

Council of Independent Colleges in Virginia Solar Group Purchasing: Results and Lessons Learned

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Outline

Introduction to Group Purchasing

CICV Results

Tracking Group Purchasing Efforts

Other College Procurements

Key Takeaways

What is Group Purchasing?

Group solar purchasing is any approach that leverages the collective purchasing power of multiple businesses, municipal governments, or universities.

Examples:

Solarize NY Group Buy Incentives - NYSERDA provides up to \$250,000 in grant funding to support clean energy for municipal governments designated as Clean Energy Communities.

- Municipalities have up to 50 hours of technical assistance.
- Installers are designated upfront, and provide predetermined group purchasing discounts.
- **Huntington Solarize campaign resulted in ~\$1/W system price savings compared to the county average**

Silicon Valley Collaborative Renewable Energy Procurement (SVREP)—9 municipal governments collaborated, identifying 70 systems that totaled 14.4MW.

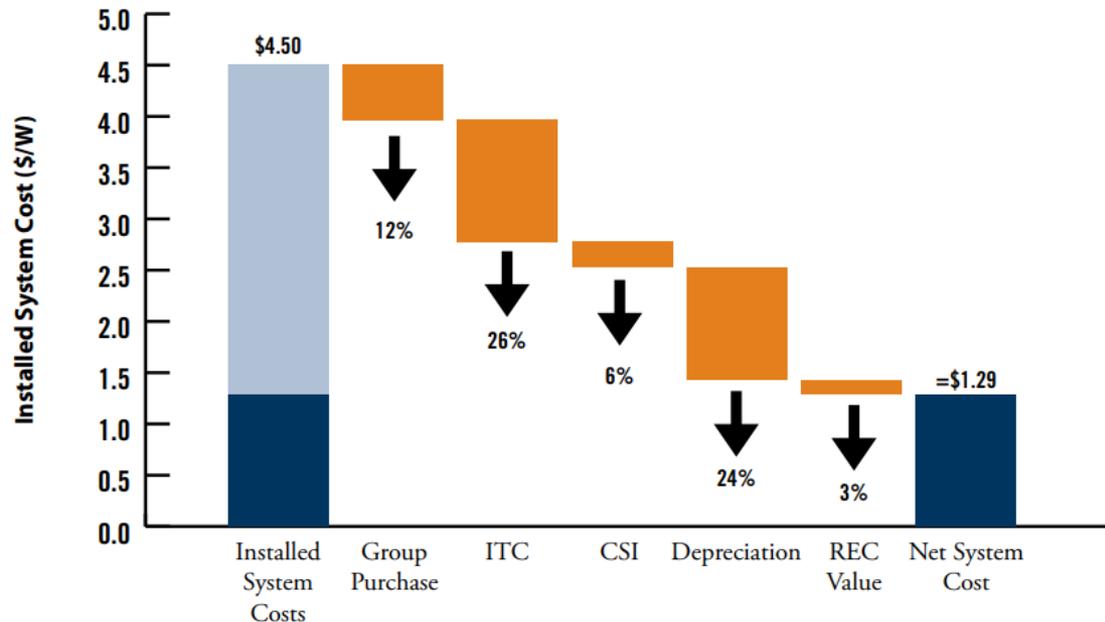
- Municipal facilities were bundled into large, medium, small-combined, and small rooftop bundles.
- **Site aggregation reduced installation costs by 12%**
- **Participants saved 75-90% in administrative costs and time.**

Group Purchasing Benefits

Group purchasing most commonly provides the following benefits:

- Lower system pricing
- Favorable contract terms
- Reduced transaction costs
- Project-enabling scale for challenging markets

