Transforming How We Energize the World

October 2023

generalfusion®


General Fusion will transform the world’s energy supply with the fastest and most practical path to commercial fusion energy —
Magnetized Target Fusion (MTF)
generalfusion®

General Fusion Overview

General Fusion has the surest, fastest pathway to commercial fusion

Company

FOUNDED IN **2002**

Headquartered in Vancouver, Canada

New, state of the art fusion campus, with ~100,000 sq ft spanning 3 facilities

~150 employees

>170 patents[1]

Backed by a global syndicate of leading investors and government support

~US$325 million raised to-date[2]

General Fusion Strategy

Pursue the fastest, lowest-risk path to commercial fusion with practical Magnetized Target Fusion technology (“MTF”)

MTF uniquely solves hurdles to commercialization

Core technologies in place and tested

Next milestone is compression of magnetized plasma to fusion conditions

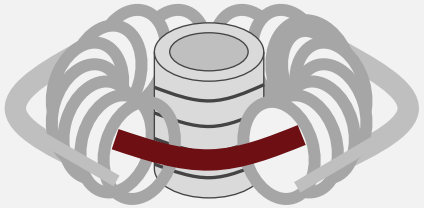
General Fusion’s two decades of technology development put commercial fusion within reach

1. Over 170 patents and patents pending. | 2. Funds raised from private equity investments and government support. Including $21mm from series F-1 closed on 8/7/2023, plus $7.6mm (CAD 10mm) of new funding commitments approved in July 2023 from the Government of Canada (SIF) and Province of British Columbia.

A Balanced Approach – Proprietary Fusion Technology that is Uniquely Practical

General Fusion's technology optimizes advantages of magnetic confinement and inertial compression for commercialization

Magnetic Confinement Fusion



All-Confinement Pathway

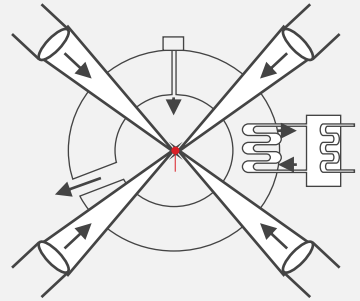
- × *Prohibitively expensive magnets*
- × *Scarce, consumable fuels*
- × *Material issues due to neutron damage*
- × *Heat extraction challenges*

Magnetized Target Fusion

General Fusion's Superior Approach

- ✓ Durable Fusion Machine
- ✓ Sufficient Fuel Production
- ✓ Simple Energy Extraction & Conversion
- ✓ Economical Fusion Power

Inertial Confinement Fusion



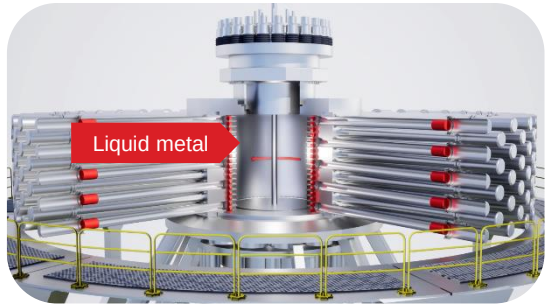
All-Compression Pathway

- × *Expensive high-power lasers and/or targets*
- × *Scarce, consumable fuels*
- × *Efficiency, structure and control issues*
- × *Heat extraction challenges*

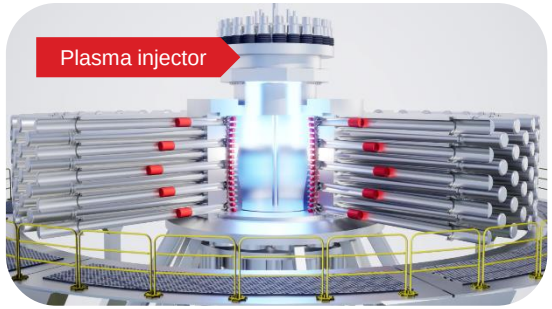
General Fusion's Magnetized Target Fusion Approach

