (COM 2021c).

2.1.2 Tools

The EU has adopted tools for companies, market participants and financial intermediaries to develop sustainable investment solutions while preventing greenwashing. (COM 2023c, p.3.)

2.1.2.1 EU Climate Benchmark Regulation

EU Climate Benchmark Regulation introduced two climate-based investment benchmarks, EU Climate Transition Benchmark and EU Paris-Aligned Benchmark. The benchmarks require

[2] "The proportion of the turnover, capital expenditure and operating expenditure ('key performance indicators') of -- activities related to assets or processes associated with environmentally sustainable economic activities" (COM 2021c, recital 1.)

excluding companies on the basis of significantly harming at least one environmental objective defined in the EU Taxonomy Regulation. Since their introduction, assets referencing these benchmarks have reached an estimated value of EUR 116 billion in 2023. These benchmarks have been recognized by "major investment institutions, including public institutions and non-EU institutions, as solid tools to help investors tailor their portfolios to follow a decarbonization pathway". (COM 2023c, p.8)

2.1.2.2 The European green bond standard

The European green bond standard (EUGBS) is targeted for companies and public entities that want to raise funds for green investments on capital markets. At least 85% of the funds raised by the bond must be allocated to economic activities that align with the Taxonomy Regulation. (COM 2023d). The Commission has great hopes that the standard will become widely used benchmark for green bonds. (OxfordSmithSchool 2018, 38:34.)

2.1.2.3 The International Platform for Sustainable Finance

The International Platform for Sustainable Finance (IPSF) is a multilateral forum that facilitates dialogue between policymakers responsible for developing regulatory measures for sustainable finance. The IPSF members can share information for best practices, identify impediments and opportunities of sustainable finance. Members can align their approaches on a voluntary basis. (COM n.d.a) Oliver Guersent has aspired that the EU Taxonomy would serve as a global standard for sustainable economic activities. (OxfordSmithSchool 2018, 27:13)

2.1.3 Impacts of the EU Taxonomy to the financial and non-financial undertakings

The Commission anticipates that the EU Taxonomy will have consequential effects on the financial markets and will steer investments towards the designated environmentally sustainable economic activities. On the other hand, the classification system is said to not set any mandatory specifications of what permissible economic activity is to invest in, nor does it set environmental performance requirements on businesses or financial products (COM 2021b, p.3).

While the Commission has emphasized the voluntary nature of the EU Taxonomy for investment decisions, businesses cannot disregard the implications of the EU Taxonomy. As the world's second-largest economy introduces a classification system that assesses the sustainability of economic activities, it significantly influences the strategic decisions of companies. In

their pursuit of not just survival but long-term prosperity, businesses are compelled to pivot to a more sustainable business model. (Pettingale, Maupeu and Reilly 2022).

Similarly, The Florence School of Regulation (FSR) has highlighted the consequential implications of the EU Taxonomy on the energy industry. The delegated acts specifying sustainability criteria will play a pivotal role in investment decisions within the energy sector (FSR 2021). This exerts pressure on financiers and companies to align their portfolios with Taxonomy-aligned activities, a condition considered vital for their future success (Pettingale et al. 2022). This transformation, in turn, directly impacts the preferences of Member States through influential domestic stakeholders.

The EU taxonomy has already had proven impact for steering EU's financial landscape. A study based on the first reporting year in 2022 showcased that 93% of the companies representing approximately 86% of EU GDP have disclosed some eligibility for sustainable turnover (EY 2022, p.6). A smaller study in 2023 interviewed 12 Nordic investments firms and institutional investors of which 11 used the EU Taxonomy when evaluating companies to make investment decisions. (Hodžić and Isaksson 2023, p.3)

The Commission has underlined the effectiveness of the EU Taxonomy in their 2023 report. Undertakings have increasingly used the EU Taxonomy to demonstrate their sustainability performance and efforts: "As of 17. May 2023, 63 percent of the STOXX Europe 600[3] undertakings have already disclosed their taxonomy eligibility and alignment". (COM 2023c, p.4-5) Significant share of companies, especially high-emitting sectors, have reported taxonomy-aligned capital expenditure (CapEx) figures that are substantially higher than their aligned revenue. For energy sector an average alignment for CapEx is 23 percent, which is more than three times more than its taxonomy-aligned revenue. This highlights the fact, that large share of companies in sectors that need to decarbonize the most are using the EU Taxonomy as a part of their long-term investment strategy. (ibid., p.5.)

The European Investment Bank (EIB) has declared how it "will progressively align its methodology for tracking climate action and environmental sustainability ("green") finance with the framework defined by the EU Taxonomy Regulation as it develops over time." (EIB 2022, p.2). By 2025, the EIB's support to climate action and environmental sustainability is set to

[3] "STOXX Europe 600 represents large, mid and small capitalization companies among 17 European countries, covering approximately 90% of the free-float market capitalization of the stock market in Europe". (ibid.)

exceed 50% of its overall lending activity, leveraging €1 trillion of investment by the EIB Group. The rest of the investment portfolio must be aligned to the objectives and principles of the Paris Agreement and must adhere the do no significant harm -principle regarding the goals of the agreement (EIB 2020, p.iv).

2.1.4 Looking forward: EU Taxonomy linkages with the EU budget and public spending

The EU has agreed to spend at least 30 percent of the EU budget in the multiannual financial framework programme (MFF) into climate-related expenditure. The methodology to measure spending that supports climate-related objectives is linked with the EU Taxonomy (COM 2022b, p.3-8).

The Commission described their interest to extend the scope of EU Taxonomy to other legislation, future Union policies, investments and to Member State spending during the legislative process. In their initial 2018 proposal for Taxonomy Regulation the Commission proposed[4]:

> (13) A Union classification of environmentally sustainable economic activities should enable the development of future Union policies, including Union-wide standards for environmentally sustainable financial products and eventually the establishment of labels that formally recognise compliance with those standards across the Union. Uniform legal requirements for considering investments as environmentally sustainable investments, based on uniform criteria for environmentally sustainable economic activities, are necessary as a reference for future Union legislation aiming at enabling those investments. (COM 2018a.)

Here the aspect of developing new Union policies on the basis of the classification system is disclosed.

> (14) In the context of achieving SDGs in the Union, policy choices such as the creation of a European Fund for Strategic Investment[5], have proven to be effective in contributing to channel private investment alongside public spending towards sustainable investments…. Common criteria for the sustainability of economic activities could underpin

[4] The Commission referred to possible applications of the EU Taxonomy also in recitals 13, 14,32), as well as in article 14(1)(h).
[5] The European Fund for Strategic Investment mobilized €334.8 billion of private and public investment by July 2018. The fund is currently combined with other funding instruments in the InvestEU fund program, which "will mobilise more than €372 billion of public and private investment through an EU budget guarantee of €26.2 billion". (European Court of Auditors 2019, p.1; EU n.d.)

> future similar initiatives of the Union supporting investment pursuing climate-related or other environmental objectives. (ibid.)

The recital 14 indicates the Commission's interest to align the biggest EU investment strategies with the criteria set out in the EU Taxonomy. The Commission demonstrated its contemplations on EU and Member State spending in MSEG meeting on 13. May 2020, where the use of the Taxonomy in context of the EU budget and MS spending was explored (MSEG 9. meeting minutes 2020). Member states expressed hesitation to use the EU Taxonomy in Member State spending, and suggested the following:

> …the taxonomy should first be tested by financial market participants and in EU programmes (eg. MFF or Invest EU). A gradual and cautious approach can then be taken to integrate the taxonomy for public spending, taking into consideration potential risks to financial stability, the minimization of administrative costs, potential national legislative changes and training for the public sector. (ibid.)

The Commission in its reply:

> …assured MS that it is taking cautious steps to explore the use of the taxonomy for public programmes. It highlighted that in its considerations it will aim to give markets sufficient time to build up capacity, to facilitate the use of the taxonomy by SMEs, to keep administrative burdens at a minimum and to carefully assess whether the taxonomy can replace the OECD DAC Rio Markers for Climate". (ibid.)

As a portion of the EU budget is already connected with the EU Taxonomy, and the Commission has expressed an interest in its application to public spending, this demonstrates the Commission's commitment to embed the EU Taxonomy to the wide range of economic decisions made in the EU.

2.1.5 Conclusions

The Sustainable Finance Framework is an overarching policy approach with the EU Taxonomy as its base of reference for sustainability. It is effectively pivoting the financial markets and companies towards more sustainable economic activities. While the Commission has underscored that the EU Taxonomy does not impose mandatory investment requirements, its primary objective is to establish a golden standard for sustainable finance that will significantly reshape financial markets and aligning them with the goals of the Green Deal. If the EU successfully establishes this benchmark, all stakeholders within the EU's financial

landscape committed to participating in environmentally responsible wealth creation, will be incentivized to use the EU Taxonomy. This underscores the political significance of the EU Taxonomy, as it then would de facto determine which economic activities are considered as sustainable, and implicitly which are not. A proportion of the EU's budget is already linked with the EU Taxonomy, and the Commission has demonstrated its preference to connect the EU Taxonomy to Member States' public funding.

3 THEORY

The aim of this chapter is to provide the theoretical framework used to guide the analysis of this thesis. The diversity of the research questions necessitates a hybrid-theoretical approach, of invoking and drawing upon different theories and theoretical concepts.

Liberal intergovernmentalism, developed by Andrew Moravcsik, is used to assess how the legislative process of EU Taxonomy leading up to the CCDA, which incorporated specific nuclear and gas activities, reflected the preferences of the Member States. Because LI doesn't contribute any significant agency to the Commission, Mark A. Pollack's depiction of the factors contributing to the Commission's independent agency is used for analyzing the influence of the Commission.

Lastly, I will use the concept of venue shopping developed by Frank Baumgartner and Bryan Jones to describe a rhetorical strategy that the Commission utilized to downplay the energy policy dimension of the EU Taxonomy and to advance its energy policy objectives, as I will argue in chapter 6.

3.1 Liberal intergovernmentalism

Liberal intergovernmentalism (LI) is grounded in broader social science theory and is commonly considered to be a 'baseline theory' in the study of regional integration. LI allows the categorization of the motivations of social actors, states, leaders, and to make predictions of the aggregate behavior or dynamic effects from their interaction that can be subjected to

empirical tests (Moravcsik 1998, p.13-14, according to Moravcsik and Schimmelfennig 2009, p.67-68.)

One of the reasons for LI's attractiveness is its simplicity. LI's core premises can be presented in a few propositions and are focused on explaining the essential dynamics in regional integration. It requires a minimum of three theories to explain the full integration process and its outcomes. The three stages which these theories seek to explain are the preferences, bargaining, and institutions. The policy issue and particular circumstances determine which stage is emphasized.

LI has two basic premises:

1. Member States are the critical actors. When studying international institutions, such as the EU, states are seen as the fundamental actors in a context of anarchy. States enter intergovernmental negotiations and bargaining as a means to achieve their goals based on their preferences.
2. Member States are rational actors, choosing preferences with the maximal utility. These choices are affected by the asymmetric and imperfect nature of the obtainable information and the uncertainty about the future. The aggregation of the individual actions of the Member States who pursue their maximal utility under the aforesaid constrictions, make up the collective policy outcomes in the EU. Co-operation between Member States and the establishment of international institutions is seen as the collective outcome of rational state choices and intergovernmental negotiations. (Moravcsik and Schimmelfennig 2009, p.67-72.)

EU decision-making (i.e international co-operation) is explained parsimoniously in a three-stage framework: states define preferences, then bargain agreements and lastly create institutions or modify existing ones to secure the established outcomes as a means to mitigate future uncertainty. (ibid.)

LI's assumptions on the underlying factors of European integration are in many ways contrary to neofunctionalism, one of the most influential 'basic' theories of European integration, first formulated by Haas in 1958 at the start of the European project. The fundamental concept of the theory is functional spillover effect and unintended consequences, whereby the initial decision made by national governments to delegate authority to centralized institutions (the

Commission, ex. High Authority) in certain policy domain or sector inflicts functional pressures to adjacent fields of policymaking to extend the authority of the central institutions into these domains or sectors (unintended consequences). (Pollack 2020, p.15; Jones, Keleman and Meunier 2016, p.1014) Neofunctionalism recognizes the central role of national governments in EU decision-making but puts the emphasis on how non-state actors (the Commission and its officials, pan-European interests, non-governmental organizations) generate pressures for deepened integration over time. (ibid., 2016.) Neofunctionalism has been refined and modified after Haas by various scholars, such as Philippe Schmitter and Arne Niemann.

Neofunctionalism has faced considerable criticism over the years and its aptitude as a general theory has been mostly refuted. However, it still has a strong influence on the theories used today, such as multi-level governance or postfunctionalism (Niemann and Schmitter 2009, p.53; Pollack 2020, p.25). Erik Jones, R. Daniel Kelemen, and Sophie Meunier have fused neofunctionalist and LI thinking in their 2016 article "Failing Forward? The Euro Crisis and the Incomplete Nature of European Integration" explaining the integration process throughout the Euro crisis.

3.1.1 State Preferences

States are unitary actors in liberal intergovernmentalism. The fundamental objectives of states or their preferences are not fixed and vary between states and inside the states across time and policy issues. National state preferences are created by political processes inside the nations. The winning domestic political compromise then becomes official preference which the state seeks to satiate.

At this stage the state can then be conceptualized as a single rational actor that seeks to maximize its utility. LI recognizes the potential for altering state preferences according to the changes in domestic political landscape, but the domestic political quarrel is seen to end at the state's borders, as a Member State enters transnational negotiations with its temporally locked-in preferences. Constructivist thinkers have critiqued this characteristic of LI's preference formation, including not recognizing the domestic diversity within governmental structures, and how the activities of the elites and interest groups can influence policy at the EU level outside the state's grip. (Moravcsik 2008, according to Moravcsik and Schimmelfennig 2009, p.69; Saurugger 2014, p.69.)

3.1.1.1 Member State preferences

In my research, Member States' preferences on whether nuclear and/or natural gas should be included in the EU Taxonomy are derived from their public positions on the treatment of nuclear and natural gas in the EU Taxonomy. Sources can be found in the 8.3 Annex. Germanys and Frances' more specific preferences are established by their proposals, which are addressed in subsection 4.6. The Table 3. below shows the preferences of the Member States regarding the inclusion of nuclear energy and natural gas activities. As indicated in the table, preferences on both issues were widely varied. The strongest support was observed for both energy activities, with the preference to include gas but exclude nuclear gained the next highest level of support. Following from that, the Table 4. shows the nuclear and gas positions of Member States as a share of EU population and as the count of Member States. Majority of the Member States backed up the inclusion of natural gas activities in the EU Taxonomy, and the plurality supported nuclear energy, although nuclear opposition was also significant. Most pro-gas Member States also supported nuclear energy, which made the preference to include both activities most powerful compared to other positions.

Table 3. Preferences of the Member States.

Positions	Support for both gas and nuclear	Support for gas but not for nuclear	Neither supporting gas nor nuclear	Support for nuclear but not for gas	Not supporting nuclear and position on gas undefined	Support for gas but position on nuclear undefined	Not supporting gas but position on nuclear undefined	Undefined

Member States	France, Finland, Czechia, Poland, Slovenia, Slovakia, Romania, Bulgaria, Hungary	Germany Greece	Austria, Luxembourg, Denmark, Spain,	Sweden, Netherlands	Portugal	Malta, Cyprus, Croatia	Ireland	Belgium, Estonia, Italy, Latvia, Lithuania
Share of the EU population (%)	36,91	20,99	14,01	6,2	2,30	1,23	1,11	17,24
Share of Member States	9	2	4	2	1	3	1	5

Table 4. Nuclear and gas positions.

	Position	**Share of EU population (%)**	**Count of Member States**
Nuclear	yes	43,11	11
	no	37,3	7
	undefined	19,58	9
Gas	yes	59,13	14
	no	21,32	7
	undefined	19,54	6

3.1.2 Bargaining

> The prospects for international agreement will depend almost entirely on the configuration of societal preferences; in negotiations, governments have little flexibility in making concessions, proposing linkages, managing adjustments or otherwise settling on the lowest common denominator (Moravcsik 1993, p.487.)

In the second stage of LI framework, the Member States start bargaining with each other to advance their preferences and to ultimately reach an agreement. LI uses a bargaining theory of international co-operation, credited for rationalist institutionalism, for explaining the international negotiations between states with divergent preferences. According to the theory, states pursue co-operation for collective and mutual benefits and shun suboptimal outcomes, but at the same time settle how the benefits are distributed among the states. (ibid.)

The distribution of gains from the established agreement are based on the relative bargaining power of Member States. This depends on asymmetrical interdependence, which refers to "uneven distribution of the gains from agreement relative to the benefits of unilateral actions or alternative agreements". (Keohane and Nye, 1977, according to Moravcsik 2018, p.1653; Moravcsik and Schimmelfennig 2009, p.70-73.) Member States that are in position to gain the least from a particular agreement compared to alternative arrangements are generally able to impose concessions from those Member States that would gain or lose the most. (ibid. 2018.)

LI does not assume that only the biggest Member States have influence on the EU decision-making. However, in economic matters - ceteris paribus - the asymmetric interdependence "tends to favor Member States with large domestic markets, economic competitiveness and the capacity to attract capital and labor." (ibid., p.1654.) This is why Germany has been able to "exercise considerable, some might say 'hegemonic', influence in Europe" (Mourlin-Druol, 2012, according to Moravcsik 2018, p.1654.). Because the EU Taxonomy is integral part of EU's green growth strategy and leverages the financial sector towards climate transition through obligatory reporting requirements (see chapter 2), it is first and foremost an economic policy of the EU. While the overarching goal is to deliver the Green Deal, it aims to achieve this by regulating financial markets and companies to steer investments to sustainable economic activities. This underscores the paramount importance of the economic dimension that Member States must consider. It is not in interest of Member States to put important

sectors, such as means of energy production at a disadvantage when it comes to accessing sustainable finance. As a result, in this study I hypothesize, that the influence of the biggest economic powers in the EU, Germany and France, on the treatment and conditions for nuclear and gas should be pronounced.

Importantly, Moravcsik argues that the specific nature of formal rules does not matter that much. This is because Member States effectively employ informal rules and procedures, placing intergovernmental bargaining at the core of EU decision-making, regardless of the specific procedure. (2018, p.1657.) This implies, that the asymmetric interdependence should reflect the preferences of Germany and France, even when the adoption of TSC for nuclear and gas activities is delegated to the Commission.

Traditional negotiation theories, such as what LI applies, show that states are unwilling to negotiate decisions that could undermine the international state-centered rule under which the decision was originally made. (Rosamond 2000, p.143-144.) LI also postulates that the national governments have sufficient resources, incentives, and expertise to negotiate efficiently, without the need for the Commission's intervention. (Moravcsik 2018, p.1653.) According to Moravcsik, information is generally distributed symmetrically among Member States and the Commission does not possess information not available for them. (ibid.; Moravcsik 1999, p.299; Moravcsik and Schimmelfennig 2009, p.71.)

3.1.3 Institutional choice

Under LI, the Member States are 'the masters of the treaty' and practice pre-eminent decision making power and political legitimacy (Rosamond 2000, p.144). In the final stage, the theory explains why national governments would delegate their powers to supranational institutions. This is referred to as institutional choice. Governments transfer sovereignty to supranational institutions if the potential gains are large and other means, such as bilateral negotiations are ineffective to reach these goals. (Moravcsik 1998, p.9, according to Rosamond 2000, p.144.) Most EU procedures are set to reduce uncertainty and to establish norms for more efficient bargaining. States are usually able to establish agreements and rarely delegate decision-making to the EU. Problems of control, sanctioning, and unfruitful negotiating between national institutions are plausible cases for more extensive delegation to the supranational level. (Moravcsik and Schimmelfennig 2009, p.71-73.)

Moravcsik explains the rationale behind the delegation of authority by the theory of credible commitments, which states that the member states delegate authority to the Union as a means to lock-in other governments to certain policy options, removing the possibility or the risk of unilateral digressions by states. In this theory or approach, the support for delegation varies between countries and the objectives discussed. (ibid., p.71.) The credible commitments presumes that states delegate power only when it serves their self-interest. (Moravcsik 1993, p.511.) Moravcsik sees that the European integration process is driven mainly by the economic interests of the states. Geopolitical interests may also play a vital role, but Moravcsik does not contribute much weight to ideological reasons. (Moravcsik and Schimmelfennig 2009, p.70.)

3.1.4 LI-based research premise

The LI theoretical approach allows for the following formulation of my research premise:

- the treatment of nuclear and gas in the EU Taxonomy should reflect the relative bargaining power of Member States, in regard to which the asymmetric interdependence should favor the influence of EU's major economic powers, such as Germany and France.

Because LI has an explicitly state-centered approach, it offers a suitable baseline theory for assessing my first research question:

1. **How did the outcome of the EU Taxonomy legislative process leading up to the Complementary Climate Delegated Act (CCDA) reflect the preferences of Member States?**

As part of this question, I will consider both how the final outcome reflected the explicit preferences of Member States, as well as the particular preferences of economically influential Member States, such as Germany and France, whose influence should be accentuated. Moravcsik does not contribute significant agency to the Commission.[6] Because of this, I will utilize additional theories to assess the second and third research questions.

[6] Moravcsik does not contribute considerable power to the European Parliament either. (2018, p.1658.)

3.2 The independent agency of the Commission

Similarly to Moravcsik, Mark A. Pollack holds the Member Sates' preferences to be essential to EU decision-making. The Commission's executive, judicial and legislative or agenda-setting functions operate within the limits of state preferences. By derogation from Moravcsik's theory, Pollack argues that the Commission can exploit the differences in Member State preferences in order to push its legislative proposal by its formal agenda-setting powers. The variance and clash of preferences may enable the Commission to pursue the policy closest to its preferences that must be able to pass through the voting procedure in the Council. (1997, p.129.) The Commission's effectiveness in exploiting conflicting preferences among the Member States is also greatly contingent on the decision-making rules that dictate the imposition of sanctions, overruling legislation, or changes in the administrative procedure vis-à-vis the Commission decisions. (ibid., p.112.)

