



*Employers entrusted to deliver
Sustainability Growth Innovation*

Position Paper

SGI Europe Position on a delegated act on nuclear and natural gas

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Representing employers and enterprises providing public services and services of general interest, SGI Europe is committed to the success of the European Green Deal. Energy is one of SGI Europe's key sectors, with thousands of companies and local stakeholders representing all technologies and the key factor for the success of the Green Deal.

SGI Europe underlines the importance of establishing a balanced and science-based EU Sustainable Finance Mechanism and welcomes the introduction of a Delegated Act on Nuclear and Gas.

This contributes to a solid and technology-neutral sustainable finance framework to steer investments into cost-effective decarbonisation efforts and fight against "greenwashing".

SGI Europe fully commits to supporting the Commission's efforts to build this framework under the following principles: technological neutrality, equal treatment and a science-based approach. The approach to focus on the contribution to the environmental objective and on whether an activity implies the Do No Significant Harm (DNSH) to the other environmental objectives is appropriate.

The first delegated act adopted by the European Commission in June 2021 is moving in the right direction encompassing several energy sectors such as networks, renewables including hydropower and bioenergy. It now needs to be complemented by this delegated act. The European Commission has announced that these activities will be addressed via a complementary DA, expected by the end of the year. During the European Council meeting at the end of October, the EU Commission President **announced the publication of the complementary DA**, emphasising that **nuclear energy is needed as a stable source and natural gas for the transition**. Moreover, as all relevant studies show, adjustable power plants play a central role in the massive expansion of renewable energy sources and their integration into the energy system.

Nuclear energy

From SGI Europe's point of view, when retained in energy mixes, nuclear is naturally eligible to the taxonomy scope as demonstrated by the spring 2021 JRC report,

Nuclear will be part of the solution to decarbonise the EU economy by 2050 and is internationally recognised as a crucial asset in the fight against climate change. IPCC special report¹ on how to limit the global temperature rise to 1.5°C clearly states, amongst others, that nuclear will be needed to achieve this goal. The recent report from the United Nations Economic Commission for Europe on Life Cycle Assessment of Electricity Generation Options² presents an assessment of various utility-scale technologies for electricity generation, regarding their potential environmental impacts on human health, ecosystems, and their resource requirements. It states that nuclear power is the least-emitting clean energy technology and has the lowest land use and mineral and metal requirements.

Nuclear accounts for around a quarter (25 %) of power production in the EU today and almost 50% of the low carbon generation. This role of nuclear to contribute to the decarbonisation of the power sector is also recognised in the IEA report 'Nuclear power in a clean-energy system'³. The European Commission Communication "A Clean Planet for all – A European strategic long-term vision for a prosperous, modern competitive and climate neutral economy"⁴ sets out "four main routes to a more sustainable, competitive and secure energy system in 2050: energy efficiency, renewable energy, nuclear energy and carbon capture and storage" and foresees that nuclear share in 2050 will remain fairly similar across all scenarios (12-15%, compared to 18% in the 2030 projection and 26% in 2015). Nuclear installed capacity in 2050 is only slightly lower than the current level (99-121 GW versus 122 GW in 2015) and, in all cases, higher than both the 2030 projection (97 GW) and the Baseline in 2050 (87 GW).

Baseload low-carbon generation capacity such as nuclear has a significant role to play in delivering the most efficient and cost-effective solution. With high availability factors, nuclear power plants produce large amounts of baseload power, ensuring grid stability, reliability and resilience – key for the future EU energy system. Low-carbon, nuclear power is closely regulated in line with International Scientific Standards¹⁹ and also has several other environmental benefits:

- across the whole fuel cycle, nuclear electricity production emits very limited GHG and other air pollutants, compared to other sources of energy;
- the land required to produce nuclear electricity is significantly lower than other energy sources⁵;
- nuclear-generated electricity produces less waste than many other sources, and that waste is handled in a responsible manner under the Euratom Treaty.

