State Aid in the Nuclear Sector: What is the Legal Test?

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Introduction.

With the upsurge of nuclear power both through the new build of nuclear power plants and the development of small nuclear reactors in the context of the EU's Green Deal and Net Zero policy, both States and private investors are eager to know whether state aid rules will hinder the provision of aid to these booming nuclear projects.

Instead of proceeding to a detailed analysis of all cases that have been dealt with by the European Commission on state aid in the nuclear sector to date, the present article provides a streamlined approach to the issue. Indeed, the author aims to identify a pattern in the Commission's reasoning that can be applied to future cases.

Applicable rules.

There are no specific rules for state aid in the nuclear sector. The general state aid rules of the Treaty on the Functioning of the European Union (TFEU) apply. Under the general state aid rules of the TFEU, the test is two-fold. First, the European Commission will assess whether there is state aid. Second, if there is state aid, the European Commission will assess whether such state aid is compatible with the TFEU.

Is there state aid?

When assessing whether there is state aid in the nuclear sector, the European Commission applies its usual test (there is aid if there is a transfer of State resources, providing a selective economic advantage that threatens to distort competition and has effects on trade) focusing on the market economy investor principle (MEIP): if a private investor would have given the same support as the State to the nuclear project, there is no state aid; if a reasonable private investor would not have acted in the same way as the State, there is state aid. In the French *Compagnie française d'assurance pour le commerce extérieur (COFACE)* case of 2007,[1] for example, the Commission found that there was no state aid. Indeed, COFACE, an export-credit insurance provider for the French State, had granted a guarantee to the Finnish private company Teollisuuden Voima Oyj (TVO) to finance a loan to buy a nuclear power plant from the French company AREVA at its Olkiluoto site. Given that the guarantee amounted to less than 1/3 of the loan, that the loan did not depend on the guarantee and that the premium was not below the market price, a reasonable market investor could have acted in the same way as COFACE. Hence, there was no state aid. By contrast, in the Hungarian *PAKS II*[2] case, the building of nuclear reactors at the Paks site was fully financed by the Hungarian State for the benefit of the Hungarian private company MVM Paks II but the internal rate of return was below the weighted average cost of capital (WACC). The Commission concluded that there was state aid because a reasonable market investor would not have acted in the same way as the Hungarian State.

If there is state aid, is it compatible with the TFEU?

In the cases where there is state aid, the European Commission proceeds to assessing whether the aid is compatible with art.107 TFEU,[3] especially art.107(3)(c) TFEU ("aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest"). In a nutshell, the test is two-fold and contains a positive condition and a negative condition. The positive condition is that state aid is compatible with the TFEU if the aid is necessary and proportionate, taking into account the objectives of the Euratom Treaty (set out below) and market failure (set out below). The negative condition is that state aid

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[1] Commission Decision of 25 September 2007 on measure C 45/06 (ex NN 62/A/06) implemented by France in connection with the construction by AREVA NP (formerly Framatome ANP) of a nuclear power station for Teollisuuden Voima Oy (notified under document number C(2007) 4323); Available at, *https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=OJ:L:2008:089:TOC*.

[2] Commission Decision (EU) 2017/2112 of 6 March 2017 on the measure/aid scheme/State aid SA.38454—2015/C (ex 2015/N) which Hungary is planning to implement for supporting the development of two new nuclear reactors at Paks II nuclear power station (notified under document C(2017) 1486); Available at, *https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2017:317:FULL*.

[3] Article 107 TFEU reads as follows: "(1) Save as otherwise provided in the Treaties, any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market. (2) The following shall be compatible with the internal market: (a) aid having a social character, granted to individual consumers, provided that such aid is granted without discrimination related to the origin of the products concerned; (b) aid to make good the damage caused by natural disasters or exceptional occurrences; (c) aid granted to the economy of certain areas of the Federal Republic of Germany affected by the division of Germany, in so far as such aid is required in order to compensate for the economic disadvantages caused by that division. Five years after the entry into force of the Treaty of Lisbon, the Council, acting on a proposal from the Commission, may adopt a decision repealing this point. (3) The following may be considered to be compatible with the internal market: (a) aid to promote the economic development of areas where the standard of living is abnormally low or where there is serious underemployment, and of the regions referred to in Article 349, in view of their structural, economic and social situation; (b) aid to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a Member State; (c) aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest; (d) aid to promote culture and heritage conservation where such aid does not affect trading conditions and competition in the Union to an extent that is contrary to the common interest; (e) such other categories of aid as may be specified by decision of the Council on a proposal from the Commission."

is compatible with the TFEU if the aid does not unduly distort competition and trade between Member States (set out below).

