



# The Roman Catholic *Archdiocese of* Washington

May 18, 2023 Webinar on Solar Power and the Parish

[Click here for webinar recording](#)



## Parish and School Financial Operations

---

### *The Roman Catholic Archdiocese of Washington*

Michelle Shelton, Executive Director,  
Facilities and Real Estate,  
[SheltonS@adw.org](mailto:SheltonS@adw.org)

Robert Messer, Manager,  
Facilities and Real Estate,  
[MesserR@adw.org](mailto:MesserR@adw.org)

Richard Anderson, CQI Associates,  
[Richard@CQIAssociates.com](mailto:Richard@CQIAssociates.com)

Elizabeth Seidel, CQI Associates,  
[Elizabeth@CQIAssociates.com](mailto:Elizabeth@CQIAssociates.com)



# ARCHDIOCESE OF WASHINGTON

## **Solar Energy Generation Systems Parish & School Workshop**

**CQI**  
**ASSOCIATES**

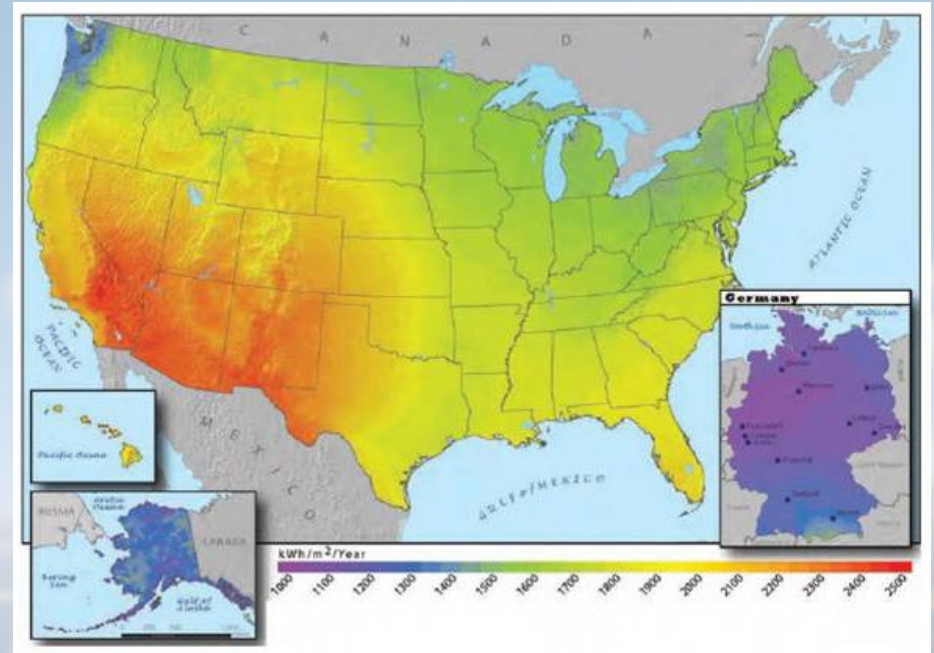
Energy & Sustainability  
Management Consultants

# Workshop Topics

- Fundamentals of Solar
- Installation Options
- Financing Options
- ADW Requirements
- Implementation Tasks
- Agreement Fundamentals

# Solar Energy

- Free and limitless energy source
- Offset energy consumption costs
- Reduce carbon footprint



- 
- **Almost the entire U.S. receives more solar rays than Germany**
  - **Current World Solar Leader is Germany**



