



THORIZON

YESTERDAY'S FUEL TOMORROW'S ENERGY

Thorizon Company Presentation to BEL

October 2025

OUR ENERGY GAP

We need steady, affordable energy. Bills rise, plants close, and the planet warms, yet 67% of our energy still comes from fossil fuels, and 58% of that is imported.

Industry cannot wait for weather-based power. It needs reliable, low-cost, carbon-free electricity and heat. A home-grown reactor that runs on stored nuclear waste is a sure path to clean prosperity and energy sovereignty.

Thorizon can unlock this untapped source of energy.

67%
FOSSIL
FUELS



58%
IMPORTED



WHAT ABOUT EXISTING NUCLEAR OR RENEWABLES?

Solar and wind are vital, but they cannot deliver the 24/7, high-temperature energy that industry and data centers demand. Traditional light-water reactors and today's SMRs provide steady electricity, but not the industrial-grade heat required. Their high-pressure design forces large exclusion zones, prevents scalable deployment near industry, and still produces long-lived nuclear waste.

Research* show people have a lot of concerns about nuclear energy: % of correspondents agree / strongly agree

COSTS?

“Nuclear energy is too expensive to build”

33%

SAFETY?

“Nuclear energy is just too dangerous”

37%

WASTE?

“Leaving nuclear waste behind is just wrong”

63%



REACTOR TECHNOLOGIES

LWR CLOSEST TO MARKET... ...MOLTEN SALT MOST CIRCULAR

Type	Status	Market
1) Light-Water Reactors (LWR) — klassieke/Gen-III+ SMR variants	veel ontwerpen zijn in late licentie- of vroege bouwfase;	de eerste commerciële LWR-SMR-eenheden in westerse landen worden nu breed verwacht rond 2028–2032
2) Natrium-gekoelde snelle reactoren (SFR / Sodium cooled)	Demonstrator in licensing process	eerste commerciële pilots rond 2028–2035 , afhankelijk van vergunningen en brandstof (HALEU)-voorziening
3) Lood-gekoelde reactoren (Lead-cooled)	Demonstrator start construction	westerse commerciële roll-out naar verwachting vooral in early-to-mid 2030s
4) Vloeibaar-zout reactoren / FHR (Molten Salt & Fluoride Salt-Cooled High-Temperature Reactors)	Ontwerp & component demonstratie fase	commerciële beschikbaarheid verwacht rond begin/midden 2030s

MOLTEN SALT THE MOST COMPLETE SOLUTION IN FISSION.

The only reactor delivering **industrial-grade heat at low pressure**, with **safety** governed by physics and **fuel circularity** by design.

	 Gen IV AMR Molten salt	 Gen III SMR Light water	 Gen IV AMR Sodium	 Gen IV AMR Lead	 Gen IV AMR HTR	 Fusion reactor
Carbon free energy Stable baseload, small energy footprint	✓	✓	✓	✓	✓	✓
Industrial use cases High outlet temperature, deliver industrial heat	✓ ~700°C	✗ ~300°C	⚠ ~550°C	⚠ ~550°C	✓ >700°C	⚠ Potential
Intrinsic safety No escalation, self- regulating capabilities	✓ ✓ Best in class	✗ High pressure, active systems	⚠ Passive cooling, fire risk	✓ Low pressure, passive safety	⚠ Pressurized, but passive shutdown	⚠ Unproven plasma stability
Fuel circularity Valorizing spent fuel and reducing long-lived waste	✓ ✓ Best in class	✗ Long-lived waste	✓ Supports recycling	✓ Supports recycling	✗ Triso fuel not reprocessable	⚠ Requires tritium breeding infra
	Best mix of use cases, safety and circularity	Proven, known by regulator	Uranium fuel security, strategic R&D	Long cycle, compact, remote power	High temperature, more mature	Long-term moonshot for electricity

