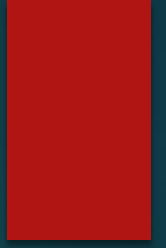




# Solar Proposal

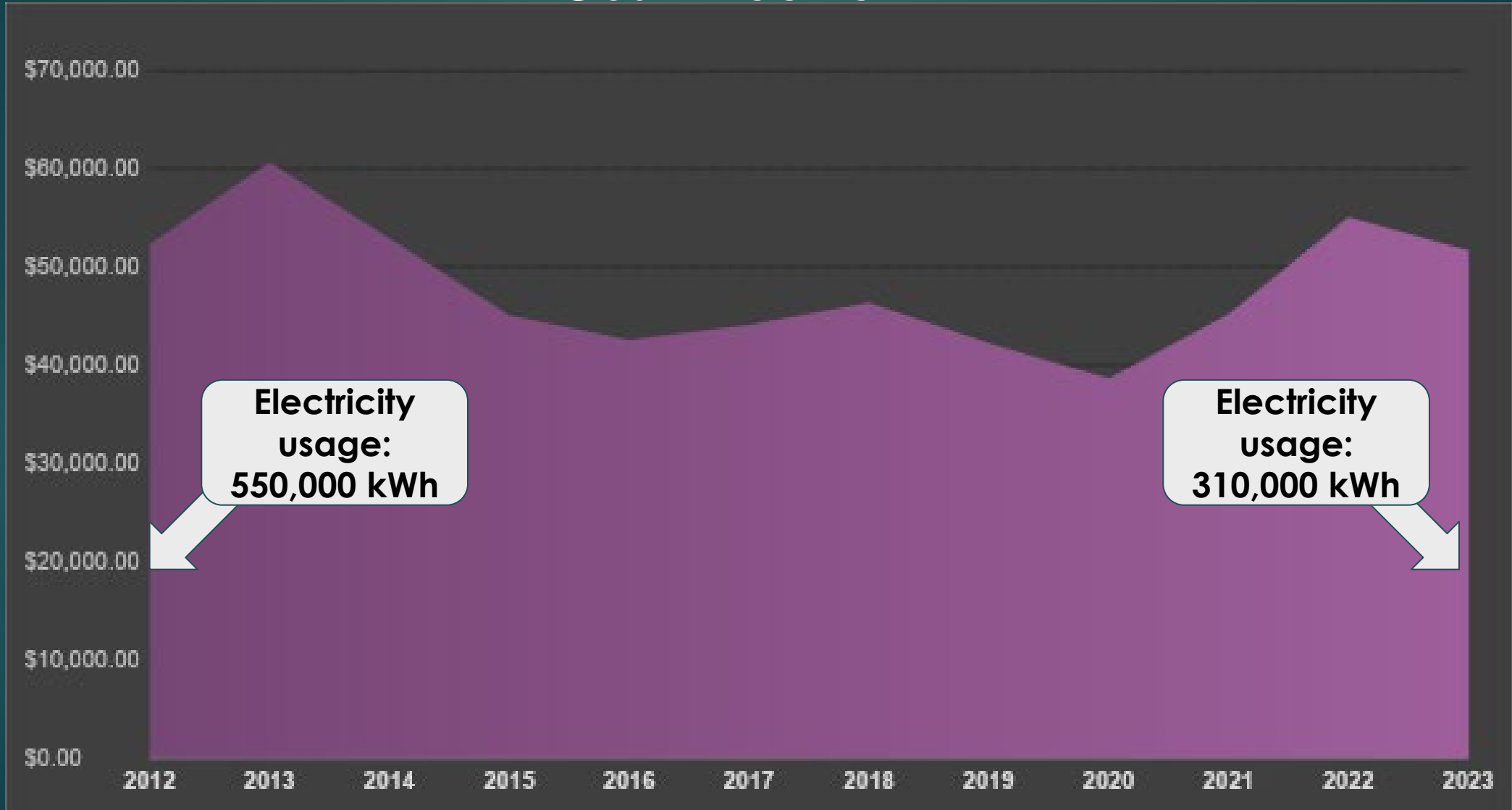
## April 2024

# Background

