

Stress-Testing Europe's Path Towards Commercial Fusion Energy Deployment – Aligning EU and National Approaches

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To: Commissioner Jørgensen & Commissioner Zaharieva

Europe stands at a pivotal moment in the development of commercial fusion energy. While Europe remains a global scientific leader, international competitors are rapidly implementing industrial strategies designed to commercialise fusion. Without a clear industrial vision, Europe now risks lagging behind and forfeiting its hard-won competitive advantage.

The forthcoming European Fusion Strategy represents a unique opportunity to convert Europe's research excellence into industrial leadership. As signatories of this letter, [Clean Air Task Force \(CATF\)](#) and the [Fusion Industry Association \(FIA\)](#) welcome the Commission's work in preparing the Strategy and offer the following recommendations. These reflect the outcomes of a recent stakeholder dialogue hosted by FIA and CATF under the European Sustainable Energy Week (EUSEW) 2026 in Brussels, bringing together **representatives from 25 industry, public institutions, and research organisations** to discuss the opportunities and priorities for the future of fusion in Europe.

1. Immediate Measures Towards a European Fusion Industry Policy

The upcoming EU Fusion Strategy must establish an industrial policy framework for fusion that provides long-term certainty, predictability, and confidence for investors and industry.

Europe is currently facing intense international competition from the United States and China. These jurisdictions have already put in place strategies to develop Fusion as an industrial sector. To remain competitive, Europe must mobilise all available strengths, including its industrial capabilities, scientific excellence, infrastructure, facilities, and expertise.

A clear and predictable framework is essential to support companies on the pathway towards commercial deployment and grid connection. The EU Fusion Strategy should therefore clearly address the following aspects:

- Establish commercial fusion deployment as an explicit European objective and define a credible pathway for commercialisation in the 2030s.
- Recognise fusion as a strategic industrial sector capable of contributing significantly to Europe's future energy system and growing electricity demand.
- Create a merit-based, milestone-driven financing framework that rewards demonstrable progress, de-risks first-of-a-kind projects and systematically attracts private capital.
- Maintain technological neutrality, enabling multiple fusion approaches to mature and compete on merit.
- Develop a fusion-specific regulation, distinct from fission, that enables safe and fast market entry.

2. Regulatory Clarity, Codes and Standards

Regulatory clarity is one of the most urgent prerequisites for the commercial deployment of fusion energy in Europe.

Within the fusion community, there is broad agreement that Europe should establish a regulatory pathway for fusion that is distinct from nuclear fission and proportionate to fusion's significantly different risk profile. The objective must be to enable the safe, timely and predictable licensing of commercial fusion facilities while maintaining the highest safety standards.

The EU Fusion Strategy should support the development of a common European regulatory approach for fusion, providing consistency and predictability across Member States and reducing regulatory fragmentation. This process should build on existing national and international experience and be developed through a structured, iterative dialogue between regulators, industry, and technical experts. Dedicated platforms for knowledge exchange, particularly concerning licensing experiences and regulatory best practices, would play an important role in supporting regulatory convergence.

The European fusion strategy should also include the development of codes and standards as a key pillar of industrial competitiveness. Harmonised standards will not only accelerate manufacturing and supply chain development but also underpin licensing frameworks, facilitate market entry, and enable the deployment of fusion power plants across Europe.

The overarching objective should be the safe and timely industrialisation of fusion across Europe.

3. Public-Private Partnerships, Financing and Governance

The successful commercialisation of fusion energy in Europe will depend on sufficient access to capital, effective Public-private partnerships (PPPs), and governance structures that support deployment rather than create additional complexity.

PPPs should serve as strategic vehicles for accelerating commercial deployment rather than solely supporting research activities. Future partnerships should support the full industrial value chain, including enabling infrastructure, demonstration facilities, supply chains, manufacturing capabilities and workforce development.

Regarding PPPs, recommended actions to maximise impact include:

- Supporting industrialisation and deployment and moving beyond a purely research-focused model. Objectives of those programs should be set up based on gaps identified by the developers.
- Maintaining a technology-neutral approach that allows competing concepts to progress on merit.
- Supporting not only R&I but also enabling infrastructure, demonstration activities, supply chains, and industrial capabilities.
- Operating under strong, technically driven governance structures with clear priorities and limited political interference.

- Being complementary and coordinated across European, national, and regional levels in order to avoid duplication and maximise efficiency.

Strong coordination between existing and future national initiatives and European programmes was identified as essential.

Financing remains one of the most significant challenges facing fusion commercialisation. The European Fusion Strategy should establish a coherent financing architecture that supports companies across the entire development pathway—from technology validation and demonstration projects to first-of-a-kind (FOAK) plants and commercial deployment.

Public funding should play a targeted role in de-risking critical technology and deployment milestones, thereby reducing financing barriers and attracting private investment at scale.

Recommended actions include:

- Adopting milestone-based funding mechanisms that reward measurable technical and commercial progress.
- Allocating public support on the basis of merit and performance rather than technology preferences.
- Designing financing instruments that systematically crowd in private capital.
- Establishing a financing continuum that supports companies from R&D through commercial deployment.
- Providing dedicated support for first-of-a-kind facilities and enabling infrastructure.

Governance structures should be designed to minimise fragmentation and ensure effective coordination across European, national and regional initiatives. Fragmentation was widely recognised as detrimental to industrial development and investment. Recommended actions for a future governance model include:

- Creating mechanisms to ensure systematic participation of the private sector in strategy setting and strategy implementation.
- Creating effective channels for dialogue between policymakers, regulators and industry, particularly fusion technology developers.
- Aligning European, national and regional initiatives behind shared commercialisation objectives.

The overarching objective should be to create a European fusion ecosystem capable of bringing commercially viable fusion power plants to market and establishing Europe as a global leader in fusion energy deployment.

4. Workforce Development and Knowledge Exchange

A future commercial fusion industry will require a dramatic expansion of Europe's workforce and skills base.

The transition from research to industrial deployment will require workforce growth by several orders of magnitude. Europe must therefore begin preparing now for the future labour needs of a commercial fusion industry.

Recommended actions include:

- Establishing a comprehensive European fusion workforce strategy.
- Expanding educational and vocational programmes dedicated to fusion technologies.
- Increasing access to hands-on training opportunities and educational fusion devices.
- Supporting regional innovation and technology transfer hubs.
- Strengthening outreach to students, policymakers, industry, and the general public.

We welcome the Commission's leadership in shaping Europe's fusion future and stand ready to support the development and implementation of an ambitious/comprehensive European Fusion Strategy.

Yours sincerely,



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