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Deploying Utility and State Incentives for Comprehensive Efficiency Projects



Montgomery County Energy Summit





April 16, 2024

Unlocking Funds for Comprehensive Projects

An exploration of Pepeco and Maryland Energy Administration
incentive and grant programs

Agenda

1. Comprehensive Project Profiles
2. The Cost of BEPS Compliance
3. Pepco's Custom Program
4. MEA's Grant Programs
5. A Case Study
6. Questions

Meet the Presenters



Stanley Katongole

Senior Program Manager

PHI



Christopher Russell

Program Manager

Maryland Energy Administration

Presentation Objectives

1

Comprehensive Projects

What are comprehensive and deep retrofit projects, and why should I consider them?

2

Cost and Benefits

What are the scale of costs and benefits to implement comprehensive facility upgrades?

3

Pepco Utility Incentives

What incentives are available through Pepco, and how can I tap them for my project?

4

MEA Grant and Loan Programs

What grant and loan programs are available through MEA, and how can I utilize them?

1

Comprehensive Project Profiles

Common Project Paths

Retro-commissioning and building tune-up



Quick payback and high impact



Comprehensive and deep retrofit



Comprehensive Projects



2

The Cost of BEPS Compliance

Estimated BEPS Costs¹

Building Type	Cost per sq. ft. (\$)	Annual benefit per sq. ft. (\$)	Average size (sq. ft.)	Total average cost (\$)	Total average benefit (\$/year)
Office	\$16-\$28	\$0.60-\$1.50	65,000	\$1.04 million to \$1.82 million	\$39,000 to \$97,500
Multifamily	\$7-\$28	\$0.30-\$1.10	112,500	\$787,500 to \$3.15 million	\$33,750 to \$123,750
Lodging	\$31-\$36	\$0.70-\$1.10	48,000	\$1.49 million to \$1.73 million	\$33,600 to \$52,800
Religious	\$33-\$36	\$0.90-\$1.10	19,000	\$627,000 to \$684,000	\$17,100 to \$20,900

YMMV - “Your Mileage May Vary”

¹ *Building Energy Performance Standards Development – Technical Analysis*. Steven Winter Associates. Feb. 2022.

Understand Sources of Funding and Financing

- Federal
 - Inflation Reduction Act offerings
 - 179d Tax Deduction (now transferrable!)
- State
 - **Maryland Energy Administration (MEA) grants**
 - **MEA loan programs**
- Local
 - Green Building Tax Credit
 - C-PACE financing
 - Green Bank
- Utility
 - EmPOWER Maryland
 - **Pepco Energy Savings for Business Program**
 - **Custom program**



3

Pepco's Custom Program

Custom Program

Custom Measures

“Catch all” program for unique projects and needs

- Building Envelope
- Non-prescriptive Variable Frequency Drives (VFDs), Lighting, Chillers
- Comprehensive and interactive projects
- Data Center Equipment
- Building and Networked Control Systems
- Compressed Air Optimization
- Specialized Technologies

Project Criteria

- Cost effectiveness test (societal cost test)
- Exceed minimum code requirements
- No demand reduction only*

Custom Incentives

Retrofit/add-on: Existing Baseline	End-of-life Equipment/New Capacity: Code Baseline
Up to 50% of full costs \$0.25 per kWh (full electric savings)	Up to 75% of incremental costs \$0.25 per kWh (incremental electric savings)
\$0.03/kWh bonus incentive for projects that remain within 15% variance of the original pre-approved energy savings (kWh) total. Projects submitted under the Custom Program since Jan. 1, 2021, are eligible for the Custom Accuracy Bonus .	

Savings at a Glance

\$40,887

average rebate amount

197 MWh

average annual energy savings

\$21,737

average annual utility bill savings

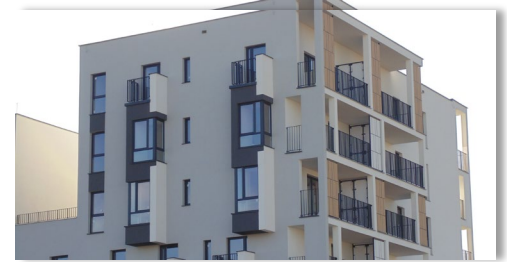
Customer Eligibility: Maryland Commercial Accounts



