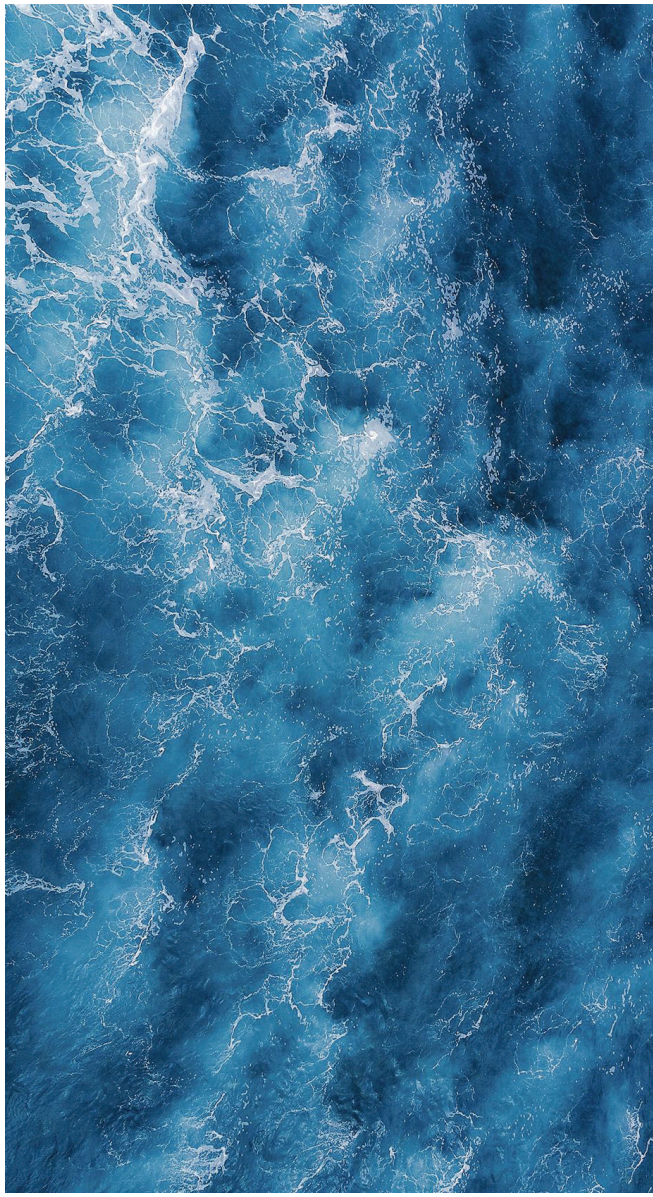
PACIFIC FUSION

Building a Fusion Economy in New Mexico

6/30 Update: Economic and Rural Development and Policy Committee



Agenda

1. Fusion energy's potential
2. R&M Campus update
3. Fusion energy economy in New Mexico

Fusion has been the holy grail of energy for 70+ years.

Affordable, reliable On-demand power

Carbon-free energy

Inexpensive, limitless fuel

The Holy Grail: Fusion is safe

No risk of runaway reactions or meltdown.

Fusion immediately stops as soon as you stop driving it

Any use of radioactive materials is regulated by the State of New Mexico.

The State's Department of the Environment Radiation Control Bureau ensures all radioactive materials are regulated, shielded, and monitored for safe operations.

Universities and hospitals safely use radioactive materials for research and treatments.

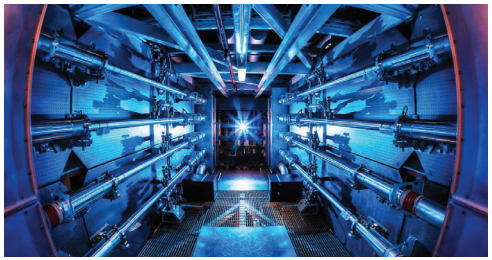
Major medical centers routinely employ beta and gamma emitters to destroy cancer cells.

Universities use radioisotopes in devices such as tritium-filled neutron generators for materials testing and bacterial sterilization studies.

