Nuclear safeguards under the Euratom Treaty and applicable secondary legislation

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The views expressed are those of the speaker and do not necessarily reflect the official position of the European Commission.

Three questions to address

1

Where safeguards come from

The world's first nuclear safeguards system - written into primary law in 1957, operating before NPT

2

Where we stand

Chapter 7 of the Euratom Treaty and Commission Regulation (Euratom) 2025/974 - in force since 6 July 2025. What is new.

3

Direction of travel

Safeguards-by-design as a legal obligation, including for small modular reactors.

One message, if you take away nothing else: for any new nuclear project to be possibly deployed on EU territory, the first conversation, required by the legislation in force, is with Euratom (EC).

ORIGINS

Precedes NPT and IAEA safeguards

1957

Euratom Treaty. Safeguards are written into primary law — Chapter 7, alongside supply, ownership, the common market, etc.

1960

The system becomes operational. The first supranational nuclear safeguards system in history starts working.

1970

The NPT enters into force. Euratom's established regional system thus contributes to the new global architecture.

1977 - 78

INFCIRC/193 — the trilateral agreement between the Euratom Community, the IAEA and the non-nuclear-weapon Member States.

1981

INFCIRC/290 — the voluntary-offer agreement covering France.

1992 - 93

The New Partnership Approach: joint inspections, shared equipment, independent conclusions, signed in 1992

2004

Additional Protocols enter into force on 30 April — site declarations, wider access, complementary access.

2005

Regulation (Euratom) No 302/2005 — legal framework for Euratom safeguards application for two decades.

2025

Regulation (Euratom) 2025/974 — in force 6 July 2025.

Safeguards in Europe were not a reaction to proliferation. They were a condition of the original Euratom Treaty: pooled nuclear industry, pooled supervision.

WHAT MAKES EURATOM SAFEGUARDS DIFFERENT

Nuclear legal competences: the three S's

SAFETY

Shared competence

EU directives set the framework, but Member States license, inspect and regulate. National regulators remain the licensing authority.

SECURITY

Mostly national competence

Physical protection stays mostly with Member States. The EU can coordinate; it does not verify.

SAFEGUARDS

Exclusive Community competence

The Commission itself verifies, on the territory of the Member States, with its own inspectors and its own enforcement powers.

The verifier is a European institution (European Commission), not a Member State.

Art. 81 — inspectors have access at all times to all places, data and persons; opposition goes to the President of the Court of Justice, with a three-day deadline.
Art. 82 — infringement action against the Member State.
Art. 83 — direct sanctions on operators: warning, withdrawal of benefits, placing under administration, withdrawal of material.

Article 84(3): safeguards may not extend to materials intended to meet defence requirements — see also Chapter VI of Regulation 2025/974.

What the system delivers today

539,000 t

of civil nuclear material under Euratom safeguards in the EU

99.9 %

physically verified — the highest coverage of any safeguards system

950+

inspections carried out across the Member States in 2024

~4,000

operator declarations verified in a single year

A real second layer

Euratom and the IAEA draw independent conclusions on the same material. Two verifiers, one set of declarations

Efficiency, not duplication

The Partnership Approach implies joint inspections, shared equipment and shared measurement results.

A working regional model

Twenty-seven States, one interlocutor, one accountancy system. The strongest available evidence that regional safeguards reinforces the NPT.

Figures: European Commission and Euratom Supply Agency reporting for 2024, data for 2025 under validation.

Six challenges that are reshaping safeguards

01 A new-build wave

More installations, more first-of-a-kind designs, more Member States re-entering nuclear — including MS building a new nuclear framework.

02 Novel technologies

SMRs, transportable and floating units.

03 The back end

Geological repositories and encapsulation plants raise a question no safeguards system has answered at scale: verification over geological timescales.

04 Data and digitalisation

Volume, quality and security of declarations; unattended monitoring; remote data transmission; cyber exposure; the arrival of AI-assisted analysis.

