

Feedback on the draft revised Requirements for Generators Regulation

nucleareurope position

nucleareurope welcomes the launch of the process for the adoption of the revised Delegated Regulation establishing a network code on requirements for generators (RfG), as new generation and storage capacity is entering the European electricity system and needs to contribute to its stable and secure operation.

Several positive developments have been achieved through the revision process, including the development of a harmonised certification framework, reinforced grid-forming capability for power park modules with a view to system stability, and adjustments related to the lessons learned from the Iberian blackout of April 2025.

nucleareurope supports the development of harmonised technical requirements whenever economically and technically justified to the benefit of the European electricity system. Requirements must, however, remain proportionate and leave room for national adjustments, as European power systems have significantly different characteristics in terms of grid architecture, operating regimes, protection systems, energy mixes and generation fleets.

The Regulation should acknowledge that some requirements may be physically impossible for certain technologies or conflict with operational safety requirements, including nuclear safety rules.

Against this background, nucleareurope wishes to underline its main concern, which is the risk of retro-active application of the RfG requirements, triggered by Article 4 or Article 45.

Article 4

Topic	Article reference	Description	Issue	Action
Significant modernisation	Art. 4	Defines the circumstances under which existing power-generating modules become subject to the new	The current drafting is too broad and creates substantial investment uncertainty. It risks bringing existing assets into scope even where only limited upgrades, component replacements	OBJECT Significant modernisation should be limited to modifications that fundamentally change the system behaviour of the asset. New requirements should apply to the modified part only, unless the whole module is

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		RfG 2.0 requirements.	or life-extension works are carried out. This could penalise refurbishment and optimisation projects that would otherwise improve asset performance and system support capabilities.	materially changed. At a minimum, for each criterion the relevant TSO's proposal should specify the requirements that apply and whether they apply to the entire modernised power-generating module or only to the modernised part.
Significant modernisation criteria	Art. 4(2)	Sets criteria for capacity, reactive power capability, frequency-stability capability and component changes.	The capacity and reactive power thresholds provide some clarity, but the criteria on frequency-stability capabilities and component changes risk reopening the scope very widely. Even minor changes could become triggers for full compliance, undermining the apparent protection for limited modifications.	CLARIFY Retain the proposed ranges and the discretion of national TSOs, under the supervision of the regulator and following consultation with stakeholders, to determine the appropriate levels. The definition should nevertheless include clear safeguards ensuring that minor changes do not trigger full compliance.
Change of components	Art. 4(2)(d)	For Type C and D modules, a change of components may qualify as significant modernisation, except for changes resulting from maintenance.	The provision risks treating routine refurbishment and spare-part replacement as a trigger for full facility compliance. For long-lived assets, particularly nuclear, this could turn ordinary life-extension activities into full-scale renewal obligations and distort investment planning.	CLARIFY A more effective approach would be to focus on measures that deliver tangible benefits to the power system, rather than forcing existing facilities into a modern regulatory framework for its own sake. The objective should be to achieve meaningful system improvements, not merely regulatory alignment. Article 4(2)(d) should expressly exclude changes resulting from maintenance and repair activities and spare parts, whether or not those parts are purchased new at the time of their incorporation in the power-generating module.

Article 45

Topic	Article reference	Description	Issue	Action
Application to existing assets through CBA	Art. 45	Requires TSOs and DSOs to carry out cost-benefit analyses on applying RfG 2.0 requirements to existing power-generating modules.	The provision is broader than the current RfG and could lead to retrofit obligations for assets that were designed, licensed and financed under different assumptions. Proportionality is essential, especially where system challenges are driven by newer technologies or changed system conditions rather than deficiencies in existing assets. The mandatory cost-benefit analysis within two years, together with the possibility for the regulatory authority to require further analyses as system needs change, creates industrial and financial risks and uncertainty after entry into force and repeatedly in the future.	CLARIFY Clarify the policy objective, avoid transferring system-wide costs to individual asset owners without clear justification. The application of requirements to existing modules should remain conditional on significant factual changes in circumstances, as under Regulation (EU) 2016/631.
Retrofit proportionality test	Arts. 45-46	Applies cost-benefit analysis before new requirements are imposed on existing power-generating modules.	The draft neither defines a robust proportionality test nor states who must demonstrate and justify a retrofit obligation.	CLARIFY The Regulation must expressly require a robust proportionality test before any retrofit obligation is imposed. It must assess whether the retrofit is suitable and necessary; whether less burdensome alternatives are available; and whether the specific grid benefits justify the costs and operational impacts. The regulatory authority, not the power plant operator, must bear the burden of proof and provide the full justification.

