

AVEVA WORLD

Innergex leverages AVEVA Operations Control to expand operations and growth in renewable energy

Presented by:

Francois Riopel - Automation Specialist

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AVEVA



François Riopel

Automation Specialist

- Based in Vancouver, Canada
- Degree in industrial electronics in 1998
- Industrial electrician in 2003 - 16 years of experience in SCADA systems and electrical systems for hydro electric utilities.
- Manage SCADA systems for 21 of Innergex Hydro electric facilities in British Columbia, supporting and maintaining systems.



Felix Deblois Leclerc

Automation Specialist

- Based in Quebec, Canada
- Graduated in 2017
- Experience as a system integrator in food processing
- Supports on-site operations in daily troubleshooting, maintaining critical systems and managing project standards.

Founded in 1990, **Innergex Renewable Energy Inc.** is a Canadian corporation which develops, acquires, owns and operates hydroelectric facilities, wind farms, solar farms and energy storage facilities in **Canada, France, the United States, and Chile.**

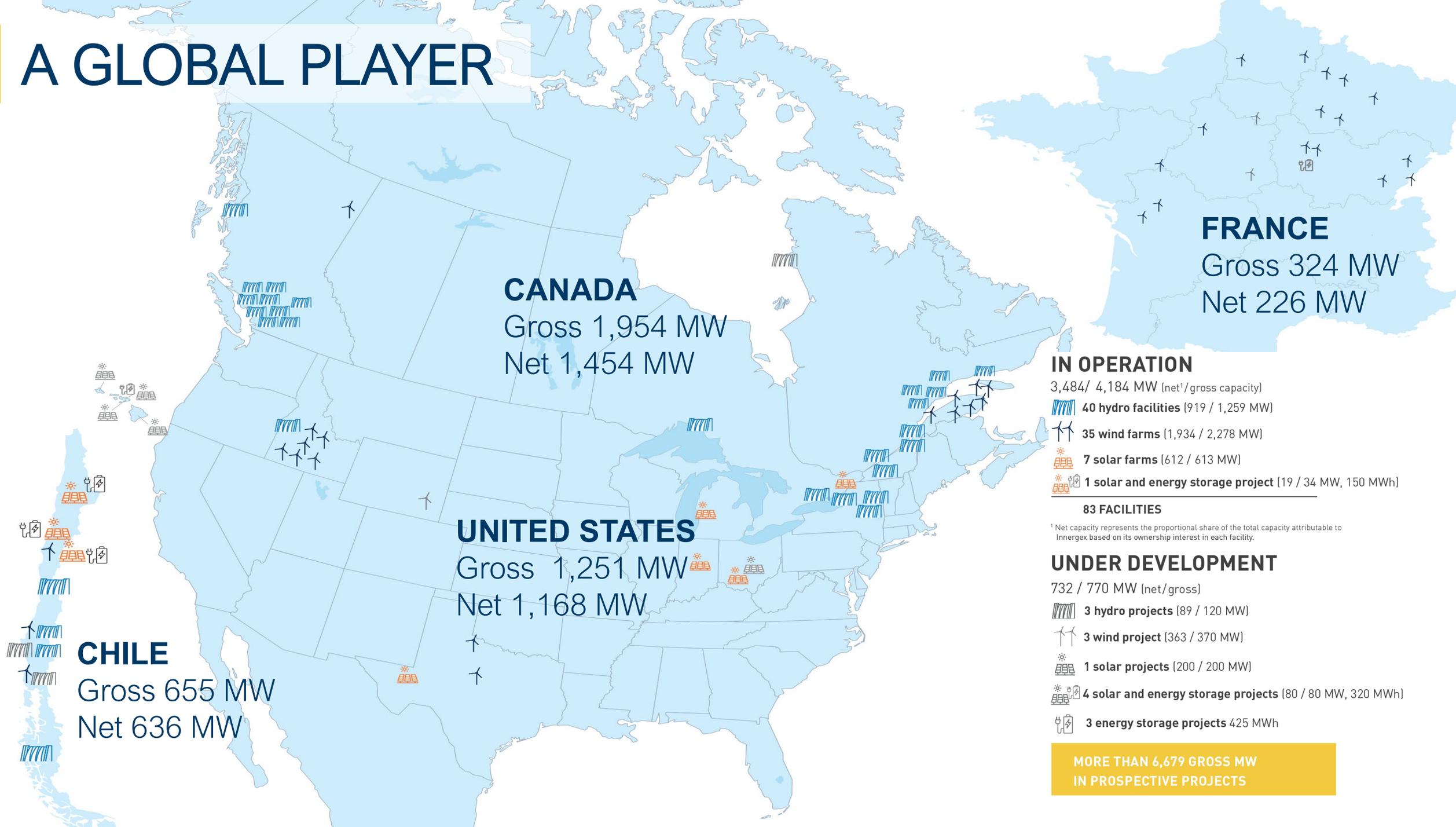
Head Office located in Longueuil, Québec, Canada



