Maximus Energy Corporation | www.maximus.energy

Microscopic Thermonuclear Fusion

A Path to Clean, Affordable Energy

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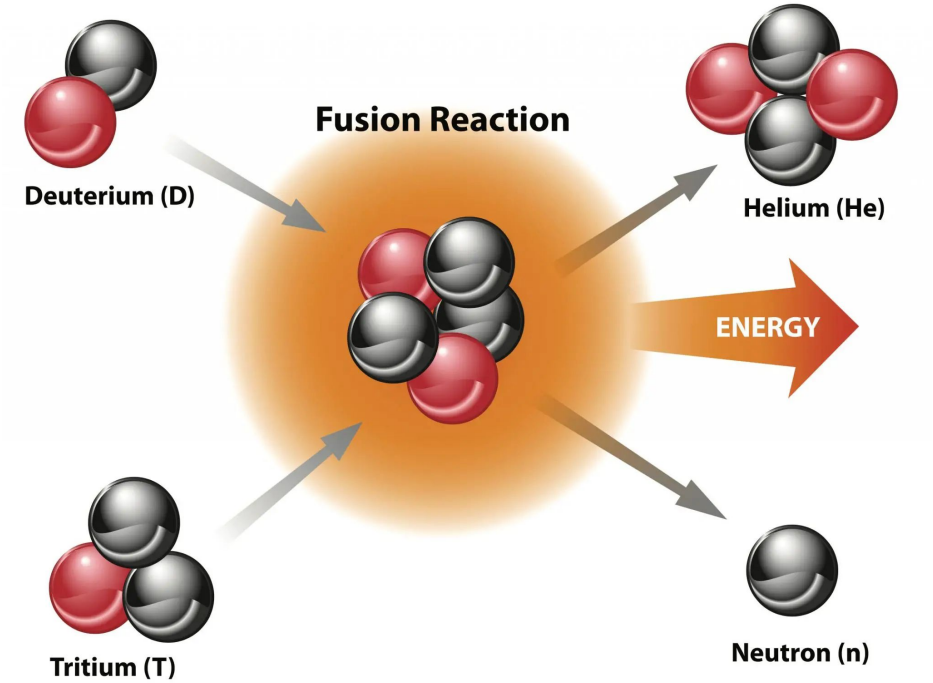
Our Objective Is

To *revolutionize* power generation and locomotion by designing and manufacturing a compact, low-cost thermonuclear fusion reactor for:

- Shipping industry (e.g. oceanic container ships, etc.),
- Semi-trucks, freight trains,
- Water desalination plants,
- Electric power plants.

What is Thermonuclear Fusion?

Hydrogen isotopes combine under influence of high temperature and/or high pressure releasing *tremendous* amount of energy.



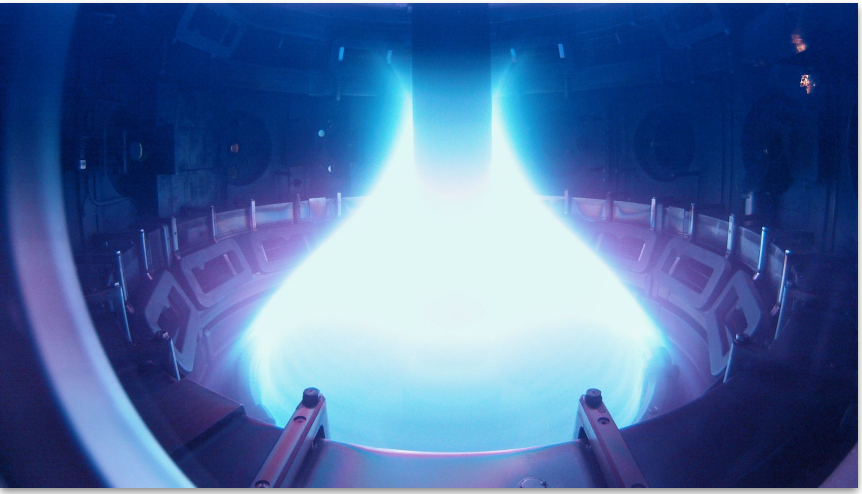
Why Fusion is the Future?

