Significance and Implication of Nuclear Inclusion in European Union Taxonomy

Sung Yoon Park*, EunBee Park, Narae Choi
Korea Institute of Nuclear Nonproliferation and Control
**Corresponding author: sypark12@kinac.re.kr*

1. Introduction

On 11th December 2019, the European Commission (EC) announced the *Europe Green Deal*. It is a comprehensive policy for the energy transition to climate-neutral Europe by 2050. The European Union (EU) also announced reducing more than 55% of greenhouse gas emissions from 1990 by 2030.

European Green Deal Investment Plan, launched in January 2020, financially supports the *Europe Green Deal*. The plan consists of a) at least ten trillion-euro financial support for the next ten years, b) building a framework for private and public sector investment, and c) a tailored support system for private firms and public institutions. For the second element, building a framework for private and public sector investment, the EU deliberated on setting up the Taxonomy, which is the standard for assessing environment-friendliness and sustainability. EU Taxonomy was set by the classification that EU Taxonomy Regulation [1] suggested, which became effective in July 2020. The member states had different views on whether nuclear energy and natural gas are eligible to be included in the EU Taxonomy. Hence the Climate Delegated Act, effective from January 2022, included solar energy, solar heat, wind, marine, water, geothermal, bioenergy, and energy storage but not a nuclear power and natural gas.

With additional deliberations, EC proposed Complementary Climate Delegated Act [2] in February 2022, which included nuclear and natural gas to the EU Taxonomy under strict conditions. The European Parliament (EP) adopted the Act in July 2022, and voting proceeded to decide whether to exclude nuclear and natural gas, but 278 were favored, 328 were against, and 33 abstained. Therefore, the European Council confirmed the Act in July, and it became effective on 1st January 2023.

This report aims to a) observe discussions regarding nuclear inclusion in the EU Taxonomy, b) analyze technical selection conditions for nuclear in the EU Taxonomy, and c) draw out implications on the Republic of Korea (ROK)'s nuclear regulation with the EU Taxonomy's evolvement.

2. Technical Evaluation Standard for the Nuclear Inclusion

The EU Taxonomy Regulation is a founding document to set EU Taxonomy, and it states a) conditions, b) delegation provisions, c) obligation to have a scientific basis, d) deadline for completing legislation, and e) environmental objectives. The Regulation also suggests four criteria to be satisfied for an economic activity to be acknowledged as environmentally sustainable. Likewise, the Regulation defines specific conditions to encourage public and private firms' investment in adequate projects and prevent Greenwashing.

With the green policy trend, including an industry in the Taxonomy means significant economic and social impact in the European markets. Hence different positions of EU member states on nuclear inclusion were visible in establishing *Europe Green Deal* and other related policies. In June 2019, the EU Technical Expert Group on Sustainable Finance (TEG) published a draft recommendation [3] as a critical and technical basis for EC decisions. However, the TEG provided a preliminary assessment of nuclear inclusion. The draft evaluated that nuclear is a method that can contribute to the climate goals, but the principle of Do No Significant Harm (DNSH) should also be considered. Furthermore, the TEG left room for the EU to discuss whether nuclear satisfies the DNSH principle. The final report [4] also made a similar conclusion for nuclear inclusion.

Therefore, empirical research and evaluation on nuclear-DNSH accordance became vital for the EC to set the EU Taxonomy. Thus, Joint Research Centre (JRC) published a technical assessment report [5] showing the possibility of nuclear inclusion by saying that there is no scientific basis that nuclear energy does more harm than other energy sources included in the EU Taxonomy. Then EU enquired about additional evaluation to independent and separate expert groups – EURATOM and SCHEER – and they provided complementary comments on JRC's report.

3. Conditions for Nuclear Inclusion

EC set technical screening criteria based on JRC's report and two technical groups' comments. Nuclear projects that satisfy such criteria would be sorted as 'transitional activities' within the Taxonomy. This decision is barely technical but rather political and realistic, with EC's consideration of not having enough low-carbon emitting energy sources to replace nuclear energy's productivity. Therefore, with strict conditions, EP included nuclear in Taxonomy by adopting the Complementary Climate Delegated Act on 6th July 2022.

