

Bruce Power, ITM and partners finalize agreement paving way for new medical isotope delivery system expected in 2022

Toronto, ON and Garching/Munich, Germany – November 12, 2019 – Two partnership agreements signed today will lay the groundwork for a new isotope delivery system at Bruce Power that will help provide lifesaving medical isotopes worldwide.

The agreements, signed at Kinectrics with Ontario Premier Doug Ford in attendance, involved three Ontario companies Bruce Power, Kinectrics & Framatome and ITM, a biotechnology and radiopharmaceutical group of companies based in Munich with a global network of radiopharmaceutical production facilities. This new partnership, in conjunction with Bruce Power's Life Extension program, helps to create a framework for isotope production until 2064, which is the expected life of the Bruce Power site following its Life Extension Program launched in 2016 which remains on time and on budget. Under the terms of the agreement the irradiation services by Bruce Power will be exclusively provided to ITM.

Using ITM's unique manufacturing methodology, the production of the medical isotope non-carrier-added (n.c.a.) Lutetium-177 (¹⁷⁷Lu) / EndolucinBeta[®] by irradiating Ytterbium-176, will be established at Bruce Power. N.c.a. Lutetium-177 is a highly pure therapeutic precursor, which is successfully applied in Targeted Radionuclide Therapy for the treatment of a growing variety of cancers such as prostate cancer, neuroendocrine tumors, or bone metastases. Pending regulatory and other approvals, the delivery system for the production of the isotope n.c.a. Lutetium-177 is expected to begin in 2022.

"Ontario has been a worldwide leader in the production of life-saving, cancer-fighting isotopes and our nuclear industry is making sure that we maintain that role for years to come," said Premier Doug Ford. *"I am very proud to see that this important work that is being done right here in Etobicoke and I'd like to congratulate Kinectrics, Bruce Power, Framatome and ITM for signing this ground-breaking agreement."*

"These agreements allow us to take the next step forward in providing life-saving isotopes," said Mike Rencheck, Executive President and CEO at Bruce Power. *"Through our partnership with Kinectrics, Framatome and ITM, we look forward to becoming part of a global network providing n.c.a. Lutetium-177 to a growing number of cancer patients worldwide."*

Earlier this year, Bruce Power and ITM completed a successful feasibility study that concluded that Bruce Power and its partners Framatome and Kinectrics, following regulatory and other approvals, are uniquely positioned to fulfil the necessary requirements to establish isotope delivery units at the Bruce Power reactors for the subsequent production of ITM's n.c.a. Lutetium-177. The study examined factors such as technical, medical and nuclear regulatory requirements, radiation protection and waste management. It also verified the specific requirements of compatibility with ITM's target and processing technology.

“We are pleased to see the progression of our common goal with Bruce Power and its partners Framatome and Kinectrics to produce our therapeutic no-carrier-added Lutetium-177 in North America,” annotated Steffen Schuster, CEO of ITM. “The qualified expertise of our partners Bruce Power, Framatome and Kinectrics will enable the fastest route in providing our no-carrier-added Lutetium-177 to cancer patients in North America and help secure the supply of high-quality medical radioisotopes for Targeted Radionuclide Therapy to cancer patients worldwide.”

The installation of the irradiation services at Bruce Power by Framatome and Kinectrics, is currently planned for late-2021. Bruce Power will provide the infrastructure and be responsible for the irradiation as it currently does with Cobalt-60.

“Kinectrics is proud to support the Ontario-based supply of this lifesaving Isotope Lutetium-177. With our partner Framatome, we will design, supply and license the isotope production system enabling large-scale production of Lu-177 to meet future market demand. This is a very exciting business opportunity for Kinectrics, building on our licensing, engineering, and active materials handling capabilities.”

