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CEM, LEED Green Associate

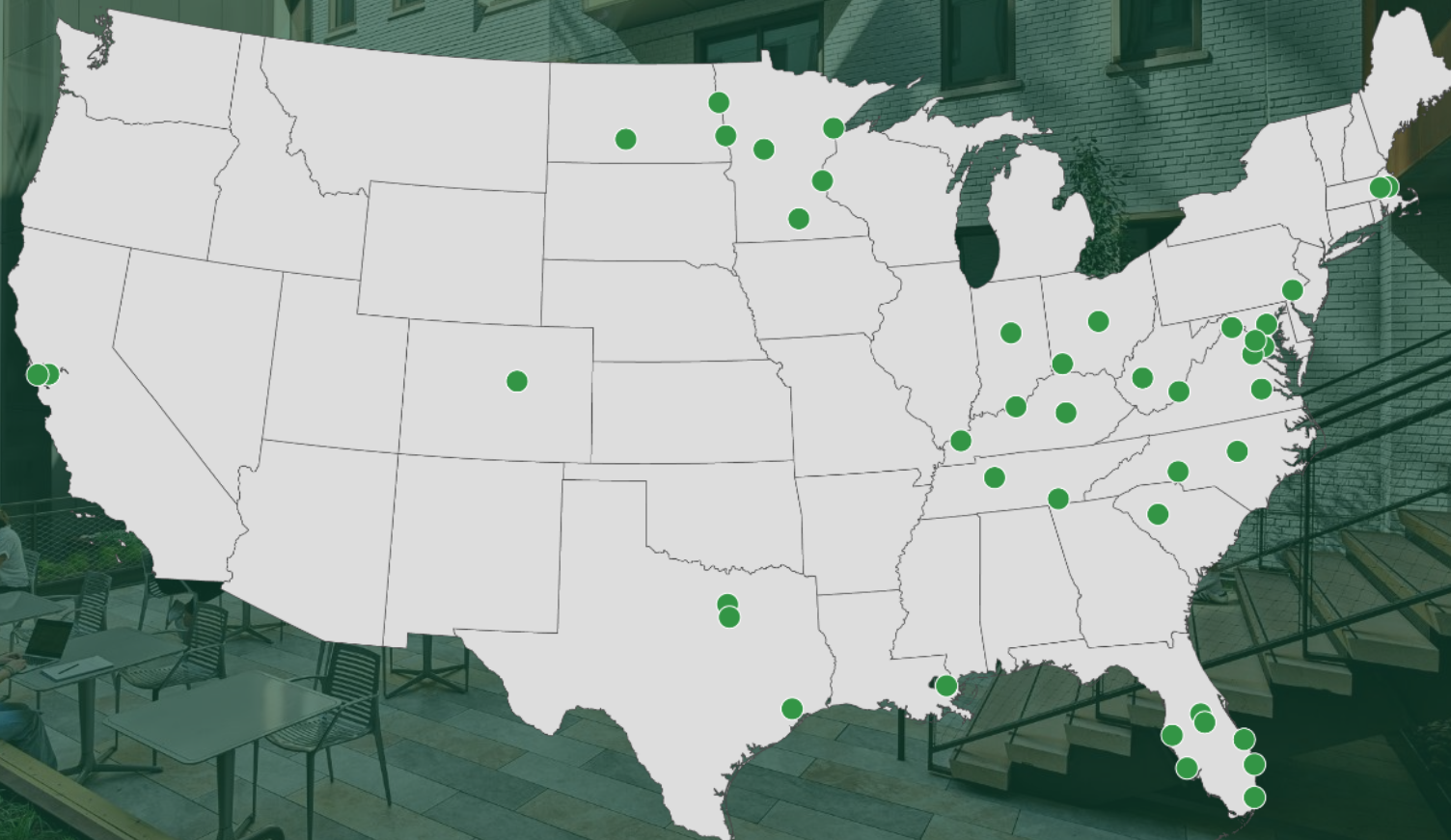


Let's Connect

01

Introduction + About CMTA

By the Numbers



1040

Employees

44

Offices Nationwide

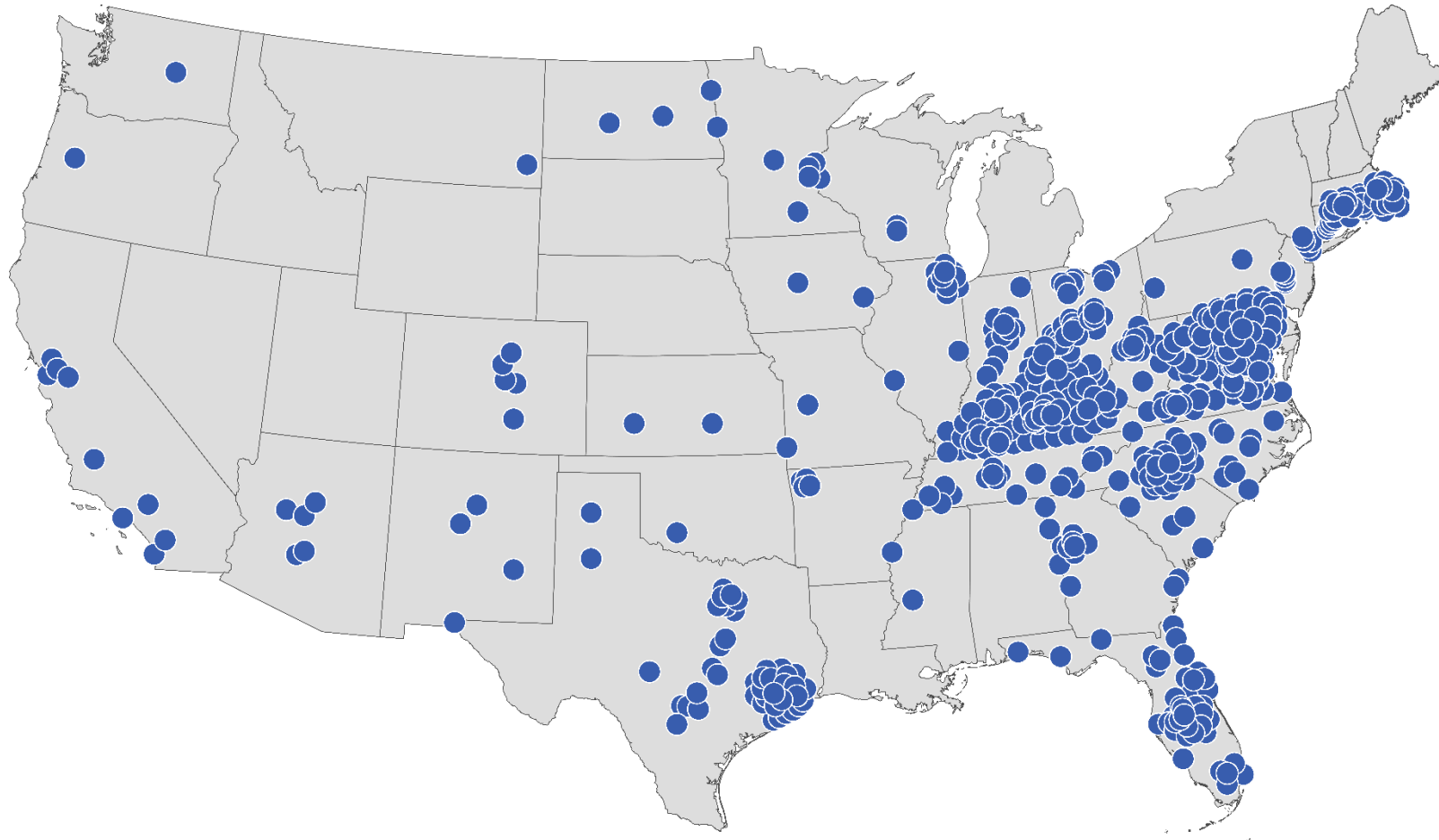
244

Professional Engineers

56

Years of Service

Operational Zero Energy Ready Projects



● Zero Energy Ready Projects

600+

Projects

45M SF

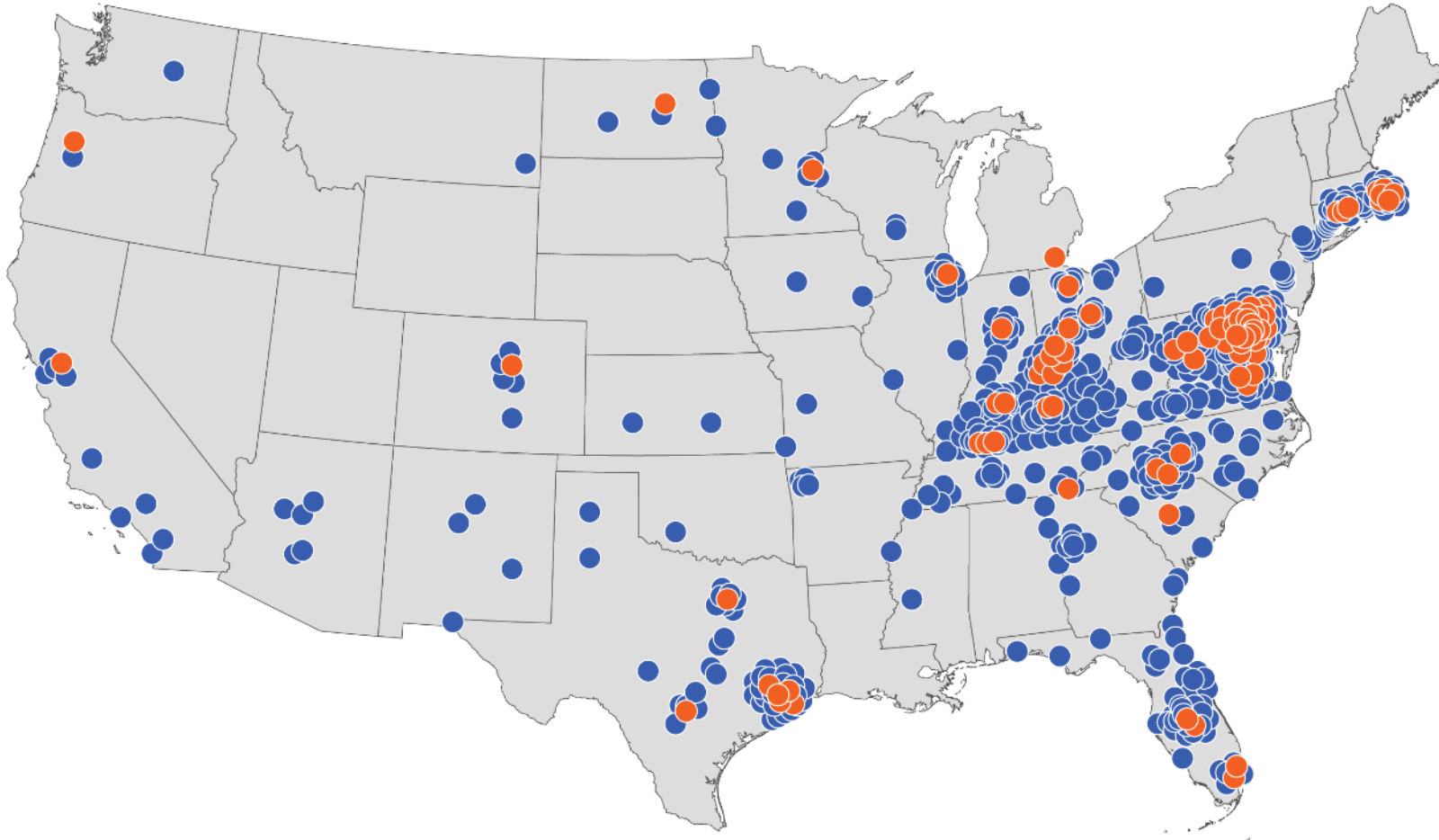
Zero Energy Ready Facilities

<30 EUI

