ARCHDIOCESE OF LOS ANGELES
Construction Department

Solar Project Guide

Solar Photovoltaic (PV) systems combine solar panels with inverters and other electrical and mechanical hardware to harness the energy from the sun to generate electricity. “PV” systems vary in size and complexity and may not be possible for all parish/school buildings.

Solar PV project systems are considered a “major project”. Locations should refer to the “Major Project Guide” for required approvals and funding requirements. The “Major Project Guide” is available in the ADLA Administrative Handbook under ADLA Administrative Handbook > Chapter 7 - Facilities > 7.4 - Construction Policies and Procedures > 7.4.2 - Major Projects.

Locations wishing to explore PV systems should consider that the average facility can save up to 30% on energy costs by changing light fixtures, smart facility operation and regular maintenance. Please follow the guidelines below to determine if “going solar” is an option for the location.

Pre-requisites: Financial

- Location has no outstanding past due accounts.
- Location has no Archdiocese loans / lines of credit.
- Proof of sufficiently available funds to purchase solar panels as required by preliminary design & cost estimates. Solar panel leases (aka Power Purchase Agreements) are not permitted.
- Higher priority facility maintenance projects and needs have been completed.

Pre-requisites: Energy Reduction

Location has implemented energy-efficiency measures such as:

- Lighting: Replaced incandescent and fluorescent bulbs with LED and/or more efficient lights as required; installed LED exit signs; installed occupancy and vacancy sensors and other daylight- responsive lighting controls.
- Windows and walls: Checked for window and wall leaks.
- Insulation: Ensured building(s) are properly insulated.
- Equipment: Upgraded office and kitchen equipment to “energy star” products.
- HVAC: Upgraded old HVAC systems to new more efficient systems, installed programmable thermostats, changed filters during “high use” seasons, performed regular maintenance to ensure heating and cooling coils are clean and nothing is blocking vents and air intakes.

Pre-requisites: Solar Project Design

- Location has gathered 12 consecutive months of Utility bills PER UTILITY METER, identified the voltage stamp on each meter (eg “120V”), taken pictures of meters, listed hours of operation, and gathered all roofing information described above where panels will be expected to be installed. This information will need to be submitted to our Solar Consultant.

Solar PV System Procurement Process:

The Construction Department has "approved" the following consultant to provide turn-key design, procurement, and construction administration services for ADLA on-site solar panel generating systems.

Mission Energy Inc. **PO Box 2144, Middleburg, VA 20118 Page Gravely, President** **P 703-249-9928 | page@mission.energy** **www.mission.energy**		**Xero Solar** **358 Coral Circle** **El Segundo, CA 90245** **P: 310-376-8740** **blochtenberg@xerosolar.com**

The consultant will follow the process outlined below to help each Location make informed decisions in determining if an installed solar panel is appropriate:

Phase 1. Solar Project Feasibility / ROI Analysis – Phase 1. The Consultant will provide Phase 1 services listed below at a cost of $1,500.00 per the ADLA Solar Consultant Contract to be signed by the consultant and site.

- Create a Helioscope for the Location illustrating the potential design, kW size of the solar array, and their optimum location including one or more roofs and/or parking areas as appropriate.
- Analyze the Location's energy consumption, utility tariffs, available federal, state and utility rebates and incentives, and utility restrictions, such as those pertaining to NEM 3.0.
- Deliver a Preliminary cash flow analysis that will be a 25 year forward outlook, including the initial design's total estimated construction costs, available rebates & incentives, avoided utility costs and annual savings, estimated system maintenance costs, a simple payback, and IRR.
- Provide the Location the results of the feasibility study and an approximate total project budget for their solar system design.

For roof mounted PV projects, the ADLA Construction Department will need to confirm the roof ages, current condition, any planned roof maintenance or replacement and existence of any current roof warranty. Additionally, the location may need to contract with an ADLA approved Structural Engineer to certify that the roof can sustain additional loading.

Solar Project Development – Phase 2. The Consultant will provide Phase 2 services listed below at a cost of $1,500 plus travel expenses (receipts provided), not to exceed $1000 per the ADLA Solar Consultant Contract.

- Perform an on-site inspection of buildings, roofs, electrical panels and interconnection infrastructure.
- Initiate preliminary discussions with local permitting authorities, the utility, and other governing agencies as required to understand approval requirements and establish a preliminary project schedule.
- Establish a Not to Exceed final construction/project cost.

Solar Project Construction / Project Management - Phase 3: Should the Location wish to proceed with the proposed solar panel project, the Location would seek Bishop's Office approval and Financial Approval per ACC construction policy. The Consultant will serve as third party construction manager and provide the Phase 3 services listed below at a Not to Exceed cost of between $15,000 - $45,000 per the ADLA Solar Consultant Contract.

- Create a complete set of turnkey engineering drawings for utility interconnection approval, local construction permits and local contractor construction bids.
- Develop an RFQ/Bid package based on design, engineering, and site requirements, and send to three (3) local, qualified solar contractors/installers to bid on proposed project.

- Create a Bid Package to include the turnkey engineering drawings and other necessary information for each contractor to submit their itemized constructions costs to build.
- Schedule site visits, as needed, for contractors, schedule calls with each to discuss their finding post-visit, any design change recommendations, concerns, questions, procurement supplies etc.
- Confirm all Bid Response Forms are completed properly and accurately; format into “apples to apples”; determine recommendation and reasons.
- Make a recommendation for award.
- Submit Interconnection Application to Location’s Utility for approval.
- Submit Construction Permit Application to Location’s local Authority Having Jurisdiction (AHJ) for approval.
- Provide ADLA and Location with final approved Vendor proposal that references above mentioned project engineering specs, payment terms, etc. to be used as Exhibit A and combined with ADLA Standard Contract (Short Form).
- Provide Construction Administration services during construction and commissioning periods.
- Advise and assist location in procuring any post installation tax incentives/ benefits.
- Provide Close Out Materials as required.