Pollack assumes rational choice of the Member States, as Moravcsik, whereby individual Member States are willing to transfer power to the Commission only when they believe it acts on behalf of their self-interests. However, the delegation of powers can lead to a principal-agent problem, whereby the Commission might diverge from the preferences of the Member States. (Pollack 2018, p.12.-13.) A conflict of interests between principals and the agents can exists almost invariably. Agents behave in opportunistic ways to pursue their own interests, while the constraints imposed by the principals will limit their capability to do so. (Pollack 1997, p.108.) According to Pollack, the autonomy of the Commission's agency depends on the preferences of the Member States, the asymmetric information[7] between principals and agents, and the decision rules used in the legislative process. (2018, ibid.) Asymmetric information is omitted from the analysis after the analysis did not provide conclusive information on the topic.

[7] LI predicates, that information is symmetrically distributed among Member States, postulating that the Commission does not have access to scarce and asymmetric information resources. (Moravcsik 1998, p.479-480; Schimmelfennig, Leuffen and Rittberger 2015, p.44.) Pollack however denotes, that "in any principal-agent relationship, the agent is likely to have more information about itself than others have, making control or even evaluation by the principal difficult. (1997, p.108.)

Following from that outline, Pollack's depiction of the factors contributing to the Commission's independent agency offer an apt theoretical trajectory for addressing the second research question of the thesis:

2. **If the Commission demonstrated independent agency apart from Member States' preferences, what factors contributed to the realization of that agency?**

3.3 Venue shopping

I employ the concept of venue shopping to characterize the rhetorical device that, in my argument, the Commission employed to downplay the energy policy dimension within the EU Taxonomy. The concept will be used to explain the Commission's agency in relation to the third research question.

Venue shopping is a theory developed in the context of US politics by Baumgartner and Jones in the 1990s. They argued that fundamental changes in policy are likely to occur when the actors are able to shift the focal point of the political debate and subsequent decision-making on certain issue to new venues, where the argumentation is built and formed within different set of rules and conventions compared to the previous venue. (Pralle 2003.)

The American political scientists defined venues as "institutional locations where authoritative decision about a policy are made". (Baumgartner and Jones 1993, p.32, according to Pralle 2003, p.257.) Novel or pivotal policy changes can be obstructed by the biases held in central institutional venues, chiefly responsible for the policymaking. Therefore, effective strategy to surpass this is to shift decision-making authority to a new policy arena, where the previous restrictions do not apply to the same extent. (Pralle 2003, p.234.) Important step in venue shopping is the framing of an issue and the construction of a representation, that associates the issue at hand with certain symbols and normative presumptions, instead of other representations that tie up the issue in the existing policy arena. Successful framing and representation bring new set of actors, rules and conventions, and alternative perceptions about the policy issue, which can lead to a fundamental policy change. (Baumgartner and Jones 1993, p.59, according to Princen 2007, p.30).

The concept of venue shopping is appropriate for addressing the third research question of the thesis, as it describes a rhetorical strategy to reframe political issues in order to advance policy objectives that are obstructed in the current policy domain:

Does the EU Taxonomy have implications to the EU's energy policy?

3.4 Conclusions

In this chapter, the theoretical framework guiding the analysis of the thesis has been established, employing a hybrid-theoretical approach to address the three research questions. The application of Liberal intergovernmentalism (LI) provides a baseline for understanding the preferences, bargaining dynamics, and institutional choices of Member States. LI's state-centered approach and its emphasis on the influence of major economic powers when dealing with economic matters enables to test out the theory in the context of EU Taxonomy legislative process leading up to the CCDA. Additionally, the chapter introduces Mark A. Pollack's insights into the Commission's independent agency, shedding light on the factors contributing to its influence within the EU decision-making process.

Finally, the concept of venue shopping, developed by Baumgartner and Jones, is employed to describe a rhetorical strategy utilized by the Commission to downplay the energy policy dimension of the EU Taxonomy. The theoretical foundations laid in this chapter provide the framework for the subsequent analysis, for examining the legislative process and outcomes of the EU Taxonomy up until the adoption of CCDA within the broader context of European integration. This chapter sets the stage for an exploration of the roles played by the Commission and Member States in decision-making, as well as the strategies employed by the Commission to influence EU energy policy.

4 ANALYSIS

In this chapter I will map out and analyze the legislative process of the EU Taxonomy up until the adoption of CCDA. The aim of this chapter is to demonstrate the Commission's agency and Member States' influence in the process of introducing nuclear and gas activities in the EU Taxonomy. The findings of this chapter will be central for the analysis done in in chapter 5, where the theoretical framework is used to answer the first two research questions.

4.1 Policy developments behind the EU taxonomy

On 22. October 2014 Jean-Claude Juncker outlined his political guidelines for the EU. His most important priority was to strengthen Europe's competitiveness and stimulating investments and jobs. Juncker pointed to the untapped potential of pooling EU's funds and financial instruments for growing the economy. (Juncker 2014, p.5)

While Juncker's clear political drive in 2014 was to grow the European economy, he acknowledged that all EU institutions, and their actions and policies should adhere to sustainable development as enshrined in the EU treaties and wanted the EU to "lead the fight against global warming ahead of the United Nations Paris meeting in 2015 and beyond". (Juncker 2014, p.7,25.) The vision was actualized in 2015 as Juncker advocated "ambitious, robust and binding" climate deal to be made at the Paris climate summit. (Gurzu 2015)

On the 30. of September 2015, the European Commission published an "Action Plan on Building a Capital Markets Union (CMU)," announcing one of key objectives of Juncker Commission to build "a true single market for capital" in Europe. (COM 2015.) The CMU is a political project aimed to restructure the bank-dominated European financial system into a pan-European market-based financial market. (Braun et al. 2018, p.108). Juncker's vision encompassed various objectives, such as mobilizing and channeling capital, stabilizing the financial system, increasing competition, and deepening financial integration. The plan underscored the need for creating a robust regulatory environment to support sustainable investment and the long-term financing of Europe's infrastructure in order to deliver the 2030 climate and energy policy objectives. (COM 2015, p.17.)

The objective of "long-term financing to sustainable investment" was borne out of the CMU project, and it was also contributed to the President Juncker (DG FISMA 2016, p.6). DG FISMA[8] was assigned as the leading DG responsible for the EU Taxonomy project in the Commission.

In the 2016 report DG FISMA describes the demand for sustainable investment. At this stage, the sustainable finance project carried the name "specific objective 1.45 – Banks, insurance companies and pension funds have greater incentive to invest in and lend to the real economy in a sustainable way, including investing in long-term European projects":

> Europe requires significant new long-term and sustainable investment to maintain and boost its competitiveness and shift to a low-carbon and resource-efficient economy. Institutional investors, in particular insurance companies and pension funds, are natural long-term investors. Specific objective 1.45 is therefore to encourage such investment in addition to encouraging bank investment and lending. (COM 2016, p.7.)

The CMU was highly salient policy project for the Juncker's Commission. The CMU was also the basis for the sustainable finance agenda, which denoted its significance as a priority policy for the Commission in the aftermath of Paris Agreement. (COM 2016.)

In September 2016, one year after the initial action plan, DG FISMA published a communication called "Capital Markets Union – Accelerating Reform" that continued to push the CMU and sustainable finance agenda forward. The Commission notified that they would establish

[8] The Directorate-General for Financial Stability, Financial Services and Capital Markets Union.

"an expert group to develop a comprehensive European strategy on green finance in the coming months." (COM 2016a, p.5.) In October 2016, the High-Level Expert Group on Sustainable Finance (HLEG) was created by the Commission to assist with developing "overarching and comprehensive EU strategy on sustainable finance as part of the Capital Markets Union". In December, 20 individual experts from civil society, financing and academia were appointed to the group (COM 2016b).

Jyrki Katainen, serving as the Vice-President for Jobs, Growth, Investment and Competitiveness of the Commission from 2009 until 2019, stated in HLEG's 2016 press release (COM 2017): "The finance sector has a critical role to play in re-orienting capital towards more sustainable technologies and uses, and financing Europe's energy transition needs…".

Here, the DG FISMA's second leading political official made explicit connection of how the emerging sustainable finance project was inherently linked to financing Europe's energy transition needs. The political ambition of the project was high-reaching and was not associated rhetorically with green transition or something alike, but with energy transition needs, which has categorically wider significance. This is because the term energy transition does not categorically exclude other than renewable energy source but refers to the needs of the whole energy system, whereby nuclear energy or abated natural gas technologies can act as viable or interim means to transform the energy system that is currently dominated 70% by fossil fuels in the EU. (Eurostat 2023). The statement of Katainen connected the sustainable finance project to the EU's energy and climate policy.

4.1.1 High-Level Expert Group (HLEG)

The HLEG was established by Valdis Dombrovskis, serving as vice president and responsible for DG FISMA at the time, and Olivier Guersent, his director general. Secretariat-General and six other Directorate-Generals were affiliated with HLEG's work, emphasizing the projects high-reaching political significance and intersection with various DG's portfolios.[9] (COM 2016c.)

[9] DG CLIMA, DG ECFIN, DG ENER, DG ENV, DG JUST, DG RTD.

Christian Thiemann, the Chair of HLEG, described the group's mission and working methods in a commentary published by the London School of Economics and Grantham Research Institute. Thiemann describes the Commission's involvement as follows:

> The level of support from the European Commission was also outstanding, reaching up to the level of Vice President. Eventually, not fewer than seven Commission Directorate-Generals sent representatives to HLEG meetings, and at the final meeting with collaborators there were about 60 people who had substantively contributed to the HLEG's work. -- We had a mountain to climb and so we focused on making the ascent in stages. This meant working closely with the Commission so that our emerging thinking could be digested by policymakers as we went along (London School of Economics and Grantham Research Institute 2019).

The group was handed with a "very broad mandate" by the Commission **"**to provide advice to the Commission on how to steer the flow of public and private capital towards sustainable investments" on pan-European scale. Besides the general layout and the timeframe of one year, the group had carte blanche to come up with recommendations for a comprehensive EU strategy on sustainable finance. (ibid.)

HLEG published an interim report in July 2017, recommending the development of a classification system for sustainable assets, and the establishment of European standards for green bonds and assets. In January 2018 HLEG published the final report recommending an EU-wide taxonomy on sustainable activities. The group recommended establishing "a sustainability taxonomy technical Working Committee" for developing the EU Taxonomy. (COM 2016c.[10])

4.1.2 2017 Report by DG ENV

In October 2017 DG ENV (Directorate-General for Environment) had published a report titled "Defining 'green' in the context of green finance". It presented an overview and analysis of different definitions of green "for green bonds, lending and listed equity" worldwide. It suggested different policy options to the Commission, and its preliminary findings were "intended to feed into the work of the EU High-Level Expert Group on Sustainable Finance". (COM 2017a, p.VII.) In one of its major policy options, the DG ENV proposed an EU-wide taxonomy with framework very similar to the existing EU Taxonomy model (ibid., p.44). The suggested taxonomy could focus on "deep green" activities, with updating review and criteria, while

[10] The Commission's webpage on HLEG was lastly updated on 3 July 2020.

controversial activities could be either left out or addressed by specific eligibility criteria and thresholds. (ibid.)

The DG ENV suggested an approach where the EU would first formulate and communicate common climate objectives, after which areas of consensus would be identified. In parallel, the Commission could develop a framework for assessing controversies, where it could:

> systematically determine why certain investments are controversial from different stakeholder perspectives and with regard to different dimensions -- The result of such an activity could consist of a framework that determines which aspects providers of targeted finance need to consider, and how, when assessing the degree of controversy of intended green investments." (ibid., p.61.)

DG ENV's report recognized that leaving controversial activities outside green classification systems, such as nuclear energy and natural gas, could "allow avoiding lengthy discussions." At the same time, too strict criteria could lend themselves to poor overall environmental impact if the Taxonomy's scope was to narrow. The experts consulted for the report generally advocated two contrary solutions: either developing "deep green" taxonomy excluding controversial activities that could diminish the credibility and trustworthiness of the system; or an approach where the "greatest absolute environmental impact" was the objective, where technologies whose environmental impacts are not immediately realized or which may still have adverse environmental impacts would be included to make these technologies more sustainable. (ibid., p.24, 38.)

4.1.3 The Technical Expert Group (TEG)

The Technical Expert Group on Sustainable Finance (TEG) was announced by the Commission on 8. March in its Action Plan on Financing Sustainable Growth and in the subsequent package of legislative measures that followed on 24 May 2018 (COM 2018b). TEG was assigned to assist the Commission in developing an EU Taxonomy, EU Green Bond Standard, benchmarks for low-carbon investment strategies, and metrics for climate-related disclosures (COM 2021d).

In the second meeting minutes of the group, it was stated that:

> Members agreed with the core principles in developing the taxonomy, including the need to be science-based, to support the transition from brown to green and thus help brown sectors become more green, to be dynamic and flexible so as to be able to incorporate technological developments, to be easy to use, and to build on existing labelling and EU environmental policies. Members raised the issue of competitiveness and innovation, emphasizing the need for any EU action to contribute to the overall competitiveness of the European economy. (TEG 2. meeting minutes 2018)

A general mutual agreement was established on incorporating brown or polluting-producing industries in the EU Taxonomy to mitigate their environmental harms. Neither nuclear energy nor natural gas is directly mentioned in the TEG's meeting minutes. There are mentions of the need of identifying transitional activities, and how to address those economic activities that reduce emissions, but "undermine climate change mitigation objectives in the long term" (TEG 8. meeting minutes 2019, p.1-2).

4.1.4 The Member States expert group on sustainable finance (MSEG)

The Commission established the Member States expert group on sustainable finance (MSEG) to support implementing of sustainable finance in their territories. (COM 2018c). It held its first meeting in June 2018.

For the MSEG the EU Taxonomy's energy policy dimensions were evident from the onset. According to the first meeting minutes, "Member States raised questions and commented on the TEG's task to help define environmentally sustainable activities, in light of a different energy policy mix and circumstances in Member States" (MSEG 1. meeting minutes 2018, p.1-2).

MSEG's second meeting minutes contains the following documentation:

> The Chair also recalled the relevance of the Member States expert group in respect to giving political steer to the technical work conducted by the European Commission's Technical Expert Group on sustainable finance (TEG) and to discussing any relevant issues related to the implementation of the Commission's Action Plan on sustainable finance. (MSEG 2. meeting minutes 2018, p.1)

Assuming that the DG FISMA has anticipated the majorities inside the Council and is also aware of individual preferences of Member States (Hartlapp et al. 2014, p.218.), it should only urge for political steering if it supports the majoritarian position of the Member States with most "political pulling power". (ibid., p.24). This would imply that it also preferred the inclusion of nuclear and gas activities. This line of argument is based on the preferences of the Member States (see chapter 3, p. 21) and on the intergovernmentalist logic of economic power corresponding to bargaining power in economic matters (Mourlin-Druol 2012, according to Moravcsik 2018, p.1654.).

The MSEG's chair's encouragement for Member States to apply political steering to TEG's work corresponds with Dawn Slevin's, TEG's member's description of the situation:

> …Taking into account the significant financial implications of adopting the TEG recommendations, it became the starting point of intense behind-door lobbying. France led a coalition of 10 EU Member States arguing that nuclear fission as well as gas-fired power plants should be included in the Taxonomy (Slevin 2021).

Apart from the subtext of Jyrki Katainen, DG FISMA's official's comment on political steering was the first clear signal of the Commission's volition to include nuclear energy and natural gas in the scope of the sustainable classification system. If the Commission was fully neutral on the issue, the rationale in promoting political influence on the Technical Expert Group outside of the formal rules of procedure of TEG is highly questionable. The rules state that only the Chair of TEG may invite experts or permit observes to take part in the discussions.[11]

4.1.5 TEG's technical report

In June 2019, TEG published Taxonomy Technical Report addressing natural gas' and nuclear energy's standing in the sustainable classification system. With regards to natural gas-fired power, TEG stated that with carbon capture and sequestration (CCS) it may qualify for the inclusion in the EU Taxonomy. Only operating facilities with life cycle emissions lower than 100gCO2 e/kWh with declining threshold every five years until zero carbon emissions by 2050 would be eligible (TEG 2019). While TEG in theory proposed the inclusion of natural gas in

[11] Rules of Procedure of TEG, point 7-8. (COM 2021d.)

the classification system, the set threshold for CO2 emissions would practically make it impossible for any currently existing natural gas facility to be eligible (Baumgarts et al. n.d).

In March 2020 TEG recommended in a final report that the so-called "polluting" or "brown" taxonomy should be designed as separate from the EU Taxonomy, whereby environmental improvements would be incentivized without risking mislabeling the positive action as adequate or as green. (TEG 2020, p.51-52.)

TEG concluded that nuclear energy has near to zero GHG emissions in the energy generation phase. It acknowledged the substantial contribution it can potentially have in the climate mitigation objectives. However, TEG did not recommend the inclusion of nuclear energy, because of the ultimately unsolved problem of the long-term management of High-Level Waste (HLW) (TEG 2020, p.209-211.):

> Given these limitations, it was not possible for TEG, nor its members, to conclude that the nuclear energy value chain does not cause significant harm to other environmental objectives on the time scales in question. The TEG has not therefore recommended the inclusion of nuclear energy in the Taxonomy at this stage. Further, the TEG recommends that more extensive technical work is undertaken on the DNSH aspects of nuclear energy in future and by a group with in-depth technical expertise on nuclear life cycle technologies and the existing and potential environmental impacts across all objectives.

TEG's statements on nuclear and especially the chosen wording, are worth dissecting. If the statement had been that the TEG has not therefore recommended the inclusion of nuclear energy in the Taxonomy, then TEG would have clearly asserted the group's definitive resolution on the issue. By adding the temporal statement "at this stage", they communicated incompleteness and lack of actual resolution. It expresses the possibility that at later stages of developing the Taxonomy, the group or some other agency could come to a different conclusion. The recommendations on nuclear energy are left inconclusive, requiring additional analysis by experts on the relevant fields in regard to the DNSH-principle.

Dawn Slevin, a member of the TEG, described her experience on how nuclear energy was handled in the group in The Sustainability Business Podcast:

> ...As coacher of do no significant harm, I coached a small study group on nuclear. Unlike the other sectors, we didn't select experts, we were given a group of experts, preformed…and effectively the group, on basis of the majority thinking on this, decided

> that the taxonomy architecture is not designed to cater for such intergenerational risks that rise from high level waste… which last for thousands of years…and this makes it unsuitable as an instrument to decide the sustainable nature of nuclear power. We recommended nuclear not included in the taxonomy -- We weren't allowed to consider economic aspects, we had to look purely at the environmental, and we weren't looking at social, because it was not part of it."
>
> [*Transcription edited for clarity*] (The Sustainability Business Podcast 2022)

The sole exception of assigning preformed expert group only on nuclear energy signals an attempt to steer the group's findings to a premeditated direction. According to Slevin the small group working on the DNSH-aspects of nuclear energy unequivocally opposed the inclusion of nuclear energy. The whole taxonomy architecture was viewed inadequate for considering the long-term impacts of nuclear waste, which implies that any other analysis or group of experts could not make the operative framework appropriate to make this assessment.

The Commission's political influence on TEG's recommendations on nuclear is further backed up by the following passage from a petition titled "The Argument against Nuclear Power as Sustainable for Finance", which was signed by Slevin and the other DNSH subgroup's members:

> The characteristics and nature of HLW generated by the nuclear fission process presents long-term intergenerational risks and thereby challenge the principle of 'do no significant harm' to the extent that nuclear fission energy may not be considered eligible for the EU Taxonomy. This was made abundantly clear to the Commission in the TEG's recommendations, which were not published in their entirety. Independent, scientific, peer-reviewed evidence compiled by TEG provided confirmation of the risk of significant harm arising from nuclear waste. (Slevin 2021)

According to the petition, the Commission was made fully aware of the ineligibility of nuclear energy in the group's recommendations, but the publicly published recommendations did not reflect these views in their entirety. This statement speaks on behalf of the Commission's taking an active role in generating and steering expert knowledge suited for specific policy outcomes. Because the Commission tends to make policies that have a high change of being accepted by the Member States and relevant stakeholders, it may be willing to coordinate expert group views. (Hartlapp et al. 2014, p. 218.) Here it seems, from the described behavior of the Commission, that it was at least trying to mitigate the risks of unfiltered expert opinion that could

easily sway to contradict the Commission's preferred policy direction. While the petition paints a picture of unanimity inside the TEG, it is plausible, that dissenting or neutral views were also present inside TEG.

Because of the highly polarizing issue of nuclear energy's place in the EU taxonomy with significant member states promoting opposing positions, it makes sense that the Commission wanted to generate ambiguity around the issue. If TEG's recommendations would have resulted in either totally supporting or opposing the validation of nuclear energy before any inter-institutional agreement was made, then it could have seriously vitiated the further negotiations between the EU institutions. This is because major proportion of Member States would have been dissatisfied with the direction the Taxonomy was headed. TEG's report opened the nuclear issue to a more public debate, but simultaneously kept all options available on the negotiation table. Provided that the TEG would have officially voiced an unequivocal position on nuclear, then the Commission would have undermined its own legitimacy if it decided to go up against the recommendations made by the group of experts it had designated. To justify its political actions, the Commission must consult experts to give its actions a sense of rationality, neutrality, and unbiasedness, as is not democratically elected. (Boswell 2009, according to Harlapp et al. 2014, p.219.) If TEG's recommendations were affected by the Commission's political steering as Slevin described, then the Commission's preference to include nuclear energy can be deduced.

4.2 The Commission's proposal for Taxonomy Regulation

The Commission published their proposal for a Regulation on the establishment of a framework to facilitate sustainable investment on 24 May 2018, much before TEG's technical or final report had been published.