Operational kBtu/ft²/year



Operational Zero Energy & Ready Projects



700+

Projects in Operation <30 EUI

10M SF

Operational Zero Energy

45M SF

Operational Zero Energy Ready

● Zero Energy Ready Projects

● Zero Energy Projects



K12 Experience

1st

**WELL Certified
School**

1st

**Zero Energy
School**

140M

**Square Feet
Designed/Renovated**

\$17B

K12 Construction



02

Inflation Reduction Act

.....

3rd largest sector of commercial building energy use in the US

Equivalent to 18 coal-fired power plants



Why K-12 Should Feature in America's National Climate Strategy



Runaway K12 Costs

\$27.5 Billion

US Annual Maintenance and Operations Spending Gap

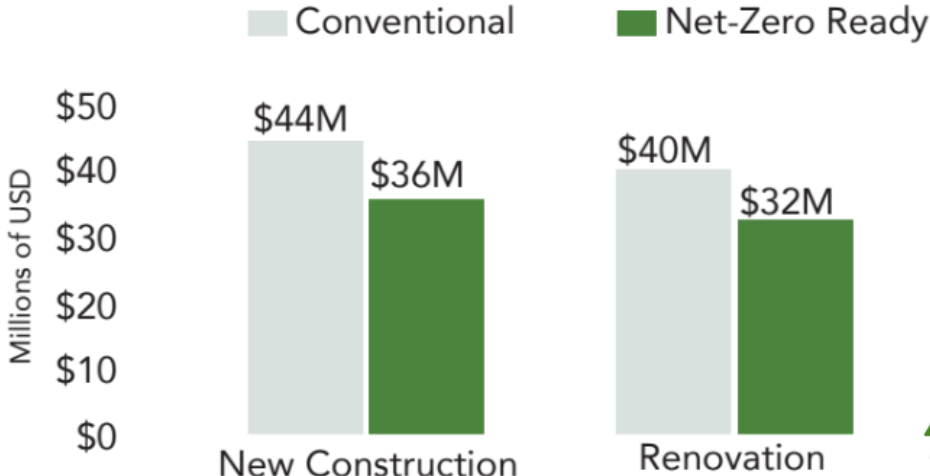
\$57.3 Billion

US Annual Capital Investment Spending Gap

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Districts that do not pursue net-zero may spend 20–25% more over a 30-year life cycle based on increased energy and maintenance costs alone (see Figure 1).

