



THE EU TAXONOMY AND THE IMPACT OF INCLUDING NUCLEAR AND NATURAL GAS – A COMMENTARY

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Abstract

The EU Taxonomy is a classification system designed to promote sustainable economic activities and increase investments in environmentally-friendly projects. Despite controversial debates surrounding its creation, the taxonomy includes both nuclear and natural gas. While this inclusion has the potential to promote the development of green business models, it also raises concerns about the taxonomy's ability to provide a unifying framework. Additionally, the inclusion of nuclear and natural gas highlights the strategic importance of energy and its impact on both environmental and foreign policies. The EU must balance its goals of achieving environmental sustainability with ensuring energy security and reliability.

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1. Introduction

Over the past years, major players in the financial market aimed to move toward greener and more sustainable (business) models and products. Besides various explanations for their motives, the shift itself is observable (Ziolo et al., 2019). Many actors in this field (e.g., asset managers) distinctly market their sustainability engagement and state these efforts as a longterm necessity to sustain their clients' wealth and their business activities. BlackRock's CEO Larry Fink states the following in his annual Letter to the CEO: "The evidence on climate risk is compelling investors to reassess core assumptions about modern finance. [...] In the near future – and sooner than most anticipate – there will be a significant reallocation of capital. Climate Risk Is Investment Risk" (Fink, 2020).

In this regard, the European Commission issued the Sustainable finance taxonomy - Regulation (EU) 2020/852 in January 2021, to foster investments in sustainable projects. The European Commission as a result of this describes the taxonomy as follows:

"The EU taxonomy is a classification system, establishing a list of environmentally sustainable economic activities. It could play an important role helping the EU scale up sustainable investment and implement the European green deal. The EU taxonomy would provide companies, investors and policymakers with appropriate definitions for which economic activities can be considered environmentally sustainable. In this way, it should create security for investors, protect private investors from greenwashing, help companies to become more climate-friendly, mitigate market fragmentation and help shift investments where they are most needed." (European Commission, 2022a)

In its current form, the EU taxonomy includes nuclear power and natural gas and therefore labels both energy sources as "green". Through this highly debated step, the question arises, what impact and implications this inclusion has on the European Union (EU) regarding efforts toward the energy transition, investment, and EU foreign policy?

2. Findings

2.1. Elements of the EU's Energy Transition

Nuclear energy (13%) and natural gas (24%) made up over a third of the energy mix in the EU in 2020 (Eurostat, 2022). In an era of global energy transition from polluting energy sources to more sustainable and renewable ones, nuclear and natural gas are viewed by many as a middle ground. The EU's push for a zero nuclear power policy, although causing controversy within the member states, is being carefully put in place. The EU is phasing out nuclear power even though it can back up intermittent renewables, such as wind and solar energy (Marques and Junqueira, 2022). The higher efficiency of nuclear power electricity generation is being overshadowed by the superior mitigation of CO₂ emissions provided by renewables. Conversely, nuclear energy remains an important energy source for some member states. Some nations claim that reducing their nuclear production could prevent them from meeting the environmental targets or even damage their economic stability. Thus, nuclear energy seems to create a political minefield that member states could use against or in favor of the EU's energy transition policies and goals (McCauley and Onderco, 2021).

The EU's reliance on natural gas imports and the lack of security provided by its reserves (Szabo, 2022) draws a concerning question regarding how the EU will manage one of its most important energy sources. Nuclear energy and natural gas have detrimental effects on climate and the environment. Regarding natural gas, its main criticalities are its reserves and importation. Moreover, its exploitation also presents several risks for the environment, wildlife, and human population. Those implications are, for example, fugitive methane emissions from natural gas extraction pipeline leakages, the consequent erosion and sedimentation from digging soil for the pipelines, which can cause earthquakes and the contamination of ground and surface water (Union of Concerned Scientists, 2014). Those potential risks of natural gas exploitation inside and outside the EU would go against the objectives of the EU taxonomy, mainly the objectives number 3, the sustainable use and protection of water and marine resources, and number 5, pollution prevention and control (European Commission, 2022c).

Nonetheless, one barrier to the climate goals, argued by many, is that investing in natural gas as a transitioning energy source might negatively affect the investments in renewable energy (Gursan and de Gooyert, 2021). This could cause a shift in budget allocation toward the exploitation and use of natural gas to the detriment of renewables and further slows down the EU's plans for sustainable investments.

