Methane Slip and Verifiability in EU Maritime Regulation

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LNG carrier at sea. Photograph: Daniel Schuh / Unsplash.

Dryade v Commission and the relationship between the EU Taxonomy and FuelEU Maritime

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Key insights

> FuelEU emissions data can support Taxonomy verification when their legal significance is specified. A calculation factor cannot itself determine the performance required for Taxonomy alignment.

1. Introduction

On 30 September 2026, the General Court partially annulled the Commission decision refusing a request for internal review of technical screening

criteria in the EU Taxonomy. The challenge in Dryade VZW and Others v European Commission succeeded on one point: the absence of a threshold for methane slip in a safeguard for gas-fuelled ships. The delegated act was not annulled. The judgment did not exclude gas-fuelled maritime activities from Taxonomy alignment (*Dryade v Commission*, 2026, para. 350 and operative part). Its importance lies in the relationship between the wording of the screening criterion and the evidence used to prove compliance.

What does Article 19(1)(k) of the Taxonomy Regulation mean when the verification of a qualitative maritime criterion relies on quantitative methods laid down in the FuelEU Maritime Regulation (FuelEU)? This article argues that regulatory borrowing needs an express link between the emissions evidence and the performance necessary to comply with the Taxonomy. FuelEU can lay down methods of measurement and default calculation factors; the Taxonomy must define the environmental performance that these tools are meant to demonstrate. The distinction is relevant in any case where operational emissions records are used to support investment classifications: the data can be reliable without answering the main legal question.

2. The maritime safeguard and its statutory limits

Taxonomy alignment depends on the cumulative conditions laid down in Article 3 of Regulation 2020/852, including the relevant technical screening criteria. Sections 6.10(e) and 6.11(d), introduced by Delegated Regulation 2023/2485, provide an alternative route to alignment from 1 January 2026 where zero direct carbon dioxide emissions are not technologically and economically feasible. The conditions concern, among other things, the ship's capability to use alternative fuels, its energy efficiency and its capability to connect to shore power. Gas-fuelled ships must show the use of "state-of-the-art measures and technologies to mitigate methane slippage emissions" (Commission Delegated Regulation (EU) 2023/2485, Annex I, points 14-15). The criterion relates to the release of methane without combusting it, which can counterbalance the benefits of using gas to power ships.

The Commission's margin of discretion is constrained by statutory requirements. Article 19(1) requires quantitative thresholds where possible, otherwise qualitative criteria (c); usable criteria facilitating verification (k); and, where appropriate, reliance on Union methodologies and legislation (d) (Regulation (EU) 2020/852). These provisions allow technical flexibility and regulatory borrowing. Users must be able to establish compliance. Zetzsche and Anker-Sørensen (2022, pp. 67-68) explain why data are useful only within sufficiently defined reporting frameworks. The present question goes one step further: reliable data still require a legal benchmark.

3. The reach of the judgment

Identifying available technologies and verifying their performance produced distinct outcomes in Dryade. The Court accepted that the technical literature sufficiently defined the available technologies, which the applicants could not displace. It considered the Commission's defence of the missing threshold contradictory. The Commission had defined the safeguard as qualitative and had used the quantified performance of methane slip under the FuelEU to verify it. Paragraph 312 states that when verification requires compliance with emissions thresholds, the criterion must either contain them or refer to rules that do (*Dryade v Commission*, 2026, paras. 310-313).

The Commission's reply to the request for internal review reveals the underlying regulatory choice. The Commission invoked forthcoming guidance, FuelEU defaults and EU ETS pricing to justify the safeguard (Directive 2003/87/EC, as amended, Annex I). It acknowledged that a percentage reduction against FuelEU defaults was possible but preferred investment guidance (European Commission, 2024, Annex II, paras. 337-344 and table on p. 107). Measurement methods could not fill the gap left by the Commission's choice.

The procedural context nevertheless restricts the scope of the judgment. The Court reviewed the decision refusing the request for internal review within the grounds properly brought in the Aarhus procedure. It maintained its deference to the Commission's complex technical assessment. Some parts of the broader challenge to the criteria were inadmissible and the challenge to the effectiveness of the criteria failed (*Dryade v Commission*, 2026, paras. 30-36, 324-327 and 334-349). The judgment does not establish a general rule requiring numerical thresholds for every safeguard. Its scope depends on the verification mechanism invoked by the Commission.