Fig 1. Life Cycle Cost of Net-Zero Ready and Conventional School 30 years of costs (in millions) for a typical elementary school



Source: Perkins Eastman et. al. 2020. "Net-Zero Energy Schools", pg. 43.
Note: Estimates are for a school designed to accommodate 800 students.

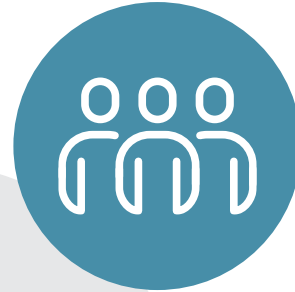
Best Value Solutions

First Costs

- Minimize upfront costs while achieving the highest value
 - Plan for the future
 - Right-size equipment
 - Invest wholistically in the building

Environmental Stewardship

- Achieve significant reductions in energy costs
- Reduce carbon emissions & air pollutants



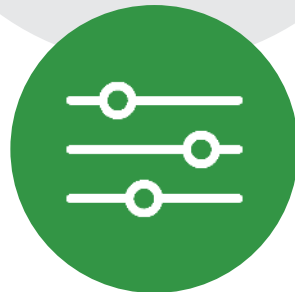
Health & Well-Being

- Improve occupant satisfaction
- Make a positive impact on occupant wellbeing



Risk Management

- Minimize unplanned system downtime
- Increase redundancy & improve control
- Reduce susceptibility to regulatory issues

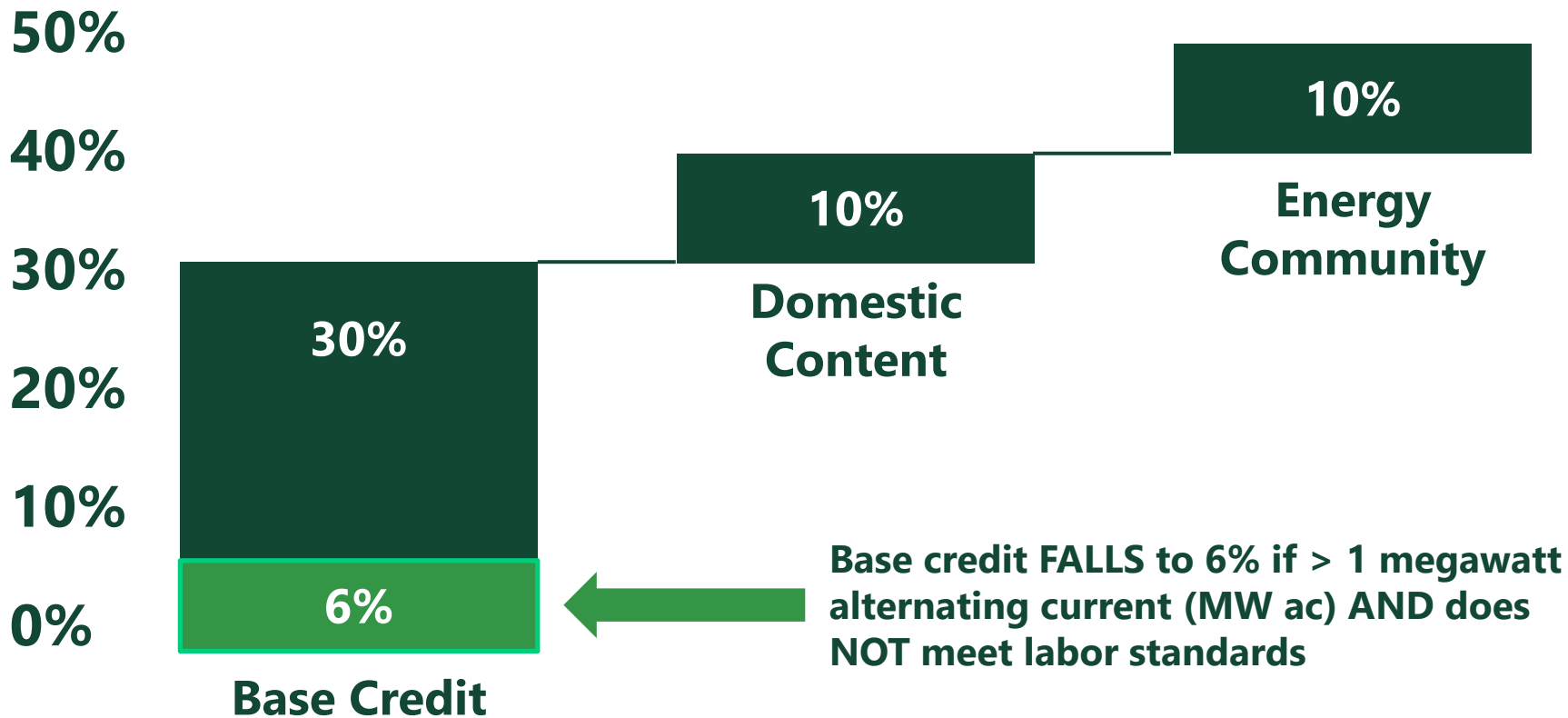


Maintenance / Operations

- Provide simple, easy-to-maintain systems

Understanding Project's Rate

1MW + Labor Standards Implications



INFLATION REDUCTION ACT

Prevailing Wage & Registered Apprenticeship Overview

The information in this document may be subject to change as guidance is issued or finalized. For all IRA clean energy tax credits, please see [IRS.gov/CleanEnergy](https://www.irs.gov/CleanEnergy) for further details and eligibility requirements.

