

**CHRIST EVANGELICAL  
LUTHERAN CHURCH**

**SOLAR PROJECT**

**September 18, 2022**

**Presenter:**

**Randy Heibel**

**Buildings and Grounds**

# CELC's APS USAGE

**135,000**

**kWh/year, 2 meters**

**\$0.18**

**/kWh**

**\$24,300**

**/year**

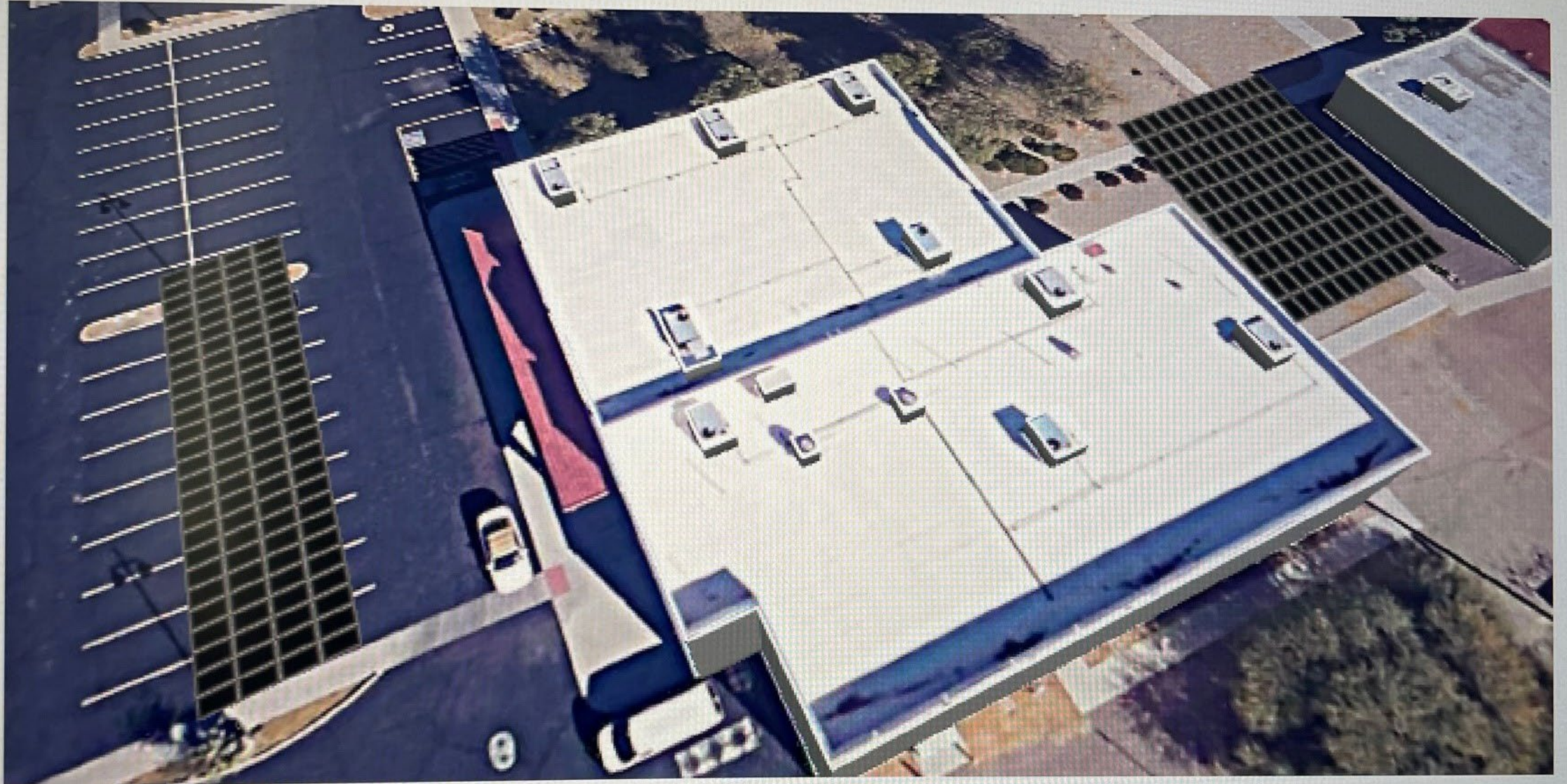
**\$486,000**

**20 years**

**\$671,000**

**20 years - 3% Inflation**







**T&K ELECTRIC & SOLAR**

# **SOLAR PRODUCTION PROJECT: ROOF TOP OF BUILDINGS**

## **Consensus: NOT A VIABLE CHOICE**

- **Ongoing Roof Leaks**
- **Loss of Roof Company's Warranty**
- **Roof Company Charges for Re-Sealing Solar Stanchions/Supports**
- **Re-Roofing Costs - around Solar Panels**
  - **Cost for Uninstalling/Re-installing Solar Panels**
- **Better Security but at the above costs**