Commercial fusion machine basics

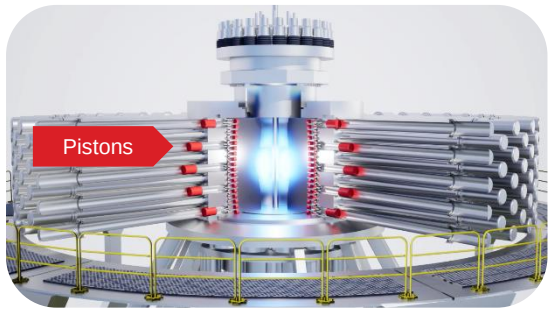
Form liquid metal cavity inside fusion vessel



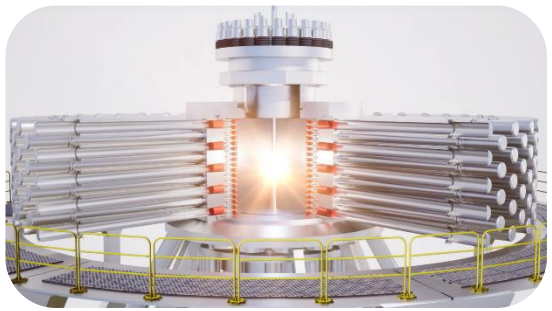
Inject magnetized plasma[1] into liquid metal cavity



Compress plasma with liquid metal using mechanical drivers



Fusion and energy extraction, conversion and recovery



Repeat

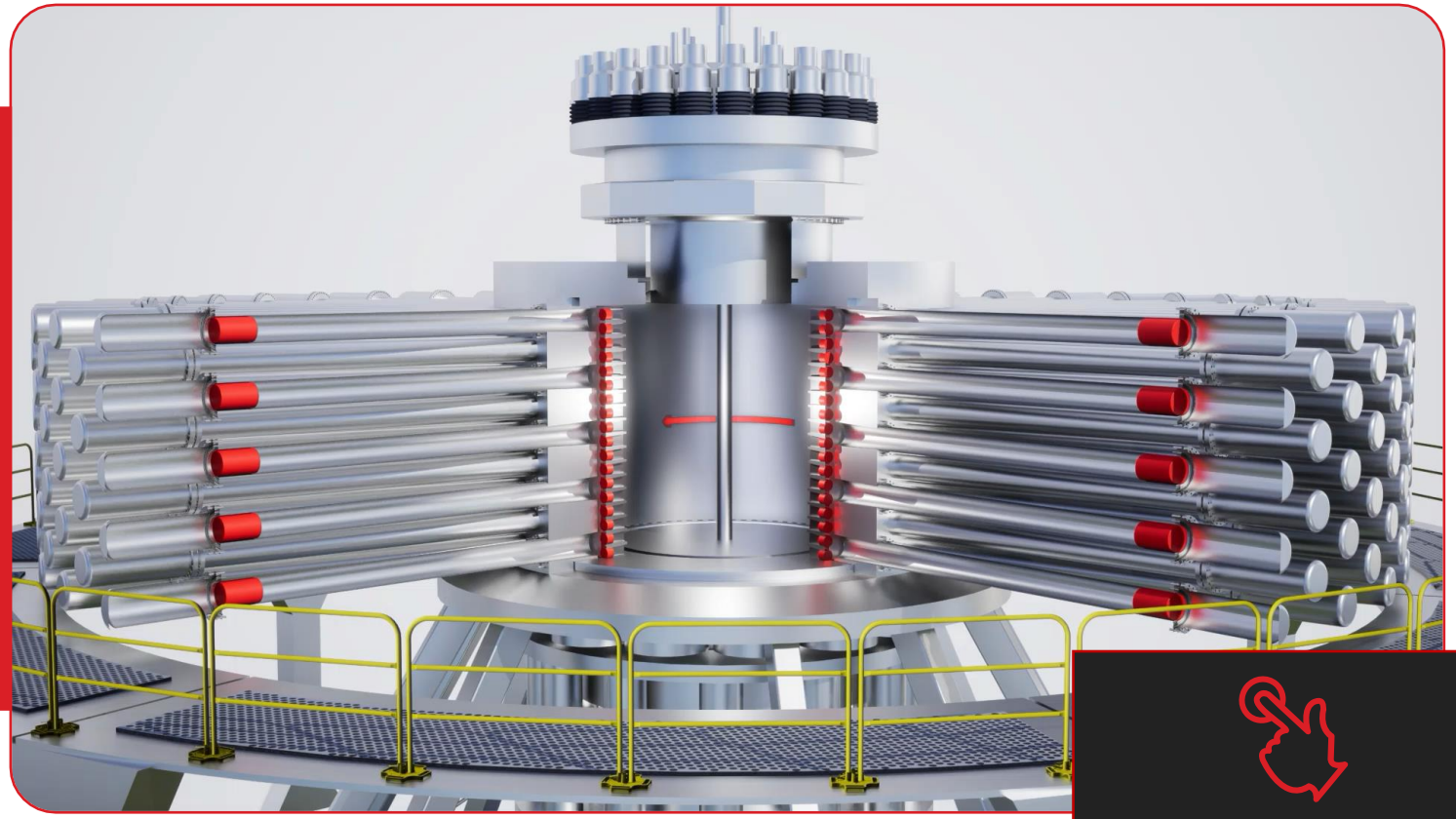
Magnetized plasma compressed fluid-mechanically to fusion conditions