Overview:
To qualify for increased credit or deduction amounts of certain clean energy tax incentives, taxpayers generally need to ensure that laborers and mechanics employed in the construction, alteration, or repair are paid no less than applicable prevailing wage rates and to employ apprentices from registered apprenticeship programs for a certain number of hours. By meeting the necessary Inflation Reduction Act (IRA) prevailing wage and apprenticeship requirements, taxpayers can increase the base amounts of many clean energy tax incentives by 5 times. There are limited exceptions, for certain small facilities that produce clean energy under one megawatt and for facilities beginning construction before January 29, 2023, where taxpayers may be eligible to claim the 5 times increase without meeting the prevailing wage and apprenticeship requirements.

Prevailing Wage:
The Department of Labor (DOL) determines the prevailing wage rates for each classification of laborers and mechanics ("labor classification") in a predetermined geographic area for a particular type of construction. In general, taxpayers claiming an increased credit or deduction amount must ensure that laborers and mechanics employed by the taxpayer or its contractors or subcontractors are paid the prevailing wage, which includes the basic hourly wage rate and any fringe benefits rate, established by the Secretary of Labor when performing construction, alteration, or repair of a qualified facility, project, property, or equipment (hereafter a facility). These wage rates are found in general wage determinations on www.dol.gov/eis/wage-determinations. A general wage determination reflects wage rates determined by DOL to be prevailing in a specific geographic area, typically a county, for a particular type of construction. In the absence of an applicable general wage determination, taxpayers may request a supplemental wage determination from DOL.

IRA Registered Apprenticeships:
Each taxpayer (or contractor or subcontractor) who employs four or more workers to perform construction, alteration, or repair work on a facility must employ one or more qualified apprentices when the apprenticeship requirements apply. In addition, a minimum percentage of the total labor hours of the construction, alteration, or repair work must be performed by qualified apprentices from a registered apprenticeship program. This percentage is 12.5 percent for facilities beginning construction in 2023 and it rises to 15 percent for facilities beginning construction in 2024 or after. Taxpayers (or contractors or subcontractors) must also ensure that any applicable ratios of apprentices to journey workers established by the registered apprenticeship program are met. An exception may apply when a taxpayer (or contractor or subcontractor) has requested qualified apprentices from a registered apprenticeship program and no apprentices are available. For more information or to learn about finding apprentices, see [Inflation Reduction Act Apprenticeship Reserves](https://www.dol.gov/eis/wage-determinations).

Recordkeeping Requirements:
Taxpayers claiming an increased amount for a particular tax incentive by meeting the prevailing wage and apprenticeship requirements are subject to specific recordkeeping requirements. Taxpayers must maintain and preserve records related to the employment of laborers, mechanics, and apprentices, including the records of any contractor or subcontractor. Examples include each laborer or mechanic's hourly rates, hours worked, deductions from wages, and actual wages paid, among other records.

Corrections and Penalties:
Taxpayers who fail to meet the prevailing wage and apprenticeship requirements may still be able to claim the increased tax incentive amounts by making certain correction and penalty payments. For failures of the prevailing wage requirements, taxpayers must make correction payments for any underpaid or missing wages, plus interest, to the affected laborers and mechanics, and taxpayers may also owe a penalty payment to the IRS. For the apprenticeship requirements, taxpayers must make a penalty payment to the IRS. Enhanced correction and penalty amounts apply when the taxpayer's failure is due to intentional disregard.

Project Labor Agreements:
Penalties for failures to meet prevailing wage and apprenticeship requirements may not apply to taxpayers employing laborers, mechanics, and apprentices under a qualifying project labor agreement that meets certain requirements.

More Information
For more details please also see [irs.gov/ira](https://www.irs.gov/ira) and [Inflation Reduction Act Department of Labor](https://www.dol.gov/eis/wage-determinations). See page 2 for a list of which tax incentives can be increased by meeting the prevailing wage and apprenticeship requirements.

Alternate Funding

A black and white photograph of a construction site. In the foreground, several construction workers wearing white hard hats and safety vests are seen from behind, looking towards the site. A large crane is visible in the upper left. The background shows a multi-story building under construction with scaffolding and a tall, thin structure in the distance.

