

Revitalizing the Willits Branch Library

Critical Infrastructure Upgrades | Reduced Carbon Footprint | Improved Energy Resilience



[amesco.com](https://www.ameresco.com)

© 2024 Ameresco, Inc. All rights reserved.



Background Information

- **August 2, 2021:** Resolution 21-117 unanimously passed
- **County Commits:** To reduce and eliminate carbon footprint in County facilities and operations
- **County Chooses:** CA Government Code (GC) 4217 for turnkey “Energy Conservation Contracts”
- **December 12, 2023:** Request for Proposals (RFP) issued to 17 prequalified firms
- **County Evaluated:** Comprehensive written proposals and shortlisted team interviews
- **April 19, 2024:** Ameresco selected as County’s energy services company (ESCO)

About Ameresco (NYSE:AMRC)

- Founded in 2000, public in 2010
- \$14B+ in energy projects implemented
- 100+ projects with counties nationwide
- \$2.4B+ in CA projects implemented
- Deep knowledge of CA codes, regs, subcontractors
- No parent company or manufactured products
- Independent, equipment-agnostic approach
- Best-value projects, tailored to County objectives

Acclaimed Leader by *Guidehouse Insights*



Top 10 in **Resilience Providers**
Leaderboard Report (2024)

Top Estimated Market Share (2023)
Energy Services Company (ESCO), U.S.

#1 Leader in Energy as a Service
Companies Leaderboard Report (2024)



ESCO Process and Work Completed to Date

Jeff Charneski: Ensures Strategic Vision Execution

POC for County Leadership and BOS



Now

Development Phase *Warren Van Ryzin*

- Investment Grade Audit (IGA)
- Willits Branch Library Prioritized, remaining facilities to follow
- Inspected equipment, analyzed utility bills, interviewed staff
- Seek BOS approval to execute construction contract in January

Construction Phase *Ferdinand Diwa*

- Final design and procure equipment
- Execute subcontracts
- Commence construction May 2025
- Oversee construction activity & safety requirements
- 12 to 24-month construction period

Performance Phase *Angie Waggener*

- Ensure equipment is fully commissioned, punch lists complete
- Coordinate with construction team to facilitate training
- Administer measurement & verification plans
- Administer operations & maintenance plan



Reviewing the County's Strategic Objectives

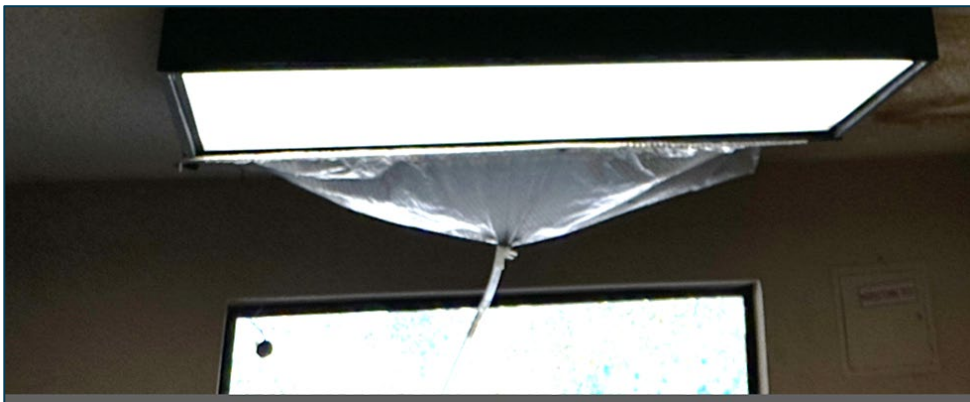
- Reduce carbon footprint Countywide
- Demonstrate commitment to clean, renewable energy
- Willits Library as an energy resilience hub during outages
- Willits Library microgrid as a pilot for other facilities Countywide
- Maximize all available alternative funding sources



Measure 1: Roof Replacement

Existing Conditions

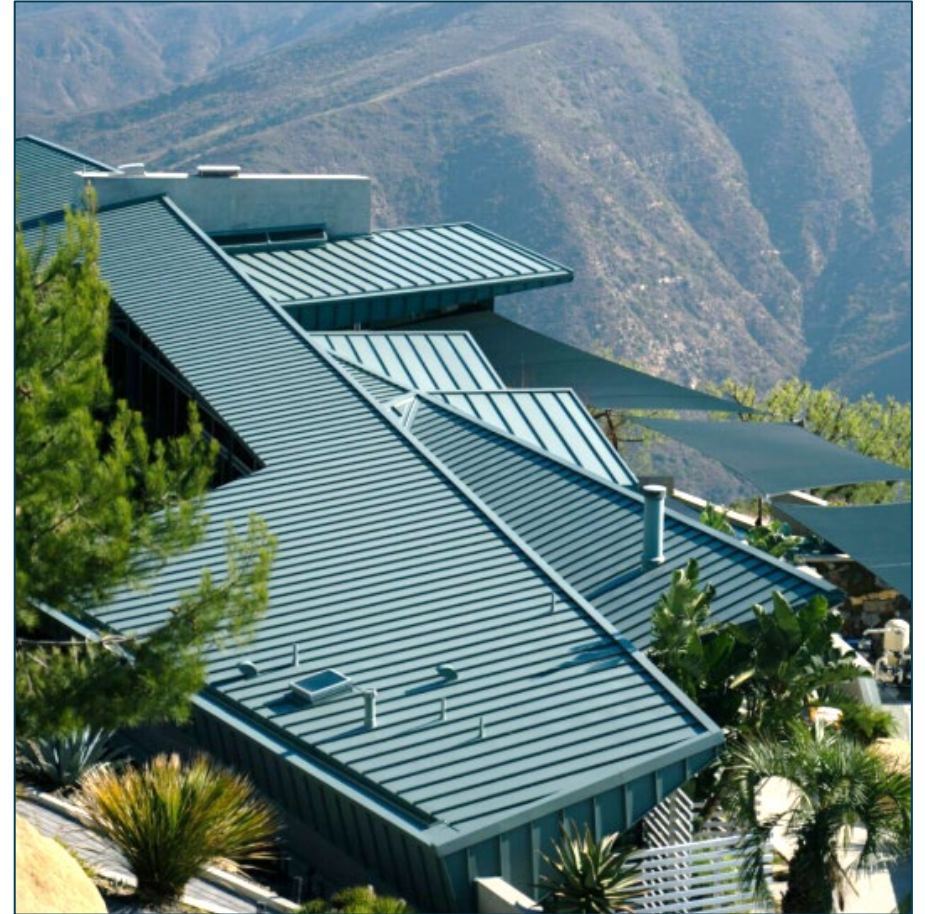
- Deteriorated, tarp-covered roof (top right photo)
- Roof is beyond useful life (bottom right photo)
- Several leaks witnessed during site walk (photo below)
- Costly and disruptive emergency repairs



