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Development's Energy Efficiency and Finance Programs



Department of
Development



Energy Efficiency and Energy Finance Programs

- Energy Efficiency Program (EEP)
- Energy Financing Programs (Energy Loan Fund)
- Energy Efficiency Training Opportunities (EETM)



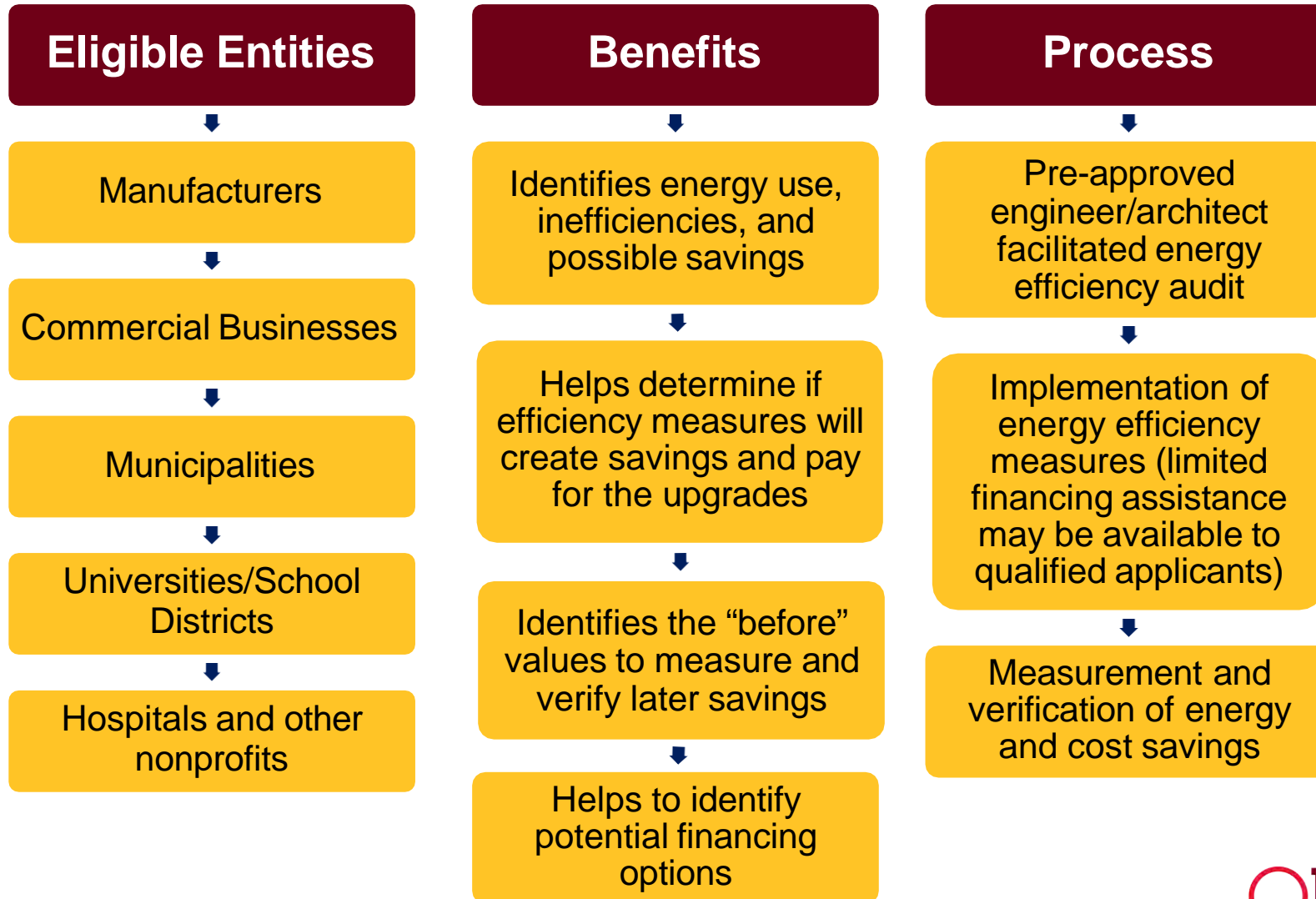
Development's Energy Efficiency Program

Helps businesses, manufacturers, nonprofits, schools, and local governments reduce energy use and improve energy efficiency – resulting in lower energy costs.