\$100M

Funding & Grants
Awarded to Clients

\$96M

Inflation Reduction Act
Funding – Targeted
K12 - 2024-2026

03

IRA Impact – Geothermal

IRA Impact – Geothermal

New Policy

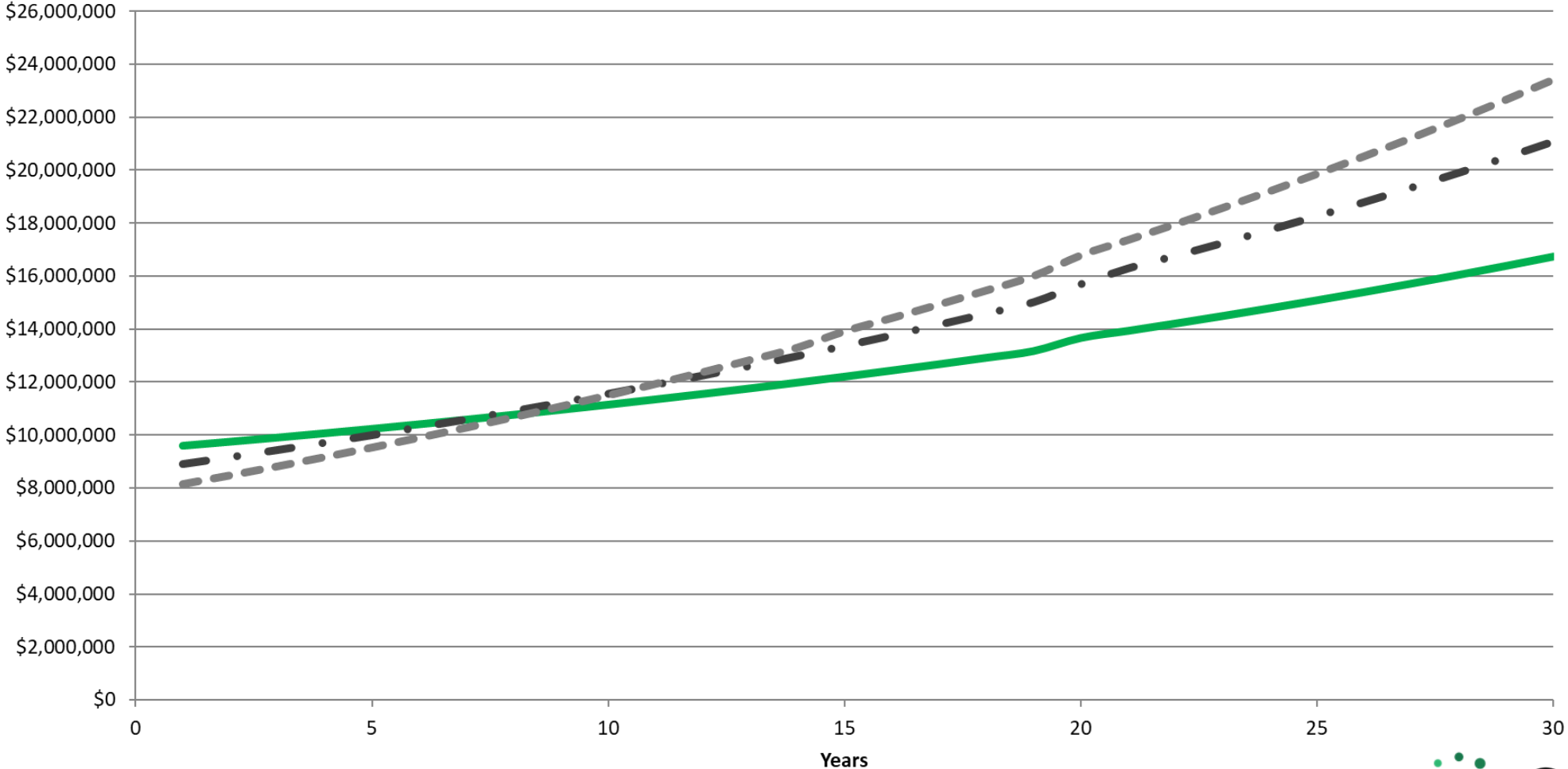
- **30%** Investment Tax Credit (ITC)
 - Geo field, water-source heat pumps (WSHP), pumps, piping, ductwork, soft costs
- Tax-exempt entities – **direct pay option**
- Tax-paying entities – **sale of credits**
- Prevailing wage & 15% apprenticeship requirements
- Reduces to **6%** if prevailing wage and apprenticeship requirements not met



Geothermal IRA Financial Impact

K-12 Example	100,000 ft²
Construction Budget	\$450/ft²
Construction Budget	\$45,000,000
HVAC Budget/ft²	\$80/ft²
HVAC Budget	\$8,000,000
IRA Impact	+\$2,000,000