05 Geopolitics

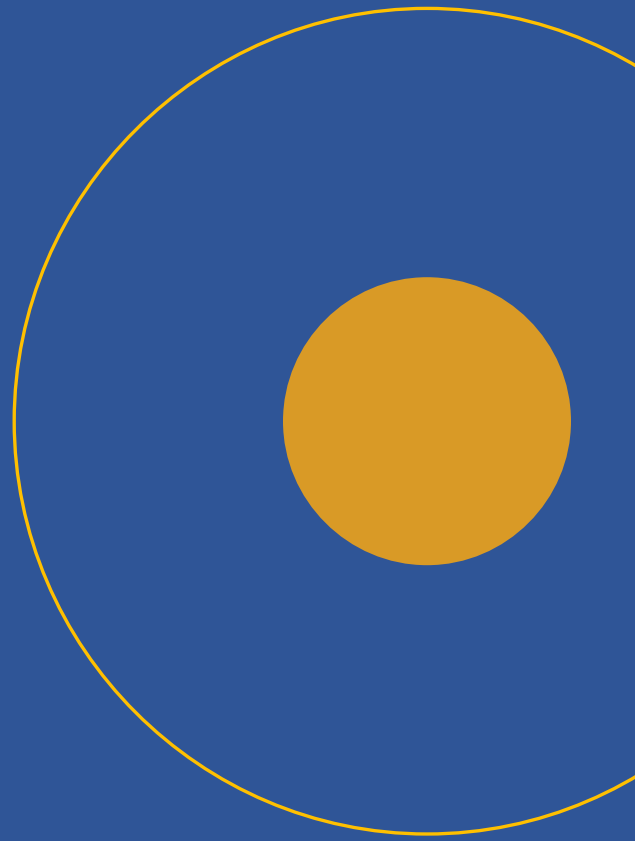
Nuclear supply-chain reconfiguration away from Russian fuel and services (RepowerEU Communication)

06 People

Inspector capacity and the narrow pool of specialised technical and legal expertise. Any expansion in facilities is, first, a staffing problem.

The Euratom safeguards landscape today

Primary law that has not changed since 1957. Secondary law that has just been revised.



Legal architecture: where the main obligations stem from

PRIMARY LAW

Euratom Treaty — Art. 2(e), Chapter 7 (Arts. 77–85), Art. 197. Unamended since 1957.

INTERNATIONAL LAW

INFCIRC/193 · INFCIRC/290 · Additional Protocol 1999/188/Euratom · nuclear cooperation agreements with the US, Canada, Japan, Australia, the UK and others.

SECONDARY LAW

Regulation (Euratom) 2025/974 · Regulation No 9 on ores · Particular Safeguards Provisions — Commission Decisions addressed to the individual operator. All binding.

SOFT LAW

Commission Recommendations and guidelines on the application of the Regulation and on operators' nuclear material accountancy and control systems. Persuasive, not binding.

Note the legislative route. Article 79 requires "a regulation made by the Commission and approved by the Council" — the Parliament is only consulted. Unusual in EU law, and a reason Euratom secondary legislation moves at its own tempo.

THE TREATY TOOLBOX

Four provisions do almost all the work

Art. 78	**Tell us who is subject to reporting**	*Anyone setting up or operating an installation for the production, separation or other use of source or special fissile material must declare its basic technical characteristics to the Commission.*
Art. 79	**Keep records, and produce them**	*Operating and accounting records permitting the accounting of ores, source and special fissile materials — with the nature and extent of the requirements set by Commission regulation.*
Art. 81	**Euratom inspectors' powers**	*Inspectors have access at all times to all places, data and persons. They may not be delayed or impeded. Opposition is referred to the President of the Court of Justice within three days.*
Art. 82–83	**Enforcement**	*A Commission directive to the Member State, then referral to the Court. Against operators: warning, withdrawal of benefits, placing under administration for up to four months, withdrawal of material.*

Inspectors act under the Protocol on the Privileges and Immunities of the European Union (Art. 191). Member States owe a duty of loyal cooperation under Art. 192.

THE NEW REGULATION

Regulation (Euratom) 2025/974 — what is new

Adopted 26 May 2025 · in force 6 July 2025 · repeals Regulation (Euratom) No 302/2005 · phased application of the annexes to **16 October 2028**

1

Graded and proportionate

Requirements matched to the strategic value of the material and the installation. Relief for smallholders through the national location outside facilities. Equivalence and proportionality now defined principles, not practice.

2

Safeguards-by-design

A preliminary declaration for new installations, major modifications and decommissioning — so that safeguards shape the design rather than being retrofitted to it.

3

New kinds of installations

Dedicated questionnaires for geological repositories, encapsulation plants and novel reactor types. New and updated definitions: spent fuel, disposal, hot cell, catch-all MBA, retained and conditioned waste.

4

Digital by default

Electronic declarations and reports throughout; an up-to-date list of inventory items available to inspectors on reasoned request; new inventory-change codes for geological disposal, termination and decommissioning gain.

Article 42: the Commission adopts guidelines by recommendation and must evaluate the application of the Regulation within ten years. This is a framework designed to be revisited.

Safeguards by design: the concept, and who it binds

What the concept requires

- Safeguards considerations are built **into the planning and design** of new installations, and into major modifications and decommissioning of existing ones, instead of being retrofitted to a design already frozen.
- The approach is **installation-specific**: tailored engineering solutions and technical measures, agreed early, rather than one template for every facility.

