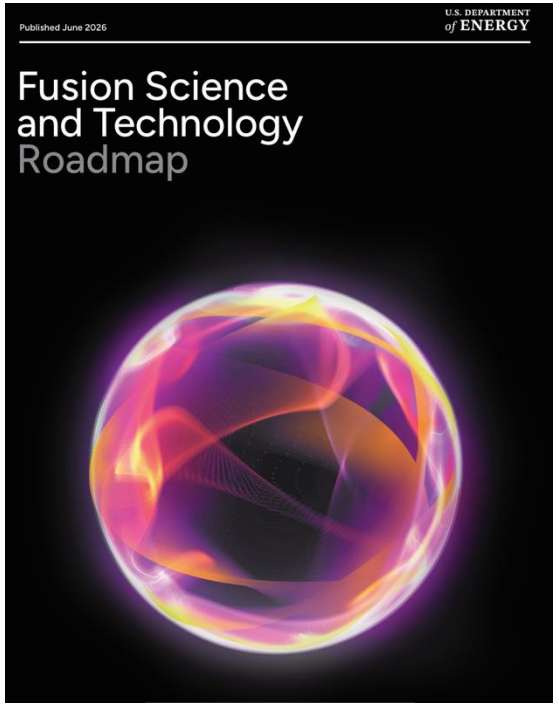
Texas Center for Nuclear Fusion Energy

The Opportunity for Fusion Energy



- U.S. Department of Energy has prioritized Commercialization of Fusion Energy with the goal of bringing fusion power to the grid by mid-2030s
  - ARPA-E Announced $135 MM Commitment in April
- Private investment of over $14 Billion and over 50 fusion companies
  - Commonwealth Fusion Systems – Fusion PPA with Microsoft for 50 MW
  - CFS Received Regulatory License for commercial power plant
- U.S. DOE has identified UH and Texas as the Hub for test stands and modeling for fusion energy and HTS magnet technologies