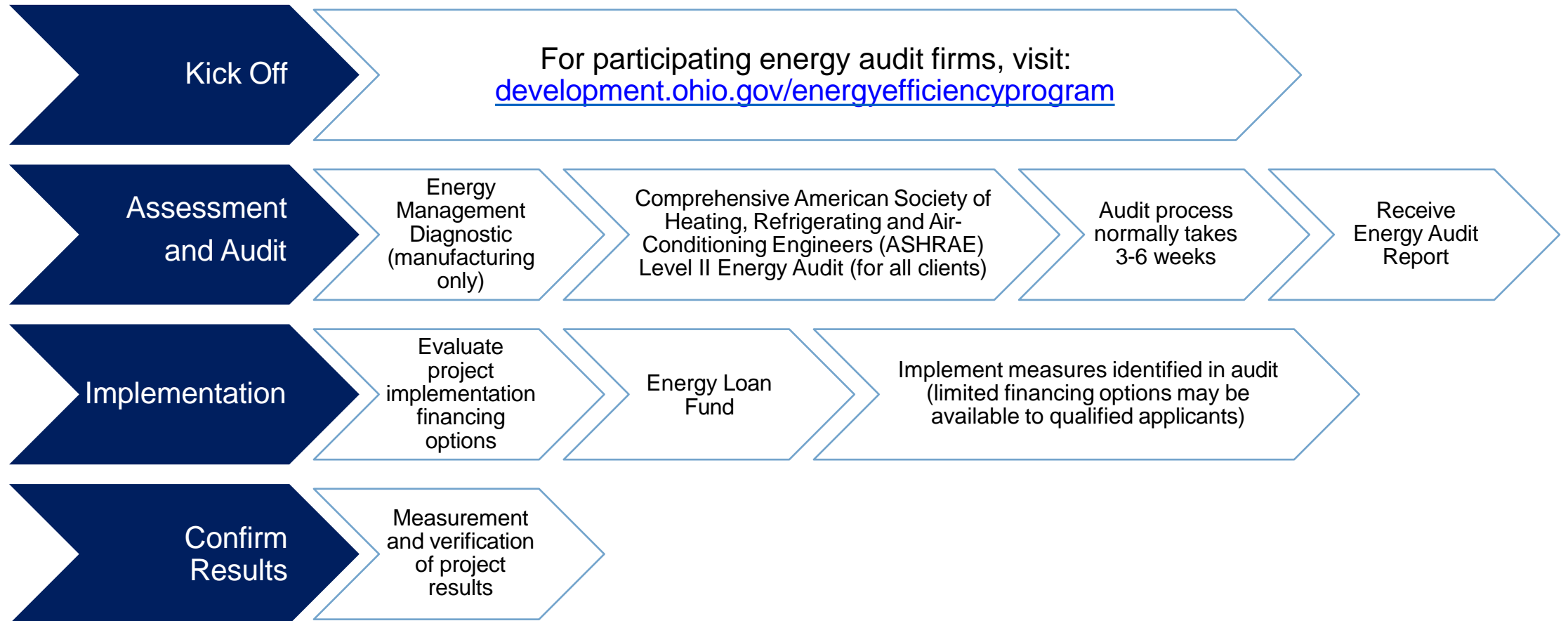


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EEP Eligible Entities/Benefits/Process



EEP Process



EEP Process Detail

Energy Management Diagnostic

- One-to-two-hour meeting for manufacturing sites, with facilitator.
- No charge.

ASHRAE Level II Audit

- For manufacturing and non-manufacturing sites.

Final Audit Report

- Existing facility conditions analysis.
- Energy use patterns and utilities analysis.
- Energy efficiency measures analysis and recommendations.
- Potential funding strategies and resources (Energy Loan Fund).
- Measurement and verification strategies.