Three breakthroughs in 2022 created a new path to practical inertial fusion energy:

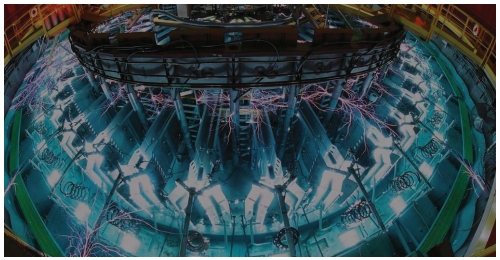
1

First-ever controlled fusion ignition



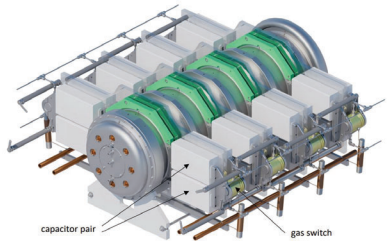
2

Efficient path to ignition using electric pulsers



3

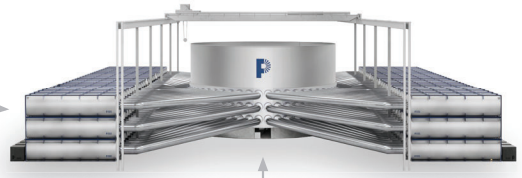
Mass-manufacturable, modular electric pulsers



Why Pacific Fusion is positioned to win

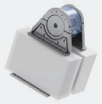
- Built on Established Science
- Right People
- Designed to be Affordable from the Start
    - Modular
    - Scalable
    - Building the First Fusion Factory
- We’ve Raised the Capital to Execute

We are assembling the modular components of our system at the Los Lunas Build Center



~50k

100,000 capacitors
+ 50,000 switches

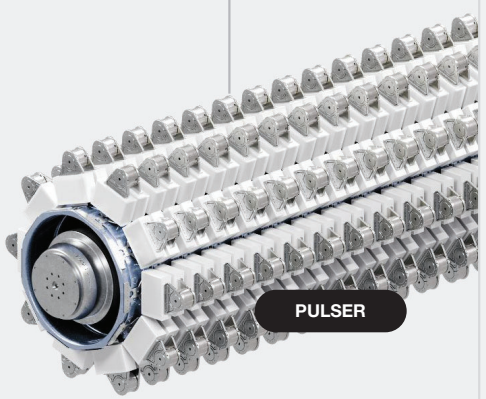


= 10

Identical
Bricks/Stage

× 32

Identical
Stages/Module



× 156

Identical
Modules/Pulser

TARGET

- Small size (<1 cm)
- Low complexity design enables low manufacturing cost
- Compatible with ~Hz rep rate

Research and Manufacturing Campus Update

The potential for a fusion industry in New Mexico

Los Lunas Build Center
The world’s first fusion factory

Current status:

- Invested in building for a production-ready manufacturing floor
- Production of Demonstration System components began in May
- 57 employees and growing, with 95% from in-state

Upcoming milestones:

- Full production by January 2028
- Positioning it as a potential hub of global manufacturing operations

Los Lunas Build Center

“The work is hands-on, fast-moving, and meaningful, which is exactly the type of environment I wanted to be in. Working at PF means a lot for my life and career.”

Ethan Alderete

“The work is challenging, the mission is exciting, and you're surrounded by people who are motivated to solve hard problems. For me, working at PF means being part of something with real purpose.”

Victoria Lujan

R&M Campus @ Mesa del Sol
The world's most powerful pulsed power system

Objectives:

- Demonstration System's #1 priority is to achieve net facility gain by 2030
- Future of the Demonstration System: A hub for research and manufacturing for all pulsed power interests, including:
  - Fusion energy
  - Medical isotope production
  - Defense applications

Upcoming milestones:

- Break ground in July, ceremony in August

The facility will have minimal impact on the environment.

Not a drain on local water supply

Our facility will not place unusual demand on the community's water supply – less than other commercial buildings of a similar size.

Limited electricity use

Facility requires ~3.3 megawatts from Public Service Company of New Mexico (PNM).