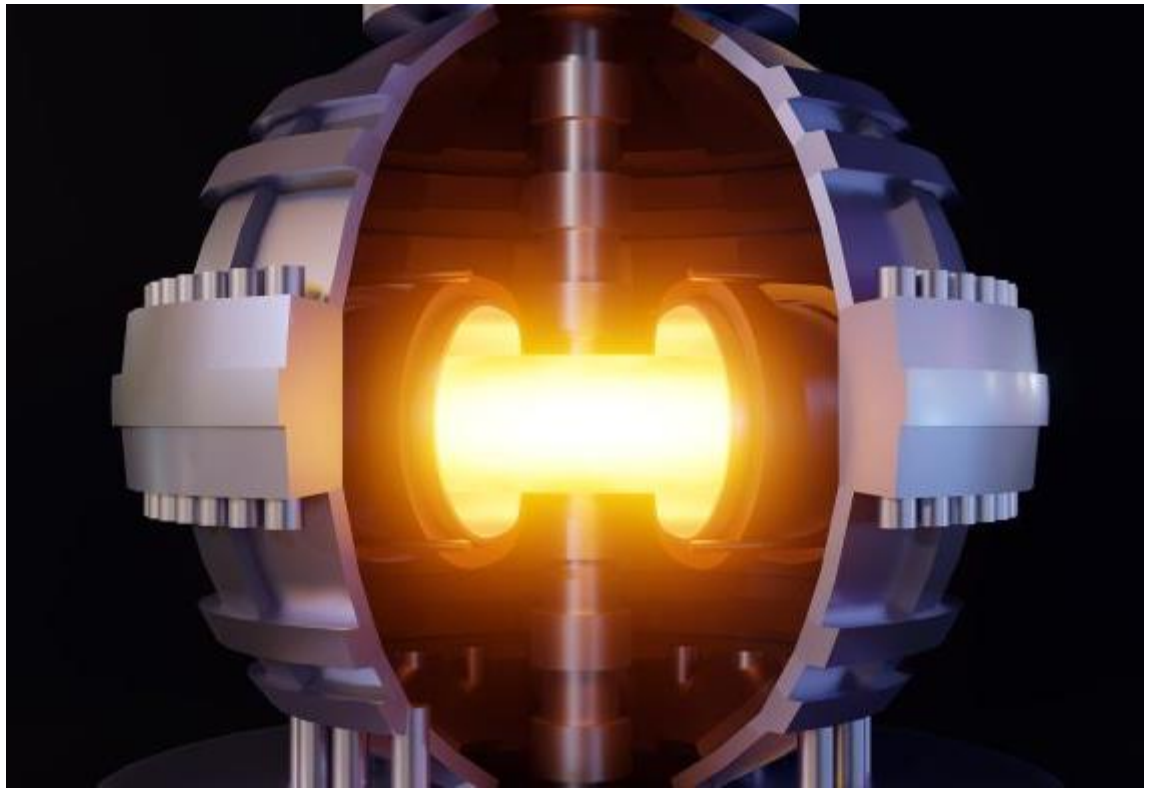
Tokamak Energy

Ansys

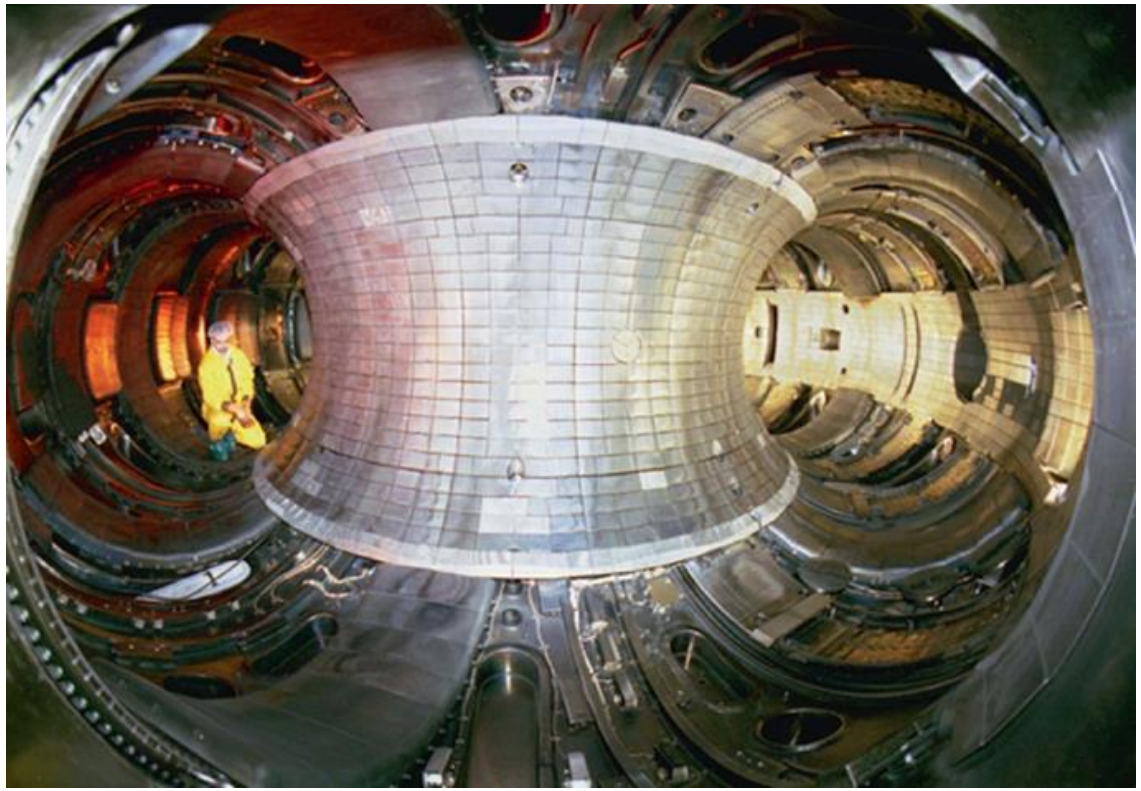
OAK RIDGE National Laboratory

NATIONAL MAGLAB

Nuclear Fusion: Limitless Energy Enabled by Powerful Superconducting Magnets