The Commission indirectly refers to brown industries in the recital 23, seeing a place for them in the taxonomy under certain criteria:[12]

> (23) Some economic activities have a negative impact on the environment, and a substantial contribution to one or more environmental objectives can be achieved by

[12] It is important to note that recitals are used to interpret and explain the purpose or the intent of the legal instrument. Recitals can occasionally be used to resolve ambiguity in the legal text, but they do not have any autonomous legal effects (Baratta 2014, p.9).

> reducing that negative impact. For those economic activities, it is appropriate to set out technical screening criteria that require a substantial improvement in environmental performance compared to, inter alia, the industry average. Those criteria should consider also the long-term impact of a specific economic activity. (COM 2018a, p.21)

The recital 23 refers to the mitigation solutions for hard-to-decarbonize industries. This can include steel, cement or chemical production, but also the transition away from coal-use by switching to less polluting energy sources. Natural gas has been the primary bridging fuel worldwide and several EU Member States are planning to switch, or are currently switching, from coal to gas. (IEA 2019, p.7-8; Bruckner et al. 2014, p.556-557; Gündüzyeli and Moore 2020, p.1-2.)

The Commission's proposal for Article 6.1(a) establishes the legal framework for the possibility to include both nuclear energy and natural gas in the EU taxonomy:

> 1. An economic activity shall be considered to contribute substantially to climate change mitigation where that activity substantially contributes to the stabilization of greenhouse gas concentrations in the atmosphere at a level which prevents dangerous anthropogenic interference with the climate system by avoiding or reducing greenhouse gas emissions or enhancing greenhouse gas removals through any of the following means, including through process or product innovation:
>
> (a) generating, storing or using renewable energy or climate-neutral energy (including carbon-neutral energy), including through using innovative technology with a potential for significant future savings or through necessary reinforcement of the grid. (COM 2018a.)

Here the referrals to climate-neutral and carbon-neutral energy can be understood to encompass both nuclear energy and natural gas witch carbon capture and storage (CCS) technologies. Carbon neutrality refers to the balance between absorbing carbon from the atmosphere and carbon sequestration with emitting carbon. Climate neutrality is often used analogously to carbon neutrality, but it includes other forms of GHG-emissions also. Both can be advanced by reducing emissions or by compensating emitted emissions (EP 2019; COM n.da). Nuclear energy is low-carbon energy. Nuclear energy is used as a baseload power source and contributes to the stability of the power grid. (Brook et al. 2014, p.10). Natural gas is generally used as dispatchable

capacity and can be used to match the intermittent output of renewable power generation, reinforcing the grid. (Levi 2013, according to Bruckner et al. 2014, p.527) Natural gas produces carbon emissions, but with CCS-technologies (carbon capture and storage) and anticipated future innovation these emissions could be reduced either by directly in the production stage or indirectly offset through carbon removal (Bistline and Young 2022, p.8; Koornneef et al., 2008; Singh et al., 2011; Corsten et al., 2013, according to Bruckner et al. 2014, p. 538).

The proposal's article 12 regarding significant harm to environmental objectives and article 14 on the requirements for technical screening criteria established potential limits and enablers for the inclusion of natural gas and nuclear activities. Next, I will go through these articles and their possible implications for the inclusion of these activities.

4.2.1 Article 12 regarding significant harm to environmental objectives

According to the article 12.1(a), "an economic activity shall be considered as significantly harming to climate change mitigation where that activity leads to significant greenhouse gas emissions". Whether unabated natural gas activities would be excluded on this basis is unclear because significant GHG emissions are not defined in the proposal. This still allows for this interpretation due to the associated carbon and methane emissions but depends ultimately on what is denoted as "significant". Nuclear energy cannot be rejected on this basis due to its low-carbon emissions.

The article 12.1(b) instills that significant harm is done for climate change adaptation, where economic activity leads to "increased negative effect of current and expected climate, for and beyond the natural and built environment within which that activity takes place". This subsection could eliminate particularly unabated natural gas activities. Although its carbon dioxide and methane emissions are on average about 50% lower than coal (IEA 2019), its climate impacts are adverse if it displaces renewable low-carbon energy sources or nuclear energy, and therefore would cause increased negative effect on climate. Nuclear energy is low-carbon energy source and escapes the scope of this text.

The article 12.1(c) sets significant harm to "sustainable use and protection of water and marine resources" as criterion, "where that activity is detrimental to a significant extent to good status of Union waters, including freshwater, transitional waters and coastal waters, or to good environmental status of marine waters of the Union". Natural gas and nuclear energy have been both associated with environmental risks related to water and marine resources (e.g., see

Brittingham et al. 2014; Brauers 2022, p.8; Kirillin et al. 2013). Drawing from this, their inclusion could be contested.

The subsection (d) of article 12.1 deems economic activity unqualified, if it, inter alia, "leads to a significant increase in the generation, incineration or disposal of waste", and therefore could potentially exclude nuclear energy due to the waste it produces. In the subsection (e) activities that "lead to significant increase in emissions of pollutants to air, water and land, as compared to the situation before this activity started" are ineligible. Due to nuclear energy's radioactive waste, and natural gas' GHG emissions, their exclusion could potentially be based on these provisions.

According to the article 12.1(f), activity that is "detrimental to a significant extent to the good condition of ecosystems" is regarded to cause significant harm to healthy ecosystems. Here the risk of nuclear disasters and thermal pollution, or pollution caused by natural gas are possible arguments for the exclusion of these activities.

Overall, the content of article 12 makes it possible to interpret natural gas and nuclear power as unfit for the sustainable classification system. However, it is essential to note that the proposal lacks any definitions for the terms "significant" or "detrimental". These definitions were left to be decided by the Commission by establishing minimum requirements for the economic activities to be fulfilled to avoid significant harm to any of the environmental objectives to as set out in the article 14.1(b).

4.2.2 Article 14 establishing technical screening criteria

The article 14 established technical screening criteria (TSC) for economic activities that contribute to at least one environmental objective set out in the proposal. According to the article 14.1(e) "the [TSC shall] be based on conclusive scientific evidence and take into account, where relevant, the precautionary principle enshrined in article 191 TFEU". These provisions could potentially work against the inclusion of the two energy sources if the scientific evidence were not found to be conclusive, or when the application of precautionary principle was seen as relevant, and its application would lead to the exclusion of these energy sources from the EU Taxonomy. What constitutes as conclusive scientific evidence, or when the principle enshrined in article 191 is deemed relevant, leaves room for interpretation as to the fate of these energy sources.

The subsections (h) and (i) in article 14.1. both can be understood to positively affect the assessment of TSC for nuclear and gas activities:

> (h) take into account the potential impact on liquidity in the market, the risk of certain assets becoming stranded as a result of losing value due to the transition to a more sustainable economy, as well as the risk of creating inconsistent incentives;
>
> (i) cover all relevant economic activities within a specific sector and ensure that those activities are treated equally if they contribute equally towards one or more environmental objectives, to avoid distorting competition in the market. (COM 2018a.)

In the subsection (h), the exclusion of nuclear or gas activities from the EU Taxonomy could potentially lead to a risk for stranded assets. Investors could disinvest into these assets as they would not be considered as environmentally sustainable inside the EU Taxonomy, causing devaluation of these assets. This could in principle decrease investment flows into nuclear and natural gas projects, potentially impacting the liquidity of these markets. Regarding the risk of creating inconsistent incentives, excluding both activities could disincentivize the technological innovation for reducing the environmental risks in these sectors, as they would be categorically excluded from the EU's sustainable classification system. This would then lead to a weakening of the effectiveness of the EU Taxonomy to reduce carbon emissions. The subsection (i) implicitly refers to the principle of technological neutrality. In the context of climate change mitigation, it refers to policy that does not discriminate between technologies with no or low carbon emissions. (Azar and Sandén 2011, p.135). Accordingly, if nuclear or gas activities would be recognized to contribute substantially to climate change mitigation, they should be treated on equal footing with other energy activities, assuming they do not substantially harm the environmental objectives.

4.2.3 The Commission proposal's implications for nuclear and gas activities

The article 6 indicates that the Commission wanted to keep both nuclear energy and natural gas inside the scope of the EU Taxonomy. It made provisions for clear interpretation that both energy sources were in principle eligible. Also, the subsections (h) and (i) of article 14.1 introduced considerations on liquidity of the markets, risk of stranded assets, creating inconsistent incentives and an approach equivalent to technological neutrality to be considered in regard to the TSC. Still, the standard for a sustainable economic activity was to be based on robust scientific evidence and potentially on precautionary principle, and the article 12 made the

contestation of their inclusion possible. Because the articles did not address these economic activities explicitly, and because the used conditions were not yet defined in the proposed regulation, they did not categorically exclude nuclear energy or natural gas. The article 16 conferred the power to the Commission to adopt delegated acts upon which the technical screening criteria for economic activities would be established. This signified, that the Commission would ultimately decide based on consultation, whether it would introduce nuclear and gas activities.

The regulation proposal was published in May 2018, before any technical reports on nuclear or gas activities had been disclosed. The Commission was undoubtedly aware of the Technical Expert Group's (appointed by the Commission to assist in developing the EU taxonomy), work during the process. By publishing the regulation proposal before TEG's recommendations, the Commission demonstrated that it had decided on a policy-direction, regardless of what subsequent TEG report would officially constitute.

These factors point to strategic, policy-driven agency by the Commission, as it adopted a certain policy option over others; the Commission could have pursued classification system that excluded more controversial sectors, following the blueprint of most of taxonomies analyzed by the DG ENV in the 2017 report "Defining "green" in the context of green finance". Instead, the Commission was headed in the direction that DG FISMA's vice-president Katainen foreshadowed, when he linked the sustainable finance project and Europe's energy transition needs together.

When juxtaposing the Commission's proposal to DG ENV's 2017 report and the earlier policy developments leading up to the proposal, one major observation arises. The EU taxonomy was as ambitious and wide-reaching policy initiative and was aiming for more of an "absolute environmental impact" than for a more specified and limited classification system, as it made provisions for the inclusion of more controversial activities. Moreover, the sustainable finance project was not an initial policy suggestion of the environmental, climate or energy DGs of the Commission, but the offspring of the Capital Market Union objective of the "true single market for capital". The underlying motivation and driving logic thus have been to reform the financial markets to stimulate investments to sustainable development and to "finance European energy-transition", rather than to primarily make environmental regulation. This does not signify that the environmental and energy policy implications of the proposed regulation were absent in any form, but rather shows how the political impetus for the EU taxonomy project was based

on the application of market-based solutions to reduce CO2 emissions, with maximum possible impact.

4.3 The Council's proposal for Taxonomy Regulation

On 23. September 2019 the Council adopted their proposal for Taxonomy Regulation, that established their mandate for negotiating with the European Parliament. (Council 2019). The Council's reference to transitional activities is highlighted clearly in their added recital in their proposal for the Taxonomy regulation:

> (24a) In defining the technical screening criteria, the Commission should take into account and incentivise the ongoing and necessary transition process towards a climate-neutral economy. The transition will need economic activities that are less damaging for the environment, while at the same time it is ensured that there is no locking-in of investments in activities that, while not harming the environment today or during the lifetime of the asset, or harm the environment less than existing activities, perpetuate infrastructures or installations, that are incompatible with long-term greenhouse gas neutrality and other longterm environmental objectives. The technical screening criteria should ensure that the selected economic activities have a credible path towards long-term sustainability goals, including the Paris Agreement. The technical criteria for these transitional activities should be adjusted regularly, in order to provide a transition path for the selected economic activities towards long-term sustainability goals, including the Paris Agreement. (ibid.)

The added recital mostly reformulates and verifies the notions that the Commission had inserted in their recital 23. It makes references to transitional activities, a term not used in the Commission's proposal.

In the Council's proposal transitional activities were enshrined unambiguously in the subsection 1.(a) of the article 6:

> 1a. …an economic activity shall also be considered to contribute substantially to climate change mitigation also where it supports the transition to a climate-neutral economy, leads to significant emissions reductions, has an environmental performance that is substantially better than the industry average and avoids carbon intensive lock-in during the economic lifetime of the financed economic activity. (ibid.)

The added section confirmed that both nuclear energy and natural gas could be considered to contribute substantially to climate change mitigation. The Council modified the article 6.1(f) to make distinction between fossil fuels and solid fossil fuels, in order to leave natural gas out of the scope of the subsection that sets out means for eligibility under substantial contribution to climate change mitigation:

> The Commission's original text:
>
> (f) phasing out anthropogenic emissions of greenhouse gases, including from fossil fuels;
>
> The Council's text:
>
> f. phasing out anthropogenic emissions of greenhouse gasses, in particular from solid fossil fuels;

The Council's proposal included new article 16 on enabling activities, that enable other activities to make substantial contribution to one or more of the set environmental objectives. Enabling activities must not lead into lock-in effects, where the enabling activity dilutes long-term environmental objectives, and must have substantial positive environmental impact based on life cycle deliberation. Both nuclear energy and natural gas activities could be considered by these provisions, as they can provide energy grid stability (i.e security of supply) to balance the effects of growing share of intermittent renewable energy in the energy system (Jenkins et al. 2018; Gürsan and Gooyert 2021).

The article 17 on significant harm to environmental objectives (art. 12 in the Commission's proposal) introduced some modifications that had implications for transitional activities. Firstly, the significant harm to environmental objectives was to "take into account the life cycle of products and services provided by an economic activity". Life cycle assessment (LCA) takes into account the environmental aspects and potential environmental impacts throughout the whole life cycle of economic activity[13]. LCA aggregates every phase of that economic activity (e.g. acquisition of raw minerals, production, recycling, final disposal). This requires thorough assessment of all of the emissions emitted throughout the value chain, which effectively sets more comprehensive conditions for economic activities to consider.

Regarding the generation, incineration or disposal of waste causing significant harm to the circular economy objective, exception is added for the incineration of non-recyclable

[13] ISO 14040:2006 describes the principles and framework for life cycle assessment.

hazardous waste in the article 17.1.(d)(ii). This caters for nuclear energy as it generates as a byproduct high level radioactive waste which cannot be reprocessed and -used and in its entirety. (WNA n.d). On the other hand, if "the long-term disposal of waste may cause significant and long-term harm to the environment", the economic activity is seen to cause significant harm (subsection iii). This text concerns nuclear energy activities. If the disposal of nuclear waste was assessed to cause, or possibly cause significant long-term harm to the environment, it would exclude these activities from the classification system.

The article 19.1.(a) added the principle of technological neutrality to be respected in the TSC (formerly article 14.1.(a)). Technological neutrality refers to the principle of regulatory non-discrimination regarding any type of technology suitable for the required function[14]. This addition was significant as it would allow the exclusion of nuclear power or natural gas to be challenged on the grounds that the decision violates the principle of technological neutrality. The Czech's proposal in April 2019 introduced the principle of technological neutrality into the Council's text. (Council 2019a) Eastern European Member States have often referred to technological neutrality in the context of EU's energy policy (Szulecki et al. 2016). The application of this principle to climate policy was further strengthened in the Climate Law adopted in 2021, where technological neutrality is referenced in the European Climate Law's Recital (34) to be considered when GHG reductions and removals are pursued as a means for reaching Union's climate neutrality objective (COM 2021e).

The article 19.1(h) stated that the nature and scale of the economic activity, should be considered in the TSC, with explicitly mentioning enabling and transitional activities. The article 19.1(f) modified the TSC to be "based on conclusive scientific evidence and the precautionary principle enshrined in Article 191 TFEU", which gave the precautionary principle equal standing with conclusive scientific evidence. The subsections on considering the liquidity of the markets, risk of stranded assets, creating inconsistent incentives and equal treatment of all relevant economic activities in specific economic sector was left as it was in the Commission's proposal.

[14]The principle of technological neutrality is defined by recital 18 of the Directive 2002/212 on a common regulatory framework for electronic communications networks and services.

4.3.1 The Council's proposal's implications on nuclear and gas

Overall, the Council's proposal made clear provisions for the potential inclusion of natural gas and nuclear energy. At the same time, LCA considerations and the potential significant harm caused by long-term disposal of waste were added to the article 16, which reinforced the scientific rigorousness of the classification system and could potentially exclude both natural gas and nuclear energy. Also, the precautionary principle was given the same footing as conclusive scientific evidence in the TSC. These changes could potentially challenge the inclusion of the energy activities discussed here, depending on the Commission's assessment and the interpretation of the precautionary principle. However, the article 19.1(h) also stated that the TSC must also take into account the nature and the scale of the economic activity, explicitly mentioning enabling and transitional activities. The Council's proposal kept the eligibility of the more controversial sectors, such as nuclear energy and natural gas on the table, whilst it also strengthened some of the environmental requirements pertaining to these activities.

4.3.2 Triloques

The Taxonomy Regulation came to its final form in the triloques - informal dialogues on legislative proposals between representatives of the European Parliament, the Council, and the Commission. The informal trilogue has become a standard procedure in the EU. (De Ruiter and Neuhold 2012; Roederer-Rynning and Greenwood 2015; Shackleton and Raunio 2003, according to Brandsma 2018). Triloques are done behind closed doors and have been subject to much criticism for lack of transparency. (Del Monte 2021.) The rationale for these closed meetings was born as EP gained co-decisive role in the EU and the legislative process was becoming convoluted. EU legislators developed informal procedures to ensure that the legislative process would not drag for immoderately long, and to gain better oversight (ibid.). Triloques have brought considerable efficiency to the legislative process. (Brandsma 2018, p.1466.) While triloques can make the coordination and decision-making process swifter, they reduce transparency to examinate the possible side-payments and the positions and actions of different actors that contributed to the agreed final compromise.

On 11. December 2021, only week before the political agreement was found, Britain, France, Czechia, Hungary, Poland, Slovakia, Romania, Bulgaria, and Slovenia rejected the compromise proposal on the Taxonomy Regulation that had emerged from the triloques, fearing it would exclude nuclear and gas activities from the scope of the regulation. (Simon 2019). In the

endorsed compromise proposal, the wording of one amendment regarding the criteria for significant harm on circular economy was altered, as it was feared to potentially exclude nuclear power from the classification system. (ibid.)

The political agreement on the Taxonomy Regulation was reached on December 18, 2019, after six triloques. In the Council's press statement, it was stated that "the agreement retains the concept of maintaining a neutral stance in relation to different energy forms, provided that they are low in greenhouse gas emissions" (Council 2019a). The statement refers implicitly to technological neutrality and in this policy context, to nuclear energy and natural gas.

The Council voted by qualified majority[15] (QVM), with 22 Member States supporting, 1 objecting (Sweden), and 4 abstaining (Austria, Poland, Bulgaria, Hungary). (The Council 2020.) Several Member States submitted statements that were presented in the minutes of the Council's meetings. Sweden opposed the agreement on the basis of the treatment of sustainable forest management and forest policy in the EU Taxonomy. Austria abstained from voting because of the potential inclusion of nuclear energy. Poland abstention was explained by the lack of guarantees that nuclear power or natural gas would be included in the regulation. Bulgaria and Hungary abstained from the vote, also expecting that nuclear energy should be included. (ibid.) These positions showcase, that even though political agreement was found on the text, dissenting views on the controversial activities remained.

4.4 Taxonomy Regulation

Taxonomy Regulation was published on 18. June 2020. A month before the Commission published the Taxonomy Regulation, Frans Timmermans, the Commission's executive vice-president in charge of the European Green Deal, stated in a press conference how "the use of natural gas will probably be necessary to shift from coal to sustainable energy". He also pointed out the possibility of using existing gas infrastructure and adapt it for hydrogen in the future. (Simon 2020.) The statement coming from the high political level of the Commission responsible for the Green Deal affirmed the fact that the potential inclusion of gas was a policy decision with vertical political support.

[15] QVM voting requires support from 14 Member States representing 55 percent of the EU population.

In the adopted text, the recital 39[16] and recital 41 unequivocally referred on how the EU Taxonomy should also include more controversial transitional activities:

> (39) Some economic activities have a negative impact on the environment, and reducing such negative impact can make a substantial contribution to one or more environmental objectives. For those economic activities, it is appropriate to establish technical screening criteria that require a substantial improvement in environmental performance compared with, inter alia, the industry average, but at the same time avoid environmentally harmful lock-in effects, including carbon-intensive lock-in effects, during the economic lifetime of the funded economic activity. Those criteria should also consider the long-term impact of a specific economic activity.
>
> (41) In establishing and updating the technical screening criteria for the environmental objective of climate change mitigation, the Commission should take into account and provide incentives for the ongoing and necessary transition towards a climate-neutral economy in accordance with Article 10(2) of this Regulation. In addition to the use of climate-neutral energy and more investments in already low-carbon economic activities and sectors, the transition requires substantial reductions in greenhouse gas emissions in other economic activities and sectors for which there are no technologically and economically feasible low-carbon alternatives. Those transitional economic activities should qualify as contributing substantially to climate change mitigation if their greenhouse gas emissions are substantially lower than the sector or industry average, they do not hamper the development and deployment of low-carbon alternatives and they do not lead to a lock-in of assets incompatible with the objective of climate-neutrality, considering the economic lifetime of those assets. The technical screening criteria for such transitional economic activities should ensure that those transitional activities have a credible path towards climate-neutrality and should be adjusted accordingly at regular intervals. (EP and Council 2020.)

The article 10[17] on substantial contribution to climate change introduced a new section (2), which solidified the foothold of transitional activities inside the EU taxonomy:

> 2. For the purposes of paragraph 1, an economic activity for which there is no technologically and economically feasible low-carbon alternative shall qualify as contributing substantially to climate change mitigation where it supports the transition to a climate-

[16] ex-recital 23 in the Council's proposal.
[17] ex-article 6 in the Council's proposal.

> neutral economy consistent with a pathway to limit the temperature increase to 1,5°C above preindustrial levels, including by phasing out greenhouse gas emissions, in particular emissions from solid fossil fuels, and where that activity:
>
> (a) has greenhouse gas emission levels that correspond to the best performance in the sector or industry;
>
> (b) does not hamper the development and deployment of low-carbon alternatives; and
>
> (c) does not lead to a lock-in of carbon-intensive assets, considering the economic lifetime of those assets.
>
> For the purpose of this paragraph and the establishment of technical screening criteria pursuant to Article 19, the Commission shall assess the potential contribution and feasibility of all relevant existing technologies. (ibid.)