Our community partnerships: Establishing roots for a long-term presence

- Village of Los Lunas and City of Albuquerque
- Industry Collaborations: New Mexico Fusion Trade Association, Greater Albuquerque Chamber of Commerce, Valencia Chamber of Commerce
- Workforce Development: CNM, UNM-Valencia, NMSU-Grants, New Mexico's Research Universities
- K-12 STEM Programming: Explora (sponsored STEM scholarship)

Future Fusion Economy in New Mexico

The potential for a fusion industry in New Mexico

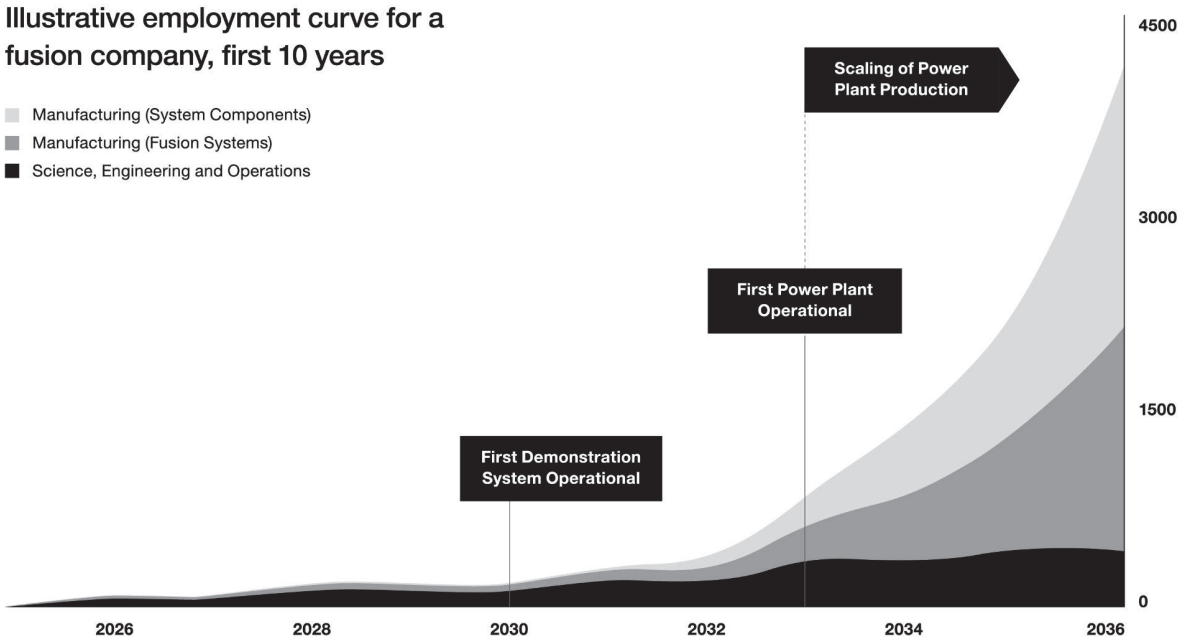
Our Vision for a New Mexico Fusion Economy

1. Establish first-ever fusion factory
2. Build and Operate a Profitable Demonstration System
    a. 200 Permanent Employees from PF
3. Build first power system in New Mexico
    a. Thousands of construction jobs
    b. Hundreds permanent operations staff
4. Expand NM Manufacturing to build power plants across the country
    a. Hundreds of thousands of sq. ft of manufacturing
    b. Thousands of jobs

New Mexico Can Be a Global Fusion Hub

The location of a first fusion facility will shape where future plants, supply chains and manufacturing clusters take hold.

This is a defining moment for New Mexico to become an epicenter for fusion, anchoring thousands of high-wage jobs, manufacturing growth and lasting leadership.



