Case #10. Can the Nuclear Power Industry Overcomes Its Adversaries?

Nuclear Power in the European Union

- The EU depends on nuclear power for one-quarter of its electricity, and a higher proportion of base-load power. Nuclear provides half of low-carbon electricity.
- Very different energy policies pertain across the continent and even within the EU, but attention is now being given to an EU Energy Union.
- A substantial degree of transmission interconnection exists in western Europe, but much more investment is needed.
- Electricity markets are a key to the future of reliable generation capacity, including nuclear.
- EU states split on classifying nuclear energy as 'green'

"It's too risky, too slow and too expensive," Germany says — while other EU members have pushed for the bloc to classify nuclear power as eco-friendly for investors.



Germany is set to complete is nuclear phaseout by 2022

This Fall, Germany, Luxembourg, Portugal, Denmark and Austria spoke out against the classification of nuclear energy as a climate-friendly source of power.

The five countries issued a statement on the sidelines of the UN climate summit in Glasgow, COP26. It came as the European Commission was working on a so-called EU taxonomy, in which it lists what the bloc considers as "environmentally sustainable economic activities."

Some other EU countries, led by France, were seeking to add modern forms of nuclear energy to that list. France, in particular, voiced plans to use nuclear energy as part of its efforts to phase out fossil fuel plants that are significant sources of greenhouse gas emissions.

"The current decade will be crucial for our common path toward climate neutrality and an economic system that respects the limits of our planet," Germany, Luxembourg, Portugal, Denmark and Austria said in their statement.

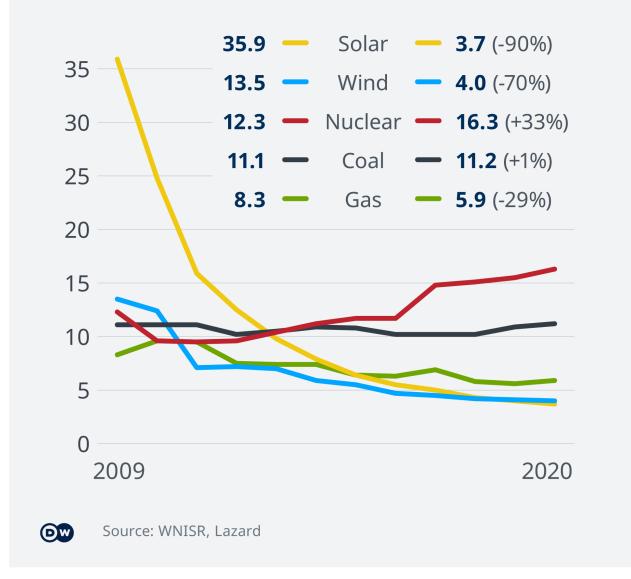
Therefore, it is crucial to have an EU taxonomy that considers the sustainability of a form of energy "throughout its life cycle," the signatories added, referring to the radioactive waste generated by nuclear power use.

They also warned that the classification could risk diverting EU funds from renewable energies such as wind and solar power.

"Nuclear power cannot be a solution in the climate crisis," said German Environment Minister Svenja Schulze. "It is too risky, too slow and too expensive for the crucial decade in the fight against climate change," she added.

Worldwide energy prices over the last decade

Generation costs in cents (US\$)



In the past decade, reneweable energy prices have significantly dropped, compared to nuclear energy

Austria's environment minister, Leonore Gewessler, also backed Germany's stance, saying, "Just because something is not quite so bad doesn't mean it's good."

What about the countries supporting nuclear energy?

France, Poland, Hungary and the Czech Republic have called on the **European Commission** to classify nuclear power plants and nuclear waste storage facilities as "green." They also want the taxonomy to include natural gas-fired power plants.

This past fall, France announced that it would start building its first new nuclear reactors in decades to meet its promises to reduce carbon emissions. "If we want to pay for our energy at reasonable rates and not depend on foreign countries, we must both continue to save energy and invest in the production of carbon-free energy on our soil," said French President Emmanuel Macron.

Compiled by the **European Commission**, the classification system is a list of "environmentally sustainable economic activities." The Commission said the list 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."

If the **European Commission** in Brussels classifies nuclear power as "sustainable" in the legal text, it will count as a direct recommendation to financial markets to invest in nuclear plants.

In April 2020, the European Commission's scientific body, the **Joint Research Centre**, released a report that found that nuclear power is a safe, low-carbon energy source comparable to wind and hydropower in terms of its contribution to climate change.

Still, many environmentalists oppose nuclear power, citing the risk of nuclear meltdowns and the difficulty of properly disposing of nuclear waste.

Foratom, the Voice of the Nuclear Energy Industry in Europe

FORATOM is the Brussels-based trade association for the nuclear energy industry in Europe. FORATOM acts as the voice of the European nuclear industry in energy policy discussions with EU Institutions and other key stakeholders. The membership of FORATOM is made up of 15 national nuclear associations representing nearly 3,000 firms.