Offices



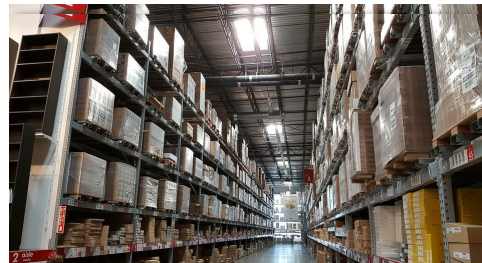
Labs



Multifamily



Hospitals and Healthcare
Facilities



Warehouses



Retail Facilities



Educational Facilities



Hotels and Lodging Facilities



Industrial Facilities

3 Pathways for Custom projects

Existing Buildings: Retrofit / comprehensive projects	Existing Buildings: Equipment replacement or addition	Comprehensive New Construction / Major Renovation
Project Criteria:		
<ul style="list-style-type: none"> Equipment is in an existing building & is being retrofitted / modified to operate more efficiently Examples: adding VFDs to a cooling tower, or installing a BAS or other controls 	<ul style="list-style-type: none"> Equipment is in an existing building and is being replaced, or Additional equipment is being added to existing equipment 	<ul style="list-style-type: none"> Entirely New Structures Extensions (Existing Buildings & Major Renovation) Space type conversion (i.e. warehouse to office) Must be a Pepco or Delmarva Power electric account customer, or in the process of becoming one
Incentives*		
<ul style="list-style-type: none"> Lesser of \$0.25 / kWh saved or 50% project cost 	<ul style="list-style-type: none"> Lesser of \$0.25 / kWh saved or 75% incremental cost 	<ul style="list-style-type: none"> \$0.25 / kWh saved
Data Collection		
<ul style="list-style-type: none"> Pre-trend data may be required to validate baseline operation of existing system Post-trend data required to verify performance 	<ul style="list-style-type: none"> Pre-trend data may be required to determine baseload for design purposes Post trend data required to verify performance 	<ul style="list-style-type: none"> Post trend data required to verify performance
Estimating kWh savings		
<ul style="list-style-type: none"> Energy model may be used, but usually not required. Excel-based calculations usually sufficient 	<ul style="list-style-type: none"> Energy model may be used, but usually not required. Excel-based calculations usually sufficient 	Energy model required for whole building performance. Baseline is code minimum: ASHRAE 90.1.2016, Appendix G (ASHRAE 90.1.2019 as of May 29.)

*Rate may increase to \$0.28 if Custom Accuracy Bonus achieved

Custom Application Checklist

- Establish which entity will submit the application
- Ensure a proper point person is identified
- Verify access to all necessary data

REMEMBER:

- **Pre-Approval is often an Estimate**
- **Final Incentive may be based on Performance**

- Signed Terms & Conditions from the customer
- Customer Account number (use “TBD” or “000” for new construction apps)
- Written scope narrative (or Technical Analysis Study Report)
 - Describe the existing conditions
 - Describe the baseline from which savings will be claimed
 - Describe the proposed solution and how it will save energy
- Equipment cut sheets or spec sheets for proposed high efficiency equipment
- Savings calculations in Excel or Energy model
- Cost estimates for baseline equipment and cost estimates for proposed high efficiency equipment
- (If applicable) Sequence of Operations, Mechanical Schedule and Drawings

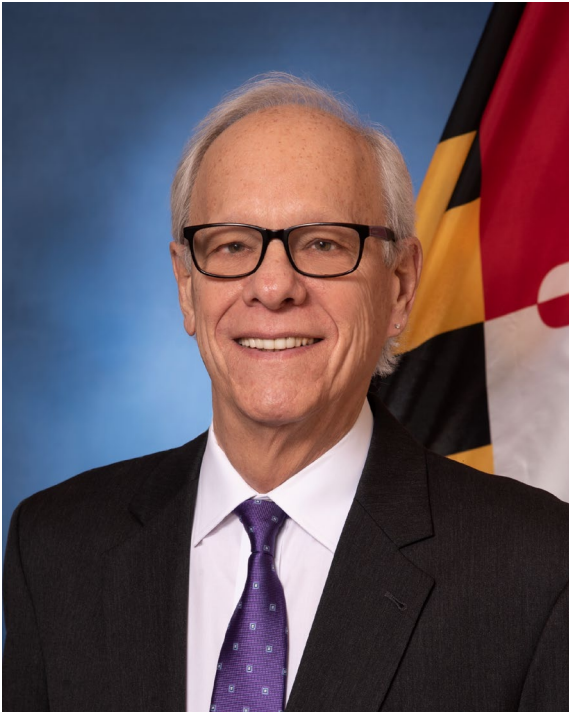
4

MEA's Grant and Loan Programs



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FOUNDED 1991



*Director
Paul G. Pinsky*

MEA's MISSION:



**CLEAN, AFFORDABLE, and
RELIABLE energy**



GREENHOUSE GAS EMISSIONS

...in a just and equitable manner.



