



SCEP

STATE & COMMUNITY ENERGY PROGRAMS

Peer Exchange

Collaborative Energy Solutions: Multi-Agency ESPC Success North Carolina Department of Adult Corrections

July 15, 2025



**ENERGY SERVICES
COALITION**

A Public Private Partnership

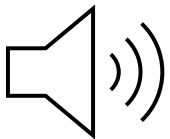
www.energyservicescoalition.org



Virtual Housekeeping



Drop your questions in the Chat box – or raise your hand



Unmute your microphone to ask questions or join the conversation

Agenda

Learning Objective: This session will highlight how interagency collaboration and public-private partnerships can amplify the impact of energy savings performance contracts—advancing sustainability, resilience, and equity across state operations.

- Introductions
- Project Scope
- Stakeholder Engagement
- Challenges Faced and How they were overcome
- Q&A and Discussion
- DOE Resources and Upcoming Events

Introductions

Speakers



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The Energy Services Coalition (ESC) is a national nonprofit organization composed of a network of experts from a wide range of organizations working together at the state and local level to increase energy efficiency and building upgrades through **E**nergy **S**avings **P**erformance **C**ontracting.

Local chapters; public and private sector individuals coming together to provide outreach and education.

Project Scope, History, Process



More Guaranteed
Savings than Any State
Corrections Project in
US History



The Largest Energy
Efficiency Project in NC
Government History



The Most Solar in a
Guaranteed Energy
Savings Project in NC
History













The 1st Public, Utility-
Owned Solar Power
Purchase Agreement in NC
History

Project Drivers

- ~\$47M utility spend
- Water/sewer 49% of spend
- EO 80 (2018) required a 40% reduction in energy/water efficiency
- ~\$200K available for Energy Efficiency in 2017
- Water management systems ~\$1M+ each
- Opted-Out of State energy efficiency and demand side management tariffs, able to apply ~\$750K/year savings towards energy efficiency programs.
- Eventually R&R funds for EO 80 goals, but insufficient
- Deferred maintenance approaching ~\$1.7B
 - Thousand Cells ~Facilities All 20 Years Old
- Adding over \$100M in air conditioning. Funding did not support BAS systems
- Many BAS systems obsolete
- Staffing shortages
- Insufficient training- Varying Degrees of Site Maintenance Expertise
- Historically, NCDAC has had a very successful Energy Management Program
- Former Secretary was a large proponent of solar
- Negative experiences with performance contracting in the past

Scope

		ALEXANDER CI	ANSON CI	BERTIE CI	MAURY CI	SCOTLAND CI	TABOR CI
	Lighting Upgrades	●	●	●	●	●	
	Water Upgrades	●		●	●	●	●
	BAS Upgrades			●	●	●	
	BAS Optimization	●	●				●
	EV Charging Stations	●	●		●	●	
	Maxeff Motor Upgrades	●	●	●	●	●	●
	NG Fuel Switch				●		
	Envelope Upgrades	●	●	●	●	●	●
	Utility Solar PPA						●
	Building Advisor	●	●	●	●	●	●

Project Timeline



Financial Impact

The Funding Journey

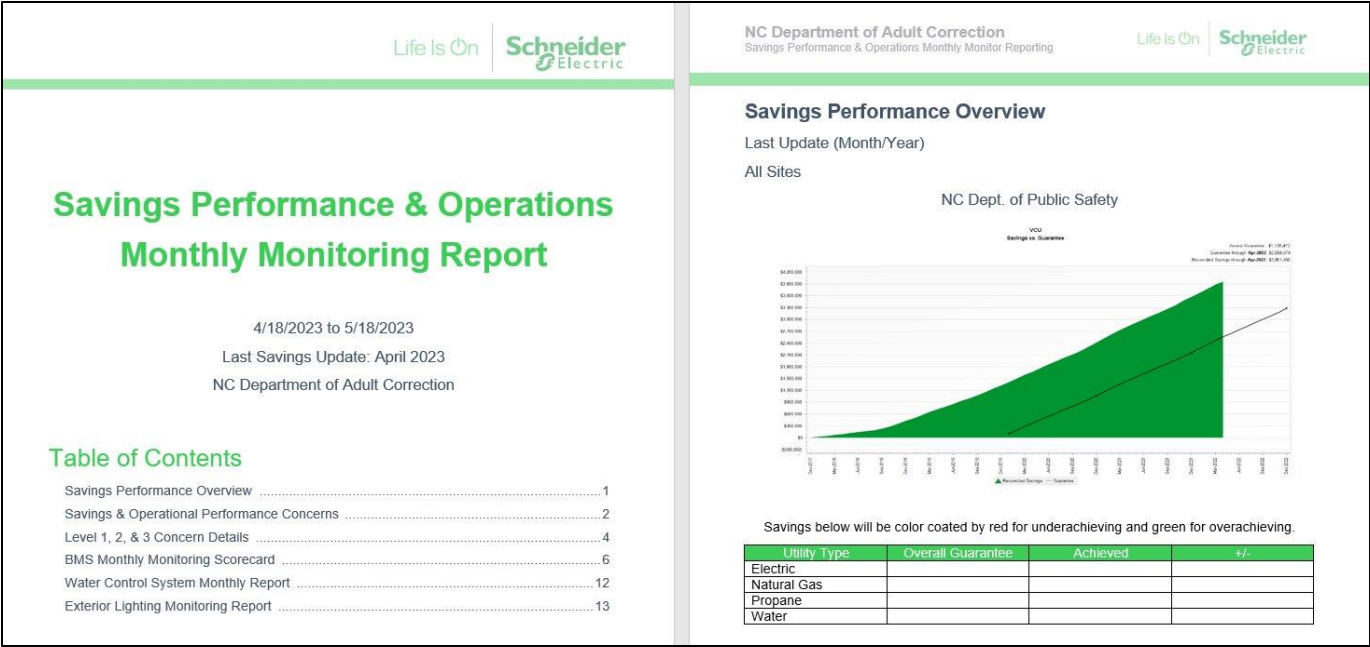
- Over \$200M of Scope Designed – Only \$36M Could Be Funded
- Needed to Get Creative to Help Fund Remaining Priority Scope
 - Escrow Earnings, Construction Pd. Savings, OSBM EE Funding, & Lapsed Salary
- \$30M+ in Customer Added Scope During Construction
- Total Project Now: \$66.8M+
 - Installment Purchase Contract
 - 179D Tax Deduction Credit – Over \$250,000
 - Rebates – Over \$380,000

