



WCPSS Energy Savings Performance Contract (ESPC) Board of Commissioners Presentation

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Energy Savings Performance Contract Project

Background
What is an ESPC?
What is an ESCO?

ESPC Milestones, Scope
and Metrics

Pending Decisions & Next Steps



Energy Savings Performance Contract Project Background

What is Performance Contracting?

- Method of obtaining energy improvements
- Uses energy savings dollars to pay for the project
- Turnkey design-build project delivery
- Self-funding
- Additional funding vehicle to address facility needs directly impacting operating costs
- Implements Energy Conservation Measures (ECM's) to achieve efficiencies

What is an Energy Service Company (ESCO)?

- Analyzes the buildings
- Designs the energy improvement measures
- Implements them
- Guarantees the energy savings

ESPC Project Milestones & Current Status

ISSUE RFP	Began process to select an ESCO
PRELIMINARY ASSESSMENT	12 schools identified based upon energy performance data
INVESTMENT GRADE AUDIT	Develop Energy Conservation Measures (ECM's) and identify cost savings
SECURE FINANCING	Issue Financial RFP to identify lender and interest rate
ENERGY SERVICE AGREEMENT (ESA)	Contract with ESCO
IMPLEMENTATION	ESCO performs facility improvements
MEASUREMENT & VERIFICATION	Third party firm verifies energy performance over term of contract



ESPC Technical Resources

NCDEQ Utility Savings Initiative (USI) program

- Assists governmental units in management of utility use.
- Serves state and local government agencies across NC.
- Promotes high performance public buildings
- Prequalifies ESCO firms.

Celtic Energy – 3rd Party Technical Reviewer

- Follows State of NC ESPC Guidelines & Best Practices
- Oversight of IGA development w/ WCPSS
- Independent savings analysis.
- Ensure final scope adheres to WCPSS requirements.
- Focus on M&V plan - sound technical approach.
- Review of overall project costs.
- Independently verify ESCO M&V performance reports.



ESPC Project Scope & Metrics

ECM SCOPE BENEFITS

- Upgraded & standardized LED lighting technology.
 - Superior light quality; longer lifetime; zero mercury lamps.
- HVAC equipment replacements.
 - New boiler at one site.
 - New cafeteria AHUs at one site.
- Multi-faceted BAS improvement:
 - Upgraded control components.
 - Expansion of BAS HVAC control.
 - Retro-Cx & optimize existing system.
- Optimize air-handling units & chilled-water system.
- Demand-controlled ventilation.

Wake County Schools, NC Energy Conservation Measures (ECMs)	Lighting System Upgrades - Interior	Lighting System Upgrades - Exterior	Domestic Water Conservation	Upgrade, Expand, Commission, and Retro-Commission BAS	SZ CV to SZ VAV AHU Conversion	Boiler Replacement	Variable CHW Pumping Upgrades	Cooling Tower VFDs	Demand Control Ventilation	AHU Replacement
	1	2	3	4	5	6	7	8	9	11
Athens Dr HS	X	X	X	X	X		X		X	
Barwell Rd ES	X	X	X	X					X	
Brier Creek ES	X	X	X	X						
Broughton HS	X	X	X	X					X	X
Cary HS	X	X	X	X			X			
Combs ES	X	X	X	X					X	
East Millbrook MS	X	X	X	X	X					
Herbert Akins ES	X	X	X	X						
Knightdale HS	X	X	X	X						
Lead Mines ES	X	X	X	X						
N Garner MS	X	X	X	X						
Rand Road ES	X	X	X	X		X		X	X	

ESPC Project Scope & Metrics



PROJECT ECONOMICS

• Total Financed Cost:	\$7,157,100
• Guaranteed Annual Savings:	\$691,100
• Comprehensive Project SPB:	10.4 Years
• Project Finance Term:	15 Years
• *Estimated Finance Rate:	3.85%

*Note: Actual finance rate determined by RFP responses



GUARANTEED SAVINGS

• Electricity (kWh):	7,209,480
• Natural Gas (Therms):	37,000
• Fuel Oil (Gallons):	9,400
• Water (kGals):	5,600
• Total Energy (MMBtu):	28,700

❖ ENERGY CONSUMPTION REDUCTION = 22%
FOR THE 12 SCHOOLS INCLUDED IN THE ESA

ESPC Project Scope & Metrics

PROJECT PRO FORMA

LINE #	LINE ITEM	INITIAL VALUES	Year 1	15-YEAR TOTAL
1	Annual Energy Costs w/o Improvements	\$ 3,030,396	\$ 3,030,396	\$ 45,455,936
2	Annual Energy Costs with Improvements	\$ 2,377,358	\$ 2,377,358	\$ 35,660,363
3	Annual energy Cost Savings (1 minus 2)	\$ 653,038	\$ 653,038	\$ 9,795,573
4	O&M Savings	\$ 38,056	\$ 38,056	\$ 296,638
5	Total Project Cost Savings (3 plus 4)	\$ 691,094	\$ 691,094	\$ 10,092,212
6	Payments for Financing		\$ (658,284)	\$ (9,509,607)
7	Payments for On-going Services	\$ (32,133)	\$ (32,806)	\$ (582,544)
8	Net Annual Benefits		\$ 4	\$ 61
9	Cumulative Cash Flow	\$ 61	\$ 4	\$ 61

NOTE: ESCO responsible to absorb any energy cost increases.

