powering tomorrow

safer, cheaper, cleaner

moltex energy

stable salt reactor

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As the world seeks to head off the worst impacts of climate change, there is an urgent need for non-carbon electricity that can meet the burgeoning demand for affordable electricity.

At Moltex Energy, we have the science to make a substantial contribution to meet the challenge with our Stable Salt Reactor technology.

We invite you to be part of this story.

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powering the future

the reason behind it all

The value of clean energy is not measured in joules or megawatts; it is valued in the difference it makes to people's lives.

At Moltex and for the countries, provinces and utilities we partner with, electricity generation is not about technology, it's about people.

It is the well-paid, high-skill jobs, the opportunity to grow our economies and communities. It is a chance to provide the things most essential to our quality of life: access to clean air, ample safe, reliable, affordable electricity, and a healthy planet that is better for the stewardship we provided to it while we were here.

Join us as we work to protect our world and grow vibrant economies for the people who inhabit it.

Learn more about how you can invest in Moltex Energy or adopt the technology as part of your jurisdiction's clean energy future.

Visit our website: MoltexEnergy.com for more information,
or
To book a meeting, contact: RoryOSullivan@MoltexEnergy.com

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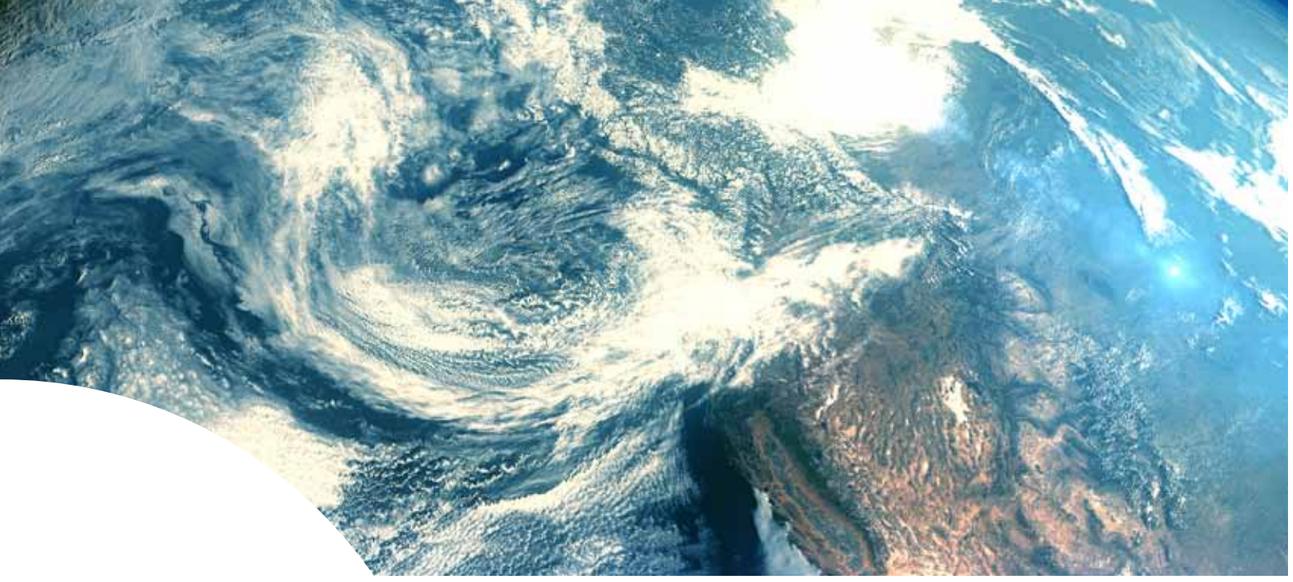

about moltex energy

a new technology company for a new generation of clean power

In less than five short years, Moltex Energy has emerged as a leader in the field of advanced nuclear technologies.

With its innovative Stable Salt Reactor (SSR) design, Moltex provides a low-carbon electricity generation technology that merges modular design's low upfront costs with affordable, large-scale power (300 – 1,000 MW installed capacity with potential for up to 3,000 MW output). It couples that with inherently safe design features that make it suitable for siting in any community.

Moltex Energy is a leader in the field of advanced nuclear technologies.

Moltex's design, has caught the attention of governments and utilities worldwide:

- With a Canadian utility partner – New Brunswick Power – Moltex is working toward development of an advanced reactor, which could be built at the existing Point Lepreau nuclear plant site;
- It is the only large-scale advanced nuclear technology vendor to be selected by the UK government with funding support; and
- Moltex has been recognized with funding from the US Department of Energy, international engineering design partner, IDOM, plus many individuals who recognize its potential to meet the urgent demand for on-grid, flexible, low-carbon electricity.

versatility

electricity to power our lives

Future electricity demand requires a multi-faceted supply solution that can power our cities, agriculture and industry as demand requires. Enter Moltex Energy.

Fossil fuels were once a preferred choice because they flexed to follow demand. Unfortunately, they came with a cost: carbon-causing, greenhouse-gas emissions that affected the health of people and the planet.