MEA STAFF

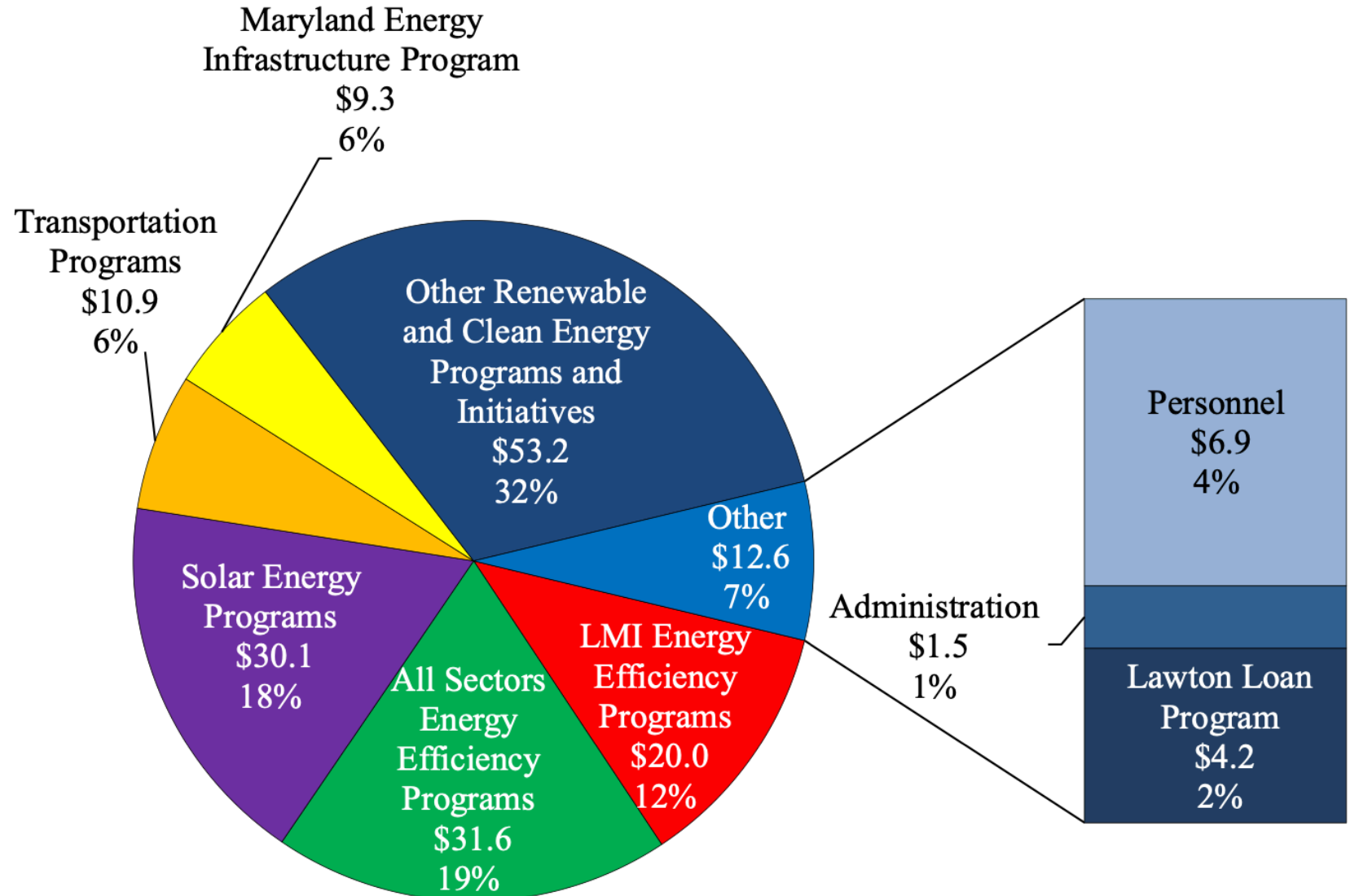
- 16 Finance
- 31 Programs
- 9 Policy & Communications
- 3 Executive + Admin