The article 10(2) was tailor-made to include nuclear energy and natural gas as potential activities for making a substantial contribution to climate change mitigation, albeit necessitating state-of-the-art environmental performance. The new clause on activities that do not have "technically and economically feasible low-carbon alternatives" became a euphemism for activities such as nuclear and natural gas. The notion of solid fossil fuels was transferred from the Council proposition, establishing the distinction between natural gas and other fossil fuels. By large, the article 10(2) is modelling the Council's suggestions from the article 6(1a) and recital 23(a). Such were the notion of lock-in effects to carbon-intensive investments, and the original clause "environmental performance that is substantially better than the industry average," which was amplified to "has greenhouse gas emission levels that correspond to the best performance in the sector or industry".

The low-carbon and climate-carbon terms were removed from the article 10(1) that the Commission had initially proposed in the article 6.1(a) of its proposal – which established the possibility of including nuclear or gas activities - but the references to potential future savings by innovative technology and necessary reinforcement of the grid were maintained.

The article 16 for enabling activities was also kept as it was in the Council's proposal. Article 17 on significant harm to environmental objectives and article 19 on TSC requirements were maintained as proposed by the Council.

The Commission was given the mandate to establish TSC for the economic activities by article 3.d, and article 23 transferred the power to the Commission to adopt delegated acts, through

which the sustainable economic activities would be established. According to the regulation, the Commission must consult The Platform on Sustainable Finance (PSF) and MSEG prior adopting the delegated acts. The Platform on Sustainable Finance (PSF) was established under Article 20 of the Taxonomy Regulation. It is a permanent expert group of the European Commission, consisting of "sustainability experts from EU organizations, the financial industry, the corporate and public sector, as well as academia and civil society". (COM 2021e, p.3.) PSF is an advisory body to the Commission and its feedback does not bind the Commission to any particular decision or action[18]. The legal framework gave the Commission autonomous power to adopt delegated acts to define the TSC, which underlined its authority to decide what is regarded as sustainable in the meaning of the EU Taxonomy. The Member States and the European Parliament could object the delegated act or the delegation, but not amend the act (EP 2021, p.4.; Türk 2021, p.421.)

4.4.1 The implications for nuclear and gas activities

The Taxonomy Regulation was now consolidating the fact that the EU Taxonomy was not ruling out the eligibility of neither nuclear energy nor natural gas, but instead established the legal foundation for their inclusion at a later date. While the final version of the text introduced several modifications and changes to the Commission's original proposal, the core objectives the Commission had presented stayed intact. When comparing the two versions of the relevant article on the substantial contribution to climate change mitigation, the Commission's version was more subtle and implicit than the final compromise text. The Commission's initial proposal laid the foundations for making the inclusion of both energy sources plausible, but the final regulation made this explicit. Simultaneously, the Commission was authorized to establish TSC for sustainable economic activities, emphasizing its discretion within the legal framework.

The Commission displayed strategic action in the process of creating the Taxonomy Regulation. By creating enabling yet ambiguous framework proposal, it left the ultimate decision on transitional activities for Member States and the European Parliament to negotiate. This gave an appearance of objectivity for the Commission, even though its proposal leaned to the potential inclusion of nuclear and gas activities. Furthermore, because neither the proposal or the final Taxonomy Regulation addressed these activities directly and left the decision-making to be made via delegated acts by the power conferred to the Commission, it created

[18] PSF Terms of Reference, p.2. (COM 2020b.)

ambiguousness of the policy path forward. Many of the articles could be understood to support and challenge the inclusion of nuclear and gas activities.

4.4.2 Statements made by Member States

Even though the political agreement on the Taxonomy Regulation was found and the compromise seemed to cater for both nuclear and natural gas industries, the widely different interpretations of their foothold in the sustainability classification system remained. Several Member States submitted a statement on the issue to the Council prior to the final vote on the political agreement, as well as in 2019, after the first political agreement was established on the mandate to enter negotiations with the European Parliament.

Germany, Luxembourg and Austria published a joint statement on 23. September 2019 in the annex to the Council's adopted mandate for negotiations with the European Parliament. The countries voiced "strong concerns" about the proposal leaving the door open to nuclear power, which would divert financial resources away from environmentally sustainable activities and create risks of lock-in-effects to these technologies." (Council 2019b). The day after, Greece shared their statement, in which nuclear energy was deemed as a non-sustainable activity, while emphasizing "the right of every Member State to define its own national energy scheme". (Council 2019c).

On 16. April 2020, after the political agreement was made in the trilogues, several Member States' statements were attached to an interinstitutional file that addressed the Council's voting results on the Taxonomy Regulation. Luxembourg and Austria opposed the inclusion of nuclear power in separate statements. Luxembourg stated that nuclear energy's inclusion would lead to financially unsustainable lock-in effects and would not be compatible with DNSH-criteria, while Austria claimed that if nuclear energy was to be classified as sustainable, transitional, or enabling activity, the taxonomy would be "inherently flawed". Germany made its own statement supported by Hungary, addressing the use of delegated acts in defining the forestry sector's sustainability. (Council 2020)

A joint statement by the Czechia, Hungary, Slovakia, and Slovenia highlighted the principle of technological neutrality as one of the underlying principles in the EU Taxonomy. The member states upheld nuclear energy's place in the taxonomy and interpreted that the regulation now ensured that transitional activities, such as nuclear energy, were included in the classification

system. Here Czechia, the initiator of including the principle of technological neutrality to the TSC, was now utilizing it, and using it to refer nuclear energy. (ibid.)

Poland criticized the regulation for not providing enough guarantees that natural gas would be recognized as a transition activity in its statement. Similarly, it criticized the uncertainty of how nuclear energy would be acknowledged, with the decision-making transferred to the delegated acts, leaving little room for the Member States to be involved. (ibid.)

These statements from the Member States highlight the widely differing interpretations of what the agreed Taxonomy Regulation would ensue for nuclear and gas. While nuclear energy was brought up frequently, natural gas was not at all criticized in the issued statements, nor even mentioned by any countries other than Poland. A contributing factor was that the vast majority of natural gas's support came from those Member States who also promoted the inclusion of nuclear energy. (see chapter 3, p. 21). Still, no Member States explicitly opposing natural gas came forward at this stage. While some of the Member States were worried that concessions to nuclear energy would be pursued on the basis of the agreed regulation, the budging to include natural gas seemed to have already happened during the inter-institutional negotiations. In fact, the Commission's, the Council's, and the European Parliament's proposals all included references that matched the profile of natural gas (EP 2019a, recital 26a). Ultimately, the political resolve on gas was made explicit when the European Council addressed the requirements for 55% GHG emission reduction in a conclusion published on 11. December 2020:

> The new 2030 target needs to be achieved in a way that preserves the EU's competitiveness and takes account of Member States' different starting points and specific national circumstances and emission reduction potential, including those of island Member States and islands, as well as efforts made. The European Council acknowledges the need to ensure interconnections, energy security for all Member States, energy at a price that is affordable for households and companies, and to respect the right of the Member States to decide on their energy mix and to choose the most appropriate technologies to achieve collectively the 2030 climate target, including transitional technologies such as gas. (European Council 2020, p.6.)

The European Council referred implicitly to the energy article in the Treaty on the functioning of the European Union (Article 194.2. TFEU), which denotes the sovereign right of the

Member States to decide on their energy mix[19]. In 6. July 2021 the Commission used the European Council's resolution as a justification for considering the recognition of natural gas and other transitional activities in the context of sustainable finance and supporting their financing in its communication "Strategy for Financing the Transition to a Sustainable Economy". (COM 2021f. p.5.)

4.4.3 The state of play on nuclear energy

In the 10. MSEG meeting minutes on 31. July 2020, the Commission presented 'the state of play of the process to assess nuclear energy in the context of the EU taxonomy' a month after the Taxonomy Regulation had been published. The Commission's communication to the MSEG is described in the meeting minutes as follows:

> …The Commission explained that the Commission's Joint Research Centre will start drafting a technical report on the 'do no significant harm' aspects of nuclear energy very soon. -- The process is not expected to conclude before the beginning of 2021. Therefore, a possible amendment of the first delegated act one year later, taking place at the same time as the adoption of the next delegated act for the other four environmental objectives by the end of 2021, could present a window of opportunity for inclusion in the taxonomy, depending on the outcome of the assessment. (MSEG 10. meeting minutes 2020.)

The excerpt verifies the Commission's preparedness to include nuclear energy in the EU Taxonomy on the basis of the assessment. The use of phrase "window of opportunity" and mapping out the inclusion scenario eliminates the option that the Commission was categorically against the inclusion of nuclear energy. When asked about the procedure for the assessment of nuclear energy, the Commission stated in a Q&A that "the credibility of this assessment is crucial. It should be scientifically rigorous, transparent and bring together a balanced set of views. It should also reflect the principle of technological neutrality, as included in the Taxonomy Regulation" (Commission 2020c. p. 13). This statement linked technological neutrality and nuclear energy, similarly as it was used by Czechia, Hungary, Slovakia, and Slovenia in their joint statement. (Council 2020.)

[19] Article 194(2) TFEU is shown and further addressed in chapter 6.

4.5 Process for the Climate Delegated Act (CDA)

The Commission published the draft for the Climate Delegated Act (CDA) supplementing the Taxonomy Regulation on 20. November 2020 for feedback from stakeholders. (COM 2020d) The Commission's draft CDA went beyond TEG's recommendations and demonstrated, that it wanted to include natural gas activities and that the possibility of including nuclear energy was under deliberation. This supports the LI theory as a basis for understanding EU decision-making, as the majority of the Member States supported the inclusion of natural gas, and the second biggest preference was to include nuclear energy.

In the draft, the possibility of including nuclear energy was announced and the explicit connection between "climate-neutral energy" and nuclear energy was established in the recital 16, which stayed intact in the final CDA:

> 16) Regulation (EU) 2020/852 recognises the importance of 'climate-neutral energy' and Article 10(2) of that Regulation requires the Commission, within the context of economic activities that support the transition to a climate-neutral economy, to assess the potential contribution and feasibility of all relevant existing technologies. For nuclear energy, that assessment is still ongoing, and the Commission will report on its results in the context of the review of this Regulation. (ibid.)

Natural gas was not mentioned in the recitals or in the articles of the draft delegated act, but was included in the annexes 1 and 2, which set out TSC for economic activities qualifying to either substantial contribution to climate change or to climate adaptation. (ibid.)

Natural gas was included in the annexes 1 and 2. In the first annex the generation of electricity using gaseous and liquid fuels; cogeneration of heat/cool and power from gaseous and liquid fuels; and production of heat/cool from gaseous and liquid fuels are qualified as contributing substantially to climate change mitigation if the life cycle GHG emissions are lower than 100gCO2e/kWh (Sections 4.7, 4.19, 4.23.) (ibid.)

The second annex contained TSC for the objective of substantial contribution to climate change adaptation, with the equivalent generation type eligible when the direct GHG emissions of the activity are lower than 270gCO2e/kWh (Article 4.7). (ibid.)

Compared to TEG's original criteria, the Commission had made two important modifications. First, the tightening of CO2-limit every five years until zero CO2-emissions in 2050 was not

included. Secondly, the set limit of direct GHG emissions of 270gCO2e/kWh for adaption was not part of TEG's recommendations - not the threshold nor the measurement of only direct GHG emissions. Direct GHG emissions consider only the emissions directly caused by the economic activity, and not the indirect upstream or downstream emissions in the total value chain (World Resources Institute and World Business Council for Sustainable Development 2004, p.25). The Commission's draft proposal for CDA demonstrated that it was planning to include natural gas in the EU Taxonomy with less strict criteria than its scientific expert group had recommended., going against Taxonomy's scientific foundation.

4.5.1 Feedback on the draft Climate Delegated Act

The Commission gathered feedback on the draft delegated act between 20. November and 18. December 2020 and received total of 46591 stakeholder feedback. (COM 2020d.) Nearly 98 percent of the feedback was from EU citizens. The feedback was categorized into campaigns. 96 percent of the total reported feedback was categorized as "similar" (i.e supportive) to the campaign 1 feedback, that was based on a separate report by Joint civil society organisation. [20] The campaign 1 insisted that the Commission should maintain the life cycle GHG emission limit of 100gCO2e/kWh for energy generation, and it should eliminate the eligibility of fossil fuels such as coal, oil, or natural gas from the sustainability classification altogether. The campaign also insisted tightening thresholds in five-year periods for the emission quotas, until zero emissions are required by 2050 (Joint civil society organisation 2020).

In a similar manner, the campaign 8 questioned why the draft delegated act completely disregarded TEG's recommendations of the tightening technical screening criteria. The Campaign 8 was signed by 125 scientists[21], who, according to the campaign, included "the full complement of professors serving on the TEG" -- scientists appointed by the Commission to the Platform for Sustainable Finance, leading scientists serving the IPCC and many others..." (Hoepner and Rogelj et al. 2020).

[20] Source: Commission Feedback and statistics: Draft delegated regulation. 44786 of the feedback was categorized as campaign 1. The campaigns can be found under "Draft Act" – "View feedback received >" – "Campaigns". (COM 2020d.)

[21] The 125 scientists were attached to the original petition but were not included in the count of the reported feedback (46591).

The feedback from EU citizens was overwhelmingly uniform – TEG's recommendations should be instilled. But the central and eastern European states saw that the Commission's proposed criteria for gas was unacceptable. According to the sources of Euractiv, ten Member States (Croatia, Cyprus, Czechia, Greece, Hungary, Malta, Poland, Romania, Bulgaria, and Slovakia) vetoed the Commission's proposal on the basis that it was practically excluding natural gas activities. The countries sent a joint working non-paper to the Commission for emphasizing "the need to maintain the possibility of using gas as a transition fuel" and "“the possibility of using hydrogen from various energy sources” – not just renewables". The Member States referred to the European Council's resolution on gas' transitional role made in December (Simon 2021).

4.5.2 MSEG feedback

The MSEG meeting minutes indicate that the concerns about energy sector have been one of the primary concerns in the discussions, but the reports do not disclose specific member state positions, the overall views of the MSEG, or the Commission's responses to the groups' questions. The reports do however testify that the draft delegated act was discussed between the Commission, the Member States, and the PSF on several occasions.[22] The 13. MSEG meeting minutes on 10. December 2020 concludes that the Member States insisted on clear disclosure of the procedure related to the assessment of nuclear energy, and how the process would continue after the JRC's report is published. The MSEG asked that the Commission would take the results of nuclear energy analysis within the Delegated Act in June 2021 at the latest. (MSEG 13. meeting minutes 2020.)

At the 14. meeting the Commission asked for Member States to provide "possible and feasible solutions" on how to make the EU Taxonomy support for the transition better. The meeting minutes shows that Member States demonstrated a lot of particular interest for "exploiting the full potential on transitional and enabling activities" (MSEG 14. meeting minutes 2021). At the 15. meeting, some Member States called for technical screening criteria aligned with state-of the art scientific evidence and TEG's recommendations. Likewise, some Member States wanted to have "realistic" TSC that incentivizes the industry without punishing actors making efforts to align their activities accordingly, and also questioned why transitioning activities

[22] In the explanatory memorandum of the Climate Delegated Act, the Commission disclosed having discussed the draft delegated act with the Platform on Sustainable Finance (PSF) on 4. December 2020 and with the MSEG in four subsequent meetings on 10.12.2020, 26.1.2021, 26.2.2021 and on 24.3.2021.

were not already accommodated in the Taxonomy Regulation or the Delegated Act proposal. (MSEG 15. meeting minutes 2021)

In the 16. meeting held in March 2021 the Commission presented the revised version of CDA. Member States expressed their views on energy issues, and some of the Member States called for keeping the EU Taxonomy based on scientific evidence. This is all the information disclosed about the discussion (MSEG 16. meeting minutes 2021). During the same meeting, the Chair of the PSF presented the report on Transition Financing that it had adopted on 18. March 2021. PSF's position and the attitudes of Member States are described as follows:

> [PSF's position:] the current taxonomy already provides options for transition financing but does not include all the options stakeholders are asking for. Options do exist to develop the taxonomy framework further, however also other policies and tools will be needed for transition finance, as we cannot solely rely on the Taxonomy for this. -- MS welcomed the work of the Platform and are supportive of activity and sector specific investment plan as well as ideas around expansion of the taxonomy. On the other hand, some of them also called for clarity around inclusion of additional activities in the taxonomy. (ibid.)

The feedback from MSEG and PSF denoted wide differences in views on transitional activities. The report implied that most Member States wanted to include transitional and enabling activities, some wanted less stringent requirements while some wanted to maintain the scientific rigorousness of the EU Taxonomy. PSF, the Commission's advisor on TSC established by the Taxonomy Regulation, saw that other instruments other than EU Taxonomy will be needed to provide transition financing the stakeholders were asking for.

4.5.3 JRC

During the summer of 2020 the European Commission requested Joint Research Centre (JRC) to carry out "more extensive technical work on the DNSH-aspects of nuclear energy". The JRC continued the work TEG had previously recommended to be conducted on DNSH-aspects of nuclear energy. JRC was assigned to conduct a technical assessment report DNSH-aspects of nuclear energy including aspects related to the long-term management of high-level radioactive waste and spent nuclear fuel, consistent with the specifications of Articles 17 and 19 of the Taxonomy Regulation". (Abousahl et al. 2021, p.1.)

On 29. March 2021 JRC published their 387 pages long technical assessment report "on the DNSH-aspects of nuclear energy. The report was published a month before the adoption of CDA. According to the report:

> The analyses did not reveal any science-based evidence that nuclear energy does more harm to human health or to the environment than other electricity production technologies already included in the Taxonomy as activities supporting climate change mitigation. (ibid., p.3.)

This report was reviewed by two sets of experts assigned by the Commission: the Group of Experts on radiation protection and waste management under Article 31 of the Euratom Treaty, as well as the Scientific Committee on Health, Environmental and Emerging Risks (SCHEER) on environmental impacts. The former adopted its position on 28. June 2021, generally confirming the findings of JRC report (Group of Experts 2021). On 29. June 2021, SCHEER also generally confirmed the conclusions of JRC, but also observed "several findings where the report is incomplete and requires to be enhanced with further evidence" SCHEER 2021, p.15). These conclusions gave the Commission a green light to include nuclear energy in the EU Taxonomy backed up by the scientific examination. The environment or energy ministers of Austria, Denmark, Germany, Luxembourg, and Spain contested the JRC's report as having methodological shortcomings. (Schulze et al. n.d.)

4.5.4 The Commission's leaked document on gas

On 11. March 2021 Euractiv published the Commission's leaked draft document that included possible criteria for natural gas activities. (Taylor 2021) According to the Commission, feedback from stakeholders had highlighted the important role of gas-fired electricity generation in ensuring the reliability of electricity supply and contributing to grid stability. Two possible options were put forward, one or both of which could be implemented. (Taylor 2021, p.1[23].)

The first option included criterion for electricity generation from gaseous and liquid fuels that contributed to the DNSH-criteria to climate change mitigation, in order to recognize how it can contribute to the reliability of electricity supply. In option 1, The direct greenhouse gas emissions of the activity should be lower than 244gCO2e/kWh, or the life-cycle greenhouse gas

[23] The leaked document is found in Taylor's article with the title "Role of gas-fired power generation in maintaining the reliability of electricity supply by contributing to grid stability".

yearly emissions of the activity are lower than 820 kgCO2e per kW of net installed capacity. (ibid., p.2)

The second option introduced new activity, that recognizes the role of gas-fired electricity generation for maintaining the reliability of electricity supply and contributing to grid stability. In order to contribute substantially to climate change mitigation, the activity's annual life cycle GHG emissions should be lower than 820kgCO2e per Kw of net installed capacity. The power plant should also be compatible with co-firing with low carbon gaseous fuels. (ibid.)

In the leaked document the Commission proposed major changes to the treatment of gas in the EU Taxonomy. Interestingly, the feedback from stakeholders was used as a justification for this new approach, while 96% of the gathered public feedback stated, that the Commission should stick with the life cycle GHG emission limit of 100gCO2e/kWh for energy generation. This drafted proposal distinctly reflected the influence of the pro-gas Member States over the public consultation, the scientific bodies, and other Member States. The leaked document was heavily criticized by Austria, Denmark, Ireland, Luxembourg and Spain. (Taylor 2021; Eickout 2021). In the later official proposals or leaked drafts the Commission did not pursue these options any further.

4.5.5 April's Communication by the Commission

In a communication published on 21. April 2021 the Commission told that the EU Taxonomy would go beyond existing "market-based green finance tools" in increasing access to sustainable finance – notably for "some carbon-intensive sectors, enabling market recognition for transitioning activities within those sectors" (COM 2021g, p.4). The communication provided foresight to the Commission's intention on the transitional activities, clearly demonstrating volition to include both activities. Importantly, the Commission ultimately justified the final Complementary Climate Delegated Act which introduced specific nuclear and gas activities "on the commitments made" in the April's communication and on the scientific assessment on nuclear. (COM 2022b)

The Commission disclosed their plan to adopt a complementary Delegated Act which would cover nuclear energy "subject to and consistent with the results of the specific review process underway in accordance with the EU Taxonomy Regulation", and also cover "natural gas and related technologies as transitional activity in as far as they fall within the limits of Article 10(2) of the EU Taxonomy Regulation". Importantly, the Commission told that the "merits of

a sunset clause for transitional activities" would be considered in this context. Here the Commission disclosed, that in addition to the transitional activities referred to in Article 10(2), also other types of time-restricted transitional activities would be now considered. The complementary Delegated Act would be "adopted as soon as possible" after the review process on JRC's assessment was done in summer 2021 (ibid., p.7).

