

This report was prepared by Key HTX using the Energy Performance Improvement Calculator (EPIC™)¹ app to estimate the energy savings and calculate the financial impacts of your project.

Property Information

Casual Dining

Building Name

Street Address

Houston

City

TX

State

ZIP Code



Building Characteristics

Casual Dining / R... 1987

Type

Year Constructed

12,571

Gross Sq. Ft.

Unconfirmed

Disadvantaged Community²

359,482

Space Cooling (kWh/yr)

707

Space Heating (MMBtu/yr)

351

DHW Heating (MMBtu/yr)

Project Cost Summary

\$144,000

Net Installed Cost (\$)

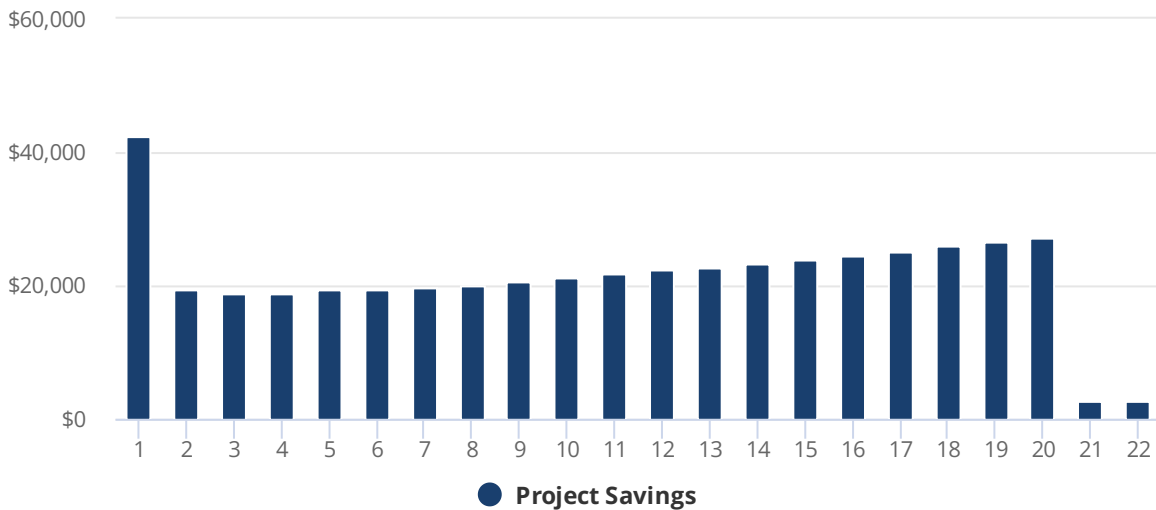
\$469,013

Lifetime Savings (\$)

\$325,013

Net Gain (\$)

Project Savings Summary



● Project Savings

Energy Improvements Summary

Energy Improvements	Useful Life (Years)	Net Installed Cost ⁴	Estimated Project Savings ³			
			Unit Savings First Year	Demand ⁵ Reduction	Cost Savings First Year	Cost Savings ⁶ Lifetime
Air Conditioning	20	\$100,000	186,212 kWh	183 kW/yr	\$33,047	\$413,972
Space Heating System	22	\$44,000	1,993 CCF		\$9,273	\$55,041
Electricity savings:			186,212 kWh			
			20.72%			
Fuel savings:			1,993 CCF			
			18.57%			
Demand reduction:				183 kW/yr		
Project Totals (\$):		\$144,000			\$42,320	\$469,013

Key Financial Metrics

(Excluding finance costs)

\$144,000

Net Installed Cost (\$)

\$469,013

Lifetime Savings (\$)

\$325,013

Net Gain (\$)

3.3

Savings to Investment Ratio (SIR)⁷

5.0

Discount Rate (%)

\$289,613

Present Value of Discounted Lifetime Savings (\$)

8.0

Capitalization Rate (%)

\$267,366

Estimated Property Value Increase (\$)⁹

Bank Loan Scenario

Displayed below are projected annual and cumulative cash flows over your project's estimated useful life, assuming the following project finance terms.