Opportunities for New Mexico

Time-sensitive: Supply chain for Demonstration System

- Procurement decisions in finalization over next 2 months
- Incentives can help money be spent on NM jobs rather than out of state procurements

Immediate tool available: RD&D fund

Key dependency: Must move at speed of business (decisions by August)

Long-term opportunity: Produce fusion power systems for customers everywhere

- Site selection work for first power system underway
- Investment decisions span next 2-3 years

Policy Toolkit

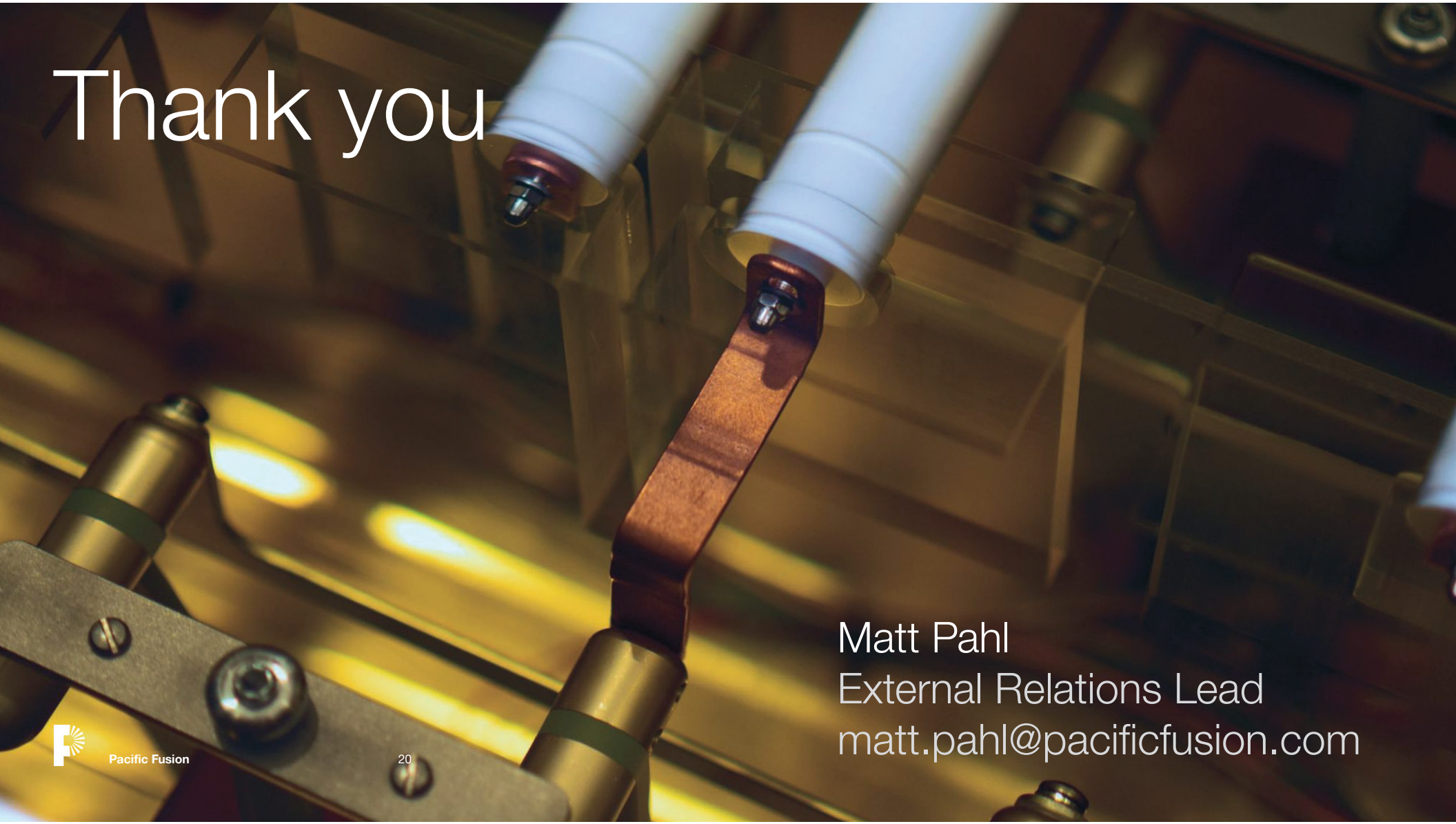
Near-term Needs

- R&D Tax Credit for startups
- Investment Tax Credit for startups

Medium-term Needs

- Carbon-free Energy Investment Tax Credit
- First power plant funding

Thank you



Matt Pahl
External Relations Lead
matt.pahl@pacificfusion.com