Impact of Collaborative Purchase and Incentives on Net Cost of PV System



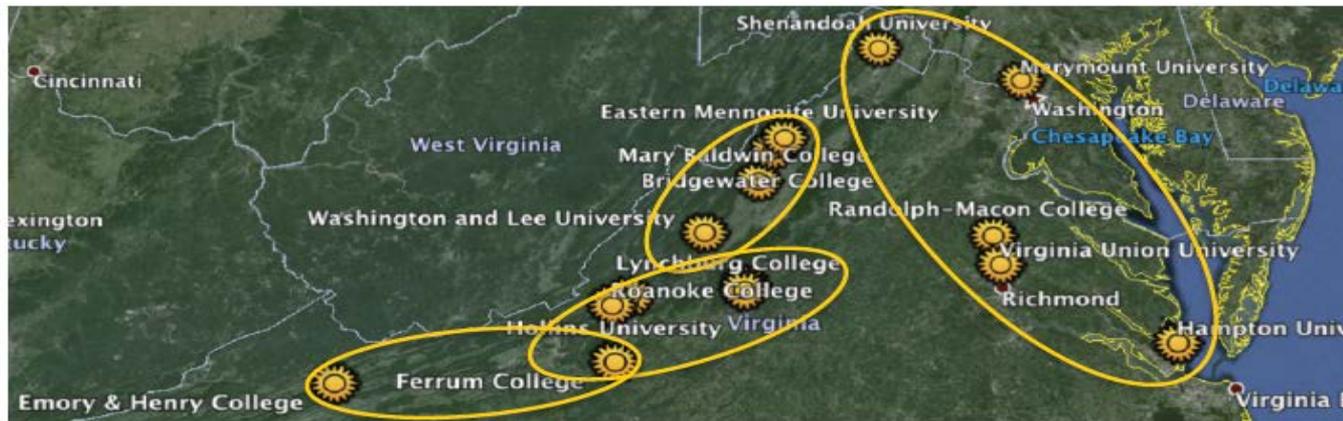
Impact of Collaborative Purchase and Incentives on Net Cost of PV System

Source: World Resources Institute and Optonity based on 2010 data in Northern California

CICV's Group Purchasing Approach

- The Council of Independent Colleges in Virginia (CICV) partnered with 15 colleges in Virginia for group purchasing of solar systems, in order to reduce procurement soft costs and increase group buying power.

- With CICV acting as the lead coordinating agency, and Optony acting as a technical consultant, the 15 colleges conducted site evaluations and screenings identifying 37+ MW of potential solar sites.
- A single RFP was issued for all of the colleges, and grouped the 15 colleges into bundles based on their geographic proximity.
- Once bids were received, then individual colleges determined whether or not to pursue projects. Three colleges executed PPA contracts in the first RFP round.



CICV 1st Request for Proposals

Table 1: Overview of Bundles

College Name	# of Meters	Recommended PV Capacity (kW DC)	Installation Type	Utility
BUNDLE 1 – GREATER ROANOKE/LYNCHBURG				
Ferrum College	1	1,622	Carport	Appalachian Power Co.
Hollins University	1	1,156	Rooftop, Carport	Appalachian Power Co. + Collegiate Clean Energy
Lynchburg College	2	1,401	Rooftop, Carport	Appalachian Power Co. + Collegiate Clean Energy
Randolph College	1	59	Ground-Mount	Appalachian Power Co.
Roanoke College	1	331	Carport, Ground-Mount	City of Salem
Bundle 1 Total	6	4,568		
BUNDLE 2 – SHENANDOAH VALLEY				
Bridgewater College	6	865	Carport, Ground-Mount	Dominion Virginia Power
Eastern Mennonite University	1	347	Rooftop, Carport, Ground-Mount	Harrisonburg Electric Commission
Mary Baldwin College	3	1,268	Rooftop, Carport, Ground-Mount	Dominion Virginia Power + Shenandoah Valley Electric Coop.
Washington & Lee University	1	80	Rooftop	Dominion Virginia Power
Bundle 2 Total	12	2,484		
BUNDLE 3 – NORTHERN AND EASTERN VIRGINIA				
Hampton University	2	643	Rooftop	Dominion Virginia Power
Marymount University	1	169	Parking Garage	Dominion Virginia Power
Randolph-Macon College	1	74	Rooftop, Carport	Dominion Virginia Power
Shenandoah University	5	1,450	Rooftop, Carport, Ground-Mount	Shenandoah Valley Electric Coop. + Rappahannock Electric Coop.
Virginia Union University	2	597	Rooftop, Carport	Dominion Virginia Power
Bundle 3 Total	11	2,933		
BID ALTERNATES – UTILITY-SCALE SOLAR PV PROJECTS				
Emory & Henry College	-	12,401	Ground-Mount	Appalachian Power Co.
Ferrum College	-	5,597	Ground-Mount	Appalachian Power Co.
Lynchburg College	-	9,884	Ground-Mount	Appalachian Power Co. + City of Bedford
Bid Alternate Total	-	27,882		
GRAND TOTAL	29	37,867		