1. General Fusion's plasma injectors form spherical tokamak plasma targets using a 100% coaxial helicity injection (CHI) process. Targets are formed into a chamber with solid metal walls. There is no active feedback; plasma position and stabilization is accomplished entirely through the metal walls acting as a flux conserver.

General Fusion's Magnetized Target Fusion Technology

Commercial fusion machine mechanics

The fusion equivalent of a diesel engine: practical, durable and cost-effective



CLICK HERE TO LEARN MORE ABOUT OUR FUSION TECHNOLOGY

General Fusion's Unique Approach Solves the Four Long-Standing Barriers to Commercial Fusion

1 **Material Degradation**

Neutrons emitted from fusion reaction damage unshielded machine structures

2 **Fuel Production**

Difficult technological path for creating a self-sustaining fuel source

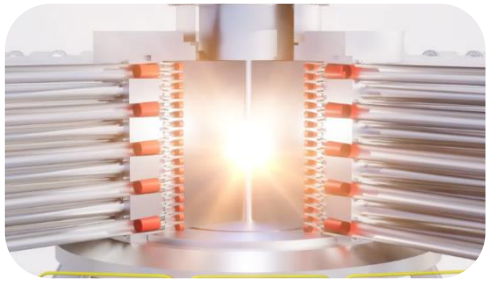
3 **Energy Capture**

The path to extract and convert fusion energy into a heat source and electricity is still experimental

4 **Cost**

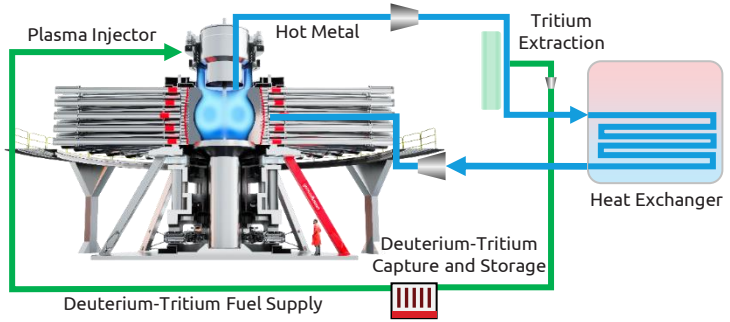
Steady-state fusion needs costly superconducting magnets, while inertial confinement relies on pricey high-power lasers and/or targets

General Fusion Addresses the Barriers to Commercial Fusion



Durable Fusion Machine

Liquid metal wall compression technology absorbs neutrons and protects machine from fusion damage