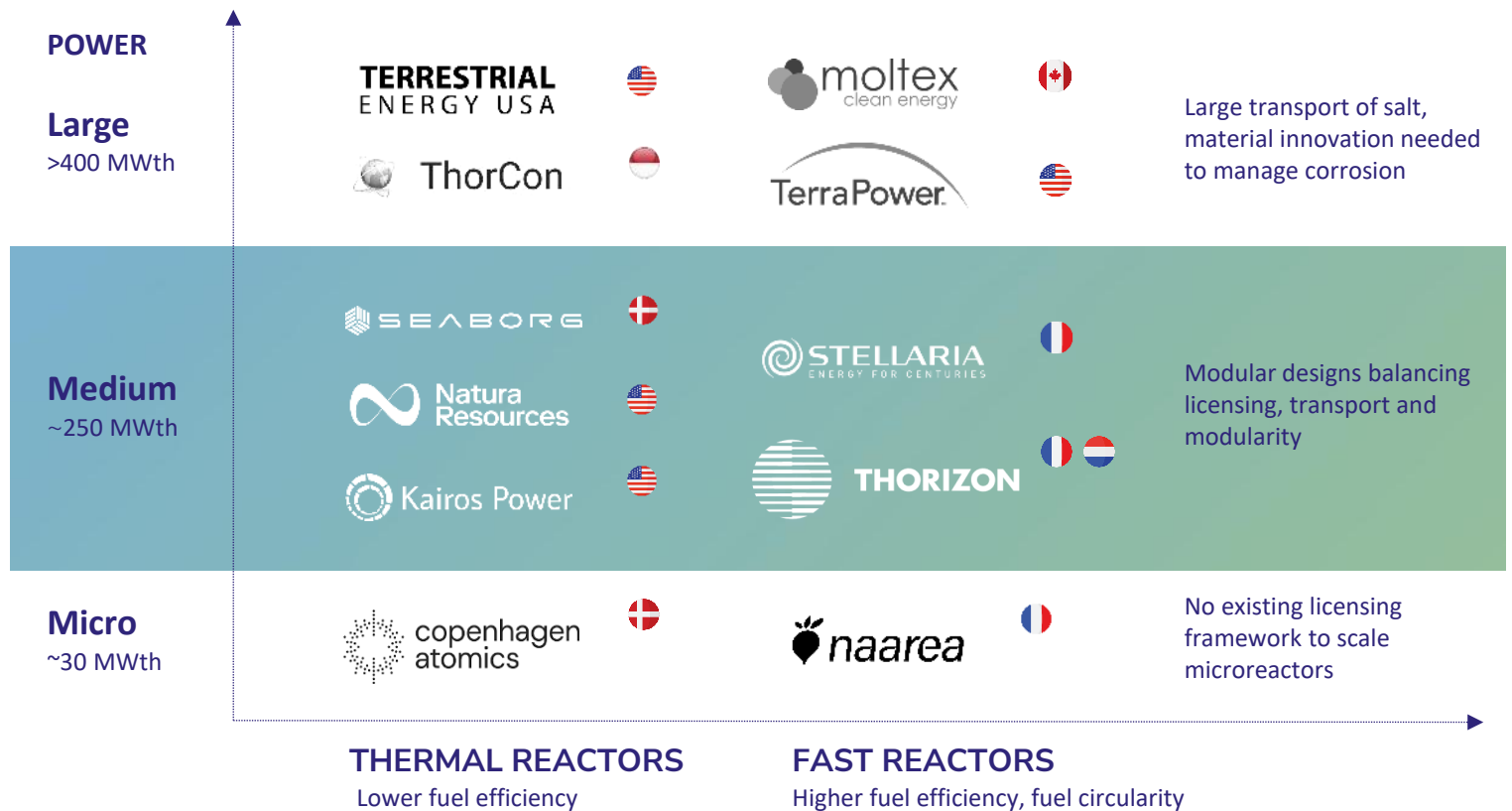
THORIZON. THE MOST BALANCED SOLUTION WITHIN MOLTEN SALT.

Our innovation is concentrated in the cartridge: a modular unit that can be independently prototyped and tested, based on proven materials.

We leverage **existing regulatory frameworks** and target licensed nuclear sites for early deployment.

We are **backed by industry leaders** combining deep technical expertise with real-world execution at scale.

Molten salt is maturing across the globe, first two construction permits granted in the US



INDUSTRIALIZING THE MOST PROMISING NUCLEAR TECHNOLOGY

Our reactor delivers firm electricity and high-temperature industrial heat directly to the grid and factories. It is safe by physics and scalable by design, redefining how the world powers industry, data, and society.

No CO₂. No long-lived waste. We provide clean energy from sovereign fuel already in stock today.



BIG TECH IS SEEING THE OPPORTUNITY.

There is a need for small, safe and low-cost nuclear reactors. Big tech companies are moving into this space.



