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Monthly Analysis

EC's Volte-face on Natural Gas and Nuclear Power



Introduction

On February 2, 2022, the European Commission presented a Taxonomy Complementary Climate Delegated Act (1) on climate change mitigation and adaptation covering certain gas and nuclear activities. The College of Commissioners reached a political agreement on the text, which will be formally adopted once translations are available in all EU languages.

A great deal of private investment is needed for the EU to become climate neutral by 2050. The EU Taxonomy aims to guide private investment to activities that are needed to achieve climate neutrality. As the European Commission clarifies, “the Taxonomy classification does not determine whether a certain technology will or will not be part of Member States’ energy mixes. The objective is to step up the transition, by drawing on all possible solutions to help us reach our climate goals”. A position which is strongly questioned by investors and entrepreneurs since inclusion or not in EU’s Taxonomy predisposes banks and lending organisations and affects approval decisions.

Hence, the latest decision by the EC is of crucial importance since it enables natural gas and nuclear power projects to gain their lost respectability. Taking account of scientific advice and current technological progress, the European Commission considers that there is a role for private investment in gas and nuclear activities in the transition. The selected gas and nuclear activities are in line with the EU’s climate and environmental objectives and will facilitate the acceleration of the shift from more polluting activities, such as coal generation, to a climate-neutral future, mainly based on renewable energy sources.



EU Taxonomy

What is the EU’s Sustainable Finance Taxonomy?

The EU taxonomy is a complex system to classify which parts of the economy can be marketed as sustainable investments. It includes a long list of economic activities, plus detailed environmental criteria that each must meet to earn a green label.

Rules for most sectors came into effect in February 2022, covering investments including steel plants, electric cars and building renovations. The rules for gas and nuclear energy, however, have been long delayed amid intense lobbying from governments who disagree on whether these fuels really help fight climate change. The European Commission proposed a green label for some gas and nuclear investments on February 2, 2022 (see below). It would apply from 2023, unless a majority of European Parliament, or 20 of the EU’s 27 countries, veto it. (2)

Table 1: About the EU Taxonomy

 THE TAXONOMY IS:	 THE TAXONOMY IS NOT:
<ul style="list-style-type: none"> ▪ a transparency tool based on a classification system translating the EU's climate and environmental objectives into criteria for specific economic activities for private investment purposes 	<ul style="list-style-type: none"> ▪ a mandatory list of economic activities for investors to invest in ▪ a mandatory requirement for public investment ▪ a mandatory requirement on environmental performance for companies or for financial products

Source: European Commission

What is For?

The taxonomy does not ban investments in activities not labelled “green”, but it limits which ones companies and investors can claim are climate-friendly. The EU’s goal to eliminate its net emissions by 2050 will require huge investments, most of them through private funding. The taxonomy aims to make truly green activities more visible and attractive to investors. With a myriad “eco-friendly” investment products already in the market, the rules aim to stamp out greenwashing, where organisations exaggerate their environmental credentials.

Who Does It Apply to?

Providers of financial products, including pension providers, in the EU must disclose which investments comply with the taxonomy’s climate criteria. For each investment, fund or portfolio, they must disclose what share of underlying investments comply with the rules.

Large companies and listed firms must also disclose what share of their turnover and capital expenditure complies. That means polluting companies can get recognition for making green investments. For example, if an oil company invested in a wind farm, it could label that expenditure as green.

What Makes A “Green” Investment?

The rules classify three types of green investments. First, those that substantially contribute to green goals - for example, wind farms or photovoltaic plants. Second, those that enable other green activities -- for example, facilities that can store electricity or hydrogen for use at a later time. Third, transitional activities that cannot yet be made fully sustainable, but generate emissions below industry average and do not lock in polluting assets or crowd out greener alternatives. An example of that would be a cement plant with emissions below 0.72 tonnes of CO₂ equivalent per tonne of grey clinker produced. Gas and nuclear power plants are now classed as transitional activities.

Why Has It Taken So Long?

The taxonomy rules have faced more than a year of intense lobbying from EU governments and industries. EU policymakers had hoped to finish the climate rules in 2020. In the end, the EU published a first set of rules in April 2021 for sectors including transport and buildings, and delayed those for the power sector such as gas and nuclear criteria until February 2022.

The criteria are based on recommendations from expert advisers, designed to comply with science-based goals to fight climate change. But some advisers say scientific criteria were sidelined in the EU’s political fighting over the rules, and their recommendations have been overlooked.