In many countries, conventional nuclear plants provide clean baseload power but do not scale up and down to follow the electricity demand flow. Renewables like wind and solar provide non-carbon electricity but are intermittent and unpredictable producers due to the nature of their fuels – the sun and the wind.

The Moltex Energy stable salt reactor uses a non-carbon, advanced nuclear technology.

Every grid needs a variable and predictable source of electricity. The Moltex Energy stable salt reactor (SSR) provides the bridge. With Moltex's GridReserve® technology, a collection of tanks that store thermal energy, a 1000MW reactor can drive 3000MW of steam turbines for eight hours a day; operating when the power is needed most. This provides the ideal back-up for a diverse electricity supply that includes less-predictable intermittent sources like renewables, without the greenhouse gas emissions of fossil sources.

safer

inherently safe by design

Technological advances have accelerated the pace of change and opened new possibilities. The Moltex Energy stable salt reactor (SSR) design uses passive safety systems and inherently-safe features that are outside of the traditional nuclear experience.

The conventional concept of nuclear power is a big industrial complex with thousands of parts and people. Nuclear plants have operated safely for decades based on preventative systems and robust emergency preparedness. Today though, new approaches to design and material selection is changing the paradigm of the reactor safety case, making it simpler and less costly.

Safety made simple.

The Moltex design ensures control of reactivity, heat removal and containment through passive safety systems and materials:

- The fission products that create a heat reaction are locked up in the fuel as salts that cannot emit into the air;
- Because the reaction that creates heat takes place at regular atmospheric pressure, no build up is ever created; and
- The fission reaction slows down as the temperature rises, so the system is self-controlling.

Safety made simple.

cheaper

small but mighty

By reducing the size of the reactor to a 20th of a conventional nuclear plant and simplifying systems and operational requirements, the Moltex Stable Salt Reactor (SSR) delivers a low-cost solution but packs a lot of power.

Many Small Modular Reactors (SMRs) benefit from low-cost modularisation of their units to reduce upfront capital costs. And this is true of Moltex reactors.

Small they may be but when it comes to powering cities and industry, the on-grid Moltex SSR brings the dual economies of modular construction and economies of scale. For example, modules manufactured in factories can be placed in a long tank to form a 1200MWe reactor. At only 18m long, this could be transported on a conventional truck.

But don't let looks fool you; this small reactor still provides big plant power.

The Moltex reactor longevity – built to last for 60 years – and its ultra-light weight give the Moltex reactor design a competitive cost advantage over other Small Modular Reactor designs.

cleaner

on its own or as part of a low-carbon mix

The Moltex Energy Stable Salt Reactor is the only technology needed to power a low-carbon economy. But, it plays well with others, too.

With its flexibility and on-grid power strength, the Moltex Stable Salt Reactor (SSR) can be a one-instrument band. But, the low-carbon, clean technology is also ideal to complement conventional baseload nuclear and renewables with its load-following capability.

Either way, it can help produce the power needed for a clean electricity system. Municipalities can leverage that grid to electrify other infrastructure like transit and heating systems that would otherwise rely on fossil fuels; further reducing the effects that contribute to climate change and smog.

Small environmental footprint; big heart.

The Moltex reactor offers other environmental advantages. It requires half the cooling water of conventional designs of the same output and has a minimal effluent impact on the surrounding land and water.

a fuel source

that reduces the waste already there

For countries that have already successfully employed nuclear, the Moltex reactor offers a key additional benefit to meet environmental stewardship goals, reduce costs and strengthen public confidence of nuclear technology through waste minimization.

There are three ways to deploy the Moltex Stable Salt Reactor (SSR). For countries which already have existing inventory of nuclear used fuel, one of these technologies, the Moltex fast spectrum reactor (SSR-W) is designed to consume the long-lived radioactive waste from current reactors.

A fuel source that reduces the waste already there.

The SSR-W has the potential to operate using the used fuel from existing operations, reducing existing inventories and avoiding future additional inventory. Additional fuel recycling occurs throughout the reactor's lifetime for further minimization.

The result: Strong environmental stewardship, a reduction in waste management cost and increased public acceptance of nuclear technology.

The Moltex SSR-W reactor is currently in development for possible siting at the Point Lepreau Generating Station site in New Brunswick, Canada.

a brighter future

a world powered by clean, safe electricity

When we envision a better world for our children, we see a place where the air is clear and the power needed for well-being and prosperity is safe, effective and affordable.

The world's energy demand is expected to grow by one third by 2040. We are in a race to keep up with this demand as millions of people strive to improve their quality of life through increased access to essential services, including electricity.

Simultaneously we grapple with the challenge of climate change and how to improve air quality for billions of people. All countries face the challenges of increasingly erratic weather and other carbon-related impacts.

At Moltex Energy, we have developed the solution to power the future.

The world needs versatile, scalable low-carbon power that is safe, affordable and can adjust to meet demand as it rises; to power the things that matter most.

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