Finance Terms

\$144,000

Amount Financed (\$)

6

Term (years)

7.00

Interest Rate (%)

Project Finance Summary

\$144,000

Net Installed Cost (\$)

\$32,766

Interest Cost (\$)

\$6,881

Interest Tax Savings (\$)¹⁰

\$469,013

Lifetime Savings (\$)

\$299,128

Net Gain (\$)

2.7

Savings to Investment Ratio (SIR), including Interest Cost

Chart of Cash Flows

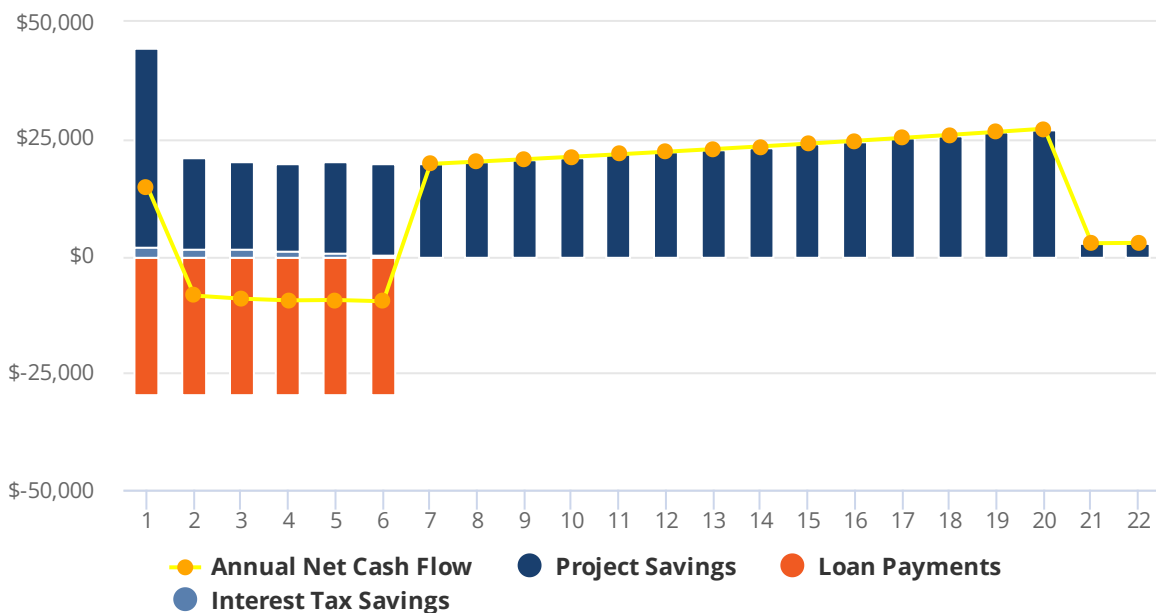


Table of Cash Flows

Year	Project Savings	Loan Payments	Interest Tax Savings	Net Cash Flows	
				Annual	Cumulative
Owner Contribution				\$0	\$0
1	\$42,320	\$29,461	\$1,984	\$14,843	\$14,843
2	\$19,281	\$29,461	\$1,680	-\$8,500	\$6,342
3	\$18,945	\$29,461	\$1,354	-\$9,162	-\$2,820
4	\$18,929	\$29,461	\$1,005	-\$9,527	-\$12,347
5	\$19,390	\$29,461	\$630	-\$9,441	-\$21,788
6	\$19,514	\$29,461	\$228	-\$9,719	-\$31,507
7	\$19,650	\$0	\$0	\$19,650	-\$11,857
8	\$20,145	\$0	\$0	\$20,145	\$8,288
9	\$20,655	\$0	\$0	\$20,655	\$28,943
10	\$21,176	\$0	\$0	\$21,176	\$50,119
11	\$21,711	\$0	\$0	\$21,711	\$71,830
12	\$22,260	\$0	\$0	\$22,260	\$94,090
13	\$22,822	\$0	\$0	\$22,822	\$116,912
14	\$23,399	\$0	\$0	\$23,399	\$140,311
15	\$23,990	\$0	\$0	\$23,990	\$164,301
16	\$24,597	\$0	\$0	\$24,597	\$188,898
17	\$25,218	\$0	\$0	\$25,218	\$214,116
18	\$25,855	\$0	\$0	\$25,855	\$239,971
19	\$26,510	\$0	\$0	\$26,510	\$266,481
20	\$27,179	\$0	\$0	\$27,179	\$293,660
21	\$2,694	\$0	\$0	\$2,694	\$296,354
22	\$2,773	\$0	\$0	\$2,773	\$299,127
Total	\$469,013	\$176,766	\$6,880	\$299,127	

