

2022
January

Policy & Politics: The EU's Green Taxonomy



Sustainability Industry Report

The Al-Attiyah Foundation



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The European Union's draft green taxonomy of sustainable investments was released in December 2021. The document is intended to outline which types of projects and technology can be claimed as 'sustainable' by companies, to avoid allegations of 'greenwashing'. It can also affect which investments are eligible for certain types of EU funding. Yet the political compromises to reach agreement have led to accusations that the taxonomy unfairly penalises certain technologies.

What is the significance of Green Taxonomy? Where are the areas of unclarity and controversy? How has the European Commission attempted to balance science-related policy and the differing political stances of the member states, in areas such as nuclear, gas and biomass?

SUSTAINABILITY REPORT

This research paper is part of a 12-month series published by The Al-Attiyah Foundation every year. Each in-depth research paper focuses on a prevalent sustainable development topic that is of interest to The Foundation's members and partners. The 12 technical papers are distributed to members, partners, and universities, as well as made available online to all Foundation members.



APS – Announced Pledges Scenario

BECCS – Bioenergy with Carbon Capture and Storage

CAN – Climate Action Network

CAP – Common Agricultural Policy

CCUS – Carbon Capture Use and Storage

DA – Delegated Act

DNSH – Do No Significant Harm

EBF – European Banking Federation

EC – European Commission

ESG – Environmental, Social and Governance

ETS – Emissions Trading System

EU – European Union

GHG – Greenhouse Gas

IEA – International Energy Agency

IIGCC – Institutional Investors Group on Climate Change

IPCC – Intergovernmental Panel on Climate Change

MEP – Member of European Parliament

NGO – Non-Governmental Organisation

NZE – Net-Zero Emissions

OECD – Organisation for Economic Co-operation and Development

R&D – Research and Development

TEG – Technical Expert Group

TSC – Technical Screening Criteria

UNEPFI – United Nations Environment Programme Finance Initiative

WWF – World Wildlife Fund for Nature

EXECUTIVE SUMMARY

- The EU Taxonomy is a technical rulebook that identifies sustainable activities that contribute to the EU's green transition and comply with the Paris Agreement under the EU Green Deal. It aims to help financial actors and investors identify those of their assets that are sustainable.
- It aims to create security for investors, protect private investors from 'greenwashing', help companies become more climate-friendly, mitigate market fragmentation, and help shift investments where they are most needed.
- Differing definitions of "sustainability" and what constitutes a sustainable activity among EU member states has hampered the growth of green investments, while a lack of transparency and unclear reporting has implied higher costs for the real economy to raise capital for sustainable solutions.
- Public financing will not be adequate to meet the energy transition challenge, necessitating the mobilisation of private capital. Steering private capital towards net zero ambition needs a systematic classification system that identifies what activities are climate goal-compatible and encourages private financiers to move their money into climate friendly investments.

- The final draft of the Taxonomy Climate Delegated Act (DA), published after months of review, lobbying and anticipation from industry and environmental groups, labels nuclear projects, permitted until 2045, as green, as well as gas projects, which are included until 2030, with emissions thresholds in place. Both these labels are subject to stringent conditions.
- The Climate DA is largely expected to pass in its current form, even though widespread opposition to the inclusion of 'fossil' gas and nuclear has been publicised by different EU member states, politicians, civil society actors, and NGOs.
- The EU Taxonomy can help in more streamlined assessments of financial groups', institutions', and organisations' corporate clients, and help in better understanding companies' transition plans, their financial requirements to achieve their climate goals, and their receptiveness to regulations.
- It can enable access to a broader range of capital (apart from public sources) at reduced transaction costs, which ultimately results in reduced risks for sustainable investments.
- Oil and gas companies can utilise the framework of the DA to strengthen their own corporate governance structures to meet the transition. If their gas projects are to qualify, they will require some degree of carbon capture, use and storage (CCUS) and/or blending with low-carbon fuels.
- Nuclear energy producers will have to continue maintaining high standards of safety and modify and/or upgrade ageing reactors to next-generation ones to burn fuel more efficiently, in order to align with the EU Taxonomy and qualify for green eco labels and finance.



05 WHAT IS THE EU GREEN TAXONOMY?

In the final hours of 2021, the final draft of the EU Green Taxonomy's Climate Delegated Act was published to set out the criteria to assess the environmental performance of almost 80 climate change mitigation and almost 100 climate change adaptation activities. Climate change adaptation and mitigation are two of six environmental objectives underpinning the EU Taxonomy, which includes, apart from climate change mitigation and adaption, protection of water and marine resources; transition to a circular economy; pollution prevention and control; and protection and restoration of biodiversity and ecosystems (Figure 1)ⁱ.

According to the Taxonomy, if a company works in any of the six fields, it can be considered sustainable as long as it meets the 'Do No Significant Harm' (DNSH) principle. The DNSH principle entails that for an activity (investment-based or reform-based) to be sustainable, it should not lead to significant harm to any of the other environmental objectives and should follow human rights and labour standardsⁱⁱ. Its performance will be assessed against the DNSH principal standards, under which it:

- Has no or an insignificant foreseeable impact on one of the 6 environmental objectives, or;
- Is tracked as 100% supporting one of the 6 environmental objectives, or;
- Contributes substantially to one of the 6 environmental objectives

Under the Taxonomy Regulation, the official law establishing the basis for the EU Taxonomy on Sustainable Activities (also referred to as the EU Green Taxonomy), the European Commission developed a list



Figure 1 The 6 Environmental Objectives of the EU Taxonomy on Sustainable Finance



of environmentally sustainable activities by defining technical screening criteria (TSC) for each environmental objective through delegated acts. The first Delegated Act (DA) covers climate change mitigation and adaptation, recognised as critical to meeting the EU's climate and energy targets for 2030, and net zero ambitions for 2050.