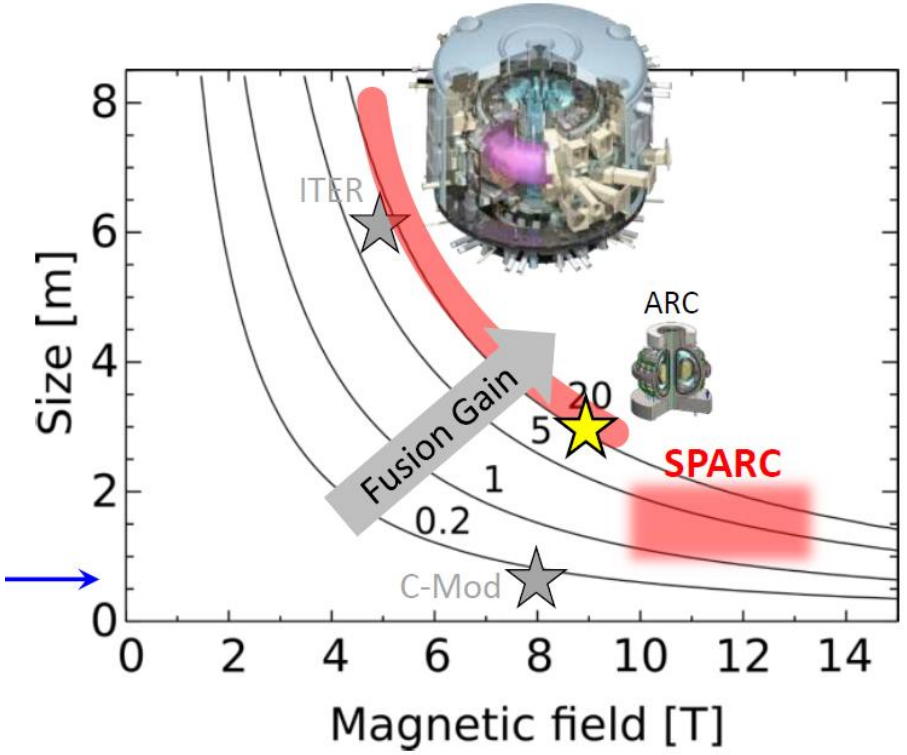
innovationnewsnetwork.com/

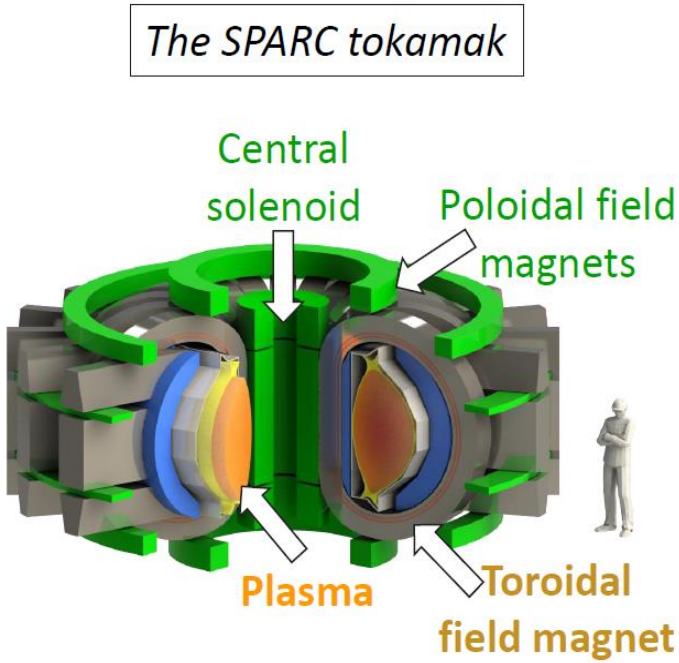


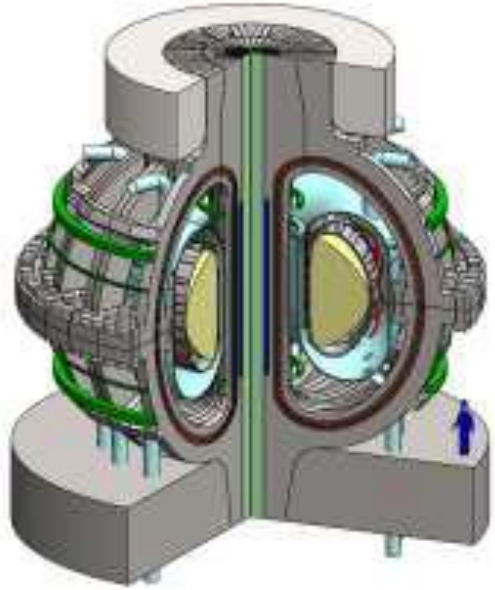
Springer Nature

Compact Fusion Systems are rapidly driving the need for volume manufacturing of REBCO tapes