Euractiv leaked a draft proposal by the Commission in April 2021, where the Commission disclosed its intention to put forward "a separate legislative proposal in Q4 2021, specifically covering how certain economic activities, primarily in the energy sector, contribute to decarbonization". (Simon 2021a, p.8[24].) Importantly, the Commission linked the EU Taxonomy to the EU's energy policy (article 194(2) TFEU) explicitly in the following statement:

> The proposal will have several advantages. On the one hand, it will allow a transparent debate by co-legislators on the contribution of natural gas and nuclear technologies to the decarbonisation objectives, respecting the right of Member States to determine their energy mix in an appropriate way. –" (ibid.)

The decision to bundle both nuclear and gas activities into single act demonstrated strategic agency by the Commission, as the tie-in agreement eliminates the possibility to support and oppose the other activity.

The Commission's statement explicitly acknowledged that their proposal was associated with the EU's energy policy. Otherwise, there would not be a need to refer to it in this context at all, if the treatment of nuclear and natural gas in the EU Taxonomy did not have any potential implications to the right of Member States to determine their energy mix – the right enshrined in the article 194(2) TFEU.

4.5.6 Climate Delegated Act (CDA)

The Commission published the Climate Delegated Act on 4. June 2021. The Commission commented on the stakeholder feedback and the consultation with PSF and MSEG in the Explanatory Memorandum of the final Climate Delegate Act Regulation:

[24] The leaked document is found in Simon's article titled "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Taxonomy, Corporate Sustainability Reporting, Sustainability Preferences and Fiduciary Duties: Directing finance towards the European Green Deal."

> …Several concerns were also expressed, with a large polarisation between those proposing more or less ambitious criteria. Some considered the calibration of some of the criteria for various activities as insufficiently ambitious. On the other hand, others considered some of the criteria as too ambitious, complex or narrow. Concerns were also raised as to the potential implications for stakeholders whose activities would not qualify under the Taxonomy as environmentally sustainable. (COM 2021h, p.3**.)**

The recital 16 addressing nuclear energy was kept unaltered, but all the previous articles applying to natural gas (4.7, 4.19, 4.23) were extracted from the final act. The 28. recital was modified to address the role of natural gas in the taxonomy:

> (28) The legal boundaries for transitional activities set out in Article 10(2) of Regulation (EU) 2020/852 provide constraints in respect to greenhouse gas intensive activities with large potential for emission reduction…In addition, Article 19 of the same Regulation requires, in particular, that the technical screening criteria should be based on conclusive scientific evidence. Where natural gas activities fulfil those requirements, they will be included in a future delegated act. For these activities, the technical screening criteria for assessing substantial contribution to climate change mitigation and 'do no significant harm' to other environmental objectives will be specified in that future delegated act. Activities that do not meet these requirements cannot be recognised under the Regulation (EU) 2020/852. In order to acknowledge the role of natural gas as an important technology in reducing greenhouse gas emissions, the Commission will consider a specific legislation to ensure that activities contributing to emissions reductions would not be deprived of appropriate financing. (ibid.)

The recital 28 reiterates and confirms the same message the Commission shared in its April's communication. The Commission explicitly stated that natural gas activities would be included in some capacity in future delegated act. The pushback from both proponents and advisories of natural gas made the Commission postpone the potential inclusion of natural gas even further, but it did not signal any desire to exclude it from the sustainable classification system.

4.5.7 Joint statements by Member States

From the start of 2021 statements issued to the Commission on the treatment of nuclear and gas started to surface. These were sent by Member States, MEPs, industry and financing

sectors, as well as NGOs[25]. Most of the statements referred to the energy article 194(2), solidifying the connection with EU Taxonomy and EU energy policy. These linkages are further addressed in chapter 6.

On 19. March 2021, a joint statement was addressed to the Commission, signed by the president of France and the prime ministers of Czechia, Hungary, Poland, Romania, Slovakia, and Slovenia. The ministers push for the inclusion of nuclear in the EU Taxonomy. The joint statement was published before the JRC's report. (Babiš, Macron et al. 2021.)

Joint ministerial letter was undersigned by environmental ministers of Germany, Austria, Denmark, Luxembourg, and Spain, and addressed to the Commission. The ministers demand the exclusion of nuclear power in the EU Taxonomy on the grounds of it being incompatible with the DNSH-principle. The letter was undated, but it addresses the JRC report's findings which was published in April 2021. (Schulze et al. n.d)

On 10. October 2021, several major European newspapers published a joint statement issued by ten European countries, which pushed for the inclusion of nuclear energy in the taxonomy. It was signed by ministers from France, Finland, Czechia, Slovakia, Croatia, Slovenia, Romania, Bulgaria, Poland, and Hungary. (ANS Nuclear Café 2021; Le Maire 2021.)

These statements denoted that these Member States were concerned about the direction the Commission's upcoming delegated act would take. This observation indicates that Member States perceived a necessity for alternative avenues through which they could exert influence and apply pressure on the Commission, beyond the consultation done within the MSEG.

4.5.8 High Political involvement: Ursula Von der Leyen and Thierry Breton

On 22. October 2021 Von der Leyen made a statement at a press conference following the meeting of the European Council. Von der Leyen explicitly connected the EU taxonomy to EU's future energy mix, which is built on renewables and clean energy, including nuclear energy as a stable source of energy and use of natural gas during energy transition.

> "-- And that leads me to the energy mix of the future. It is obvious that we need more renewable and clean energy. If you look at the production price of renewables, it has

[25] In addition to the statements made by Member States, statements were made at least by trade unions in the European nuclear sector on 28.1.2021; 46 environmental NGOs request that nuclear power be better considered in the European taxonomy in the name of the climate on 27.3.2021; Joint statement by 87 MEPs on 8.7.2021; FNG on 29.8.2021.

> considerably decreased. For solar energy, it is ten times cheaper today than a decade ago. Wind energy is very volatile, but it is 50% cheaper than it was a decade ago. So that is the way to go. They are carbon-free and they are homegrown, so a lot of independence is in that. Alongside this, we need a stable source, nuclear; and during the transition, of course, natural gas. This is why – as we have already stated as a Commission in April – we will come forward with our taxonomy proposal." (COM 2021i)

The speech was primarily addressing the concerns Member States had issued in the past months. The remarks were tweeted in a more succinct form by Von der Leyen on the same day (Von der Leyen 2021). Von der Leyen communicated the political direction of the Commission had chosen, foreshadowing the inclusion of nuclear and natural gas activities in the EU taxonomy. In effect, the president of the Commission linked the EU taxonomy to EU's energy policy by addressing them together as an interrelated subject.

Shortly after the publication of draft Complementary Climate Delegated Act (CCDA), which included specific nuclear and gas activities, the French newspaper JDD published an interview with Thierry Breton, the French Commissioner for the Internal Market, who regarded nuclear power as fundamental to achieve the objective of carbon neutrality and energy transition. Breton pointed out the investment gap of 50 billion euros for existing nuclear plants and 500 billion euros in the new generation of nuclear power plants. According to Breton, the sustainability label for nuclear energy and natural gas is essential for attracting capital investments to these activities. (Gröndahl 2022).

Breton acknowledged that Member States are responsible for their own energy mix (referring to the energy article 194(2) TFEU), while adding that "collective responsibility must focus on the means to be deployed throughout the European Union to collectively achieve the objective set by all the states: net-zero in 2050." (ibid.) Breton's reference to the energy article of the Union, the energy transition, and the necessity of a sustainable label for required investments in the nuclear and gas sector, further solidify the linkage between the EU's energy policy and the EU taxonomy (ibid.).

4.6 Process for the Complementary Climate Delegated Act (CCDA)

4.6.1 Non-paper for less-stringent requirements for nuclear energy and natural gas

On 3. November 2021, Euractiv published an unsigned leaked non-paper on inclusion of gas and nuclear in the EU taxonomy. Multiple sources suggested that the originator of the non-paper was France, with contributions from Poland, Czechia, and Hungary. In this thesis, it is presumed that the non-paper was assigned to these Member States for a lack of counterfactual evidence suggesting otherwise. Moreover, according to the unnamed diplomatic sources, the compromise was discussed at a meeting hosted by France on 18. October 2021 with attendance of like-minded EU-countries: Bulgaria, Cyprus, Czechia, Finland, France, Greece, Hungary, Malta, Poland, Romania, Slovakia, and Slovenia. (Simon 2021b; Correia and Lindgaard 1.11.2021; Simon 2021.)

The non-paper sought a compromise satisfying both nuclear and natural gas supporters. In the non-paper, an alternative criterion for the 100 g CO2e/kWh of energy output was presented for natural gas activities for contributing substantially to climate change mitigation. It introduced a sunset clause, valid until 31. December 2030, requiring a threshold of less than 340 gCO2/kWh of direct GHG emissions from electricity produced from natural gas and less than 700 kg CO2/kW of annual GHG emissions from the installation. It is important to note that the threshold was based only on direct GHG emissions and not to life cycle emissions as it was in the Commission's leaked document (see p.58). For combined heat/cooling and power generation using natural gas, the sunset clause, applicable until 31. December 2030, requires the direct GHG emissions of the installation to be below 250-270 g CO2/kWh of output energy. (Simon 2021b.)

The non-paper included five activities for nuclear energy that were taken from JRC's report's Annex IV (Abousahl et al. 2021, p.353-364). These were: nuclear power plant operation, interim storage or final disposal of radioactive or spent nuclear fuel, mining and processing of uranium for fuel, reprocessing of spent nuclear fuel, and high-efficiency nuclear cogeneration. The non-paper did not provide any detailed eligibility criteria for nuclear energy.

4.6.2 Draft version of Complementary Climate Delegated Act

According to World Nuclear News, the Commission started consultations with the MSEG on Sustainable Finance and the Sustainable Finance Platform on a draft text of a Taxonomy Complementary Climate Delegated Act (CCDA) covering certain gas and nuclear activities on 31. December 2021 (WNN 2021) The day after Euractiv published a leaked the draft version of the CCDA. (Simon and Taylor 2022).

The drafted delegated regulation amends both the first Climate Delegated Act and Taxonomy Disclosures Delegated Act by adding TSC for certain economic activities in the natural gas and nuclear energy sectors and providing specific disclosure requirements for natural gas and nuclear energy sectors respectively. The annex I establishes TSC for substantial contribution to climate change mitigation and TSC for substantial contribution to climate change adaptation is issued in annex II.

Next, I will provide a selected overview of the requirements for both economic activities in the Commission's draft CCDA. The selected overview is based on the recommendations made by MSEG, Member States and PSF and will not provide exhaustive list of the set conditions. For example, the annex II on substantial climate change adaptation is omitted from the overview and analysis, as it was not brought up by these actors.

The overview of the draft CCDA will be contrasted to the final version of the delegated act in on page 72. The draft CCDA establishes the Commission's preferred policy for nuclear and gas activities. The final CCDA will be compared to proposal made by MSEG, Member States and PSF to gain insight into how the final delegated act reflected these proposals.

4.6.2.1 Nuclear energy

Three types of economic activities in the nuclear energy sector were included in Annex I (substantial contribution to climate change mitigation) and Annex II (substantial contribution to climate change adaptation) of the Draft CCDA:

- 4.26. Pre-commercial stages of advanced technologies with minimal waste from the fuel cycle.
- 4.27. Construction and safe operation of new nuclear power plants, for the generation of electricity or heat, including for hydrogen production, using best-available technologies.

- 4.28 Electricity generation from nuclear energy in existing installations. (COM 2021j.)

4.6.2.1.1 Substantial contribution to climate change mitigation

- The life cycle GHG) emissions from the generation of electricity from nuclear energy under all sections must be below the threshold of 100 g CO2e/kWh.
- Under all sections, Member States must ensure operational final disposal facilities for all very low-, low- and intermediate level radioactive waste. Member States must also have a detailed plan for a high-level radioactive waste (HLRW) disposal facility in operation by 2050. Member States must report to the Commission every five years about the actual progress in the implementation of the HLRW disposal plans and demonstrate that it has established radioactive waste management fund and a nuclear decommissioning fund, which can be combined.
- Member States must demonstrate that nuclear safety measures are proportionate with the potential "magnitude and nature of the hazard relevant for the nuclear installation and its site" has measures to minimize the impact of extreme external natural and unintended man-made hazards and performs an appropriate site and installation-specific assessment.
- For section 4.28, the construction permit for new nuclear installation has been issued by 2045 by Member States' competent authorities. For section 4.29, the extension of existing nuclear installation must be authorized by Member States' competent authorities by 2040.
- In sections 4.27. and 4.28. the use of best-available technology and accident-tolerant fuels is required. (ibid.)

4.6.2.2 Natural gas

Three types of economic activities in natural gas sector were included in the Annex I and II of the Delegated Regulation:

- 4.29. Electricity generation from fossil gaseous fuels.

- 4.30. High-efficiency co- generation of heat/cool and power from fossil gaseous fuel.
- 4.31. Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system. (ibid.)

4.6.2.2.1 Substantial contribution to climate change mitigation

There are two alternative GHG emission requirements for electricity generation from natural gas under section 4.29.

1. Lifecycle GHG emissions from the generation of electricity using fossil gaseous fuels are lower than 100 g CO2e/kWh.
2. Alternative GHG emission sunset clause: For facilities that have been granted construction permit by 31. December 2030: Direct GHG emissions of the activity of facility are lower than 270g/CO2e/kWh of the output energy, or annual GHG emissions do not exceed an average of 550kgCO2e/Kw of the output energy of the facility's capacity over 20 years. The facility must also fulfill other requirements:
    - The generated power cannot be efficiently replaced by RES for the same capacity produced.
    - The facility replaces an existing high emitting electricity generation facility that uses solid or liquid fossil fuels.
    - The production capacity of the facility does not exceed the replaced capacity by more than 15 percent.
    - The facility is compatible with cofiring of low carbon gaseous fuels and commits to use at least 30 percent of renewable or low-carbon gases as of 1. January 2026, and at least 55 percent as of 1. January 2030, and to switch to 100 percent renewable or low-carbon gases by 31. December 2035. The switching must lead to an emission reduction of at least 55 percent GHG per kWh of output energy.
    - The activity must happen in a Member States' territory that has committed to phase-out the use of energy generation from coal. (ibid.)

Equivalent conditions apply for sections 4.30 and 4.31 for the sunset clause, except for these notable differences:

- Only the direct GHG emissions threshold (lower than 270g/CO2e/kWh of the output energy) is eligible, the alternative method of calculating annual GHG emission is not applied.
- Production capacity of the facility cannot exceed the replaced capacity.
- The refurbishment of the facility cannot lead to increase in production capacity. (ibid.)

4.6.3 Letter to the Commission by the German government

On 21. of January 2022 the German government issued a list of requests for the Commission to loosen requirements on natural gas while rejecting the inclusion of nuclear energy. Regarding the delegation, Germany requested that an ordinary legislative procedure and public consultation should be implemented to enable the Member States and the European Parliament to exert adequate influence. This request holds significant importance, particularly in the context of the power dynamics between influential Member State and the Commission. It underscores Germany's remorse over delegating decision-making authority to the Commission on this matter.

Germany insisted on multiple changes for the technical screening criteria for natural gas activities. (BMF 2022.) The key changes to the technical screening criteria will be addressed when comparing them to the final CCDA adopted by the Commission.

Germany insisted on, inter alia, the following changes to the technical screening criteria for natural gas activities:

- Annual emission budgets should be defined for sections 4.30. and 4.31., with realistic values from the Commission.
- The intermediate steps for fuel switching should be flexibly enabled only from 2036 onwards, and the fuel switch requirements should be understood as guideline values.
- The DNSH-principle extends beyond EU taxonomy and occurs in in several other EU legal acts, in particular the climate, environment and energy aid guidelines, and should therefore also be consistent with the resulting energy system requirements.

- The maximum 15% capacity addition requirement in section should refer to the retired capacity in the Member State, not to individual facilities.
- It should also be possible to replace old gas-fired power plants with modern, hydrogen-ready plants. The commitment to a greenhouse gas reduction of 55 percent GHG emission reduction objective is unrealistic in this context and the Commission should set realistic values to enable this. (ibid.)

4.6.4 Responses from MSEG on Sustainable Finance and from the Sustainable Finance Platform

On 10. January 2022 the MSEG on sustainable finance held a meeting discussing the draft CCDA, where several Member States either supported or opposed the inclusion of gas and nuclear activities in the CDA and proposing modifications to the criteria. (MSEG 20. meeting minutes 2022)

The lack of disclosure of the Member States' representatives' statements in the MSEG meeting minutes eliminates precise mapping of the individual Member States positions. Importantly, the differences between the final CCDA and the views presented by MSEG allow to assess the degree upon which the Commission accommodates these views and/or pushes for different policy direction.

4.6.4.1.1 MSEG's stance on nuclear energy

Several pro-nuclear Member States opposed:

- The cutoff dates of 2040 and 2045 for granting the permit for nuclear installation in section 4.28 and section 4.27 respectively.
- The requirement for HLRW disposal facilities to be fully operational by 2050.
- Accident-tolerant fuel was not seen yet mature or commercially available technology.

Some pro-nuclear Member States argued against:

- The "transitional" label of nuclear energy activities, meaning that it should be eligible under the article 10.1. of the Taxonomy Regulation.

- Whether the Commission's competences were going beyond Euratom Acquis Communautaire on the notification requirement.
- Mining, fuel reprocessing and waste disposal should be included.

Anti-nuclear Member States opposed the inclusion of nuclear energy on the following grounds:

- Nuclear waste is incompatible with the DNSH-principle.
- Article 10(2) of the Taxonomy Regulation does not accommodate nuclear activities.
- Lack of intermediate targets for HLRW disposal facilities before 2050.
- Insufficient assessments of risks.

Some argued that a public consultation should have provided for CCDA and the proposal should have been tabled as traditional co-decision procedure. (ibid.)

4.6.4.1.2 MSEG's stance on natural gas

Many pro-gas Member States argued:

- Criteria for gas too strict, although few "strongly" questioned the 270g threshold or the 2030 date for sunset clause.
- Timeline for fuel switching by 2035 as too ambitious, insufficient availability of hydrogen at that time.
- GHG emission reduction objective too hard.
- Condition for coal replacement too rigid.

Some pro-gas Member States argued:

- Carbon budget option was inadequate.
- Questioned the status and the identity/scope of the independent third party in charge of assessing the submitted GHG assessments.

Other Member States opposed the proposal based on:

- Noncompability with the 1.5 degree Paris goals and latest climate science.

- The concept of technology neutrality within the taxonomy.
- Precision e.g., as to the requirement to demonstrate the non-availability of renewables.
- How EU taxonomy would compare to standards applied by China and Russia.
- The impact on EU leadership in sustainable finance globally. (ibid.)

4.6.4.1.3 Feedback from the PSF

The Platform for Sustainable Finance (PSF) published its feedback on the proposed draft version of the Complementary Delegated Act on 21. January 2022. The Commission made the request for PSF's input on 31. December 2021, initially giving only 12 days for feedback but then extended for 21 days. PSF disclosed that it hoped more time for deliberation. (PSF 2022, p.1-2.)

According to PSF, the drafted CDA activities were not in alignment with the Taxonomy Regulation and majority of its members identified a serious risk of undermining the sustainable Taxonomy Framework. Members expressed doubts about the applicability of the proposed criteria, and many were "deeply concerned about the environmental impacts that may result" (ibid.) PSF also objected the alternative GHG emission criterion for natural gas activities and recommended a separate classification system for activities not up to the standards proposed by TEG. (PSF 2022, p.3.)

PSF recommends that nuclear activities under section 4.27 and 4.28 should not be included in the EU Taxonomy. PSF regards the TSC for these sections inadequate in ensuring that no significant harm is caused to the three environmental objectives in the article 17 of the Taxonomy Regulation: the sustainable use and protection of water and marine resources, the transition to a circular economy, pollution prevention and control, as well as the protection and restoration of biodiversity and ecosystems. For the installation of new nuclear plants, the TSCs are viewed unsatisfactory for verifying substantial contribution to climate neutrality objective in 2050 if the installations come into service near to 2050 or later. (ibid., p.4.)

A summary of selected nuclear and gas related recommendations of PSF are shown in Table 5.

Table 5. Summary of selected PSF's recommendations.

Summary of selected PSF's recommendations relating to nuclear and natural gas activities (ibid., p.3-4)

Proposed TSCs differ fundamentally from the TSCs in the Climate Delegated Act and are not consistent with the provisions of the Taxonomy Regulation, effectively making the proposed activities not sustainable within the meaning of the Taxonomy Regulation
Regarding sections 4.29, 4.30 and 4.31 on natural gas activities: • Criterion 1.b (Direct emissions of 270gC02/kWh and/or 550gC02/kW average over 20 years) should be removed and only the criterion 1.a (100g CO2/kWh) based on lifecycle GHG emissions should be implemented as science-based, technology neutral approach consistent with the Climate Delegated Act. • PSF recommended an alternative Taxonomy classification (so-called Amber zone[26]) for activities with GHG emissions above the 1.a criterion, which should be based only on lifecycle emissions.
Sections 4.27 and 4.28 for nuclear activities should not be considered as Taxonomy aligned as DNSH-principle is not verified and therefore does not meet the requirements of the Taxonomy Regulation.

The following paragraph from the PSF's report illustrates how the EU Taxonomy was regarded as non-suitable as a policy mechanism for energy system transition:

> The Taxonomy is a disclosure requirement and not mandatory for investments, nor can it solve energy sector transition policy beyond environmental performance. Rather, energy system transition decisions require additional tools, financing sources, consideration of additional social objectives and are to be determined by other policy mechanisms. (ibid., p.2)

The statement is convergent with the earlier account of PSF's position disclosed in the MSEG's 16. meeting held in March 2021 (see page 57.). While fossil gaseous fuels were acknowledged as potential contributors to broader energy transition objectives, and existing nuclear power plants were recognized for their substantial contribution to climate change mitigation, the PSF maintains that the EU Taxonomy is not an appropriate instrument for addressing the European Union's overall energy transition policy. (ibid., 3-4.)

[26] PSF told that it is developing an intermediate performance category (Amber category), and an unsustainable category particularly suitable for transitional energy activities with excessive emissions or that violate the DNSH-principle.