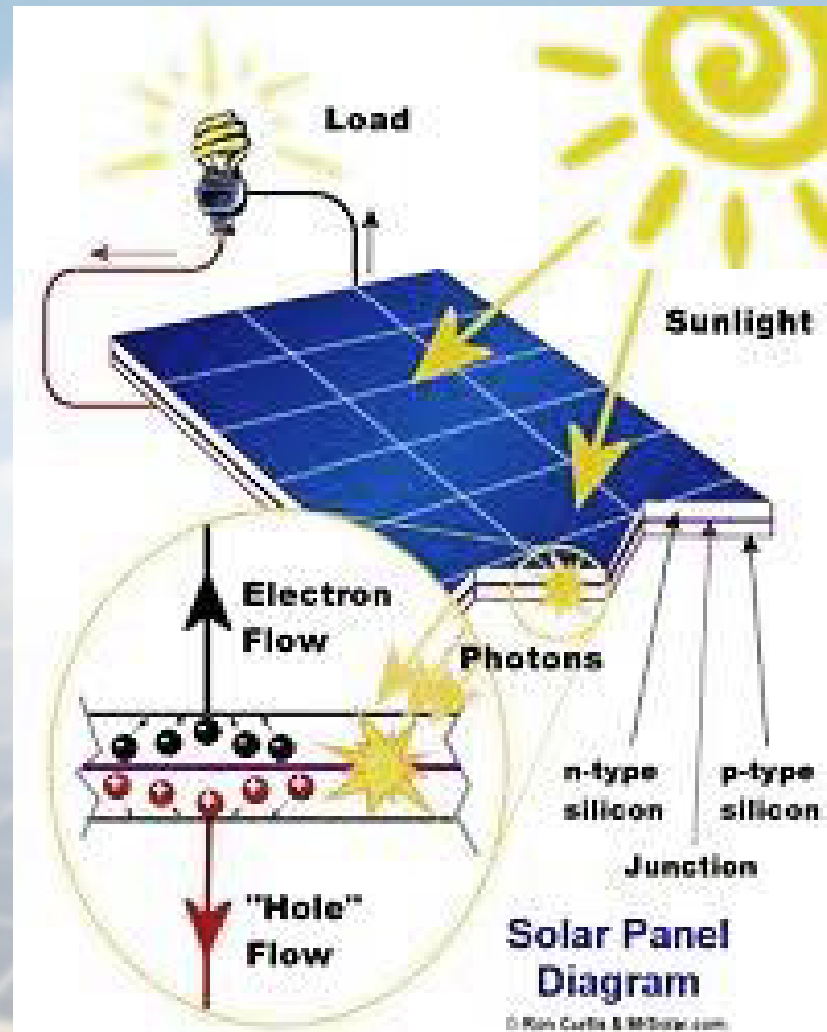
# ADW Guidance

- Development of solar systems for ADW parishes and schools has become a topic of significant interest.
- Parishioners and School families are encouraging the development of renewable resources at the local level.
- Solar contractors are offering what may appear to be favorable options for the development of solar projects.
- As parish and school leaders begin to consider the alternatives they may find the process confusing.
- **The goal of this workshop is to provide guidance from the Archdiocese on the development of solar systems.**



# Photovoltaic Solar Technology

- Converts sunlight directly into electricity



# System Configurations

- Net Meter - On Site Systems - Behind the Meter
  - The solar generation must be intended primarily to offset all or part of the parish or school electricity requirements
- Off Site Systems – Aggregate Meter Option by Utility
- Community Solar - By Utility & By Supplier



# Roof Mounted Solar



# Ground Mounted Solar





# Parking Canopy Mounted Solar





# Garage Canopy Mounted System





# Solar Financing Options

- **Direct Purchase**
- **Power Purchase Agreement**
  - Third Party Financing
  - Typically 20 year
  - Fixed price for the generated energy
  - Financing company retains all financial and environmental incentives

# Direct Purchase

- Parish or School purchases the system and retains all environmental benefits
- Electricity is generated behind the meter
- Supply, deliver and distribution costs are offset by the generated solar energy
- System size cannot exceed 95% of annual consumption of the designated meter
- Aggregation of multiple meters is not permitted
- Parish or School pays for ongoing maintenance and operation

# Power Purchase Agreement – Solar Contractor

- Agrees to design, permit, construct, operate, and maintain the solar system
- Agrees to pay all costs to design, permit, construct, operate, and maintain the solar system
- Retains financial potential benefits to include tax incentives, production incentives, depreciation
- Retains potential environmental and renewable energy credit benefits
- Agrees at the end of the term of the PPA Agreement to remove the solar system and restore the property to its original condition

# Power Purchase Agreement – Parish or School

- Agrees to provide roof, parking or land for the construction of the solar system
- Agrees to pay for the generated energy produced from the solar system at a fixed price with annual escalation fees for a period not to exceed 20 years
- Receives the full benefit of the generated energy from the solar system to offset electricity purchased from the utility



# ADW - Requirements

- Parish or School must obtain approvals from the **College of Consultors, Moderator of the Curia, Real Estate and Facilities Management Office and the Office of General Counsel** prior to signing any agreements or documents for solar installations, including contracts under \$25,000.
- Solar may NOT be installed on a **church roof**, unless approved by College of Consultors and the Moderator of the Curia.
- Solar installations may NOT be installed on **buildings designated historic** without the approval of the College of Consultors and in accordance with the local historic district review board, if applicable.
- The Archdiocese of Washington will not enter into a contract with any company created with the sole purpose of acquiring tax credits.

