

Solar Power Demonstration Site

The Solar Power Demonstration Site is a partnership between Saskatoon Light & Power, Saskatchewan Polytechnic, the Saskatchewan Environmental Society (SES), and the SES Solar Co-operative. Saskatoon Light & Power and the SES Solar Co-operative co-own a fixed angle ground-mount array and a manually adjustable ground-mount array. Saskatchewan Polytechnic provided two sun-tracking arrays on a Saskatoon Light & Power long-term loan. The Saskatchewan Environmental Society provided seed funding to the SES Solar Co-operative.

The site compares different solar collection systems in our local climate conditions to analyze their cost and performance to inform future deployment. Early results are showing that the site is meeting or exceeding its production expectations and financial payback.

Item	Fixed Position Array	Manually Adjustable Array	Sun Tracking Arrays
Initial Production Estimate (kWh/kW)	1,230	1,368	1,880
Actual Production Estimate (kWh/kW)	1,310	1,403	1,906
Initial Capacity Factor (%)	14.0	15.5	21.5
Actual Capacity Factor (%)	14.9	15.8	21.5
Initial Cost per kW (\$/kW)	4.70	4.75	5.3
Actual Cost per kW (\$/kW)	4.70	5.10	9.84
Initial Payback Time (years)	23	21	16
New estimated Payback Time (years)	21	21	25