ENEL LAUNCHES ITS FIRST ENERGY STORAGE PROJECT IN CANADA

- Enel expands its storage expertise to Canada by signing an agreement with Ontario-based commercial apple grower, processor and retailer Algoma Orchards for the installation and operation of a 1 MWh lithium-ion behind-the-meter battery system
- Enel's DEN.OS\(^1\) software will optimise battery use during peak hours and allow Algoma Orchards to enhance its participation in Ontario's demand response programme
- The project, which is due to be operational by 1H 2018, is expected to generate significant savings for Algoma Orchards over the 11-year contract term.

Rome and Boston, April 11\(^{th}\), 2018 – The Enel Group’s advanced energy services division Enel X, through its US subsidiary EnerNOC, Inc., has signed an agreement with wholesale and retail apple orchard Algoma Orchards of Ontario, Canada to deploy a 1 MWh lithium-ion battery storage system, expanding the Group’s energy storage expertise to the Country for the first time.

Enel’s DEN.OS software\(^1\) will optimise the battery use, with the aim to boost financial savings from managing Ontario’s Global Adjustment (GA) charges and to enhance Algoma Orchards’ participation in the demand response programme by Ontario’s Independent Electricity System Operator (IESO). The storage system is expected to be deployed in the first half of 2018, and is due to generate significant savings for Algoma Orchards over the 11-year contract term.

“The agreement we have just signed demonstrates the value of deploying flexible energy assets like battery storage systems to drive savings for C&I customers and improve the sustainability and reliability of the electricity grid for all consumers,” said Francesco Venturini, Head of Enel X. “As battery costs continue to decline, we look forward to developing many more projects like the one at Algoma Orchards that leverage our best-in-class DEN.OS\(^1\) optimisation software to deliver savings for customers through tailored commercial offerings.”

Under the terms of the agreement, Enel will purchase, install and operate the battery on behalf of Algoma Orchards, and share in the savings which are expected to be created by the DEN.OS\(^1\) optimisation software that controls the battery. Enel will also provide Global Adjustment peak prediction services and enrol the battery storage system in IESO’s demand response programme.

“Algoma Orchards has a long history of implementing environmentally sustainable projects including recycling water from our production facility, collecting rainwater from our roof and the operation of a large-scale solar system on our apple picking facility in Newcastle,” said Kirk Kemp, President of Algoma Orchards. “The additional energy storage system is going to assist us in reducing our carbon footprint, something that all of our employees are proud of.”

\(^1\) Distributed Energy Network Optimization System.
Global Adjustment (GA) charges

In Ontario, GA is a capacity charge included on all electricity consumers’ monthly electricity bill to cover the costs of providing adequate generating capacity and energy conservation programmes throughout the province. Customers, like Algoma Orchards, with a peak demand greater than 500 kW, can participate in the Industrial Conservation Initiative (ICI) that allows them to manage their GA costs by reducing demand during peak periods. As a result, many large commercial and industrial customers are turning to battery storage as a strategy to manage these demand peaks and therefore, mitigate GA charges. Enel's DEN.OS¹ software, combined with the energy storage system, maximises savings on GA charges by predicting peak demand periods on the grid and switching to energy stored in the battery rather than drawing electricity from the grid during these periods.

Demand response

Enel's storage system can create additional value by optimising the use of the battery for IESO's wholesale demand response programme. The energy intelligence software, DEN.OS¹, combined with the energy storage system, allows Algoma Orchards to monetise its storage by participating in the IESO programme, which pays large energy consumers for being on standby ready to reduce their electricity consumption in response to grid system needs, as well as providing incremental payments if and when they are dispatched. By tapping into the energy stored in the battery, Algoma Orchards can reduce its energy consumption when required by the grid to contribute to its stability, without any impact on the company's overall operations.

Demand response programmes pay large energy consumers, such as manufacturing facilities, data centres, and commercial real estate companies, to adjust their power consumption, with the aim to stabilise the grid. Demand response provides greater grid flexibility, stability, and more efficient use of power infrastructure, with a view to help maintain electricity prices as low as possible for all consumers.

Algoma Orchards is a leading wholesale and retail apple orchard in Durham Region, Ontario. The company has been an EnerNOC demand response customer since 2010.

Enel, through EnerNOC, has been present in Ontario, Canada since 2008 and is currently the largest commercial and industrial aggregator of demand response in the province with about 200 MW across approximately 400 customer sites. Through its renewables subsidiary Enel Green Power North America, Enel has recently been awarded two wind projects in Canada, 115 MW Riverview and 30.6 MW Phase 2 of Castle Rock Ridge, both to be built in Alberta. The company already operates two wind farms in the Country, 76.2 MW Castle Rock Ridge in Alberta and 27 MW St. Lawrence in Newfoundland.

EnerNOC, an Enel Group Company, partners with enterprises to reduce costs, manage risks, increase sustainability, and maximise the value of emerging energy technologies through customised energy management strategies. EnerNOC is the global leader in demand-side flexibility services, providing large energy users access to more demand response and demand management programmes worldwide than any other provider. In addition to its flexibility solutions, EnerNOC’s technology-enabled advisory solutions help large energy users create value through strategic energy procurement, energy management, and other advanced services such as utility bill management software.

Enel X is a new Enel global business line dedicated to developing innovative products and digital solutions in sectors in which energy is showing the greatest potential for transformation: cities, homes, industries and electric mobility.

Enel is a multinational power company and a leading integrated player in the global power, gas and renewables markets. It is Europe’s largest utility in terms of market capitalisation and figures among Europe’s leading power companies in terms of installed capacity and reported EBITDA. The Group is present in over 30 countries worldwide, producing energy with around 88 GW of managed capacity. Enel distributes electricity and gas through a network of over 2 million kilometres, and with over 65 million
business and household customers globally, the Group has the largest customer base among European competitors. Enel’s renewables arm Enel Green Power already manages around 41 GW of wind, solar, geothermal, biomass and hydropower plants in Europe, the Americas, Africa, Asia and Australia.