NEWS RELEASE

The Helium Imperative: Fueling Converging Forces - AI, Energy Resilience, and Decarbonisation

2025-07-04

Technology, Space & Energy

As artificial intelligence continues to transform a wide range of consumer-facing technologies, energy demand is surging.

Advanced cooling systems, semiconductors, and high-performance hardware are essential to AI infrastructure - and helium plays an irreplaceable role across all three. In tightly packed data centers handling hundreds of thousands of simultaneous AI queries, helium's unique cooling properties ensure operational stability and thermal efficiency. Without it, large-scale deployment and the processing speeds that define modern AI would be unattainable. Helium is also used extensively in the fabrication of cutting-edge processors like Nvidia's H100 and Blackwell series.

According to the MIT Technology Review, **the AI boom is driving a surge in power-hungry datacenters, now using 4.4% of U.S. electricity** - a figure projected to nearly triple by 2028. Training just one model, like OpenAI's GPT-4, can cost over $100 million and consume enough energy to power a major city for several days.

To meet this extraordinary energy demand, one of the most promising solutions is Small Modular Reactors (SMRs) - next-generation nuclear systems offering scalable, low-carbon baseload power. Once seen as fringe, SMRs are now gaining serious traction as the future of distributed energy resilience. According to a recent **BBC report, governments and tech giantsalike are accelerating SMR deployment** to support data centre growth.

Many of the most advanced SMR designs use helium as a primary coolant, thanks to its inert nature, thermal stability, and efficiency at high temperatures. Water-cooled reactors simply can't match the operational performance provided by helium. And there is no substitute - helium's role in SMRs is both critical and non-replaceable. AI growth and clean energy goals are converging - and helium will be key to unlocking the full potential of SMR technology.

The Carbon Cost of AI and Why Helium Matters

As AI's footprint increases, so does its environmental impact. A 2024 Harvard study found that U.S. data centers - often located on fossil-fuel-heavy grids - emit 48% more CO_2 per kilowatt-hour than the national average. While renewables are essential, they can't meet the constant demands of data centers - clean power 24/7 requires nuclear technology, and that means a growing role for helium. From powering SMRs to enabling improved energy efficiency across computing infrastructure, helium is central to any serious decarbonization strategy.

The Topaz Helium Project, Minnesota, USA

If Pulsar's Topaz Helium Project in Minnesota comes online as expected, it would represent one of the most significant additions to U.S. helium production in a generation - at a time when domestic supply chains have never been more geo-politically or economically important.

Recent well testing at Jetstream #1 and #2 recorded strong pressure data. With flow testing set to recommence this month, Pulsar is moving steadily toward unlocking Topaz's full production potential.Meanwhile, in Greenland, Pulsar's Tunu Project is being assessed not only for helium, but also for geothermal energy potential - a rare and valuable dual-resource opportunity supported by global energy consultancy **Sproule-ERCE**.

Pulsar remains the only primary helium company worldwide with assets in both the U.S. and Greenland - two of the world's most stable, resource-rich jurisdictions.

Smart Capital Sees It Coming

AI, clean energy, and decarbonization are converging megatrends that will define the next decade of innovation and investment. Helium sits at the center of them all.

For investors, understanding helium's role today is a chance to anticipate where the world is heading. As Pulsar advances its high-grade, future-facing helium assets, smart capital continues to invest in critical raw materials like helium - recognising that this rare element is as essential as it is inevitable.

Pulsar Helium's shares trade on TSXV: PLSR | OTCQB: PSRHF | AIM: PLSR

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