**MENU OF ALL MEA
GRANTS, LOANS &
REBATES**





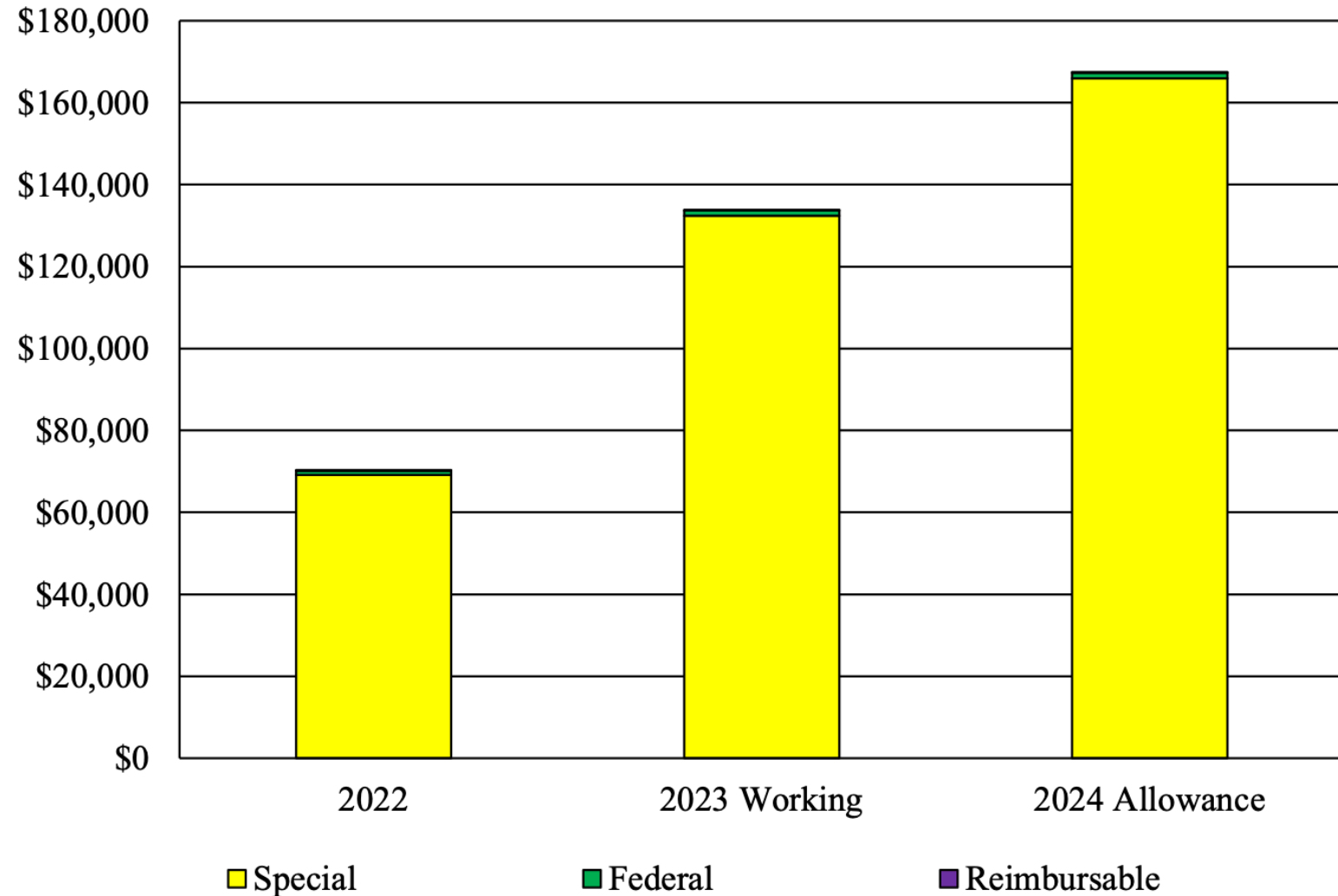
FY24 Fiscal Allowance \$167.5MM





Operating Budget Summary

**Fiscal 2024 Budget Increases \$33.6 Million, or 25.1%, to \$167.5 Million
(\$ in Thousands)**





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GRANTS

LOANS

REBATES

OUTSIDE THE METER

< HYBRID >

INSIDE THE
METER

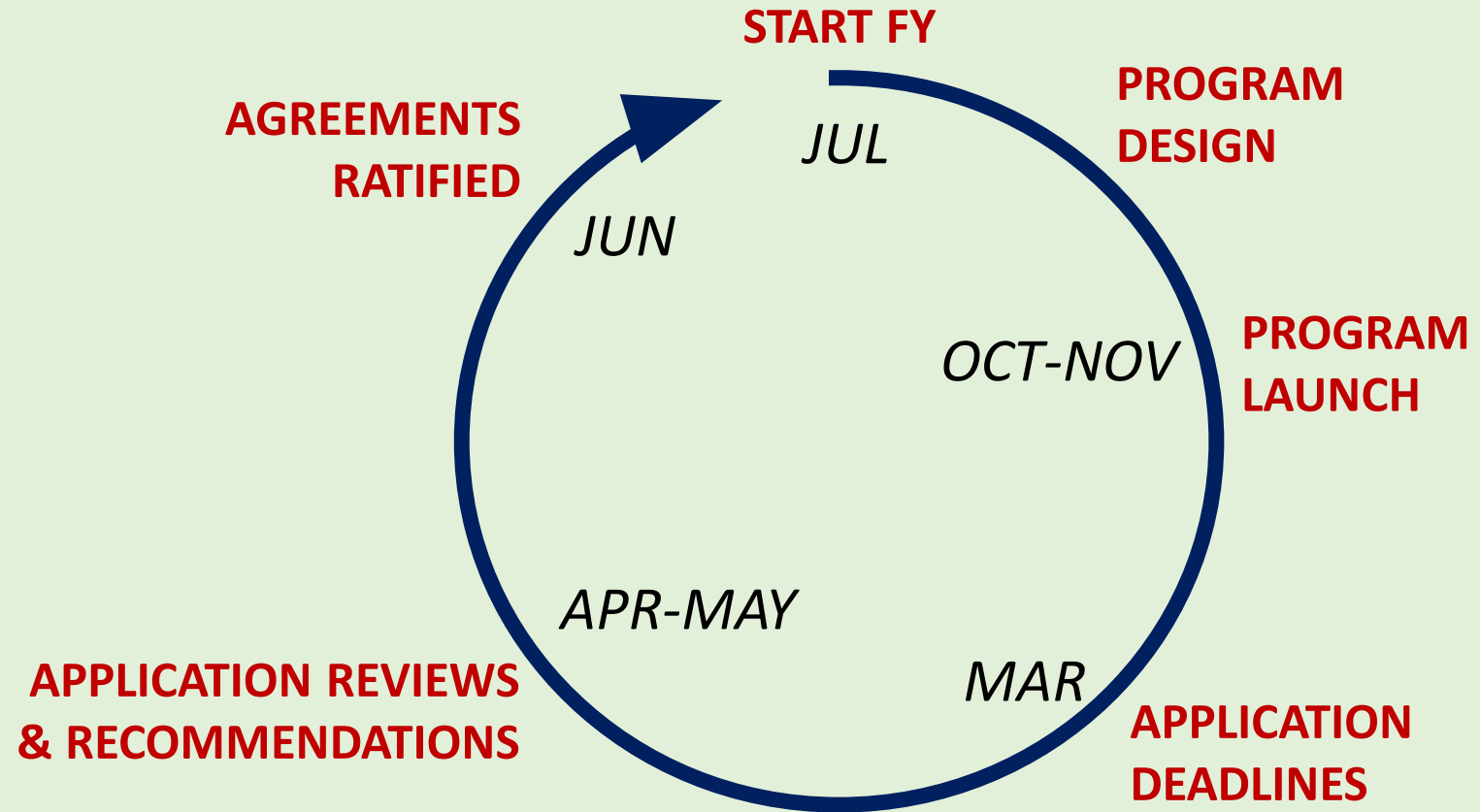
TRANSP.

- Commercial Clean Energy Rebates
- Residential Clean Energy Rebates
- Solar Energy Equity Grants
- Solar Canopy and Dual Use Technology Grants
- Community Solar LMI-PPA Grants
- Clean Energy & Community Development Program
- Public Facilities Solar Grants
- Resilient Maryland Program
- Decarbonizing Public Schools Grants
- Maryland Smart Energy Communities Grants
- OPEN Energy Grants
- Energy Efficiency Equity Grants
- Mechanical Insulation Grants
- Commercial, Industrial & Agricultural Grants
- Streetlight & Outdoor Lighting Efficiency Grants
- Jane E. Lawton Conservation Loans
- Electric Vehicle Supply Equipment Program
- Medium- and Heavy-Duty Zero Emission Vehicle Grants



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MEA's Program LIFE CYCLE



COMMERCIAL, INDUSTRIAL & AGRIC. GRANT PROGRAM

- Energy efficiency incentive
- \$4.4 million in FY24
- First-come, first-served
- Existing and new construction
- Award values:
 - Percent of total project cost, net of rebates
 - Values increase “proportionately” with (%) energy saved
- Closed for FY24, look for FY25 later this year