# ADW – Requirements

- Parish or School shall be required to hire an **energy and sustainability consultant at their expense** to assist with the following:
  - **Initial site solar feasibility assessment to determine**
    - System Location at Parish or School
    - System Construction Type – Roof, Ground Mount, Parking Canopy
    - System Size – Annual kW/DC
    - System Annual kWh Production Estimate
    - Parish or School Account to be connected to solar system
  - Review of the RFP submissions, proposal evaluations, and contractor selection process
  - Assist in supervising the solar contractor installation of the solar array system.
- The consultant reports and review documents shall be included in the resulting submission for review by the College of Consultors and the Moderator of the Curia.

# Roof Mounted Solar Requirements

- The Parish or School shall be required to hire at their expense an independent structural engineer to inspect the roof and determine what may need to be done to the existing structure to accommodate the added weight of the solar panels.
  - The resulting structural engineer reports shall be submitted to Real Estate and Facilities Management Office for review prior to proceeding with the findings and recommendations.
  - The structural engineers reports and review documents shall be included in the resulting application for review by the College of Consultors and the Moderator of the Curia.
- The existing roof material on the buildings at the ADW Parishes/Schools must have a longer life expectancy than the solar photovoltaic electric generating system installations or a new roof must be installed. (20 year manufacture warrantee)
- If a flat roof is involved, then flat roof walking panels must be installed to protect the roof during solar panel installation and all subsequent maintenance.



# Roof Mounted Solar Requirements

- If a roof replacement is required, the ADW Parishes/Schools must **obtain three bids for the replacement of the roof.**
- The three bids and all related documents must be submitted to the Real Estate and Facilities Management Office and the Office of General Counsel prior to signing any agreements for the roof replacement and must comply with established policies and procedures.
- The ADW Parishes/Schools must determine how to pay for the costs for roof upgrades, roof replacements, and/or roof structural upgrades prior to the installation of the solar system:
- The costs may be paid by the ADW Parish or School
- The costs may be paid by the solar contractor and incorporated into the Power Purchase Agreement.
  - NOTE: The solar contractor would increase the per kWh cost to be paid by the Parish or School, therefore, depreciating the cost of the roof upgrades over the 20-year life of the solar installation. Funding for any roof upgrades would need to be separately listed in the PPA for evaluation.



# Request for Proposal

- Parishes or Schools shall issue a **formal Request for Proposal** (RFP) for the solicitation of proposals from solar contractors.
- ADW has developed an **RFP template document** to be used as the basis for development of the formal request.
- Parishes or Schools shall **obtain three (3) independent bid submissions** as a result of the issuance of the Request for Proposal from licensed and qualified solar contractors to be considered for contracting for solar installation.
- Solar contractors must have a minimum of five (5) years of relevant experience and the appropriate liability insurance.
- Solar contractors shall be in compliance with ADW contracting policies.
- Multiple bids from solar installation companies submitted by one solar contractor will not be accepted.

# Development Tasks

- Feasibility Assessment
- Structural Engineers Assessment
- Request for Proposal
- Proposal Evaluation – Interview & Selection
- Agreement Legal Review
- Agreement Negotiations & Pre Approval
- Best and Final Pricing
- Approval College of Consultors & Moderator of the Curia
- Agreement Signing

# Construction Tasks

- Design
- Utility Interconnection Application
- Building & Regulatory Permits Application
- Commissioning & Final Inspections
- Certificate of Commercial Operation from Host Utility
- Performance Monitoring
- Quarterly Preventative Maintenance and Annual Performance Reviews

# Solar Agreement Fundamentals

## Agreement Legal Review Required:

- Parish
- Archdiocese
- Year One Price & Production kWh Baseline
- Annual Escalation Rate & 20 Year Schedule
- Performance Guarantee – 90% plus
- Annual Reporting – kWh & Meeting Performance Guarantee
- Solar Energy Certificate Credits
- System Removal after 20 Years



# Option for Thermal Hot Water Solar



# Why Solar?

- Renewable & Sustainable
- Regulatory Financial Incentives Provide Near term Economic Benefits
- Long-Term Budget Stability
- Consistent with Stake Holder Expectations



