

EDENTON-CHOWAN SCHOOLS



MECHANICAL

ELECTRICAL

PLUMBING/FIRE PROTECTION

COMMISSIONING

ENERGY

HEERY

Overview of Performance Contracting

- Construction method that allows an Owner to complete energy-saving capital improvements within an existing budget by financing them with money saved through reduced utility expenditures.
- Owners make no up-front investments and instead finance projects through guaranteed annual energy savings.

Basis for Performance Contracting Approach

- NC Statutes G.S. 143-64.17
 - ESCO Guarantees Savings
 - Savings Must Equal or Exceed Contract Costs
 - Maximum 20 Year Term of Contract
 - Energy Upgrades for Existing Building
 - Local Government Commission (LGC) Approval
 - State Energy Office Review

Steps for Edenton-Chowan 's Performance Contract

- Step 1 - ESCO Selection
- Step 2 - Investment Grade Audit (IGA)
- Step 3 - Construction Administration
- Step 4 - Measurement & Verification

Where You Are In The Process

- Step 1 - ESCO Selection
 - Needs Assessment
 - Preliminary Energy Analysis
 - Request For Proposal
 - Proposal Evaluation
 - Select Energy Service Company (ESCO)

Preliminary Energy Analysis

Existing Facilities

- Chowan MS Older Systems / \$1.53 SF-YR
 - Holmes HS Old and New Systems / \$1.04+ SF-YR
 - White Oak ES Newer Systems / \$1.17 SF-YR
 - Walker ES Newer Systems / \$1.46 SF-YR
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- New Energy Efficient School \$0.80 to \$0.90 SF-YR

Preliminary Energy Analysis

Summary of Potential Energy Conservation Measures (ECMs)

	CMS	JHHS	WOES	WES
SYSTEM WIDE EMS	X	X	X	X
RENOVATE OR NEW ENERGY EFFICIENT HVAC SYSTEM	X			
SELECTED HVAC EQUIPMENT REPLACEMENTS		X		
RETRO-COMMISSIONING (OR Cx of REPLACEMENT HVAC)	X	X	X	X
SCHOOL WIDE OCCUPANCY SENSORS	X	X	X	X
NEW ENERGY EFFICIENT HIGH BAY GYM LIGHTING SYSTEM	X	X	X	X
REDUCED WATTAGE LAMPS AND BALLASTS	80% Existing	30% Existing	X	X
SELECTED NEW ENERGY EFFICIENT LIGHT FIXTURES	X	X	X	X
REPLACE SELECTED SINGLE PANE WINDOWS WITH DP	X	X		
SELECTED EXTERIOR LIGHTING REPLACEMENTS	X	X	X	X
SELECTED LOW FLOW PLUMBING FIXTURES	X	X	X	X

Preliminary Energy Analysis

Summary of Potential ECM Savings

	CMS	JHHS	WOES	WES	
SYSTEM WIDE EMS	\$4,212	\$5,169	\$2,478	\$2,662	\$14,521
RENOVATE OR NEW ENERGY EFFICIENT HVAC SYSTEM	\$28,937	\$0	\$0	\$0	\$28,937
SELECTED HVAC EQUIPMENT REPLACEMENTS	\$0	\$7,662	\$0	\$0	\$7,662
RETRO-COMMISSIONING (OR Cx of REPLACEMENT HVAC)	\$2,082	\$11,493	\$1,837	\$1,977	\$17,389
SCHOOL WIDE OCCUPANCY SENSORS	\$4,212	\$7,753	\$3,718	\$3,993	\$19,676
NEW ENERGY EFFICIENT HIGH BAY GYM LIGHTING SYSTEM	\$2,808	\$5,169	\$2,478	\$2,662	\$13,117
REDUCED WATTAGE LAMPS AND BALLASTS	\$562	\$5,169	\$2,478	\$1,863	\$10,072
SELECTED NEW ENERGY EFFICIENT LIGHT FIXTURES	TBD	TBD	TBD	TBD	\$0
REPLACE SELECTED SINGLE PANE WINDOWS WITH DP	\$3,070	\$0	\$0	\$0	\$3,070
SELECTED EXTERIOR LIGHTING REPLACEMENTS	\$678	\$1,256	\$598	\$649	\$3,181
SELECTED LOW FLOW PLUMBING FIXTURES	TBD	TBD	TBD	TBD	\$0
	\$46,561	\$43,671	\$13,587	\$13,806	\$117,625
	38.4%	23.1%	13.4%	13.1%	

Preliminary Energy Analysis

Estimated Costs & Savings

- Costs: \$2.5 to \$4.5 per sq ft
- Median building energy savings: 22%
- Median building annual savings: \$32,000/YR
- Median payback time: 10 years

***Energy Conservation Measures:***

Building Automation System upgrades
HVAC System Replacements
Operations Optimization
Occupancy Sensors for Lighting
Energy Efficient Interior Lighting
Selected Envelope Upgrades (Windows)
Energy Efficient Exterior Lighting
Water-Efficient Technologies

PROJECT AT A GLANCE***Project Size:***

4 K-12 schools / 378,122 square feet

Projected Project Cost:

\$1.0 to \$1.7 million

Projected Annual Cost Savings:

\$120,000 - \$150,000

Projected Total Project Savings:

\$1.8 to 2.25 million

Greenhouse Gas Emission Reduction:

22%

Projected Simple Payback:

10 years (financed over 15 years)

What Is The Next Step In The Process

- Complete Step 1 - ESCO Selection
 - Issue Request For Proposal
 - Proposal Evaluation
 - Select Energy Service Company (ESCO)
- Begin Step 2 - Investment Grade Audit (IGA)

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