In 2019, the European Commission established a Technical Expert Group (TEG) on sustainable finance in order to inform its work on the Action Plan for Financing Sustainable Growth under the EU Green Deal, the first part of which called for the establishment of a common EU classification system for sustainable activities, or a taxonomyⁱⁱⁱ.



The Taxonomy itself is a technical rulebook that identifies sustainable activities that contribute to the EU's green transition and comply with the Paris Agreement^{iv} under the EU Green Deal. It aims to help financial actors and investors identify the proportion of their assets that are sustainable, according to alignment with the Taxonomy's Technical Annex.

In this way, it aims to create security for investors, protect private investors from 'greenwashing' (the misleading or overstated claim that particular investments or companies are sustainable), help companies become more climate-friendly, mitigate market fragmentation, and help shift investments where they are most needed^v.

The Taxonomy disclosure obligations encourage the reporting of progress towards meeting the TSC as well as the reporting on their achievement by companies to receive Taxonomy-aligned finance. Reporting includes

turnover, CAPEX, OPEX, and how much of turnover goes into activities that contribute to the Taxonomy's environmental objectives. This makes it easier for investors to assess whether a company is sustainable, and if it qualifies for sustainable finance and/or is eligible to receive EU green bonds. Once investors have clarity on a company's environmental performance, they can better manage their portfolios in order to obtain "green" labels (or "eco" labels) in the EU.

The first EU Taxonomy report was published by the TEG in March 2020, after which the Taxonomy Regulation was brought into force in July 2020, followed subsequently by the draft of the first Taxonomy Climate DA in April 2021^{vi}. In recent media reports and public news, the Climate DA has increasingly been referred to as the Taxonomy itself, which can be misleading. A second DA for the other four environmental objectives is planned to be published in 2022^{vii}. Both DAs together make up the EU Taxonomy for Sustainable Activities, or the EU Green Taxonomy.

Table 1 What is the EU Taxonomy?

The Taxonomy Is	The Taxonomy Is Not
<ul style="list-style-type: none"> • A list of economic activities and relevant criteria • Flexible to adapt to different investment styles and strategies • Based on the latest scientific and industry experience • Dynamic, responding to changes in technology, science, new activities and data 	<ul style="list-style-type: none"> • A rating of good or bad companies and/or investments • A mandatory list to invest in or not invest in • Making a judgement on the financial performance of an investment – only the environmental performance • Inflexible or static



Differing definitions of "sustainability" and what constitutes a sustainable activity among EU member states has hampered the growth of green investments, while a lack of transparency and unclear reporting has implied higher costs for the real economy to raise capital for sustainable solutions^{viii}. For example, the difference in cost of capital is not entirely consistent with the lowest Environmental, Social, and Governance (ESG) rated and highest ESG-rated companies in Europe, where companies in quintile 5 (high sustainability) often encounter higher costs of capital than companies ranked lower on the ESG scale due to unclear reporting and lack of a systematic methodology to assess performance. In sectors

like energy and information technology, the difference in cost of capital between quintile 1 (low sustainability) and quintile 5 companies can vary by as much as 0.3% to 0.6%, and in emerging markets by as much as 0.6% to over 1.1%^{ix}. This in turn has complicated investor efforts to check and compare environmental performance of their portfolios in order to reorient capital flows in a sustainable direction. A common language for investors, financial actors, institutions, policy makers, and regulators could help avoid greenwashing and make it easier for private capital to be raised^x, hence the need for a robust, science-based transparency tool.

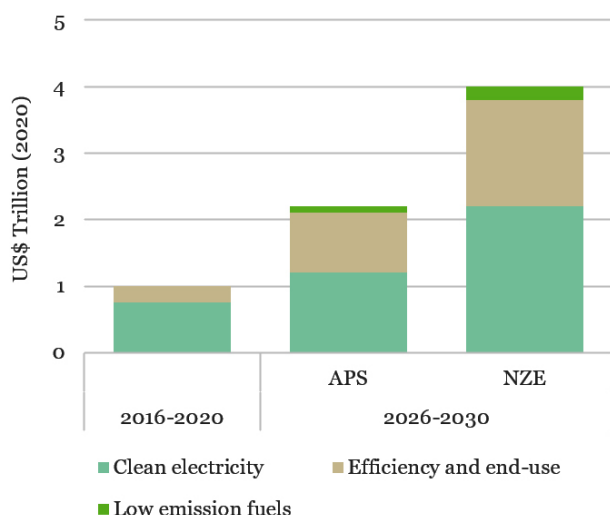
The International Energy Agency's (IEA) Net Zero scenario estimates that globally about US\$ 4 trillion is required annually, on average, to meet 2030 climate targets (Figure 2, Figure 3 and Figure 4). The OECD on the other hand estimates that as much as US\$ 6.3 trillion a year would be required to 2030 to meet development goals, increasing to US\$ 6.9 trillion a year to make this investment compatible with the goals of the Paris Agreement^{xi} (this is a broader definition than the IEA's, partly explaining the larger figures).

Public sector sources will not be adequate to meet this challenge, necessitating that public capital is targeted to mobilise much larger quantities of private capital. Steering private capital towards the net zero ambition needs a systematic classification that identifies what activities are climate goal-compatible and encourages private financiers to move their money into climate friendly investments. Private capital can also play a crucial role as "transition financing", i.e., expending and investing in businesses to make them perform better environmentally in the run-up to the climate goals.