Key Assumptions

Tax Impacts

21

Federal Marginal
Tax Rate (%)

80

Federal First Year
Bonus Depreciation (%)¹¹

MACRS

Federal Remaining
Depreciation Method

Energy Cost

\$0.090

Electricity Cost (\$/kWh)

\$15.00

Electricity Demand Cost (\$/kW)

3.0

Electricity Average Annual Escalation
Rate (%)

\$0.96

Natural Gas Cost (\$/CCF)

\$2.25

Natural Gas Demand Cost (\$/CCF)

3.0

Natural Gas Average Annual Escalation
Rate (%)

Energy Consumption

(For the period February 2023 to February 2024)

4,024

Total Energy (MMBtu/yr)

880,818

Electricity (kWh/yr)

9,887

Natural Gas (CCF/yr)

320.1

Total Energy Use Intensity (EUI)
(kBtu/SF-yr)

70.1

Electricity EUI
(kWh/SF-yr)

80.9

Fuel EUI
(kBtu/SF-yr)

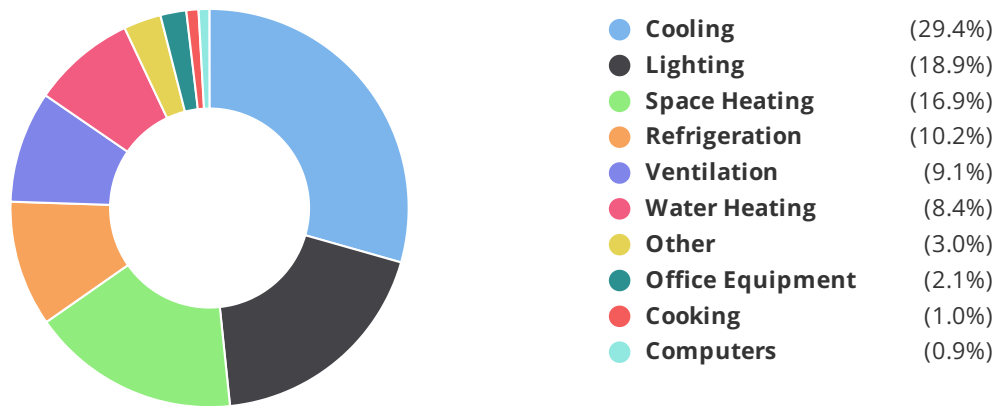
1,261

Typical Heating Degree Days
(HDD/yr)¹²

3,009

Typical Cooling Degree Days
(CDD/yr)¹²

The chart and table below displays your property's weather normalized energy consumption by end-use.



End-use	Total Energy			Electricity			Natural Gas		
	MMBtu/yr	kBtu/SF	Percent	kWh/yr	kWh/SF	Percent	CCF/yr	CCF/SF	Percent
Cooling	1,227	97.6	29.4	359,482	28.6	40.0			
Lighting	790	62.9	18.9	231,605	18.4	25.8			
Space Heating	707	56.2	16.9				6,866	0.5	64.0
Refrigeration	427	33.9	10.2	124,983	9.9	13.9			
Ventilation	378	30.1	9.1	110,738	8.8	12.3			
Water Heating	351	27.9	8.4				3,411	0.3	31.8
Other	127	10.1	3.0	24,589	2.0	2.7	414	0.0	3.9
Office Equipment	88	7.0	2.1	25,658	2.0	2.9			
Cooking	41	3.3	1.0	10,928	0.9	1.2	40	0.0	0.4
Computers	37	2.9	0.9	10,722	0.9	1.2			
Total	4,171	331.8	100.0	898,705	71.5	100.0	10,731	0.9	100.0

