KINECTRICS
a BWXT company

Hydrogen Energy Systems

Cutting-edge solutions for a hydrogen-powered future



We provide sustainable & cutting-edge solutions that empower our clients and partners to excel in a **hydrogen-powered future**.



Comprehensive Suite of **Hydrogen Services**

We offer a comprehensive suite of hydrogen services to meet the diverse needs of our clients. We are engaged in feasibility studies and technology assessments from production to storage through use and distribution.

Hydrogen **Production**

Our focus is to find the right solutions for our clients. Technologies that our team is focused on include Proton Exchange Membrane and Alkaline Electrolyzers for green hydrogen; Steam Methane Reforming coupled with Carbon Capture and Storage and Autothermal Reforming for blue hydrogen; and, Solid Oxide Cells for pink hydrogen production.





Hydrogen **Storage**

Our expertise spans large-scale gas storage employing advanced technologies, medium-sized storage encompassing both liquid (cryogenic) and gaseous methods, and innovative solutions such as underground storage utilizing salt caverns. All while considering the necessary regulatory framework and safety standards.



Driving Innovation. Sustainable Solutions for a Hydrogen-Powered Future.

Overview

- **Hydrogen Production**. We are currently undertaking a hydrogen feasibility study at our Kipling site in collaboration with Bruce Power and FuelCell Energy. The study is a **technoeconomic assessment of hydrogen production**. The evaluation is comprehensive spanning economic factors, hydrogen production, storage, distribution and infrastructure.

- **Hydrogen Safety**. Providing adept licensing and regulatory support, seamlessly navigating pertinent laws, regulations, codes, and standards within the hydrogen landscape. We offer **expert safety assessments and risk management services** to ensure a secure hydrogen environment.

- **Infrastructure Development**. From design to implementation, we are your partner in infrastructure development. **Facilitating meaningful public consultations**, including the active involvement and engagement of Indigenous communities in the developmental process.

- **Grid Integration**. We have a long history of expertise in transmission and distribution. Our GridSim facility is a world-leading, independent facility that will allow testing of smart grid systems, renewable generation and integrated energy systems.

- **Consulting Services**. Our experts conduct market assessments, site selection, and project guidance for your hydrogen needs, **spanning feasibility studies and regulatory compliance**. Our consultancy services are tailored to your specific project.

- **Hydrogen Storage**. Energy storage solutions come in all shapes and sizes. **Our team can find the right solution for your grid, energy source, and need**. Our Helius Clean Energy Innovation Centre supports the development, testing, and qualification of clean energy storage technologies, with a focus on hydrogen integration with nuclear reactors.

Key Benefits

- **Expertise**. Our team is made up of industry-leading experts with in-depth knowledge of hydrogen technologies and regulations.

- **Client-Centric Approach**. We tailor our services to meet your specific requirements and exceed your expectations.

- **Innovation**. We are committed to staying at the forefront of hydrogen advancements, embracing new technologies, and pushing boundaries.

- **Specialized Facilities & Laboratories**. We are leading the development of a world-class campus for innovation in clean energy, supporting next generation nuclear technologies, hydrogen, and clean energy technologies.

Powering innovative and sustainable energy solutions globally.



kinectrics.com

/kinectrics

@kinectrics

KINECTRICS
a BWXT company

HY072826