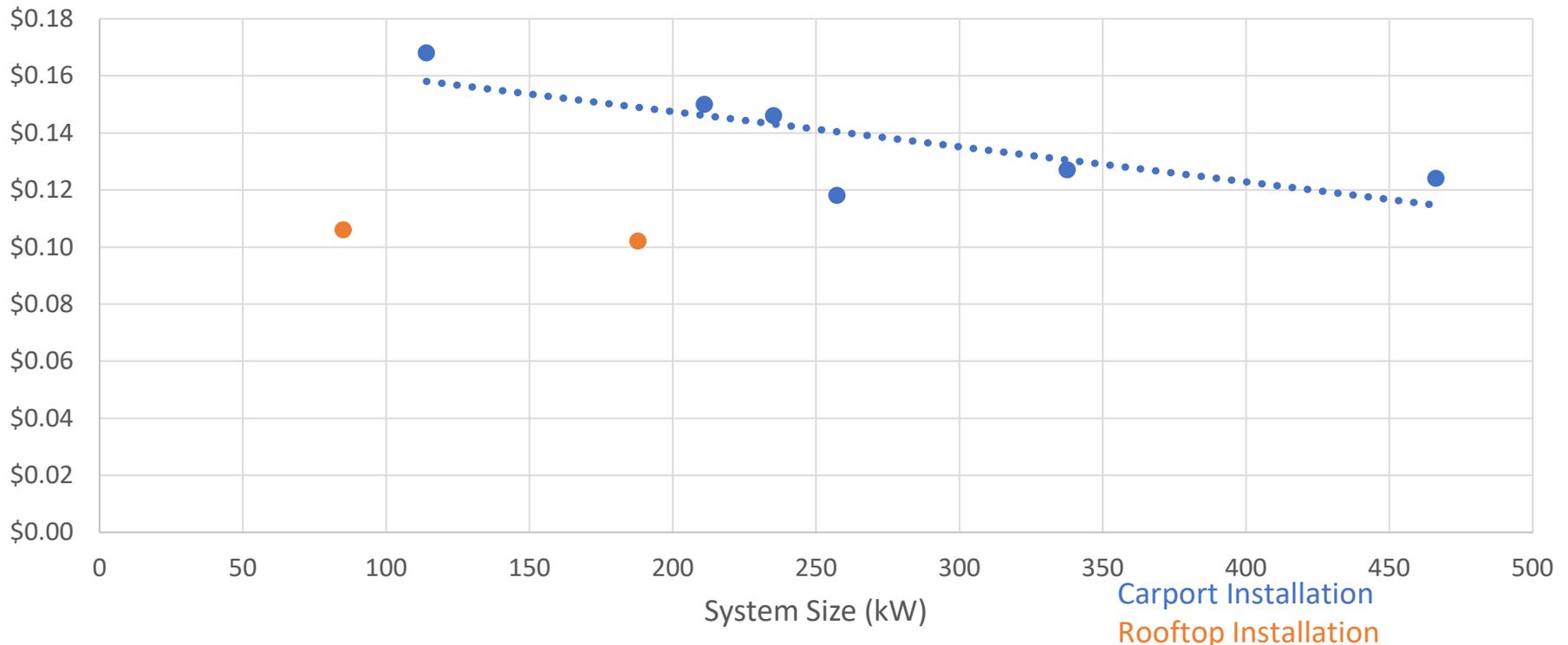
Contracted Projects



CICV Procurement Results

- **1,900 kW of contracted solar projects across three colleges.**
- Six competitive proposals from vendors. Group procurement may have enticed more responses and resulted in better pricing.
- **Vendors offered a 0-4% group buy discount.**