The EU Taxonomy is not limited to financial actors or companies obligated to report under the EU's Non-Financial Reporting Directive. It can also be used on a voluntary basis by credit institutions and local issuers merely by virtue of being part of the reporting chain. SMEs may want to report in order to attract green investments.

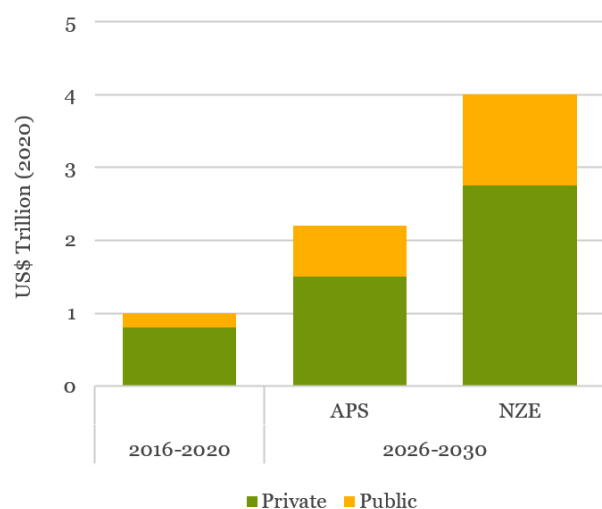


Figure 2 Average annual clean energy investment to reach net-zero 2050 under IEA scenarios APS (Announced Pledges Scenario) and NZE (Net-Zero)^{xii}



Climate change adaptation and mitigation were selected for the first DA of the taxonomy, as they cover high-emitting macro sectors of the European economy, climate conscious activities which can also enable emission reductions in other sectors (covered by the remaining objectives of the taxonomy).

Figure 3 Average annual clean energy financing by sector to reach net-zero 2050 under IEA scenarios APS (Announced Pledges Scenario) and NZE (Net-Zero)^{xviii}

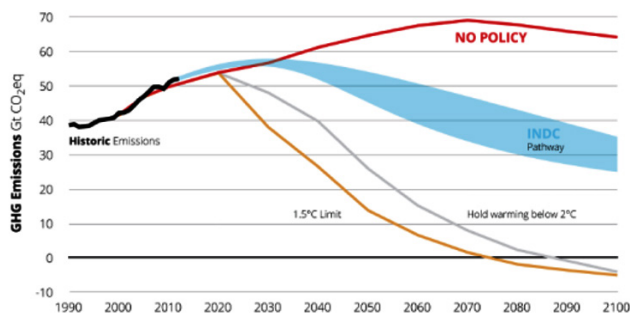


Under climate change mitigation, the TSC classifies activities as sustainable, transitional, and enabling. Sustainable activities are those already compatible with 2030 and 2050 climate goals; transitional are those that are not currently operating at the level of the TSC to be classified as sustainable on their own, but will contribute to emissions' reduction from other sectors, while enabling activities are those that enable and/or support emissions' reductions in the other two categories. For example, solar panels, an enabling technology, can encourage uptake of solar farming, a low-carbon technology, for power needs of industry and buildings, a transitional sector.

Table 2 Examples of mitigation activities and their TSC^{xv}

Activity	TSC	Examples
Sustainable, i.e. already compatible with a 2050 net zero economy	Likely to be stable and long-term; reviewed at least every 5 years	Renewable energy (such as solar energy or wind power)
Transitional, i.e. activities that contribute to a transition to a net zero economy, but are currently not operating at that level	Likely to be revised regularly and tightened over time; reviewed at least every 3 years	Manufacturing processes (such as cement); building renovation
Enabling, i.e. activities that enable those above	Consistent with the activities being enabled	Manufacture of renewable technologies, such as solar panels, wind turbines

Figure 4 Global CO₂ emissions pathways to meet the 2030, 2050 and 2100 climate goals^{xiv}