<p>100% RENEWABLE ENERGY</p> <p>Hydro, wind, solar and storage facilities</p>	<p></p> <p>83 operating facilities and 14 projects under development ¹</p>	<p></p> <p>Gross installed capacity 4,184 MW ¹</p>	<p></p> <p>Enough electricity to supply 1,083,528 households with clean energy in 2021</p>
<p></p> <p>Over 480 employees</p>	<p></p> <p>Enterprise value² \$9.4 billion</p>	<p></p> <p>Market Capitalization² \$4.1 billion</p>	<p></p> <p>Dividend / Yield \$0.72 / 3.6%</p> <p><small>(Yield is based on share price as of March 31, 2022)</small></p>

1. As at June 9, 2022, date of the acquisition of Aela.
 2. All financial data are as at May 10, 2022, date of the publication of our Q1 results.

A GLOBAL PLAYER

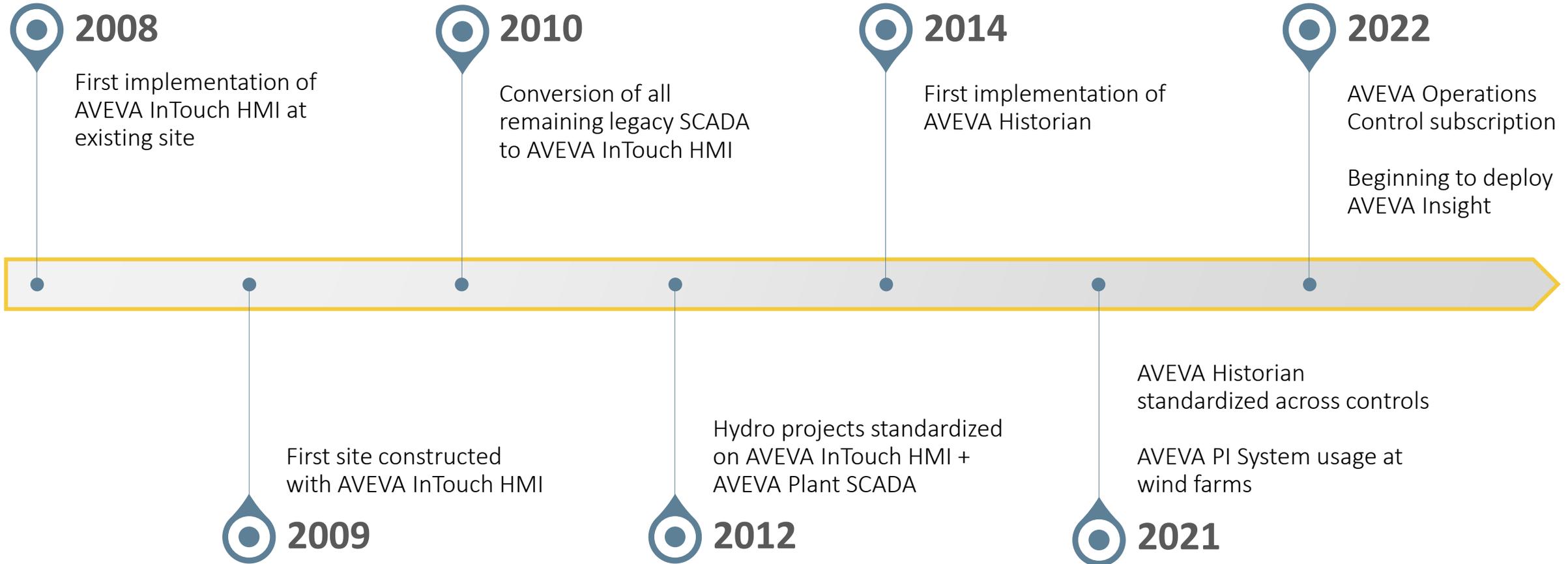


BUSINESS CHALLENGES



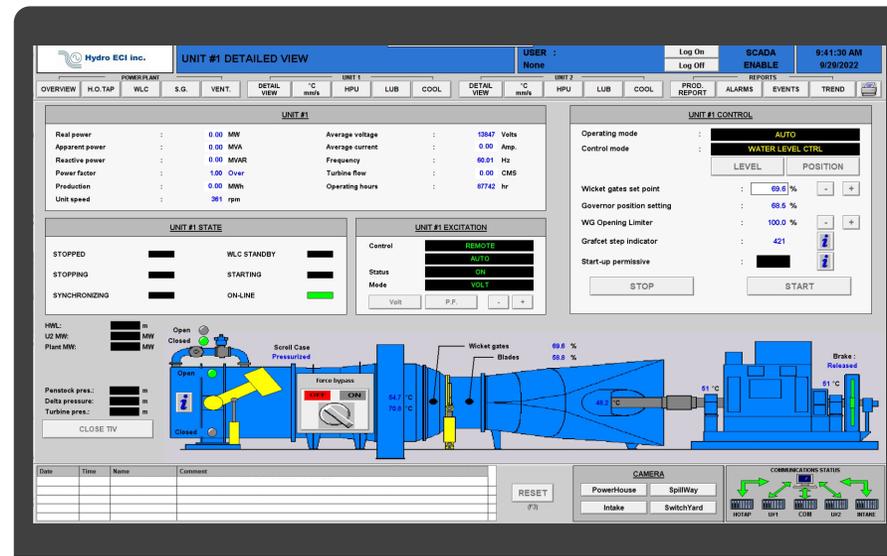
- Remote site communication connections are not 100% reliable
- Lacking data redundancy, if data was lost, it was gone for good
- Limited visibility into the cause of performance impacts
- Need for consistent and consolidated data flow and infrastructure that would enable better analysis and reporting, reducing silos
- Mixed set of software vendors and vintages deployed across sites and functions resulting in upkeep complexity