Scope and transitional provisions

Topic	Article reference	Description	Issue	Action
Existing modules outside RfG 1.0 scope	Art. 3(2)	The draft does not expressly exclude existing power-generating modules that did not fall within the scope of Regulation (EU) 2016/631.	Without an express exclusion, facilities that were outside the scope of RfG 1.0 may become subject to RfG 2.0 despite their existing status.	CLARIFY Add a new point (e) excluding 'existing power-generating modules which were not falling within the scope of application of Regulation (EU) 2016/631'.
Protection of projects already under development	Art. 61(3)	The transitional provisions retain RfG 1.0 only for modules already within its scope and modules connected within 24 months after entry into force.	The purchase of the main generating plant has been removed as a criterion, although it is a decisive and essential timeline element for nuclear projects. This creates an additional risk for projects already launched on the basis that RfG 1.0 would apply. Connection to the network is also a less precise project milestone than conclusion of the connection agreement.	CLARIFY Article 61(3)(b) should refer to the conclusion of a connection agreement within two years after entry into force and should retain the criterion of a final and binding contract for the purchase of the main generating plant within that period.

Technical requirements

From a general standpoint, any change in the capabilities of generation facilities regarding voltage behaviour, frequency behaviour and new control functionalities is likely to have significant implications for equipment design and protective devices. The benefits for overall system security therefore need to be demonstrated in each case, given the costs those requirements are likely to entail. The future Regulation should ensure that the requirements adopted remain compatible with the constraints of all generation technologies expected to make a sustainable contribution to the European electricity system. If the retro-active application were triggered, we have challenges in existing assets with the following requirements in particular:

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Remote active power control	Art. 15 par. 11, Art. 15(13) and Art. 27(1)	Requires power-generating modules and storage modules to react to external signals without undue delay. Article 15(13) allows the relevant system operator to require remote	This is problematic for assets where immediate active power changes may conflict with nuclear safety rules or plant-protection requirements. For nuclear power plants, giving the system operator the possibility to remotely decrease active power would affect the functioning of the	OBJECT Make clear that asset protection and nuclear safety constraints prevail over external active-power instructions. For Type D synchronous power-generating modules, Article 27(1) should exempt the requirements in Articles 15(11) and 15(13), in line

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		reduction of active power output.	primary circuit, as defined in the general operating rules, and conflict with nuclear safety principles.	with the 2023 ACER recommendation.
Autonomous grid connection	Art. 16 and Art. 27(1)	Requires power-generating modules to be capable of autonomously connecting to the network within specified voltage, frequency and active-power-gradient ranges.	This is not feasible for nuclear power plants. A requirement for autonomous connection without the plant operator being in charge is not aligned with nuclear safety principles.	OBJECT Type D synchronous power-generating modules should be exempted from Article 16 through Article 27(1).
Type D exemptions and voltage-dip requirement	Art. 22(3), Art. 24(3), Art. 27(1) and Table 14.1	Article 27(1) makes Type D synchronous modules subject to lower-category requirements but omits Article 22(3) on robustness and includes Article 24(3) on the voltage-dip requirement.	This appears to be a cross-reference error. Type D assets should remain subject to the robustness requirement in Article 22(3), while the exemption should concern Article 24(3), as under RfG 1.0. In addition, fixing Urec2 at 0.85 pu tightens the previous range.	OBJECT Amend Article 27(1) to include Article 22(3) and exempt Type D synchronous modules from Article 24(3). Restore the Urec2 range of 0.85-0.9 pu in Table 14.1.
Voltage ranges and endurance requirements	Art. 20 par. 2c / Table 6	Sets voltage ranges and minimum time periods during which modules must remain connected, including for Nordic and other synchronous areas.	The expanded requirements may be challenging for existing synchronous generators. In the Nordic system, certain voltage management assumptions may imply equipment such as on-load tap changers that are not standard practice for assets connected to the transmission system. This could impose significant cost and design implications.	CLARIFY Allow regional reference values and asset-specific solutions agreed between the system operator and facility owner, subject to regulatory oversight.
Reactive power below Pmax	Art. 26 par. 2b	Requires synchronous modules to provide reactive power capability below maximum capacity according to the alternator capability diagram.	The current drafting may make the requirement below Pmax stricter than the requirement at Pmax. This could penalise assets that install larger generators than strictly required, because the additional capability becomes a mandatory obligation rather than a voluntary capability.	CLARIFY Ensure reactive power requirements below Pmax do not exceed the intended capability requirement at Pmax and do not create perverse investment incentives.