Nuclear energy is not renewable due to the limited amount of uranium on earth. However, it is still seen as a relatively clean energy source mainly for being carbon-free,

posing fewer risks to the climate. On the other hand, it poses environmental risks, particularly when constructing new nuclear power plants and dealing with nuclear waste (EnergySage, 2021). Furthermore, nuclear power plants pose the risk of system failures that consequently lead to atomic disasters such as Chernobyl (1986) and Fukushima (2011), emitting vast amounts of radiation that affect the environment, wildlife, and humans for a prolonged amount of time. In terms of benefits, nuclear power plants have much smaller life cycle emissions (between 4 and 110 gCO₂eq/kWh) when compared with coal (820 gCO₂eq/kWh) and gas (490 gCO₂eq/kWh), which are 90% and 80% higher than the ones of nuclear power plants, according to the IPCC 2014 report (EnergySage, 2021). Nuclear energy also offers a stable energy output to countries, provided that there is a ready and reliable supply of uranium (B. Pilkington, 2022).

The EU's decision-making regarding how it will proceed with its energy transition is of utmost importance when accounting for which transitioning energy sources it will use in this process. It may last more than ten years and will be equally important in a quest for a more sustainable future where renewable energy sources will dominate. Nuclear energy and natural gas are shaping out to play a pivotal role in this transition despite their downsides, as European countries could still see their benefits soon. The next section outlines the current state of investments in renewable energies, nuclear, and gas.

How the Inclusion of Nuclear and Natural Gas Impacts Investments

Looking at investments in the energy sector, one can observe a steady rise in investments in renewable energy sources over the past years (IEA, 2021). In this regard, renewable energy as well as energy storage technologies usually fit under the ESG (environment, social, and governance) terminology.

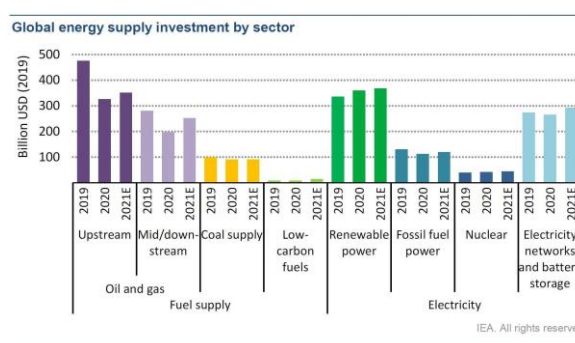


Figure 1: Global energy supply investment by sector, taken from IEA (2021)



Figure 2: Global investment in clean energy and energy efficiency, 2017-2021, taken from IEA (2021)

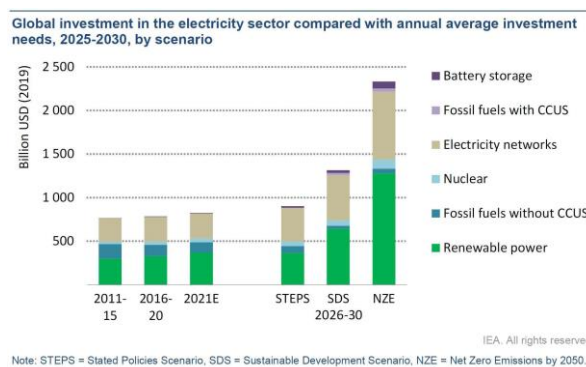
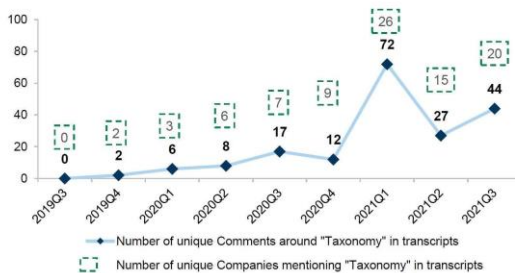


Figure 3: Global investment in the electricity sector compared with annual average investment needs, 2025-2030, by scenario, taken from IEA (2021)

S&P Global states that the EU taxonomy can be perceived as a major attempt of standardization in the realm of ESG investments. While the amount of ESG related AuM within the EU is estimated to be about €3.3 trillion, the EU's Green Deal aims to attract about €1 trillion over the course of the next 10 years. Therefore, an implementation of a sound framework could influence investors decisions (Laidlaw, 2022).

