



Kluane Lake Research Station Combined Renewable Energy Power System



RUSSIA

ARCTIC OCEAN

GREENLAND (DEN.)

UNITED STATES

LABRADOR SEA

YUKON

● **WHITEHORSE**

HUDSON BAY

CANADA

OTTAWA ★

PACIFIC OCEAN

ATLANTIC OCEAN

UNITED STATES





The Facility

- Mess Hall/Cafeteria
- Washrooms & Showers
- Recreational Lounge
- Laboratory
- Teaching Spaces
- Meeting Spaces
- 40 Beds

Solar Panels

- 128 Hanwha Q.Peak G4 370-watt monocrystalline solar modules
- Located on Mess Hall, Operations Room, Ground mounted
- 4 Nuance Energy Osprey Racks – 35-degree tilt angle, 16 module racks with adjustable foot anchors





Battery Bank

- Discover Energy 96-volt 4400TG Gel Battery bank– 2V, 48 batteries - OPzV - 2VRE8 - 4400TG - 2197Ah @ C20



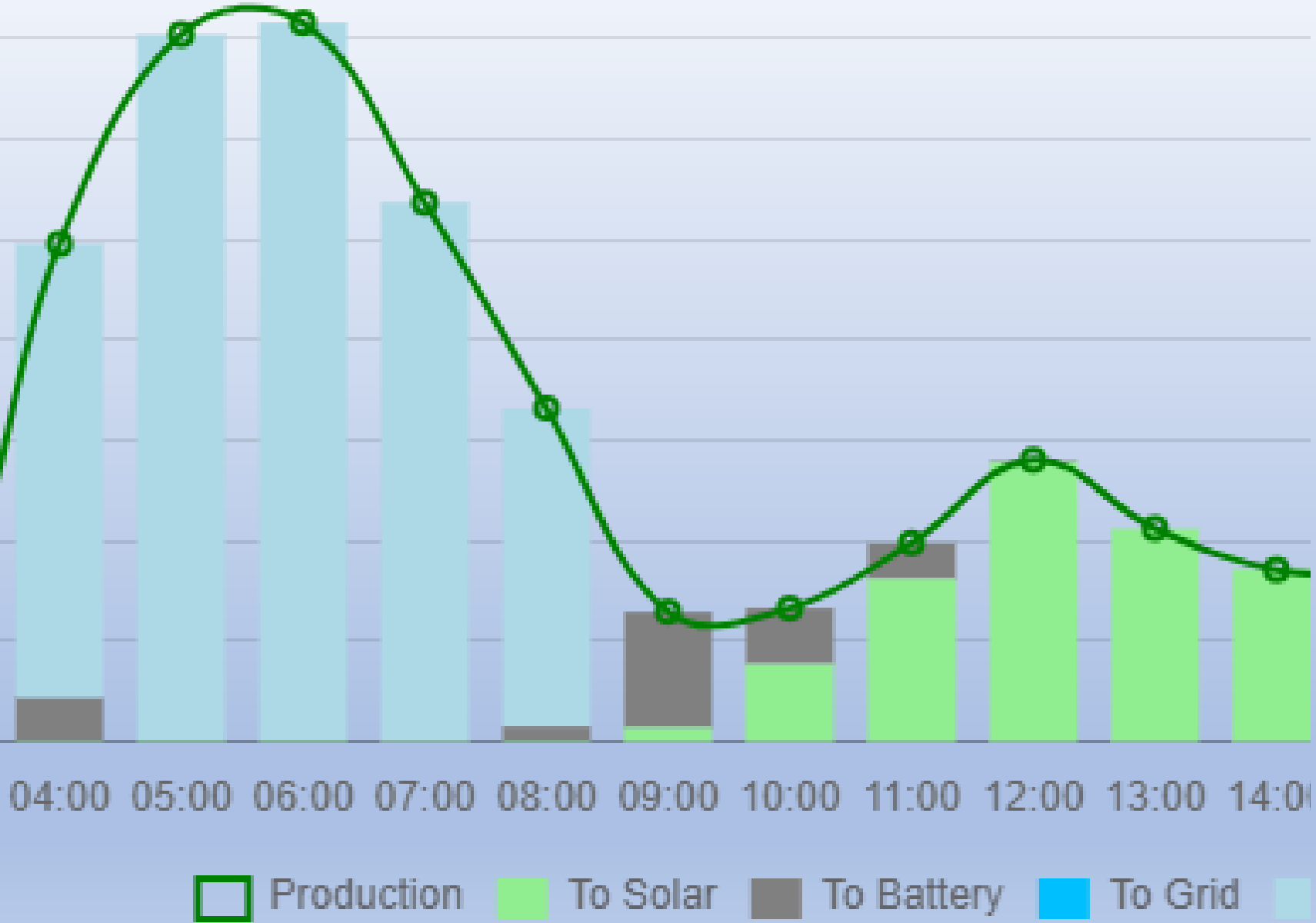
Inverters, Charge Controllers, Generator

- 4x Schneider Conext XW 6848 Inverters – 48 VDC, 130A Charger, 120/240VAC Output
- 8x Schneider MPPT Charge Controller - 80A, 600VDC
- 20kW Kabota diesel generator





Typical Winter Power Production – February 21, 2020



00:00-04:00 Batteries provide power

04:00-08:00 Generator recharges batteries and provides power

08:00-18:00 Direct solar power with small additions from battery bank

18:00-00:00 Batteries provide power

Production
 To Solar
 To Battery
 To Grid



Thank You

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