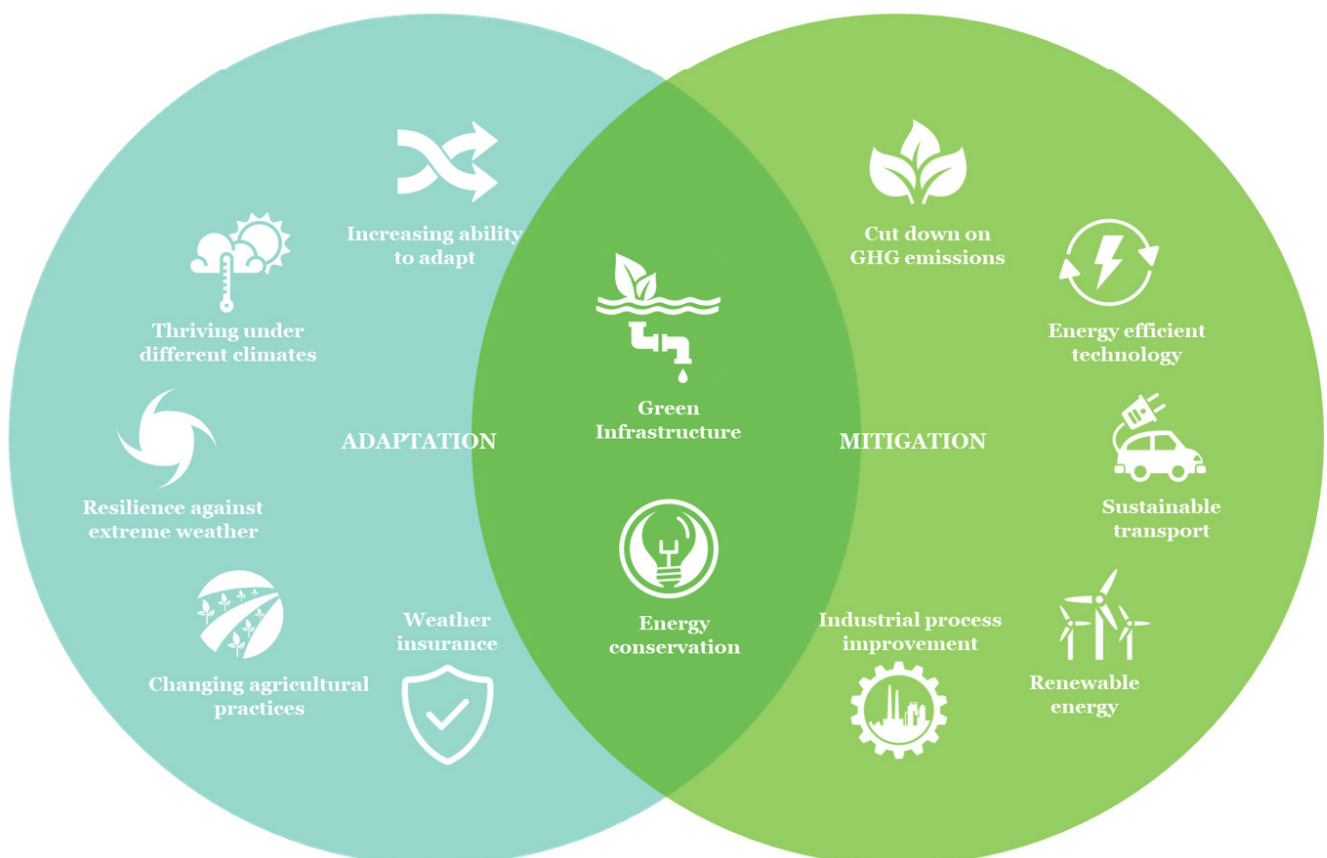
Under climate change adaptation, the TSC classifies activities as adapted or enabling adaptation. Adapted economic activities are those where the activity on its own has adopted all the relevant measures to reduce its material physical climate risks, while economic

activities enabling adaptation are those which enable adaptation of other economic activities, such as non-life insurance, weather insurance, or weather observation (Figure 5).

After being released in April 2021, the Climate DA underwent a four-month review period by the European Parliament and Council, both of whom requested an additional two months to complete their assessment, concluding in December 2021.

The 6-month review period saw impassioned arguments among EU member countries for and against the inclusion of gas and nuclear in the DA, with the final text of the act, released two hours before New Year 2022, labelling both as "activities that contribute to the green transition and comply with the Paris Agreement".

Figure 5 The climate change mitigation and adaptation objectives of the EU Taxonomy^{xvi}



Following the political agreement on the Taxonomy Regulation in 2020, the European Commission launched in-depth work to assess whether to include nuclear energy and gas in the classification of environmentally sustainable activities. For nuclear, the Joint Research Centre, the Commission's in-house science and knowledge service, drafted a technical report on the DNSH aspects of nuclear energy, aiming to provide evidence-based scientific support for policymaking^{xvii}. However, when the draft of the first Taxonomy Climate DA was released in April 2021, both nuclear and natural gas were absent from the list of environmentally sustainable activities, resulting in an uproar among EU member states convinced of their necessary role in the energy transition.

As it stands now, the final draft of the Taxonomy Climate DA, published after months of review, lobbying and anticipation from industry and environmental groups, labels nuclear projects, permitted until 2045, as green, as well as gas projects, which are included until 2030, with emissions thresholds in place. Nuclear is classified as sustainable on the condition that countries can safely dispose of the toxic waste, having a suitable final repository ready by 2050, and meet DNSH standards.

For gas, direct greenhouse gas emissions need to be under 270 gCO₂e/kWh of energy output, or annual emissions cannot exceed 550 kgCO₂e/kW of energy output over 20 years^{xviii}, suggesting concerted action on efficiency and carbon abatement practices, such as CCUS. A highly efficient gas power plant would produce about 370 gCO₂e/kWh (see Figure 6), so the green taxonomy limit cannot be achieved without CCUS and/or a blend of low-carbon gases (hydrogen, ammonia or renewable natural gas).

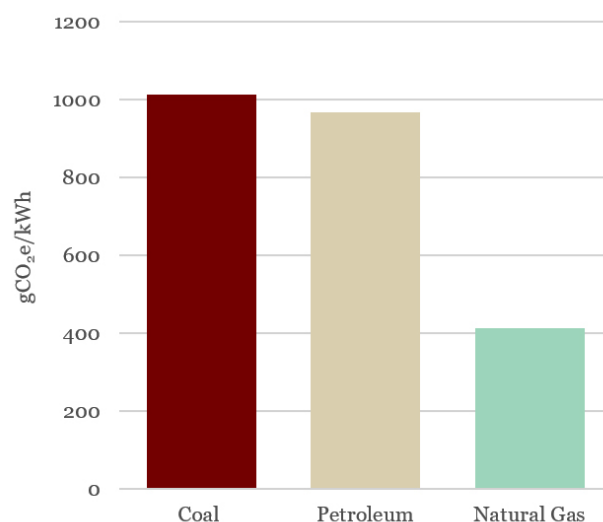


The lifetime extension of existing powerplants will also be considered green "in view of the long lead times for investments in new nuclear generation capacity", but will have to include modifications and safety upgrades in order to comply with the highest achievable safety standards. Moreover, gas' sustainability hinges on its ability to replace coal power, with operators needing to demonstrate that co-firing of low-carbon gases (apart from gas) will be possible, and that plans are in place to use at least 30% of them from 2026 onwards^{xx}.