Media Release: Nvidia CEO
Nuclear is going to be a vital, integral part of powering AI

CLIMATE

Amazon goes nuclear, to invest more than \$500 million to develop small modular reactors

MICROSOFT / TECH / SCIENCE

Microsoft wants Three Mile Island to fuel its AI power needs

Microsoft has signed a 20-year deal to exclusively access 835 megawatts of energy from a nuclear plant.

CLIMATE / ENVIRONMENT / SCIENCE

Meta turns to nuclear energy for its AI ambitions

“We believe nuclear energy will play a pivotal role in the transition to a cleaner, more reliable, and diversified electric grid,” Meta’s announcement says. It’s not alone.

Google orders small modular nuclear reactors for its data centres

Terrell said SMRs offered “a simplified, inherently safe design, faster construction, and flexibility on deployment location” compared with large-scale nuclear plants. “Obviously, this is a bit of a longer-term bet, but it is an incredibly promising bet. If we can get it to scale globally, this will deliver enormous benefits to power grids around the world.”



Flexible carbon-free energy
100 MWe baseload, 550°C heat



Reduction of long-lived waste
Optimal use of scarce resources



Walk-away safe
Low pressure, no meltdown risk



Cost competitive
Up to € 60 per Mwh, modular core

THE BEST SOLUTION FOR CLEAN POWER CLOSE TO WHERE IT IS NEEDED

The moment for a clean, low-cost reactor is now; Molten salt reactors can unlock the full potential of nuclear energy.

Thorizon reactors deliver 100 MW of affordable electricity and 550 °C industrial heat on site, while valorising spent nuclear fuel, an abundant and secure untapped source of energy. We enable you to flip the energy script.



AFFORDABLE

High Thermal Efficiency
Modular, low-pressure system

WALK AWAY SAFE

Low operating pressure
Self-regulating

CIRCULAR

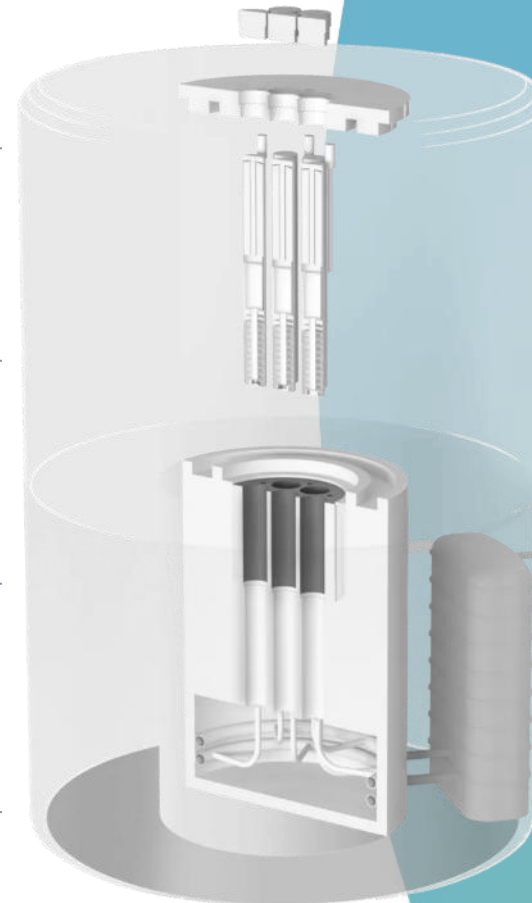
Nuclear waste as fuel
Reduce long-lived waste

THE KEY TO INDUSTRIALIZE MOLTEN SALT: MODULAR CORE SOLVES CORROSION AND TRANSPORT

Our modular core is **factory-made**, low pressure and transportable, reducing build time and complexity. Its high thermal efficiency delivers more energy from the same fuel, lowering operational costs.

Molten salt keeps the fission reaction stable at low pressure, eliminating meltdown risk and enabling construction **close to end users**. The exchangeable core keeps the system safe and up to date.

By using fuel more efficiently and flexibly, and valorising existing stocks the reactor strengthens energy security, cuts uranium dependency, and delivers **cleaner, more reliable power**.