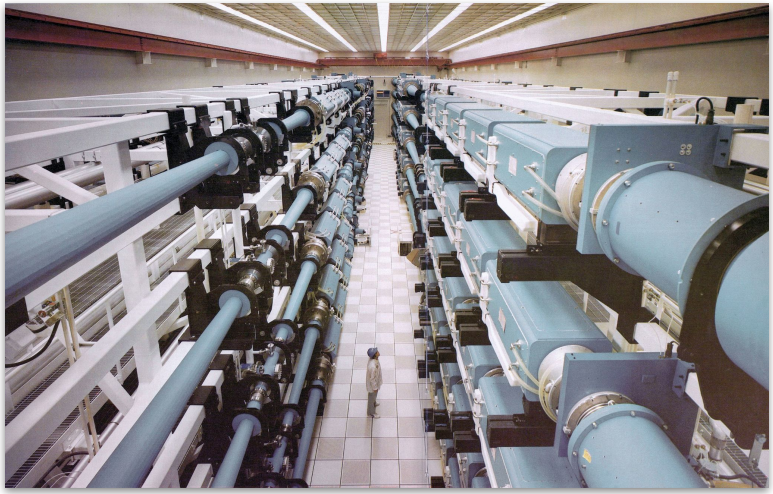
There is a consensus among scientists and engineers that fusion energy is:

- **Inexhaustible:** deuterium is obtained from water,
- **Cheap:** 10 milligrams of deuterium = 1 barrel of oil,
- **Safe:** radiation is entirely contained within the reactor and ceases when the reactor is turned off,
- **Zero emission:** the reactor does not emit CO_2 or other pollutants,
- **Zero waste:** the reactor does not produce nuclear waste requiring remediation.

What Are Common Approaches to Fusion?

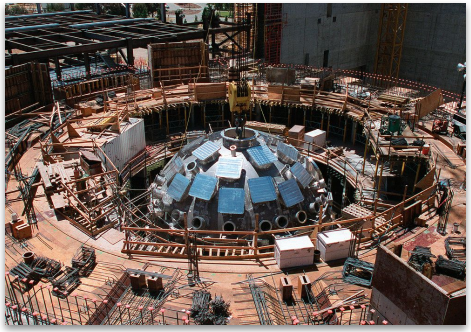
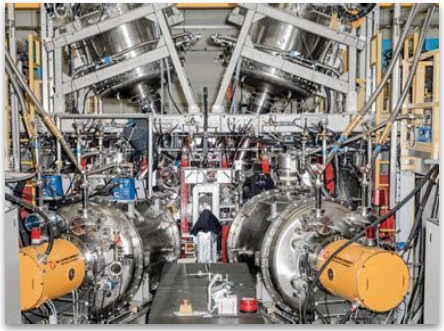
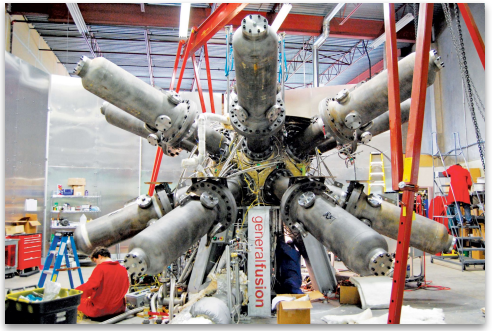
1. **Magnetic Confinement:** extremely hot plasma is created and kept in place using super-strong magnetic fields. *Very difficult and very expensive.*
2. **Inertial Confinement:** extremely hot plasma is created and kept in place by compressing a solid fusion target using super-strong lasers. *Very difficult and very expensive.*





Who is Doing Fusion?

1. ITER (international collaboration, France)
2. National Ignition Facility (government, USA)
3. Commonwealth Fusion Systems (>$2B, USA)
4. Tri-Alpha Energy (>$1B, Google-backed, USA)
5. General Fusion (>$1B, Bezos-backed, Canada)
6. Helion Energy ($500M, USA)
7. First Light Fusion ($100M, UK)

How Close Are We to Fusion Power?

