

Streamlining EU Nuclear Energy Licensing Through Regulatory Reliance and a European Generic Design Assessment Framework

Executive Summary

July 2026

CLEAN AIR TASK FORCE

List of Abbreviations

Term	Definition
NRA	National Regulatory Authority
IAEA NHSI	International Atomic Energy Agency Nuclear Harmonization and Standardization Initiative
GDA	Generic Design Assessment
ENSREG	European Nuclear Safety Regulators Group
FOI	Freedom of Information
GDAR	Generic Design Assessment Report
MoC	Memorandum of Cooperation
DIO	Design Information Owner
TSO	Technical Support Organisation
WENRA	Western European Nuclear Regulators Association
ENGARDE	European Generic Assessment of Reactor Designs
NRA	National Regulatory Authority

Executive Summary

This document summarises “White Paper on Codifying Regulatory Reliance and Establishing a European Generic Design Assessment Framework to Streamline Nuclear Licensing in the European Union”, prepared by Łukasz Młynarkiewicz, PhD, Attorney-at-Law Partner, Head of Nuclear Energy Practice Kochański & Partners (K&P).

This executive summary reflects the revised version of the White Paper dated 13 July 2026, incorporating feedback from experts and peer review.

The regulatory fragmentation issue in the European Union

The European Union faces a structural inefficiency in its nuclear licensing architecture: standardised or near-identical reactor designs are assessed from first principles by every Member State deploying them, independently and without legally operative coordination. This redundancy consumes a scarce global pool of nuclear safety expertise, inflates project costs, creates investment uncertainty, and delays the deployment of zero-carbon firm capacity that Europe's energy transition requires. It is not an inevitable feature of nuclear regulation – it is a consequence of the absence of statutory authority for national nuclear regulators to formally rely upon credible foreign assessments as valid evidence in domestic proceedings.

This diagnosis has now been explicitly acknowledged in the Commission's 2026 SMR Strategy, which identifies regulatory fragmentation as a structural barrier to SMR deployment and calls for streamlined regulatory processes and a collaborative approach among regulatory authorities across the EU to enable timely SMR licensing and economies of scale. The Strategy's Action 8 calls on Member States to establish a 'regulatory coalition of the willing' and envisions a progression from information exchange through aligned licensing procedures to mutual recognition. This White Paper provides the legal architecture through which that progression can be realised.

"A fragmented approach would lead to duplicated efforts, slower regulatory approvals, limited manufacturing capacity, and higher unit costs, undermining public confidence and future investments – such a scenario should not be accepted for the development of this strategic technology for Europe."[1]

The Strategy calls for "streamlining regulatory processes and supporting a collaborative approach among regulatory authorities across the EU to enable timely SMR licensing and economies of scale."

The Commission's own roadmap – from ENSREG information exchange and Joint Early Reviews, through alignment of licensing procedures, to mutual recognition – is precisely the maturity ladder this White Paper tries to translate into legally operative instruments.

Two reforms to overcome fragmentation

This White Paper proposes two complementary, legally compatible reforms:

First – Codification of regulatory reliance in national atomic law.

A targeted statutory amendment grants each NRA explicit authority to: (i) accept foreign regulatory assessments, approvals, and quality-control results as valid evidence in domestic licensing proceedings; (ii) formally waive re-conducting its own analyses in areas comprehensively addressed by credible foreign assessments, subject to a documented equivalence determination; and (iii) provide a legal safe harbour that gives investors and applicants procedural certainty about the status of foreign assessments in national proceedings. This mechanism operates bilaterally, requires no supranational agreement, and can be enacted in the next national legislative cycle. The burden of demonstrating equivalence rests with the applicant, who must prepare a structured gap analysis classifying the foreign assessment against domestic requirements across three categories – full equivalence, partial equivalence requiring justification, and gaps where supplementary domestic analysis is needed. The NRA retains full decision-making authority throughout. This approach is already being considered by WENRA through the ENGARDE (European Generic Assessment of Reactor Designs) initiative. ENGARDE was established to develop a common framework for reactor concept assessments through harmonised review methodologies, regulatory cooperation, and review leveraging – with mutual reliance principles forming one of its core operational tools (WENRA spring plenary 5-6 May 2026; Stockholm, Sweden).

Second – A voluntary European Generic Design Assessment (GDA) framework.

Participating Member States' NRAs jointly conduct a pre-licensing assessment of a reactor design's generic safety fundamentals, producing a non-binding Generic Design Assessment Report (GDAR) that each participating NRA may formally leverage through its domestic reliance clause. The framework is governed by ENSREG, supported by the Commission, and explicitly voluntary: it creates an option, not an obligation. Site-specific assessments remain fully within national authority. The framework directly addresses the absence of standardised, transferable review outputs that currently limits the practical value of collaborative reviews. Its common reference framework is anchored in IAEA Safety Standards and WENRA reference levels – standards already applied in all participating Member States – making the feasibility of the GDA process substantially greater than might otherwise be assumed.