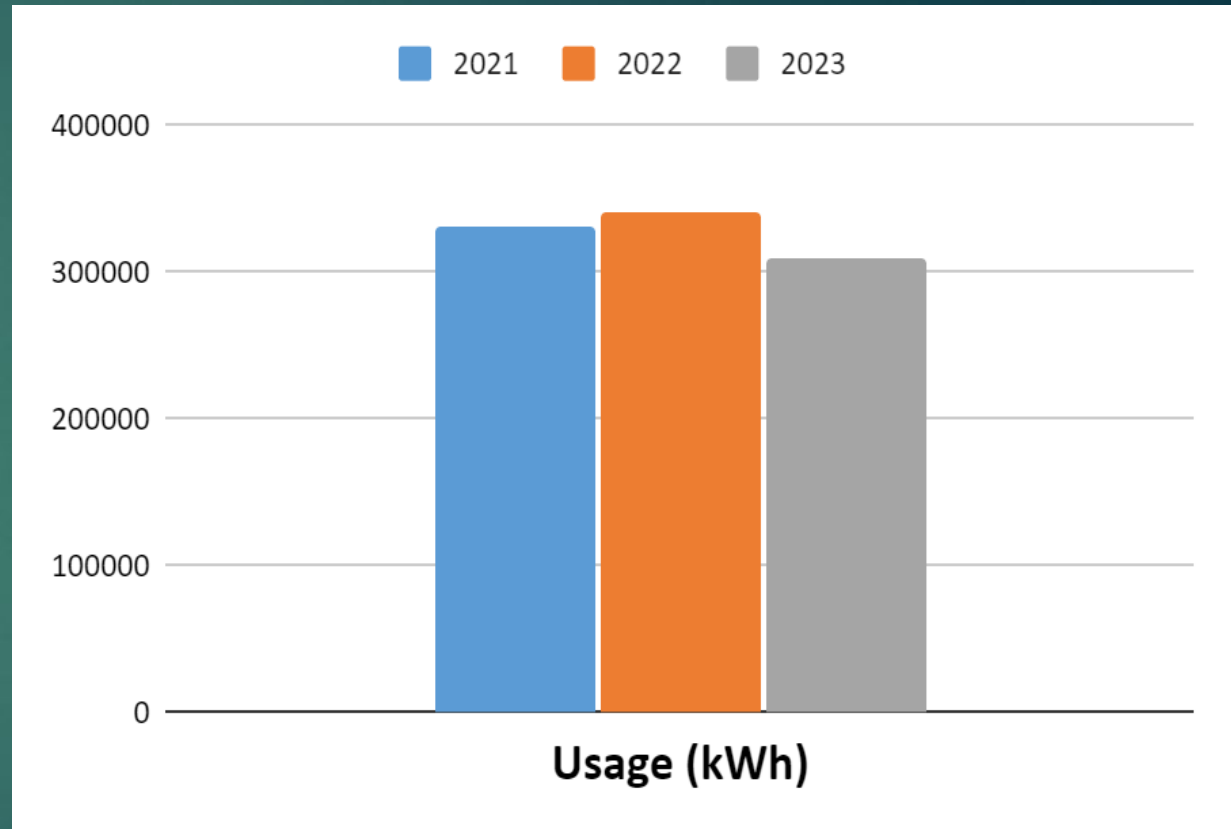
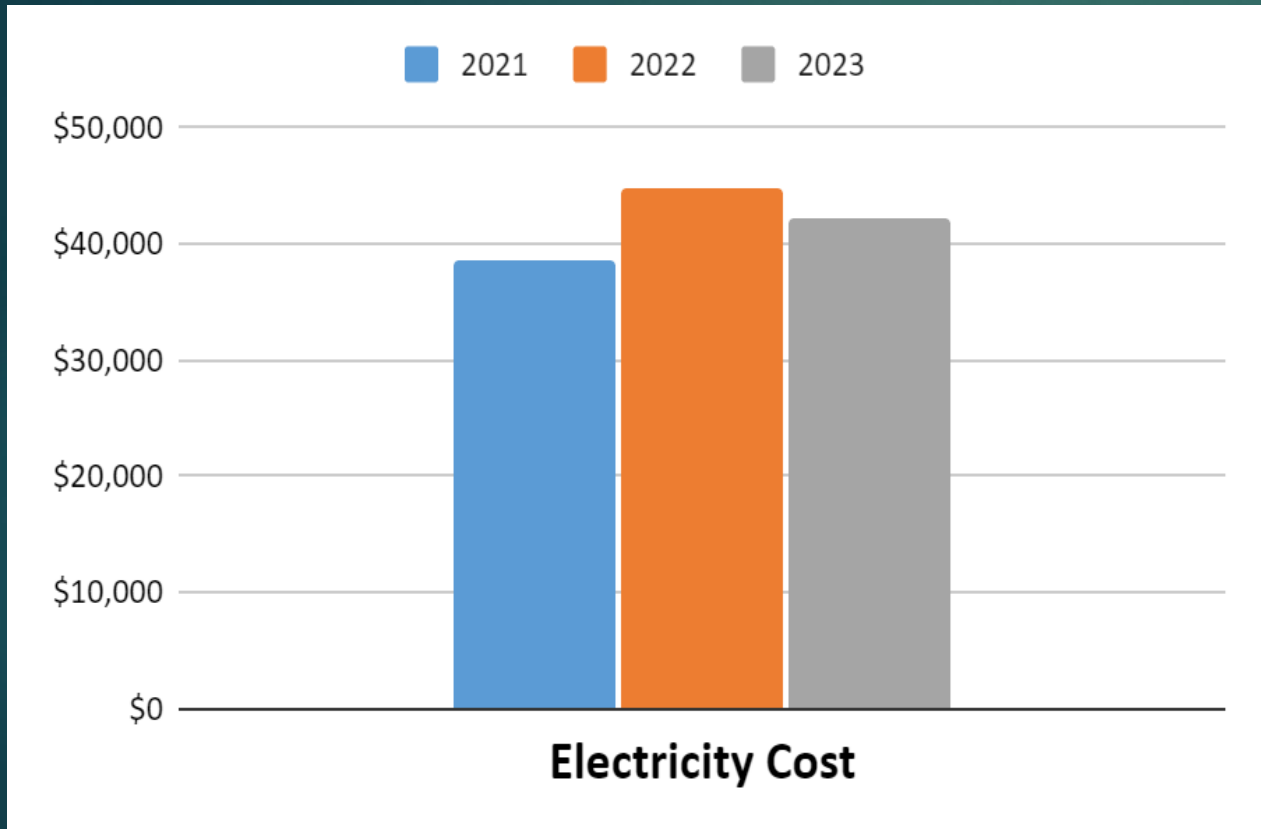


