

WLC SOLAR PROJECT - "ENERGIZING OUR MISSION" FAQ's

10/11/2026

1) **Economics - What is appropriate economic threshold? Payout (Yrs), ROR (%), IRR (%); What discount factors are appropriate?**

Response – *The economic justification for an investment in Solar needs to be looked at as an investment to hedge the church finances against the prospect of future energy price volatility and escalation. Escalation and volatility are almost a certainty based on the last ten years in Alberta where price has gone up by 2.5 times on a kWhr basis representing 9% / year escalation. During that same time frame, there are periods where price had gone up by as much as 4 times representing > 20% / year escalation. This volatility and escalation is a consequence of the de-regulated electrical supply market in Alberta; as well as the electrical energy price correlation to natural gas price. Currently in Alberta, 80% of the electrical energy is generated by natural gas. Base Case economics have assumed a 2% per year price escalation while sensitivities of 0% and 4% escalation have been run to “bookend” the picture. All of these assumptions on escalation are very conservative in comparison to what we have experienced.*

Another way to describe this investment is that it is an investment to reduce financial risk. The “DO NOTHING” scenario continues to expose the church operations to price volatility and escalation. The investment case provides the certainty of a 30 year levelized cost for electricity (flat \$4.72 / kWhr) with significant potential to be lower through membership in the Solar Club, which brings a proactive program of seasonal price switching.

The Base Case economics for a \$68.8 K capital investment shows an Internal Rate of Return (IRR) of 9.9%, an NPV of \$210.7 K, a simple Rate of Return (ROR) of 306.3% on capital and a payout of 10 to 11 years while reducing financial risk. Application of a 4% discount on future cash savings delivers (IRR) 7.5%, (NPV) 68.3, (ROR) 99.3% and (Payout) 13 to 14 years. One could argue that because this investment buys financial risk reduction, that a 4% discount rate is a very conservative representation of present value (NPV).

- 2) **What is the natural gas price forecast? Industry? Alberta Energy Regulator (AER)? 80% of electrical energy in Alberta is generated from Natural Gas.**

Response – *Access to electrical energy and / or natural gas pricing forecasts by industry or government / regulatory bodies will be helpful to inform or validate opinion within our facilities committee that history will continue to repeat itself as described in Item 1). Consensus is that the pressure on the Alberta electrical grid, already taxed by robust population and industry growth will continue. Factors such as the prospect of the expected data center build out and the start-up of LNG plants on the BC coast will perpetuate the volatility and escalation of energy prices; one might argue even to a higher degree than we have experienced in the recent past. Data centers will increase demand and operating LNG plants will expose natural gas to relatively high global pricing. To date, we have not been able to see any of those industry forecasts or know whether they are available.*

- 3) **Base Load (kWhr's) design check. The savings and project economics are based on 1 year of EPCOR utility bills prior to April 2026.**

Response – *The Alberta Micro-Generation Regulation stipulates that the system design be based on the previous 12 month period of utility energy consumption. After checking the energy bills from September 2025 to August 2026; we might be 5% short on our design capacity? Some of this load increase could be attributed to increased building activity / occupancy including the Korean Community since November 2025. We need to confirm with Fire Sky Energy if we are wise to update the design capacity accordingly. As well, we need to re-confirm with Sky Fire the latitude within the Alberta Micro-Generation Regulation to include the surplus (6%) design factor; which particularly in the early years, provides a lucrative (est \$1,000 per year) cash benefit not reflected in the economics .*

- 4) **Is there a risk of future change to the regulatory environment in Alberta? Terms of Microgeneration Regulations?**

Response from Sky Fire Energy – *There is always some level of uncertainty and risk that the regulatory environment could change in Alberta. That said, in our experience the GofA has never indicated an issue with rooftop solar PV (much more true for ground-mount). Further, where compensation has changed (e.g. Saskatchewan / Sask Power) it was due to a much more favourable compensation regime which gave a one for one credit and which included transmission and distribution charges. In Alberta, you are only being compensated for the retail value of the energy (though you do benefit from a small amount of avoided transmission and distribution charges). One should never count on rate switching (e.g. Solar Club) when making an investment decision. While the ability to rate switch seasonally may be around for years to come, it could just as easily go away in a year or two. That said, the concept of net metering (net billing) would appear to be safe as the micro Generation Regulation has been in place since 2013.*

5) How does the Solar Club Work? Is there a cost? What are the benefits?

RESPONSE - *Financial Optimization via the 2026 Solar Club membership provides significant upside to the project economics which has not been reflected in the base economics . There is a minimal administrative cost for being a member.*

Operating a system of this size makes optimizing our export / import strategy incredibly lucrative. Members of the Alberta Solar Club maximize their return on investment using a dual-rate model: High Summer Export Rate (35.00¢/kWh): Switch to this rate during high-generation months (typically April through September). Because our system produces massive surpluses on sunny days, we will sell power back to the grid at a steep premium. Low Winter Import Rate (5.90¢ to 8.40¢/kWh): Switch back to this lower rate during dark winter months (October through March) when sun hours drop (or when our panels are covered with snow); thus minimizing the cost of electricity we must pull from the grid.

6) What is the risk to the structural integrity of the roof due to additional load? Do PV Panels damage the asphalt roof?

