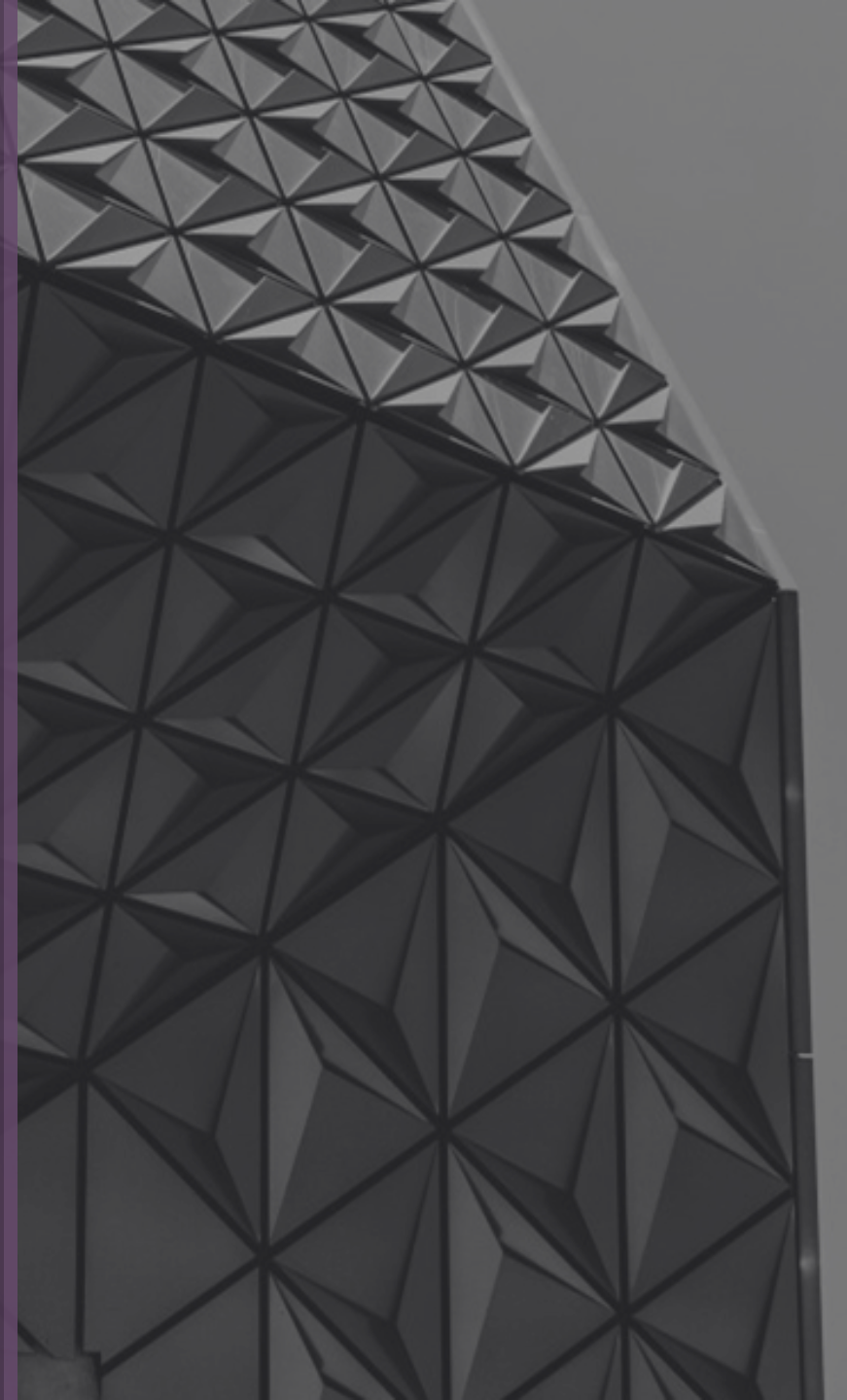


Energy Efficient Infrastructure

JULY 2023

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Background and Context



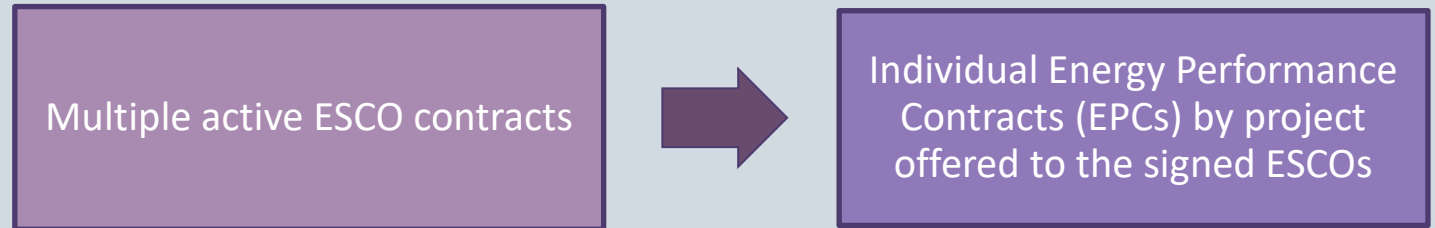
Governor Wes Moore's executive order to double the state's energy spending and align new buildings and major renovations with the goal of net zero greenhouse gas emissions by 2045.

Bill 16-21, with unanimous county council support, established Building Energy Performance Standards (BEPS) to realize the county's Climate Action Plan goals of eliminating greenhouse gas emissions by 2035.

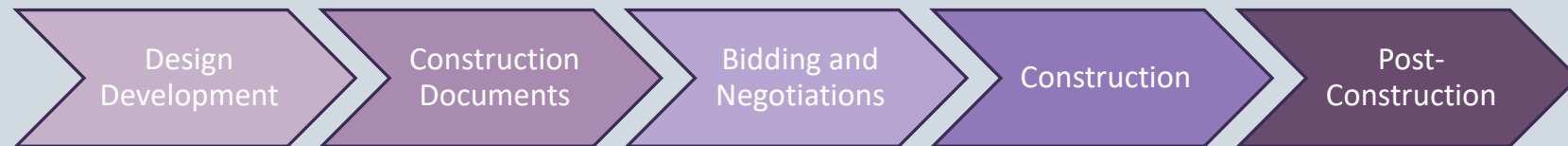


Energy Savings Companies (ESCO)

The ESCO structure:



The ESCO timeline:



Montgomery County's ESCO timeline

In 2014, the County contracted 3 Energy Savings Companies: Ameresco, Energy Savings Group, and Noresco, with the goal of improving energy performance standards across county infrastructure.

2014

The payback comes in the form of avoided utility bills, which can be reinvested to other energy savings efforts. This model can be applied to numerous county buildings, with some amendments.

2023

2017

Using the above structure, 6 separate bundles of projects were initiated and completed by 2017. The programs were funded by long-term financing through the CIP.

Challenge #1: ESCO M&V Inefficiency



In the Post-Construction phase, ESCOs provide Measurement & Verification (M&V) of their estimated savings, built into the upfront costs of the contract.

→
ESCOs provide usage guidelines, such as building occupancy and temperature monitoring, to achieve their guaranteed savings.
If their guidelines are adhered and the estimates are inaccurate, the companies are responsible for reimbursing the county for the difference.

→
However, the county's building usage needs do not allow it to function within the usage guidelines. Therefore, the ESCOs are not responsible to provide reimbursement.