FORATOM supports the European Nuclear Society (ENS), a Learned Society that brings nuclear societies and professionals in Europe together, allowing them to exchange knowledge and experience about nuclear science and technology. ENS promotes the development of nuclear science and technology and the understanding of peaceful nuclear applications. Founded in 1975, ENS is the largest society for nuclear science, research and industry in Europe.

The Society's membership includes national nuclear societies from 20 countries in Europe plus Israel. Another crucial component of that membership are its Corporate Members, representing key stakeholders which are partners for nuclear technology and research in Europe.

ENS connects its members with the principle aim of fostering and coordinating their activities on an international level. In relation to this, the society encourages the networking of scientists and

engineers between different countries and organises meetings devoted to scientific and technical matters and to the communication on nuclear applications.

ENS comprises more than 12,000 professionals from the academic world, research centres, industry and authorities: people who voluntary commit themselves to generate ideas and to take up responsibilities, who have the enthusiasm to get things done and the curiosity to learn from colleagues and from people outside the network

One major initiative of ENS is called, "Nuclear for Climate." It circulates a position paper entitled, "Net Zero Needs Nuclear."

The Russian Invasion of the Ukraine and the Future of Nuclear Power

On February 24, Russia invaded the Ukraine. On February 27, Germany signaled a U-turn in key energy policies, floating the possibility of extending the life-spans of coal and even nuclear plants to cut dependency on Russian gas, part of a broad political rethink following Russia's invasion of Ukraine.

Europe's top economy has been under pressure from other Western nations to become less dependent on Russian gas, but its plans to phase out coal-fired power plants by 2030 and to shut its nuclear power plants by end-2022 had left it with few options.

In a landmark speech, Chancellor Olaf Scholz spelled out a more radical path to ensure Germany will be able to meet rising energy supply and diversify away from Russian gas, which accounts for half of Germany's energy needs.

"The events of the past few days have shown us that responsible, forward-looking energy policy is decisive not only for our economy and the environment. It is also decisive for our security," Scholz told lawmakers in a special Bundestag session called to address the Ukraine crisis.

"We must change course to overcome our dependence on imports from individual energy suppliers," he said. This will include building two liquefied natural gas (LNG) terminals, one in Brunsbuettel and one in Wilhelmshaven, and raising its natural gas reserves.

Earlier in the week, Germany halted the \$11 billion Nord Stream 2 Baltic Sea gas pipeline project, Europe's most divisive energy project after Russia formally recognised two breakaway regions in eastern Ukraine. Nord Stream 2 is now considered dead by most analysts.

As of the date of this case, the price of natural gas in Europe has almost doubled from pre-war levels.

ACTORS IN THE CASE

FORATOM

EUROPEAN NUCLEAR SOCIETY

EUROPEAN COMMISSSION (EC)

EC'S Joint Research Centre

EUROPEAN PARLIAMENT

4 PRO-NUCLEAR COUNTRIES

5 ANTI-NUCLEAR COUNTRIES

Antinuclear environmental NGOs

NOTE: YOU MAY CHOOSE TO REFERENCE CURRENT EVENTS AS THEY ARE UNFOLDING IN UKRAINE AND THE INTERNATIONAL ENVIRONMENT IN ANSWERING THE QUESTIONS BELOW.

CASE QUESTIONS:

- 1. (1.5) If you were the FORATOM, what would be the main issues and actors you would monitor as you seek to influence the vote of the European Parliament on the proposed European Commission Green Deal Taxonomy approaches? (maximum words: 80)
- 2. (3.5) AS FORATOM, what is your most likely scenario on how events will unfold (<u>without active intervention on your part</u>) between now and the vote of the European Parliament and individual EU countries on the proposed European Commission Green Deal Taxonomy?
- 3. (1.5) What public policy model do you think will best describe how the European Commission decided on its Green Deal Taxonomy? Explain your choice (maximum words: 30)
- 4. (1.5) What public policy model do you think will best describe how (a) the European Parliament will decide on the proposed European Commission Green Deal Taxonomy? Explain your choice (maximum words: 40)
- 5. (2) What public policy models do you think will best describe how the (a) Germany and (b) Czech Republic will decide on the proposed European Commission Green Deal Taxonomy? Explain your choice (maximum words: 50)
- 6. (5) Given that scenario and public policy models you cited, as FORATOM, what will be your strategy going forward to maximize the possibility of the proposed European Commission Green Deal Taxonomy that includes nuclear power will be approved? (maximum words: 150)

Appendix A

In February 2022, the European Commission labeled nuclear and gas as sustainable. Anti-nuclear power critics immediately called the step "greenwashing" and say it could threaten the bloc's bid to become climate-neutral by 2050.



Nuclear energy is criticized by environmentalists, among other reasons due to very large water use

European Commission chief Ursula von der Leyen cannot repeat often enough how close stepping up climate action is to her heart.

She described the European Green Deal as "Europe's man on the moon moment." She has called climate neutrality "our European destiny." And she solemnly proclaimed that no effort will be spared for Europe to become the world's first continent with <u>net-zero emissions</u>.

But as often, the devil is in the detail. The big question is how exactly the European Union intends to achieve its goals.