Gas and nuclear are particularly sensitive. The Commission’s original proposal for the fuels, published in November 2020, excluded gas plants unless they used emissions-capturing technology. That faced a backlash from countries including Poland and Bulgaria, who say gas investments are needed to quit more-polluting coal. Others, such as Denmark and Luxembourg, say it is not credible to label gas, a fossil fuel, as green. The final rules class gas plants as sustainable investments, if they meet certain criteria including a CO₂ emissions limit.

Is That It?

To be deemed green, an activity must substantially contribute to one of six environmental objectives (see Figure) and not harm the other five. The rules published so far cover two aims - fighting climate change, and adapting to its impacts. Criteria for the others will follow later this year.

Figure: The EU Taxonomy Encompasses a Standard Set of Definitions for Sustainable Activities Centered Around Six Environmental Objectives



Source: European Commission

The EU has also delayed until later this year a contentious decision on whether to label agriculture, potentially including intensive farming, as climate-friendly. Brussels is also considering expanding the system. One option is a list of polluting activities, to force providers of financial products to flag “unsustainable” investments.

Latest Developments on EU Taxonomy



Investments in some gas and nuclear power plants would be labelled as sustainable under rules proposed by the European Commission on February 2, a plan that has split countries and investors, and which some lawmakers will attempt to block. Brussels has taken more than a year to decide if gas and nuclear energy should count as green investments in the EU’s taxonomy, a rulebook to guide investments to help raise the massive amounts of private capital needed to meet EU climate change targets. (3)

In final rules, gas-fired power plants would be labelled green this decade if they met an emissions’ limit of 270g of CO₂ equivalent per kWh, or have annual emissions below 550kg CO₂e per kW over 20 years. That could include gas-fired power plants with relatively high CO₂ emissions today, provided they switch to low-carbon gas or reduce their running hours in later years. However, industry representatives say that such plants with minimum emissions do not yet exist, especially in SE Europe.

Gas plants must also switch to run on low-carbon gases by 2035. A requirement in a previous draft, for plants to start switching in 2026, was dropped. New nuclear plants must receive construction permits before 2045 to get a green investment label, and be located in a country with a plan and funds to safely dispose of radioactive waste by 2050. The green labelling of nuclear and gas has faced opposition on multiple fronts, from its expert advisers on the rules, some investors and countries - reflecting broader divisions among governments over the path to meet the EU’s goal of net zero emissions by 2050.

Austria and Luxembourg have threatened legal action if nuclear gets a green label, citing concerns of accidents and nuclear waste. Pro-nuclear states, including France, say CO₂-free nuclear energy is crucial to meeting climate targets. Gas is similarly divisive, with Poland and Bulgaria among the states that say gas investments should be encouraged to phase out more-polluting coal. Denmark, Ireland and others say labelling the fossil fuel as green would undermine the EU’s leadership in fighting climate change. If approved, the gas and nuclear rules would apply from January 2023, when providers of financial products must disclose what share of their investments comply.

Table 2: Gas- and nuclear-related activities included in the EU Taxonomy

 WHICH GAS-RELATED ACTIVITIES ARE INCLUDED?	 WHICH NUCLEAR-RELATED ACTIVITIES ARE INCLUDED?
<ul style="list-style-type: none"> ✓ Electricity generation from fossil gaseous fuels ✓ High-efficiency co-generation of heat/cool and power from fossil gaseous fuels ✓ Production of heat/cool from fossil gaseous fuels in an efficient district heating and cooling system <p><i>Each gas-related activity must meet specific emission thresholds, should replace an existing coal facility which cannot be replaced by renewables, should achieve certain targets in terms of emissions reductions, and fully switch to renewable or low-carbon gases by 2035.</i></p>	<ul style="list-style-type: none"> ✓ Research, development and deployment of advanced technologies ("Generation IV") that minimise waste and improve safety standards ✓ New nuclear plant projects with existing technologies for energy generation of electricity or heat ("Generation III+") [until 2045] ✓ Upgrades and modifications of existing nuclear plants for lifetime extension purposes [until 2040] <p><i>Comprehensive nuclear safety and waste management requirements apply for all nuclear activities to qualify, in full compliance with all relevant regulatory requirements and with the best technology criterion, and monitored by the Commission. Additional and stricter requirements have been foreseen on waste disposal, funding and decommissioning planning.</i></p>

Source: European Commission

Intense Opposition

As already mentioned, the policy has been mired in lobbying from governments for more than a year and EU countries disagree on which fuels are truly sustainable. Natural gas emits roughly half the CO₂ emissions of coal when burned in power plants, but gas infrastructure is also associated with leaks of methane, a potent planet-warming gas. The EU’s advisers had recommended that gas plants not be labelled as green investments unless they met a lower 100g CO₂e/kWh emissions limit, based on the deep emissions cuts scientists say are needed to avoid disastrous climate change.