# Faith Total Energy Expense

Gas + Electric

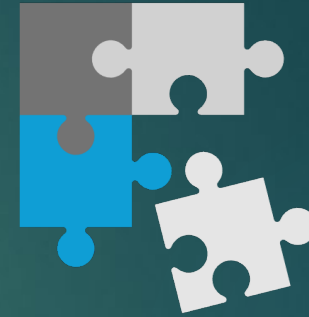


# Faith Electric Expense



# Solar Project Research

- 3 Team Members
- 30+ Meetings over 7 Months
- 6 Different Vendors
- 20 Different Bids
- Pros & Cons of mounting on Roof vs. Ground
- Talked to several other churches & references
- Investigated Federal Rebates
- Researched Xcel Billing Options & Incentive Programs
- Compared Financing Options



# Solar Energy & Photovoltaics

- Energy generated by the sun
- Captured on panels to produce electricity
- Clean & renewable
- Panels generate DC power
- Inverters convert to AC power
- New bi-directional meter installed
- Solar production powers our building first
- When we generate extra, it goes to the grid
- When we need more, it comes from the grid
- We get billed for the difference



# Caring for God's Creation

- ▶ Reduces environmental impact
  - ▶ Reduces emissions from burning fossil fuels lessening effects of climate change.
  - ▶ 45% of electricity generated in Minnesota in 2022 came from the burning of fossil fuels
  - ▶ This system would generate enough electricity in 30 years to:
    - ▶ Offset 394,274 gallons of gas
    - ▶ Charge 231,316,602 cell phones
    - ▶ Power 28 homes
- ▶ Creates healthier local environment
  - ▶ Cleaner air and water
  - ▶ Reduction of respiratory diseases, cardiovascular issues, and even long-term chronic health conditions







# Solar Proposal





164.8 FT

175.5 FT

175.5 FT

175.5 FT

175.5 FT

255.4 FT

# About



CEDAR CREEK  
*energy*

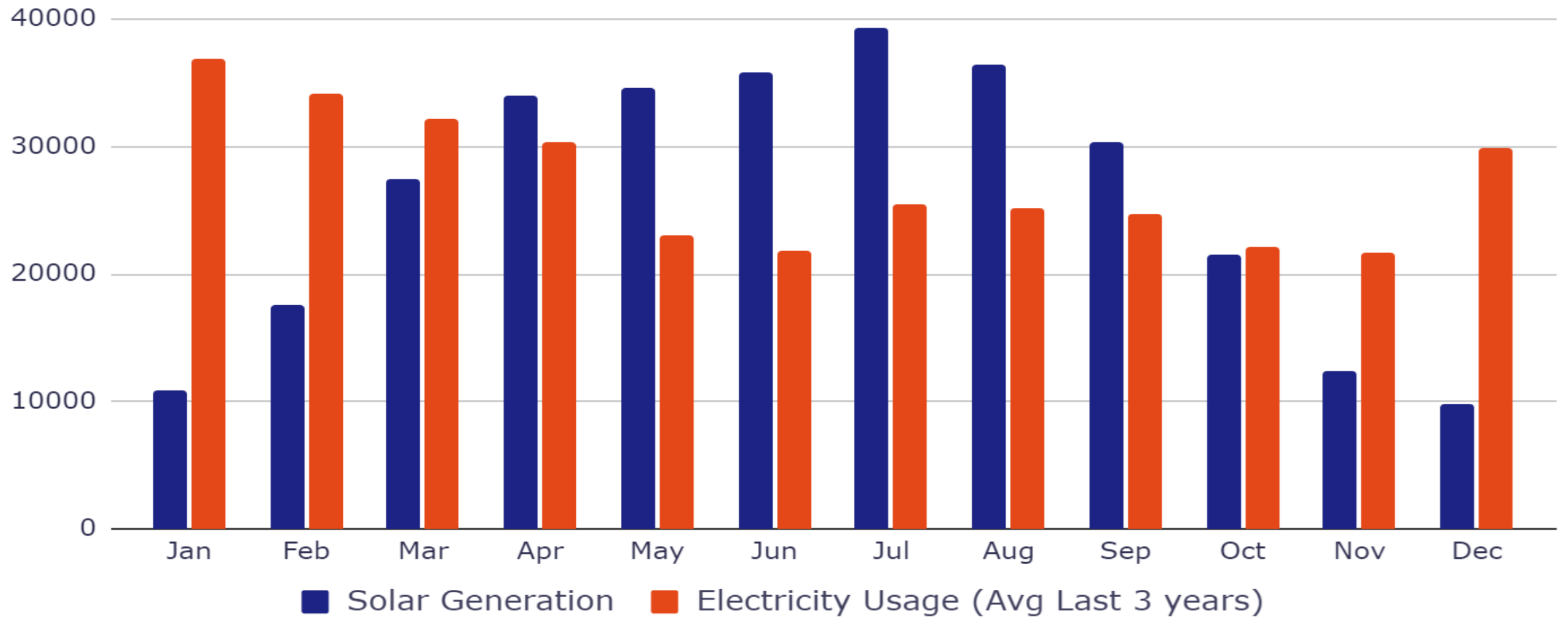
- Locally owned
- Based in Blaine, MN
- In business since 2007
- Licensed, bonded, insured
- 80+ employees
- In-house designers, engineers, project managers, installers, quality control & quality assurance