Importantly, the 2022 Guidelines on State aid for Climate, Environmental Protection and Energy (CEEAG),[4] which foster aid that benefits the EU's climate goals—e.g. fighting global warming, protecting the environment and supporting green energy—exclude aid to the nuclear sector. These Guidelines apply to categories of environmental aid and promote a wide variety of aid measures, e.g. decarbonisation aid in the form of contracts for difference, which may entail a payback by the beneficiary to the State if the reference price (e.g., market price) exceeds the strike price set in the contract.

Yet the CEEAG do apply to state aid for pink hydrogen, i.e. hydrogen produced using nuclear energy, if it reduces emissions and does not increase the demand for electricity generated from fossil fuels.

Given that the TFEU cannot derogate from the Euratom Treaty, the *lex specialis*, and that the Euratom Treaty does not contain state aid rules, when applying the TFEU´s state aid rules, the objectives of the Euratom Treaty need to be taken into account, more specifically art.2(b) TFEU relating to nuclear safety, art.2(c) relating to nuclear development and investment and art.2(e) relating to nuclear safeguards.

Furthermore, market failure characterises the nuclear sector because nuclear projects bear intrinsic risks. First of all, there are market risks. Production cannot be stopped at nuclear power plants. Nuclear power plants are characterised by high upfront costs and long recovery times. The average operational life of a nuclear power plant is 60 years and traditional price hedging instruments are not available for more than 20 years. Hence, alternative ways need to be found to provide long-term revenue stability to private investors and avoid volatility. Recently, contracts for difference have been used for nuclear projects in an attempt to alleviate market risks. However, private investors will only benefit from contracts for difference if they manage to agree a relatively high strike price with the government and if it is likely that the price of the nuclear energy will remain lower than the strike price. The 2022 Czech *Dukovany II* project,[5] currently under in-depth investigation by the European Commission, does not foresee contracts for difference probably due to a forecasted increase in electricity prices pursuant to the invasion of Ukraine. Secondly, there are construction risks. Nuclear new build is prone to huge delays and cost overruns. The Finnish Olkiluoto 3 project endured 10 years of delay and triple costs, inter alia because AREVA became insolvent before the nuclear power plant saw the light. Thirdly, there are environmental risks. Indeed, nuclear projects carry radiation risks and generate nuclear waste and spent fuel. Fourthly, there are political and regulatory risks. Political risks often stem from safety perceptions by the general public. If the political tide changes during a nuclear new build project, which is planned over multiple years, aborting the project is a very large risk for private investors. That is why the Czech State foresees a protection against unforeseen events for the private operator CEZ during the entire period of the new build of *Dukovany II*,[6] e.g. an amendment of the Czech law implying the impossibility to build the new nuclear plant. That is also why the UK State proposed a compensation for investors if the nuclear power plant at the *Hinkley Point C*[7] would close on political grounds or if the State-owned company would fail to pay its contract for difference payments. Regulatory risks in nuclear projects are also considerable. E.g. at the *Vogtle*[8] site, nuclear designer Westinghouse did not obtain the regulatory approval by the US regulator and had to replace half of the material of its AP1000 technology, which caused delays and cost overruns. Such delays and cost overruns, in turn, cause damages claims and liability litigation.