Nuclear power produces very low CO₂ emissions but the Commission sought expert advice this year on whether the fuel should be deemed green given the potential environmental impact of radioactive waste disposal. Some environmental campaigners and Green EU lawmakers criticised the leaked proposal on gas and nuclear. “By including them... the Commission risks jeopardising the credibility of the EU's role as a leading marketplace for sustainable finance,” Belgian MEP and the Co-Leader of the Greens/EFA Group in the European Parliament Philippe Lamberts said. Austria opposes nuclear power, alongside countries including Germany and Luxembourg. EU states including the Czech Republic, Finland and France, which gets

around 70% of its power from the fuel, see nuclear as crucial to phasing out CO₂-emitting coal fuel power, Reuters reported.

The European Commission is facing a furious backlash over plans to allow gas and nuclear to be labelled as “green” investments, as Germany’s economy minister led the charge against “greenwashing”. The EU executive was accused of trying to bury the proposals by releasing long-delayed technical rules on its green investment guidebook to diplomats on New Year’s Eve, hours before a deadline expired.

Robert Habeck, who became recently the economy and climate action minister in Germany as part of a coalition of Social Democrats, business-friendly Free Democrats (FDP) and Greens, said the plans “water down the good label for sustainability”. Habeck also told that it was “questionable whether this greenwashing will even find acceptance in the financial market”. (4)

Austria’s government repeated its threat to sue the European Commission if the plans go ahead. Leonore Gewessler, the country’s climate action minister, said neither gas nor nuclear belonged in the taxonomy “because they are harmful to the climate and the environment and destroy the future of our children”. She added: “We will examine the current draft carefully and have already commissioned a legal opinion on nuclear power in the taxonomy. If these plans are implemented in this way, we will sue.” She also accused the Commission of “a night and fog operation” in the timing of the publication, a charge echoed by Luxembourg’s energy minister, Claude Turmes, who described the draft as a provocation.

France and other pro-nuclear states, such as the Czech Republic and Hungary, support the inclusion of nuclear, while many governments in central, eastern and southern Europe lobbied for gas to be included as a “bridge” fuel.

Germany’s finance minister, Christian Lindner of the FDP, recently mentioned that Germany needed gas-fired power plants as a transition technology because it was foregoing coal and nuclear power. “I am grateful that arguments were apparently taken up by the Commission,” he said. He was speaking after Germany closed three of its six nuclear power plants on December 31, to meet a pledge of phasing out the technology by the end of 2022. France’s European affairs minister, Clément Beaune, said the proposal was good on a technical level and the EU could not reach its goal of carbon neutrality by 2050 without nuclear power.

NGOs accused the Commission of seeking to evade scrutiny. “That particular consultation lasted only 8 working days, while most Brussels consultations last four weeks”, they note. “The European Commission couldn’t have tried harder to bury this proposal. If the EU is confident in this proposal, it must hold a public consultation”, they added.

The Case of SE Europe

Natural gas appears to serve the needs of most SEE countries, which use coal and/or lignite as a basic source for electricity generation and which are trying to slash emissions by 2030. Substituting solid fuels with gas is undoubtedly a fast-track solution. But gas is not emissions-free and there are growing concerns that leaks of potent planet-warming methane from gas infrastructure could cancel out the benefits of switching to gas from coal. This is obviously not an immediate concern for SEE countries and such philosophical questions should occupy them at a later stage, once they manage to phase out solid fuel plants.

Seen in a broader context, the switch from coal to gas for power generation offers the single most important stop to halve power generation's emissions and this constitutes a bold move towards GHG emission reduction. This is particularly important for SE Europe, where coal and lignite still have dominant role in power generation and gas appears as the only quick way to reduce substantially GHG emissions.

Almost all governments in SE Europe consider gas as the fastest and most efficient way for decarbonization. Already we witness much increased gas use in the region. Hence, there appears to be a strong inconsistency in the region between pursued EU policy targets with regard to gas use – with EU arms such as EIB and EBRD already implementing negative investment decisions towards new gas infrastructure projects – and locally applied energy policies, which very much favor further gas use. Fortunately, the EU decided an energy strategy correction with the inclusion of natural gas and nuclear in its taxonomy as well as associated changes in its medium- and long-term action plans.

