

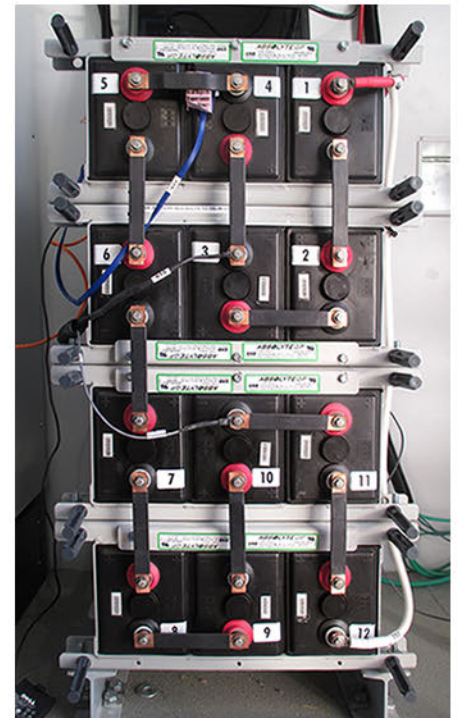


## Project Profile

DeTect, Inc. (tasked with implementing an avian detection and deterrence system by a large oil & gas producer) turned to Northern Reliability to provide a robust, reliable, off-grid solution to provide continuous power to their equipment at a site with no existing utility connection. Northern Reliability arrived to a solar/diesel hybrid power solution that integrated 1.6kW of photovoltaic power with a diesel-fired 7kW generator. The system was designed to endure long periods of time between servicing and/or refueling. To protect the equipment during Edmonton's severe winter, NRI's team developed a weather resistant enclosure to house the generator and ensure back-up power during the winter months.

## Northern Reliability's Off-Grid Power Solution

A fully autonomous solar/diesel hybrid power system, with an industrial battery bank for energy storage, housed in an environmentally controlled shelter.



**“Winters in northern Alberta are long and harsh so we were not comfortable with a solar-only system and not thrilled with the idea of running a generator 24/7/365. Northern Reliability’s hybrid solution, combined with their experience in harsh environments, was a perfect fit for this application.”**

*- Jared Quillen, Project Manager, DeTect, Inc*





## System Configuration:

- 1.6 kW PV array configured in 2 redundant arrays
- 7kW diesel fired generator set with 150 gallon base tank
- 600 Ahr AGM VRLA industrial grade battery
- Custom Programmable Logic Control (PLC) system
- Custom SCADA system

## The Energy Challenge

A remote oil & gas producer needed 24/7/365 power for avian monitoring equipment to prevent water fowl from landing in tailing ponds. Very cold temperatures and little sunlight during winter months made redundancy a top priority along with reliability.

### Benefits

#### Back-up Power

Generator provides back-up power during poor solar events.

#### Hybrid Design

Hybrid architecture minimizes solar array size and fuel consumption.

#### Weatherproof

Robust design can withstand tough temperatures saving battery life.