In the UK *Hinkley Point C*[9] case, the UK filed three financial support measures to EDF with the European Commission: (1) a contract for difference between EDF and a UK State-owned company to ensure that the UK State would pay the difference as long as the price of nuclear electricity was below the strike price; (2) a State guarantee to EDF and (3) a State compensation to investors if the nuclear power plant would close on political grounds or if the State-owned company would fail to pay its contract for difference payments. The European Commission assessed the compatibility of the state aid for *Hinkley Point C* by means of its usual test. First, the Commission established that a reasonable market investor would not have acted in the same way as the UK State and, hence, the support measures amounted to state aid. Subsequently, even though it required commitments to mitigate the UK´s support measures, the Commission found that these measures were compatible with art.107 TFEU. In so doing, the Commission invoked the objectives of art.2(c) of the Euratom Treaty relating to nuclear development and investment. Even though a

[4] Communication from the European Commission containing Guidelines on State Aid for Climate, Environmental Protection and Energy (2022/C 80/01), available at, *https://ec.europa.eu/commission/presscorner/detail/en/qanda_22_566*, replacing the former Communication from the European Commission containing Guidelines on State aid for Environmental protection and Energy 2014–2020 (2014/C 200/01).

[5] State Aid-Czechia State aid SA.58207 (2021/N)-Support for the construction and operation of a new nuclear power plant at the Dukovany site, Invitation to submit comments pursuant to art.108(2) of the TFEU (2022/C 299/02); Available at, *https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022XC0805(04)*.

[6] State Aid-Czechia State aid SA.58207 (2021/N)-Support for the construction and operation of a new nuclear power plant at the Dukovany site, Invitation to submit comments pursuant to art.108(2) of the TFEU (2022/C 299/02); Available at, *https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022XC0805(04)*.

[7] Commission Decision (EU) 2015/658 of 8 October 2014 on the aid measure SA.34947 (2013/C) (ex 2013/N) which the United Kingdom is planning to implement for support to the Hinkley Point C nuclear power station (notified under document C(2014) 7142), available at, *https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2015:109:TOC*.

[8] Available at, *https://www.nrc.gov/reactors/new-reactors/large-lwr/design-cert/ap1000.html*, more particularly, see, *https://www.nrc.gov/docs/ML1134/ML113480014.pdf*.

[9] Commission Decision (EU) 2015/658 of 8 October 2014 on the aid measure SA.34947 (2013/C) (ex 2013/N) which the United Kingdom is planning to implement for support to the Hinkley Point C nuclear power station (notified under document C(2014) 7142), available at, *https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2015:109:TOC*.

contract for difference at first sight seems to be aid for operating the nuclear power plant, the Commission considered it to be nuclear development and investment aid.[10] The Commission also invoked market failure and held that the limited distortion of competition triggered by the measures was offset by their positive effects. In the appeal lodged by the Austrian State before the General Court against the Commission, the Austrian State argued that there was no common agreement by all EU Member States to foster nuclear energy. The key message of the General Court´s judgment,[11] however, was that all EU States were members of Euratom and that this was sufficient to invoke the objectives of the Euratom Treaty when assessing the UK´s support to *Hinkley Point C*. The Court of Justice confirmed the General´s Court judgment.[12] Now that the UK is not part of the EU anymore following Brexit, the UK has dropped the contract for difference approach and turns to a regulated asset based approach for its support measures at *Sizewell C*.[13]

Once the European Commission has evaluated the positive condition when assessing the compatibility of state aid for the nuclear sector with the TFEU and has taken account of the Euratom objectives and market failure, it proceeds to assess the corollary negative condition, by checking whether the aid does not unduly distort competition and trade between Member States. This implies that the aid must address market failures for which no alternative policy measure or aid instrument would be less distortive of competition and that its amount must be limited to the minimum necessary. Importantly, this negative condition is tied to the positive condition of the Commission´s test. Indeed, the Commission proceeds to weigh the negative effects of the aid on competition and trade against its positive effects in a balancing exercise.

In the recent Hungarian *PAKS II*[14] case, as set out above, the European Commission applied the MEIP-test and found that there was state aid because a reasonable market investor would not have acted in the same way as the Hungarian State when fully financing the building of nuclear reactors at the Paks site. However, the Commission considered the aid to be compatible with art.107 TFEU because it was necessary and proportionate, taking the Euratom objectives and market failure into account, and because the limited distortion of competition that it triggered was offset by the project´s positive effects.