European Commission President Ursula von der Leyen paints herself as a friend of the climate

The Green Deal taxonomy is "a classification system, establishing a list of environmentally sustainable economic activities," according to the European Commission. This taxonomy could be described as the EU's green investment rulebook, intended to serve the goal of allowing the continent to become climate neutral by 2050.

In its proposal, the EU Commission stated that certain strings remained attached. For example, gas plants could only be considered green if the facility switched to low-carbon or renewable gases, such as biomass or hydrogen produced with renewable energy, by 2035.

<u>Nuclear power plants</u> would be deemed green if the sites can manage to <u>safely dispose of</u> <u>radioactive waste</u>. So far, worldwide, no permanent <u>disposal site</u>, has gone into operation though.

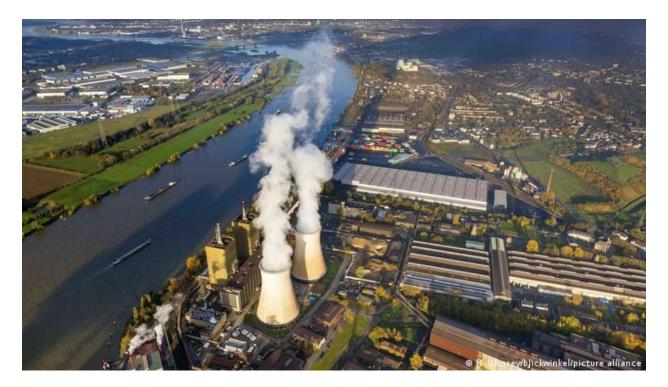
At a news conference in Brussels, Mairead McGuinness, the EU commissioner responsible for financial services, said her institution was not guilty of "greenwashing," as gas and nuclear were labeled as "transitional" energy sources in the taxonomy. "Our credibility is still strong," McGuinness added.



Natural gas can be liquified, allowing it to be shipped relatively easily via tanker

Environmental organizations most certainly see this critically, saying the proposal could jeopardize the EU's aim to reach climate neutrality by 2050. The **Climate Action Network Europe** wrote that the EU Commission "sacrifices the scientific integrity of the taxonomy on the altar of fossil gas and nuclear lobbies" and failed to "reorient financial flows towards genuinely climate-positive investments."

And it's not just climate activists: Also a group of **experts critical of nuclear power** advising the EU on the matter had announced how they are worried about "the environmental impacts that may result," for example the consequences of a nuclear accident. Building new nuclear plants would also take too long to contribute to the 2050 neutrality goals, they believe.



Germany has opted to use gas as a bridge away from more polluting fossil fuels and toward zerocarbon energy sources

Germany pro-gas, France pro-nuclear

France wants to invest in new nuclear power plants, particularly in new generation, so-called <u>small modular reactors</u>.

Energy expert Nicolas Mazzucchi, who works for the Foundation of Strategic Research think tank in Paris, supports the French government's plans. "These reactors can be produced on an industrial level at factories, as automated as possible, to make it cheaper and guarantee quality," Mazzucchi told DW.

Germany, however, has argued against nuclear power — also unsurprisingly, as it decided to shut down all its nuclear power plants by the end of 2022 following the Fukushima disaster in 2011. Denmark, Austria and Luxembourg share this view, highlighting the controversial point of where to safely store highly radioactive nuclear waste.

France: Is nuclear energy green?

In a letter to the European Commission, Germany's current governing coalition has clearly said that gas is needed as an interim energy source until enough renewables are available.

To avoid a clash with its EU neighbor France, German Chancellor Olaf Scholz downplayed the importance of the taxonomy at an EU leaders' meeting last year, saying the debate was "completely overrated."

Georg Zachmann, a senior fellow at the Brussels-based **Bruegel think tank**, has been following the EU's energy and climate policy for years. He said that, in the end, he was relatively sure no decision would be taken by the **European Commission** in Brussels to prevent France, for example, from investing in and building new nuclear reactors.

The **European Commission** is keen to have the taxonomy viewed as the "gold standard" for guiding private investment toward measures that help fight climate change.

But in Zachmann's view, no investor would be interested in nuclear or gas if the EU "invested political capital" in getting member states to substantially expand their renewable energy production. "We know that onshore wind and solar power are not very costly in most European countries," he pointed out.

What happens next?

The **European Commission's** taxonomy proposal will now be reviewed by the 27 EU member states and by the European Parliament.

Because the **European Commission** opted for a "*delegated act*," a type of fast-track legislative procedure, only a total of 20 EU countries, or a majority of EU lawmakers at the European Parliament, would be able to reject it.

While EU states are not likely to turn down the taxonomy, a win in the **European Parliament** is not yet certain. Parliamentarians from across the political spectrum have expressed anger over the inclusion of fossil gas and nuclear power in the EU taxonomy.

Green lawmaker Rasmus Andresen said he was "disappointed" by the proposal, adding that the Green parliamentary fraction would fight hard to gather a majority against the taxonomy.

German Social Democrat Joachim Schuster told DW he thought it possible that the European Parliament could vote against the act.

And even if lawmakers were to support it, there was another threat looming: Austria and Luxembourg threatened to sue the European Commission over the taxonomy rules.