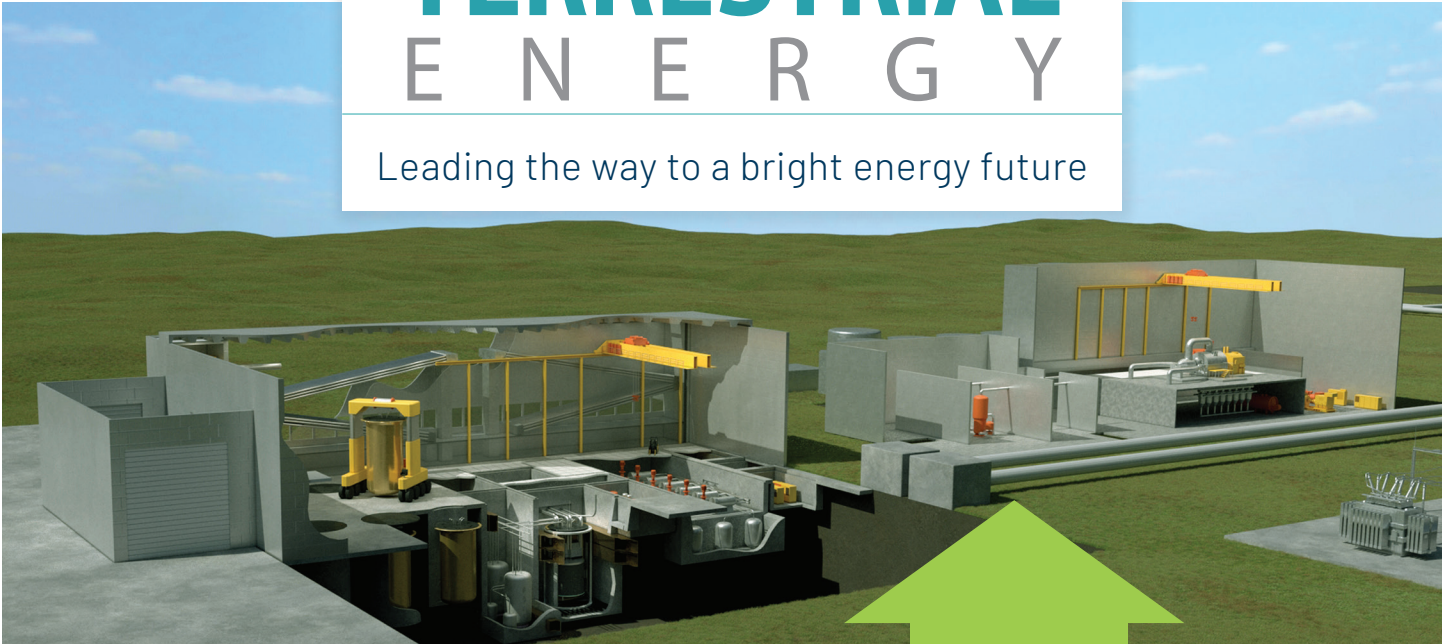


# TERRESTRIAL ENERGY

Leading the way to a bright energy future



## Terrestrial Energy is leading advanced reactor developers to market

Terrestrial Energy is an energy technology company developing a clean alternative to fossil fuel combustion that produces heat and electricity using advanced reactor technology. It is an early leader in a growing sector. Established in 2013, Terrestrial Energy's strong leadership, advisors and partners are pursuing a \$30 trillion opportunity to provide clean energy to global markets that is low-cost, versatile and high impact.

**“The next energy miracle is nuclear energy.”**  
– Bill Gates

Terrestrial Energy's Integral Molten Salt Reactor, the IMSR<sup>®</sup>, is that clean energy technology, and it is transformative. It uses nuclear energy but is fundamentally different from today's commercial reactors. The company's engineering and regulatory and business developments have moved the IMSR<sup>®</sup> power plant design to a leading market position. As a result of its truly transformative commercial merits, IMSR<sup>®</sup> deployment is supported by governments and industry. Terrestrial Energy is on track to secure first industrial customers in North America in the early 2020s, with first plants operating in the late 2020s.

## How heat and power from advanced reactors will play a key role in our clean energy future

Many countries aim to reduce emissions by 80 percent by 2050, with many also predicting this is not possible without nuclear energy. Experts agree that nuclear energy must play a critical role in our clean and prosperous energy future, but current technology is insufficient to meet that promise. Advanced reactors like the IMSR<sup>®</sup> represent a step change in innovation, and Terrestrial Energy's IMSR<sup>®</sup> is leading the way.