EEP Energy Audit Grants

	Manufacturers	Non-Manufacturers
Qualifications	All Ohio manufacturers	Facility > 10,000 sq. ft.
Development grant funding	75% of total audit cost, up to \$22,500	50% of total audit cost, up to \$15,000
Customer share	Remaining 25%, plus any amount >\$30,000	Remaining 50%, plus any amount >\$30,000

Development and client pay engineer/auditor directly

Visit: development.ohio.gov/energyefficiencyprogram

EEP Contractors/Energy Auditors

NON-MANUFACTURING

Sol design + Consulting
Cleveland and Cincinnati
Sanyog B. Rathod
(513) 455-8228 x700
sanyogr@solconsults.com

Plugsmart/Ameresco
Columbus
Jarret Kelley
(800) 518-5576
jarret.kelley@plugsmart.com

Heapy Engineering
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(937) 224-0861 x4514
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MANUFACTURING

Energility LLC
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(614) 746-9276
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Graphet Data Mining
Cincinnati
Nikhila Rao
(513) 474-4870 x 202
nrao@graphet.com

Go Sustainable Energy LLC
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Greg Raffio
(614) 268-4263 x 305
graffio@gosustainableenergy.com

JCC Energy Controls
Akron
Jack Ceisa
(330) 285-5491
jack@jccenergysolutions.com



EEP Customer Case Studies

Case Study by Jack Ciesa

Morgan Advanced Materials – Thermal Ceramics

Baseline Energy Cost	\$2,883,868/year
Projected Energy Savings	\$1,217,675/year (42%)
Estimated Project Costs	\$10,636,500
Rebate Potential	\$84,669
Simple Payback	8.7 years

Savings Opportunities:

No/Low-cost measures	Motors/Drives
Compressed Air	Regenerative Thermal Oxidizers



Thermal Ceramics

Case Study by Energility

Metal Production

Baseline Energy Cost	\$228,800/year
Projected Energy Savings	\$115,700/year (61.5%)
Estimated Project Costs	\$1,570,000
Rebate Potential	\$605,300 (+ <i>tax credits</i>)
Simple Payback	7.9 years

System Savings Opportunities:

Lighting	Heating Systems
HVAC Controls	Adding Solar PV



Case Study by Ameresco

Commercial Office Space

Baseline Energy Cost	\$693,626/year
Projected Energy Savings	\$197,246/year (28%)
Estimated Project Costs	\$6,733,986
Rebate Potential	\$9,987
Simple Payback	12.1 years with O&M

System Savings Opportunities:

DDC Controls	Entirely New HVAC System
LED Fixtures	Roof Upgrades



Development's Energy Efficiency Finance Programs



Energy Loan Fund

Low-interest loans

- For improvements to existing structures
- Energy efficiency
- Renewable energy

Expected results

- Energy use reduction > 15%
- Payback < 15 years
- Economic impacts: job creation/retention, community improvements
- Improvement in environmental quality

Loan details*

- \$250,000 – \$2,500,000
- 1% – 3% interest for most applicants

*Numbers may adjust annually. Additional program requirements/restrictions are available in the program guidelines.



Energy Loan Fund

Eligible Applicants

- Manufacturers
- Commercial Businesses
- Public Entities
(including local governments)
- Nonprofits
- Hospitals
- Colleges/Universities
- Ohio K-12 School Districts