Measure 1: Roof Replacement – Metal

Maximizes Useful Life of Roofing System

- Tear off existing roofing material
- Install new Versa-Span™ metal roof (sample at right)
- Approximately twice the useful life of composition shingle
- Includes new sheathing over entire roof (if required)
- Includes insulation in flat roof areas
- Also includes the following:
 - Ridge vents to all ridges
 - Gutter installation to eaves
 - Downspouts and gutter guards



Measure 1: Roof Replacement – Composition Shingle

Lower-Cost Roofing Option

- Tear off existing roofing material
- Install like-for-like comp. shingle roof (sample at right)
- Includes new sheathing over entire roof (if required)
- Approximately half the useful life as metal roof
- Costs \$150,000 less than metal roof



Measure 2: Solar-Powered Microgrid

- 32.4 kW DC rooftop solar photovoltaic (PV) system (rendering at right)
- 40 kW / 122 kWh battery energy storage system (BESS)
- In peak energy load conditions: provides 4 hours of backup power capability
- In practice (historical energy load conditions): provides multi-day backup power
- Enables Library to serve as a cooling center/emergency shelter
- Enables off-grid operation
- Supports future electrification of HVAC equipment & elimination of nat. gas usage



All benefits of Q.PEAK DUO XL-G11S/BFG

Bifacial energy yield gain of up to 21 %
Bifacial Q.ANTUM solar cells make efficient use of light shining on the module rear-side for radically improved LCOE.

Low electricity generation costs
Q.ANTUM DUO combines cutting edge cell separation and innovative wiring with Q.ANTUM Technology for higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 21.7 %.

Innovative all-weather technology
Optimal yields, whatever the weather with excellent low-light and temperature behavior.

Enduring high performance
Long-term Advanced Yield Security with Advanced Anti-PID, Advanced Anti-LeTID, and Hot-Spot Protect.

Frame for versatile mounting options
High-tech aluminum alloy frame protects from damage, enables use of a wide range of mounting structures and is certified regarding IEC for high snow (5400 Pa) and wind loads (3750 Pa).

A reliable investment
Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty.

Cost, Savings, and Simple Payback Summary

Project Option 1: Metal Roof and Maximized Microgrid Capability

Measure Name	Annual kWh Savings	Annual Therm Savings	Total \$ Savings	Upfront Cost	State Library Facilities Grant & Inflation Reduction Act (IRA) Investment Tax Credits (ITCs)	Net Cost After Receipt of Grant and ITCs	Simple Payback (Years)
Metal Roof Replacement	318	29	\$2,729	\$489,499	\$247,040	\$242,459	88.8
32.4 kW PV + 40 kW / 122 kWh BESS	36,792	0	\$11,915	\$467,820	\$140,346	\$327,474	27.5
Total	37,110	29	\$14,644	\$957,320	\$387,386	\$569,934	38.9

Project Option 2: Composition Shingle Roof and Maximized Microgrid Capability

Measure Name	Annual kWh Savings	Annual Therm Savings	Total \$ Savings	Upfront Cost	State Library Facilities Grant & Inflation Reduction Act (IRA) Investment Tax Credits (ITCs)	Net Cost After Receipt of Grant and ITCs	Simple Payback (Years)
Composition Roof Replacement	318	29	\$2,729	\$358,183	\$247,040	\$92,960	40.7
32.4 kW PV + 40 kW / 122 kWh BESS	36,792	0	\$11,915	\$467,820	\$140,346	\$326,142	27.5
Total	37,110	29	\$14,644	\$826,003	\$387,386	\$438,617	30.0

Ameresco will gladly deliver alternative scope combinations, if the County desires.

Next Steps and Estimated Timeline

- **Jan. 2025 BOS Meeting:** Seeking approval to execute construction contract for Willits Library scope
- **Spring 2025:** Execute construction contract for scope at remaining County facilities
- **Summer 2025:** Construction at Willits Library commences, with remaining facilities to follow
- **December 2026:** Estimated construction completion date for scope at all facilities

Thank You!

Jeff Charneski, CEM
2300 Clayton Road, Suite 1370
Concord, CA 94520

858-444-0205
jcharneski@ameresco.com