It remains to be seen how the European Commission will assess the three-fold support measures notified by the Czech State for the *Dukovany II* project.[15] The proposed aid is currently subject to an in-depth investigation by the European Commission under art.108(2) TFEU. As set out above, the support measures do not foresee a contract for difference. However, they include a State loan with a low interest rate, covering almost 100% of the construction costs; an off-take electricity purchase agreement (PPA) with a State-owned company that will resell the nuclear electricity on the market, either for a minimum period of 30 years with prolongation options or for lifetime of the Dukovany power plant, estimated at 60 years; and an investor protection mechanism against a change of law or policy for the benefit of the private operator ČEZ during the entire investment period. The Commission considers that each of the three notified measures constitutes state aid. However, it remains to be seen whether the Commission will consider the measures to be compatible with art.107(3) TFEU. When opening its in-depth investigation,[16] the Commission set out that the aid fulfils the positive condition of the compatibility assessment, i.e. the aid facilitates the development of an economic activity. In so doing, the Commission referred to the Euratom Treaty and the judgment of the Court of Justice of the European Union in *Austria v Commission* C-594/18 P.[17] However, the Commission has doubts on the fulfilment of the negative condition of the compatibility assessment, i.e. the aid cannot unduly affect trading conditions to an extent contrary to the common interest. It is unclear to the Commission whether the combination of all three measures is appropriate, especially when comparing them to past nuclear investments where less aid or less interventionist aid measures seemed sufficient. In other terms, the Commission wonders whether the Czech State could achieve the same objectives with less or alternative aid that is less likely to distort competition. The Commission also has doubts on the duration of the aid measures, especially when considering that the off-take contract for *Hinkley Point C* was concluded for 35 years and that the State loan repayment period for *PAKS II* was only 21 years (and not accompanied by operating aid). Furthermore, it questions the lack of guarantees that the State-owned company with which ČEZ will conclude a PPA will maximise profits. And

[10] The Commission also dismissed the UK´s argument that a contract for difference amounted to a service of general economic interest in the sense of the *Altmark* case-law, available at, (*https://eur-lex.europa.eu/EN/legal-content/summary/state-aid-application-of-rules-for-services-of-general-economic-interest-sgei.html*; C-280/00 *Altmark*) because there was no obligation on EDF to sell electricity to the UK State.

[11] *Austria v Commission* T-356/15, ECLI:EU:T:2018:439.

[12] *Austria v Commission* C-594/18 P, ECLI:EU:C:2020:742.

[13] In a nutshell, nuclear companies have the right to charge electricity suppliers a regulated price in exchange for the construction and operation of a nuclear power plant (which the electricity suppliers recoup from consumers).

[14] Commission Decision (EU) 2017/2112 of 6 March 2017 on the measure/aid scheme/State aid SA.38454—2015/C (ex 2015/N) which Hungary is planning to implement for supporting the development of two new nuclear reactors at Paks II nuclear power station (notified under document C(2017) 1486); Available at, *https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L:2017:317:FULL*.

[15] This article went to press prior to the European Commission's decision of 30 April 2024 approving the state aid measures for the *Dukovany II* project.

[16] State Aid-Czechia State aid SA.58207 (2021/N)-Support for the construction and operation of a new nuclear power plant at the Dukovany site, Invitation to submit comments pursuant to Article 108(2) of the TFEU (2022/C 299/02); Available at, *https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022XC0805(04)*.

[17] *Austria v Commission* C-594/18 P, ECLI:EU:C:2020:742.

more importantly, the Commission questions the very choice of ČEZ as project promoter without any open selection process.

Conclusion.

Whether aid provided to nuclear projects amounts to state aid or not will generally depend on whether a reasonable market investor would have taken a similar decision as the State. However, even if a reasonable market investor would not have done so, state aid for nuclear projects will usually be found compatible with the TFEU due to the very broad umbrella provided by the objectives of the Euratom Treaty and market failure characterising the nuclear sector. To date both the European Commission and, upon appeal, the European Courts have been quite lenient towards state aid for nuclear projects. Given the new taxonomy labeling nuclear energy as “green”, this trend is unlikely to change.