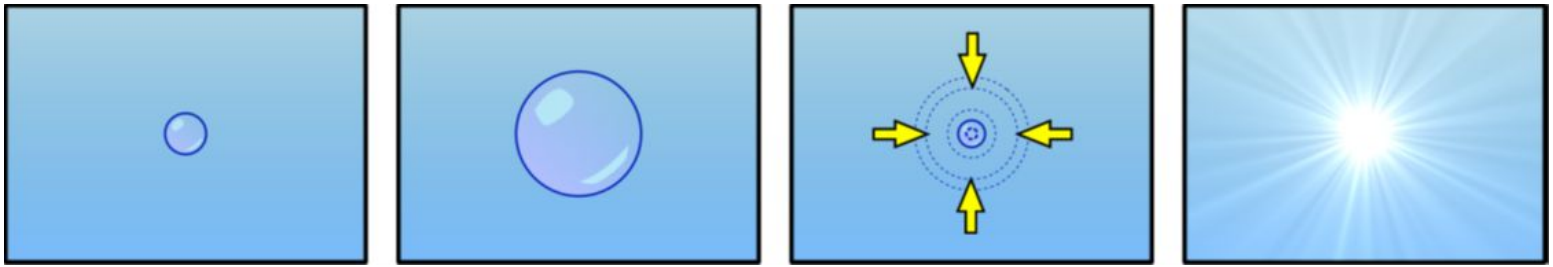
Despite tens of billions of dollars spent and more than six decades of research fusion power is always 30 years away…

Why? Because conventional approach proved difficult. Fresh, out of the box ideas are needed but such ideas are either not funded or outright attacked by vested interests (remember ‘cold fusion’? ‘bubblegate’?)

Fortunately new generation of startups has no shortage of new ideas.

Our Approach: Microscopic Thermonuclear Fusion

- We are expanding and collapsing nanobubbles in fluids using acoustic waves.
- Each bubble is a microscopic thermonuclear reactor therefore we call our approach Microscopic Thermonuclear Fusion (MTF).
- Our approach is substantially similar yet significantly different from ‘bubble fusion’.
- Each bubble generates a tiny amount of fusion, but there are trillions of bubbles that pulsate million times per second; this allows harvesting several kilowatts of thermal energy from one liter of working fluid.



Why Is Our Approach Unique?

Extreme simplicity! →

a. Very low cost to research & develop

b. Very low cost to build & operate a reactor

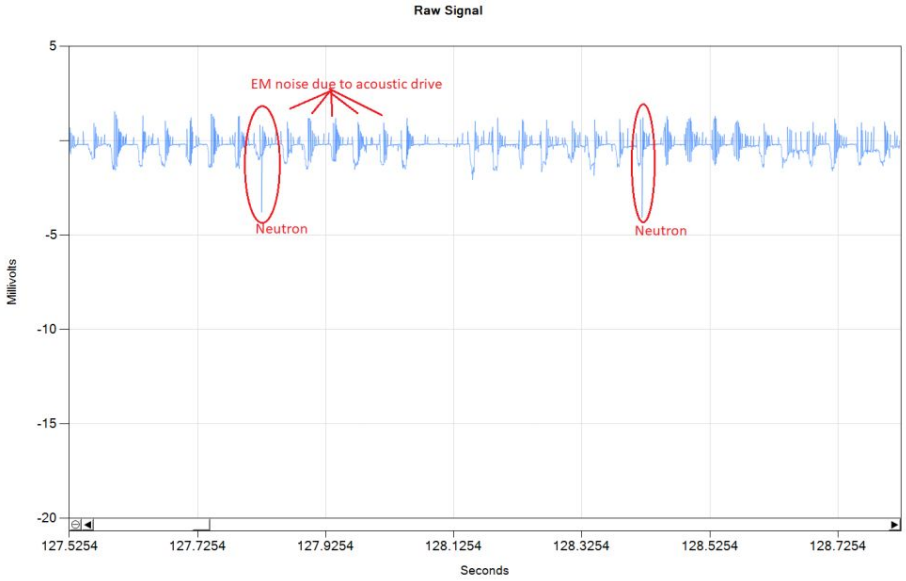
c. Very low CapEx / OpEx of a commercial system (CapEx of a car engine, OpEx ~$0)

