

Fast Facts



Community Solar Initiative 2017



“When completed, this will be the largest municipal solar array in BC. We are proud to be a leader in electricity self-generation, and appreciate the BC Hydro net-metering initiative that helps us achieve it. We anticipate reduction in the District electricity costs to be in the neighborhood of \$70,000 per year. Over 30 years, that amounts to savings of more than \$2 million. That’s calculated using present rates and future rate increases will enhance that savings considerably.”

Gwen Johansson, Mayor
District of Hudson’s Hope



BACKGROUND:

2016

- The District of Hudson's Hope began implementation of a community solar initiative with the goal to offset electricity costs to the District and take a lead role in sustainable energy solutions by installing photovoltaic (PV) systems on community buildings.
- The District received \$1.35 million from the Strategic Priorities Fund/Federal Gas Tax Fund through the Union of BC Municipalities. Urban Systems (Fort St. John) was contracted to oversee the project.
- Peace Energy Renewable Energy Cooperative (Dawson Creek) was contracted to perform a "Community Scan" to determine which buildings or other locations would produce the best financial return with solar energy.

2017

- Peace Energy Co-op/Moch Electric Ltd. Joint Venture was selected through a competitive RFP process to provide structural and electrical engineering, supply, install and commission the PV arrays.
- Crews have been on-site in Hudson's Hope installing the PV arrays through the summer and fall of 2017. Completion is expected at the end of 2017.


TECH SPECS:

- Roof-mounted grid-tied solar arrays have been installed on six municipal buildings as well as one ground-mounted grid-tied array at the sewage treatment lagoons.
- Total installed capacity of all the arrays combined will be just over 500 kW, making this the largest municipal solar project in British Columbia.
- "Grid-tied" means solar generated electricity is fed into the grid when it is not needed, accumulating a credit with BC Hydro. That credit will be withdrawn later when the buildings need power, such as at night or in the winter.
- These high-efficiency polycrystalline solar panels come with a ten-year materials and workmanship warranty, and a 25-year energy production warranty. Solar panels are expected to run with little or no maintenance for 30 years and probably much longer.
- Solar panels are solid-state devices that turn sunlight directly into electricity. They are silent, have no moving parts, require no fuel and produce no pollution.
- The roof-top solar arrays have been flush mounted parallel to roof surfaces to provide maximum energy at minimum cost. Flush mounting produces minimum load stress. All buildings have been assessed by a structural engineer.
- SolarEdge™ voltage optimizers and inverters are used to ensure maximum efficiency from every panel. SolarEdge™ optimizers have a 25-year warranty, and their inverters come with an extendable 12-year warranty. SolarEdge™ technology also provides remote internet


monitoring of every panel in real time and records historical output data. This allows the District to monitor how much power they are producing, how much money they are saving and whether the solar arrays are operating correctly.

- Students from Hudson's Hope High School were hired for the solar installation teams. Other solar education and training opportunities have been offered in Hudson's Hope during construction including several public information sessions. District personnel will be trained to monitor, operate and maintain the solar energy systems.




 The Hudson's Hope District Office has a 53 kW solar array which will provide about 80% of its electrical needs. The Bullhead Mountain Curling Club (behind, upper right) has a 72 kW solar array providing 100% of its electrical needs.




 The Arena has a 132 kW solar array, which will provide about 52% of its electrical needs.




 The new Hudson's Hope Public Works Shop has a 92 kW solar array, which will provide about 90% of its electrical needs.



 122.4 kW of ground mounted solar at the newly upgraded Sewage Treatment Lagoons will provide about 50% of the facility's electrical needs.



 The Visitor Information Centre has a 10.1 kW solar array which will provide about 50% of its electrical needs.