Bioenergy, which also got a mixed response for being included in the first draft of the DA as "transitional", has now been included in the final draft as "sustainable", with the text of the act reading "bioenergy is no longer labelled as transitional^{xxi}", which would have meant a TSC review every three years with more stringent rules at each review. Rules for forestry, meanwhile, are also more relaxed, with reduced complexity and burdens for forest holdings and forests smaller than 25 hectares not being covered by the taxonomy requirements^{xxii}. Forestry has also been granted an extended "time frame for demonstrating" its climate benefits and will "rely more on existing sustainable criteria", which could mean challenges in access to funding for forest investments^{xxiii}.

Agriculture, meanwhile, has been excluded from the list of economic activities that are covered under the DA, "pending further progress on negotiations on the Common Agricultural Policy (CAP)^{xxiv}", in order to achieve coherence across the different instruments needed to achieve the environmental and climate ambitions of the Green Deal.

Figure 6 CO₂ emissions per kWh of electricity generation by fuel source^{xx}



The major determinations of bioenergy / biomass, forestry, natural gas, and nuclear energy included in the Taxonomy Climate DA have come under the microscope by a host of climate-change experts, governments, politicians, NGOs, scientists, lobbyists, and onlookers as being misaligned with the broader EU Green Deal. The major stickler has been the inclusion of nuclear energy as a sustainable activity, and fossil gas as a transitional one, feedback on which, and the broader DA, was provided by the EU countries on January 21, amidst a backlash from the wider community.

Greenpeace blasted the Climate DA as a "licence to greenwash" within days of the DA draft being released, and Austria raised the spectre of legal action against the executive, threatening to sue the European Commission if it finalises the inclusion of nuclear energy^{xxv}. Austrian Climate Minister Leonore Gewessler called the move to include nuclear energy a "cloak-and-dagger operation", emphasising that for Austria, neither nuclear nor gas could be included in the taxonomy, as "they are harmful to the environment and destroy the future of our children^{xxvi}".

Germany, meanwhile, has also reiterated its opposition to nuclear power, alongside Austria, Denmark, Luxembourg, and Spain, while calling on the Commission to further ease restrictions on fossil gas that require gas to be replaced by low-carbon gases such as biomethane and/or hydrogen in the transition to green energy. For Germany, nuclear energy "is risky and expensive", according to statements by the Green Party, but fossil gas used as "a fuel in the ultra-modern and efficient gas-fired power plants in Germany forms a bridge" to transition and enables Germany's "rapid phase-out of coal" and achieve significant CO₂ savings in the short-term.

However, to realise this, Germany says it needs more time to switch to low-carbon gases than suggested in the DA, which offers a timeline of 2026 for blending rates of decarbonised gases at 30%, and 2030 for 55%, which are "not realistically achievable".

Germany's pro-gas stance hinges on its future generation mix. The country has a planned increase of 50% of gas power generation to exit coal by 2030, which translates to an increase in fossil gas power capacity of 33%, up from 90 TWh in 2020, to between 120-150 TWh in 2030^{xxvii}. It plans to build these plants as hydrogen and other low-carbon gases-ready, but might be able to begin transporting blended gas only after 2030, which oversteps the DA's time limits. In a letter to the Commission outlining its concerns, Germany has suggested shifting the fuel switch "in a flexible manner after 2036".

France on the other hand, has come out in strong defence of nuclear power as a sustainable, stable, and independent energy source that can make up for the shortcomings of renewable systems, guarantee constant supplies, and reduce energy price volatilities. The country has tapped into Europe's ongoing energy crisis to make its case for nuclear energy and has garnered the support of nine other EU countries, most of which already count nuclear as part of their national mix: Bulgaria, Croatia, Czechia, Finland, Hungary, Poland, Slovakia, Slovenia, and Romania. According to France, which obtains over 70% of its electricity from nuclear stations, as long as gas remains a part of the energy mix, supply tensions will be more frequent, and Europe's dependency on exporters will only deepen, weakening its energy security.

But while Germany and France lead the nuclear versus fossil gas battle, other EU member states have rejected the DA entirely for including both in its final draft. These include Austria, Spain, Denmark, and Luxembourg, who feel the science backing the inclusion of both is weak and unjustified. For example, all four countries note that the 270 gCO₂e/kWh emissions limit set in the case of natural gas are above the scientific recommendations of institutions such as the IPCC and IEA to meet climate targets, making the DNSH principle meaningless. Also,

the condition of a gradual switch to renewable gases starting 2026 "is at odds with the inherent need of financial markets to only count as green those revenues generated from activities that meet the TSC criteria now, as opposed to those that might or will meet the criteria sometime in the future^{xxviii}."