4. What FuelEU's numbers establish

FuelEU establishes the average greenhouse gas intensity of the energy used on board a ship per year through a lifecycle calculation. The methane slip enters the calculation through the non-combusted fuel coefficient, Cslip, with different default values assigned to each engine technology in Annex II. The default values include 3.1% for medium-speed dual-fuel Otto engines and 0.2% for slow-speed dual-fuel Diesel engines. The actual tank-to-wake emission factors certified through laboratory tests or direct emission measurements can replace the default factors except for the fossil-fuel carbon dioxide factors under Article 10(5) (Regulation (EU) 2023/1805, arts. 4 and 10, Annexes I-II). For methane slip specifically, however, the Commission's October 2025 guidance states that laboratory testing is not envisaged for the determination of methane emission factors or methane slip values (European Commission, 2025, p. 3). These calcula-

tion rules quantify emissions; the annual intensity limit sets the required performance.

A default factor serves a different function from a maximum permissible methane-slip level. An engine can be assigned the calculation coefficient without that coefficient being an approval of its environmental performance. Showing that the actual value is lower than the default strengthens the evidentiary basis of the calculation without necessarily proving that the reduction meets the Taxonomy safeguard. Taking the default as a sustainability threshold introduces another normative decision that needs justification in light of the technological neutrality, conclusive scientific evidence and equal treatment requirements of the Taxonomy (Regulation (EU) 2020/852, art. 19(1)(a), (f) and (j)).

The October 2025 guidance explains what can be done at the evidentiary level. It provides for engine load monitoring, documentation of values of methane slip and verification, while making clear that it is non-binding (European Commission, 2025, pp. 2-6). These tools make engine performance more credible and comparable. Their technical relevance does not mean that they can replace the screening criterion. Because the guidance was published later, it cannot retroactively complete the criterion.

A terminological problem arises in paragraph 311: the Court calls FuelEU Annex II values thresholds, although Cslip values are default calculation factors. This does not undermine the Court's finding on verifiability. The referring provision must clarify whether those values are ceilings, reference points for a defined percentage reduction or calculation inputs. Those values alone cannot determine what performance satisfies the Taxonomy safeguard.

5. Making regulatory borrowing legally determinate

The strongest case for borrowing the methods used in FuelEU is pragmatic. Requiring separate measurements of the same emissions could raise costs and create inconsistent records without adding environmental oversight. A closed list of permitted technologies could become obsolete or fail to encourage better technologies. Technical literature lists several methods for mitigation (Huonder & Olsen, 2023). Article 19(1)(d) provides that, where appropriate, the criteria should build on Union methodologies and take account of relevant existing Union legislation (Regulation (EU) 2020/852, art. 19(1)(d)). The aim should be a functional link between regimes that can be used while preserving different roles.

There must be some determination as to the level of performance that will suffice. A fixed ceiling would be determinate, but its level would require scientific-technical justification. A required percentage reduction below each engine's baseline factor would accommodate different technologies, but identical percentage reductions from different baselines would leave different residual emissions. The percentage approach envisaged by the

Commission would thus require justification for the differentiation it would produce; mere measurability could not supply the substantive compatibility with the Taxonomy that would be required.

Explicit reference can avoid parallel measurement, but its temporal dynamics matter. FuelEU permits updating emission factors for scientific knowledge and international or Union developments (Regulation (EU) 2023/1805, art. 4(4)). A Taxonomy benchmark dynamically linked to those factors could change alignment following an accounting update. Alternatively, fixing the benchmark to a specific version could perpetuate an outdated baseline. The better design specifies the borrowed methodology and required performance separately, with a mechanism for reviewing their relationship. The judgment leaves the design question open.

Emissions pricing alone cannot supply the safeguard's performance benchmark. The Commission argued that pricing encourages methane mitigation (European Commission, 2024, Annex II, para. 343). Vander Putten (2025, p. 41) stresses the political determinations that can lie behind what appear to be technical classifications. Without an explicit benchmark, verifiers would make that determination themselves. Specifying required performance preserves technical judgment without delegating regulatory policy to verifiers.

6. Consequences for maritime investment

For a shipowner seeking to support an assertion of Taxonomy compatibility, an engine certificate and a FuelEU compliance document serve different evidential ends, whose relevance will depend on the specific condition, method of measurement, and time-period. Due diligence for an investor in, or lender to, a ship should link the relevant maritime criterion to the evidence that supports it. *Dryade* imposes no additional documentation requirement. Meeting the methane slip safeguard leaves Article 3 open for confirmation.

7. Conclusion

Where thresholds for emissions are the basis of verification, Article 19(1)(k) requires that they be stated, or expressly incorporated by reference, in the criterion (Regulation (EU) 2020/852, art. 19(1)(k); *Dryade v Commission*, 2026, para. 312). Dryade imposes no general requirement as to numerical thresholds for environmental criteria. Its significance for maritime regulation is that it requires a determinate link between the evidence adduced and the performance required. The calculation factors used in FuelEU do not by themselves fill the gap. Any reliance on them would need to make clear the legal role they are to play within the Taxonomy safeguard, and provide justification for the benchmark that results. Otherwise, greater precision in measurement can exist alongside uncertainty about the performance on which investment decisions are to rest.

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