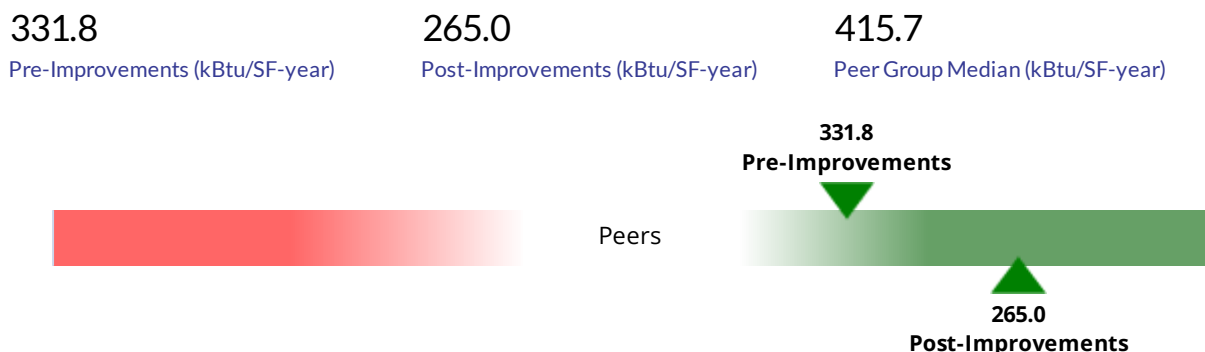
Energy Savings

Displayed below are baseline energy savings assumptions, subject to editing by the EPIC user where property-specific information is available.

- Your project's building is assumed to operate similarly to peer buildings in the same geographic area. Where default values have been applied, they represent average values from peer buildings.
- Baseline efficiency for existing equipment is assumed to be equivalent to ASHRAE 90.1 standard effective at the time of building construction or equipment installation, including an estimate of age-related performance degradation.
- Baseline heating equipment is assumed to be of the non-condensing type.
- Parking lot lighting/ventilation is excluded from the estimated energy use of the building.
- If the age of existing equipment is unknown and your building is >25 years old, all existing heating and cooling equipment is assumed to be 25 years old for purposes of establishing the baseline energy efficiency metrics, e.g., EER, combustion efficiency, etc., for existing equipment.
- If the age of existing equipment is unknown and your building is <25 years old, all existing heating and cooling equipment is assumed to be equivalent to the age of the building for purposes of establishing the baseline energy efficiency metrics, e.g., EER, combustion efficiency, etc., for existing equipment.
- Your building's energy consumption by end-use (space heating, cooling, DHW, lighting) is based on U.S. Energy Information Administration's (EIA) Commercial Building Energy Consumption Survey or U.S. Department of Energy's (DOE) Residential Energy Consumption Survey (for multifamily buildings of 5 or more units), as adjusted by EPIC to remove the influence of weather, and consider peer building's equipment infrastructure in the same geographic area.
- Your building's electricity cost per kWh and natural gas cost per CCF is assumed to be consistent with EIA's average retail price for peer buildings in the same geographic area.
- Your project's actual energy use and cost savings may differ from estimates due to variations in building design and geometry, operating characteristics, tenant behavior, local climate, occupancy, equipment operation and maintenance, variations in building climate control, changes in utility rates and costs, and other factors. Energy savings estimates are provided as a guideline only without any warranties, expressed, or implied.
- Energy savings estimated in this report are only applicable to the specific equipment proposed for this project and should not be assumed applicable to equipment deemed to be similar.

Performance Comparison with Peer Buildings

Your building's pre-improvements weather normalized EUI is 331.8 kBtu/SF-yr. This can be compared to the peer group median EUI range of 457.2 to 374.1 kBtu/SF-yr. Your building's post-improvements EUI is estimated at 265.0 kBtu/SF-yr.



View [Performance Comparison](#) for additional information on benchmarking methodology.