JANE E. LAWTON CONSERVATION LOAN PROGRAM

- Energy efficiency loan
- \$4.2 million in FY24
- 2% APR (3% for loans < \$50K)
- First come, first-served
- Existing & new construction
- FY24 Deadline for applications: May 15, 2024



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Commercial, Industrial & Agricultural Program Focus





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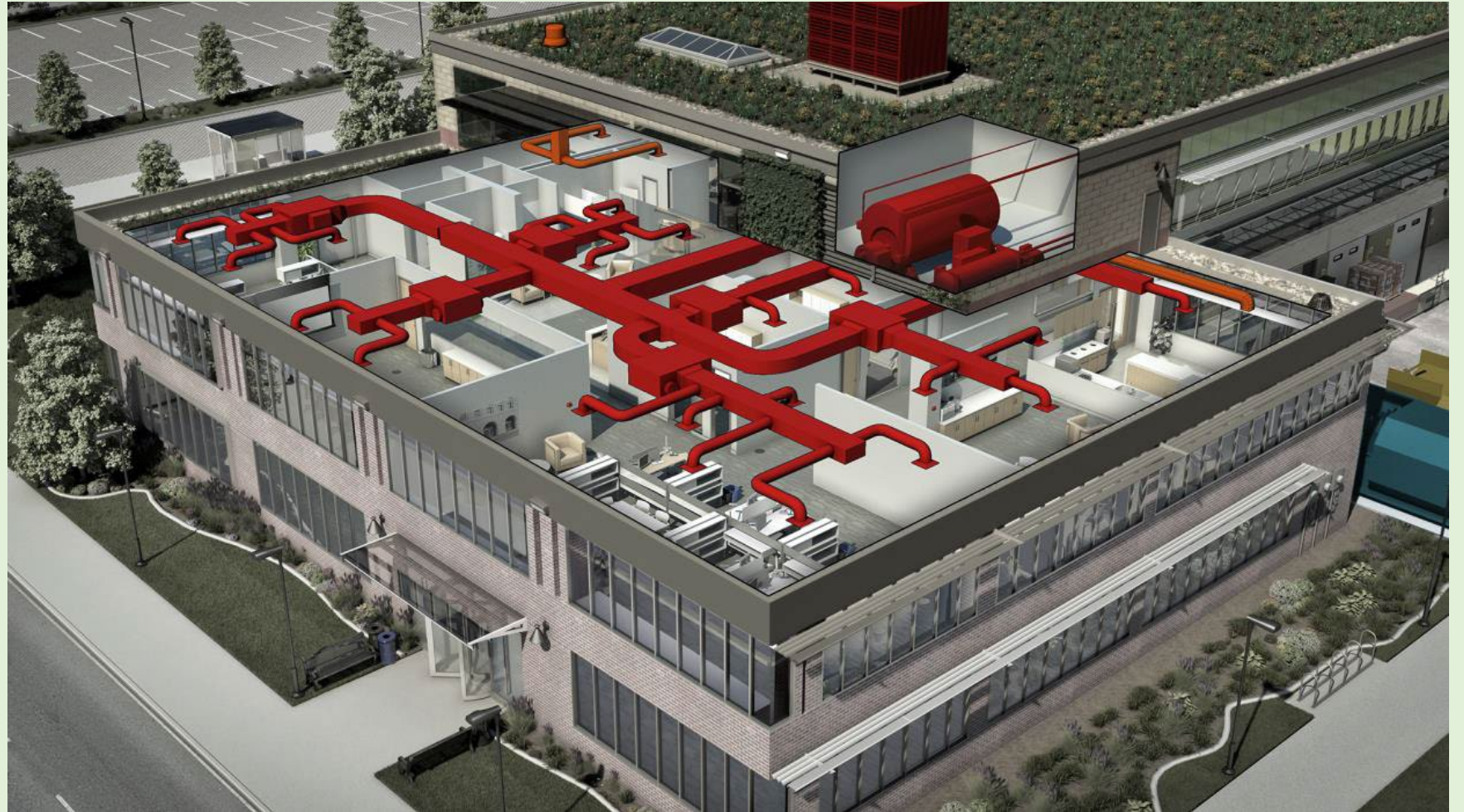
Commercial, Industrial & Agricultural Program Focus: Artificial Lighting Efficiency & Daylight Harvesting