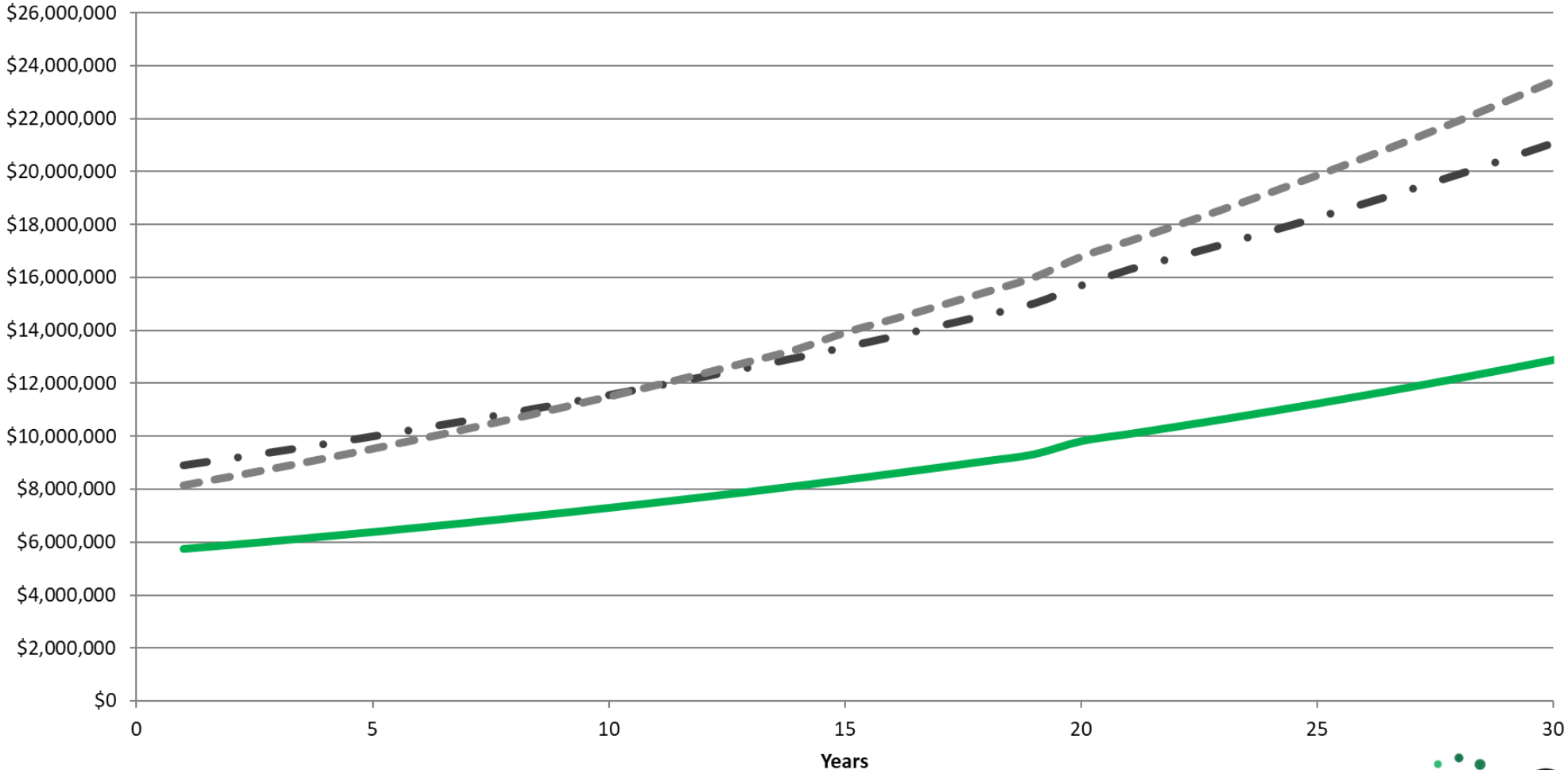
LCCA: Geothermal vs. Traditional



--- VAV - . - 4-Pipe FCUs — Geothermal

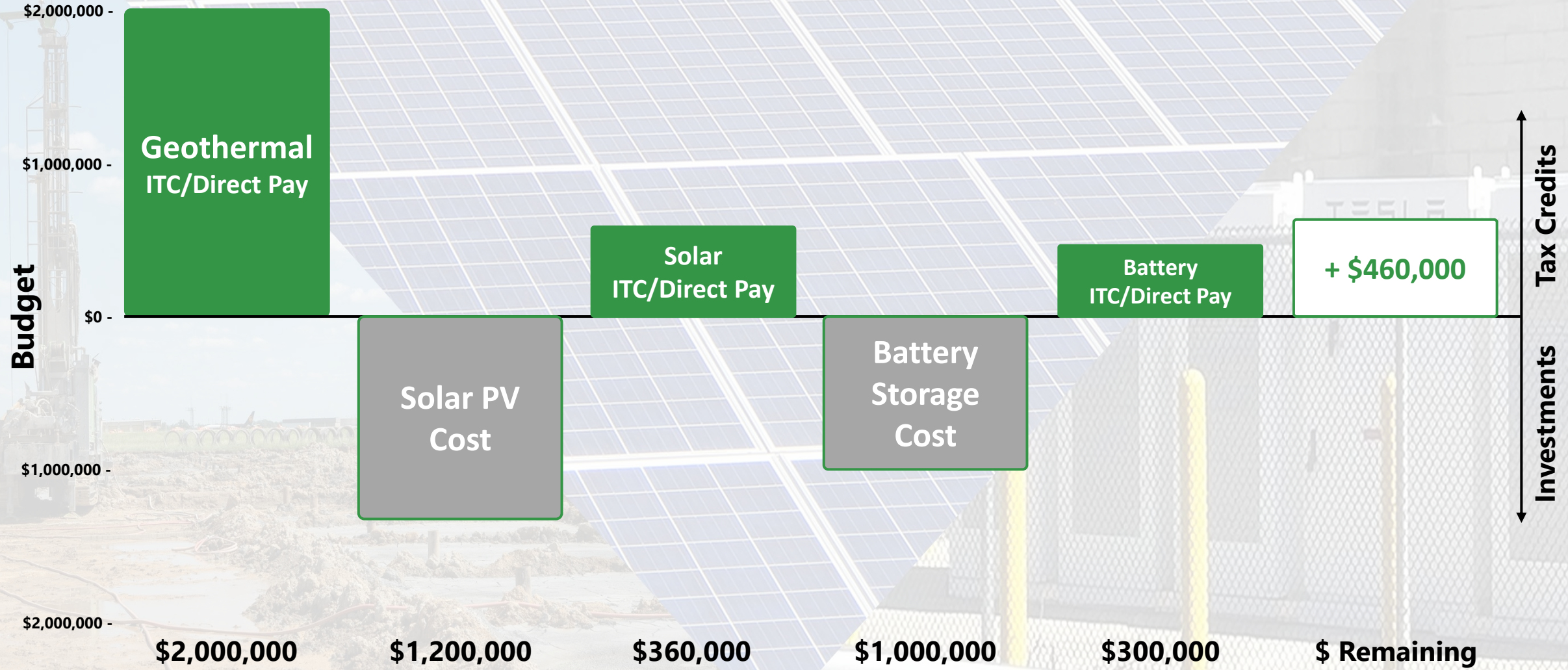


LCCA: Geothermal vs. Traditional



--- VAV - . - 4-Pipe FCUs — Geothermal

Value Stacking for Procurement



05

IRA Impact – Thermal Storage

Bear Creek Elementary

Collier County Public Schools, FL

115,000 Square Feet

Prototype Enhancement

- Addition
- Thermal Storage Solution
- Utility Rebates
- Federal Funding



**Inflation
Reduction Act**



**Utility
Rebates**



**Thermal
Storage**



Courtesy of Harvard Jolly / PBK

Finances - Utility

Cost:

3800 Ton/Hr Tank **\$1,100,000**

Utility Rebate **(\$323,460)**

30% IRA **(\$440,000)**

+ 10% Domestic Adder

Adjusted First Cost **\$336,540**

Annual Energy Savings **\$103,925**

Simple Payback **3.2 years**





Thermal Storage

- **Resiliency**
- **Utility Costs Savings**
 - \$100K+ annually
- **Utility Rebates**
 - \$300K+
 - <10 Year Payback
- **ITC savings**
 - \$400k+

03

IRA Impact – Solar

IRA Impact – Solar

New Policy | For-Profit/Not-for-Profit & State Entities

- 26% Investment Tax Credit (ITC)
- **30%** Investment Tax Credit (ITC)
 - Up to **70%** with credit adders
- Direct pay option

- No Production Tax Credit (PTC)
- **\$0.026/kWh** production tax credit

- 1-year credit carryback
- **3-year** credit carryback
- Credits can be transferred to another entity



Sunset Elementary

Clinton City Schools, NC

7 Facilities – 566,076 Square Feet

Energy Services Contract

- 107.83 kW **solar photovoltaic array**
- Roof Replacement
- Heating Equipment Replacement
- Retro-commissioning and Optimizations
- LED lamps and fixtures
- HVAC systems replacement and Upgrades



**Inflation
Reduction Act**



**Energy
Savings**



**Distributed
Solar**



Finances- Added ITC

Cost:

107.83 kW Solar PV \$226,300

IRA/ ITC (\$55,360)

Adjusted First Cost \$170,940

Annual Energy Savings \$9,200

Simple Payback 18.6 years

IRA Submission: March 2024





Let's Connect.