# **SOLAR SYSTEM**

## **ADVANTAGES/DISADVANTAGES**

### **CANOPIES BETWEEN BUILDINGS A & B**

- **98% Solar Power - Services Buildings A & B**
- **Shade between Buildings A & B**
  - **Fellowship, Wedding Reception, Outdoor Classroom**

### **CANOPIES: PARKING LOT PORTION & INTERBUILDING**

- **67% Solar Power - Services Building B Only**
- **Similar to “Shade between Buildings A & B” (as given above)**
- **Parking Lot Shade – Cooler for Vehicles**

# **SOLAR SYSTEM**

## **ADVANTAGES/DISADVANTAGES**

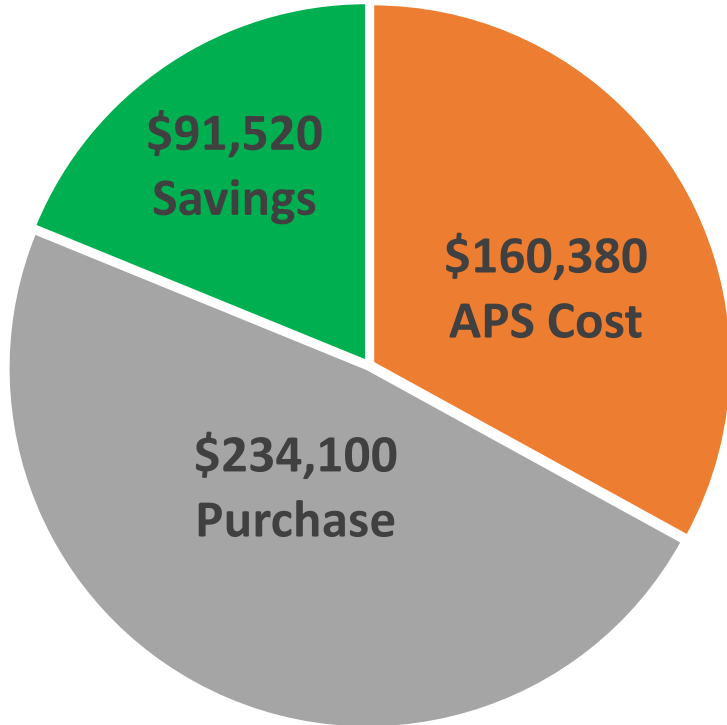
### **GROUND MOUNTS BETWEEN BUILDINGS A & B**

- **67% Solar Power - Services Building B Only**
- **No Shade between Buildings A & B**
- **Security Fence Costs**
- **Landscaping Concern**
  - **Weeding Around Solar Panels**
  - **Spraying Chemicals**