“Bruce Power’s unwavering commitment to life-saving isotope development expands Framatome’s innovation and expertise in nuclear technologies, as we join forces with Bruce Power, Kinectrics and ITM in the fight against cancer,” said Bernard Fontana, CEO of Framatome. “Our contribution in developing and delivering Lutetium-177 medical isotopes not only transforms medical treatments for cancer patients worldwide, it strengthens Canada’s position as a global leader in the production of medical isotopes for the advancement of human health.”

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How the cooperation works:

- An Isotope Delivery System on a Bruce Power unit can be used to turn targets into medical isotopes through a process referred to as irradiation. This is a similar process utilized by Bruce Power in the production of Cobalt-60.
- N.c.a. Lutetium-177 is made by irradiating a stable isotope, Ytterbium-176, delivered by ITM.
- The Ytterbium-176 is sealed in special containers and placed in the reactor for about two weeks and then it is sent for processing and distribution to health care facilities.
- Each container may contain enough n.c.a. Lutetium-177 isotope for about 200 patient treatments.
- The irradiation does not generate any nuclear waste as all intermediate material is either purified to n.c.a. Lutetium-177 used for patient treatment or recycled to produce more of the isotope.
- ITM will deliver Ytterbium-176 targets to the irradiation site, while Framatome and Kinectrics will be responsible for handling and preparing the Ytterbium-176 targets according to ITM requirements.

About Bruce Power

Formed in 2001, Bruce Power is an electricity company based in Bruce County, Ontario. We are powered by our people. Our 4,200 employees are the foundation of our accomplishments and are proud of the role they play in safely delivering clean, reliable,

low-cost nuclear power to families and businesses across the province. Bruce Power has worked hard to build strong roots in Ontario and is committed to protecting the environment and supporting the communities in which we live. Learn more at www.brucepower.com and follow us on [Facebook](#), [Twitter](#), [LinkedIn](#), [Instagram](#) and [YouTube](#).

About ITM

ITM Isotopen Technologien München AG is a privately held biotechnology and radiopharmaceutical group of companies dedicated to the development, production and global supply of targeted diagnostic and therapeutic radiopharmaceuticals and radionuclides for use in cancer treatment. Since its foundation in 2004, ITM and its subsidiaries have established GMP manufacturing and a robust global supply network of novel, first-in-class medical radionuclides and generator platform for a new generation of targeted cancer diagnostics and therapies. Furthermore, ITM is developing a proprietary portfolio and growing pipeline of targeted treatments in various stages of clinical development, which address a range of cancers such as neuroendocrine cancers and bone metastases. ITM's main objectives, together with its scientific, medical and industrial collaboration partners worldwide, are to significantly improve outcomes and quality of life for cancer patients while at the same time reducing side effects and improving health economics through a new generation of Targeted Radionuclide Therapies in Precision Oncology. For more information about ITM, please visit: www.itm.ag

About Kinectrics

Kinectrics is the category leader in providing life cycle management services for the electricity industry. Trusted by clients worldwide, our expertise in engineering, testing, inspection, and certification is backed by our independent laboratory and testing facilities, a diverse fleet of field inspection equipment and an award-winning team of over 1,000 engineers and technical experts. From initial design and type testing to operational deployment and maintenance services, Kinectrics collaborates closely with customers to ensure that utility assets perform safely, reliably and efficiently throughout their entire life cycle. Learn more at www.kinectrics.com and follow us on [LinkedIn](#), [Twitter](#), and [YouTube](#).

About Framatome

Framatome is a major international player in the nuclear energy market recognized for its innovative solutions and value-added technologies for designing, building, maintaining, and advancing the global nuclear fleet. The company designs, manufactures and installs components, fuel and instrumentation and control systems for nuclear power plants and offers a full range of reactor services. With 14,000 employees worldwide, every day Framatome's expertise helps its customers improve the safety and performance of their nuclear plants and achieve their economic and societal goals. Join the energy conversation with Framatome on Twitter: [@Framatome](#), Facebook: [@FramatomeUS](#) and LinkedIn: [@Framatome](#).

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