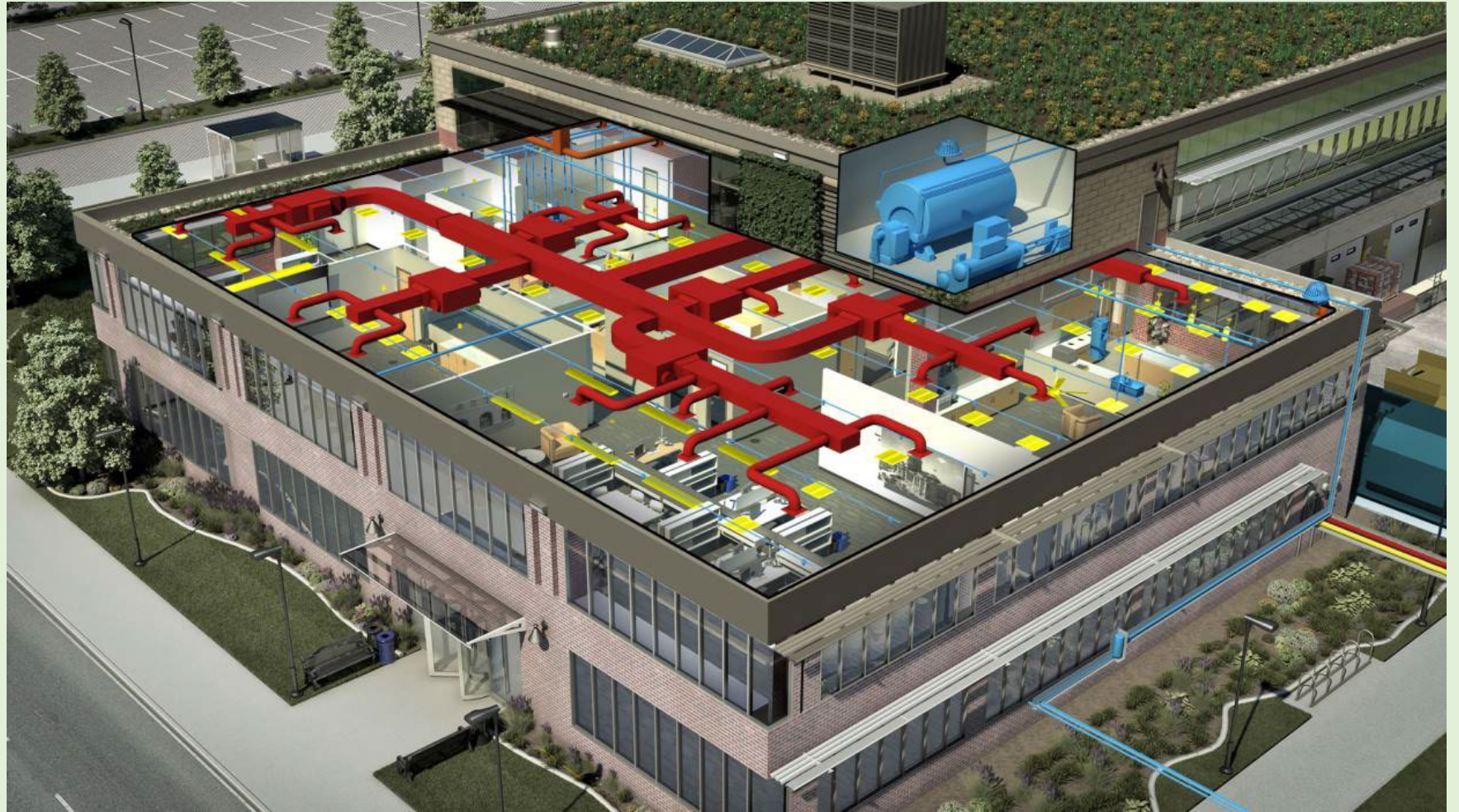
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Commercial, Industrial & Agricultural Program Focus: Heating, Ventilation & Air Conditioning



Commercial, Industrial & Agricultural Program Focus: Building Automation, Sensors, Controls & Re-commissioning