Early communication with the Commission and the Member State clarifies the legal obligations, optimises cost and avoids delay to the project.

Who is bound

Any **person or undertaking** planning to set up, or legally responsible for setting up or operating (Art. 2(34)):

- reactors and critical installations;
- conversion, fabrication, reprocessing and isotope separation plants;
- separate storage installations and encapsulation plants;
- geological repositories, waste treatment, storage and disposal installations;
- any other location where source or special fissile material is held or customarily used above one effective kilogram.

Proven at the back end

Applied systematically at the world's first deep geological repository for spent fuel, in Finland.

Every SMR design

The SMR designs under discussion in the EU will all be under Euratom safeguards. None sits outside the system.

One door, one interlocutor

The Commission is the exclusive contact point for safeguards in the EU, and the partner of the IAEA.

The obligation attaches to the preliminary declaration, and its trigger is the definition of the main design options ***— long before the construction licence, and long before any nuclear material exists.***

What must be declared, and when - sequencing

1	Art. 3(1)	**As soon as the main design options are defined**	**Preliminary declaration.** *To the Commission and to the Member State concerned, so that safeguards enter the installation's planning stage.*
2	Art. 4(2)	**No later than the construction licence application**	**Initial declaration.** *Owner, operator, location, purpose, type, capacity and pre-operation information. Expected throughput, inventories and drawings of material flows may be added.*
3	Art. 4(1)	**At least 200 days before the first nuclear material consignment**	**Complete declaration.** *The full basic technical characteristics of the new installation, before any nuclear material arrives on site.*
4	Art. 5(2)	**As soon as the decision is taken, and not later than 20 days before work starts**	**Significant changes.** *Purpose, type or layout — in particular access routes to areas where nuclear material is used or stored. Other changes: 30 days after completion (Art. 5(3)).*
→	Art. 8	**Downstream, on the basis of the declared BTC**	**Particular safeguard provisions.** *A Commission Decision to the operator fixing material balance areas, key measurement points, records, inventory frequency, containment and surveillance. Not itself part of the design-stage obligation.*

The practical rule: in the EU, the first door is Euratom

Articles 41–42 — Euratom Treaty

Undertakings engaged in the industrial activities listed in Annex II must communicate investment projects for new installations, replacements and conversions to the Commission — not later than three months before the first contracts are concluded with suppliers, or three months before work begins where it is carried out with the undertaking's own resources.

Article 78 - Euratom Treaty
Articles 3–4 — Regulation 2025/974

A preliminary declaration of basic technical characteristics as soon as the main design options are defined, and in any event no later than the first application for a construction licence. Two separate obligations, two separate triggers — and both bite long before nuclear material exists.

For a nuclear project to be deployed on EU territory, the first compulsory engagement is with Euratom (EC). There is an obligation to transmit BTCs in the Euratom legislation (mirrored by IAEA Design Information Questionnaires-DIQs enshrined in INFCIRC/193). Please note that "transmission to IAEA" only concerns BTCs/DIQs, not the elements under Articles 41-42 of the Euratom Treaty.

SMRs and Safeguards – SMR Nuclear Alliance

2024

European Industrial Alliance on SMRs launched by the Commission in February

350+

members — designers, utilities, supply chain, research bodies, financiers

8

Technical Working Groups supporting the selected project working groups

TWG6

Nuclear Safety and Safeguards — the dedicated safeguards forum

Why a working group matters

TWG6 is where safeguards questions are worked through with designers, utilities and the supply chain before they harden into licensing problems. It converts what would otherwise be bilateral regulator-developer friction into a shared technical conversation.

Compliance is an entry criterion

Alignment with the EU legal framework — including safeguards — is an explicit criterion for admitting projects to the Alliance.

And at Member State level

The Nuclear Alliance of Member States, in its March 2026 declaration, frames safety, security and safeguards together as integral to Europe's nuclear ambition — not as a constraint upon it.

The Alliance adopted its first Strategic Action Plan at the second General Assembly in September 2025; a second call for projects followed in 2026.

Five conclusions to take away

1. Euratom safeguards are an exclusive Community competence — a supranational verifier with its own inspectors and its own enforcement powers.
2. The Treaty has not changed since 1957. The secondary law has just been rewritten, and the rewrite is where the substance sits.
3. Regulation 2025/974 is graded where it can afford to be, and more demanding where it must be — above all at the design stage.
4. Safeguards-by-design are now enshrined in the Regulation, which formulates a legal obligation to submit a preliminary declaration of basic technical characteristics as soon as main design options are defined.
5. For any new nuclear project to be deployed in the EU - small modular reactors included — the first conversation is with Euratom (EC).

Thank you