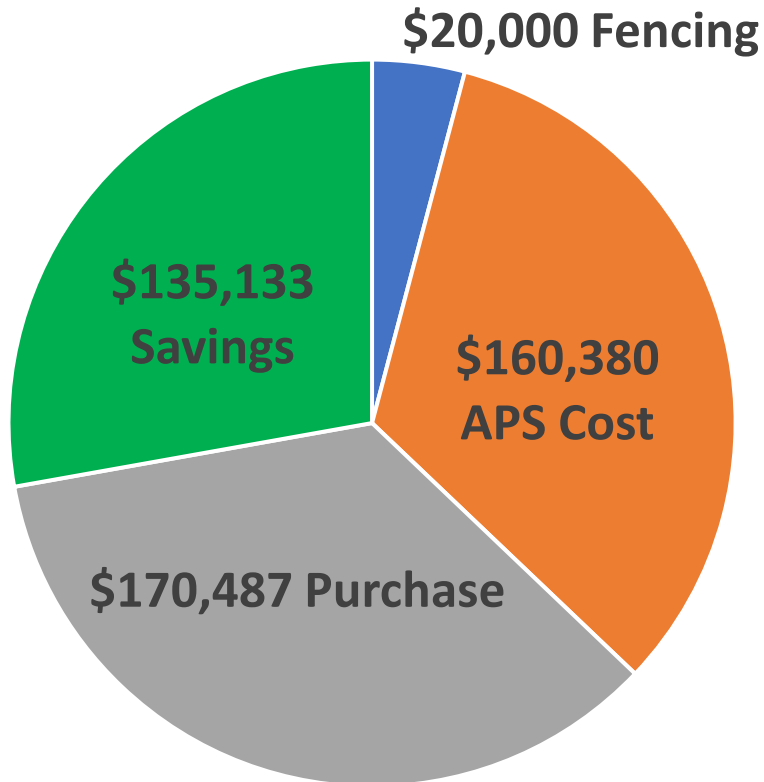


# PURCHASING SOLAR

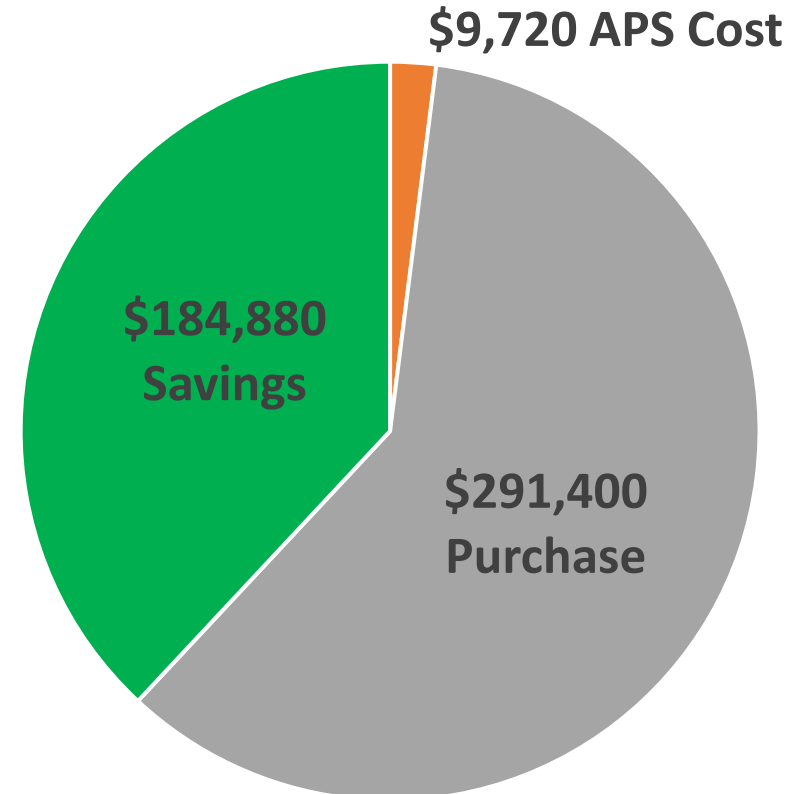
SCP SOLAR  
B CANOPIES: 67%



T&K ELECTRIC & SOLAR  
B GROUND: 67%



SCP SOLAR  
A&B CANOPIES: 98%



# **FINANCING SOLAR FOR CHURCHES**

## **OPTION 1: Purchase to Own – CELC Contributions**

- **Inflation Reduction Act – ??30% Benefit??**
  - **Needs confirmation**

## **OPTION 2: LLC Purchase – CELC Lease/PPA**

- **LLC – Limited Liability Corporation**
- **PPA – Power Purchase Agreement**
- **Tax Benefits to LLC members**
- **~6 years LLC sells/contributes Solar to CELC**
- **Costs: Legal, Administrator**
- **Corporate Rules, Regulations, Reports, Meetings**

