

Hydron Pilots Disruptive Technology for Upgrading Biogas to Renewable Natural Gas (RNG)

Hydron receives financial support through BC Fast Pilot Program

NORTH VANCOUVER, BC, March 8, 2022 — Hydron Energy Inc., the cleaner fuel company that is commercializing a revolutionary biogas upgrading solution, has announced that it is receiving advisory services and funding from the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP) and Innovate BC, through the BC Fast Pilot program. The funding will support Hydron to design, build, and operate a pilot-scale, mobile renewable natural gas (RNG) upgrader system known as INTRUPTor™ I-Multi Waste-to-Energy Pilot Project.

“The BC Fast Pilot Program enables Hydron to apply its gas separation expertise to create a next-generation multi-swing process and demonstrate a breakthrough approach with 50% lower cost for upgrading biogas to RNG,” said Hydron Energy President and CEO Soheil Khiavi. “Commercially viable, small-scale gas separating solutions are crucial to unlocking access to dispersed waste feedstocks, preventing methane emissions, and achieving net-zero emissions by 2050.”

The I-Multi Waste-to-Energy Pilot Project will demonstrate the feasibility of using the INTRUPT™ process, an acronym for **I**ntensified **R**egenerative **U**pgrading **P**latform **T**echnology, in a field test to upgrade biogas to biomethane. During the 1,000 planned hours of field testing, which will take place in the fall of 2022, the I-Multi will produce 5,000 Nm³ of RNG with a purity between 94-98%.

EPCOR Commercial Services Inc. (EPCOR) has been a strategic partner since the project launched in June 2021 and continues to have a positive influence on the project’s outcomes. In addition to supporting the development of the pilot, EPCOR is identifying potential test sites within its network, connecting Hydron with facility owners to pilot the INTRUPT™ process.

“Disrupting a mature industrial market with a new technology is often met with doubt and demands to prove results in the field,” said Business Development Manager Alison Cartier. “Support provided to Hydron through the BC Fast Pilot Program and from our project partner, EPCOR, is helping us quickly progress our gas separation technology from prototype to commercial product and opening doors to potential customers, future joint-venture partners, and investors.”

Hydron is using its proprietary materials, hardware, and process cycle to produce up to 50% savings on both capital and operating costs. Enabling the upgrading process to occur under ambient conditions, the INTRUPTor™ does not require any feed compressors/vacuum pumps, feed gas drying units, nor exhaust gas post-treatment systems, which also improves the carbon intensity level. The I-Multi system will be a mobile unit and will travel between sites in Canada and the US, demonstrating its performance under different biogas conditions during the next few years. The company aims to have its first commercial scale product on the market in 2024.

For more information about the BC Fast Pilot Program, you can [read the press release](#) issued by Innovate BC and meet all the [Round 3 BC Fast Awardees](#).

About Hydron Energy Inc.

Founded by Soheil Khiavi, a serial entrepreneur who previously founded Inventys (now Svante) in 2009, Hydron is the cleaner fuel company unlocking net-zero energy for the hard-to-decarbonize sectors, like transportation. The team is leveraging its unique intellectual properties portfolio and years of experience developing gas separation technologies to commercialize a new multi-swing process that efficiently and cost-effectively converts wastes into fuels. The company is commercializing its INTRUPTor™ Systems to produce two disruptive gas separation products. The first product is for the renewable natural gas (RNG) market. It will provide a significant cost savings to customers who want to upgrade biogas into biomethane (also known as RNG) and benefit from incentives related to clean fuel standards. The second product is a compact mobile syngas upgrading unit for blue hydrogen production that could be deployed for syn-gas, flare-gas, and tail-gas upgrading applications. For more information, see www.hydron.ca.

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NEWS RELEASE

Hydron Energy Receives Funding from B.C. Clean Energy Catalyst in its Inaugural Open Call for Innovation

The B.C. Centre for Innovation and Clean Energy (CICE) selected Hydron, as well as seven other innovators, from more than 75 initial applications.

NORTH VANCOUVER, BC, July 12, 2022 — Hydron Energy Inc., the cleaner fuel company that is commercializing a revolutionary gas upgrading solution, announced today it has received one of the first funding awards granted from newly established B.C. Centre for Innovation and Clean Energy (CICE). Hydron is building a first-of-a-kind gas upgrader, the INTRUPTor™ I-Multi, to produce renewable natural gas (RNG) from biogas.

“Hydron is commercializing a proven platform technology new to the clean fuel market. This timely support will help demonstrate how our breakthrough product significantly reduces the cost of upgrading biogas to RNG and saves cash for both project developer and site owner,” said Hydron Energy President and CEO Soheil Khiavi.