OUR JOURNEY - CANADA



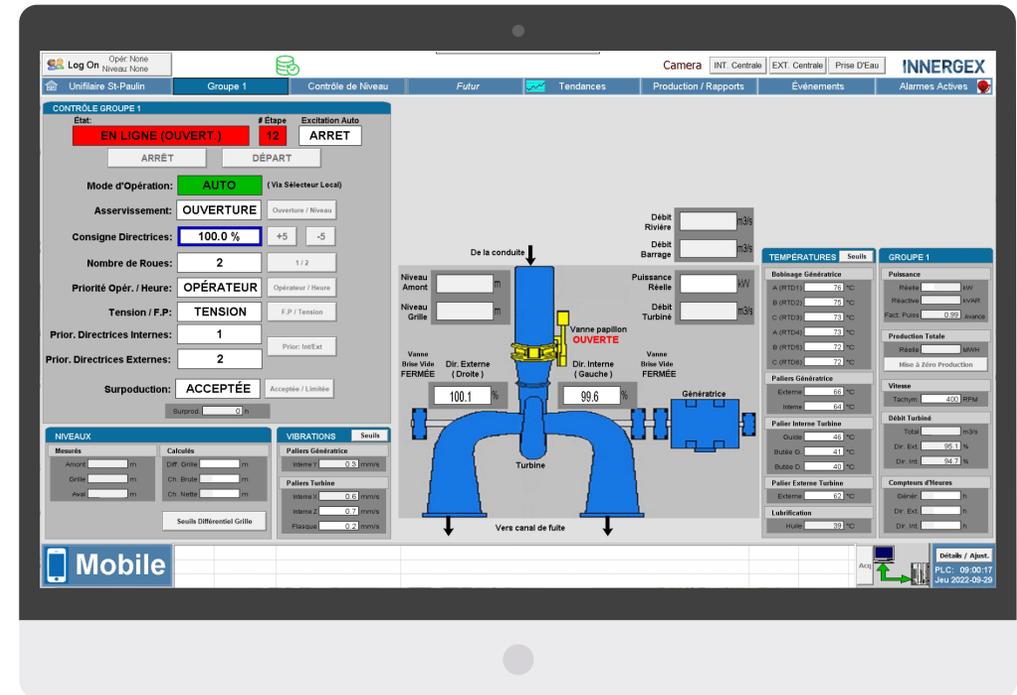
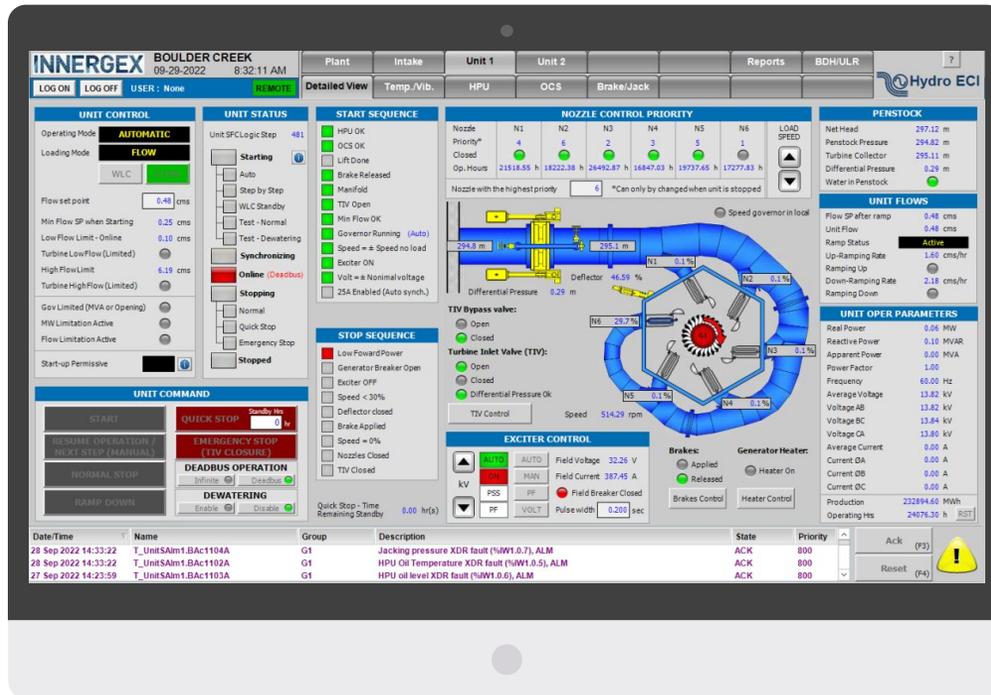


AVEVA is our partner in digital transformation



The unmatched compatibility helps us to update our hardware incrementally without having to redesign our applications.