The environment and climate ministers of the four countries further argue that the proposed TSC for nuclear power are also inconsistent as they do not take into account the extremely high costs linked to nuclear development as

Table 3 Key EU countries' stance on the draft Climate DA inclusions [x = does not support; ✓ = supports]

Country	TSC for Nuclear	TSC for Gas	TSC for Bioenergy	TSC for Forestry	Stance on Inclusions
France	✓	x			Gas should be removed from the taxonomy
Germany	x	✓			Nuclear should be removed from the taxonomy
Austria	x	x			Both gas and nuclear are incompatible with the EU Green Deal, and should therefore be removed
Sweden			✓	✓	Accepts bioenergy and forestry TSCs
Spain	x	x			Both gas and nuclear are incompatible with the EU Green Deal, and should therefore be removed
Denmark	x	x			Both gas and nuclear are incompatible with the EU Green Deal, and should therefore be removed
Luxembourg	x	x			Both gas and nuclear are incompatible with the EU Green Deal, and should therefore be removed
Finland	✓		✓	✓	Accepts nuclear, bioenergy, and forestry TSCs, although concern over forestry TSC being unclear and open for "interpretation"
Poland	✓	✓			Accepts nuclear TSC

well as the dangerous impacts of high-level radioactive waste, making the inclusion of nuclear energy in the Climate DA incompatible with the DNSH principle. More importantly, after over 6 decades of use, "not a single fuel element has been permanently disposed anywhere in the world." Lack of operational experience with deep geological repositories for high active waste and effective waste disposal solutions means it is "unacceptable to circumvent the problem by demanding member states to have a mere plan for a disposal facility in operation by 2050." However, FORATOM, a Brussels-based trade association that represents Europe's nuclear energy industry, argues that the Onkala deep repository in Finland will be operational by 2025^{xxix}.

Members of the European Parliament, led by the left-wing Progressive Alliance of Socialists and Democrats (S&D) have also expressed their displeasure at the inclusion of fossil gas and nuclear, saying they "cannot support the proposed delegated act with its current content", because the criteria for gas are too lax. As for nuclear, it risks "fatally undermining public trust in the taxonomy", due to lingering doubts over the management of highly radioactive waste. The Greens, another member of the EU Parliament, have also shown inclination to reject the DA as a bloc, despite the German Greens being part of the pro-gas coalition in Berlin.

This presents two possible challenges to the DA being incorporated as law. One, 20 of the 27 EU member countries in the EU Council of Ministers can reject the draft DA, for it to be revised and a new DA to be presented. Two, and more likely, the European Parliament can "kill" the DA with a simple majority, i.e. at least 353 Members of Parliament, in a Plenary vote. The S&D, the Greens, the Left, and others similarly aligned make up 256 MEPs in opposition to the

DA, roughly 100 short of the majority required to reject the proposal. This means that other political groups further to the right of the hemicycle will need to join the rebellion if it is to be voted down. However, conservative groups like the Polish-dominated ECR Party are largely supportive of the inclusion of nuclear and fossil gas, while the European People's Party (EPP), the largest group in Parliament with 177 members, remains divided.

Nordic countries Finland and Sweden, meanwhile, who had issues against the DA's proposed TSC for bioenergy and forestry during draft consultations, seem more welcoming of the revised changes in the Taxonomy, which has seen criteria for biomass reduce to as low as possible (see P6).



The revisions have been heavily criticised, with centrist MEPs in the European Parliament suggesting the Commission's decision to relax bioenergy and forestry sustainability criteria was an attempt to win support from Nordic countries, without which it would encounter a blocking minority at the European Council level at a time when the inclusion of nuclear and gas are being fiercely decried by other member states.

However, the role of bioenergy and biomass as renewable resources seems unlikely to change in the DA for now, even though green groups have called on the Commission to strip forest biomass – combustible pellets burnt for energy – from the list of sustainable activities.

Biomass has been a contentious topic for the EU's Green Deal and its taxonomy. It produces around half of the world's renewable energy, and ~60% of the EU's, and is treated as carbon neutral, on the condition that certain sustainability conditions (TSC) are met, mainly that biomass harvesting does not exceed forest growth. This becomes problematic when pitted against the ruling for forestry, where reduced complexity and burdens for forest holdings, and the elimination of TSCs for holdings smaller than 25 hectares, could discourage sustainable investment to boost forest cover, but conversely encourage higher wood biomass harvesting.

Nordic countries rely heavily on biomass for their energy needs and see it as critical to meet their renewable energy targets. Former EU Commission Director for Climate Change, Jorgen Henningsen, has said that "without relying heavily on biomass, many member states will find it very difficult to meet their future commitments, be it emissions' reductions or renewable energy commitments^{xxx}."

Relaxed TSCs for biomass could also disincentivise investments into crucial medium-term technologies like biomass with carbon capture, which could effectively enable higher storage of carbon than the amount released during power generation. Higher carbon reduction could also offset the emissions from fossil fuels currently used in transportation^{xxxi}, the TSC for which are yet to be released.



Civil society has also piled on the pressure on the Commission, calling on its President, Ursula von der Leyen, to resist lobbying from member states in favour of nuclear, gas, and biomass, so that it honours the commitments enshrined in the EU Green Deal. Greenpeace has said that the Commission's actions have shown "a shocking disregard for the climate crisis, nature, and the people of Europe", and that "polluting companies will be delighted to have the EU's seal of approval to attract cash and keep wrecking the planet by burning fossil gas and producing radioactive waste^{xxxii}."

Other environmental organisations, such as the World Wildlife Fund for Nature (WWF), the European Environmental Bureau, and Friends of the Earth have also denounced the Commission's plans as "greenwashing at its best." The WWF went as far as to say that the "proposal is a scientific disgrace that would damage the EU's sustainable finance agenda and the EU Green Deal" and called on all member states to oppose it^{xxxiii}.

The Institutional Investors Group on Climate Change (IIGCC), a coalition of 370 members managing US\$ 56.8 trillion and including some of the world's biggest asset managers such as BlackRock and Vanguard, have also warned the EU against including natural gas in the Climate DA, and have said that the revised emissions threshold of 270 gCO₂e/kWh versus the Commission's initial proposal of 100 gCO₂e/kWh^{xxxiv} would hinder "the capacity of our members to align their portfolios with net zero^{xxxv}."

