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RECHTSANWÄLTE

SERIES: SMRs IN EUROPE — THE LEGAL AND CONTRACTUAL LANDSCAPE

Essay 2 of 6

Licensing Without Borders? Europe's Fragmented Approval Regime

There is no common European licensing system for nuclear reactors. Each Member State approves, licenses, and regulates nuclear installations under its own national framework. For a technology whose central promise is serial production and standardised deployment, this fragmentation poses a structural challenge.

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The Constitutional Baseline: Nuclear Energy as National Competence

The starting point is the Treaty. Under Article 194(2) TFEU, each EU Member State retains the right to determine the conditions for exploiting its energy resources, its choice between different energy sources, and the general structure of its energy supply. Nuclear energy falls squarely within this national competence, and the decision whether to build, operate, or phase out nuclear power plants remains a sovereign prerogative of each Member State.

The Euratom Treaty, which dates from 1957 and has never been substantially revised, provides the institutional framework for nuclear cooperation at European level, but stops short of establishing a common licensing or approval process. The key secondary legislation – the Nuclear Safety Directive (Council Directive 2009/71/Euratom, as amended by Directive 2014/87/Euratom) and the Spent Fuel and Radioactive Waste Directive (Council Directive 2011/70/Euratom) – sets minimum safety standards and requires Member States to maintain

independent regulatory authorities. It does not prescribe how a reactor should be licensed, what the stages of the approval process should be, or how long it should take.

The result is that a reactor design approved in one EU Member State has no legal status in another. A developer wishing to deploy the same SMR design in Finland, Poland, and the Czech Republic must go through three entirely separate licensing processes, with different requirements, different timelines, and different regulatory cultures. For a technology whose economic case depends on standardisation and repeatability, this is a significant obstacle.

What This Means in Practice

Europe's nuclear regulatory landscape currently comprises more than 20 national frameworks, each with its own licensing stages, technical requirements, and institutional structures. Some jurisdictions – France, Finland, Sweden, the Czech Republic, Romania – have decades of experience with nuclear power and well-established regulatory authorities. Other EU Member States, such as Poland and Estonia, are building their nuclear regulatory frameworks from the ground up. Outside the EU, the United Kingdom remains a significant reference point through its Generic Design Assessment process, while Norway took its first step into nuclear licensing in February 2026.

The practical consequences of this fragmentation are substantial. Each national licensing process typically takes several years, so a vendor that must complete separate and sequential processes in each country of deployment sees the cumulative timeline erode much of the schedule advantage that modularity is intended to deliver. Regulatory divergence also creates pressure on vendors to modify standardised designs to meet country-specific requirements – precisely the dynamic that undermined the cost and schedule benefits of standardisation in previous generations of reactor construction.

For project developers and their legal advisors, the fragmentation raises further questions. Which jurisdiction's approval governs the manufacturing of modules in a cross-border supply chain? If a module is fabricated in France, transported to Poland, and assembled on a site licensed under Polish law, which regulatory regime applies to factory quality assurance? How are design modifications required by one national regulator reconciled with the standardised design certified elsewhere?

The European Response: From Industrial Alliance to SMR Strategy

The European institutions have recognised the problem. In 2023, the European Industrial Alliance on SMRs was launched with the objective of building a shared industrial and regulatory framework for SMR deployment by 2030. The Alliance now comprises almost 400 organisations, including reactor developers, utilities, research institutions, and government bodies. In October 2024, it selected eight priority SMR projects representing a range of reactor technologies – from the ORLEN Synthos / GE Hitachi BWRX-300 in Poland, to EDF's Nuward, the Rolls-Royce SMR, and the EAGLES-300 lead-cooled fast reactor consortium

(Ansaldo Nucleare, SCK CEN, ENEA, RATEN).

On 10 March 2026, the European Commission published its *Strategy for Small Modular Reactors and Advanced Modular Reactors* (COM/2026/117), accompanied by an updated Nuclear Illustrative Programme (PINC, COM/2026/120). The Strategy sets out nine actions aimed at deploying the first European SMRs by the early 2030s. Four elements are most significant for the licensing question.

A 'regulatory coalition of willing' regulators. The Commission proposes to develop the existing ENSREG SMR Regulators' Taskforce into a coalition of national regulators willing to align their licensing procedures or conduct joint preliminary reviews of SMR designs in the pre-licensing phase. The aim is to avoid duplication, save regulatory resources, and accelerate design assessment, while stopping short of a binding common approval.

