

What does the tritium acquisition mean for Exicom?

The Tritium Acquisition will add Tritium Group's manufacturing facility in Tennessee, USA, and its world-class engineering centre in Brisbane, Australia to Exicom's existing presence in Asia. This acquisition expands Exicom's global reach and amplifies its commitment to research and development to drive innovation in this growing industry.

Can nuclear reactors produce tritium?

But tritium, with a half-life of 12.3 years, exists naturally only in trace amounts in the upper atmosphere, the product of cosmic ray bombardment. Nuclear reactors also produce tiny amounts, but few harvest it. Most fusion scientists shrug off the problem, arguing that future reactors can breed the tritium they need.

Where does tritium come from?

The few kilograms of commercially available tritium come from CANDU plants, a type of nuclear reactor in Canada and South Korea. According to ITER projections, supplies will peak this decade, then begin a steady decline that will accelerate when ITER begins burning tritium.

How much is tritium worth?

This wasn't ordinary hydrogen but its rare radioactive isotope tritium, in which two neutrons and a proton cling together in the nucleus. At \$30,000 per gram, it's almost as precious as a diamond, but for fusion researchers the price is worth paying.

Will JET's 'ITER' breakeven if it starts a deuterium & tritium reactor?

By getting to one-third of this breakeven point, JET offered reassurance that ITER, a similar reactor twice the size of JET under construction in France, will bust past breakeven when it begins deuterium and tritium (D-T) burns sometime next decade. "What we found matches predictions," says Fernanda Rimini, JET's plasma operations expert.

How much tritium will OPG ship a year?

OPG Vice President Jason Van Wart expects to be shipping up to 2 kilograms annually beginning in the 2030s, when ITER and other fusion startups plan to begin burning tritium. "Our position is to extract all we can," he says. But the supply will decline as the CANDUs, many of them 50 years old or more, are retired.

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Tritium Power Solutions Inc. and Tritium Power Solutions Pty Ltd agreed to acquire Assets And Business of Tritium group in USA and Australia from Tritium DCFC Limited (OTCPK:DCFC.Q), Tritium America Corporation, Tritium Technologies Llc and Tritium Pty Ltd for \$29.6 million on August 7, 2024.

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The \$25 billion ITER, funded by China, the European Union, India, Japan, South Korea, Russia, and the United States, is due to start operation in 2025 but won't produce large amounts of power until 2035, when it is due to start burning the energy-producing isotopes deuterium and tritium (D-T).

In a man-made reactor lacking such gravitational forces, the most effective fusion method has been found to heat hydrogen isotopes deuterium and tritium to even greater temperatures of 150 million degrees Celsius.

Svalbard and Jan Mayen (Norwegian: Svalbard og Jan Mayen, ISO 3166-1 alpha-2: SJ, ISO 3166-1 alpha-3: SJM, ISO 3166-1 numeric: 744) is a statistical designation defined by ISO 3166-1 for a collective grouping of two remote jurisdictions of Norway: Svalbard and Jan Mayen. While the two are combined for the purposes of the International Organization for Standardization (ISO) catego...

Unlike conventional fission-based generation methods, fusion creates only a small amount of short-lived waste, emits no greenhouse gases and has a secure fuel supply through deuterium, which can be distilled from seawater, and ...

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