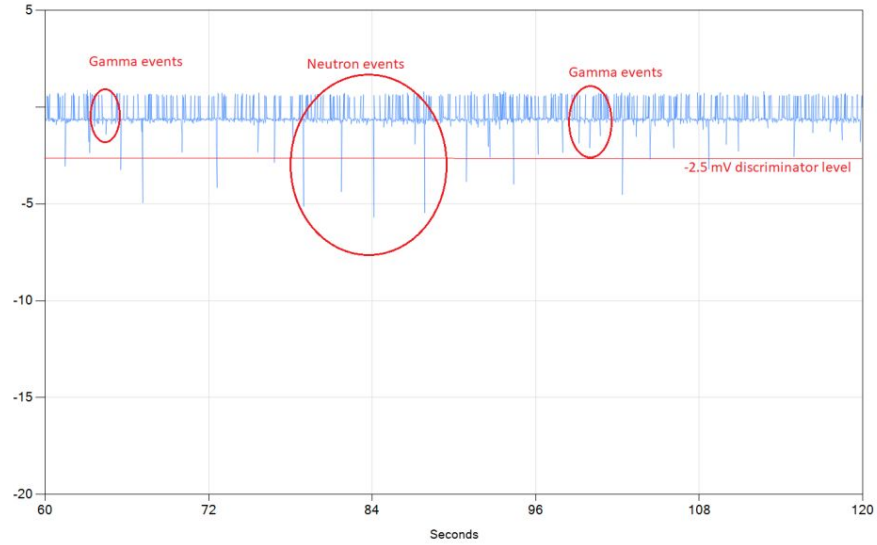
MTF Proof-of-Concept Reactor

COMPLETED

Neutrons Coincident with Acoustic Drive

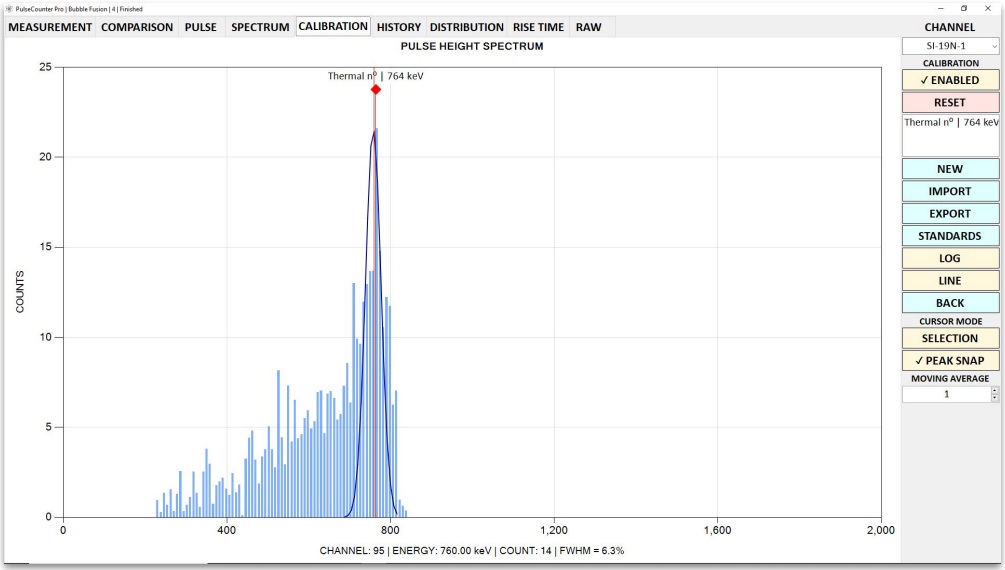
COMPLETED



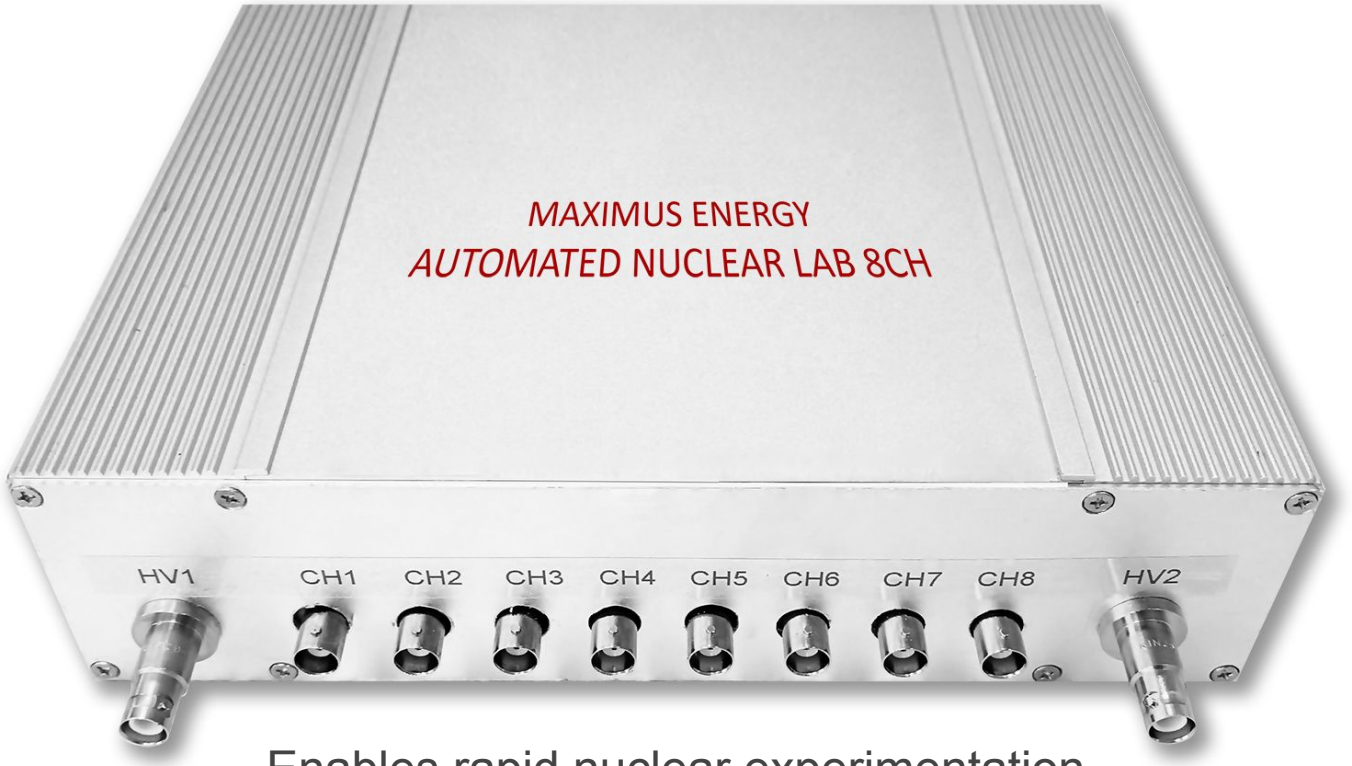


Unique Enabling Technology

1. Automated Nuclear Lab (ANL)
2. PulseCounter Pro Software

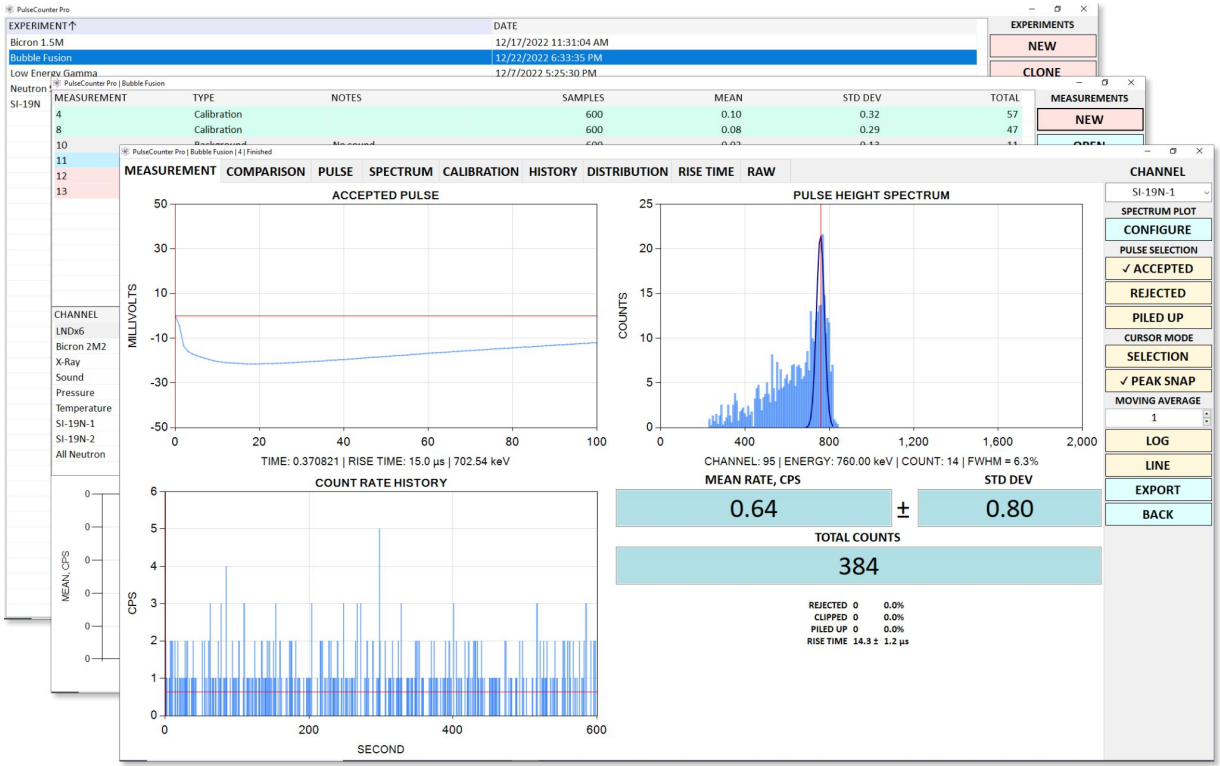


Automated Nuclear Lab



Enables rapid nuclear experimentation

PulseCounter Pro Software



Enables automated real-time nuclear data acquisition, processing and analysis

What Is The Expected Timeline?

Stage 1: Proof of Concept, done.

Stage 2: Demonstration of control & development of an engineering model, 12-24 months.

Stage 3: Engineering and construction of a 10kW demo reactor, 12-24 months.

Stage 4: Commercialization, manufacturing, sales & technology licensing.

What Are The Expected Capital Needs?

Stage 1: done

Stage 2: raising $400K USD

Stage 3: $2.5M USD

Stage 4: TBD

What Are The Risks?

1. Deriving the engineering model may be more difficult than we think.
2. The model may reveal that commercial power generation is unfeasible.