2020s

Licensing and construction of first commercial IMSR<sup>®</sup> power plants

Selection of first IMSR<sup>®</sup> power plant site with first customer

Completion of CNSC second design review

2017

Completed CNSC first design review, an industry first for an advanced reactor

Started siting work for IMSR<sup>®</sup> at Canadian National Laboratories

Terrestrial Energy USA advanced to phase two of the US DOE loan guarantee application; advised US NRC of licensing plans

Formed Corporate Industrial Advisory Board; Terrestrial Energy USA received GAIN grant from US DOE

2016

Engaged with the Canadian Nuclear Safety Commission (CNSC); awarded cleantech grant from SDTC, an agency of the Canadian government

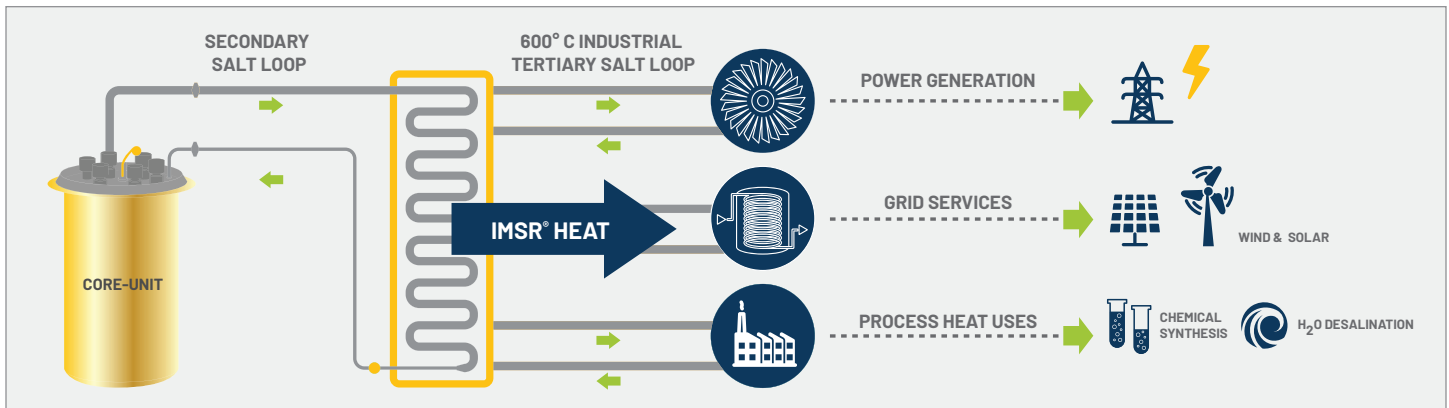
Completed conceptual design, started IMSR<sup>®</sup> engineering

2015

Incorporated

2013

[www.TerrestrialEnergy.com](http://www.TerrestrialEnergy.com)



## Terrestrial Energy's IMSR®: low-cost, clean, versatile and high impact

Terrestrial Energy's IMSR® uses a liquid fuel, a fundamentally different nuclear technology, in an innovative power plant design that is low-cost, emission-free and "walk away"-safe. As price will drive its market deployment, the IMSR® is a cost-competitive energy alternative to fossil fuel combustion. Efficient production of electricity as well as heat makes the IMSR® a powerful tool for policymakers to achieve deep decarbonization.

- **Cost-Competitive:** IMSR® power plants are small (190 MWe/400 MWth) and modular. They require a much smaller upfront investment (less than \$1 billion) and are constructible in under five years, making them easier to finance.
- **Clean:** Like all nuclear power plants, the IMSR® produces no greenhouse gases. Small plant footprint and a low water requirement minimize environmental impacts and increase siting flexibility.
- **Produces Heat:** IMSR® power plants are versatile. They supply 600°C heat in the form of a hot molten salt—ideal for large-scale electricity generation and energy-intensive processes such as desalination, hydrogen production, petrochemical refining and clean synthetic transport fuels, applications not serviced by current clean-energy technologies. This capability of IMSR® power plants uniquely enables *deep decarbonization*.
- **Dispatchable:** IMSR® power plants are the clean energy partner to variable renewables, such as wind and solar as they can rapidly load-follow, and so remove the need for utility-scale grid storage.
- **Innovation:** The IMSR® liquid fueled power plant design blends proven molten salt technology with innovative enhancements—key is the integration of primary reactor components into a sealed, replaceable vessel. This enables simple and robust safety systems for a "walk away"-safe nuclear power plant.

## Why Terrestrial Energy is the company to watch

Terrestrial Energy's IMSR® power plant design has completed phase one design review in Canada, a first for an advanced reactor. It is a clear leader among advanced reactor developers, and its IMSR® power plant design has many advantages even compared to other next generation reactors. Terrestrial Energy benefits from engineers and advisors from some of the world's leading nuclear energy companies, and its executives have decades of world-class experience. Its technology is on schedule for 2020s commercialization and deployment. It has the potential to transform global energy supply.

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**TERRESTRIAL ENERGY**

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