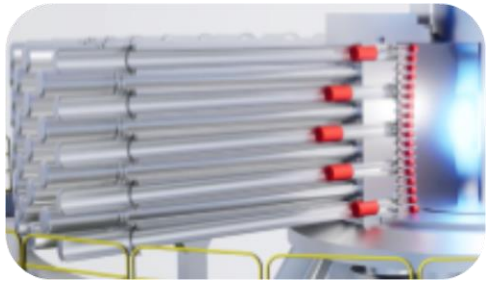


Sufficient Fuel Production

Liquid metal wall surrounding fusion plasma produces tritium fuel with a sustainable breeding ratio

Simple Energy Extraction and Conversion

Liquid metal wall surrounding fusion absorbs neutrons and heat for simple conversion to electricity via steam turbine



Economical Fusion Power

Mechanical compression with liquid metal avoids the need for expensive magnets or targets, high-power lasers and exotic/unavailable materials

General Fusion's Achievements

In the past 20 years, General Fusion has achieved significant milestones on its mission to deliver practical fusion energy

Proven **success scaling individual technologies,** creating the pathway for General Fusion to integrate, deploy and commercialize fusion energy

2002-2005 | 2006-2015 | 2016-2020 | 2021-2023

2002
- Founded

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2005
- **First fusion reaction to produce neutrons**

2010
- First plasma injector **properly confined plasma**

2012
- Liquid metal compression tests **validated engineering of liquid metal approach** and synchronization of pistons

2013
- Sufficient plasma performance to heat when compressed

2017
- Stable compression of plasma

2018
- **Heating and increased neutron yield during plasma compression**

2019
- Plasma lifetime maintained within liquid metal wall cavity

2021
- Plasma performance **sufficient to achieve fusion conditions at scale**[1]
- Compressed liquid cavity with symmetry and controlled shape **sufficient to achieve fusion conditions**

2022
- Market Development Advisory Committee formed
- **Exceeded core technology performance targets with plasma and compression prototypes**

2023
- Symmetrical compression results from LM26 test ring compression test bed

✓ **Fusion Process Stability**

✓ **Plasma Performance**

✓ **Liquid Compression Performance**

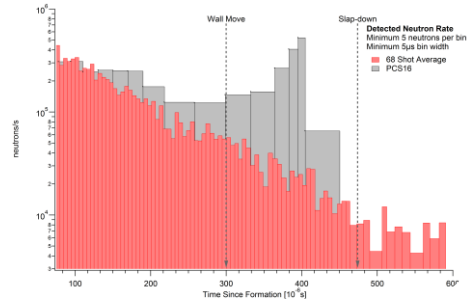
1. Plasma lifetime and quality shown to be sufficient to achieve fusion conditions through General Fusion's approach.

20 Years of Practical Development and Demonstration

Core technology capabilities developed and successfully tested

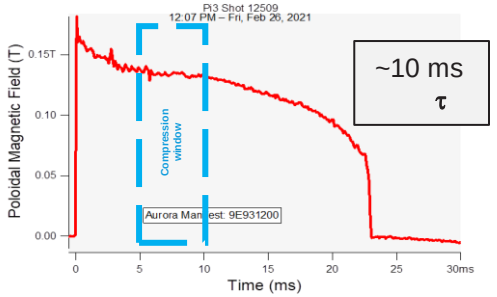
Fusion Process Stability

Sub-scale science program provides understanding of plasma behavior and neutron yield under compression as well as plasma behavior in liquid metal systems



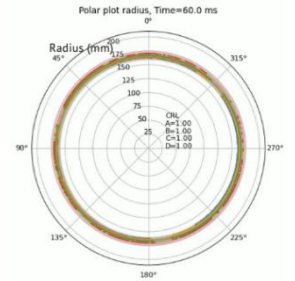
Plasma Performance

24 prototypes and over 200,000 plasma experiments have culminated in the world's largest and most powerful operational fusion plasma injector for LM26



Liquid Compression Performance

Testbeds demonstrate compression technology necessary for smooth, rapid and symmetric compression of a liquid cavity



Next Up: LM26 – Integrated demonstration of Magnetized Target Fusion to achieve fusion conditions (10 keV) with potential for breakeven[1]

1. Throughout this presentation breakeven refers to Deuterium-Tritium breakeven equivalent using Deuterium-Deuterium fuel.