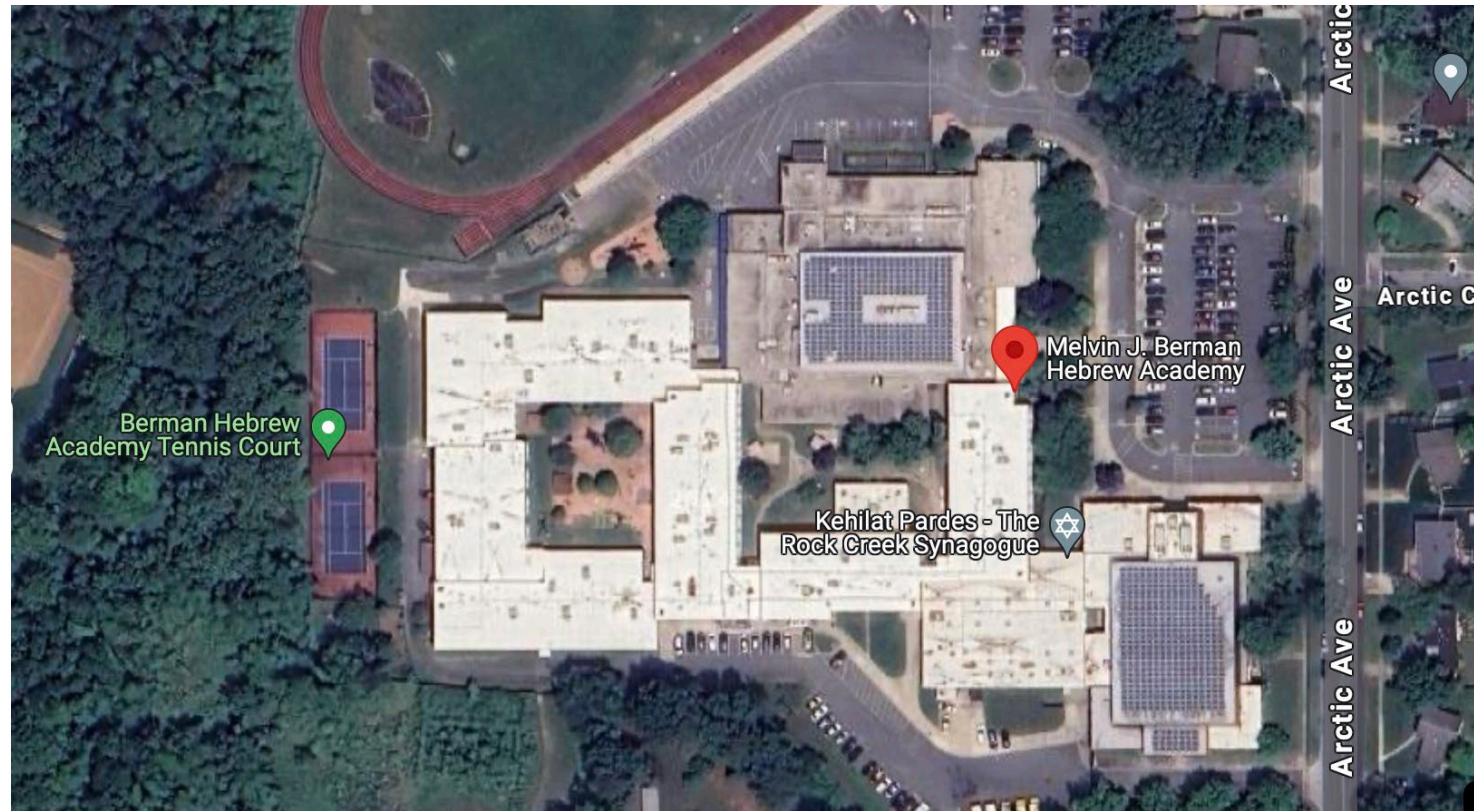
- + Data centers
- + Building shell upgrades
- + Industrial process equipment



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Project Case Study

Case Study: Melvin Berman Hebrew Academy



Case Study

Electric Savings: **426 MWh**

Emissions Reductions: **~298 MTCO₂-e**

MEA Grant: **\$300,000**

Pepco Incentives: **~\$236,500**

32% Annual energy savings



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Questions



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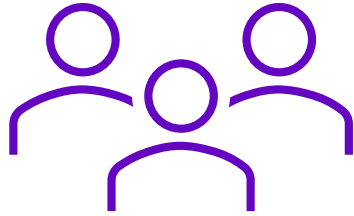


energy.maryland.gov

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Getting Started



Ask the Experts

Stop by later this afternoon to talk to one of program experts. Our Pepco Energy Savings for Business program team is here to answer all your questions.



Learn More at Pepco.com

If you missed our Ask the Expert session or have to leave early you can learn more about our programs and find approved Service Providers to get your project started online.

- Business programs: [pepco.com/Business](https://www.pepco.com/Business)
- Email: pepcobusiness@icf.com