“Our team is leveraging decades of experience developing gas separation systems to launch a new pre-combustion platform technology that removes carbon dioxide and other contaminants from product gases. As a result, INTRUPTors will create highly valued gas streams such as RNG, blue and turquoise hydrogen, green ammonia, and others from waste.”

The funding from CICE will help Hydron complete both phases of the field-testing program of its mobile pilot and establish the INTRUPTor I-Multi Mobile RNG Solution Centre. After its field testing programs are completed, the INTRUPTor I-Multi Mobile RNG Solution Centre will travel to key sites and demonstrate how the INTRUPTor system, and biogas upgrading, works in a real-world context. “Our goal is to create an engaging mobile experience that enables us to demonstrate the INTRUPTor on a new level across North America and encourage participation from agriculture and agri-food waste producers,” added Khiavi.

“The market needs small-scale biogas upgrading systems to match the size of dispersed feedstocks to reduce methane emissions from our agriculture industry,” said **Hydron Energy Business Development Manager Alison Cartier**. “But conventional technologies become financially unfeasible at this scope because of the scale of the ancillary equipment and towers needed to support their process.”

The INTRUPTor™, an acronym for **I**ntensified **R**egenerative **U**pgrading **P**latform **T**echnology, operates in ambient conditions and therefore does not require any feed compressors, vacuum

pumps, feed gas drying units, or exhaust gas post-treatment systems to produce pipeline-quality RNG. As a result, the INTRUPTor reduces the capital and operating costs by up to 50% and delivers an industry-leading carbon intensity score.



“We expected a handful of companies to submit proposals – instead, we received over 75 amazing video applications asking for over 30 times what we were initially expecting to fund,” said **CICE Deputy Executive Director Yemi Adefulu**. “This is a true testament to the brilliance of B.C.’s innovators, and after a rigorous and efficient due diligence process, we are excited to be awarding \$3.4 million to 8 successful companies.”

Founded by the Government of British Columbia and Shell and supported by the Canadian Federal Government, CICE issued its first Open Call in January 2022, 90 days following the Centre’s incorporation, inviting innovators with low-carbon solutions from across the province to submit applications. For more information about the Inaugural Open Call, read the [press release](#) by B.C. Centre for Innovation and Clean Energy (CICE).

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For Immediate Release

GuardRFID® Receives LenelS2 Factory Certification under the LenelS2 OpenAccess Alliance Program

The GuardRFID AllGuard® real-time location system interfaces with LenelS2's OnGuard access control security system to create smarter access control

Vancouver, BC, Canada – July 21, 2020 – Guard RFID Solutions Inc., a proven expert in real-time location systems, announced today that it has successfully completed certification for the interface of its AllGuard real time location system with the OnGuard® version 7.5 access control system.

“GuardRFID has completed required factory testing at LenelS2 to validate the functionality of its interface to the OnGuard system. Since OnGuard version 6.4, GuardRFID continues to keep its certifications with the OnGuard platform up to date, allowing users to employ the latest features and function,” said John Marchioli, OAAP Product Management, LenelS2. “We look forward to their continued involvement in the LenelS2 OpenAccess Alliance Program.”

The interface enables seamless data exchange between AllGuard and OnGuard through LenelS2's DataConduIT application interface. This allows OnGuard system users to use GuardRFID's active RFID/RTLS infrastructures and tags for a variety of use cases in healthcare, industrial, and commercial applications.

“This interface provides customers with real-time security and privacy protection, including people and asset perimeter protection as well as real-time tracking and location,” said GuardRFID CTO Dalibor Pokrajac. “This added layer of intelligence, which we call smarter access control, increases the level of security while adding greater flexibility.”

In addition to the software-based interface, GuardRFID also renewed its certification for one of its active RFID readers (TRC-LNL) to interface directly with the LenelS2 access panel (eg LNL2200, LNL1300). This interface does not require use of DataConduIT or the AllGuard server. TRC-LNL communicates with LenelS2 access panels via the RS-485 interface, using the Open Supervised Device Protocol (OSDP). This direct communication allows LenelS2 customers to leverage the benefits of long-range RFID (up to 10 meters tag read range), without the complexity of additional software components.



For Immediate Release

About GuardRFID

GuardRFID is a proven expert in real-time location systems driving the next generation of security and compliance applications in healthcare, industrial and commercial environments. With indoor and outdoor installations around the world, the Company delivers the most robust multi-purpose real-time location platform with superior flexibility, interoperability and performance helping organizations achieve the protection, compliance and efficiencies they require when it comes to their people and assets – today and tomorrow. For more information, please visit www.guardrfid.com

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