EUROMOT

The European Association of Internal Combustion Engine and Alternative Powertrain Manufacturers

POSITION PAPER

Comments on Setting a Renewable Energy Framework for the Decade Ahead

13 April 2026

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COMMENTS ON SETTING A RENEWABLE ENERGY FRAMEWORK FOR THE DECADE AHEAD

13 APRIL 2026, BRUSSELS

EUROMOT, the European Association of Internal Combustion Engine and Alternative Powertrain Manufacturers, welcomes the European Commission's initiative to consult stakeholders through the call for evidence *"Setting a renewable energy framework for the decade ahead"* [1]. Achieving the EU's 2040 renewable energy and climate objectives will require not only continued expansion of renewable energy sources (RES), but also decisive action to ensure that electricity and heat systems can reliably integrate high shares of variable renewable generation and maintain a stable electricity grid.

Following a detailed analysis of the Commission's Impact Assessment (IA), EUROMOT notes that a major challenge already observed in today's electricity markets is insufficiently addressed: **the lack of adequate supply-side flexibility to manage prolonged periods of low renewable output.** This issue is developed below in line with the structure of the IA.

Key recommendations:

- **Explicitly recognise supply-side flexibility as a key enabler of renewable energy integration**, alongside grid expansion, energy storage and demand-side response, particularly for longer periods of low wind and solar generation.
- **Address the imbalance in the Renewable Energy Directive**[2A] **framework**, which currently focuses predominantly on surplus renewable electricity management, while underestimating the need for supply-side dispatchable, fast-responding generation in low-RES production scenarios.

- **Acknowledge the role of supply-side flexible, dispatchable power generation technologies**—including single-cycle and cogeneration engine plants—in stabilising the electricity system and enabling higher and faster penetration of intermittent renewable electricity.
- **Acknowledge the role of dispatchable power generation technologies and their ancillary services they can provide for stabilizing the grid by providing inertia, frequency control, voltage control or black start capaiblity.**
- **Ensure policy coherence across EU energy legislation**, taking into account that flexible generation is already recognised in the Energy Efficiency Directive (EED) (Recital 58) [2B], but remains insufficiently reflected in the Renewable Energy Directive.
- **Provide a predictable and technology-neutral framework for investment in flexible supply-side generation assets**, including hydrogen-ready and renewable-fuel-capable power plants, as a necessary complement to renewable deployment and storage.

A. Political context, problem definition and subsidiarity

The Impact Assessment correctly identifies that the current growth rate of renewable energy sources will be insufficient to meet the required RES shares, and highlights key challenges such as grid constraints, limited flexibility, and increasing hours of low or negative electricity prices driven by non-dispatchable renewable generation.

However, the analysis places a strong emphasis on surplus renewable electricity production and implicitly assumes that grid expansion and energy storage will be sufficient to address periods of low renewable generation. In practice, these measures alone cannot guarantee system adequacy during extended periods of low wind and solar output.

Recent experience confirms this. Germany faced prolonged "*Dunkelflaute*" periods in 2024[3,4], characterised by very low wind and solar generation, leading to high price volatility and increased reliance on dispatchable backup generation. As acknowledged by energy analysts, fossil-based supply-side generation currently closes this gap and, in the future, hydrogen-ready and renewable-fuelled plants will be needed to maintain greenhouse-gas-neutral electricity supply.

Despite this reality, the contribution of thermal, supply-side dispatchable generation to grid stabilisation and renewable integration is not adequately recognised in the Renewable Energy Directive[2A]. Fast-response reciprocating engine power plants can be started and shut down within minutes and do not need to operate at part load to remain flexible. During periods of high renewable generation, they can remain offline, saving fuel and avoiding unnecessary CO_2 emissions. This enables faster and more cost-effective integration of intermittent renewables into the electricity system.

The importance of such operational characteristics is already acknowledged in recital (58) of Directive (EU) 2023/1791 (EED), which highlights the role of different inertia and start-up times in improving system efficiency. A comparable recognition is missing from the Renewable Energy Directive framework.

B. Objectives and policy options

The IA states that the updated framework should accelerate cost-effective RES investments, strengthen the enabling framework for RES integration into the electricity system, improve energy system integration, and ensure predictability of the energy transition pathway.

In this context, the Renewable Energy Directive[2A] currently frames grid balancing largely in terms of **energy storage, demand-side response, electrification of transport, and sector coupling**, as reflected in several recitals and provisions. While these measures are important, they primarily address situations of surplus renewable electricity and do not sufficiently account for **low-RES production scenarios**.

As a result, the potential of **grid-balancing** thermal **single-cycle and cogeneration engine plants**—which can rapidly respond to fluctuations in renewable generation and demand—is overlooked. These plants directly support RES integration by providing supply-side flexibility when intermittent renewable output is low, thereby enabling a faster and more economical expansion of wind and solar capacity.