A large factor to account for is the amount to which current AuM are already invested in sustainable labeled products. According to Laidlaw (2022), it seems unlikely that investors already excluding those industries would start including them just because of the taxonomy. The author further states, that "[many] investors already exclude fossil fuels, and nuclear has been excluded from many portfolios, especially since the 2011 nuclear disaster in the Japanese city of Fukushima" (Laidlaw, 2022).

Exhibit 2: Discussions around the Taxonomy in earnings calls have seen steady growth in the past two years
 Number of comments discussing EU Taxonomy, STOXX 600 transcripts

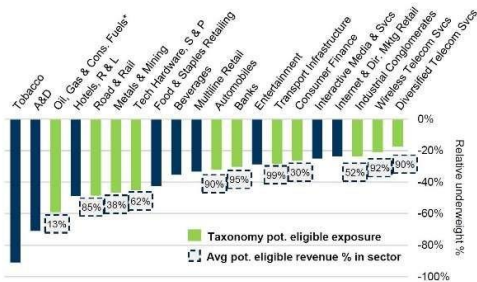


Source: Refinitiv Eikon, Goldman Sachs Global Investment Research

Figure 4: Discussion of EU taxonomy, taken from (Tylenda et al., 2022b)

S&P Global points out that experts in the realm of ESG investment like the Institutional Investors Group on Climate Change (IIGCC), activists as well as EU’s own Platform on Sustainable Finance strongly oppose the inclusion and argue that this act lacks the taxonomy’s initial science-based approach (Laidlaw, 2022). A main issue identified by those stakeholders is the possibility that such a taxonomy issued by the EU could be misleading and encourage actors to invest in unsustainable projects. They further argue that the EU could damage “its reputation as a global leader in sustainable finance regulation if it allowed a fossil fuel in the taxonomy” (Laidlaw, 2022).

Exhibit 6: Some of the most underweight industries in ESG funds have portions of revenue that are eligible under the Taxonomy
 GICS 3 industries most relatively underweight in ESG funds, Oct 2021, with avg. eligible revenue % in exposed sectors

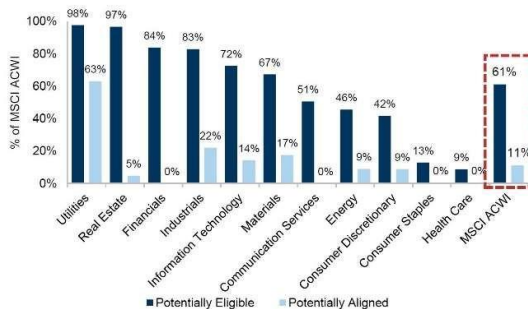


*The Oil & Gas industry has some exposure to low-carbon activities (chemicals, renewables, bio fuels, etc.) defined under the Taxonomy.

Source: Morningstar, Goldman Sachs Global Investment Research

Figure 5: Industry exposure, taken from (Tylenda et al., 2022b)

Exhibit 7: Over half of global companies have some exposure to the EU Taxonomy, with only 11% potentially-aligned (>5% rev.)
 MSCI ACWI exposure by GICS 1, >5% rev potentially eligible/aligned



Source: European Commission, FactSet, Goldman Sachs Global Investment Research

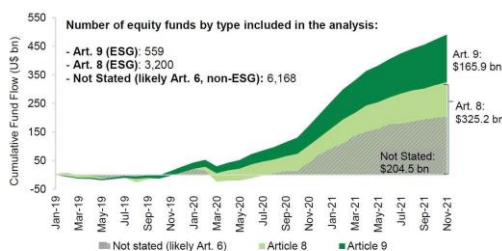
Figure 6: Companies exposure to EU taxonomy, taken from (Tylenda et al., 2022b)

Being a leader in sustainable finance, the EU’s taxonomy functions as a benchmark for the design of similar policies abroad (Aing, 2021; Tylenda et al., 2022b). While this fact is generally perceived as positive (Aing, 2021; Tylenda et al., 2022), an inclusion of nuclear and gas in the EU taxonomy could therefore lead to an inclusion of these industries in other taxonomies as well (Laidlaw, 2022).