# FINANCING SOLAR FOR CHURCHES

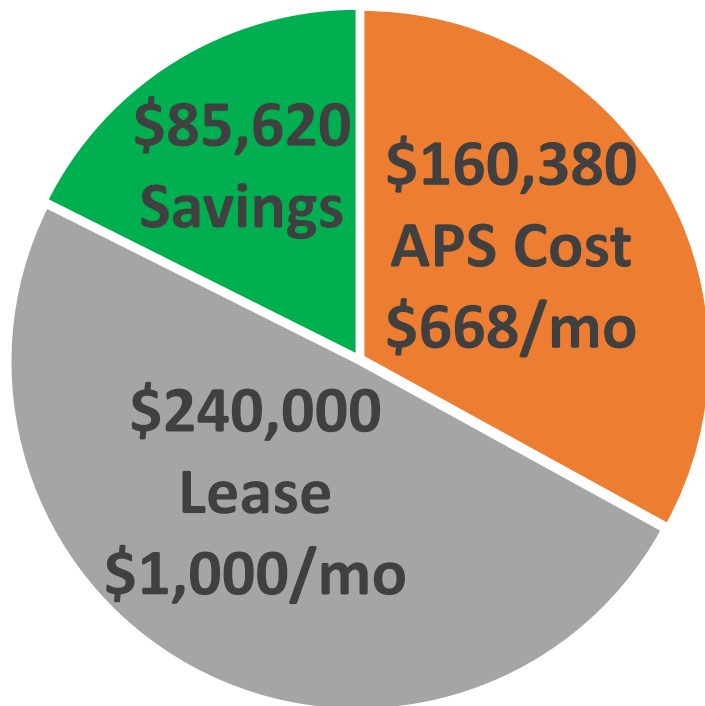
**PURCHASE COSTS:** Security Cameras, Solar Panel Maintenance, Inverter Life Span/Replacement, Insurance Coverage

## **OPTION 3: CELC - Leases from Solar Company**

- **20-year Lease – Monthly Payments**
- **Lower APS costs**
- **Lease Terms**
  - ~Solar Company owns/operates/maintains/repairs the system
  - ~CELC may option to buy the system after 20 years

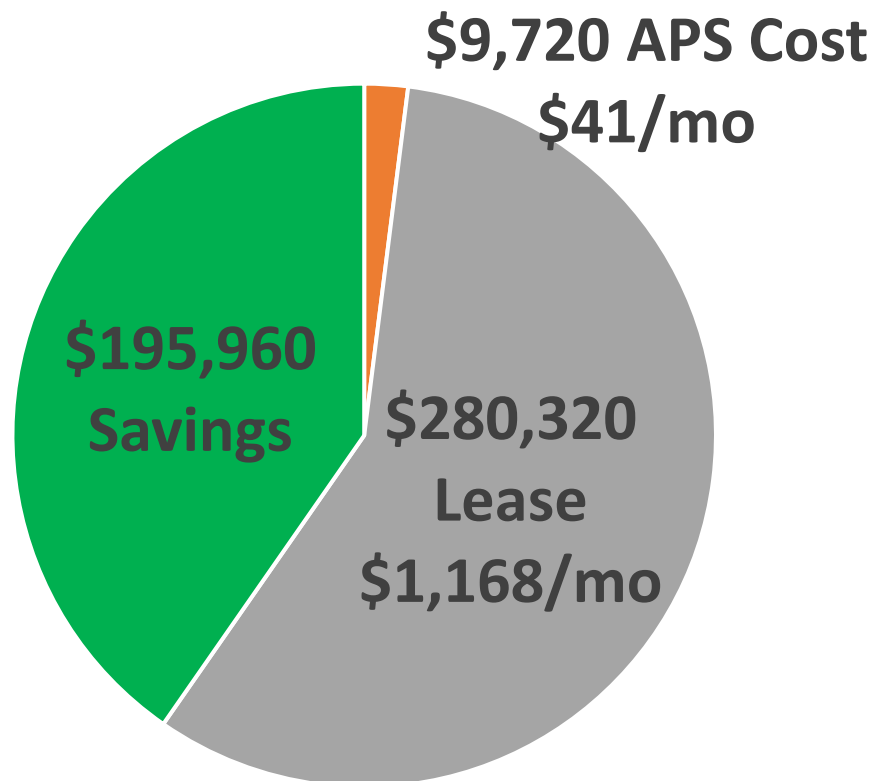
# LEASING SOLAR – SCP SOLAR

## B SOLAR CANOPIES



Current Monthly APS = \$2,000  
Lease Payment + APS = \$1,668  
Savings: \$2,000 - \$1,668 = \$332/mo  
Downpayment = \$0

## A&B SOLAR CANOPIES



Current Monthly APS = \$2,000  
Lease Payment + APS = \$1,209  
Savings: \$2,000 - \$1,209 = \$791/mo  
Downpayment = \$29,100