Former Governor of the Bank of England, Mark Carney, who leads the Glasgow Financial Alliance for Net Zero has warned that the ruling on natural gas would cause hundreds of



financial institutions to "sacrifice their climate credibility^{xxxvi}", if they followed the TSC. Climate Action Network Europe (CAN Europe) has argued that natural gas is "incompatible" with the Paris Agreement's 1.5°C warming limit, and that nuclear power completely contravenes the DNSH principle. The European Consumer Organisation (BEUC) has also castigated the Commission, saying that publishing the draft DA on New Year's Eve "when nobody was watching" was a "highly irregular move", and "speaks volumes to the Commission's confidence in its own draft^{xxxvii}."

Not all assessments are negative, however. For example, FORATOM has welcomed the Commission's proposal for nuclear as a sustainable activity, saying that nuclear should not be treated as a transitional technology, "as it clearly contributes to climate mitigation objectives, and does not cause more harm than any other power-producing technology already considered taxonomy compliant." Eurogas, the association representing the European gas wholesale, retail and distribution sectors, also welcomed the inclusion of natural gas into the DA, underlining the vital role it sees natural gas playing in the ongoing coal phase-out, and called for "realistic starting points" in the emissions thresholds, proposing an initial limit of 350 gCO₂e/kWh for power plants (which could be met by a highly-efficient plant without CCUS), as opposed to the DA's 270 gCO₂e/kWh.

While pressure alone from civil society and other onlookers cannot alter the text of the act, widespread opposition, rejection, and calls for amendment by member countries in the EU Council of Ministers, or by MEPs in the European Parliament, can result in the Commission having to retract the draft for

revision. One proposed compromise has been to split the taxonomy to allow companies to report whether they include gas, nuclear or both under the rules, but nuclear groups have argued against this as unfairly discriminating on non-scientific grounds. It would also complicate the taxonomy and reduce the clarity of 'sustainable' claims.

As it currently stands, with the deadline for feedback from legislators having passed on January 21, the Commission is largely expected to pass the act in its current form, released on December 31, in February. The Commission is likely to opt for a path that gives all sides in the debate something to be satisfied with in order to prevent the emergence of political tension and minimise the threat of EU countries eyeing their own green taxonomies, which could be divergent from the Green Deal's climate goals, undermining the bloc's ambition of becoming the first in the world to achieve carbon neutrality.



A key advantage of the Climate DA, and the wider taxonomy, is the creation of a common definition for sustainable activities. According to SEB^{xxxviii}, the Swedish financial group, a common typology for sustainable activities can enable access to a broader range of capital (apart from public sources) at reduced transaction costs, which ultimately results in reduced risks for investment. Another advantage of the classification system is that it encourages the use of financial regulations, to reach common ground on climate-compatible preferences and long-term strategies.

Comparing different sustainability funds also becomes easier due to the establishment of common parameters. Several EU banks are working with the United Nations Environment Programme Finance Initiative (UNEPFI) and the European Banking Federation (EBF) to develop common guidelines on how to apply the taxonomy to their financial services.

Private and public sector actors can use the DA in a range of both equity and debt-based financial products, such as investment and mutual funds, insurance-based investment products, and private and occupational pensions, and in insurance and investment advice. Under the sustainable finance disclosure regulation, financial market participants will be required to provide specific disclosures for financial products that have sustainable investment objectives or promote environmental characteristics. Parties offering financial products in the EU will be required to make disclosures on:

- How and to what extent they have used the EU Taxonomy in determining the sustainability of the underlying investments;

- To what environmental objective(s) the investments contribute and;
- The proportion of underlying investments that are Taxonomy-aligned, expressed as a percentage of the investment, fund or portfolio.

However, the debate over the inclusions of the DA has also raised questions about its measurement thresholds, scope, and unintended consequences. Concerns have also been cited over the workability of the rules by financial actors, especially with respect to local and national contexts^{xxxix}, which ideally would encourage the classification system and thresholds to be more dynamic.



Oil & Gas Producers:

- Although the Climate DA, and by extension, the EU Taxonomy is not binding on non-EU financial market participants and companies, oil and gas investors outside of the EU may use the Taxonomy to gauge whether or not an investment contributes to an "environmental objective," such as climate change mitigation or adaptation.
- The emissions limits on gas-fired plants would require CCUS, and there are also requirements to be compatible with low-carbon gases. The taxonomy, in combination with other policies such as the rising price of carbon dioxide emissions under the EU's Emissions Trading System (ETS), will give further impetus to the deployment of these technologies.
- The EU framework can provide the most explicit guidance to investment funds and companies seeking clarity as to whether a technology, product, or service, in the oil and gas sector makes a substantial contribution to an environmental objective.
- This could be particularly pertinent for large gas producing countries such as the US, Russia, Australia, Qatar, and the UAE, and would force producers to align their strategies with the TSC outlined for fossil gas under the EU Taxonomy to attract foreign investment, as well as ensure "carbon-neutral" export to EU countries. However, it is promising for gas exporters in that it leaves the door open for gas power, and for replacement of coal-fired capacity in countries such as Poland.
- The impact of the DA and the wider taxonomy will transcend sustainable finance and could become the starting point for similar regulatory activities in other countries pursuing the energy transition. For example, Japan's Transition Finance Study has proposed the creation of a "transition taxonomy", and Canada and Malaysia are also developing their own classification systems.
- The Climate DA will reinforce a coalition of financial actors, energy businesses, and government institutions, thus making it harder to slow or reverse climate policies. It can create a legacy of long-lived low-carbon infrastructure, and could externalise carbon pricing, pushing EU trade partners to deepen their own climate action.