# Questions?

## References:

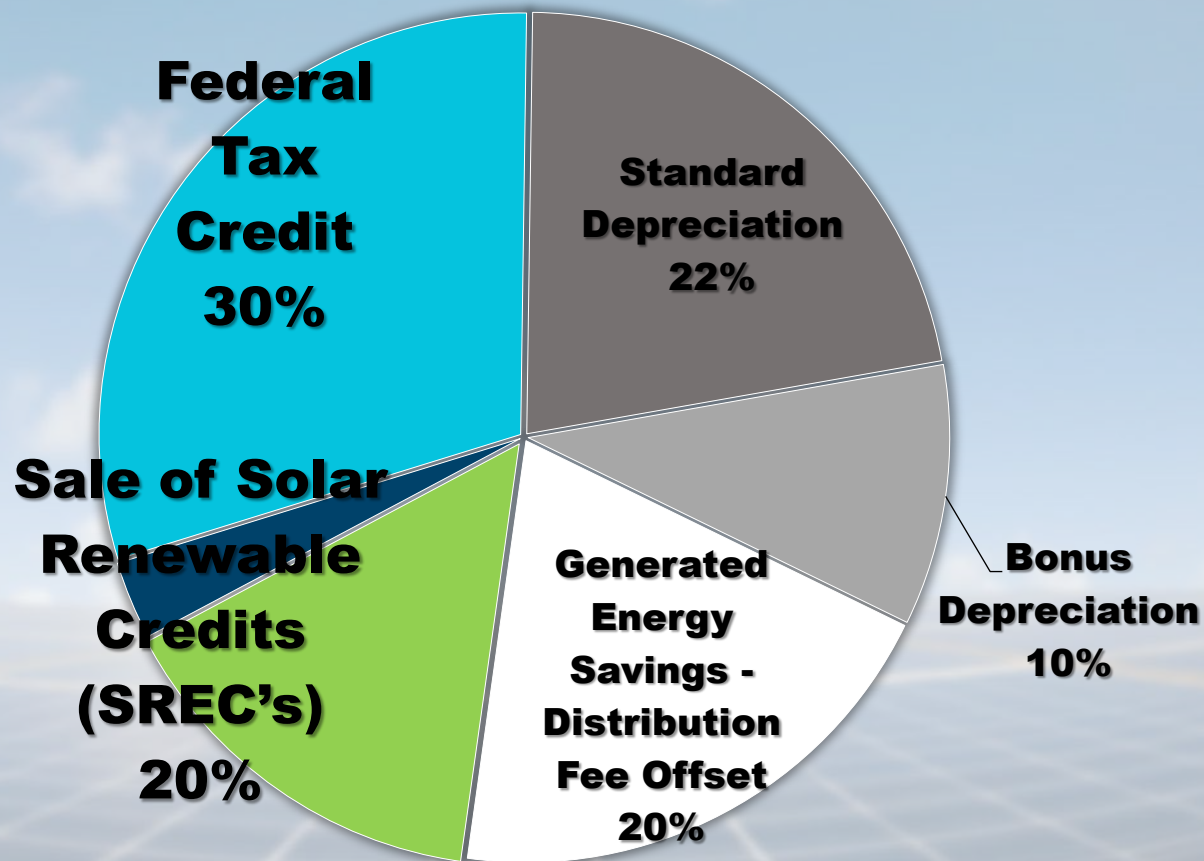
- **Solar Energy Industries Association**  
*202-682-0556 | 600 14th Street, NW, Suite 400,  
Washington, DC 20005*
- **Department of Energy.Gov/Solar**
- **Renewable Energy World**  
*[www.renewableenergyworld.com/solar-energy.htm](http://www.renewableenergyworld.com/solar-energy.htm)*
- **National Renewable Energy Laboratory**  
*[www.pvwatts.nrel.gov](http://www.pvwatts.nrel.gov)*
- **CQI Associates, LLC**  
*443-864-7293 - [richard@cqiassociates.com](mailto:richard@cqiassociates.com)*

# Reference Slides





# Federal Regulatory Financial Tax Incentives



*Federal tax & production incentives with the current value of SRECS in DC remain the most important market driver*

# The implementation steps

## Pre-Construction

1

### Assessment

- Technical
- Financial
- Regulatory Review

2

### Contractor Selection

- Request for Proposal
- Price Proposal
- Agreement Review

## Construction

3

### Design & Phasing Plan

- Occupied campus
- Road closures

3

### Permits

- Electrical permit
- Building Permits
- Utility Interconnection Application

3

### Construction

- Site Access
- Internal approvals
- Utility Coordination

4

### Operation

- Commissioning
- Utility Certification
- Start-up