

15 October 2025

To: Ms Ursula von der Leyen, President of the European Commission and Mr Dan Jørgensen, European Commissioner for Energy and Housing

Subject: Delivering an Effective Fusion Strategy for Europe

Dear President von der Leyen,
Dear Commissioner Jørgensen,

Europe has long led in fusion energy research with its world-class infrastructure, talent, and industrial capacity. Fusion energy is the type of industry with breakthrough innovation potential which last year's Draghi report emphasised as essential for European productivity growth. The clean, firm and abundant power that fusion energy could provide will be essential for Europe to meet its decarbonisation goals, secure energy independence, and drive Europe's innovation agenda, particularly for powering '*Industry 5.0*' by enabling abundant power to support key sectors such as semiconductors, AI, quantum computing, and advanced manufacturing.

It is precisely because of these economic stakes, combined with advancements in enabling technologies making fusion power plants more economical, that fusion has transformed from a research endeavour into a global commercial race. The US, UK, China, and Japan have already committed billions to private-sector fusion pilot plants. Although Europe holds key advantages in the global race for fusion energy, its fragmented governance, an outdated R&D agenda, a lack of regulatory clarity, and limited Public-Private Partnership (PPP) opportunities create barriers for Europe's fusion energy ecosystem to be globally competitive. Without urgent action, Europe risks becoming a follower in a field it helped pioneer.

We, the undersigned organisations, firmly believe that unlocking fusion's potential requires the EU to **move decisively from a fragmented, research-centric approach to a comprehensive, commercially driven industrial strategy** directed towards building a genuine European fusion energy sector, prioritising the deployment and construction of fusion power plants. As the Commission prepares the EU's first-ever Fusion Strategy, it is essential to get its foundation right. We recommend the following key priorities:

- **Make commercial deployment the core objective:** The Strategy must clearly identify Europe's main goal: enabling private sector-led net energy fusion demonstration plants by the 2030s.
- **Shift to a Key Enabling Technology (KET)-based roadmap:** Europe must move beyond its sequential fusion roadmap toward a KET-based strategy prioritising commercially relevant R&D. This will align public funding with industrially relevant projects as well as enable public research to close technology gaps for

both commercial fusion power plants and public sector DEMO projects, without bias towards the latter. A KET-based approach would promote technical diversity, flexibility and competition.

- **Retrofit public sector institutions including labs and other research facilities to support near-term commercialisation under a KET-based roadmap.** Public sector institutions should serve the core mission of accelerated commercialisation, and their capabilities should be utilised to close science and technology gaps relevant to commercial deployment where possible.
- **Streamline governance in the European fusion sphere.** The European fusion ecosystem is hampered by overlapping and competing governance structures. We recommend expanding the role of Fusion for Energy (F4E) Joint Undertaking (JU) to fully utilise its vested functions to operate as the singular public governance body coordinating research, industrial engagement, and commercialisation efforts across Europe, incorporating the private sector—both start-ups and industrial suppliers—as co-leaders in its board, decisions and priorities.
- **Explicitly recognise fusion as a strategic clean technology in EU legislation.** Including fusion energy in the EU's Green Taxonomy and the Net Zero Industry Act – complete with a list of components - would ensure that it receives appropriate policy and financial support enabling it to contribute to energy security and decarbonisation goals in a timely manner.
- **Distinguish fusion energy from fission regulation at the EU level due to their fundamental differences.** Europe should distinguish fusion energy from fission regulation at the EU level to generally align Member States whilst preserving flexibility of national implementation. The role of the FELEX team at Fusion for Energy, which is a joint working group with industry, as an international regulatory body on fusion provides a good opportunity for Europe to remain at the forefront of fusion energy policy coordination.
- **Establish a cohesive Public-Private Partnership (PPP) programme as soon as feasible.** While other regions have launched targeted PPPs to accelerate private fusion development, Europe remains without a dedicated mechanism to anchor public investment in early-stage fusion companies. This absence creates structural financing barriers for fusion energy start-ups as compared to their competitors abroad. A robust PPP framework would enable cost-sharing, expand access to shared infrastructure, and align public research with private sector needs. It is a prerequisite for translating Europe's strong R&D base into a globally competitive fusion industry. We recommend that an expanded F4E be given the mandate to immediately launch a substantive fusion energy **PPP** programme through the Innovation Partnership mechanism already in its mandate. This would **immediately** enable cost-sharing, expand access to shared infrastructure, and align public research with private sector needs. Whatever the mechanism, the Commission must prioritise speed in establishing a PPP programme as soon as possible for European fusion energy start-ups.

- **Establish and define IP Rights in PPPs that encourage competitiveness.** IP management frameworks should be set up to favour, where possible, the private sector. This will prevent innovation from becoming siloed and enable technology transfer into the marketplace. F4E's Technology Development Programme could serve as a model for a larger programme.

We, as representatives of the European fusion ecosystem (e.g. industry-, civil society, academia, research organisations, etc), believe that these actions would create the foundation for a world-leading European fusion industrial strategy, one that builds on Europe's strengths while removing the barriers to progress. The window for action is open, but it will not remain so forever. Global competitors are advancing and rapidly establishing their own unique supply chains, mobilising billions of public funding that attracts private capital away from Europe. Without sustained industrial investment and long-term commitments, Europe risks losing its hard-won leadership after decades at the forefront of fusion development.

Europe can convert its fusion energy expertise into a commercial industry capable of reigniting Europe's engine for growth, but only if it acts decisively.

With this letter, we also emphasise that industry must be recognised as an equal partner and fully integrated into the EU's long-term fusion strategy.

Dear Commissioners, the missing element is clear: strong political commitment and targeted policies to transform fusion's potential into commercial reality. We count on your leadership to deliver a timely, effective, and future-proof EU fusion industrial strategy.

Sincerely,

The undersigned Organisations



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