Regulatory 'sandboxes' under the Net-Zero Industry Act. The Strategy proposes cross-border regulatory sandboxes as a mechanism for testing harmonised approaches to SMR licensing. The concept is borrowed from financial services regulation and has not previously been applied in the nuclear sector.

'SMR Valleys' for industrial co-location. The Strategy introduces the concept of 'SMR Valleys' – designated zones where SMR deployment is combined with industrial and digital infrastructure, supported by coordinated permitting and supply-chain development. This builds on the co-location models discussed in Essay 1.

Streamlined export controls for intra-EU transfers. The Strategy acknowledges that components and technologies needed for SMRs are often categorised as dual-use items, and proposes that Member States streamline export control procedures for transfers between EU countries to avoid administrative delays in cross-border SMR projects.

What the Strategy Does Not Do

The limits of the Commission's approach deserve to be stated plainly. **The SMR Strategy does not create a common European licensing system.** It cannot, given the Treaty constraints. Nuclear licensing remains a national competence, and the Commission has no power to impose a harmonised approval process on Member States. What the Strategy creates instead are frameworks for voluntary cooperation – joint reviews, shared assessments, aligned procedures – among regulators who choose to participate.

This is a meaningful step, though it leaves several structural questions unresolved. A joint pre-licensing review does not amount to mutual recognition: even where regulators in Finland, France, and the Czech Republic jointly assess an SMR design, each country still issues its own licence under its own national law. Whether a joint review can genuinely compress the cumulative licensing timeline, as opposed to running parallel processes under a common umbrella, remains to be seen.

The Strategy is also silent on *how multi-module SMR installations should be classified for licensing purposes*. As discussed in Essay 1, whether a six-module NuScale VOYGR installation is one nuclear facility or six has

consequences for environmental impact assessment, safety zones, liability, and insurance. That classification remains a matter of national law, and the Strategy offers no guidance toward harmonisation.

The International Baseline: IAEA and Convention Frameworks

In the absence of a harmonised EU regime, the international framework provides the common baseline. The IAEA Safety Standards, while not legally binding, serve as the reference point for national regulatory systems worldwide. The Convention on Nuclear Safety (CNS) and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management establish peer-review obligations and shared safety principles among contracting parties.

The IAEA's Nuclear Harmonisation and Standardisation Initiative (NHSI), launched in 2022, aims specifically to facilitate the deployment of SMRs by harmonising regulatory approaches across jurisdictions. In September 2025, the first pilot project under the NHSI was launched: an international pre-licensing initiative for the EAGLES-300 lead-cooled fast reactor, involving the nuclear regulators of Belgium (FANC), Italy (ISIN), and Romania (CNCAN). This represents a concrete step toward cross-border regulatory coordination, albeit for a design that is still years from commercial deployment.

For newcomer states — countries building nuclear programmes from scratch — the IAEA framework is particularly important. Poland, Estonia, and Norway must each develop national nuclear legislation covering siting, licensing, construction oversight, waste management, and liability. The IAEA Safety Standards and the Euratom Directives provide the minimum requirements, but the detailed design of each national framework is a substantial legislative and institutional undertaking.

What This Means for Project Developers and Their Advisors

The fragmented licensing landscape has direct consequences for anyone involved in the planning, financing, or construction of SMR projects in Europe.

For reactor vendors, the absence of mutual recognition means that each national deployment requires a separate licensing effort, with the associated cost, delay, and risk that country-specific modifications will erode the standardisation premium.

For project developers and investors, licensing uncertainty is a direct financial risk. The duration, cost, and outcome of a national licensing process cannot be reliably predicted in countries where the regulatory framework for SMRs is still being developed, and contractual frameworks — whether EPC, EPCM, or bespoke structures — will need to allocate this regulatory risk explicitly.

For cross-border supply chains, the interface between factory-based manufacturing regulation and site-based nuclear licensing remains legally uncharted. Where modules are fabricated under the industrial regulations of one jurisdiction and must be certified under the nuclear safety regime of another, the contractual and regulatory coordination required is considerable.

The Commission's SMR Strategy is a welcome signal of political intent, but it operates within firm constitutional limits:

cooperation between regulators is not the same as a harmonised approval. Until these frameworks are tested against actual SMR construction projects, the distance between strategic ambition and contractual reality will remain the central challenge for SMR deployment in Europe.

COMINDIS is a highly specialized international boutique law firm for plant engineering, energy and infrastructure projects.

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Next in this series: **Essay 3 — From Turnkey to Modular: How SMRs Are Reshaping Nuclear Construction Contracts**

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