Energy Loan Fund

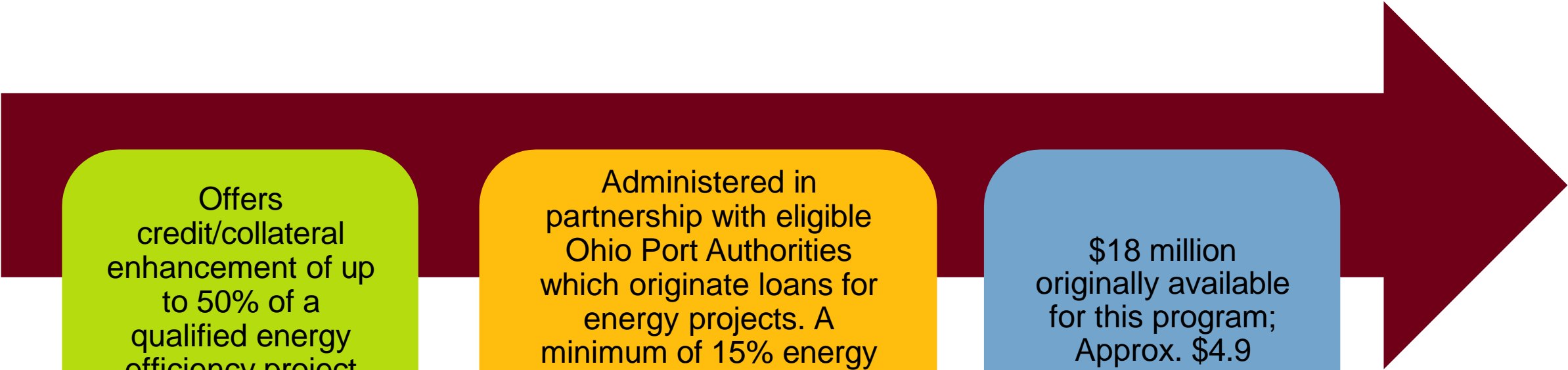
Approximately \$8 million available in FY22-23 (program details may change subject to funding availability and current interest rates)

More information or to apply:
development.ohio.gov/energyloanfund



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Loan Loss Reserve Fund



Offers credit/collateral enhancement of up to 50% of a qualified energy efficiency project on an existing structure.

Administered in partnership with eligible Ohio Port Authorities which originate loans for energy projects. A minimum of 15% energy savings and a simple payback period of 15 years or less is required.

\$18 million originally available for this program; Approx. \$4.9 million remaining.

Loan Loss Reserve Fund

Participating Ports



- Cincinnati
- Cleveland-Cuyahoga County
- Columbus-Franklin County
- Dayton-Montgomery County
- Lake County
- Lorain County
- Summit County
- Toledo-Lucas County

