



NEWS RELEASE

# Canadian hydropower producer upgrades timing network with Adtran's Oscilloquartz optical cesium clock

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News summary:

- Leading utility needed a seamless way to transition from legacy power grid synchronization to ultra-stable PTP timing and resilient PNT
- Oscilloquartz ePRTC+ solution delivers new levels of accuracy and availability with robust protection against GNSS cyberattacks
- Ensemble Sync Director ensures centralized control, comprehensive monitoring and operational simplicity

MONTRÉAL--(BUSINESS WIRE)-- Adtran today announced that a leading Canadian hydropower producer is using its Oscilloquartz grandmaster device combined with its optical cesium atomic clock to achieve new levels of precision, reliability and resilience in its power grid synchronization network. The deployment addresses the urgent need to implement the highest standards of protection against GNSS disruptions, including jamming and spoofing cyberattacks, and helps bolster North America's energy resilience. Featuring multi-source protection, the enhanced timing architecture offers a zero-trust approach to positioning, navigation and timing (PNT), ensuring robust and accurate synchronization. It also seamlessly supports existing services, enabling a smooth transition from legacy timing to power grids with advanced PTP technology. For streamlined operations and assurance, the synchronization network is remotely managed through the Adtran Ensemble Controller with Sync Director.

Adtran's Oscilloquartz timing technology is playing a key role in protecting Canadian hydropower producer from GNSS cyberattacks. (Photo: Business Wire)

"It's great to be helping another major utility to modernize its



timing infrastructure and

prepare for next-generation smart grid applications. The transition from traditional TDM to advanced packet-based synchronization marks a significant milestone for this forward-thinking power supplier. The solution will also strengthen its timing network against the growing dangers of relying solely on GNSS,” commented John Scherzinger, GM of Americas sales at Adtran. “The deployment of our advanced grandmaster clock enables the utility to extend reliable timing to Canada’s most remote regions. The superior stability and precision of our optical cesium clock are key to realizing levels of accuracy and resilience never seen before. What’s more, our **Ensemble Sync Director** system brings the benefits of centralized control, ensuring comprehensive monitoring and simplified operational management. This is essential for maintaining the reliability and security of the utility’s extensive and often remotely located network.”

By enhancing its timing framework with Adtran’s Oscilloquartz solution, the hydroelectric producer is ensuring it maintains the highest standards of cybersecurity and energy reliability in its critical infrastructure. The deployment will also improve the stability and security of the energy supply across Canada and the US. The new solution includes Adtran’s **OSA 3350 ePRC+** combined with its highly versatile **OSA 5422** to provide the highest precision, stability and resilience against GNSS vulnerabilities. Featuring an all-digital design, the OSA 3350 ePRC+ utilizes optical-pumping techniques, guaranteeing timing accuracy and optimal stability for over a decade – twice the lifespan of conventional cesium clocks. Together with the OSA 5422, the solution future-proofs the utility’s timing network and assures compliance with governmental regulations. It also fortifies security and underscores the renewable energy utility’s commitment to maintaining a continuous, secure power supply.

“This leading Canadian power supplier is renowned for its dedication to innovation. Its choice to adopt our technology highlights both the impact of our solution and its significance on a global scale. By transitioning its substation network from traditional TDM to advanced packet-based synchronization, it’s setting a precedent for the entire industry to follow,” commented Gil Biran, GM of Oscilloquartz, Adtran. “Our solution offers robust defense against GNSS vulnerabilities and ensures adherence to stringent industry regulations. Through our ongoing support, the utility is reinforcing its dedication to enhancing both resilience and reliability – elements that are fundamental for fulfilling PNT requirements. This is crucial for safeguarding the integrity of critical network infrastructure, ensuring a consistent and dependable energy future for all.”

## About Adtran

ADTRAN Holdings, Inc. (NASDAQ: ADTN and FSE: QH9) is the parent company of Adtran, Inc., a leading global provider of open, disaggregated networking and communications solutions that enable voice, data, video and internet communications across any network infrastructure. From the cloud edge to the subscriber edge, Adtran empowers communications service providers around the world to manage and scale services that connect people,

places and things. Adtran solutions are used by service providers, private enterprises, government organizations and millions of individual users worldwide. ADTRAN Holdings, Inc. is also the largest shareholder of Adtran Networks SE, formerly ADVA Optical Networking SE. Find more at **Adtran**, **LinkedIn** and **X**.

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