Generally, the taxonomy’s potential is perceived as high. While Tylenda et al., (2022b) state that a unified framework is highly anticipated by businesses, Aing (2021) perceives the taxonomy “as a powerful tool to support decision-making on investments”. Therefore, another possible development that has to be kept in mind is the possibility of a two-fold market development. The industry could hereby issue several products and investment options, some which align with the taxonomy including gas and nuclear as well as some which align with the taxonomy but especially exclude gas and nuclear, which would counteract the taxonomy’s purpose of being a unifying framework (Laidlaw, 2022). This possibility of further diversification or “nuancing” is also supported by a report issued by Goldman Sachs.

Exhibit 3: Article 8 & 9 ESG equity fund flows have rapidly outgrown non-ESG counterparts in Europe

Cumulative fund flow of Eur. Eq funds by type (US\$bn) 2019-2021 (Nov.)



Source: Morningstar, Goldman Sachs Global Investment Research

Figure 7: Equity fund flows, taken from (Tylenda et al., 2022b)

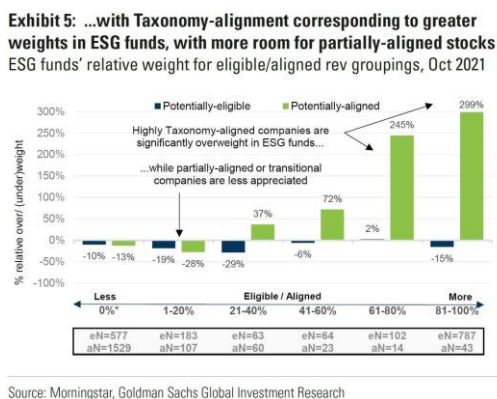


Figure 8: Taxonomy alignment, taken from (Tylenda et al., 2022b)

The report states that while it seems unlikely for investors who already engage and act upon ESG criteria (which work with strict exclusion criteria) to include nuclear or gas in the future (as mentioned above), one would have to pay attention on “exclusion exceptions [that] may be made where companies with nuclear or gas exposure meet the strict taxonomy criteria” (Tylenda et al., 2022b). According to Goldman Sachs, greenwashing allegations against the taxonomy since “the EU Commission has stated that they will amend the existing Taxonomy Disclosure Delegated Act to ensure that investors can identify [...] activities [including] gas or nuclear in final Taxonomy reporting requirements” (Tylenda et al., 2022b). In regard to reporting frameworks, one has to pay attention to the overall alignment of the taxonomy with other already existing reporting and classification schemes, especially the Sustainable Finance Disclosure Regulation (SFDR). In addition to that, global political developments may affect the overall effectiveness of the taxonomy.

Exhibit 1: Timeline of reporting requirements for the EU Taxonomy for corporates and asset managers



Figure 9: Timeline of reporting requirements for the EU Taxonomy for corporates and asset managers, taken from (Tylenda et al., 2022b)

2.2. The Taxonomy's International Dimension

The EU Taxonomy has successfully had international effects. The necessity to secure businesses in the long run has seen the EU taxonomy be corresponded by indigenous versions around the world. Especially traditionally resistant countries like China, South Korea, and Russia have advanced sustainability frameworks themselves (Bellona Europa, 2022). Early in 2022, China's central bank pledged to converge on the EU's sustainability parameters to classify green investments to ensure congruence between the Chinese and the European green business model (Li and Yu, 2021). Concerning Russia, a commentator observed that the Russian taxonomy is a 'direct response to the EU taxonomy'; yet, if the latter is intended to reduce emissions, the former is primarily concerned with accession to the international market (Bellona Europa, 2022).

While the EU taxonomy will likely find compliance by the United States (Engler, 2021), the EU taxonomy, in general, is likely to represent a successful attempt by the European Union to lead the transition to a global sustainable economic model. By acting on the market stage, the EU economic power acts as an incentive for other parts of the world to adapt to the EU regulatory frameworks (Bradford, 2015). Hence, the EU can export specific models of the world economy on the one hand and not be penalized by a competitive disadvantage that would weaken the European economy and produce carbon leakage effects on the other. Nevertheless, the inclusion of natural gas and nuclear power in the taxonomy, while being justified to make the energy transition more affordable, slows down the shift toward a green economy (Appunn, 2022).