4.6.5 Complementary Climate Delegated Act (CCDA)

The Commission adopted the Complementary Climate Delegated Act (CCDA) on 9. March 2022. (COM 2022c) In this section, I will compare:

- The draft CCDA and the adopted CCDA.
- The MSEG positions and the adopted CCDA.
- The PSF's recommendations to the adopted CCDA.
- Germany's government's list of requests to the adopted CCDA.
- The acclaimed requests of France, Poland, Czechia, and Hungary to the adopted CCDA.

This assessment will determine whether the final CCDA corresponded more closely with the proposals of the MSEG, the Commission's epistemic community or those of the influential member states.

4.6.5.1 Comparing the CCDA to draft CDA and MSEG's positions

4.6.5.1.1 Nuclear energy

Overall, the sections 4.26, 4.27, and 4.28 on nuclear activities were kept intact with only minor changes, mainly clarifying the set criteria. For example, the content of the TSC in the first paragraphs was clarified to apply to Member States, which are responsible for ensuring that the requirements are met. (COM 2022c p.8,12,16.)

The criteria for the use of accident-tolerant fuel in sections 4.27 and 4.28 were postponed until 2025. In the draft CCDA, the accident-tolerant fuel was required immediately. As a caveat, the article 1 of the CCDA states, that the Commission's review on the TSC (according to the article 19.5. of the Taxonomy Regulation) "shall take into account the technical progress in accident-tolerant fuel commercialisation in the Union and worldwide". This effectively enables delaying the requirement for accident-tolerant fuels, if the commercialization is not yet technologically feasible. Several pro-nuclear Member States had stated in the MSEG 20. meeting, that accident-tolerant fuel was not seen yet mature or commercially available technology. (COM 2022c.)

Apart from modifications to the requirement on the accident-tolerant fuel, the CCDA did not accommodate any of the positions voiced on nuclear in the MSEG 20. meeting.

4.6.5.1.2 Natural gas

The adopted CCDA introduced some changes to the sections 4.29, 4.30, and 4.31 regarding natural gas activities, but did not substantially alter the set criteria. Importantly, the primary threshold of life cycle GHG emissions being lower than 100 g CO2e/kWh was kept in the natural gas sections. Also, the sunset clause requiring the direct GHG emissions of the activity being lower than 270g CO2e/kWh of the output energy, was kept intact. The alternative annual average budget of 550kgCO2e/kW of the facility's capacity over 20 years was kept for the electricity generation (Section 4.29), and not for the other sections, as in the draft CCDA. (ibid.)

Here are selected changes to the paragraph 1(b) of the sections 4.29, 4.30, 4.31, which sets out the alternative sunset clause criteria.

- The facilities granted construction permit must demonstrate that the power generation cannot be replaced by power generation based on renewable energy sources (RES). As a change to the draft CCDA, this demonstration must be based on comparative assessment with "the most cost-effective and technically feasible renewable alternative for the same capacity identified; the result of this comparative assessment is published and is subject to a stakeholder consultation". (COMc 2022, p.20,22,24.)

- The interim goals for fuel switching were omitted in the adopted CCDA. (ibid. p.20,22,23.) The full switch to renewable and/or low-carbon gaseous fuels by 31. December 2035 was not altered as many pro-gas Member States had insisted in the MSEG 20. meeting. The article 1 of CCDA amends the CDA by giving the Commission powers to review and assess the necessity to amend the dates referred to in Annex I Sections: 4.27, 4.28, 4.29 (1b), 4.30 (1b), 4.31 (1b). This does not however guarantee favorable conditions for the Member States promoting less-stringent rules.

- In the draft version the facility that replaces high-emitting facility must lead to a reduction in emissions of at least 55% GHG per kWh of output energy. In the adopted CCDA, the replacement must lead to a reduction in emissions of at least 55% GHG over the lifetime of the newly installed production capacity for electricity generation (section 4.29). For 4.30 and 4.31, the former criteria still applied (ibid., p.22,24.)

- Added requirements for the independent third party that verifies compliance of 1(b) criteria. The verifier must have necessary resources and expertise and not have any conflict of interest. (ibid., p.20,22,23.)

The CCDA did not incorporate the substantial changes proposed by Member State representatives during the MSEG 20. meeting. The only exception was the modification in section 4.29 concerning GHG emission reductions through replacement. However, this change led to undesirable consequences for pro-gas Member States seeking more lenient criteria. The modification specified a 55% GHG emission reduction over the lifetime of the installed production capacity. While this in principle allows for backloaded emission reductions and higher initial emissions, it poses challenges for peaking gas-fired plants. These plants must reduce emissions based on their total production capacity, not their actual electricity production. Consequently, gas-fired plants cannot ramp down power generation to meet emission reduction targets.

The changes aligning with MSEG positions included clarifications regarding the independent third-party assessors for GHG assessments and requirements to demonstrate the unavailability of RES generation. These changes aimed to enhance transparency in both assessment procedures and were not tailored to favor pro-gas Member States.

4.6.5.2 Comparing the CCDA to PSF's recommendations

The Commission did not adopt any of the PSF's recommendations. While the Commission is not legally obligated to follow the PSF's recommendations, the disregard for the platform's TSC positions contradicts the scientific foundation of the EU Taxonomy. This is not because the Commission's policy approach is inherently unscientific - for example, JRC's conclusions supported the inclusion of nuclear activities - but rather because the Commission diverged from the guidance of its two key scientific bodies, the PSF and TEG, which were consulted to establish the EU Taxonomy's scientific basis. Both TEG and PSF had recommended separate classification system for incentivizing decarbonization in polluting sectors, but not inside the EU Taxonomy. The alternative sunset clause for natural gas activities in the EU Taxonomy was therefore incompatible with the recommendations of the TEG and the PSF, which can be seen as contradicting the EU Taxonomy's science-base. Below (Table 6), I provide a summary comparison in respect to key points:

Table 6. PSF recommendations compared to CCDA.

PSF recommendations	Adopted CCDA by the Commission
Regarding sections 4.29, 4.30 and 4.31 on natural gas activities: • Criterion 1.b (Direct emissions of 270gC02/kWh and/or 550gC02/kW average over 20 years) should be removed and only the criterion 1.a (100g CO2/kWh) based on lifecycle GHG emissions should be implemented as science-based, technology neutral approach consistent with the Climate Delegated Act. • PSF recommended an alternative Taxonomy classification (so-called Amber zone) for activities with GHG emissions above the 1.a criterion, which should be based only on lifecycle emissions.	• Criterion 1.b was not changed in sections 4.29, 4.30 or 4.31. • "Amber-zone" classification system was not developed or advanced by the Commission.
Regarding sections 4.27 and 4.28 for nuclear activities: • should not be considered as Taxonomy aligned as DNSH-principle is not verified and therefore does not meet the requirements of the Taxonomy Regulation.	• Sections 4.27 and 4.28 remained intact in the CCDA.

(PSF 2022; COM 2022c.)

4.6.5.3 Comparing the CCDA to the German government's proposal

The CCDA did not incorporate any requests issued by the German government. The selected requests are compared with the adopted CCDA in Table 7.

Table 7. German government's requests compared to CCDA.

German government's list of requests for natural gas activities after the publication of draft CDA	How the final CCDA adopted by the Commission reflected these requests
• Annual emission budgets should be defined for sections 4.30. and 4.31. with realistic values from the Commission.	Annual emission budgets were not introduced for sections 4.30. and 4.31.
• The intermediate steps for fuel switching should be flexibly enabled only from 2036 onwards, and the fuel switch requirements should be understood as guideline values, evaluated according to available quantity of renewable or low-carbon fuels.	Intermediate steps were removed entirely, but the switch to full use of renewable and/or low-carbon gaseous fuels by 31. December 2035 stayed intact. Flexibility and interpretation as "guideline values" were not introduced.
• The DNSH-principle extends beyond EU taxonomy and occurs in in several other EU legal acts, in particular the climate, environment and energy aid guidelines, and should therefore also be consistent with the resulting energy system requirements.	DNSH-principles were not changed.
• The requirements under DNSH-principle must be consistent with the requirements for classification "transitional technology". The requirements under DNSH must be less stringent compared to requirements under "significant contribution to climate change". Therefore, at a minimum: Annual budgets applied to significant contribution to climate change should be supplemented. DNSH-principle and its requirements in the EU taxonomy should	DNSH-principles were not modified. Annual budgets for significant contribution to climate change were not supplemented.

be consistent with various other EU legal acts where DNSH is applied, in particular with Guidelines on State aid for Climate, Environmental protection and Energy (CEEAG).	
• The maximum 15% capacity addition requirement in section 4.29 (1.iv) should refer to the retired capacity in the Member State, not to individual facilities.	Not changed.
• It should be possible to replace old gas-fired powerplants with modern, hydrogen-ready plants. The commitment to a greenhouse gas reduction of 55 percent GHG emission reduction objective is unrealistic in this context and the Commission should set realistic values to enable this.	Old gas-fired powerplants can be replaced in principle with modern hydrogen-ready powerplants (1(b)(iii)) under both draft and final CCDA, but the GHG emission reduction target was not modified. However, 1(b)(vii) postulates, that the economic activity must take place "on the territory of a Member State in which coal is used for energy generation, that Member State has committed to phase-out the use of energy generation from coal and has reported this in its integrated national energy and climate plan".
• The replacement rule for district heating should be abolished, or at least allow provision for reasonable increase in capacity.	No changes were made to the replacement rule and capacity cannot be increased by the new facility.
• An ordinary legislative procedure and public consultation should be implemented to enable the Member States and the European Parliament to exert adequate influence.	Ordinary legislative procedure was not implemented. The proposal was kept as a delegated act and separate public consultation was not held.

• Nuclear energy should not be included in the EU Taxonomy.	Nuclear energy activities were included.

(BMF 2022; COM 2022c.)

The fact that the Commission did not take into account any of Germany's requests is an unexpected result, given the LI theory's claim that large economic powers tend to have greater influence on the EU decision-making. In the following, I will discuss some key aspects of German requests which denote its priority to include natural gas over excluding nuclear energy, and how it's request on changing the legislative procedure challenges LI conception of delegation of powers. These findings are employed in chapter 5, where the first two research questions are addressed through the theoretical framework found in chapter 3.

4.6.5.3.1 Germany's preferences

Germany's request to implement ordinary legislative procedure (co-decision) and public consultation corresponds to the propositions raised by "some" Member States in the MSEG meeting on 10. January 2022. According to the article 23(3) of the EU Taxonomy Regulation, the Council or the European Parliament could have revoked the delegation of powers at any time. This would have required qualified majority voting in the Council; a qualified majority which Germany and the "other Member States" were unable to convene.

The aspiration to overrule this delegation of powers suggests, that the Commission had amassed powers that these Member States had not envisioned to hand over to the Commission, i.e. the Commission's policy did not reflect their preferences. Because of this, they wanted to restore decision-making powers and influence back to themselves, illustrating tension between integration and state sovereignty. This speaks at least partly against Moravcsik's credible commitments approach, whereby Member States are willing to delegate authority to the Union only when it serves their interest, and they want to lock-in other countries to certain policy options. (Moravcsik 1993, p.511; Moravcsik and Schimmelfennig 2009, p.71-73.) According to Moravcsik, national governments are incentivized to delegate authority only when the probability of it bearing decisions contrary to the interest of the government or major domestic interest groups is minimal. (1993, p.511.) While rationality is an imperative presumption for making a

generalized theory of the Member States' choices, Germany's[27] backtracking points to unintended consequences, whereby it effectively misestimated the risk associated with the delegation of powers to the Commission and the likelihood of that risk materializing.

Germany's determination (and the other unnamed Member States) to change the legislative procedure from delegated act to co-decision, and to carry out public consultation supports the Neofunctionalist view, where European integration may occur as a result of Member States conceding authority to the Commission with highly imperfect knowledge of the consequences of such delegation of powers. (Haas 1970, p 627). All Member States that opposed the inclusion of nuclear energy, except Austria, had voted for the EU Taxonomy Regulation and thereby agreed to concede authority to the Commission to adopt delegated acts where technical screening criteria for these transitional activities would be established.[28]

Even though Germany strongly opposed the inclusion of nuclear energy in the EU Taxonomy, this opposition became arguably secondary to the inclusion of natural gas. The former German government (2018-2021) led by chancellor Angela Merkel was responsible for negotiating the EU Taxonomy Regulation, which enabled the inclusion of transitional activities that did not have economically or technologically feasible alternatives. In November 2021, when Merkel's government acted as a caretaker until the new government was established, Merkel voiced her support for the inclusion of natural gas, seeing it as the bridging technology for energy transition needs, and opposed the classification of nuclear energy as sustainable. However, the chancellor acknowledged the difficulty of convincing other Member States to follow suit on the nuclear issue and the difficulty of delaying the procedure, given that the Commission had already presented its legislative proposal[29] (Rinke 2021).

On 3. November 2021 Sven Giegold from the German Green party criticized Merkel for effectively giving up her opposition to France's nuclear policy in the EU taxonomy at the previous EU summit. Giegold's view was that Merkel overstepped her boundaries by pushing for swift

[27] Also applies to the other Member States that voted for the EU Taxonomy Regulation but pushed for co-decision procedure.
[28], Articles 10(3) and 23 (COM 2020a).
[29]Clarification: In Reuters interview, Merkel refers to an act presented by the Commission without specifying the act. It may simply refer to the direction the Commission had announced in April 2021, as Climate Delegated Act did not yet mention the inclusion of nuclear energy. Another possibility is that Merkel is referring to the CCDA draft, which means that the proposal would have been circulated to member states before the MSEG meeting on 31 December 2021, as reported by WNN (see page 64).

proposal from the Commission and conceding on the nuclear opposition, leaving no room for maneuver for the new German government (Giegold 2021).

On 17. November 2021, German newspaper Handelsblatt reported about a draft version of Germany's coalition treaty, where the German government stated its opposition against the inclusion of nuclear energy and natural gas as sustainable technologies under the EU taxonomy. This was met with strong resistance from Germany's energy industry (Stratmann 2021). During the formation of the coalition, a fundamental rift emerged between the Greens, who were vehemently opposed to the inclusion of nuclear power and natural gas in the EU taxonomy, and the SPD and FDP, who also mostly[30] opposed nuclear but welcomed the inclusion of natural gas (Kurmayer 2021; Kurmayer 2021a; Linder 2022; Kaspar 2021; Wettengel 2022). The draft statement was ultimately removed from the final coalition treaty signed by SPD, FDP and eventually by the Green party on 7. December 2021 (Deutchlandfunk 2021). The rationale for withdrawing the statement was to maintain Franco-German relations and to "find a compromise on sustainable investments" according to Sven Giegold, who was a one of the central negotiators for the Green party in the coalition discussions (Kurmayer 2021b).

Germany's internal divide on the gas issue, which was officially resolved only at the end of 2021, weakened Germany's proactive influence in the EU. Germany's list of requests regarding natural gas activities was a reaction to the draft CCDA and had been sent to the Commission only about a month before the Commission tabled their finalized proposal. The ongoing coalition negotiations and the lack of consensus on the gas issue imposed credible constraints to the degree upon which influence could be exerted before official position was formed.

Germany's primary preference under Merkel's and Schulz's governments was to include natural gas activities in the EU Taxonomy. Although Germany did not voice its official support for natural gas until 28. January 2021, it negotiated the EU Taxonomy Regulation, which enabled the inclusion of transitional activities, such as natural gas, and subscribed to the European Councils "pro-gas" conclusions on 11. December 2020 when it was also holding the EU

[30] FDP leader and German Finance Minister Christian Lindner at least partially praised the EU Commission's proposal to classify investments in natural gas and nuclear power as sustainable under certain conditions. (Linder 2022)

Presidency. The omission of nuclear and gas opposition in the Schulz's government's official coalition treaty foreshadowed the desire to incorporate gas.

Schulz's government declared to vote against the CCDA, but it was not willing to challenge the Commission at the ECJ (Von der Burchard 2022). Because Germany's lacked countervailing force to challenge the French-led coalition, it was practically impossible to overturn the proposal.[31] Therefore, the announcement was principally a symbolic gesture for denouncing nuclear energy. Pursuing litigation would have denoted, that the anti-sentiment for nuclear would have been the primary preference of Germany, as the measure would have also compromised the inclusion of natural gas, due to sharing similarly controversial attributes for the sustainability classification. In the context of the EU Taxonomy, if nuclear energy was classified as unsustainable, the inclusion of natural gas would have been scientifically indefensible and contradictory.

4.6.5.4 Comparing the CCDA to the acclaimed proposal of France, Poland, Czechia, and Hungary

The Commission's proposal for CCDA did not reflect the acclaimed recommendations of France, Poland, Czechia, and Hungary, expect for the criteria for combined heat/cooling and power generation using natural gas. This criterion was already present for these activities in the Commission's draft CDA for substantial contribution for climate change adaptation, and in the draft CCDA for substantial contribution for climate change mitigation which was published after the French proposal. The requests from France, Poland, Czechia, and Hungary are compared to CCDA in Table 8.

Table 8. Request from France, Poland, Czechia, Hungary compared to CCDA.

Acclaimed proposal from France, Poland, Czechia, Hungary	The Commission's CCDA proposal
Include five additional nuclear energy activities: nuclear power plant operation, interim storage or final disposal of radioactive or spent nuclear fuel, mining and processing of uranium for fuel,	The Commission did not introduce these activities.

[31] The voting method for objecting the CCDA reduced the possibility to overturn the act, as later described on page 92.

reprocessing of spent nuclear fuel, and high-efficiency nuclear cogeneration	
Alternative criteria for the 100 g CO2e/kWh of energy output for substantial contribution to climate change mitigation: a sunset clause, valid until 31. December 2030, requiring a threshold of less than 340 gCO2/kWh of direct greenhouse gas emissions from electricity produced from natural gas and less than 700 kg CO2/kW of annual emissions from the installation	The sunset clause was kept unaltered. The direct GHG emissions of the activity must be lower than 270g CO2e/kWh of the output energy, or annual direct GHG emissions of the activity cannot exceed an average of 550kgCO2e/kW of the facility's capacity over 20 years
For combined heat/cooling and power generation using natural gas, the sunset clause, applicable until 31. December 2030 the direct GHG emissions of the installation should be below 250-270 g CO2/kWh of output energy.	The direct GHG emission threshold of lower than 270 g CO2/kWh of output energy was introduced in both draft and final CCDA. Same requirements were presented in the Commission's draft CDA for substantial contribution for climate change adaptation.

(Simon 2021b.)

The Commission accorded more attention to the French-led coalition's input than of Germany's by including both nuclear and gas; however, it did not act upon the majority of their requests. Importantly, the French-led proposal requested for more nuclear activities and less strict criteria for natural gas, which the Commission did not accommodate in the adopted CCDA.

4.6.5.4.1 France's preferences

While Germany had internal conflict in its domestic formulation of preferences, France, on the other hand, demonstrated persistent and uniform preference to include both activities in the EU Taxonomy. The inclusion of nuclear power was France's red line. In April 2021, the French economic minister Bruno Le Maire declared that it would fight for the inclusion of nuclear energy in the EU Taxonomy (Le Maire 2021). In December 2021 Macron defended nuclear energy in the EU Taxonomy as the sovereign energy solution. He also stated that EU's priority is to move towards gas and nuclear from more polluting energy sources (Moussu 2021).

While France was vocal about its preference to include nuclear, it did not actively voice its support for natural gas in its public statements. One reason could be the fact that lobbying for nuclear energy was its foremost priority as it was the most contested issue within the Council, whereas natural gas enjoyed support from the majority of Member States, making it more of an established consensus. Overall, by endorsing both activities, France was able to form the strongest coalition of Member States.

4.7 Conclusions

In this chapter I have mapped out and analyzed the political process of including nuclear and gas activities in the EU Taxonomy. I have set out to investigate what roles and influence the Commission and the Member States had in their inclusion and in the set criteria.

In its proposal for the Taxonomy Regulation, the Commission exhibited a clear preference for not excluding either activity from the negotiation table. Throughout the legislative processes concerning the Climate Delegated Act (CDA) and the Complementary Climate Delegated Act (CCDA), the Commission consistently demonstrated its inclination to incorporate both nuclear and gas activities in the EU Taxonomy.

The Commission displayed strategic agency throughout the preparatory and legislative procedures, contributing to the inclusion of nuclear and gas activities. This took various forms: Firstly, the Commission purportedly influenced the Technical Expert Group's (TEG) recommendations, steering them towards a more favorable stance on nuclear, as argued by Slevin and other TEG members. Furthermore, the Commission's proposal for the Taxonomy Regulation was deliberately ambiguous regarding the inclusion of nuclear or natural gas, allowing room for different interpretations by proponents and supporters of these activities of what the regulation would enable. Lastly, by postponing the inclusion of natural gas and combining it with nuclear into a single act, the Commission made it more challenging to object the act, compared to if these activities were considered separately.

I have compared the adopted CCDA to the recommendations made by MSEG, PSF, Germany, and by France, Poland, Czechia, and Hungary, in order to assess the independent agency of the Commission. The CCDA adopted by the Commission did not substantially reflect these

recommendations. The influence of the Member States and the Commission in final outcome is further discussed in chapter 5 through the theoretical framework described in chapter 3.

Throughout this chapter, the linkages between energy policy and the EU Taxonomy have been highlighted. These connections are found in the statements issued by Jyrki Katainen, Frans Timmermans, Ursula von der Leyen, and Thierry Breton from the Commission, as well as in the Commission's draft proposal in April 2021. The association is also established by the Member States. These energy policy linkages are further explored in chapter 6.