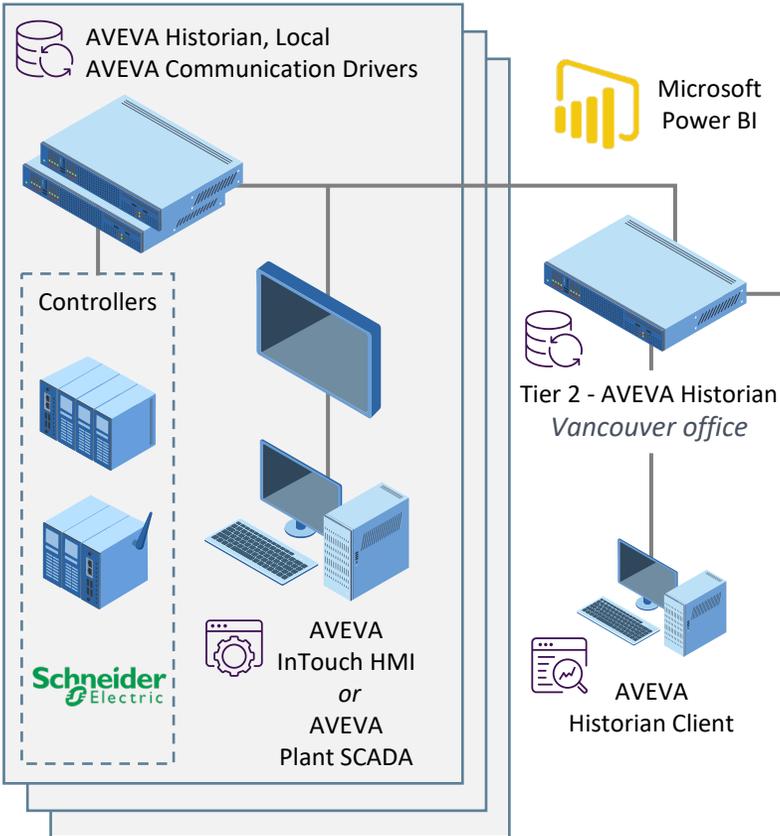
Most of our subcontractors use AVEVA software – making consistency and integration easy.