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Voltage withstand duration for existing machines	Art. 20 / Table 6	Requires operation for defined periods at specified voltage ranges.	For existing synchronous machines, the 60-minute requirements may be particularly challenging and may effectively require overdimensioning. This could generate costs without clear proportional system benefit.	CLARIFY Review the duration requirements and ensure that existing machines are not forced into disproportionate retrofit obligations.

Derogations and fleet-wide solutions

Given the large number of assets potentially affected, derogation processes should also allow for asset-class or fleet-wide solutions where common technical issues arise, rather than requiring individual derogation requests for each installation. This would be consistent with the objective of efficient implementation and particularly important where nuclear safety requirements or other technology-specific considerations apply.

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Derogation eligibility	Art. 55	Allows regulatory authorities to grant derogations at the request of facility owners or prospective owners.	It is unclear whether system operators can request derogations for a class or fleet of assets. In some situations, a system-operator-led fleet-wide derogation may be more efficient than requiring each individual asset owner to file separately. The former possibility for relevant system operators or TSOs to request derogations for classes of power-generating modules connected or to be connected to their network has been removed.	CLARIFY Allow TSOs or relevant system operators to request derogations for groups of assets where this is more efficient and proportionate. Article 55 should be aligned with Recital 31, which states that system operators should be allowed to propose derogations.
Derogation procedure and CBA burden	Art. 57	Requires asset owners to provide detailed reasoning, supporting documents, CBA and demonstration of no adverse cross-border effects. Article 57(4) requires TSOs and relevant system operators to assist in preparing the cost-benefit analysis and	The burden on individual asset owners may be excessive. Much of the relevant system information needed for the CBA and cross-border assessment sits with the system operator. Article 46 is written primarily for TSO/DSO-led assessments and is not easily transferable to individual asset owners.	CLARIFY Clarify that system operators must actively support or prepare the system-related parts of the assessment, including CBA inputs and cross-border impact analysis. Retain this support obligation and clarify that it covers all system-

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		provide the necessary data.		related evidence needed for the assessment.
Regulatory principles	Art. 7	Requires proportionality, non-discrimination, transparency, cost optimisation and consideration of nuclear safety rules and local system needs.	This article is positive and provides important safeguards for implementation. Recognition of nuclear safety rules, lowest total cost and proportionality is particularly important for existing conventional and nuclear assets.	KEEP Retain and ensure these principles have practical effect when requirements are specified by system operators.
National adaptation and derogations	Recital 31	Recognises the possibility to adapt requirements to local circumstances and to grant derogations where justified.	This flexibility is important and should be welcomed. It provides necessary room to account for local system characteristics, technology-specific constraints and practical implementation challenges. The effect of a plant of the same capacity can vary significantly across synchronous areas and local grids, depending on the electrical size of the system, grid characteristics and generation mix.	KEEP Retain and ensure that flexibility is operationalised clearly in the substantive provisions. The ranges proposed in Table 1 and the discretion of national TSOs, under regulatory oversight and following consultation, should therefore be retained.

Transmission charges for generators (G-charges)

At the Electricity Market Expert Group meeting of 2 July 2026, the European Commission announced under AOB its intention to propose the deletion of Annex B to Regulation (EU) No 838/2010 at the next Expert Group meeting. Although separate from the RfG revision, this issue directly affects the regulatory and investment framework applicable to generators.

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Proposed repeal of the cap on generator transmission charges	Annex B to Regulation (EU) No 838/2010	Annex B currently limits transmission charges for generators connected to the transmission network. Its deletion would give national regulatory authorities full discretion when national tariff	nucleareurope considers the proposed deletion highly problematic. Removing the cap could increase injection charges beyond current levels, regulatory uncertainty and costs for existing generation assets and future investments, including nuclear. Broad	OBJECT The Commission should not proceed with the proposed deletion. Removal of the cap should be considered only after a full impact assessment and stakeholder consultation and once a robust EU-level framework is in place. That framework must ensure predictable, transparent,

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		methodologies are next reviewed.	national discretion could also cause significant divergence in G-charge levels across Europe, undermining a level playing field for generators and investment.	proportionate and non-discriminatory charges and prevent excessive or unjustified divergence between Member States.