# INFUSE in the context of Fusion Energy Sciences Public-Private Partnerships

Innovation Network for Fusion Energy FY2026 Workshop

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# Public-Private Partnerships (PPPs)

## Why PPPs?

- Leverage decades of public support for fusion R&D and synergy with existing activities
- Greater available resources (public + private) to achieve objectives & accelerate timelines
- Stakeholders are committed & aligned by sharing cost, risk, and expertise.
- Research and innovation can be pursued in a way that is relevant for commercialization

## Why now?

- The private fusion landscape has changed.. Increased technical readiness & investment, combined with significant market pull.
- Fusion is at an inflection point where PPPs can help.

## PPP Exemplars:

### GAIN

- The Gateway for Accelerated Innovation in Nuclear (GAIN) is a DOE Office of Nuclear Energy program that provides access to gov't support that moves innovative nuclear energy technologies toward commercialization

### NASA COTS

- NASA COTS (Commercial Orbital Transportation Services) used milestone-based payments to accelerate development of a domestic private space industry.

# *Managing our PPPs*

- The FES Portfolio of Public-Private Partnership programs is managed with input from our national labs, primarily Princeton Plasma Physics Laboratory and Oak Ridge National Laboratory.
- Funding decisions are made by the Office of Science, and these decisions are informed by input from the labs and expert reviewers.


# Fusion Private-Sector Engagement

*Public Sector conducts open research at Private Facilities*

*Fusion Innovation Research Engines to enable a fusion industry*

*Public-Private Fusion Consortium Leverages partnerships to cos-share tech transfer*

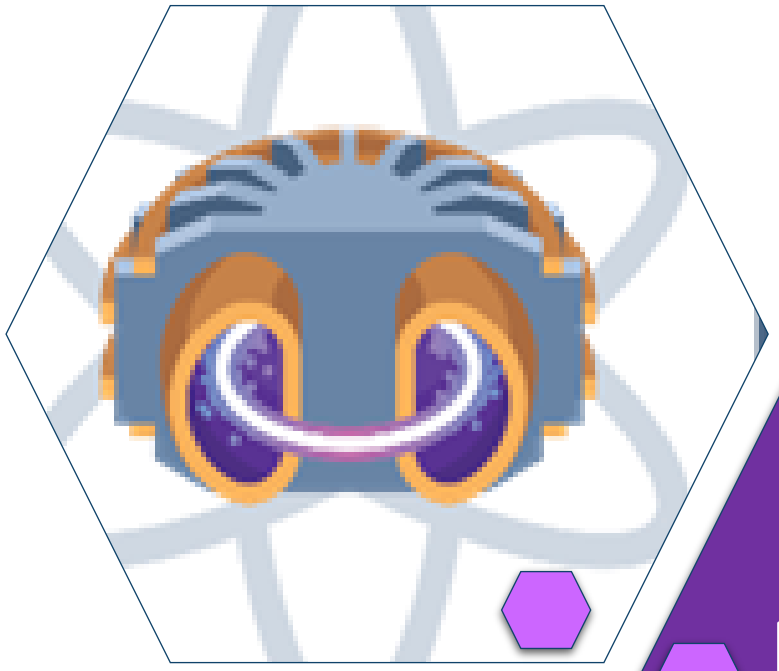

*Private companies access unique capabilities at National Labs & Universities*

*+ SBIR/STTR*

*Private companies receive payment only when milestones are met*

*Public conducts research on complementary public and private facilities*

# Fusion Private-Sector Engagement



***Private companies access unique capabilities at National Labs & Universities***

INFUSE

# INFUSE: Part of the Roadmap

- The Fusion Science & Technology Roadmap includes 10 action items-- #5 is to *Expand Private-Public Partnership Programs*.

## GROW

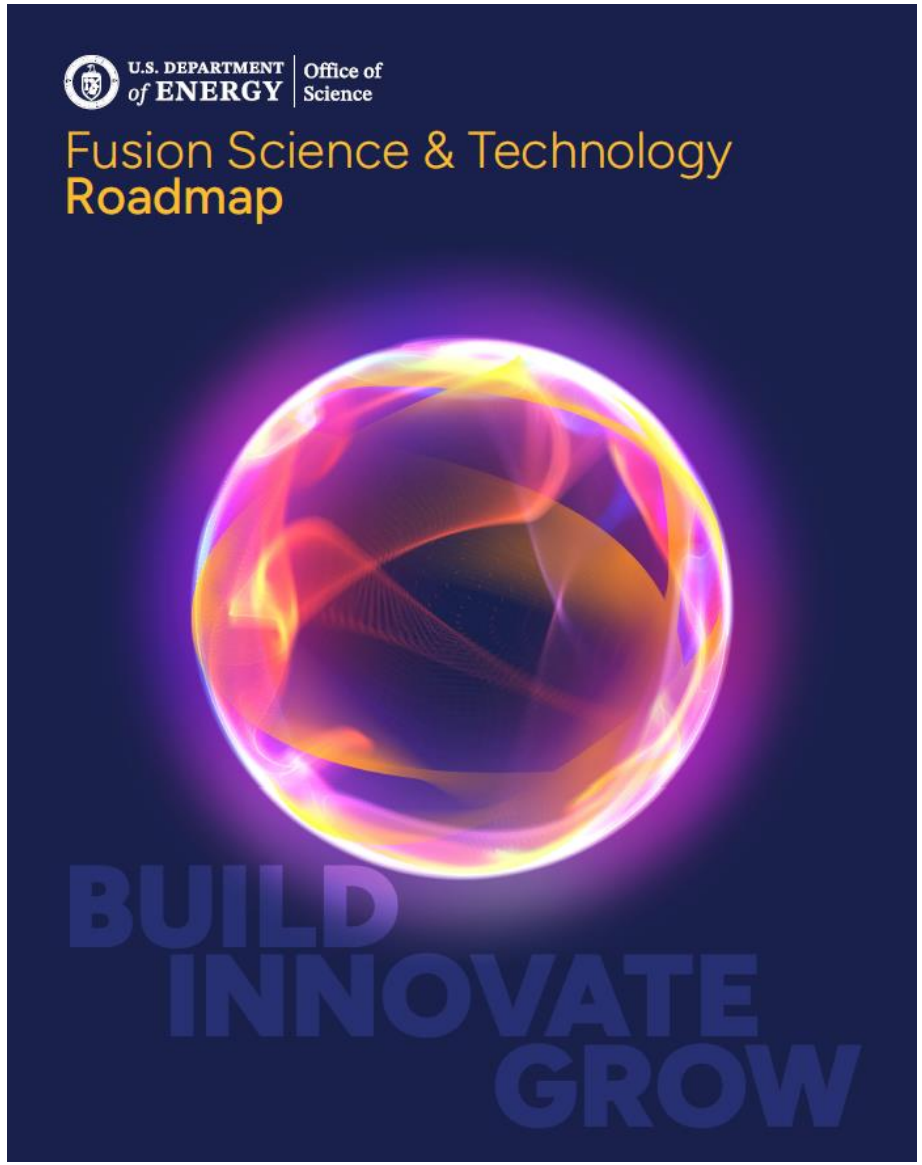
### 5. Expand Private-Public Partnership Programs