ARCHITECTURE - CANADA

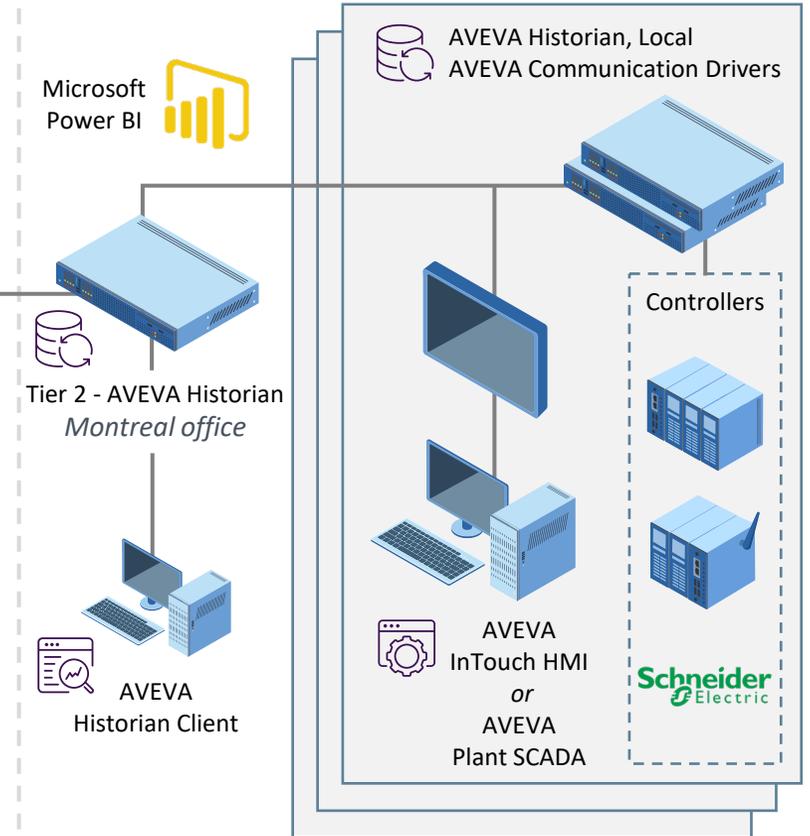
West Region

21x hydro stations



East Region

13x hydro stations + 1 solar park

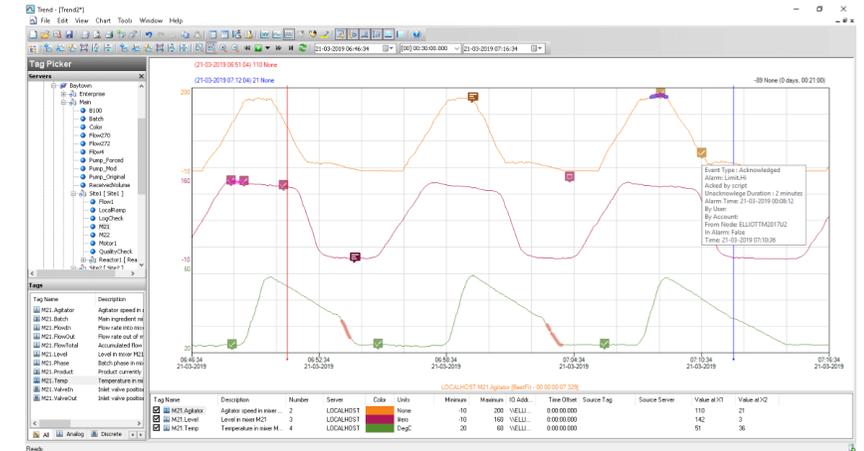


AVEVA Insight

- Centralized data analysis tool for management
- Compliance reports (environmental)
- Production reports (efficiency, energy, etc.)

IMPACT OF INFORMATION ALIGNMENT

- AVEVA Operations Control is providing significant **flexibility to deploy** what we need and makes it easy to upgrade to remain current.
- Tiered AVEVA Historian architecture gives huge improvement in **data redundancy**.
- AVEVA Communication drivers **increased reliability** and software usage consistency. Resulting in **reduced upkeep effort** between controllers and SCADA
- We use the data from AVEVA Historian to **track the missed energy**. That allows us to pinpoint which process equipment is causing the missed energy, consequently allowing us to **make accurate business cases** when it's time to invest on process equipment.
- We also use the data from AVEVA Historian to **track our turbine efficiency**, allowing us to **predict when to replace turbine runners**.
- Primary data analysis tools are now AVEVA Historian Client & AVEVA Insight - are **critical to troubleshoot** the process in real time by our **operation staff** at every plant (Tier-1) as well as by the **managers** from the corporate office (Tier-2).



NEW SOFTWARE STRATEGY

Access to **new software updates** and new features without having to go by the project approval and purchase order process

Removal of architectural limitations
– unlimited AVEVA Historians and development at every site

Enable our move to a **hybrid environment** (cloud + on-premises)

Access to Technical Support from local AVEVA Select partner and AVEVA corporate, without the risk of maintenance contract being cost cut

Integrated set of capabilities that **meets the needs** of operators, maintenance, and management