Energy is a highly strategic resource. Without it, national economies would stop, and state's power limited. This is well represented in the EU, where member states hardly concede energy competencies to the supranational level, similarly to what happens in the military and defense sector (Westphal, 2008). Yet, different member states have different energy mixes (Eurostat, 2022). Energy ties with foreign partners are difficult to revise (Westphal, K., & Stiftung Wissenschaft Und Politik, 2021), and such complexities easily merge into overly complex ones comprehensive packages like the EU Taxonomy. Moreover, while natural gas production in the EU has declined over the past 20 years, this has incentivized European countries to rely more on imports to ensure energy security (Meyer, 2022). Hence, pushing to include natural gas and nuclear power in the sustainable classification results from past choices and energy supply priorities.

Nevertheless, the Russian invasion of Ukraine is a turning point and will have farreaching consequences for the European energy sector (Heusgen, 2022). While the outcomes for nuclear power and natural gas will likely diverge, the common thread will be

a boost in renewable energy investments in a context where the energy transition will meet the broader cadre of geopolitical competition. As the head of the International Energy Agency, Fatih Birol, claimed, Putin's invasion redefined energy security considerations in Europe (Aldermann and Reed, 2022). In this context, nuclear capacity in the European Union could be an alternative solution to make up for Russia's energy imports cut. Yet, the invasion has instead emphasized the divisiveness among European states concerning nuclear energy. Again, divisions develop between a supportive block led by France and an opposing one headed by Germany (Aldermann and Reed, 2022).

In fact, despite two of Germany's largest energy companies agreeing to delay the phaseout of nuclear power to ease energy reliance on Russia, the government intends to concretize the plan and follow the Energiewende (Chazan and Miller, 2022), namely, the energy transition program introduced in 2011 (Federal Foreign Office, n.d.). Nonetheless, at the beginning of the current crisis, Germany pledged to cut all its energy ties with Russia, which will comport significant consequences for natural gas flows (Balmforth and Ratz, 2022). While Russia cannot be considered a reliable partner anymore, natural gas will still be a crucial component of the energy transition. Yet, gas flow maps will be redrawn, and the most dependent countries on Russian gas, Germany and Italy, have already started signing new deals (Campbell, 2022; Wintour, 2022).

Nonetheless, the current war is making outstandingly clear that the energy transition is an opportunity to rethink strategic relationships. Accordingly, the meaning of energy security will evolve (Tsafos, 2022). As Nikos Tsafos commented, "of all the policy dilemmas presented by the energy transition, the question of how much to do at home versus abroad tops the list as the thorniest one" (Tsafos, 2022). In this context, investments in renewables and the security of fossil fuels supply will keep going hand in hand (Goldthau et al., 2018), yet with revised strategic priorities in Europe.

The REPower EU plan, introduced on 18th of May 2022, intends to cut dependence on Russian gas to ensure energy supplies and fight climate change effectively (European Commission, 2022a). The project aims to save energy, diversify energy supplies, and accelerate the roll-out of renewable energy through smart investments and new partnerships worldwide. Interestingly, however, while the Communication issued by the EU Commission foresees a role for nuclear as an alternative to natural gas shortages, the document does not mention the role the EU Taxonomy can play in this context (European Commission, 2022b).

3. Conclusion

The EU Taxonomy is a classification system in the cadre of the European Green Deal establishing a list of environmentally sustainable economic activities aimed at scaling up investments in sustainable activities. After controversial debates dominated mainly by European member states' interests and power plays, the taxonomy included both nuclear and natural gas in the taxonomy. This PES commentary discussed the impact of such an inclusion on the EU's environmental policy, investments in renewables and green activities, and foreign policy.

The taxonomy has a high potential to drive economic activities in the green direction. However, including nuclear and natural gas opens a two-fold possibility of market development in this regard. The industry could issue several products and investment options, some aligning with the taxonomy, including gas and nuclear, and some aligning with the taxonomy but excluding gas and nuclear, which would hinder the taxonomy's purpose of being a unifying framework.

Similar patterns are identifiable internationally. In fact, the necessity to align with the EU's taxonomy, justified by the EU's market power of attraction, has led different countries worldwide to develop similar classifications. Yet, one has not to forget energy's deeply strategic value. The current war in Ukraine highlights this aspect. It is likely to affect the future developments of green business models such as the EU Taxonomy and developments concerning nuclear and natural gas specifically.

While nuclear is an alternative to Russian gas that has been considered, it is nonetheless heavily opposed by countries such as Germany. Concerning natural gas, Russia will no longer be regarded as a reliable partner. While energy maps and the direction of future investments are being redrawn, the stake for the EU is to reconcile the security of energy supplies, their reliability, and the achievements of the environmental goals promoted.

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