PPPs are awards that feature resource sharing (generally in the form of cost-share or non-federal share from private-sector awardees) between public and private sector partners. PPPs in fusion leverage decades of public support for fusion R&D as well as existing activities. Greater resources can be applied to specific problems and risk- and cost-sharing ensure all stakeholders are committed and aligned. Research and innovation are also pursued, guided by the Roadmap, relevant and valuable for commercialization. As private investment grows, topping $2.6B in the 12-month period ending in 2025[32,33], working together with the private sector allows greater resources to support development of a competitive domestic fusion power industry.

Even as venture capitalists deploy investment to term opportunity for increased prosperity that fusion energy presents. These impacts suggest that we act with urgency to expand the scale and scope of PPP programs.

**Currently**, DOE supports two PPP programs in fusion.

- The Innovation Network for Fusion Energy (INFUSE) began in 2019. As of August 2025, the INFUSE program made 127 awards, totaling $30.3M, to support 38 private companies partnering with 10 DOE national laboratories and 15 U.S. Universities. The INFUSE program is modeled after the DOE Nuclear Energy (NE) program, the Gateway for Accelerated Innovation in Nuclear (GAIN).
- Milestone-Based Fusion Energy Development Program (Milestone Program) is designed to support private sector companies to develop their technological roadmaps towards viable early-stage




https://www.energy.gov/

# FES Public Private Partnerships *at a glance*

## Milestone

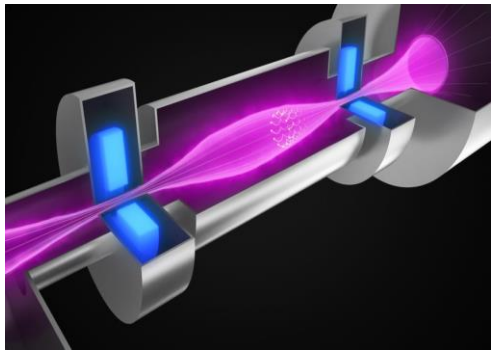
- NASA-COTS model **only pay for success**
- **100% $ to private** for achieving technical and business milestones toward FPP design
- Efforts are **proprietary**
- **Private Benefit:** DOE $, legitimacy to investors given rigor of DOE evaluations
- **Public Benefit:** Maturation of FPP designs to guide future public research investments

**FY26**

## Fusion BRIDGE

- DOE, non fed govt., philanthropy, and private joint sponsor small-to-large scale facilities
- **$ to public and private**, but contingent on high leverage opportunities (e.g., 10x DOE $)
  **Private Benefit:** Shared capital investment for **proprietary** research.
- **Public Benefit:** Shared capital investment for **non-proprietary** research.

*FES program engages the private fusion ecosystem (e.g. FIRE, CTC) to leverage each others' strengths and the $10B in private fusion investments*



## INFUSE

- Private seeks small assistance vouchers
- **100% $ to public** for private sector relevant work with a **20% private contribution**
- **Private Benefit:** Access to public expertise to advance private **proprietary** efforts
- **Public Benefit:** Nurtures emergent private fusion efforts to improve the variety of fusion entities (more shots on goal).

## Private Facility Research

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- Public **uses private facilities for free** leveraging billions in capital investment
- **100% $ to public** for conducting experiments on private facilities
- **Private Benefit:** Public expertise maximizes device performance toward investor goals.
- **Public Benefit:** All work is **non-proprietary** and published advancing S&T for all

# What's next?

INFUSE:

- Is strategically valuable in our portfolio
- Offers a high return on investment for our portfolio
- Useful entrance point for FES (new companies, new concepts, etc.)

How to grow?:

- Help us, by sharing your successes from past awards
- At the workshop , try to find the right partners to move forward

# Join our Reviewer List!

- Help us select the strongest, most innovative proposals
- Your input matters– from postdocs to the most senior scientists, *we want your help*

***Scan to sign-up to review!***

# Questions? Comments?

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