Increased operation efficiency, improved production and process through standardization

WHAT'S NEXT

1

Take further advantage of AVEVA Insight

2

Adopt artificial intelligence to monitor our assets and prevent losses

3

Explore AVEVA Unified Operations Center for enterprise-wide visibility

WORLD-CLASS POWER OPERATIONS



“The transition to a clean economy, turning a risk into an opportunity, will be powered by renewable energy. This represents a unique opportunity to meet our collective climate goals while promoting sustainable economic development and enhancing the human condition.” – Michel Letellier, CEO



Challenges

- Communication & data consistency
- Data redundancy
- Limited visibility
- Mixed set of software and hardware vendors

Solutions

Standardization from independently managed systems to a consolidated operations control software strategy

Benefits

- Increased system reliability
- Reduced upkeep and complexity
- Predicting equipment lifecycles
- Improved operational visibility
- More accurate business cases

Questions?

Please wait for the microphone.
State your name and company.



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Thank you!

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ABOUT AVEVA

AVEVA is a global leader in industrial software, sparking ingenuity to drive responsible use of the world's resources. The company's secure industrial cloud platform and applications enable businesses to harness the power of their information and improve collaboration with customers, suppliers and partners.

Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life's essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world's most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. With operations around the globe, we are headquartered in Cambridge, UK and listed on the London Stock Exchange's FTSE 100.

Learn more at www.aveva.com