In fact, the Renewable Energy Directive[2A] already allows electricity generation from Renewable Fuels of Non-Biological Origin (RFNBOs), and the use of RFNBOs is not limited anymore only to the transport sector. Consequently, dispatchable thermal power plants fuelled by RFNBOs or hydrogen can make a significant contribution to decarbonised electricity supply and grid balancing. Especially cogeneration plants using renewable fuels can achieve total efficiencies of 90% and more and achieve significantly more fuel efficiency compared to the use in the transport sector. Recital (11) of Renewable Energy Directive does not fully reflect this legal and technological reality. Taxonomy [5A, 5B], activity 4.7 "'*Electricity generation from renewable fuels of non-biological origin (RFNBO)*' is also in line with this.

EUROMOT therefore considers that **supply-side flexible solutions**, including modern gas-fired (and future hydrogen- or renewable-fuelled) power and cogeneration plants, should be explicitly recognised and encouraged within the Renewable Energy Directive framework. A correction is needed to ensure a cost-effective, reliable, and timely transition towards the EU's 2040 objectives and beyond.

C. Likely impacts

The IA anticipates positive impacts from the updated Renewable Energy Directive, including accelerated RES deployment, expanded storage, lower system costs, and improved energy security. However, without sufficient attention to supply-side flexibility, these benefits risk being undermined.

Experience from recent low-renewable periods demonstrates that energy storage and demand-side flexibility alone cannot guarantee uninterrupted power supply or prevent extreme price spikes. **Secure, dispatchable, and flexible supply-side generation capacity remains indispensable**, especially during prolonged periods of low wind and solar availability.

Flexible, renewable-enabling gas engine power plants already provide this function today and can transition towards sustainable fuels over time. Overlooking their role in the Renewable Energy Directive framework creates a structural gap that may slow down RES deployment and increase overall system costs.

D. Better regulation instruments

The consultation aims to assess the current implementation and impact of the EU RES framework and explore possible improvements. In this context, EUROMOT stresses that **electricity supply-side flexibility must be explicitly integrated into the regulatory framework**.

Reciprocating internal combustion engines (RICEs) have demonstrated high adaptability to both technological change and a wide range of fuels, including biofuels, hydrogen and synthetic fuels. Beyond fuel flexibility, their **operational flexibility**, rapid start-up, fast load response and quick shutdown, allows them to deliver critical grid-balancing and renewable-enabling services[6].

As intermittent renewable electricity shares increase, the ability to maintain grid stability and reliability at competitive prices becomes increasingly important. Battery storage alone cannot fulfil this role over extended periods[7]. Flexible engine-based power plants therefore represent an essential complement to renewable generation and storage.

EUROMOT calls for the Renewable Energy Directive framework to be adjusted accordingly, so that **supply-side flexible solutions** are properly recognised and incentivised. This is necessary to secure a **reliable, cost-effective and accelerated transition** towards the EU's 2040 climate and renewable energy ambitions and beyond.

References

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THIS IS EUROMOT

EUROMOT, the European Association of Internal Combustion Engine and Alternative Powertrain Manufacturers, represents the key manufacturers of internal combustion engines and alternative powertrains installed in industrial non-road mobile machinery, marine and stationary applications that are operating in Europe and worldwide.

Founded in 1991, we provide an unparalleled heritage and hub of expertise for businesses, authorities, regulators, and public stakeholders worldwide. In partnership with major sector associations and institutions, it is our mission to drive smart regulation and sustainable innovation.

Delivering dependable power for society at high energy conversion efficiency with low emissions remains a key objective of EUROMOT member companies. EUROMOT asserts internal combustion engines and alternative powertrains are a key enabler to address the additional societal need for decarbonisation across multiple industry sectors. This can be achieved by continuing to advance the development of highly efficient energy conversion systems capable of operating on low and net-zero Greenhouse Gas (GHG) energy carriers.

Headquartered in Brussels, EUROMOT is a European interest group, and our profile is registered in the EU Transparency Register under the identification number 6284937371-73. We have been granted consultative status at the United Nations IMO (International Maritime Organization, London) and United Nations ECE (Economic Commission for Europe - Geneva) and other relevant stakeholders.

OUR MEMBERS

35 YEARS

EUROMOT aisbl, Rue Joseph Stevens 7, 1000 Brussels, Belgium
A European Interest Representative · TVA BE 0599.830.578 · RPM Brussels
EU Transparency Register Id. No. 6284937371-73

A Non-Governmental Organisation in consultative status with the UN Economic Commission for Europe (UNECE) and the UN International Maritime Organisation (IMO)

PRESIDENT
Dr Holger Lochmann

GENERAL MANAGER
Dr Peter Scherm

Contact Us

EUROMOT aisbl

The European Association of Internal Combustion Engine and Alternative Powertrain Manufacturers

Aliénor Poher
Senior Manager Regulatory Affairs and Sustainability

+32 (0) 28 93 21 42

Rue Joseph Stevens 7
1000 Brussels - Belgium

alienor.poher@euromot.eu

www.euromot.eu

TVA BE 0599.830.578

RPM Brussels

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