

Grid-Tie Solar Assessment

Community Centre, Mayne Island

Summary

The Community Centre main roof has very good solar potential, with minimal shading. There is room for a 21 module, 5.6 kW system, producing 6,200 kWh annually (valued at \$680/year if offsetting usage at \$0.11 per kWh, re BC Hydro [Rate 1300](#)). The [annual consumption](#) is about 30,000 kWh so the solar contribution would be 20%. Installed cost is estimated at \$16.5k (\$2.95 per Watt) using Enphase microinverters. Since this building has significant electric heating costs, consider installing a [ductless mini-split heat pump](#). With a heat pump, the annual electric consumption would reduce to less than half and the solar contribution would then be about 50%.

South Roof



- roof faces 160° T (20° off true South)
- lower roof slope: 18° upper roof slope: 45°
- shading loss: 4%
- annual production: 6,200 kWh with 21 modules
- kWh/kWp ratio: 1124

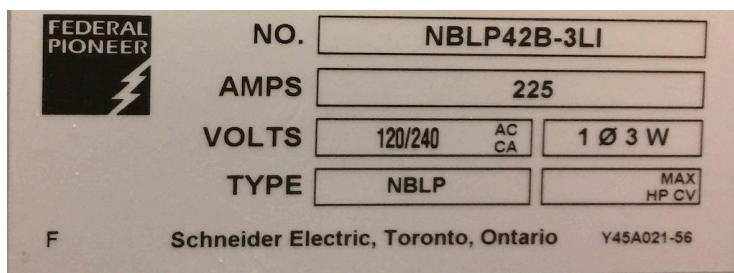
Supporting Documents

- Module layout and shade model: [3D](#), [Line Drawing](#) or [Satellite](#)
- [HelioScope Production Report](#)
- [Single Line Diagram](#) (electrical)
- [All Photos](#)

Notes

- modules mounted flat on rails on the roof (not tilted up)
- the electrical system is a standard 120/240 Volt split-phase (“single phase”) supplied via Schneider Federal Pioneer commercial panels and a 200A service
- BC Hydro meter number: 4128656 (type P263)
- standing seam metal roofing (12” seam spacing)

Photos



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