



# The importance of early engagement in the radiological licensing processes for fusion



Commonwealth  
Fusion Systems

# CFS on a path to deliver commercial fusion energy



- CFS founded in 2018, spun out of MIT
- Raised more than \$2 billion
- Built a high caliber, diverse team
- Over 1000 employees



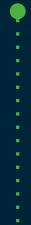
# CFS: the surest path



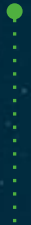
R&D

Commercial demo

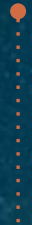
Commercial powerplant



Physics  
COMPLETED



Magnet tech  
COMPLETED



**SPARC**  
UNDER CONSTRUCTION

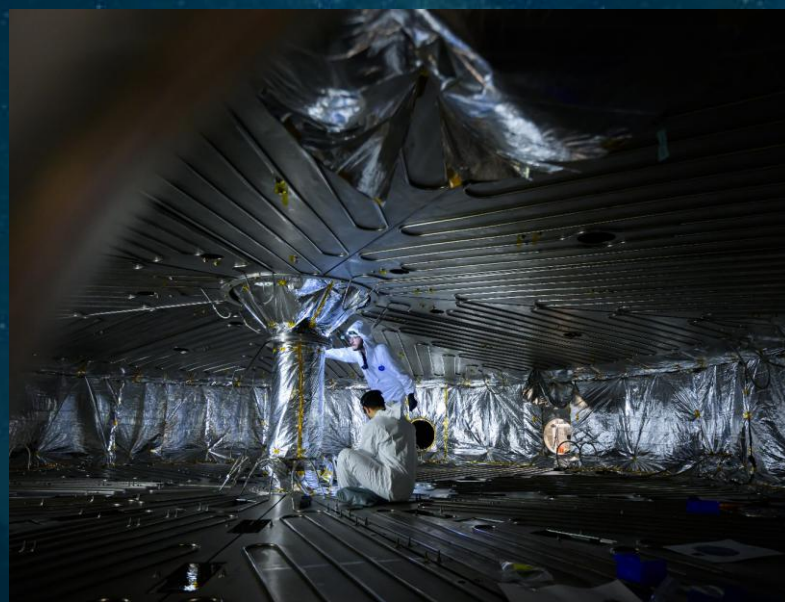
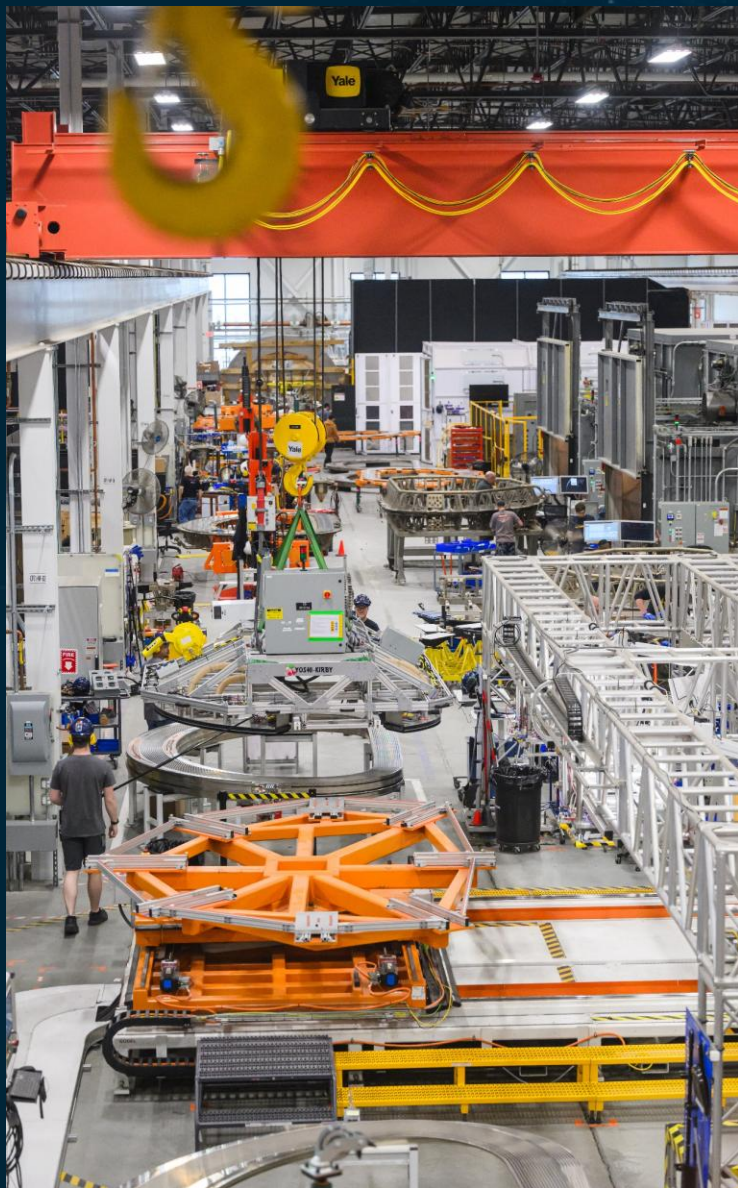