PPA Rate (\$/kWh) vs. System Size (kW)



Tracking Group Purchasing Efforts



1. Strategy and Participant Recruitment

- Identifying and recruiting participants
- Defining procurement goals



2. Site Assessment

- Screening for potential solar sites
- Assessing sites and developing a final list of locations for RFP



3. RFP Issuance

- Develop Request for Proposal (RFP) with input from participants



4. RFP Evaluation

- Evaluate proposals
- Conduct site visit for vendors
- Conduct interviews with top vendors

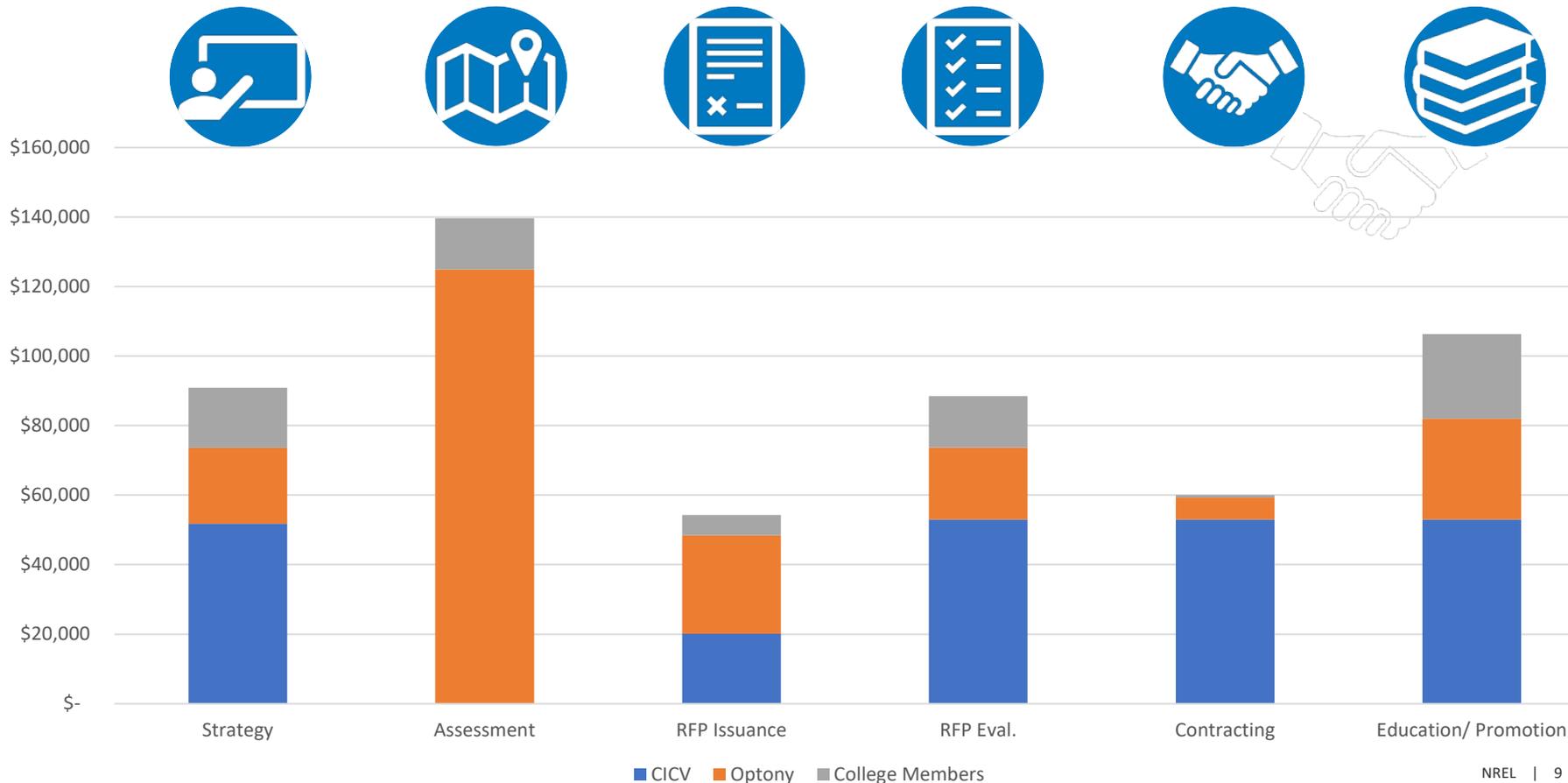


5. Contract Negotiation and Award

- Select winning proposal
- Negotiate contract terms and conditions

CICV Group Purchasing Administrative Cost

- The group procurement involved many colleges that did not ultimately pursue projects in the first RFP, which increased strategy and assessment costs for the portfolio.
- Education and Promotion (right), such as developing curricula, were unique costs for the Solar Market Pathways initiative, and were tracked separately.



Did Group Procurement Save Money?

- Procurement soft costs were lower than average for the other colleges interviewed. However, there is a dearth of literature concerning buyers' procurement costs nationally.
- Vendors offered a 0-4% group buy discount, but the competitiveness of the colleges' PPA rates regionally is difficult to quantify, due to the limited PPA transactions in the state.

- For the colleges that pursued projects, their individual soft costs were likely lower than if they had pursued procurement individually. However, this is due to the support they received from Optony and CICV with the first three steps of the procurement process (strategy, site screening, RFP development).
 - Washington and Lee – 30 hours/\$3,233
 - Lynchburg – 59 hours / \$6,344
 - Virginia Union – no data
- To quantify their PPA cost savings in the future, colleges pursuing a group procurement approach should request that RFP bidders include pricing both for individual projects at a college, as well as the bundled group purchase, to ascertain these savings.

Other College Procurements

Loyola University Chicago