Energy Improvements Detail

Air Conditioning:

36	100.0	\$100,000
Total Capacity Replaced (Ton)	Total Capacity Replaced (%)	Net Installed Cost (\$)
7.2	15.0	20
Existing EER	Replacement EER	Estimated Useful Life (yrs)

Space Heating System:

481,039	100.0	\$44,000
Total Capacity Replaced (BTUH)	Total Capacity Replaced (%)	Net Installed Cost (\$)
67.4	95.0	22
Existing Efficiency (%)	Replacement Efficiency (%)	Estimated Useful Life (yrs)

Energy Savings Detail

Air Conditioning:

186,212	3,552,528	\$33,047
First Year Electricity Unit Savings (kWh)	Lifetime Electricity Unit Savings (kWh)	First Year Cost Savings (\$)
\$413,972		
Lifetime Cost Savings (\$)		

First year and lifetime cost savings values include the following tax impacts:

\$4,096	\$104,461
First Year Tax Liability From Energy Cost Savings (\$)	Lifetime Tax Liability From Energy Cost Savings (\$)
\$17,640	\$21,000
First Year Tax Savings From Depreciation (\$)	Lifetime Tax Savings From Depreciation (\$)
\$13,544	\$83,461
First Year Net Tax Savings (\$)	Lifetime Net Tax Liability (\$)

Space Heating System:

1,993 First Year Natural Gas Unit Savings (CCF)	43,543 Lifetime Natural Gas Unit Savings (CCF)	\$9,273 First Year Cost Savings (\$)
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\$55,041
Lifetime Cost Savings (\$)

First year and lifetime cost savings values include the following tax impacts:

\$402 First Year Tax Liability From Energy Cost Savings (\$)	\$12,175 Lifetime Tax Liability From Energy Cost Savings (\$)
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\$7,762 First Year Tax Savings From Depreciation (\$)	\$9,240 Lifetime Tax Savings From Depreciation (\$)
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\$7,360 First Year Net Tax Savings (\$)	\$2,935 Lifetime Net Tax Liability (\$)
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Total Project Energy Savings Summary:

186,212 First Year Electricity Unit Savings (kWh)	3,552,528 Lifetime Electricity Unit Savings (kWh)
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\$15,407 First Year Electricity Cost Savings (\$)	\$392,974 Lifetime Electricity Cost Savings (\$)
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1,993 First Year Natural Gas Unit Savings (CCF)	43,543 Lifetime Natural Gas Unit Savings (CCF)
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\$1,512 First Year Natural Gas Cost Savings (\$)	\$45,801 Lifetime Natural Gas Cost Savings (\$)
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841 First Year Total Energy Unit Savings (MMBtu)	16,605 Lifetime Total Energy Unit Savings (MMBtu)
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\$42,320 First Year Total Energy Cost Savings (\$)	\$469,013 Lifetime Total Energy Cost Savings (\$)
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First year and lifetime cost savings values include the following tax impacts:

\$4,497 First Year Tax Liability From Energy Cost Savings (\$)	\$116,636 Lifetime Tax Liability From Energy Cost Savings (\$)
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\$25,402 First Year Tax Savings From Depreciation (\$)	\$30,240 Lifetime Tax Savings From Depreciation (\$)
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\$20,904 First Year Net Tax Savings (\$)	\$86,396 Lifetime Net Tax Liability (\$)
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Post-Improvements EUI

265.0

Total Energy Use Intensity (EUI)
(kBtu/SF-yr)

56.7

Electricity EUI (kWh/SF-yr)

71.5

Fuel EUI (kBtu/SF-yr)

Environmental and Societal Benefits:

586

Pre-Improvements CO₂e/yr Emissions (MT)

120

First Year CO₂e Emissions Reduction (MT)¹³

466

Post-Improvements First Year CO₂e Emissions (MT)

2,324

Lifetime CO₂e Emissions Reduction (MT)¹³

3.7

Job-Years Created¹⁴

Footnotes

¹ EPIC™ predictive analytics are powered by data collected by SRS over the past decade in the performance of thousands of energy improvement project analyses. EPIC's algorithms are augmented by utility energy efficiency program technical resource manuals and industry best practice energy savings calculation methodologies.