EP 3 963 603 B1

EUROPEAN PATENT SPECIFICATION

AFFORDABLE

High Thermal Efficiency
Modular, low-pressure system

WALK AWAY SAFE

Low operating pressure
Self-regulating

CIRCULAR

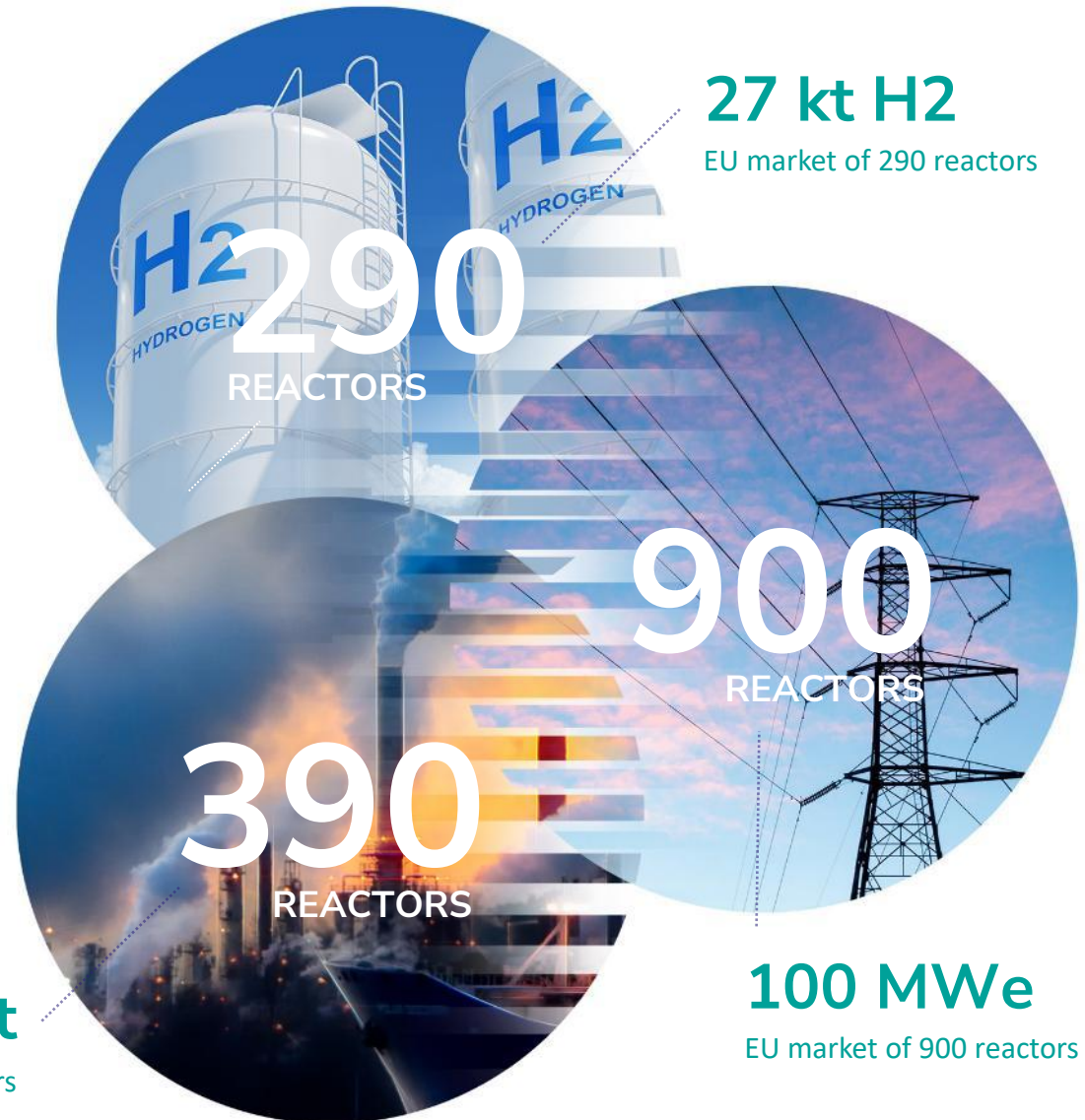
Nuclear waste as fuel
Reduce long-lived waste

A LARGE MARKET WAITING TO BE CAPTURED.

To meet net-zero, global nuclear capacity must double by 2050, cutting emissions equal to 3 years of global CO₂.

Our reactor delivers 550°C high-temperature heat for industry, 27kt clean hydrogen, or 100MW off-grid power for fast-growing data center needs.

We can offer reliable, local, and domestic energy, with fuel security for decades.



