

Life Is On

Schneider
Electric

Providing Resilient and Sustainable Power to Remote Facilities:

Partnering with the Canadian Coast Guard

The Canadian Coast Guard (CCG) was searching for a reliable energy solution for its infrastructure in hard-to-reach locations with unpredictable weather. Schneider Electric's solution tailored to the CCG provides them with sustainable, and resilient energy where it is needed most.

solar.se.com



Committed to reducing its GHG emissions, the Canadian Coast Guard needed a sustainable and reliable energy system to monitor and protect maritime traffic. Not only that, but the CCG was searching for a reliable energy solution for its infrastructure in hard-to-reach locations with unpredictable weather. Schneider Electric's solution tailored to the Canadian Coast Guard provides them with sustainable and resilient energy where it is needed most.

Challenges

The Canadian Coast Guard is a special operating agency in Canada's Department of Fisheries and Oceans. The CCG is responsible for lifesaving operations at sea, maintaining efficient maritime trade, and protecting the environment. The CCG operates 24/7 throughout one of the world's largest countries, navigating through remote and difficult terrain.

The Canadian Coast Guard needed for a system to manage its power sources and battery monitoring. Due to their commitment to securing a more sustainable future, they wanted a potential system with renewable energy generation. These were the main factors that drove the selection of Schneider Electric's equipment.

One of the project's unique challenges was limiting downtime when switching power sources to maintain critical infrastructure. Having tried and trusted equipment is essential, since getting to remote locations for maintenance work can be troublesome when the weather is less than ideal.

Customer Profile

The Maritime and Civil Infrastructure group within the Canadian Coast Guard plays an integral role in ensuring Canadians receive vital maritime services.

Goal

Provide hybrid power system to remote non-grid tied radar and radio communication infrastructure.

Solution

Two generator redundancy with battery backup as a UPS system managed by Schneider Electric's XW+ Hybrid Inverters (one at each site).

Results

Increased confidence in systems' ability to handle fluctuating loads, peak times, and difficult weather. Utilizing early notifications of battery downtime and lifespans, the Maritime and Civil Infrastructure group is also able to work more efficiently and confidently on operations and maintenance trips.

Solution

After numerous meetings to understand the Canadian Coast Guard's unique needs, a special configuration was determined. The CCG has large systems with 3100Ah 48V AGM battery bank and 5kW generator. The custom single-unit systems were designed for four sites with a 800-4000W range of load equipment. Using two separate generators, ranging in size from 3.5-5kW for each system, the custom design included a XW+ Hybrid Inverter, battery monitor, 2 MPPT 60 Charge Controllers, and a robust communication and energy monitoring system.

Cemented through in-person and remote support sessions, the Canadian Coast Guard knows that due to the superior flexibility and scalability of the XW platform they can modify and expand their system as needed in the future.

Results

The new system can support fluctuating loads, peak usage times, as well as challenging weather conditions. With efficient charging and monitoring of batteries, the Canadian Coast Guard no longer needs to worry about their facilities running out of power.

The generator and battery arrangement managed by Schneider Electric's solar energy storage system, can be counted on, even in demanding circumstances. It allows for seamless and worry-free transitions from generator to battery power when outages inevitably occur on generator power.



Transportation of equipment storage shed via helicopter to remote mountain-top telecommunication site.

“Schneider Electric has been very helpful, sending engineering support to our base in Victoria early on to help our shops build familiarity with the technology.”

— Tom Earles, P.Eng., Canadian Coast Guard



XW Pro Hybrid Inverter

Learn more about the XW Pro hybrid inverter and how it connects solar and battery for backup power and energy security.

Watch the XW Pro video.



Final site assembly: mounted communication tower, power and communication equipment storage, and diesel storage tanks for generator fuel.

Learn More



Bringing Power to Western Australia



Meeting Green Targets While Increasing Resiliency & Cost-Efficiency



Powering the 1st EDGE-Certified Football Stadium in the World



Green Energy without Compromising Lifestyle



Building Energy Resilience with Reliable Energy Storage & Monitoring Solutions



Powering Rural Clinics in Nigeria with Solar Microgrids

Schneider Electric Solar

Head Office
#100 – 13091 Vanier Place,
Richmond, BC, Canada
V6V 2J1
<https://solar.se.com>

© 2022 Schneider Electric. All Rights Reserved.
All trademarks are owned by Schneider Electric Industries SAS or its affiliated companies.
CS20220502_Canadian Coast Guard Case Study.indd

Life Is On