² Using your building's address, EPIC conducts a search of the Climate and Economic Justice Screening Tool (CEJST) to confirm if it is in a Disadvantaged Community (DC). Owners of buildings in DCs may be eligible for government-funded technical and financial assistance and incentives for qualifying energy improvements.

³ Energy savings estimates are weather normalized. This methodology, based on typical year weather conditions over a 20-30 year period, accounts for yearly weather variations to ensure estimates are representative of your property's typical performance. Projects with multiple improvements, where applicable, include an assumption for interactive effects.

⁴ Net installed cost equals gross cost less incentives.

⁵ EPIC supports peak electric demand reduction estimates for lighting and air conditioning improvements, e.g., RTUs, PTACs, chiller systems, split systems and cooling associated with heat pumps. EPIC assumes the utility tariff does not include a ratchet provision. If there is such a provision, first year demand savings may not be applicable, however, there would be no impact to the savings beyond the first year.

⁶ Lifetime energy cost savings equal the estimated savings over the estimated useful life of the improvements. Estimates include average annual utility price escalation factors of 3% for electricity and 3% for fuels, and an annual performance degradation factor to account for the percent by which the equipment performance is forecast to degrade each year. Present value of discounted lifetime savings are displayed in the Key Financial Metrics section. When tax impacts estimation is enabled, estimates of first year and lifetime cost savings include federal and state income tax liabilities related to the project's energy cost savings. When depreciation impacts estimation is enabled, the project's estimated savings will also include income tax savings from depreciation. Estimates of income tax impacts should be considered approximations and should not be relied on for tax, legal or accounting advice. You should consult a tax professional to verify tax impacts.

⁷ SIR equals the ratio of project's estimated lifetime savings to its installed cost. Energy savings estimates include average annual utility price escalation factors for electricity and fuels, and an annual performance degradation factor to account for the percent by which the equipment performance is forecast to degrade each year. When income tax and depreciation impacts estimation is enabled, the project's lifetime savings will include the net effect of increased tax liabilities related to the energy cost savings and reduced tax liabilities related to depreciation and interest expense, where applicable.

⁸ Present value is the current worth of a future stream of cash flows given a specified rate of return. Your project's cash flows are discounted at a 5% discount rate. The higher the discount rate the lower the present value of future cash flows.

⁹ Property value increase is calculated by dividing the estimated first year improvement in net operating income (NOI) of \$42,320 by the estimated capitalization rate of 8.0%. NOI impacts include energy savings and other recurring costs/savings, e.g., maintenance savings. Tax and finance-related items, e.g., loan payments, tax credits, and depreciation are excluded from NOI.

¹⁰ Bonus depreciation allows federal taxpayers to deduct a significant percentage of an eligible asset's cost basis in the year in which the asset is placed in service. For assets placed in service during 2022 the percentage is 100%. In subsequent years the percentage is reduced by 20% per year, reducing to 20% in 2026 and 0% in 2027. Availability of bonus depreciation for state income taxes is determined by each state's tax code and may not be available in some states. In cases where bonus depreciation is less than 100%, the balance of the asset's cost basis may be depreciated using accelerated (MACRS) depreciation or straight line depreciation. If the MACRS depreciation option is chosen assets are classified as 5-year property. For assets that qualify for the Investment Tax Credit (ITC) the cost basis used for depreciation is reduced by 50% of the ITC. If the straight line depreciation option is chosen, the asset's cost basis is depreciated over its useful life in equal amounts each year. Roofing is always depreciated using the straight line method over 39 years.

¹¹ Typical HDD and CDD are based on statistically analyzed weather data for a 20-30 year historical period, and used in the weather normalization analysis to estimate energy savings that are representative of your

property's typical performance.

¹² Building direct CO₂e emissions reduction (metric tons) are estimated using U.S. EPA Emission Factors for on-site combustion. Indirect CO₂e emissions reduction, i.e., associated with purchased electricity, is based on EPA's eGRID2021 data representing fuel mix by state. Non-baseload output emission rates are used, including transmission and distribution losses at 4.5%.

¹³ Job-years created values are based on methodology outlined in the American Council for an Energy-Efficient Economy Study, Energy Efficiency Job Creation: Real World Experiences, 2012.

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