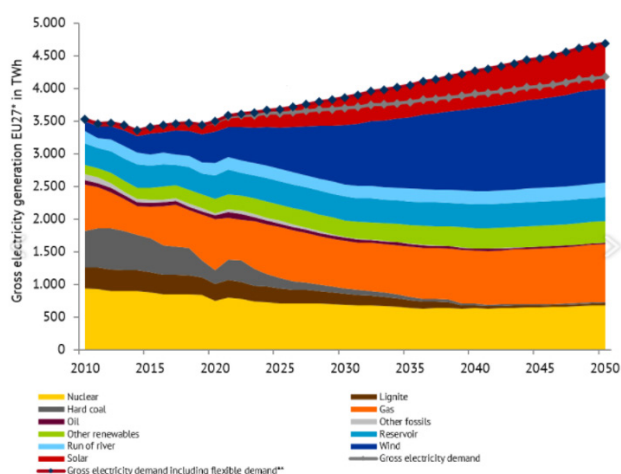
- If passed in its current state, the Climate DA would mark a significant milestone globally as being the first classification system to enlist TSCs for investment in sustainable energy activities, including fossil gas and nuclear.
- The DA can inform foreign oil and gas companies' decisions on future investments, particularly if they have EU trade links. These should be directed towards contributing substantially to the climate change mitigation and adaptation objective, while avoiding significant harm to other objectives such as biodiversity and water. Oil and gas companies in the Middle East can, for example prioritise investment in renewables or green hydrogen to reduce exposure to assets that risk being stranded and avoid imposition of carbon border tariffs.
- Oil and gas companies can utilise the framework of the DA to strengthen their own corporate governance structures. This can include aligning corporate strategies with the Paris Agreement goals by making them part of their articles of association; placing responsibility for their transition plans at the board level; and linking long-term remuneration to progress on their transition plans.

Biomass & Nuclear Producers:

- Biomass producers should not overlook the benefits of crucial medium-term technologies like biomass with carbon capture and storage, which could effectively enable higher storage of carbon than the amount released during power generation, thus making a critical contribution to net zero aspirations.
- Large biomass producers can combine Bioenergy with Carbon Capture and Storage (BECCS) systems with renewable energy deployments to enable carbon-negative power systems. These systems need not rely on wood biomass and can utilise alternate bioenergy feedstocks such as forest residues, municipal solid waste and switchgrass, alongside complementary wind and/or solar power.
- Biomass producers should also consider burning biomass as part of BECCS for its greater impact on GHG emissions than using biomass feedstocks for biofuels, which cannot be combined with capture technology.
- The classification of nuclear as a sustainable activity reduces the frequency of review of its TSC criteria, which could reduce the sense of urgency for new R&D into waste management practices, disposal options, sustainable cooling requirements, and recyclable potential. Nuclear energy producers will have to continue maintaining high standards of safety and modify and/or upgrade ageing reactors to next-generation ones to burn fuel more efficiently, in order to align with the EU Taxonomy and qualify for green eco labels and finance.

- The inclusion of nuclear will be supportive of lifetime extensions for existing plants, and potentially for construction of new reactors in nuclear-friendly countries such as France, Sweden, Finland and large parts of eastern Europe. This is particularly so given current high gas prices and concerns over supply security. In this sense, the taxonomy is supportive of EU energy and political security and keeps nuclear alive as a significant part of the European energy mix. As Figure 7 shows, one recent projection of EU electricity generation shows a continuing sustained role for both nuclear and gas, albeit without growth from current levels.

Figure 7 Development of EU's Power Generation Landscape, highlighting the role of nuclear and gas to 2050 (**Total gross electricity consumption)^{xl}



The EU taxonomy's Climate DA has the potential to influence significant change in the race towards a low-carbon future, even though disagreements over its inclusions continue. It can help signpost the way for private investment to contribute to climate goals at reduced transactional costs, reducing the risk of investment into crucial, medium-term carbon-removal technologies like CCUS, DAC, and/or bio-sequestration.

Increased clarity and transparency on environmental sustainability criteria will also save time and money for investors and issuers by eliminating the backlog of bureaucratic hodgepodge typically encountered in approving ESG and other sustainable investments. Non-EU market participants and small and medium-sized firms can also benefit by making their information publicly available to help raise finance at better conditions for their investments and business operations.

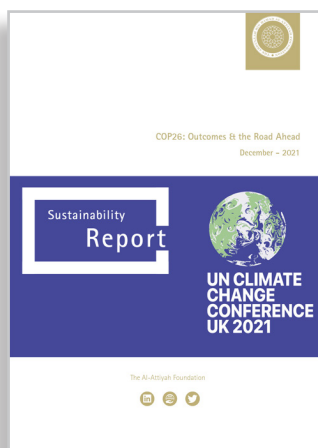
In this way, companies outside of the EU can attract investors by virtue of them being Taxonomy-aligned. This also speaks to the expectation of the EU Taxonomy serving as a basis for a global system of classification for sustainable investments in the near future.



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October – 2021

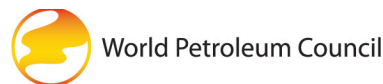
Strategies for Sustainable Production and Consumption of Natural Resources

An increasing number of countries have committed to reach net-zero carbon emissions, usually between 2050-70. Any remaining emissions of carbon dioxide or other greenhouse gases would be cancelled out by increased forestry or other methods to remove atmospheric CO₂.



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