Challenge #2: Project Redundancy

There are currently 4 projects in the CIP that have two main goals:



1. Reduction of greenhouse gas emissions

Energy
Conservation: MCG

Energy Systems
Modernization

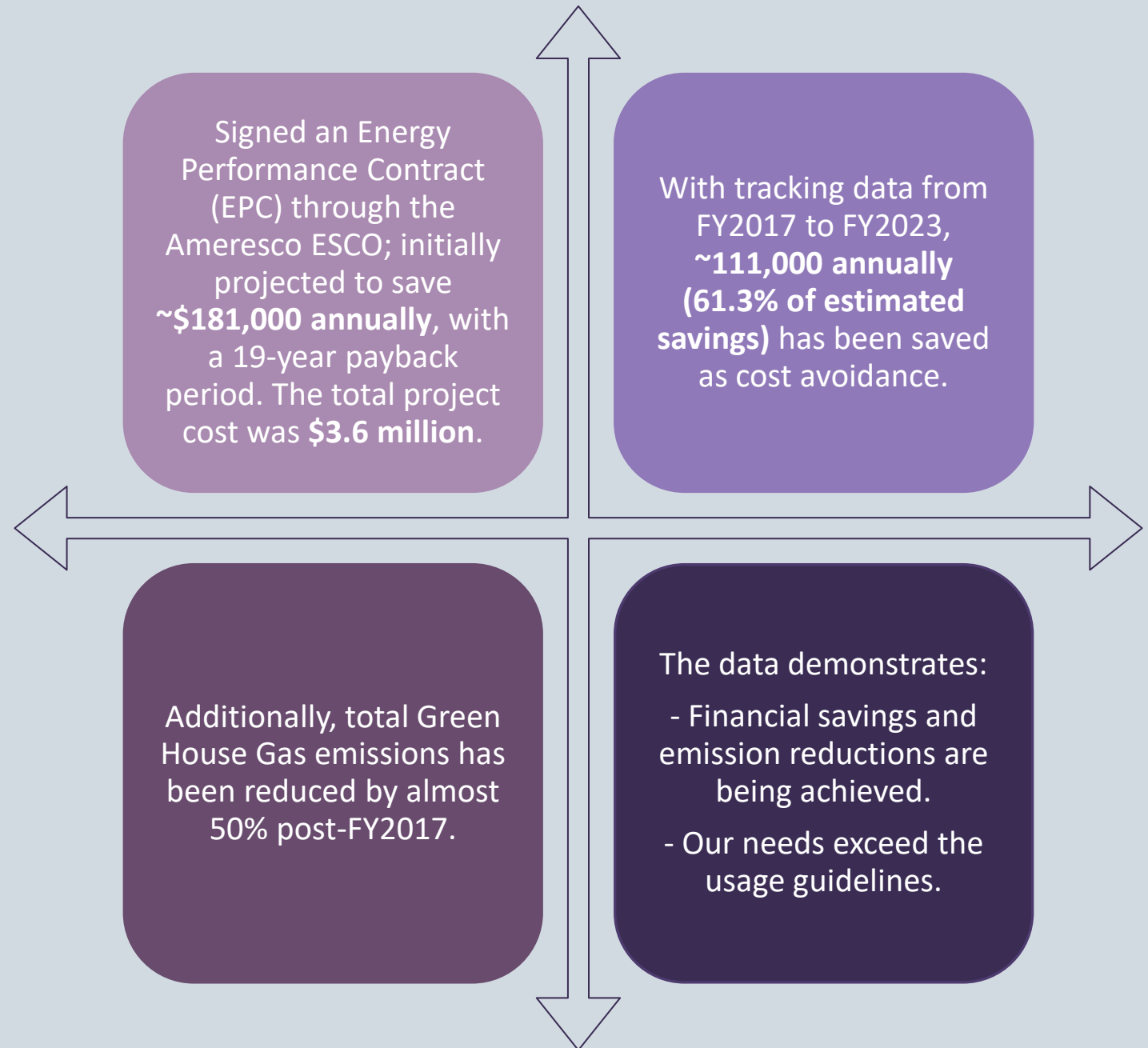


2. Reduction of utility bills from energy efficiency measures

Exelon-Pepco
Merger Fund

AltaGas-WGL
Merger Fund

Case Study- Piccard Office Building



Recommendation #1: Move to an EPC structure

“EPC As-Needed”

- The county can sign EPCs for design and construction as needed.
- In that case, the county should take initiative to ensure that the savings estimates offered by energy companies are feasible.