3. Commercial power generation may be too difficult to engineer.
4. Competition may come up with a better technology.
5. Nuclear Regulatory Commission (NRC) may interfere with commercialization.

What Are The Current Challenges?

1. Generation of bubbles of a specified size: in progress.
2. Amplitude & frequency control of the acoustic field: in progress.
3. CFD modeling of bubble collapse: in progress.
4. Bubble size measurement to confirm expansion and collapse: not started.
5. Preparation of optimal working fluid: not started.
6. Scanning of the parametric space to validate the MTF theory; the parameters are the acoustic frequency, acoustic amplitude, bubble radius, bubble concentration, headspace pressure, bubble gas composition, fluid composition, surfactants, temperature.

What Is The Target Market?

1. Small generators: 10-100 kW;
2. Locomotion engines for ships, trucks, trains;
3. Electric power generation;
4. Salt water desalination for drinking and irrigation.

The implications of the MTF technology are *revolutionary* and it will *change the world as we know it*.

Imagine cars, trucks and ships that you need to fill up only once a year.

Imagine unlimited clean fresh water.

Imagine electric power too cheap to meter.

Valuation Projection

Stage 2: $3.5M (now, this offering, raising $400 for 10% of equity)

Stage 3: $100M (12-24 months from now)

Stage 4: $1-100B+ unicorn (24-48 months from now)

Revenue Sources

- Technology licensing,
- Reactor manufacturing & sales.

Return on Investment / Exit Strategy

- **Private Company:** technology licensing, reactor manufacturing and sales will eventually enable the company to pay dividends to shareholders.
- **Public Company:** IPO.

About Maximus Energy Corporation

Maximus Energy Corporation is based in Naples, Florida (USA). The MTF technology was developed by founder, **Max Fomitchev-Zamilov**, Ph.D., a retired Penn State professor. Maximus Energy Corporation is privately funded and earns revenue from the sales of nuclear instrumentation that it manufactures or refurbishes.

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