- Issued an RFI and RFP. Got 4 RFP respondents, but financing fell through. Debating whether to go back out to RFP.
- 700 kW, Flat 25 year PPA, \$0.07/kWh
- Minimal procurement cost, relied on bidders for site assessment

Western University of St. Louis

- In RFP process, got 9-10 responses.
- 1.5-2MW, rooftop
- 150 hours of procurement effort

Parkland College:

- Was involved in a consortium of community colleges in their first solar procurement. Went out on RFP for PPAs (got 11 proposals).
- 2 MW, 25 year PPA, \$0.03-\$0.04/kWh
- 50 hours of procurement effort

University of Minnesota Duluth

- Issued campus-wide RFP
- 190 kW, \$2.20-\$3.50/W
- 324 student hours

University of Colorado at Colorado Springs

- System purchase RFP, got 4 bids
- 150 kW, \$2.95/W
- 45 hours of procurement effort

University of Central Florida

- Issued RFQ and RFP. Stalled for two years on board approval.
- 14 MW, \$1.10/W
- 250 hours of procurement effort, \$35,000 in technical consultant work

Lessons Learned from the CICV Project

Location matters: Group solar procurement in Virginia, where there is a relatively nascent solar industry, is much more challenging than in more solar-friendly states.

Confirm commitment: Site assessment is a major procurement cost, ensure that participants are committed prior to the RFP.

Recruit Students: Student involvement can provide a significant benefit by stretching project dollars and serving as project champions

Scale is Key: Achieving large project scale is critical to realizing significant group purchasing savings.

Recommendations for Evaluating Future Collaborative Procurements

- Track hours spent on solar procurement, and categorize the effort based on the five categories.
 - Track the effort from all team members:
 - Lead coordinating agency
 - Technical consultant (if applicable)
 - Procuring Colleges
- Request that RFP bidders include pricing both for individual projects, as well as the bundled projects.
 - This will help to quantify the bulk procurement savings and allow for a direct comparison between individual vs. group procurement.

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