4. Controversies Over Nuclear Inclusion

Despite EC and EP's conclusions, nuclear inclusion remains controversial. NGOs such as Greenpeace moved to oppose the EU's decisions. Greenpeace argued that the Act contradicts the Regulation, European climate law, and obligations of the 2015 Paris Agreement. If the EC does not withdraw the Act by February 2023, Greenpeace plans to file EC to the European Court of Justice (CJEU). In addition, five other NGOs resigned from TEG, insisting that the EC politically interfered with the works of TEG, neglecting its recommendations without providing a legitimate scientific basis.

EU member states also joined to pressure the EC to withdraw the Act. On 7th October, Austria filed a lawsuit, and on 10th October, René Repasi, a German member of the EP, also asked the CJEU to nullify the Act. If the Court accepts such objections, two scenarios can be drawn out. First, if the Court partially agrees with the argument, the EC will have to reset the technical screening criteria, and nuclear inclusion conditions may become stricter. Although with a lower possibility of realization, if the Court decided to agree with the argument fully, the second scenario would unfold to exclude nuclear from Taxonomy. Generally, the Court's legal procedures require more than two years, and appeals would add up to more years. This implies that controversies over nuclear inclusion are likely to be prolonged.

5. Implication for the ROK Nuclear Regulation

Regarding nuclear inclusion, some analyze that it can be a chance for the Korean nuclear industry to expand its exports, owing to the global trend of expanding the use of nuclear energy. However, others view that strict conditions for nuclear inclusion would pose more difficulties for building nuclear power plants. Hence the EC's decision cannot purely be an incentive for the industry. When the draft Act was announced in January 2022, European Atomic Forum *(Forum Atomic Européen*, FORATOM) strongly demanded that the technical screening criteria be withdrawn. Regardless of different views and positions, it is clear that the criteria suggested by the Act will become the minimum requirements for nuclear research, development, construction, operation, and regulation.

Therefore, the firms must develop strategic technology to make this change a chance to expand the Korean nuclear industry's market, taking into consideration of the technical screening criteria, since they have the responsibility to satisfy the client's demands. Therefore, Korean firms have been making efforts since 2017 to meet the criteria. However, the Act drew a deadline of 2045 for new nuclear power plant construction permits, and all operators should apply Accident Tolerant Fuel (ATF) to all plants by 2025, which gives very little time.

Under the circumstances that exporters should be able to satisfy all strict regulations, it is visible that the ROK will struggle to win the bid only with support from the Ministry of Trade, Industry and Energy (MOTIE) and the will of nuclear operators. First, even if ROK wins the bid, it will face severe criticism and hardships if it fails to obtain the permit. Moreover, the EU can always come up with new and unpredictable regulations. Assuming the EU's unique form as a regional entity that requires the engagement of all member states' positions, the complicated and fluctuating process of developing Taxonomy laws and policy would continue and even intensify. Hence, the export promotion project should include the regulatory body's expertise.

The EU Taxonomy is now effective, and the Korean nuclear industry welcomes the EU's decision, considering it a green light for nuclear exports. However, it is essential to remember that expertise in all areas should be involved to analyze the significance of nuclear inclusion and build an appropriate strategy and policy.

REFERENCES

[1] "Regulation", (EU) 2020/852, European Union
[2] "COMMISSION DELEGATED REGULATION (EU)", C(2022) 631 final, EUROPEAN COMMISSION
[3] "Taxonomy Technical Report", 2019.06., TEG
[4] "Taxonomy: Final report of the Technical Expert Group on Sustainable Finance", 2020.03., TEG
[5] "Technical assessment of nuclear energy with respect to the 'do no significant harm' criteria of Regulation (EU) 2020/852 ('Taxonomy Regulation')", 2021, JRC