**ARC**  
EARLY 2030s

# Construction of SPARC Facility in Devens, Massachusetts



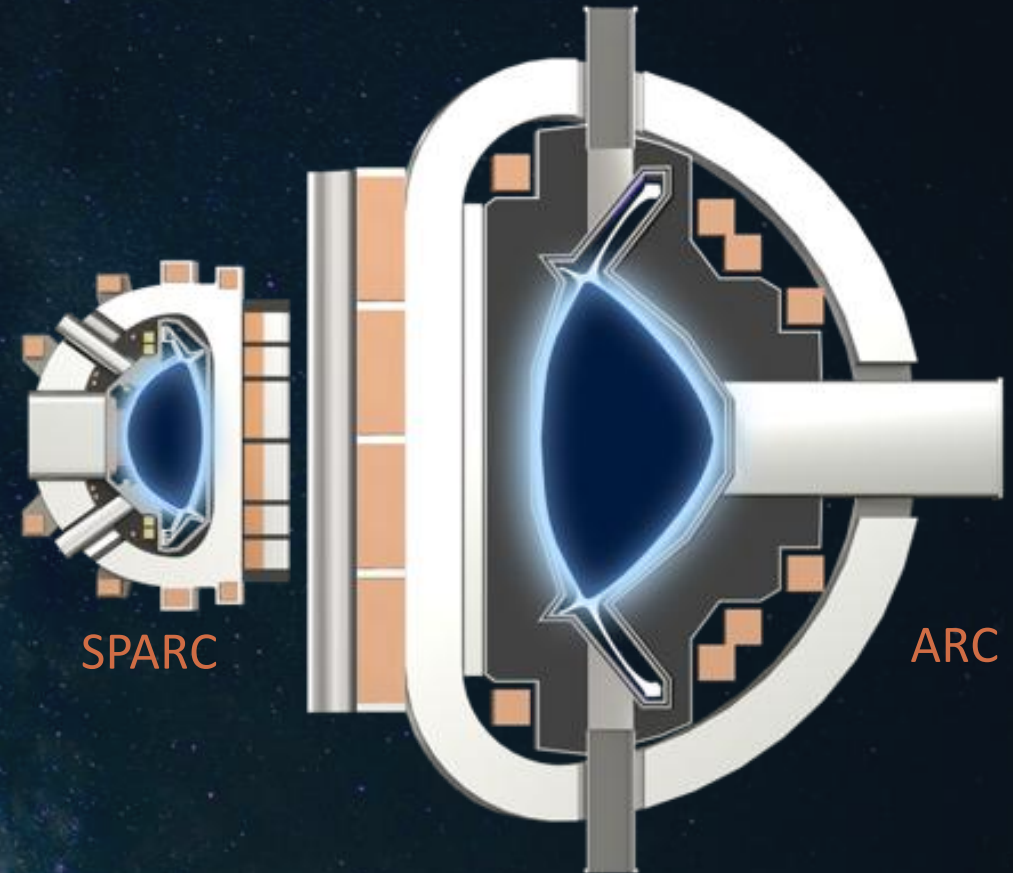
# CFS magnet factory in Devens, Massachusetts