RESPONSE – Without being able to say zero, almost zero. Solar PV adds 3.1 psf when flush mounted like proposed. The reality is that the PV system adds some structural support to the roof system. The PV system tends to shed snow quicker than the asphalt shingle roof system. Sky Fire has never seen a roof system based on an engineered roof (truss) system fail due to PV load. Included in the scope of work, the Contractor (Sky Fire Energy) will conduct a structural assessment by a qualified structural (P. Eng.) engineer registered in Alberta with APEGA. The panels will be installed during the cooler months of winter; which will minimize damage to shingles.

7) Is the sealing mechanism around the roof fasteners reliable?

RESPONSE – “K-Flash” is an aluminum, mechanically watertight flashing system. It is a textured powder-coated black finish that blends well with asphalt shingles.

8) Are PV panels susceptible to damage by hail?

RESPONSE - The [LONGi LR8-66HGD-620M](#) PV panel carries an industry-standard hail certification under the **IEC 61215** global standard. During official testing, this module successfully passed the standard hailstone impact test:

Hailstone Size: 25 mm (1 inch ... golf ball size) in diameter travelling at 50 mph and at 90 degrees.

The [LR8-66HGD-620M](#) belongs to the Hi-MO 7 dual-glass series. This gives it a distinct physical edge against impact compared to traditional single-glass panels:

1. **Dual-Glass Structure:** Instead of a rigid plastic back sheet, it features 2.0mm heat-strengthened (tempered) glass on both the front and the back. This symmetric glass-sandwich design significantly increases structural rigidity and helps absorb mechanical shock.
2. **Flexible Encapsulation:** The solar cells inside are encapsulated in a robust Ethylene-Vinyl Acetate (EVA) film. This acts as a shock absorber, dramatically reducing the risk of internal cell microcracking when hit by high-velocity ice.

The PV panels also benefit from being oriented to the south whereas most hail arrives from the north / northwest. The 27 degree roof slope helps ensure that the hail will generally strike at a higher angle vs (90 degrees) resulting in a more glancing blow to the panels.

9) What is incremental cost of building insurance for PV panels; including hail damage coverage?

RESPONSE - The current WLC insurance provider (Reliance) has quoted an incremental \$300 per year (\$2,500 deductible) on our insurance premium based on a \$73,000 replacement cost. The incremental insurance premium has been included in the project economics. Reliance confirms that there is no distinction between coverage of (POED) Property of Every Description vs Solar Panel rider. Hail is not an excluded peril and the Hail Damage Limitation coverage conditions on the building would also apply to the PV panels.

Reliance had initially requested confirmation that the PV panels will be installed using a Ballast Mount. SkyFire is proposing to use the [K-Flash system](#) . K-Flash is permit-ready, compliant with standards like UL 2703, and backed by a 20-year manufacturer warranty from Kinetic Solar. Because it meets industry engineering and safety benchmarks, it does not inherently trigger an insurance denial on its own. Reliance has since confirmed that using the K-Flash mounting system will be covered under our policy. As well Reliance has requested a copy of the SkyFire invoice for the supply and installation of the PV panels.

10) Will potential accumulation of snow on the PV panels impact performance?

RESPONSE – The energy modeling accounts for snow which is actually a fairly small overall percentage. This is true as snow coverage generally affects PV modules between November and February which corresponds to the shortest days and least energy production. Furthermore, the PV modules will actually shed the snow fairly quickly as they are dark in colour and made to absorb the light and in the case of WLC a fairly steep (27 degree) angle. While energy production could be improved by removing snow (e.g. telescopic snow rake) it is not recommended that this be done. The risk of personnel injury or damage to the PV modules is not worth it.

11) What is impact of smoke and particulate matter on PV panel performance?

RESPONSE – *It depends. Light smoke will have limited effect on PV production whereas a thick, heavy cloud will have significant impact. In fact, we could experience more than 50% to 75% reduction during days with thick smoke.*

12) Has rodent and bird protection been included in the capital cost?

RESPONSE – *Yes, SkyFire's quote includes nearly \$2,000 to provide mechanically fastened rodent guard protection screens.*

13) Will additional maintenance and technical support be required? What will be the cost?

RESPONSE – *Minimal incremental maintenance is expected. For the proposed system, SkyFire does not recommend an ongoing maintenance contract. SkyFire recommends that someone at WLC is tasked with checking the PV system monitoring (inverter) periodically (e.g. weekly) to ensure that the system is operating properly. An allowance has been included in the project economics for replacement of the inverter over the 35 year life of the project. (the inverter comes with a 10 year warranty). Sky Fire has included in the scope of supply technical training with respect to monitoring and optimizing system performance; as well as assistance and guidance to access the Solar Club of Alberta.*

14) Experience of churches that have done this?

A) St. Paul's United Church FAQ's and responses: <https://stpaulsunited.org/solar-panels/>

B) Sunnybrook United Church in Red Deer:

- *In year 5 of 9-year payout*
- *Use micro-generation contract with 6 months of export at 3 times the rate which pays for distribution and administration charges on the electricity bill*

- *Can sell offset carbon credits after a completed year of data.*
- *Installed in November/December in 10 days*
- *Anticipated decline 0.5%/year over 20 years*

15) Proactive management of WLC Utility Contracts? (EPCOR and Direct Energy); assign responsibility within facilities committee. Develop a process and system using the JOTSON APP.