



# BEAVER CREEK SOLAR PROJECT

## PROJECT DESCRIPTION

The community of Beaver Creek YT, home of the White River First Nation (WRFN), currently receives its electricity from diesel-powered generators. Copper Niisuu Limited Partnership, the development branch of the WRFN, is developing a solar project to lower GHG emissions and generate a sustainable income.

3EYOND Consulting has been supporting the project through various phases since 2019, from feasibility study, design and construction.

## SERVICES

- Feasibility Study and Front End Design
- Detailed Design, Construction and Commissioning Management

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## PROJECT AT A GLANCE



REGION:  
BEAVER CREEK, YUKON



CLIENT:  
COPPER NIISUU LIMITED  
PARTNERSHIP



STATUS:  
ONGOING



TYPE:  
SOLAR ENERGY

## KEY STATS

# 55%

average diesel generation  
reduction over 30 years

# 75%

diesel generation reduction  
expected from March to  
August

# 5,300

number of quiet hours per  
year when diesel generators  
will be off



## PROJECT SHEET: BEAVER CREEK SOLAR PROJECT



### CHALLENGE

- Develop a business case for an industrial-scale solar plant in a 100 people community
- Design on permafrost and arctic climate
- Design and build a power generation system in a microgrid / remote community with a short construction season

### SOLUTION

- Negotiate an Electricity Purchase Agreement (EPA) with ATCO Electric Yukon
- Optimize the solar plant layout and battery storage to maximize the diesel reduction
- Secure grant funding
- Support procurement process, including tendering, permitting (YESAB) and community consultation
- Support construction quality control

### RESULTS

- System designed to generate sustainable income for the client and be able to maintain the asset for 30 years
- System designed to minimize capital cost and maximize GHG reductions
- Construction already started: Site preparation performed in March 2021
- Construction and commissioning expected to be completed in late 2022
- 1.9 MW: capacity of solar panels to be installed
- 3.5 MWh: capacity of battery storage to be installed