LM26 Demonstration Program

General Fusion Milestones Completed

Three Core Technology Milestones Achieved, Leveraging Large Scale Prototype Systems

- ✓ Fusion Process Stability

- ✓ Plasma Performance

- ✓ Liquid Compression Performance

Next Milestones

LM26 Demonstration Program

✓ 2021 – 2023

Demonstration of LM26 Plasma Injector Performance: Plasma injector[1] achieved pre-compression plasma performance sufficient to achieve fusion conditions (10 keV) when compressed

○ 2025

Demonstration of LM26 Plasma Compression to 10 keV: Addition of solid lithium liner compression system to LM26 plasma injector to achieve fusion conditions (10 keV) through compression of magnetized plasma

○ 2026

LM26 modification to increase plasma performance to target breakeven[2]

Commercialization Program

○ 2026 Onward

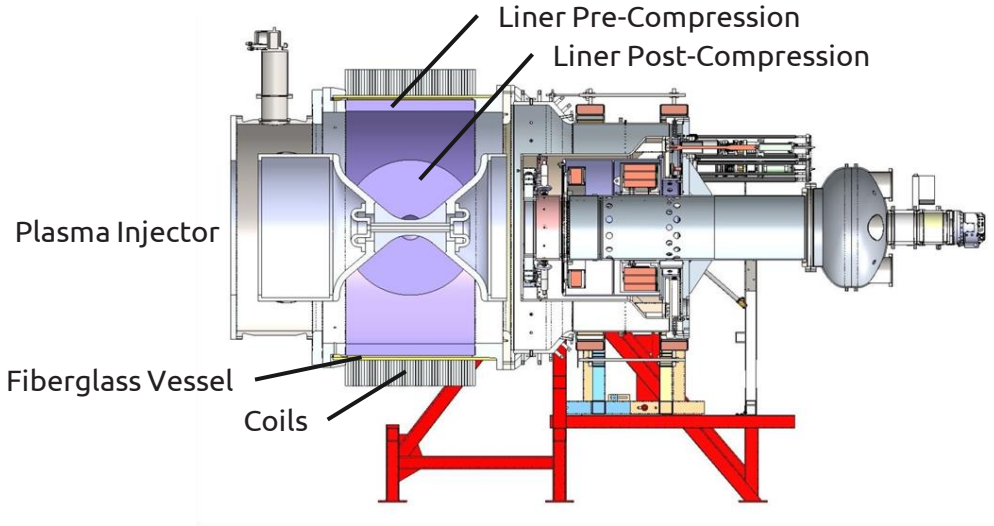
Near commercial fusion machine with liquid lithium compression system, followed by first commercial plant putting electricity on the grid

1. General Fusion is leveraging its Pi3 plasma injector, which achieved previously announced performance milestones in 2021 and 2022, as part of the LM26 Demonstration Program. 2. Throughout this presentation breakeven refers to Deuterium-Tritium breakeven equivalent using Deuterium-Deuterium fuel.

Lawson Machine 26 ("LM26")

General Fusion's LM26 machine will compress General Fusion's world-leading plasmas using a lithium liner

LM26 Demonstration Program in Progress



1. Plasma Injector Operating

- **Plasma lifetime and density sufficient** to create fusion conditions (10 keV) when compressed

