REWIRE ENERGY

NYSES

ReWire Performance Team

The Value of Zero Energy

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Presenters

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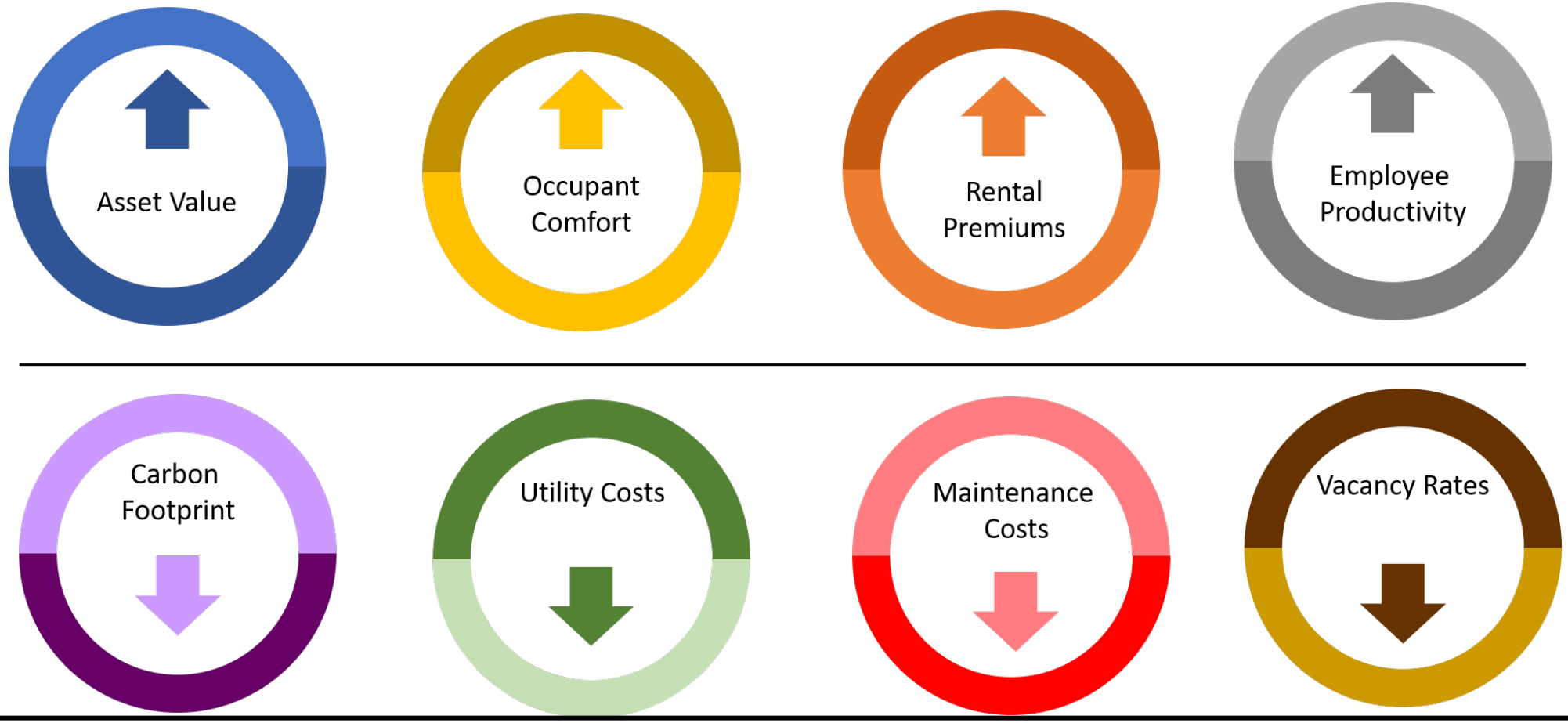
The Weidt Group

Definition of Zero Energy (ZE)

A **zero-energy building**, is a building with zero net energy consumption, meaning the total amount of energy used by the building on an annual basis is roughly equal to the amount of renewable energy created on the site, or by renewable energy sources elsewhere.