# Project Bid Includes:

- Engineering
- Components:
  - 400 Jinko 580W Panels (232 kW total)
  - 3 Chint Power Systems 60 kW Inverters
  - Racking
  - 10 AWG Stranded Copper Wire
  - Up to 520' Directional Boring
  - 6 ft Chain Link Fence with Gate
- Project Management
  - Interconnection Application with Xcel
  - Building Permit Application with City of Forest Lake
  - Installation
  - Testing & Go Live with Xcel
- Assistance with Rebate & Incentive Applications

# Electric generation vs usage

Solar Generation vs Usage Comparison



# Financial Summary (30 years)

	<u>Likely</u>	<u>No Extra Incentives</u>
Project Bid Amount	\$551,470	\$551,470
Additional Costs (tree removal)	\$1,000	\$1,000
<b>Project Cost:</b>	<b>\$552,470</b>	<b>\$552,470</b>
Up-Front Incentives	\$(295,988)	\$(166,041)
Production Incentives (over 30 years)	\$(268,823)	\$(245,855)
<b>Estimated Incentives Available:</b>	<b>\$(564,811)</b>	<b>\$(411,896)</b>

# Financial Summary (continued)

	<u>Likely</u>	<u>No Extra</u>
Net Bid Less Incentives	\$(12,341)	\$141,574
Plus Loan Interest (if zero funds raised)	\$183,558	\$235,900
Plus Additional Insurance	\$158,685	\$158,685
Plus Anticipated Electric Bills	\$691,296	\$691,296
<b>Total Cost with Solar:</b>	<b>\$1,021,198</b>	<b>\$1,226,455</b>
VS. Estimated Electric Bills Without Solar:	\$2,082,761	\$2,082,761
<b>Potential Savings:</b>	<b>\$1,061,563</b>	<b>\$856,306</b>



# Up Front Incentives

\$165,741	30% Federal Tax Rebate (guaranteed)
\$55,247	10% Bonus Credit for Low-Income Community (limited funds available - first come, first served)
\$75,000	Xcel Solar Rewards Income Qualified Non-Profit \$1 per Watt from segment A (need to qualify, then first come)