SPARC- High-field Tokamak to demonstrate net-energy fusion device by 2027





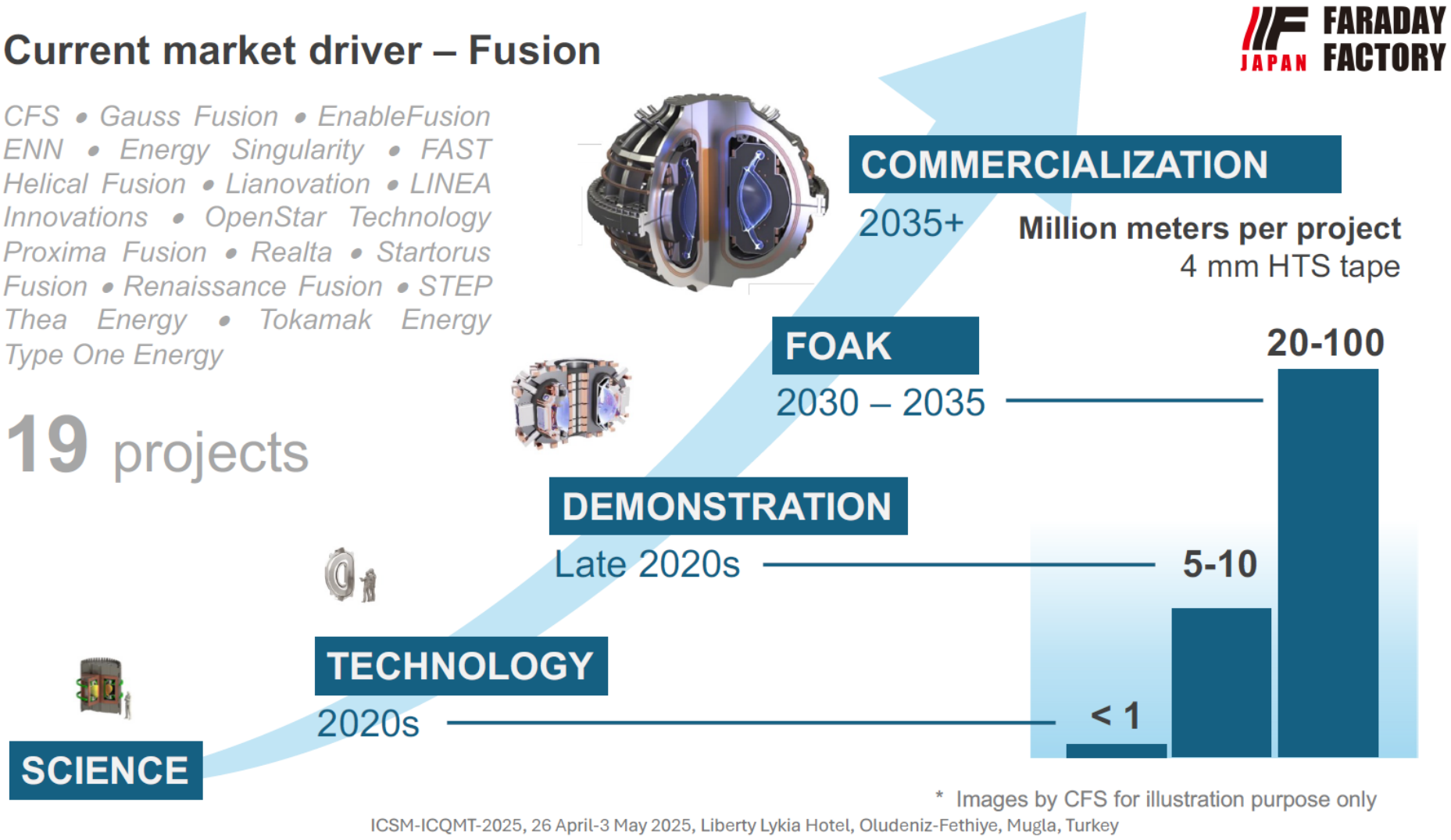


Courtesy Commonwealth Fusion Systems

HTS operating at 20+T enables 10X smaller fusion energy systems

20,000 kilometers REBCO tapes needed for ARC!

Nuclear Fusion: Commercialization Roadmap

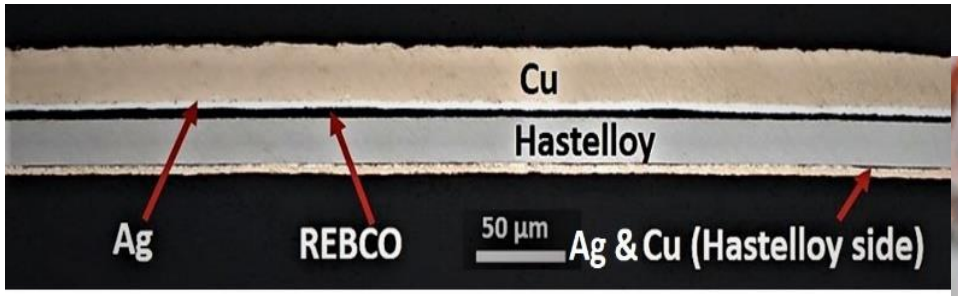


Superconductor Pilot at UH Technology Bridge





AMPeers – scaling manufacturing



SBIR·STTR
America's Seed Fund™
POWERED BY SBA

Fermilab

BERKELEY LAB

U.S. MAGNET DEVELOPMENT PROGRAM

Next Steps for UH's Center for Nuclear Fusion Energy

Center will focus on:

- Develop advanced HTS conductors and magnets for fusion reactors
- Design and develop prototype magnet systems
- Advance HTS technologies to commercial manufacturing
- Test-beds for manufacturers to validate HTS wires, magnets and components of fusion reactors
- Access to Texas-based supply chain manufacturers to manufacturing test-beds and expertise
- Hands-on workforce training at scale