5 THE INFLUENCE OF THE MEMBER STATES AND THE COMMISSION

In this chapter, I will assess whether the inclusion of nuclear and gas activities and the set criteria reflected the preferences of the Member States or demonstrated independent influence by the Commission. I will achieve this by compiling the analysis provided in Chapter 4 and by employing the theoretical framework described in chapter 3 to address the first two research questions:

1. **How did the outcome of the EU Taxonomy legislative process leading up to the Complementary Climate Delegated Act (CCDA) reflect the preferences of Member States?**

2. **If the Commission demonstrated independent agency apart from Member States' preferences, what factors contributed to the realization of that agency?**

The legislative process of the EU Taxonomy Regulation leading up to the adopted CCDA demonstrates, that the Commission preferred the inclusion of specific nuclear and gas activities in the EU Taxonomy. The Commission's proposal for Taxonomy Regulation created enabling rather than restricting framework for their inclusion. Public statements by the high political-level actors in the Commission linked the energy transition needs of the EU taxonomy to either natural gas, nuclear or both. Moreover, the draft and final version of CDA and CCDA, the

leaked document on alternative gas criteria, and the Commission's statements in the MSEG group and its April Communication all pointed to their inclusion in some capacity.

It is important to emphasize, that in order to pass legislation through the interinstitutional negotiations, the Commission must anticipate a sufficient support for its proposal. (Hartlapp, Metz and Rauh 2014, p.23; Bürgin, 2015, p. 699.) Because of this, it can be exceedingly difficult to separate the independent agency of the Commission. The proposal of the Commission can give an illusion of independence, while it may de facto only demonstrate how effectively the Commission is being controlled by the Member States. (Pollack 1997, p.130.)

The prevailing preference of the Council was to include both energy sources. The majority of the Member States backed up the inclusion of natural gas activities in the EU Taxonomy, and the plurality supported nuclear energy, although nuclear opposition was also significant. Overwhelming majority of pro-gas Member States also supported nuclear energy, which made the French-led coalition for including both activities most powerful. Austria, Luxembourg, Denmark, and Spain were the only Member States opposing both energy sources, which made their position relatively weak. Germany, alongside Greece, were the only Member States promoting gas but not nuclear, which weakened Germany's ability to form a strong alternative coalition against the French-led coalition. In terms of Moravcsik's theory on bargaining, the asymmetric interdependence favored France's nuclear alliance, while Germany was not able to form an alternative coalition as their preferences were not shared widely amongst the Member States.

The policy option to include both activities was strengthened by two additional interlinked factors: similar attributes for energy security and logrolling. Virtually all Member States use or plan to use either one or both energy sources to bolster mid- to long-term energy security within the energy system that is characterized with increased fluctuation in energy generation caused by increased share of intermittent RES. (Gündüzyeli and Moore 2020, p.13-20; COM 2023e.) While both natural gas and nuclear energy are less harmful than solid fossil fuels in terms of the GHG emissions, and they serve a function in the energy system that generates grid stability, they both contain risks and dilemmas that make their sustainability definition contestable in the framework set by the EU Taxonomy.[32] Both pro-gas and pro-nuclear Member States benefitted when the energy sources were dealt as a two-way deal, because this reduced the

[32] Particularly article 17 on significant harm to environmental objectives and article 19 on TSC in the Taxonomy Regulation.

spotlight in which they would have found themselves individually otherwise, and it fragmented the political debate.

The inclusion of nuclear energy and natural gas supports Moravcsik's position that the best predictor of the outcomes of EU decision-making are the Member States' preferences and their inter-state bargaining based on asymmetric interdependence**.** (Moravcsik 1999, p.298.) Furthermore, the alignment of preferences between the two major economic powers can be observed in the Commission's decision to incorporate both nuclear and gas-related activities in the CCDA. It is important to assert, that the opposition against nuclear energy was ultimately a lesser political objective for Germany compared to its pronounced preference for the inclusion of gas-related activities.

While Moravcsik's theory can be used to explain the inclusion of natural gas and nuclear activities, it does not capture the full picture. The overtly stringent rules set by the Commission would undermine the relevance of including these activities, because it would exclude the Member States' forms of production from the scope of the regulation. So, a more accurate definition of both pro-gas and pro-nuclear Member States' preferences would entail their inclusion on the basis of criteria that would enable their energy activities the access for sustainable financing.

The comparative analysis of the adopted CCDA against the recommendations from MSEG, PSG and Member States shows that the Commission did not substantially alter the delegated act based on the expressed positions. The stakeholders expressed wide range of criticism about the Commission's proposal but were unable to transfer their preferred policy to the final adopted act. The CCDA adopted by the Commission introduced stricter technical screening criteria for natural gas and nuclear energy activities than the alternative options proposed, by Germany, and by France, Czechia, Hungary, and Poland. Similarly, the Commission did not adapt Germany's request on nuclear energy, nor did it include the additional nuclear activities proposed by France, the Czechia, Hungary, and Poland.

According to Moravcsik, economic policy issues tend to favor Member States with substantial economic power (2018, p.1654.) On this basis, it would be reasonable to anticipate that the CCDA would have implemented the requests proposed by German and France. However, neither Germany nor France was able to transfer their requests to EU policy through bargaining with other Member States or by influencing the Commission through other venues. Moreover,

Bulgaria, Croatia, Cyprus, Greece, Malta, Romania, and Slovakia had also promoted looser requirements for gas when the Commission published its initial technical screening criteria in the draft CDA published in 2021. These countries were also present in a meeting led by France where the compromise text was discussed, with participation of other like-minded countries Czechia, Finland, Hungary, Poland, and Slovenia. Because Eastern EU Member States have displayed lower ambition levels in climate action in their national climate and energy plans (Elissaou 2023), their support for the French-led proposal would have been more in line with their interests than the Commission's policy approach. The adopted CCDA reflected to greater extent France's proposal than Germany's as both nuclear and gas were included but did not act upon the vast majority of their requests.

These factors indicate agency of the Commission that went beyond the preferences of the most economically powerful Member States. Furthermore, the TSC in the CCDA diverged substantially from the guidance of its two key scientific bodies, the PSF and TEG, and did not reflect the preferences of the Member States voiced in the MSEG that opposed nuclear and gas on the basis of being incompatible with the Taxonomy framework. The Commission acted as the mediator between these widely diverging positions but demonstrated its own independent influence in doing so. It was the Commission that adopted a compromise between these conflicting preferences, which did not reflect any of the proposals of the Member States or its scientific advisory groups. This underscores its central role in the decision-making regarding the TSC.

Overall, the Commission demonstrated semi-independent agency throughout the EU Taxonomy process from its initiation to the adoption of the CCDA. The term "semi-independent" is deliberatively chosen to highlight two factors. Firstly, while the Commission's legislative proposals and communication supports the view that the inclusion of nuclear and gas activities was the preferred policy approach for the Commission, it was also the strongest preference amongst Member States. This makes it exceedingly difficult to distinguish the independent agency of the Commission, as it is presumed to anticipate the Member States' preferences when tabling proposals. The functional pressures for the Commission to want to include nuclear and gas activities in the EU Taxonomy are explored in the final chapter of this thesis. Conversely, the adopted TSC for nuclear and gas activities did not reflect the positions addressed in the sub-sub-section 4.6.5, denoting independent agency of the Commission.

5.1 Factors facilitating the Commission's semi-independent agency

Next, I will consider factors that facilitated the Commission's ability to advocate for its preferred policy apart from Member States' preferences. I do this by assessing the decision rules used in the legislative process and the preferences of the Member States, which Pollack has assigned for determining the degree of independent agency of the Commission. (2018, p.12-13.; see chapter 3.)

5.1.1 Decision rules

Much of the research on the principal-agent dynamics in the context of the EU has focused on implementing acts where comitology procedure is used (Blom-Hansen 2011; Pollack 2020, p.32; Franchino 2007). According to Pollack, Member States use comitology committees to exercise control and "intrusive" oversight over the Commission's decision-making process (1997, p.113-116). Comitology committees are comprised of representatives of the Member States' governments, and their opinion is binding the Commission in the exanimation procedure (voted by QVM), while non-binding in advisory procedure (voted by simple majority); the two types of comitology procedures. (Del Monte and Mańko 2021, p.9.) As outlined, Pollack consider comitology committees to be effective control mechanism for Member States over the Commission's use of executive powers. (Pollack 2018, p.13.) But does the same apply to delegated acts where comitology procedure is not used?

In the Taxonomy Regulation the decision on the technical screening criteria for sustainable economic activities was left to a later stage through delegated acts (article 19). As defined in article 290 TFEU, delegated acts are non-legislative instruments that can be adopted by the Commission when the Council and the European Parliament has delegated power to the Commission in a basic act (Article 290 TFEU). The delegated act can amend or supplement the non-essential elements of the legislation The essential elements of legislation require political choices falling within the responsibilities of the European Union legislature to be adopted, and therefore cannot be delegated.[33] (The European Parliament v Council of the European Union, 5. September 2012, Case C-355/10, p.12)

[33] Whether the creation of criteria for taxonomy-eligible economic activities would involve political choices falling within the competence of the co-legislators deserves its own discussion but will not be discussed further here.

The Commission acts autonomously when it prepares delegated act. For gathering information, it may use expert groups, public consultations or commission a study. (Spasova 2021, p.514.) According to the Taxonomy Regulation, the Commission consults the MSEG and PSF before adopting the delegated act[34]. However, the article 290 TFEU does not lay down rules and general procedures of how the Commission's uses its delegated powers or how the co-legislators can exercise supervision and control, as is the case for comitology committees. (ibid., p.510.)

The Interinstitutional Agreement of 13. April 2016 on Better Law-Making set certain common rules for delegated acts. The agreement is referred to in the Taxonomy Regulation Article 23(4), which describes the exercise of delegation. According to the Interistitutional Agreement on Better Law-Making:

> [The three EU institutions] shall cooperate throughout the [delegated act] procedure with a view to a smooth exercise of delegated power and an effective control of that power by the European Parliament and the Council. To that end, appropriate contacts at administrative level shall be maintained.[35]

While the Agreement acknowledges that the co-legislators must have effective control over the delegation of powers, it does not lay down formalized rules for this. Moreover, the consultation of Member State representatives' expert groups does not legally bind the Commission. (Gellermann 2018, according to Del Monte and Mańko 2021, p.7.) The Member States have the right to either oppose a delegated act or revoke the delegation of powers but cannot amend the act (COM n.db).

The absence of clear formal rules of procedure leaves the actual modus operandi obscured. Some authors believe that the procedure resembles comitology process, reintroducing comitology "through the back door" (Ruffert 2016, according to Del Monte and Mańko 2021, p.7.) Conversely, Siderius and Brandsma postulates that the Commission is less prone to accommodate the preferences of Member States under delegated acts than with implementing acts (2016, p.1271-1272). Türk has argued that the Member States experts consulted for a delegated act do not have the same powers as the comitology committees, but their involvement inhibits the Commission, in particular by their power to object the delegated act. (2021, p.421.) Kaeding and Stack have stated that the high threshold required for vetoing the proposal leads to reduced

[34] Article 10(3), 23 and 24 in the EU Taxonomy Regulation (COM 2020a.)
[35] Annex, section I(2) in the INTERINSTITUTIONAL AGREEMENT of 13 April 2016 on Better Law-Making (EP, Council and COM 2016.)

influence of Member States (2015, p.1275). One important piece of evidence denoting the need for alternative means of influence are the statements made to the Commission by national high-level political representatives. These testify to the fact that the MSEG's internal consultative work alone was regarded as insufficient measure to influence the Commission. Austria has pursued a lawsuit against the Commission on the basis of, inter alia, infringing the rules set out in the Interinstitutional Agreement on better law-making (Austria v Commission.2022, Case T-625/22).

Member States' decision on the CCDA was implemented by the Reversed Reinforced Qualified Majority Voting Method (RRQVM) which requires 72% of member states (20 Member States) to oppose the act, representing 65% of EU citizens (Commission 2022f). The article 290 TFEU states that the Council uses QVM voting to oppose a delegated act, but in practice article 238(2) on reinforced QVM is applied. (Article 238 TFEU; Del Monte and Mańko 2021, p.6.) In effect, RRQVM automates decision-making in favor of the Commission. Objecting the delegated act requires a high majority of Member States, which, from the point of view of the national governments, reduces their individual power of influence. This is especially true in politically incendiary cases.[36] Furthermore, as Member States participate and negotiate with each other in a "continuous game", objecting an act that is important for other Member States would bear a risk of retaliation in future negotiations. To a large extent, this explains why the Council predominantly decides by consensus - not necessarily because general agreement has been established - but because Member States use the strategy of blame avoidance (Novak, 2013, p.1092.1104). To put it another way, there is always a higher political involved for Member States to object an act than to support one.

While the European Parliament's vote on CCDA was public (COM 2022g), the result of the Council vote was not available in the Council's electoral register.[37] This can indicate that vote was either not held or not disclosed to the public. Full certainty could not be established, as The General Secretariat of the Council did not comment on the issue.[38] However, the tentative preferences expressed by Member States strongly indicated that the required amount of

[36] According to two representatives of the Finnish Foreign Ministry who worked in Coreper I and as legal adviser respectively, delegative acts usually deal with low-politics issues.
[37] The Council's electoral register can be found here: https://www.consilium.europa.eu/en/general-secretariat/corporate-policies/transparency/open-data/voting-results/

[38] I contacted the Secretariat through their public information service. The Finnish representatives contacted on the issue (footnote 36) also could not find or disclose confirmation whether the vote was held or not.

objecting Member States would not be established, reducing the significance of the vote. This does raise questions about the transparency of decision-making for EU citizens, as the voting results or lack of vote cannot be verified.

Overall, the legislative framework and formal rules under delegated acts allow the Commission more authority over decision-making than in comitology procedure, while the right to object to the proposal or, ultimately, to revoke the delegation inhibits the Commission's discretion. Outside the formal rules, there may also be informal codes of conduct that lead to decision-making similar to comitology. In the context of EU Taxonomy, Member States ability to influence was severely constrained under the formal procedural rules. This is due to deep political rifts between Member States, which reduced the likelihood of obtaining the majority needed to oppose or withdraw a delegated act. This strengthened the Commission's ability to adopt TSC that did not reflect the expressed preferences of the Member States. The volition of Germany and other Member States to implement ordinary legislative procedure (co-decision) and public consultation speaks on the behalf of unintended consequences, whereby these Member States did not foresee the implications of delegating powers to the Commission to adopt TSC for the transitional activities.

According to Blom-Hansen and Senninger, the Commission may strategically package or split initiatives, where it may have incentive to package initiatives to combine controversial elements into noncontentious ones; effectively increasing the associated costs of objecting the proposal. (2020, p.632.) The EU Taxonomy process supports this observation. The vote on the Taxonomy Regulation was almost unanimous. This can be contributed to the commitment of EU institutions to promote climate action. The Taxonomy Regulation left the politically polarizing elements to a later stage, without a clear-cut indication on how these activities would be treated. The Council regarded the agreement on the Taxonomy Regulation to incorporate "neutral stance in relation to different energy forms, provided that they are low in GHG emissions" (Council 2019). The Commission included limited scope of natural gas activities in the draft CDA but decided to combine the act on nuclear and gas activities after a plethora of negative feedback. The selected procedure diffused the potential objection because the Member States could only object both or neither one of the activities. The postponement of the controversial issue to a later stage and the joint proposal for both activities demonstrated strategic agency of the Commission to realize its preferred policy.

5.1.2 Preferences of the Member States

The Commission's room for maneuver on the CCDA was greatly achieved by the dissenting views within the Council. Germany was unable to form a strong coalition with other Member States, as it did not find a compromise solution on the nuclear issue with France. If this would have been the case, it would have enabled the formation of a strong majoritarian coalition (at least 10 Member States, 55,71% of the EU population) with the two biggest economic powers of the EU. While this would not be enough for objecting the delegated act, according to Moravcsik's theory, coalition of Germany and France should have been influential in the final outcome of EU decision-making. Because this did not occur, TSC for natural gas was suboptimal for both Germany and France-led coalition. The Commission was able to utilize this discrepancy between Member States preferences and adopt more stringent TSC for gas than France and Germany had proposed.

6 LINKAGES WITH EU ENERGY POLICY

In the previous section I have demonstrated that the Commission displayed semi-independent agency that exceeded the preferences of the most economically influential Member States, Germany and France. Based on my analysis, the Commission favored the inclusion of nuclear energy and gas activities in the EU Taxonomy. However, it ultimately chose to implement more rigorous criteria than those advocated by the Member States supporting these activities. At the same time, this decision diverged from the recommendations of TEG, PSF, public consultation, and other Member States within the MSEG.

In this last chapter my objective is to present evidence that establishes linkage between the EU Taxonomy and the EU's energy policy. The aim is to provide functional justifications for why the Commission would have wanted to include both activities in the EU Taxonomy. As I will demonstrate, the Commission has repeatedly denied the energy policy dimension of the EU Taxonomy, but also associated it with its energy policy objectives. Moreover, Member States have repeatedly invoked the article 194.2 TFEU defending their right to decide on their energy mix.

6.1 Mixed messages

In a Q&A held on 2. February 2022 on the CCDA, the Commission denied association with the Taxonomy and energy policy when asked about how the complementary act was going to address the energy price discussions:

> The Taxonomy is not an instrument of EU energy policy. It is a tool to increase transparency in financial markets for private sector sustainable investments. It does not mandate investments and does not prevent any economic sector from receiving investments. Member States remain fully responsible and competent for deciding their own energy mix and for striking the appropriate balance – in terms of energy security, energy price stability and their commitment to decarbonisation and climate neutrality. The Taxonomy is an important element in the sustainable finance toolkit to help fund the Green Deal (COM 2022d).

On 7. March 2022 DG FISMA's policy assistant repeated the same message in an article:

> Member States remain fully responsible for deciding their own energy mix and for striking the appropriate balance, in terms of energy security, energy price stability and, especially, in terms of their commitment to decarbonisation and climate neutrality. Finally, the taxonomy is not an instrument of EU energy policy, but a tool to increase transparency in financial markets for sustainable investments by the private sector. It does not mandate investments and does not prevent any economic sector from receiving investments. What the taxonomy does is to guide the market and help drive the transition towards climate neutrality (De Iacovo 2022).

On 6. May 2022, the Commissioner for Energy, Kadri Simson, gave an answer to Parliamentary question on the behalf of the Commission, stating in a similar fashion:

> The Taxonomy is not an instrument of EU energy policy. Member States remain fully responsible and competent for deciding their own energy mix and for striking the appropriate balance — in terms of energy security, energy price stability and in terms of their commitment to decarbonisation and climate neutrality (Simson 2022).

The same phrases were used in in an opening speech Commissioner McGuinness' held on 5. July 2022, before the European Parliament's Plenary Vote on the Complementary Delegated Act:

> The taxonomy is a voluntary instrument to guide private investors towards investments that allow us reach our climate goals. It is a tool for the financial sector and for investors. It is not energy policy: Member States are and remain fully in charge of their energy mix.I want to stress that there is no obligation on any Member State to invest in either

> nuclear or gas. There is no obligation on any private investor to invest in nuclear or gas (COM 2022e).

The notion that EU taxonomy was not a tool of energy policy, and that Member States were still fully in charge of their energy mix, were coupled together in all these statements. These statements are referring to the legal basis of EU energy policy, article 194.2 TFEU:

> 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. (Article 194 TFEU)

Article 194.2 explicitly states that the Member States are entitled to determine what energy sources they wish to employ and how to exploit their own resources, as well as how they structure their energy supply provided these factors are aligned with article 192.2.(c). The referred section of the article 192 states, that measures which affect significantly the "Member State's choice between different energy sources and the general structure of its energy supply" are decided by the Council, who acts "unanimously in accordance with a special legislative procedure" whereby the consultation of the European Parliament, the Economic and Social Committee and the Committee of the Regions is mandatory, but not legally binding the Council (Article 192 TFEU; Eur-lex. n.d.). The sovereignty of national energy decisions is thus established by the article 194 TFEU. Because of these factors, the Commission cannot impose laws that restrict these rights under the Union's current energy policy mandate.

In the public statements issued by Member States to the Commission in 2021, repeated references to the energy article were made, upholding the view that sovereignty in energy decisions

was underlying and unbroken national right. Environmental ministers from Germany, Austria, Spain, Luxembourg, and Denmark acknowledged "the sovereign right of Member States to decide for or against nuclear power as part of their national energy systems" while being concerned that the inclusion of nuclear energy would damage the Taxonomy's usability and credibility. (Schulze et al. n.d.) In a statement issued by the French president and the prime ministers of Czechia, Hungary, Poland, Romania, Slovakia, and Slovenia, the sovereignty in energy policies and the principle of technological neutrality was raised:

> …we are highly concerned that the Member State's right to choose between different energy sources and the right to determine the general structure of the energy supply (Article 194 TFEU) is currently heavily limited by EU policy making, which excludes nuclear power from more and more policies. -- We call on the European Commission to ensure that the EU energy and climate policy accommodates all paths to climate neutrality according to the *technology neutrality* principle. In this context, all available and future zero and low-emission technologies have to be treated equally within all policies, including taxonomy of sustainable investments, aiming at achieving climate neutrality by 2050. (Babiš, Macron et al. 2021.)

Here the connection between EU Taxonomy and its consequential energy policy aspects are made explicit. The principle of technological neutrality is also referred, which was enshrined in the technical screening criteria of the Taxonomy Regulation. Furthermore, on October 10. 2021, several major European newspapers published a joint statement signed by ministers from France, Finland, Czechia, Slovakia, Croatia, Slovenia, Romania, Bulgaria, Poland, and Hungary. (ANS Nuclear Cafe 2021). The ministers repeated their concerns of the potential adverse implications the EU taxonomy could have to their own energy policy decisions, if nuclear energy was left outside the classification system: "The European treaties allow each member state to define its own energy "mix". It is essential that our rights in this area are respected, and that all low-carbon energy production technologies are considered fairly". (ibid.)

In addition to these publicly declared statements, Greece had recognized on 24. September 2019 "the right of every Member State to define its own national energy scheme", while still objecting the inclusion of nuclear energy. These statements testify how Member States connected EU Taxonomy to energy policy, and how the Commission's adoption of TSC was seen to potentially overstep on their competences in national energy policy. (Council 2019c.)