2. Next Step: Compression System Integration

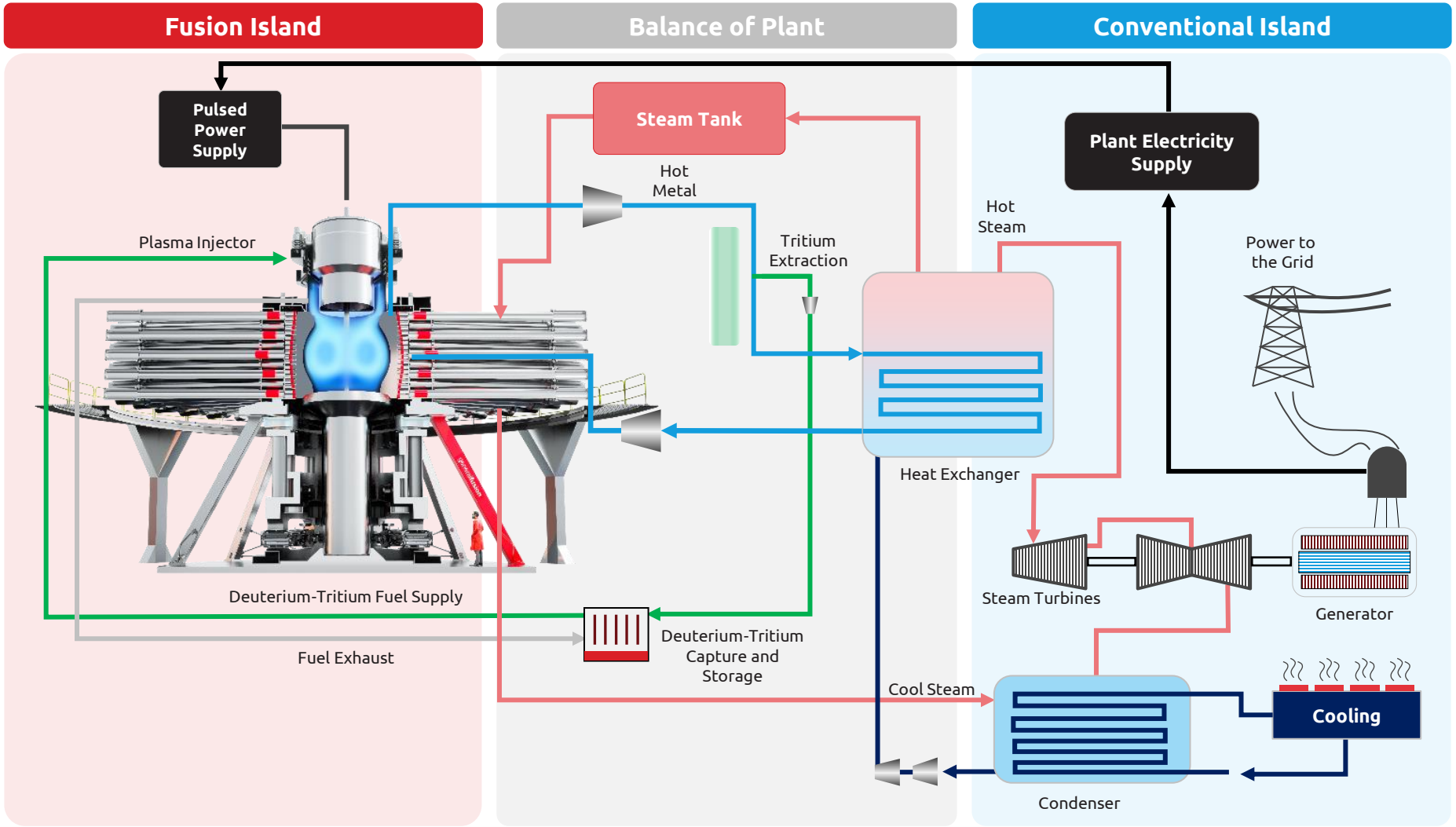
- Compression system will compress plasma using electromagnetic acceleration of a solid lithium liner
- The LM26 machine aims to **reach 10 keV in 2025** with **increasing progress toward breakeven[1] demonstration in 2026**

General Fusion's goal is to achieve scientific breakeven[1] (100% Lawson) in 2026

1. Throughout this presentation breakeven refers to Deuterium-Tritium breakeven equivalent using Deuterium-Deuterium fuel.