# SPARC paves the way for ARC



- 13/17 subsystems are the same in ARC
- Demonstrates physics operational points for ARC
- Demonstrates coordinated track record of execution of a significant infrastructure project
- Establishes supply chain across >1000 global vendors and informs supply chain development for ARC
- SPARC received its Radioactive Materials License in October of 2024 and will become the de facto commercial fusion regulation template for ARC
- Informs ARC economics using SPARC receipts — the highest fidelity data for fusion costs at scale





# ARC

**Our contribution to the energy transition**

## **CFS ARC™ fusion power plant**

- 400MW net electric
- Baseload or load following
- High quality 600 deg C process heat
- Energy dense with small footprint
- Can slot into existing grid infrastructure



# ARC's Global Siting Search



## Started in 2022

Used playbook and lessons learned from siting process for our MA site

Started process early while initiating construction of SPARC machine



## Global in nature

Focus on countries with a risk-appropriate regulatory framework

Prioritized Agreement States in US



## Set criteria list

Physical attributes

Available infrastructure

Talent and workforce availability

Customer demand

Partnership with key institutions

Community acceptance

# World's first grid-scale fusion power plant: Virginia, US



- Strong partners at local, county and state level
- In the heart of one of the fastest growing electricity markets
- Leveraging existing infrastructure, strong talent ecosystem and skilled regional workforce
- Partnership with public utility Dominion energy



# Early Engagement and Fusion Education



- CFS engaged with wide, diverse set of stakeholders in VA ranging from policymakers to regulators to community members
- Fusion education is key: hosted fusion 101 meetings, town halls, participated in webinars and conferences to educate on fusion
- Prioritized collaboration with VDH through meetings, presentations, site visits and more recognizing ARC is a first of kind project



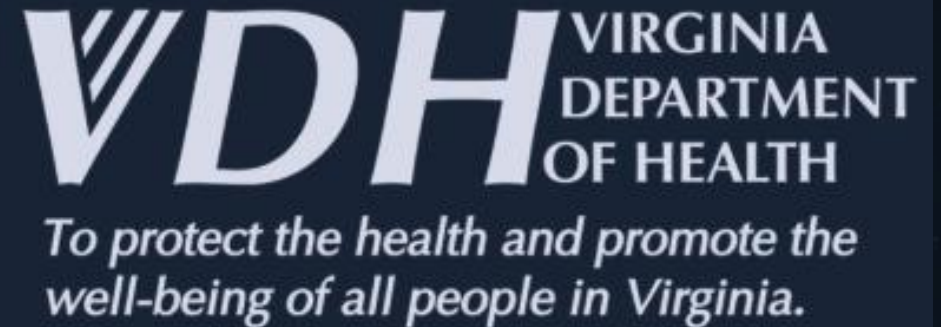
CFS Attending RVA Webinar



# Virginia's Fusion Program Director Role



- Fusion Program Director Role – Created 2025 reporting to VDH Senior Leadership
- Radioactive Materials Program – regulatory role
- Environmental Monitoring and Preparedness – public health safety role



# VDH's Fusion Specific Engagements



- VDH has engaged with the Governor appointed Radiation Advisory Board
- Engagement with Local Public Health
- Creation of a Virginia multi-agency working group
- VDH has attended CFS Community Meetings and monitors social media as news releases occurs



# Importance of Early Engagement

- State perspective on stakeholder outreach
- Engaging with state and private stakeholders
- Engaging with the local community

## Lessons Learned

- Gather the most frequent and difficult questions from the community through direct engagement or social media
- Draft and prepare Q&A documents in advance of community meetings
- Align with developers on timelines, educational materials and needs

# Next Steps



## VDH

- Continued effective collaboration
- Expanding collaboration with other Virginia Agencies and organizations such as the Organization of Agreement States (OAS)
- Continued community outreach and engagement

## CFS

- Collaboration with VDH on state, local but also regulatory considerations
- Continued educational efforts including presentations at newly created multi-agency working groups
- Continue permitting processes towards start of construction timeline



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