

Kirtland Resiliency Project Unveiled — Featuring BlockEnergy, the Future of Renewable, Utility-Distributed Power

The BlockEnergy Smart Platform Delivers the Most Resilient Electric Power Available

ALBUQUERQUE, NEW MEXICO, USA, September 1, 2020 /EINPresswire.com/ -- The BlockEnergy Smart Platform is delivering the new standard for power security and resiliency on Kirtland Air Force Base (KAFB) — right now. Created by Emera Technologies LLC, (ETL) BlockEnergy introduces the first utility-focused business model for a distributed energy platform. Using smart technology, it's able to put new residential communities on resilient, renewable power — today.

BlockEnergy is different than any power system brought to market to



Realtime system BlockEnergy Smart Platform System Interface located at Kirtland Air Force Base, (KAFB). The large LED screens is where BlockEnergy comes alive, allowing anyone to see the movement of energy throughout the BlockEnergy system in real time.

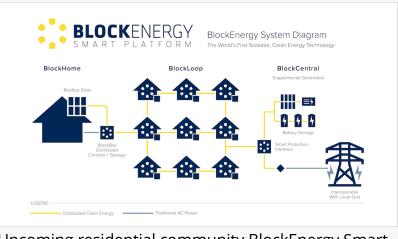
date. As a subsidiary of Emera Inc, a utility with \$34 billion in assets serving Canada, the U.S. and Caribbean, ETL was launched by utility, technology and renewable energy experts. Their aim, to remove complexity from today's power systems by creating the first plug-and-play electricity platform, able to seamlessly interoperate with the existing grid. Better yet, BlockEnergy is designed for utility ownership, made to be operated and maintained by local utilities — the same as any other capital asset.

BUSINESS CASE FOR LOCAL UTILITIES

"I am intrigued by the idea of providing superior reliability at the community level by using a step-change in technology. The safer, the simpler, the more modular that you make a power platform, the more reliable and cost-effective it is to build and maintain over its lifetime. BlockEnergy is all of these things, and we believe it's a business model local utilities and their customers will like," says Rob Bennett, CEO of Emera Technologies. "The electric power market is changing. Market trends utilities face are, decarbonization, decentralization and digitization, "the three D's." BlockEnergy aligns with these market shifts, giving utilities a new power platform to respond to the changing market," said Louise-Anne Comeau, VP of of Business Development, for ETL.

MILITARY-TESTED: KIRTLAND

RESILIENCY PROJECT PARTNERSHIPS Kirtland Air Force Base, (KAFB), is the 6th largest base in the United States Air Force and home of the 377th Air Base Wing, able to act as home base



Upcoming residential community BlockEnergy Smart Platform application. Unveiled to the public during North America Smart Energy Week, October 21-22, 2020.

for U.S. government continuity when required. Power surety is critical to KAFB's mission and developing methods of greater power resiliency is paramount to on-base security and their duty for the greater U.S. military.

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The safer, the simpler, the more modular that you make a power platform, the more reliable and costeffective it is to build and maintain over its lifetime." *Rob Bennett, CEO of Emera Technologies* In 2019, the BlockEnergy Smart Platform was quietly installed on Kirtland Air Force Base for testing in a pilot project designated, The Kirtland Resiliency Project. The program benefitted from a partnership with Sandia National Laboratories, (SNL) — a premier U.S. Department of Energy advanced research facility — under a Cooperative Research and Development Agreement, (CRADA) with ETL.

Their joint mission, "To take bold steps toward energy

resiliency, reliability and renewable integration," said David S. Miller, Colonel, USAF Commander, 377th Air Base Wing at KAFB.

Working with ETL also allows Sandia to extend their research beyond military use, in an effort to, "enable clean, efficient and resilient, direct current microgrids for communities," said Program Manager, Sandia National Laboratory, Summer Ferreira.

The result of these partnerships is the world's most resilient and secure power platform available today. After turning BlockEnergy on eight months ago for the Kirtland Resiliency Project, the system has performed effortlessly.

BLOCKENERGY SYSTEM TESTING

Through their joint CRADA, ETL and SNL are developing a robust testing program to be implemented over the coming months that will push the BlockEnergy system to its limits. With the broad testing and analytical expertise of SNL and DETL, this program will test system functionality and the resiliency of the BlockEnergy platform, including simulated tests such as a sudden loss of grid power, and more. Access to this highly sophisticated testing capability, specialist equipment and testing results will significantly enhance BlockEnergy's ongoing development.



A BlockBox in operation on Kirtland Air Force Base for the Kirtland Resiliency Project.

KIRTLAND RESILIENCY PROJECT + SYSTEM SPECS

The Kirtland Resiliency Project is comprised of a 250 kW microgrid including 100kW of solar and 220 kWh of battery storage. The pilot project uses rooftop solar and modular nanogrids, called BlockBoxes, that contain batteries, power electronics and distributed controls installed at various homes within the project site. In addition, the project hosts a community center on base. These resources are supplemented by other centralized foundations including solar and storage at BlockCentral, a localized area on-site that is a source and sync resource for the microgrid. A scalable distributed control architecture also allows for seamless integration of new loads into the microgrid, managing ongoing operations of the system in real time, employing artificial intelligence methods.

"We view Kirtland as a Crown Jewel of National Security Complexes. As the sixth largest base in the Air Force, we have an opportunity to continue leading the Department of Defense by taking bold steps towards energy resiliency, reliability and renewable integration. We are looking at sustaining infrastructure and ensuring mission readiness in a way that is safe, secure, reliable, and cost-effective. The Emera project is right in line with what we are trying to do. This also positions us as a leader in helping the state of New Mexico meet 2045 renewable portfolio standards, while testing an innovative and practical approach to energy surety and resiliency," said David S. Miller, Colonel, USAF Commander, 377th Air Base Wing at KAFB.

NEW RESIDENTIAL DEPLOYMENTS OF BLOCKENERGY

Upcoming residential deployments of BlockEnergy will use modular parts similar to those employed for the Kirtland Resiliency Project. In new neighborhoods, each home receives rooftop solar and a BlockBox containing battery storage and distributed controls. The neighborhood homes are then networked together and interconnected with BlockCentral, a local source that integrates supplemental storage and generation. Together, the BlockBoxes and BlockCentral form self-sustaining, energy loops, referred to as, "BlockLoops."

BlockEnergy neighborhoods can be independent power systems that operate indefinitely without connecting to the broader power grid, or they can interconnect with the local utility grid, becoming a bi-directional resource with one point of common coupling.

BlockEnergy is the world's first plug-and-play energy platform. Purpose-built for utilities, it is able to interoperate with the local grid and requires no customized engineering or design to deploy. It is scalable and adapts easily to changing power loads and community growth, delivering safe, renewable energy with superior resilience.

PRODUCT UNVEILING

The BlockEnergy Smart Platform for residential community use will be unveiled during North America Smart Energy Week, October 21-22.

Jen Degtjarewsky, Media Director at Media Lab One, LLC Emera Technologies LLC 505-224-3963 email us here

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