ESPC Project Scope & Metrics - Financing

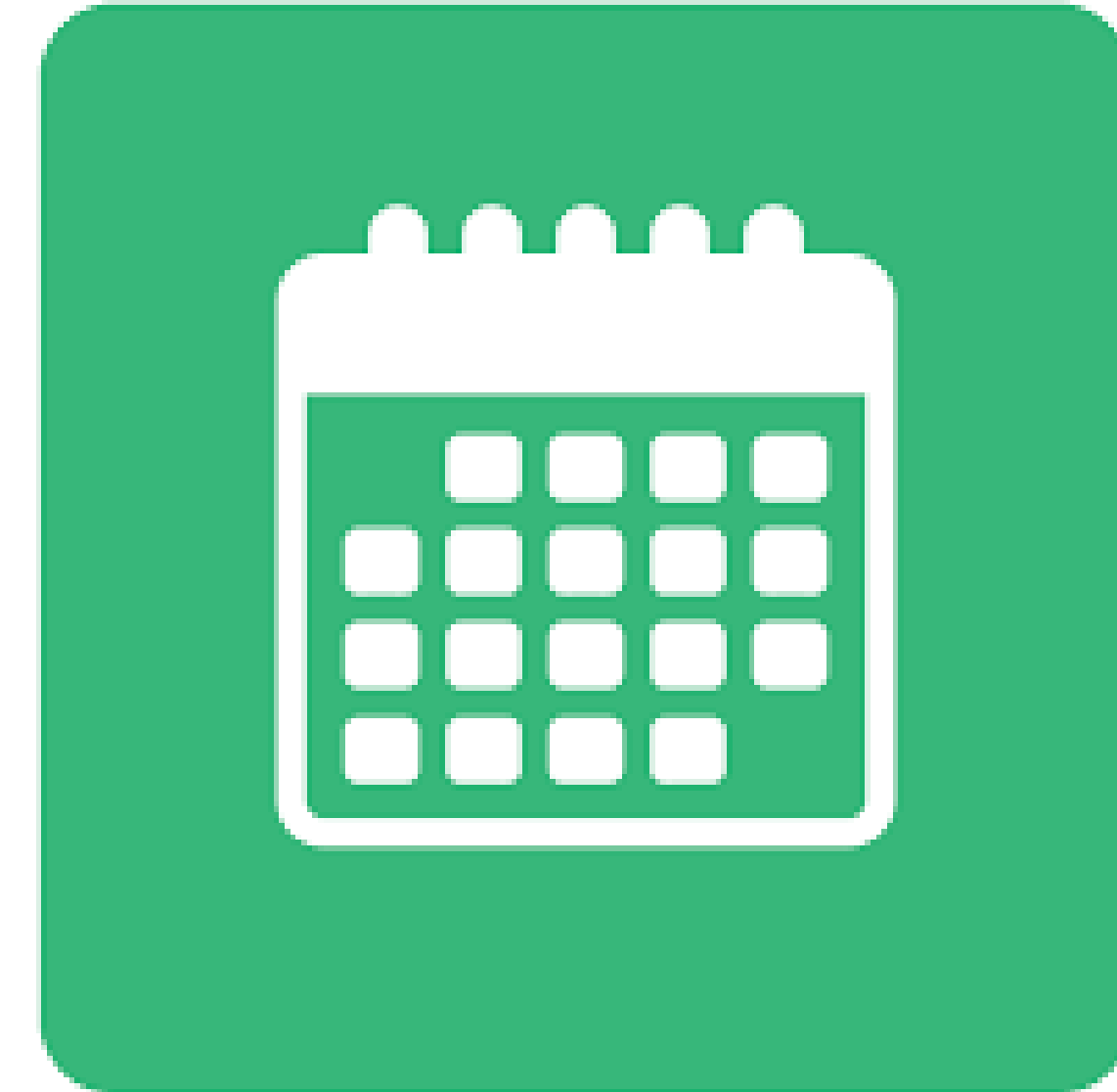
- Once the project is solidified, owner releases “Financial RFP” to solicit responses from financial institutions (interest rates).
- **Requires resolution from County Commissioners to not reduce utility budget over term of contract.**
 - Portion of utility budget moves to Debt Retirement Account.
 - WCPSS responsible for loan payments.
- Review and approval by LGC
- Construction costs paid to ESCO from escrow account.
- Annual reports provided by ESCO to verify savings (M&V).
 - Reviewed by WCPSS & 3rd Party.
- **If a shortfall occurs, the ESCO writes WCPSS a check.**



SCHEDULE

Milestones

- Release Financial RFP (6/15/18)
- BOC Resolution Approval (6/18/18)
- Submit LGC Application (7/13/18)
- LGC Approval (8/7/18)
- BOE Signs ESA (8/17/18)
- Begin Construction Phase (September 2018)



Next Steps

- Financial RFP Approval.
- Request BOC Resolution Approval.
- Approval to Execute Energy Services Agreement (ESA).



Questions?





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