YOU CANNOT BUILD A NUCLEAR REACTOR **ON YOUR OWN.**

UNMATCHED ENDORSEMENTS FROM 4 EUROPEAN GOVERNMENTS

€10M

France Grant



€10M

European Grant



€4M

Dutch Grant + Equity



Recognition as a strategic EU SMR project and joint licensing track in 3 European countries



STRATEGIC PARTNERSHIPS WITH EXECUTION POWER

Thorizon partners with industry leaders:



Orano for fuel supply



VDL for manufacturing



EPZ for deployment and operations



Tractebel for licensing and engineering

KNOWLEDGE OF RENOWN RESEARCH INSTITUTES



TNO innovation for life



Thorizon, an NRG spin-off, builds on decades of research with access to key facilities and construction expertise, partners with CEA and TNO, and is backed by DIFFER's dedicated MSR lab.

A TEAM THAT HAS DONE IT BEFORE

Team of ~25
in Amsterdam



Team of ~25
in Lyon



We combine **deep nuclear expertise** with **industrial execution power**.

Our team includes reactor designers, licensing experts, and hardware engineers with experience from loop design to full reactor deployment. We can **prototype in-house**, move fast, and operate in **cross-functional teams that scale**.

In-house design, licensing and prototyping skills

Working in mission teams across offices

**>10 nationalities
30% women**



THORIZON MADE PROGRESS ON EVERY CRITICAL PATH

TRANSITIONED TO BASIC DESIGN



Design based on strong platform patent and 8 patent follow-ons. Concept design mature enough to start the regulatory process.

STARTED PROTOTYPING & TESTING



Three test loops are running in-house. Salt and material irradiation is underway at high-flux reactor (NRG) and DIFFER. Pump prototype early 2026.

LINED UP FIRST DEPLOYMENT SITES AND END-USER



Dutch nuclear operator EPZ as launching customer / operator. Engaged on three licensed sites in NL, FR, and BE, with prefeasibility studies concluded positively.

REGULATORY PATHWAY UNDERWAY & SECURING FUEL



Active engagement with ANVS, ASNR, and FANC, joint preparatory review ongoing and to be completed in 2025. Partnership with Orano since 2022, aligned roadmap with fuel availability.

OUR ROADMAP FROM PROTOTYPES TO FIRST OF A KIND

COMPONENT PROTOTYPES

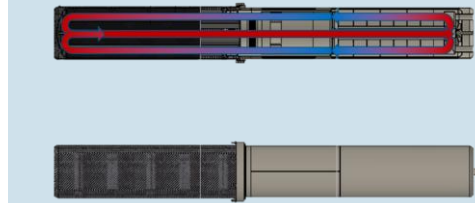


Thorizon Loops 2025

Pumps, valves, and heat exchangers with molten salt in loops

📍 Thorizon labs in NL and FR

MOLTEN SALT DEMONSTRATOR



Thorizon Pilot ~2027

Representative full-scale module with hot salt, without nuclear fuel

📍 Site in Brabant (cartridge)

📍 Site in Zeeland (THX - salt)

FISSILE DEMONSTRATOR



Thorizon Pioneer ~2030

Experimental reactor, first fast molten salt reactor in Europe

📍 3 sites under consideration

FULL SCALE FOAK



Thorizon One ~2034

First full scale, grid-connected power plant delivering 100MWe for end-user

📍 Most likely location is Zeeland (NL)

THANK YOU

LET'S TURN YESTERDAY'S WASTE INTO TOMORROW'S ENERGY INDEPENDENCE

Together we create secure, affordable, zero-carbon energy, while earning venture-scale returns on a technology the world can't wait for.

Driving technological breakthrough at speed

Best positioned to commercialize MSRs fast — using proven materials and designing within today's regulatory framework.

Unlocking a large, clean source of energy

100 MWe baseload and 550°C industrial heat — ideal for data centers, electrification, and Europe's energy-hungry industries.

Credible player capable of rapid scaling

Backed by Orano, VDL and EPZ. A unique consortium spanning fuel, manufacturing and operations — hard to replicate.

Attractive returns, strong financial backing

Public support from NL, FR, and EU governments. Capital-light model with cartridge sales and 'fuel-as-a-service'. Competitive LCOE.

Exceptional Team with nuclear, deep tech and scale-up talent

Driven team combining nuclear experience with engineering excellence and start-up agility — built to deliver.