6.2 Venue shopping

The Commission's repeated statements negating EU Taxonomy's energy policy dimension can be understood as distinct reactions to the concerns of the Member States. The Commission has contradicted its communication strategy several times during the legislative process of the EU Taxonomy, as Ursula von Der Leyen, Frans Timmermans, Thierry Breton and Jyrki Katainen have all associated the EU Taxonomy and energy policy in their statements.

The EU is set out to decarbonize the economy in accordance with the Paris Agreement and Climate Law, and the Commission is not settling only for a lowest-common denominator compliance but wants to show global leadership in climate policies. However, it lacks competences within the existing mandate it has in energy policy to make Member States stop exploiting their domestic highly-pollutant energy sources or their reliance on imported fossil fuels. The article 194 acts as a "emergency break switch" for the Member States, and the likelihood that Member States would allow changes in the energy article reducing their sovereign rights is not likely.

Still, the fact is that the consequential climate measures hinge on the major transformation of the energy sector. Because this is not politically feasible only under the mandate of EU's energy policy, The Commission must search for alternative ways to promote their energy and climate objectives. The concept of venue shopping theory can be used to describe the Commission's approach to frame and represent the EU Taxonomy as a part of EU's economic, environmental and climate policy, while simultaneously downplaying and denying the implications it has on future energy policy of the Member States and the Union.

This is nothing new in the energy policy domain of the EU. Until the ratification of the Lisbon Treaty, the Commission lacked formal competences in energy policy. Nevertheless, it managed to advance its energy policy objectives by leveraging its strong competences in competition policy and environmental policy. (Tosun et al. 2015, p. 4; Biesenbander 2015, p.23, 34; Alexandrova and Timmermans 2015, p.53; Matlary 1994, p.6–8.) As Buchan and Keay has argued, the energy article in the Lisbon Treaty established common energy policy, but at the same time tied the Commission's hands to respect the sovereignty of Member States in their energy decisions. (2015, p.14-16.) This explains why the Commission uses different venues for advancing its climate policies related to the energy sector.

The Commission has stated that Member States remain fully sovereign in deciding their own energy mix and that the EU Taxonomy does not set mandatory investment requirements, but also anticipates it will have consequential steering effects on the financial markets towards sustainability. (COM 2021b, p.3). The EU Taxonomy impacts the energy policy decisions of the Member States and the EU, as investments to non-Taxonomy-aligned activities become less attractive. This is substantiated as a real concern by the Member States in their statements, as they perceived the treatment of nuclear and gas as a concern of national energy policy. If economic actors (companies, investors, banks, Member States, EU, individual citizens) will continue to allocate more funding for sustainable investments, and the EU Taxonomy becomes the gold standard for demonstrating sustainability (as it is already used in the sustainable finance framework and in the EU's budget), then the guiding influence of the EU Taxonomy-alignment cannot be understated. Taxonomy-alignment becomes decisive factor if undertakings want to be perceived as sustainable in the financial markets and want to be competitive against other market participants. This way, voluntary compliance becomes necessity.

6.3 Links with EU Taxonomy and EU energy policy

The tension between state sovereignty and integration has characterized common European energy policy throughout its long and challenging history. (Buchan and Keay 2015, p.6-16.; Buchan 2020, p.323-325.) EU's energy policy has three main strands: competitive internal energy markets, climate change and energy security. (Buchan 2020, p.331.) EU's energy security dimension is omitted from this thesis.[39]

The Commission's two fundamental energy policy objectives are competitive internal energy markets and the promotion of sustainable energy production aligned with EU's climate and

[39] Historically, the EU has had little competence in energy security decisions, which have been left to national jurisdictions. EU's energy security has concerned mostly natural gas and overreliance on Russian gas, as oil markets are highly decentralized. (Buchan 2020, p.331.) Since the 2004 and 2007 eastern enlargement energy security re-emerged into EU's political agenda. The Russia-Ukraine gas disputes in 2005-2006 and 2009 fueled security of supply concerns, and the annexation of Crimea in 2014 provoked the Energy Union proposal. (Knodt, Ringel and Müller 2020, p.788; Szulecki et al. 2016, p.552-554.) Until the catalytic Russian war on Ukraine in 2022, bigger member states (such as Germany, France and Italy) preferred bilateral energy agreements with Russia, while CEET countries have demanded for unified front against Russia's gas price manipulation. (Buchan 2020, p.331-336.) After the war started, the energy security has gained top priority in EU's energy policy.

environmental targets. The way in which competitiveness and climate objectives have been pursued has been contradictory in many ways. (Buchan and Keay 2015) The Commission has used competition policy to dismantle energy monopolies and to tackle national subsidies distorting the competition on the markets. Since the 1990s, the growing political urgency surrounding climate change has led to the development of policies aimed at increasing the use of RES in the energy mix of both Member States and the EU (Verbruggen and Laes 2021; Eikelund 2008).

The Commission originally insisted on non-distorting harmonized EU-wide support scheme for renewables but lost the political battle against Member States who opted out on national feed-in-tariffs. The successful expansion of RES, largely due to the national support mechanisms, achieved significant environmental objectives of the EU, but also disrupted the competition on energy markets (Grigorjeva 2015, p.1; (Kozlova and Overland 2022, p.1.; González-Díaz, p.21)

There are serious challenges and contradicting forces in in the EU's longstanding energy policy objective of creating liberalized functional internal energy markets for both electricity and gas and decarbonizing the energy sector (Buchan and Keay 2015). The expansion of RES deployment in the electricity markets and the electricity price formation in the current electricity markets reduced the opportunities for conventional, more expensive generators to earn profits from the markets (the missing money problem)[40]. This underlying dynamic has been regarded as the main driver for the surge of national capacity remuneration mechanisms (CRMs); forms of state aid for electricity producers to keep generation capacity available, or "lights on" in times of supply scarcity. (Blazques et al. 2018, p.2.; Pototschnig and Godfried 2015, p.34; Kozlova and Overland 2022, p.2; Hancher, Hauteclocque and Sadowska 2015. p.5; Kozlova et al. 2023, p.8).

The Commission has viewed capacity mechanisms as a threat to the fundamental goals of the EU's energy policy: competitive energy markets and decarbonization. In response, the Commission has implemented stricter criteria for their design and for proving their necessity and

[40] In the current market pricing system, the expansive share of low-marginal cost RES in the grid lowers the market clearing prices for all electricity producers, (presuming that the renewable capacity is available for generation) as it reduces the opportunities for more expensive generators to earn profits from the markets. For investors, the diminishing utilization rate of conventional power plants reduces their attractiveness as an investment. (Buchan and Keay 2015, p.54-62)

their impact on the markets (Leiren et al. 2019). The same applies for subsidizing renewable energy (Zabalo et al. 2022, p.19-20; Jakobs 2014, p.755.)

The regulation on the internal market for electricity (2019/943) sets requirements for Member States to demonstrate resource inadequacies with the objective of "eliminating or at least reducing the need for a CRM" (EP and Council 2019; Schittekatte and Meeus 2019, p.7.) Moreover, it sets out CO2 emission thresholds for the design criteria for capacity mechanisms. The thresholds are well above the Taxonomy's alternative GHG threshold value set for gas activities by 2030, which would still increase the "average EU emissions from current levels and risks harming the Paris Agreement (TEG 2021):

> (a) from 4 July 2019 at the latest, generation capacity that started commercial production on or after that date and that emits more than 550 g of CO2 of fossil fuel origin per kWh[41] of electricity shall not be committed or to receive payments or commitments for future payments under a capacity mechanism;
>
> (b) from 1 July 2025 at the latest, generation capacity that started commercial production before 4 July 2019 and that emits more than 550 g of CO2 of fossil fuel origin per kWh of electricity and more than 350 kg CO2 of fossil fuel origin on average per year per installed kWe shall not be committed or receive payments or commitments for future payments under a capacity mechanism. (EP and Council 2019.)

The capacity mechanisms are temporary in nature and applicable for maximum of 10 years. (ibid., article 21.8). The set CO2 emission thresholds would reduce the most harmful emissions from fossil-fuel based electricity generation, such as lignite, hard coal or older gas-fired power plants. Even if these capacity mechanisms would provide security of supply and would not distort competition, they would still not be able to contribute to EU's climate targets. CRMs tend to subsidize fossil fuel-based power generators, which can potentially decelerate energy transition (Mays et al., 2019). Natural gas and nuclear energy receive the most capacity remuneration through CRMs, while remuneration for natural gas and coal/lignite represented more

[41] All of the emission thresholds set out in paragraph (a) and (b) are to" be calculated on the basis of the design efficiency of the generation unit meaning the net efficiency at nominal capacity" (ibid., p.87). This calculation method suggests that switching off the power generation for reducing emissions is not applicable.

than one thirds of the CRMs between 2019-2020. (ACER 2023, p.39; Schittekatte and Meeus 2021, p.11). ENTSO-E has found resource adequacy risks in energy all around Europe in 2025, 2027 and 2030 scenarios[42]. (2022, p.16). This can suggest increased need for CRMs in the future if adequate capacity is not provided through the energy markets.

The national subsidizes for renewables and capacity remuneration, and the casting defect of the electricity markets provide two functional reasons for the Commission to include gas and nuclear activities in the EU Taxonomy. Firstly, excluding nuclear and gas (i.e conventional power generation) from the Taxonomy would limit their investment opportunities while providing access to investment flows only for RES. The increasing volume of Taxonomy-aligned investments could bolster the market share of RES – that generally provide intermittent power generation and have low-marginal costs (Papavasiliou 2020, p.1.) – which would subsequently diminish the remuneration rates for conventional power generators from the electricity markets. This reduced attractiveness of conventional power generation investments increases the need for nationally funded CRMs to ensure grid stability and energy security. By including nuclear and gas activities in the EU Taxonomy, the Commission can mitigate this risk, as the activities can get access to sustainable financing under certain criteria. The EU Taxonomy-alignment creates impetus for Member States to fund more sustainable CRMs. If natural gas and nuclear energy were to be categorically excluded from the EU Taxonomy, there would be no forward moving attractor created for funding Taxonomy-aligned nuclear or gas-based CRMs.

The Commission is using competition policy for linking EU Taxonomy with its energy policy objectives through guidelines on State aid for climate, environmental protection and energy of 2022 (CEEAG). The CEEAG aims to avoid distortion of competition and trade within the single market, while ensuring adherence to EU's climate objectives.

The Commission has described the link between the CEEAG and EU Taxonomy as follows:

> ...The Taxonomy can be a very useful tool in the context of EU State aid assessments. Where measures meet the taxonomy requirements, the State aid assessment can be simplified. In particular, in balancing the positive and negative effects of the aid, the

[42] The reference scenario accounts only for current CRMs. (ENTSO-E 2022, p.11)

> Commission will pay particular attention to compliance with the ‘do no significant harm' principle (COM 2022h).

The Commission’s statement demonstrates an intention to harmonize Union’s state aid rules with Taxonomy alignment. The simplification of state aid assessment suggests more streamlined impact assessments. Furthermore, in the CEEAG Guidelines, the Commission recognizes natural gas’ transitional role, but insists that the state aid for natural gas projects is compatible with the EU’s 2030 and 2050 climate objectives. (COM 2022i, p.80). Here the Commission is signaling intention to enforce the alignment between state aid and EU Taxonomy. This indicates instrumental value for the Commission to include certain natural gas activities in the EU Taxonomy. Taxonomy-aligned activities could be treated more favorable under state-aid procedures, which could encourage Member States to grant state aid for the Taxonomy aligned activities instead of non-aligned activities.

Hydrogen created by nuclear energy can be included in CEEAG, but as in the earlier 2015 guideline, nuclear energy is not included in the CEEAG. This is explained by the limited number of very large projects, being security-sensitive, and the need for taking account for EURATOM treaty, requiring a case-by-case assessment. “State aid for nuclear energy can, however, be approved directly under the Treaty and the EURATOM Treaty”. (COM 2022h.)

Incorporating nuclear and natural gas activities within the EU Taxonomy, beyond the perspective of encouraging national subsidies for sustainable energy, can also be seen as advantageous for inciting energy sectors on the path towards EU’s climate and energy objectives. Had the EU Taxonomy categorically excluded nuclear and natural gas activities, it could have had adverse consequences on investments in research, development, and innovation (RDI) oriented towards more sustainable means of energy production. These investments would not been incentivized, as they activities would have remained ineligible for the EU's classification system for sustainable activities. With their inclusion, the investments in RDI are encouraged, which can sprout more sustainable forms of natural gas and nuclear energy technologies, giving competitive edge against their non-sustainable competitors. Simultaneously, adopting the recommendations of PSF and TEG could have risked setting the target too far from current state-of-the-art technologies, potentially failing to incentivize gradual progress.

These energy policy linkages with the EU Taxonomy are examples of the Commission’s use of “soft governance” (Knodt el al. 2020, p.789), where the Commission incentives Member

States to comply and adopt its policies in areas where it cannot legally enforce the use of EU Taxonomy. The Commission is obliged to follow its guidelines when exercising its discretion, which results as an indirect obligation for the Member States. (Bouchagiar 2017, p.166; Gerig and Vasconcelos 2015, p.188.) However, if guidelines on state aid were found to be in conflict with articles in the TFEU, the TFEU would take precedence, and the guidelines would need to be interpreted as consistent with the TFEU. (Bouchagiar 201, p.158.)

The Commission's mandate to push its climate objectives in the domain of energy policy is restricted, which creates pressures for the Commission to engage in venue shopping, i.e to advance its energy and climate objectives through alternative policy domains such as financial regulation. The inclusion of nuclear and gas activities with more stringent environmental criteria than France and Germany insisted on supports the Commission's energy policy objectives of competitive internal energy markets and decarbonizing the energy sector. Conversely, their exclusion would have worked against these policy objectives.

7 CONCLUSIONS

Energy sector represents the largest share of GHG emissions in the EU and globally. That is why consequential climate action hinges on transforming the energy sector towards sustainability. The Commission's ambition is that the EU Taxonomy would consequentially support this goal. Member States still have the right to make their energy mix decisions, while the EU Taxonomy has the potential for a substantial influence on the investment decisions done in the energy sector within the EU. This makes the EU Taxonomy suitable area of study for investigating the tension and pull between European integration and state sovereignty.

The main objectives of this thesis have been to study the power dynamic between the Member States and the Commission, and to assess the linkages between the EU Taxonomy with EU's energy policy. In this thesis I have set out to answer three interrelated research questions. As part of the first two research questions, I have investigated whether the inclusion of nuclear energy and natural gas in the EU Taxonomy reflected the preferences of the Member States, or did the Commission demonstrate independent agency in the EU decision-making - and if so, by what means it was able to achieve this. As part of the third research question, I have examined the connection between EU energy policy and the EU's sustainable classification system, establishing a possible impetus for the Commission's agency.

The preferences of the Member States predicted the inclusion of nuclear and natural gas in the EU Taxonomy. This result is coherent with LI, whereby the preferences of the Member States, their asymmetrical interdependence, and the emphasis on major economic powers in the EU in economic matters are used to explain EU decision-making**.** While I have also displayed that the Commission demonstrated preference of the inclusion of nuclear and natural

gas, its separate agency from the preferences of the Member States is exceedingly hard to verify.

Importantly, the CCDA adopted by the Commission did not substantially reflect Germany's requests, the acclaimed proposal by France, Poland, the Czechia, and Hungary, nor the recommendations expressed by MSEG, TEG, or PSF. This demonstrated independent agency on the part of the Commission. This finding is not congruent with the fundamental premise of LI, which does not assign any meaningful independent agency to the Commission. Using Pollack's depiction of the factors contributing to the Commission's ability to act independently, the divergent preferences of the Member States - particularly Germany's incapacity to find compromise solution with the French-led coalition - and the decision rules under delegated act procedure all contributed to the Commission's ability to act more independently. The Commission also demonstrated strategic agency by various means: it purportedly influenced the Technical Expert Group's (TEG) recommendations, steering them towards a more favorable stance on nuclear, tabled an proposal for Taxonomy Regulation that had ambiguous implications to nuclear and gas activities, postponed the political issue on nuclear energy and natural gas later in the policy sequence, and combined both energy activities into single act, which defused the potential risk of objection.

I argue that the Commission exhibited semi-independent agency, where the preferences of Member States set the stage for the inclusion of natural gas and nuclear energy. Yet, the Commission also utilized the decision rules and divergent preferences of Member States to advance policies that did not conform to the requests of Germany and France.

Acknowledging the Commission's partially independent role does not negate the LI theory, but points to the need of complementing it with other theories, such as Pollack's framework explored in this thesis. These additional perspectives acknowledge the Commission's potential independent influence, providing a more comprehensive understanding of the decision-making dynamics.

As part of my third research question, I have examined the linkages between EU's energy policy and the EU Taxonomy. This connection has been underlined by interpreting statements made by the Commission and the Member States during the legislative process. Furthermore, I have utilized the concept of venue shopping to explain Commission's strategy to

downplay the energy policy dimension of the EU Taxonomy. At the same time, the Commission contradicted this communication strategy several times during the legislative process. Notably, the Commission's draft proposal in April 2021 made an explicit connection with the inclusion of nuclear and natural gas with EU's energy policy. Also, several high-level political figures within the Commission associated the EU Taxonomy with its energy policy goals during the legislative process. Member States expressed a clear connection between the two in multitude of their statements. The act of venue shopping can be interpreted as a strategic effort by the Commission to expand its influence on EU's energy policy over its existing mandate.

The linkages with EU Taxonomy and energy policy have been explored in this thesis to put forth a possible explanation for the Commission's preference to include nuclear and natural gas in the EU Taxonomy with specific criteria. As I have argued, the inclusion of nuclear and natural gas supported the Commission's longstanding energy policy objectives of competitive internal energy markets and decarbonizing the energy sector. By implementing more rigorous TSC standards for nuclear and gas activities than those initially proposed by Germany and France, the Commission stimulates technological advancements within these sectors towards greater sustainability. The inclusion could encourage Member States to fund CRMs for more sustainable power generation than the Regulation (2019/943) currently requires. Simplifying state aid rules when economic activity aligns with the EU Taxonomy provides additional incentives for Member States to embrace and apply the EU Taxonomy. Furthermore, the EU Taxonomy has already been linked to the EU budget, and the Commission has shown interest to connect the EU Taxonomy to public spending. This denotes political interest on the behalf of the Commission to embed the sustainable classification system at the heart of EU.

The EU Taxonomy has the potential to become one of the main cornerstones of EU' climate policy alongside with the EU Emission Trading System. If the EU Taxonomy achieves what the Commission aims for, it will steer the financial markets towards sustainable economic activity in accordance with EU's climate objectives. Ultimately this depends on how banks, investors, companies, the EU, and Member States will implement the EU Taxonomy. Moreover, understanding how the EU Taxonomy will be aligned with MFF, Member State budget, and other EU policies in the future is imperative. This analysis is crucial for understanding the potential amplification of its effects, as Member States and other financial actors could be compelled to align a larger proportion of their investments with the EU Taxonomy due to loss

aversion. Subsequently, impactful EU Taxonomy increases the power of the Commission's soft governance approach.

It is important to investigate who ultimately determines the economic activities and criteria within the EU Taxonomy now and later in the policy sequence when TSC will be reviewed. This exploration should discern the extent to which these decisions are based on scientific examination or influenced by the interests of Member States and other stakeholders. Unraveling this aspect is essential for determining the driving force behind the EU, and whether the decisions promote or undermine EU's climate objectives.

7.1 Limits of the study and further research

The power relations between the Member States and the Commission were the main focus of this study, with particular emphasis on Germany and France. The influence of the European Parliament and other stakeholders (such as industry, epistemological community, NGOs, international organizations and Russia[43]) were omitted from the analysis. Further study could assess their influence on the decision-making in this topic to gain more comprehensive insight into the EU decision-making. An in-depth study of the Commission's agency and internal conflict between the DGs, Secretariat General and executive agencies is also fruitful research area, which would require access to the Commission's internal documentation and interviews.[44] Future research could also delve deeper into aspects related to energy policy of the Member States and the EU, such as the effects of the EU Taxonomy on national energy decisions.

The most notable potential limitation of this study with implications for further investigation, lies in the conceptualization of preferences. Within the scope of this thesis, Member States' preferences were categorized as supporting, objecting, or remaining neutral regarding the inclusion of nuclear energy and natural gas. The requests of Germany and France represented the more specific preferences of these countries.

[43] (Greenpeace France 2022)
[44] The study by Hartlapp, Metz, and Rauh (2014) titled 'Which Policy for Europe?' is a suitable reference for this type of research. Published by Oxford University Press.

The study's findings indicated that the adopted criteria for nuclear and gas went beyond the specific preferences outlined in Germany's and France's proposals, which were treated as their preferences in the analysis. However, ideally preferences do not comprise of just one preferred outcome; rather, they encompass a wide range of hypothetical outcomes characterized by varying trade-offs and degrees of risk aversion (Moravcsik 1997, p. 523–524). A more in-depth examination of Germany's and France's preferences could be carried out to examine whether the TSC in the CCDA was aligned within the range of acceptable and preferred outcomes for Germany and France. This analysis could evaluate the assertion of the Commission's independent agency made in this thesis.

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8.3 Annex

8.3.1 Sources for the preferences of the Member States

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Germany, Austria, Denmark, Luxembourg, Spain

Svenja Schulze, S., Gewessler, L., Jørgensen, D., Kollerup, S., Dieschbourg, C., Rodríguez, T., Calviño, N. “Letter to Mr Frans Timmermans, Mr Valdis Dombrovskis, Ms Mairead McGuinness Commissioner, Mr Virginijus Sinkevičius.” Euractiv. Accessed on 19.11.2023. https://www.euractiv.com/wp-content/uploads/sites/2/2021/07/Joint-ministerial-letter_AT_DE_DK_LU_ES.pdf

Germany, Czechia, Hungary, Slovakia, Slovenia, Austria, Poland, Luxembourg

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Germany, Austria, Luxembourg

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