---

1 (2026) 117 final, Communication from the Commission – Strategy for the development and deployment of Small Modular Reactors (SMRs) in Europe, Strasbourg 10.03.2026, p. 3. Hereinafter: Commission's SMR Strategy.

Neither reform displaces national regulatory sovereignty. The relying NRA remains independent, responsible, and accountable for every decision it takes. The final decision to issue a licence always rests with the national regulator. The reforms convert voluntary, informal technical cooperation – which already exists in the form of the NUWARD Joint Early Review, the BWRX-300 collaborative review, or the Joint Early Review of Steady Energy's LDR-50 SMR design, but produces no formal legal effect – into a structured, legally grounded mechanism that reduces redundancy without reducing oversight.

Recommendations

- Amend national atomic laws to insert a "reliance clause", granting the head of each NRA explicit authority to accept and waive re-analysis of foreign safety assessments, subject to documented equivalence conditions.
- Establish a European GDA framework as a voluntary multilateral pre-licensing instrument, governed by ENSREG, with Commission's support under the Euratom Treaty's investment facilitation and safety information functions.
- Create statutory Freedom of Information (FOI) exemptions for proprietary technical and security data exchanged between regulators, to enable candid regulator-to-regulator information sharing.
- Extend reliance provisions to supply chain certificates and quality-control results for serially manufactured components.
- Build upon the Commission's SMR Strategy (Action 8), as the political mandate for this White Paper's proposals: the ENSREG taskforce already established for SMR pre-licensing information exchange should be developed, with the legal architecture proposed herein, into the "regulatory coalition of the willing" the Commission describes – with statutory reliance as the legally effective connective tissue that converts informal technical cooperation into administratively actionable licensing outcomes.

Implementation framework: Three strategic pathways

The proposed legal reforms can be executed across three distinct, overlapping timelines:

IMMEDIATE	MEDIUM-TERM	LONG-TERM
Pathway One: National Atomic Law Amendment	**Pathway Two: Nuclear Safety Directive Amendment**	**Pathway Three: New Euratom Implementing Regulation**
Actioned directly by willing Member States through national legislative tracks to insert reliance clauses, requiring no prior EU-level consensus.	Incorporating regulatory reliance and joint review mandates into the existing EU legislative framework to harmonize practices across all Member States.	Establishing a dedicated, permanent governance and funding structure for the European GDA framework under specific Euratom treaty mechanisms.

Implementation roadmap

The following phased roadmap reflects a realistic progression from the immediately actionable to the institutionally ambitious:

Phase 1 – Building Foundations
Years 1–2: Reliance as National Law

Actions

- Member States analyse current atomic law and prepare amendments, authorising the regulator to use foreign assessments on an optional ("may use") basis; build relationships and competencies through NHSI, workshops, and staff exchanges; sign Memoranda of Understanding with key regulators.
- The Commission's grant scheme referenced in Action 8 of the SMR Strategy should be accessed in this phase to fund NRA staff participation in ENSREG taskforce activities and IAEA NHSI working groups, creating a financial incentive for prompt national legislative action.
- European Commission publishes a recommendation to Member States on the content and structure of statutory reliance clauses.
- ENSREG develops a template MoC for regulator-to-regulator information sharing.
- Member States enact FOI exemption provisions for shared regulatory data.

Milestones: At least two Member States enact statutory reliance clauses; bilateral MoCs concluded between NRAs of deploying Member States.

Phase 2 – Piloting and Testing
Years 2–4: First European GDA

Actions

- Select a specific SMR pilot project; conduct a collaborative review with a partner regulator; analyse lessons learned; use the NUWARD Joint Early Review as a reference point.
- ENSREG convenes a pilot European GDA review for one SMR technology, with a coalition of at least three willing NRAs.
- Develop common reference framework for the pilot GDA, drawing on IAEA Safety Standards and WENRA reference levels.
- Publish the first GDAR (redacted public version); participating NRAs formally invoke their domestic reliance clauses to give legal effect to the GDAR in national proceedings.

Milestones: First GDAR published; first national licensing decision formally invoking a domestic reliance clause issued. Success in Phase Two provides the empirical evidence base for the Commission's Action 8 SMR coalition, demonstrating that the "early 2030s" deployment target is achievable through the combined reliance-plus-GDA architecture.

Phase 3 – Scaling and Formalisation
Years 4+: Regional Reliance and Legislative Consolidation

Actions

- Extend collaborative reviews to broader areas; aim for participation in joint reviews; transform MoUs into more formal agreements.
- Commission proposes an amendment to the Nuclear Safety Directive incorporating a provision on European GDA participation and reliance.
- ENSREG institutionalizes the GDA process with permanent governance structures.
- Expand supply chain reliance provisions; develop cross-recognition of TSO accreditation.

Milestones: Nuclear Safety Directive amended; European GDA framework institutionalised; at least five Member States with enacted reliance clauses and active GDA participation.