General Fusion's Practical Commercial Power Plant

General Fusion's MTF technology is ideally suited for traditional steam plant applications and repowering old power plants

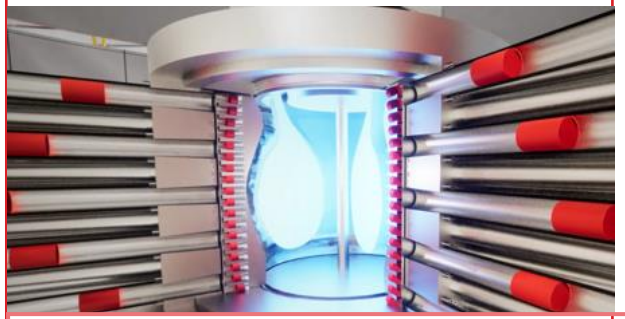


A Wide Spectrum of Partnerships

General Fusion has partnerships with industry leaders to accelerate its path to commercial deployment

Fusion Technology Development

Build sustained value around proprietary MTF fusion technology

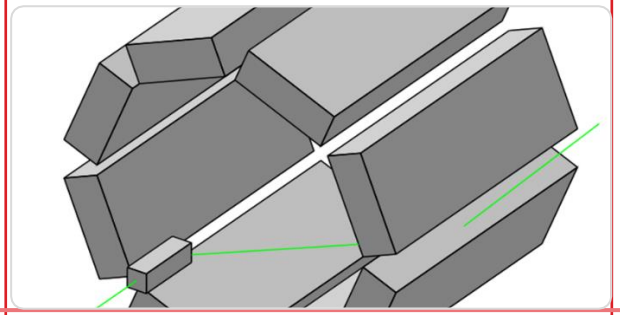


Technology Development Partner — UK Atomic Energy Authority

- Plasma Stability and Compression — PPPL Princeton Plasma Physics Laboratory
- MHD Simulation — Oak Ridge National Laboratory
- Hydrodynamic Stability — McGill University
- Edge Plasma Modeling — Lawrence Livermore National Laboratory
- Thermal Transport — General Atomics

Diagnostic Development

Leverage experience to build diagnostic tools



Diagnostics and Code — UK Atomic Energy Authority

- Neutron Spectrometer — TRIUMF
- Magnetic Probes — Queen's University
- Neutron Diagnostics — SFU Simon Fraser University
- Ion Doppler — Oak Ridge National Laboratory

Support for Future Near Commercial Machine and Related Systems

Cornerstone partners to support commercialization

Project & Future Location Partner — UK Atomic Energy Authority

- Engineering and Construction — Hatch
- Architect — AL_A
- Building Engineering — Arup
- Project Management — Turner & Townsend
- Forging and Materials — Sheffield Forgemasters
- Tritium Extraction — Canadian Nuclear Laboratories
- Liquid Lithium — University of Illinois Urbana-Champaign
- Tritium Inventory — SRNL Savannah River National Laboratory

Collaboration agreement with UKAEA propels General Fusion's technology and commercialization plans forward

Current UKAEA Collaboration Projects:

- Neutronics Model Development and Simulation
- Qualifying Class 3 Steel for Vacuum
- Supply of Thompson Scattering Polychromators
- Magnetic Profile Reconstruction Validation
- Polarimeter and Interferometer Consulting
- STEP^2-GF Supply Chain Development
- Thermal Transport Analysis Training

1. General Fusion has a project development agreement with the UKAEA. This project was previously referred to as the Fusion Demonstration Program, or FDP. However, the LM26 program will significantly de-risk the project at the UKAEA, and allow a much more advanced machine to be built. This is now referred to as the Near Commercial Machine. 2. The UKAEA's Spherical Tokamak for Energy Production Program

Building Potential Launch Customer Portfolio for Early Adopters

Focus on key prospective markets and customers with Market Development Advisory Committee (“MDAC”)

Purpose of the General Fusion MDAC

Develop early adopters for commercial power plant	**Apply end-user input to commercial power plant design**	**Support formation of regulatory framework for fusion**	**Participate in energy policy and market design**

Regulatory Engagement

The United Kingdom set precedent as the first country to propose a fit-for-purpose, technology-appropriate, fusion regulatory framework in 2021

In 2023 The United States Nuclear Regulatory Commission voted to regulate fusion energy separately from the regime that regulates nuclear fission

Fission and fusion require different technology-appropriate regulatory regimes. Fusion requires no special nuclear material

Current Members of the General Fusion MDAC

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