# Production Incentives

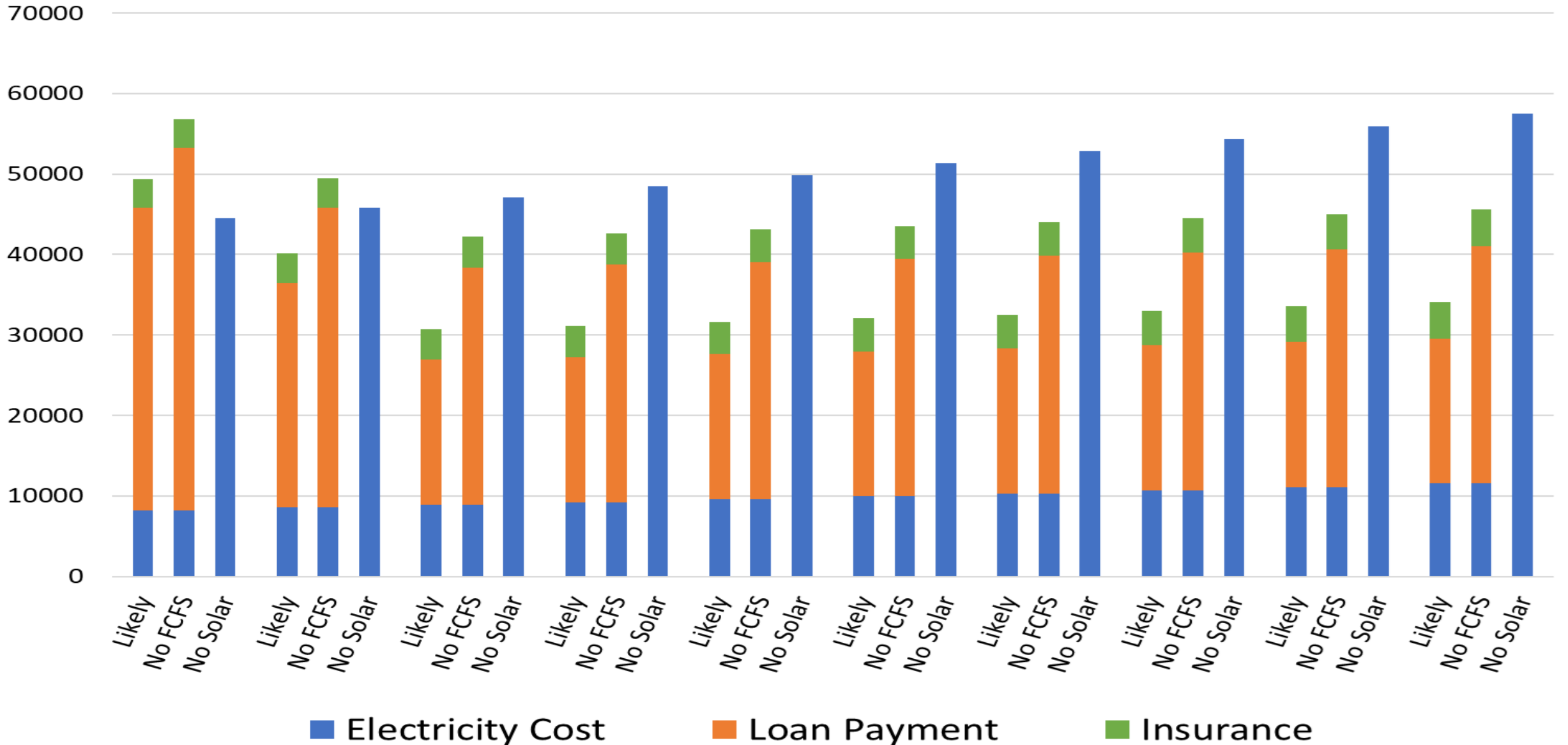
\$22,968 Segment A	Xcel Solar Rewards Income Qualified Non-Profit Performance Credit of \$0.02 per kWh (estimate, paid at year-end for 10 years if qualified)
\$245,855 Segment B	Xcel PV Rider Credit of \$0.071 per kWh generated from 1:00PM - 7:00PM (credit guaranteed, amount estimated, credited on monthly bill)

# Financing & Cash Flow

	Principal	P&I Pmts
Project Cost	\$ 552,470	
Use Wisely Funds	- 50,000	
Fundraising Campaign	- ?	
Loan Amount (Mission Invest Fund 20 yrs @ 6.5%)	= 502,470	
Approx. 6 Monthly Payments of <b>\$3747</b>		22,482
Xcel Solar Rewards Up-Front Incentive Received	- 75,000	
Loan Reamortized, Approx. 12 Monthly Pmts of <b>\$3180</b>		38,160
Federal 30% and 10% Rebates Received	- 220,988	
Loan Reamortized, 222 Remaining Payments of <b>\$1413</b>		313,689

# 10 Year Cash Flow Comparison

## Solar + Loan + Insurance vs. No Solar



# Process & Timeline

If the congregation votes to move forward on May 19...

Week 1	Sign with vendor, pay \$10K engineering deposit
Wks 4-5	Review final plan, agree on changes if needed *
Week 5	Apply for Interconnection & Solar Rewards with Xcel
Week 5	Finalize loan with Mission Investment Fund
Week 5	40% payment due
Week 5	Submit building permit application to City
Month 4	Review Xcel results, determine if upgrades to equipment are needed *
Month 5	40% payment due prior to materials delivery

# Process & Timeline (continued)

Month 5	Installation
Month 6	Electrical inspection and Xcel witness test
Month 6	20% final payment due
Month 7	Go Live & receive Solar Rewards up front credit
Feb-Apr	Apply for Federal tax rebates with Form 990 filing
Fall ?	Receive Federal rebate check
	(all of the above timeframes could take much longer)
In Season	Plant bushes south of fence & pollinator plants between panels ?



Questions?