DGS has capacity to monitor measurement

- The case study displays the county’s ability to track progress data without third-party assistance.
- It should build on this capacity by training new and existing employees, avoiding the 2-10% ESCO M&V costs.

EPCs allow more flexibility

- Separating each EPC will allow more flexibility to tailor the contract to the needs of that project.

Recommendation #2: Increase Project Alignment

Energy
Conservation: MCG

Energy Systems
Modernization

Exelon-Pepco
Merger Fund

AltaGas-WGL
Merger Fund

Merger Funds Projects' Approach

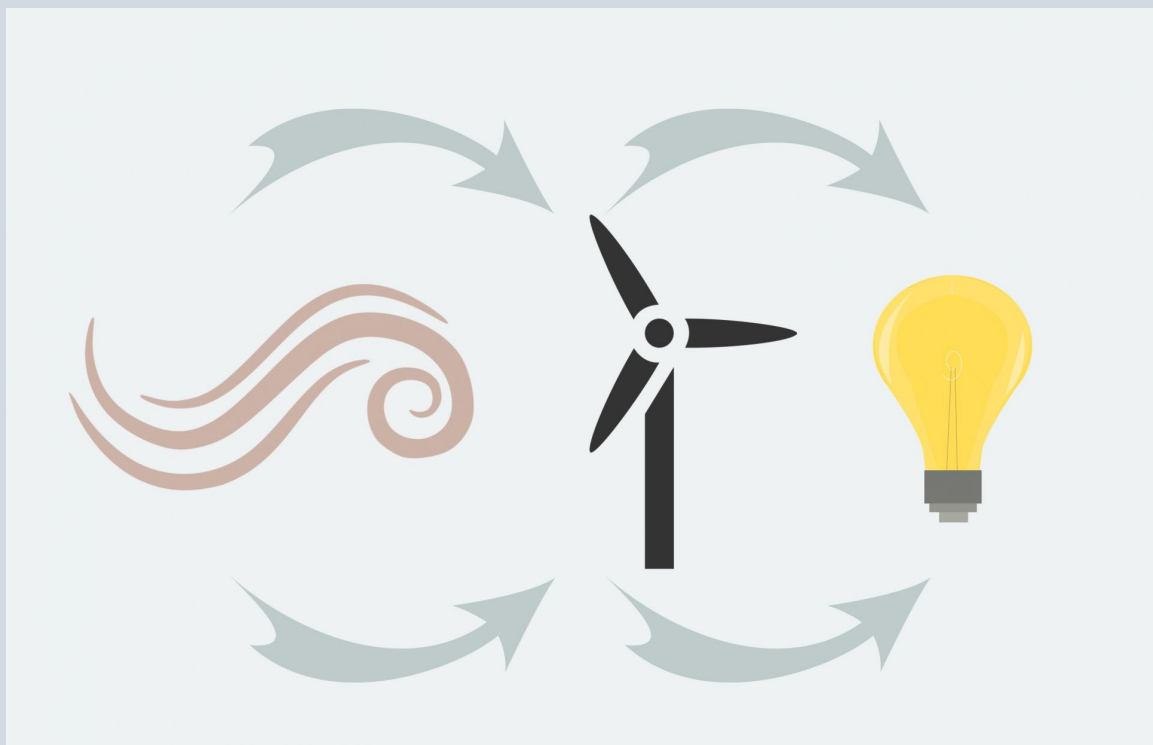
- Of these projects, the newer merger funds are utilizing an EPC structure on an as-needed basis.
- However, they are limited in their scope.

Demand for more Projects

- With the county's aging infrastructure, there are much larger projects in the pipeline that could benefit from emulating the merger fund projects' approach.

EPCs allow more flexibility

- After consolidating projects as appropriate, new protocols for EPCs should be developed and applied across the board to all energy infrastructure projects.
- This will help streamline internal communication and accountability.



Thank you.