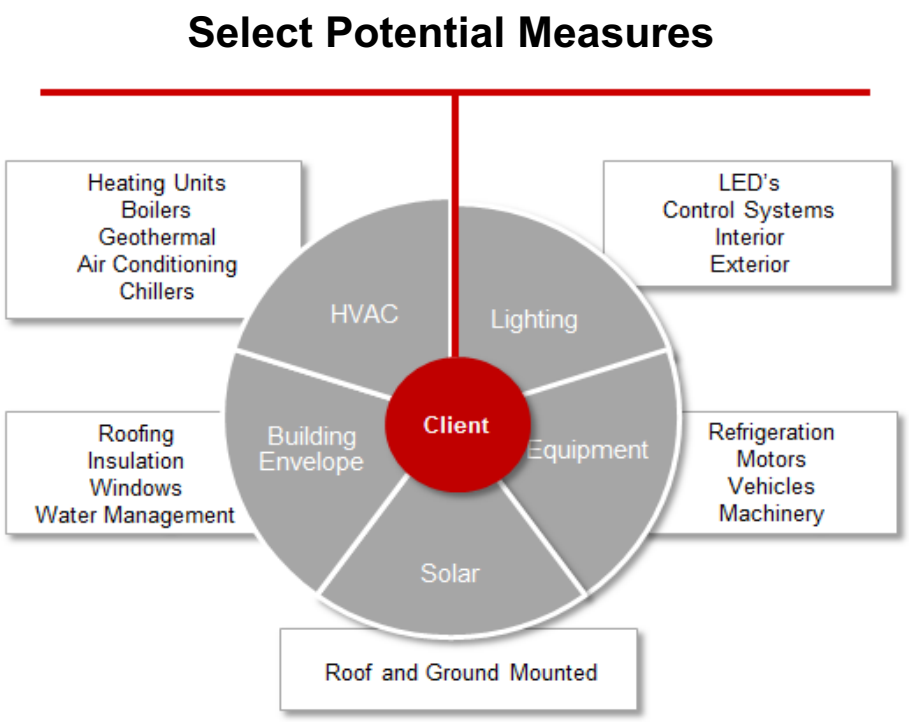
ZE buildings reduce overall energy initially through high levels of energy efficiency and conservation measures, and then by using renewable energy generation.

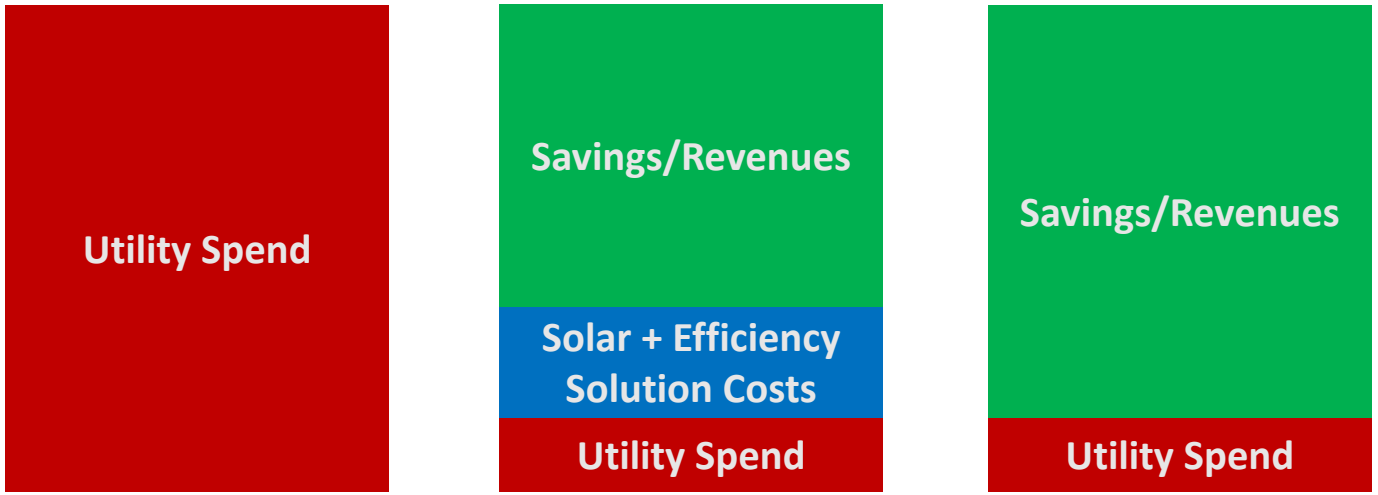
Value of Zero Energy Building Solution



Source: The Value of Zero: The Business Case for Net-Zero-Energy Homes, Offices, & Industrial Buildings