ohioportauthorities.com

Case Study

Warren Co. Career Center

Projected Energy Savings	\$128,147/year
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Estimated Project Costs	\$1,442,393
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Simple Payback	12 years
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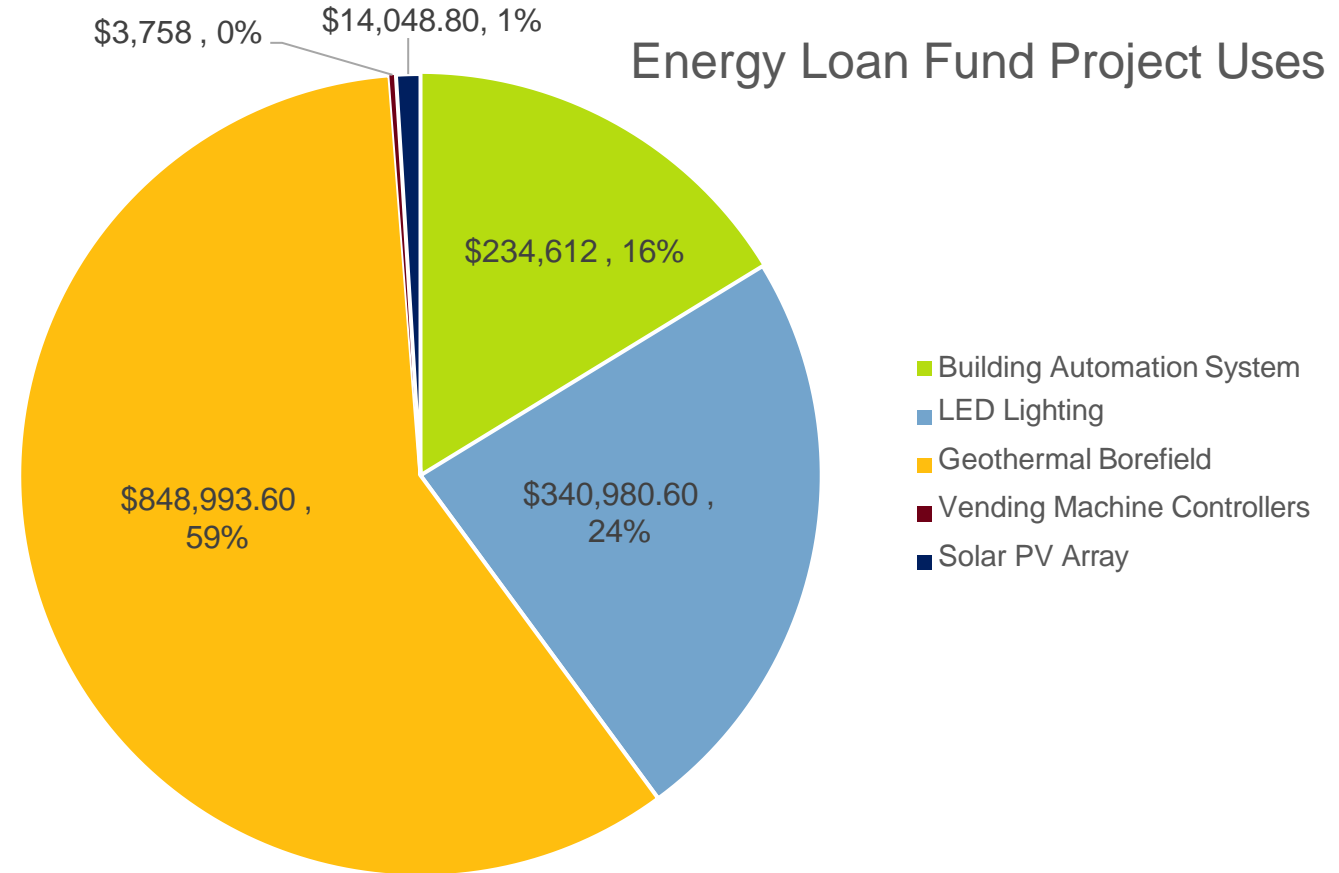
Projected CO ₂ Emissions Reduction	1,556 t/year
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System Savings Opportunities:

Building Automation System	Geothermal Borefield
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LED Lighting	Solar PV Array
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Vending Machine Controllers



Case Study

Worthington City School District

Projected Energy Savings	\$379,117/year
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Estimated Project Costs	\$2,849,775
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Simple Payback	7.5 years
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System Savings Opportunities:

Building Insulation

EMS Control

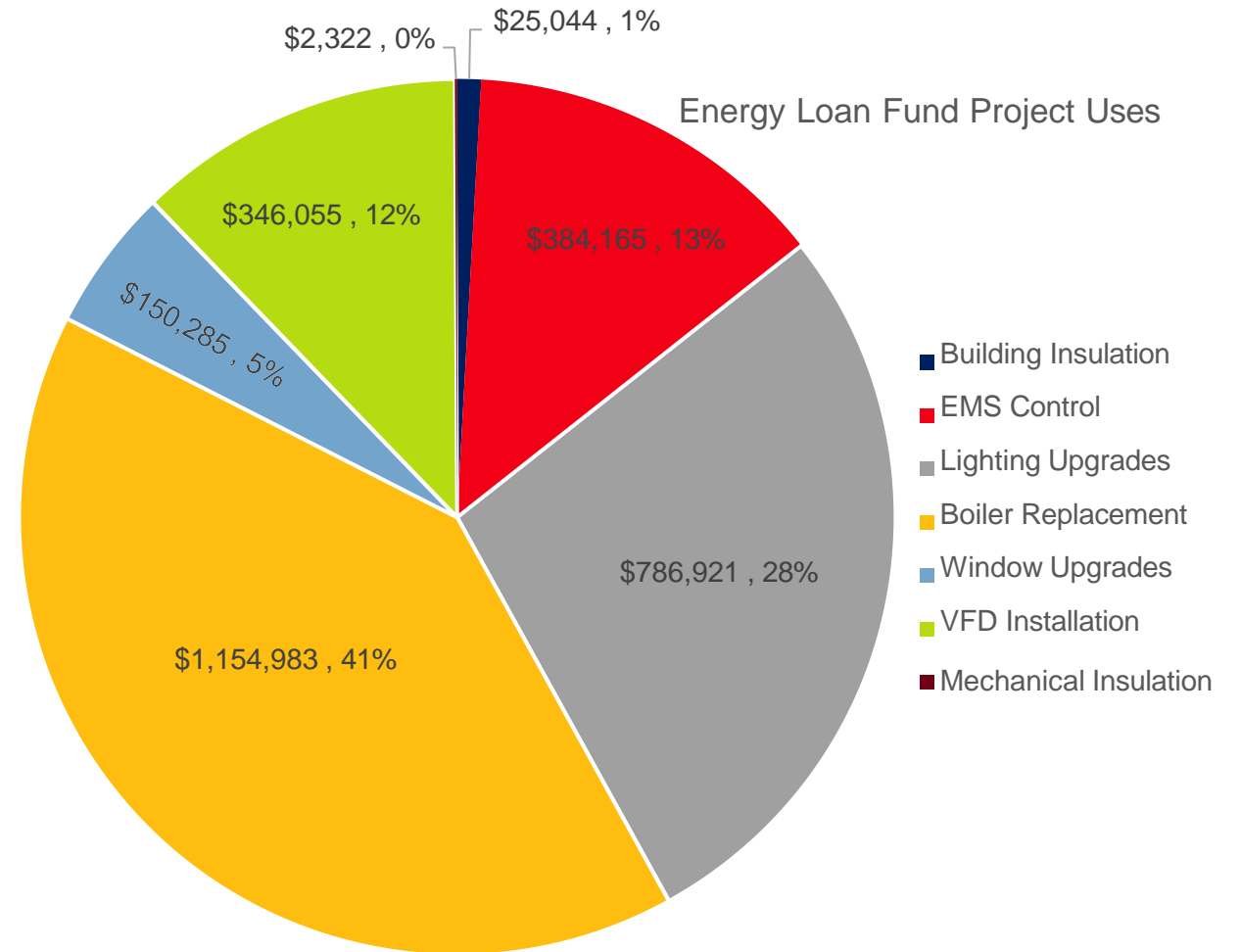
Lighting Upgrades

Boiler Replacement

Window Upgrades

VFD Installation

Mechanical Insulation



Summary

Ohio Programs Provide Required Elements for Energy Efficiency Results

Incentives and Financing

- Energy Loan Fund
- Grant funded audits and implementation

Subject Matter Expertise

- Facilitators provide Ohio Energy Efficiency Program outcomes

Technical Assistance, Information and Education

- Ohio Energy Efficiency Training for Manufacturers (EETM)
- Direct Staff Technical Assistance

Coal Program

- Program is available for coal-based research and/or product development.
- Over \$57,000,000 in grants have been awarded since 2013.
- Approximately \$12,000,000 of current funds available for 2023/2024 Fiscal Year.
- Prior research projects funded include carbon capture and storage, as well as extraction of rare earth elements from coal waste.



Photo from Ohio Department of Natural Resources

Infrastructure Investment and Jobs Act

Program	Funding	Brief Overview
State Energy Program	\$13,295,590	
State Energy Security Plan (SESP)	\$200,000	Update Ohio's SESP
Energy Efficiency Program for Ohio Communities (EEPOC)*	\$8,000,000	Grant funds for energy efficiency retrofits for Ohio Communities
EEPOC Audit Support*	\$1,000,000	Grant funds for ASHRAE Level II energy audits
Education and Outreach	\$795,590	College and university training for students; K-12 education programs
Energy Efficiency Conservation Block Grant (EECBG)	\$3,130,030	
Programs are TBD	TBD	

Energy Efficiency and Finance Programs Contacts

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Helpful Links:

[Development.ohio.gov/energyefficiencyprogram](https://development.ohio.gov/energyefficiencyprogram)

[Development.ohio.gov/energyloanfund](https://development.ohio.gov/energyloanfund)



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Questions?



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