	Project Statistics
Total Utility Baseline for 6 Sites	\$11.15M
Average Annual Guaranteed Savings & Average Annual Financing Payment	\$3M (26.9%)
Total Financed Project Cost	\$38.7M
Total Guaranteed Savings Over 20 Years	\$60M

Measurement & Verification

Guaranteed Savings is made possible through M&V

- 96.8% of Savings – Measured via Option C (At-The-Meter)
- Monthly Customized Reports:
 - BAS Monitoring
 - Water Controls Monitoring
 - Exterior Lighting Monitoring
- On-Site Visits
- 2 Annual Reconciliation Meetings
 - Central Engineering
 - Correctional Institutions
- Resource Advisor



Lessons Learned

- Open communication and collaboration between parties
- Know the laws/rules within your own State
 - Ownership of solar/PPA rule
 - ESPC laws
 - Research!
- Know what incentives, rebates, and tax credits are available
- Have internal champions
 - Experienced Team with Depth
 - Dedicated Energy Manager a plus
- Means to retain institutional memory
- Effective M&V Plan
- Third Party Consultant has your back

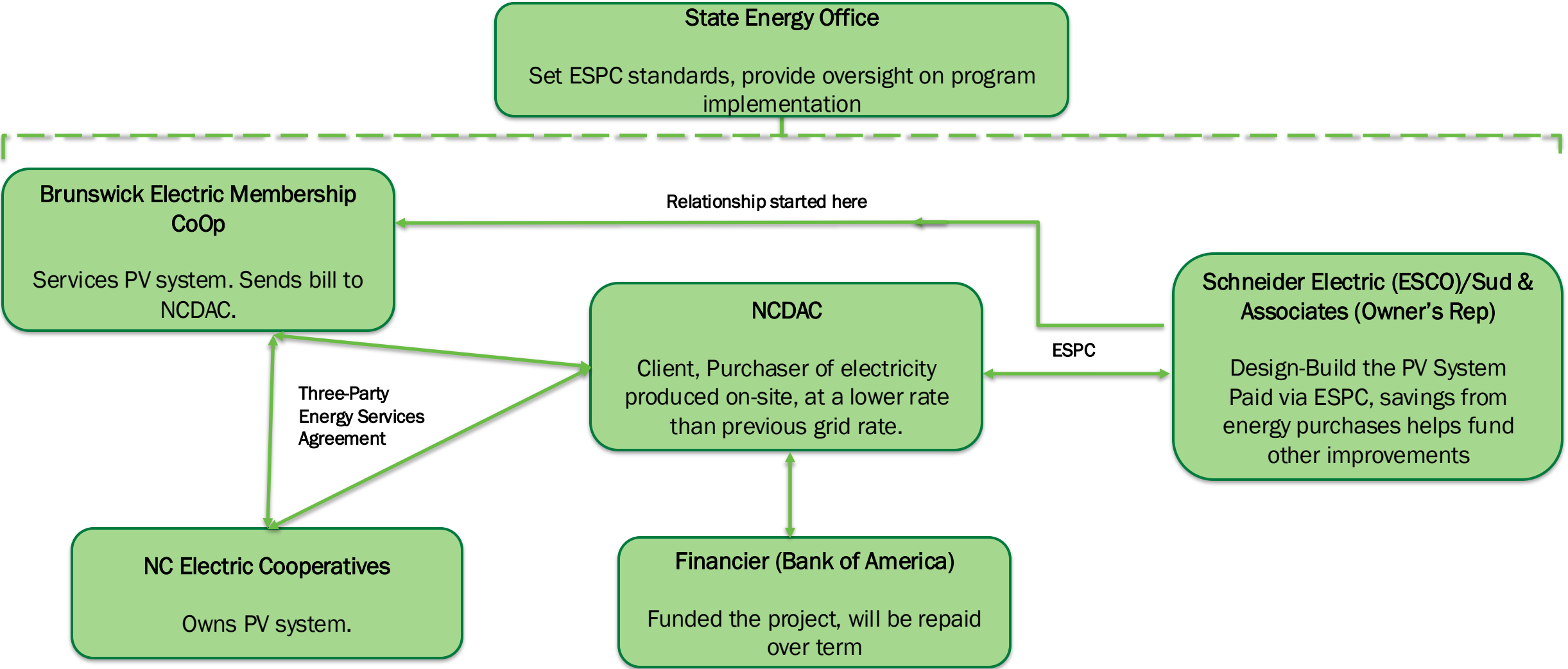


Project Highlight: Solar Goals

	NCDAC	Brunswick	State Energy Office	NC Electric CoOp
Cost effective	X	X		X
Sustainable	X	X	X	X
Efficiency	X	X	X	X
Resilience	X	X		X
Safety	X	X		X
Security	X	X	X	X
Human Comfort	X			
Maintainability	X	X		X
Reliability	X	X		X

Project structure

A 500 kW solar array at Tabor Correctional Institution, owned by NC Electric Cooperatives and serviced by Brunswick Electric Membership Cooperative, delivering reduced electricity rates over a 20-year term.



About the Project

The project included a 500 kW Solar Energy Solutions Agreement (ESA), EV charging infrastructure, and comprehensive efficiency upgrades—ranging from lighting and HVAC to water management systems that support contraband detection and flood prevention.

- Key benefits and outcomes include:
 - **A 500 kW solar array at Tabor Correctional Institution, owned by NC Electric Cooperatives and serviced by Brunswick Electric Membership Cooperative, delivering reduced electricity rates over a 20-year term.**
 - Conversion of 16 perimeter patrol vehicles to electric, with charging stations installed at four sites.
 - Upgrades to lighting, building automation systems (BAS), HVAC systems, and building envelopes.
 - Water management systems that enhance facility safety and security
 - Compliance with Executive Orders 246 and 80, supporting EV adoption and energy use reduction goals.
 - Workforce development through tailored training tracks for staff and offenders.
 - 17% participation by historically underutilized businesses.



Next Steps

- Phase 2 at Central Prison – Largest Facility
 - Assess Solar at All 50+ Sites, As Feasible
 - Pull Excess Solar Savings Into Central Prison Deferred Maintenance
- Involve more Co-Ops
- Evaluate Battery Energy Storage System



Q&A and Discussion