In SE Europe, there are five countries (Bulgaria, Hungary, Romania, Slovenia and Croatia) that currently operate **nuclear** power plants (NPPs), while Turkey is expected to build no fewer than 3 NPPs over the next decade. Nuclear power, although it covered only 4.0% of the gross inland consumption in SE Europe in 2019 and 9.0% of its electricity needs, remains a viable option for sustainable power generation because it offers important baseload capacity and supports the EU's decarbonization policies. The zero emissions from operating NPPs contribute to the region's efforts to curtail GHG emissions. This means that nuclear energy has an important role to play in the SE European energy and electricity mix over the next decades.

Following the tragic accident at Fukushima's NPP in March 2011 and operational security reviews, which have since been conducted by the SEE countries that host NPPs, the use of nuclear power in the region is unlikely to diminish over the next decade. Neither Bulgaria nor Romania nor Hungary are likely to shut down the Cernavoda, Kozloduy 5-6 and Paks 1, 2, 3, and 4 power plants respectively on account of safety concerns.

The same applies for Croatia and Slovenia, which, between them, share the Krško NPP. Both governments are very well aware of the fact that a decrease in the participation of nuclear power in their electricity

generated portfolio cannot be easily replaced by renewables or be compensated by an increase of coal generated electricity due to the equally burdensome environmental costs. If they are to reduce the participation of nuclear power in their electricity mix, both states have as an alternative the increase of imported gas, magnifying their already high energy dependence.

Theoretically, the participation of nuclear generation in the regional electricity mix is set to diminish significantly as the rising demand of Bulgaria and Romania will be covered by increased volumes of natural gas and, to a lesser extent, renewables. However, this might change as both Romania and Turkey are definitely going ahead with plans to increase their nuclear installed capacity, which will result in two major nuclear power generation complexes with 6 GW of new installed capacity to be operated by 2030.

In the case of Bulgaria (Units 5 and 6 and the planned Unit 7 of Kozloduy NPP) and Turkey (the Akkuyu site), Russia might have a role to play. However, it should be recalled that strategic investments have two substantial characteristics in the energy sector. They need many years to be implemented but they last for decades. Such long-term planning should not be subverted by short-term political priorities against regional, economic and safety considerations.

In this sense, the Fukushima anti-nuclear rationale does not appear to hold in the case of SE Europe. For countries already involved in nuclear power development (i.e. Bulgaria, Romania, Hungary, Croatia/Slovenia, Turkey), the road ahead is unlikely to be obstructed by revised risk assessments. Developing further nuclear power generation in the region will be a real challenge as not all countries favour this option. Detailed studies need to be undertaken to identify the real potential pitfalls of nuclear energy and to assess the compatibility of nuclear and RES power in the context of decarbonization.

Discussion

The countries of the SE European region look upon gas as their best hope - in addition to renewables - for a quick decarbonization and phasing out of the really polluting, in the context of climate change, solid fuels. Without the base load and quick response provided by natural gas in power generation, it is useless to talk about greater RES penetration in SE Europe's electricity grids. We have now reached a situation where it is most urgent for the European Commission, governments and industry to sit around the table and work out a new strategy to include natural gas and nuclear as part of the solution towards achieving the new emission goals of 2030, and not exclude them. A strategy, which will obviously include stringent emission standards and much stricter environmental and health safety conditions for natural gas and nuclear power generation as well as provision for the introduction of hydrogen in gas grids in the near future.

On June 8, 2021, IENE organized an online workshop on “Gas Markets in Transition in SE Europe” and the main conclusion was that without natural gas EU’s highly ambitious 2030 and 2050 goals cannot be really achieved in SE Europe (5). The general consensus of the workshop was that natural gas is a transitional fuel and we have to utilise it as such in order to reduce GHG emissions and finally succeed (if ever) a zero-carbon energy mix.

In addition, many countries in SE Europe have recognized nuclear energy as an element in achieving their climate goals (6). Along with Romania and eight other EU member states, Bulgaria requested in October 2021 the European Commission to include nuclear power plants in its green taxonomy and label them as low-carbon technology.

With the European Commission’s Taxonomy Complementary Climate Delegated Act released in February 2022, the task at hand is to ensure that criteria and thresholds broaden the scope of technological climate solutions. The EU taxonomy has the potential to be a game-changer, but it must adopt a holistic approach, examining all possible solutions to meet climate objectives, moving beyond labels such as a “brown list” that appear to dictate what are “good” and “bad” technologies.

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