Nuclear energy is the major instrument for decarbonisation across a number of EU Member States – 14 Member States currently generate electricity from nuclear reactors. Indeed for many, particularly Central and Eastern European countries, due to geographical location and other conditions, it is the only reliable low carbon energy source of electricity (and heat). Without continued operation and further development of nuclear energy,

¹ <https://www.ipcc.ch/sr15/>

² <https://unece.org/sites/default/files/2021-10/LCA-2.pdf>

³ <https://webstore.iea.org/nuclear-power-in-a-clean-energy-system>

⁴ https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_analysis_in_support_en_0.pdf (p.76-77)

⁵ <https://www.nei.org/news/2015/land-needs-for-wind-solar-dwarf-nuclear-plants>

it will be challenging for these member states, and certainly more expensive and less efficient, to meet the EU and international emission decarbonisation ambitions.

The importance of nuclear to the energy transition is certain. The March 2020 TEG report recognises that "*nuclear energy* generation has near to zero greenhouse gas emissions in the energy generation phase and can be a contribution to a climate mitigation objectives". The March 2021 JRC Report comes to the same conclusion. Regarding substantial contribution and DNSH principle, it states that "The analyses did not reveal any science-based evidence that nuclear energy does more harm to human health or to the environment than other electricity production technologies already included in the Taxonomy as activities supporting climate change mitigation."

SGI Europe therefore believes that, **based upon available evidence today, nuclear has to be included within the taxonomy scope, while of course being subject to the appropriate DNSH criteria. In this regard, the JRC has proposed a set of science-based criteria that should form the core of the delegated act. We expect the Commission to act vigorously and appropriately to present a delegated act that will effectively include nuclear with criteria that should not make it impossible by requirements that are not achievable in the foreseeable future, even for state-of-the-art plants.**

Natural Gas

From SGI Europe's point of view, the usage of natural gas in highly efficient electricity and heat generation technologies is necessary to ensure the security of supply in several member states, at least during a clearly defined transition phase of the energy system, combined with a binding perspective of H2 readiness.

For Europe, the question of a **reliable power supply** is existential. Particularly in the countries that have decided on an extremely ambitious project of a parallel phase-out of nuclear energy and coal-fired power generation, it is of utmost importance to ensure security of supply for industrial centres and citizens.

Combined heat and power (CHP) plants that simultaneously generate highly efficient electricity and heat are necessary as a bridge technology and vehicle for decarbonisation to quickly leverage the existing CO₂ savings potential and thus protect the climate. In this context, they are essential to ensure the secure supply of electricity and heat as well as the social compatibility of the heat transition in the energy transition process. However, with the conversion to hydrogen to be carried out in the future and committed planning for this transformation, gas-fired (heating) power plants will then also assume an important function in the long term. As long as hydrogen is not yet available in the required volumes in the next few years, investments in highly efficient natural gas-fired power plants, ideally in CHP, must therefore continue to be possible.

In our view, it is essential that the **complementary Delegated Act on gas ensures the security of supply and the transformation of the energy system**. The financing of natural gas power plants- and CHP-projects must not be obstructed or even be made impossible by requirements that are not achievable in the foreseeable future, even for state-of-the-art plants.

The aim of this regulatory process, the reliable achievement of climate protection targets while at the same time ensuring the security of supply, can be achieved by classifying the use of natural gas in modern power plants and CHP plants as sustainable. This must occur under the condition that facilities adhere to realistic threshold values **according to state of the art and in the face of increasing flexibility requirements**. Accordingly, the threshold value **for direct CO₂ emissions** on an annual average should be set according to the following table:

	Gas-fired CHP plants	CCGT power plants	Gas-fired peak units
Annual average in gCO₂/kWh	310	350	550

After 2030 these values should be evaluated to reach carbon neutrality by 2050. Alternatively, an **emissions budget approach could be introduced**. This approach would **cap emissions over the operation time of the plant**, while at the same time **allowing for necessary flexible plant operation**. The emission budget should correspond with the threshold values proposed above.

The long-term sustainability of the investments can be ensured by **mandating the technical compatibility** with hydrogen and other climate-neutral fuels (H2-readiness). Currently, industry, as well as other stakeholders, are developing a working definition of H2-readiness based on plant manufacturer's assurances that around 2030, depending on the adaptation of gas networks and the availability of sufficient hydrogen volumes by that time, **CHP- and power plant-components** are available which can be operated **with 100% hydrogen**.