Discussion Questions

1. What were the biggest challenges in coordinating across multiple state agencies, both utilities, and how were they addressed to ensure the success of this ESPC project?
2. How did the project team evaluate and prioritize the various technologies and upgrades—like EV infrastructure, solar ESA, and water management systems—within a single ESPC contract?
3. In what ways did the ESPC align with broader state policies, such as Executive Orders 246 and 80, and how important is this policy alignment for project success and stakeholder buy-in?
4. What role did workforce development and training—especially for offenders and staff—play in the project's value proposition, and how can others incorporate similar elements into their ESPC efforts?
5. How was the M&V Option ultimately selected?
6. What lessons were learned in engaging historically underutilized businesses (HUBs) in the project, and what advice would you give to others aiming to improve supplier diversity in ESPC contracts?

DOE Resources and Upcoming Events

Resources

ePX Resources

- How to Get Started with ePX, user guide, training videos: [ePX Help/Documentation page](#)
- Review the Deep-Dive Training [recording](#) ([see slides here](#))

Showcase Achievements and share examples of successful ESPC implementation

- [Case study submission form](#)

Complete the [Expression of Interest](#) form to obtain a Partner Agreement to join the ESPC Campaign

U. S. DOE Better Buildings Program:

- [ESPC Toolkit](#)
 - [Evaluating ESPC Results](#)
 - [The Business Case for Conducting Measurement and Verification In State and Local Government Energy Savings Performance Contract Projects](#)

U.S DOE Federal Energy Management Program:

- [Performance Contracting National Resource Center](#) - Hub for ESPC resources: legislation by state, SEO contacts, trainings
- [M&V Guidelines: Measurement and Verification for Performance-Based Contracts Version 5.0](#)

Written Guides & Reports:

- [IPMVP Core Concepts](#)
- [M&V and Energy Performance Contracting for Facility Owners](#)

Upcoming

Upcoming Event

July 30, 2025 2pm ET/ 11am PST Workshop

In this workshop we will put pen to paper and **start thinking through your agency's ESPC program**, and we will provide tools to get you started with **ECM identification and stakeholder engagement**. Leave with a To-Do List to get you on your way!

Direct Technical Assistance

State and local ESPC Campaign partners are invited to set up a time to speak with a U.S. DOE Project Facilitator (Owner's Representative for Federal Projects) virtual office hours. Discussion topics can be anything regarding an ESPC project, including specific questions on your project. To request a meeting time, please complete this [Technical Assistance Sign-Up Form](#).



Thank you!

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