Combine Energy Efficiency and Renewables





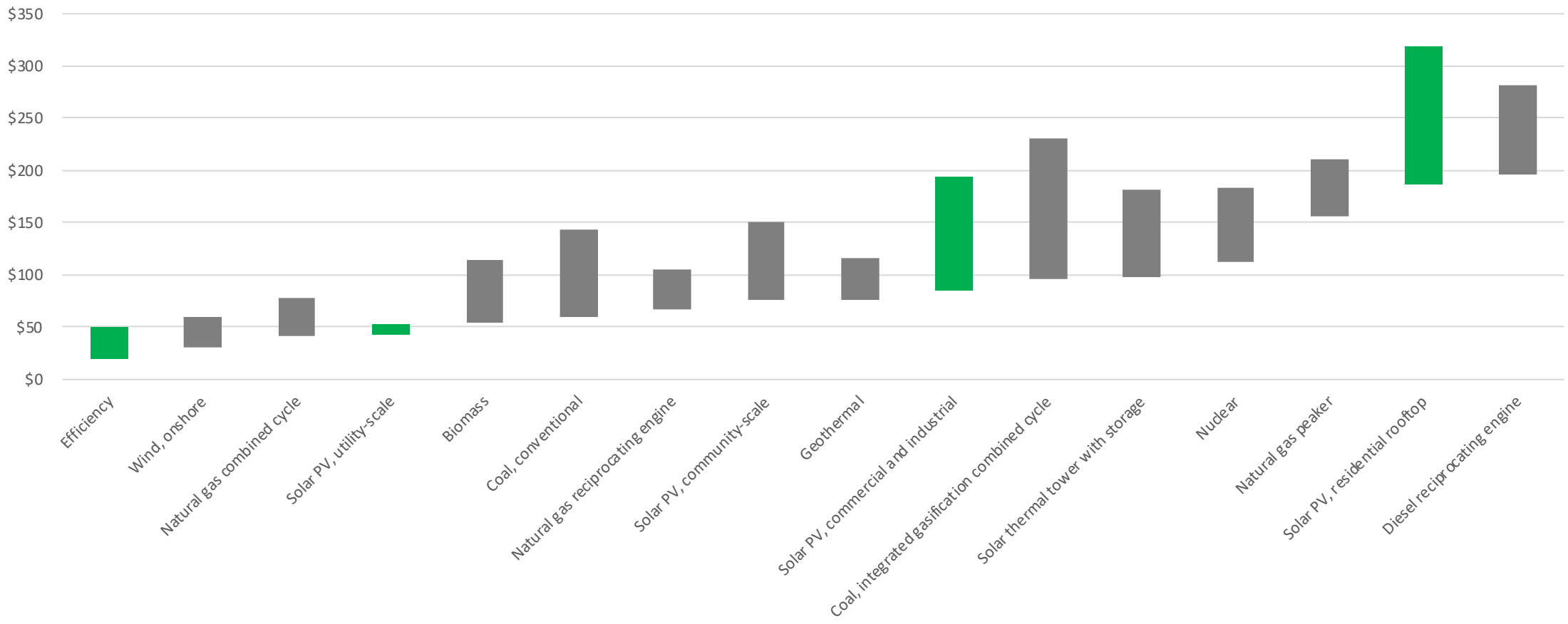
Pre-Project Utility Spend

Debt/Payback Period

Post Payback Period

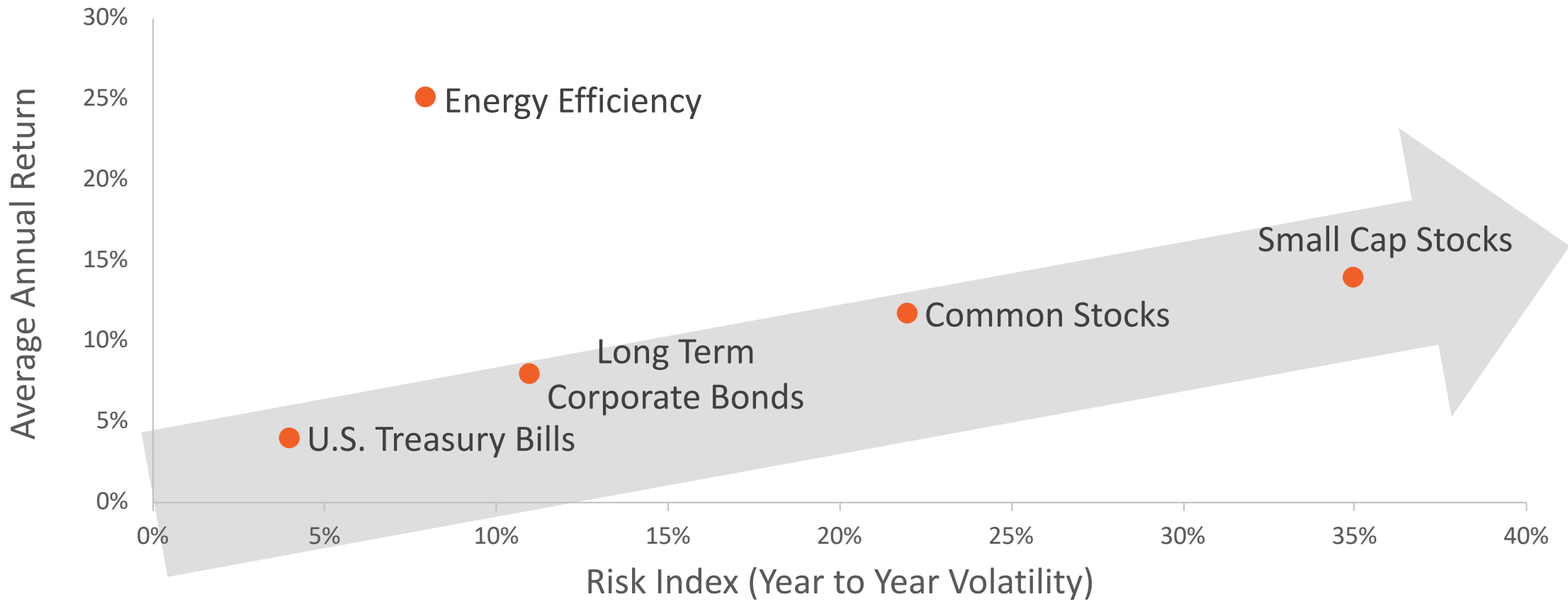
Levelized Cost of Electricity

Efficiency is our Least Cost Resource



Risk and Return of Investments

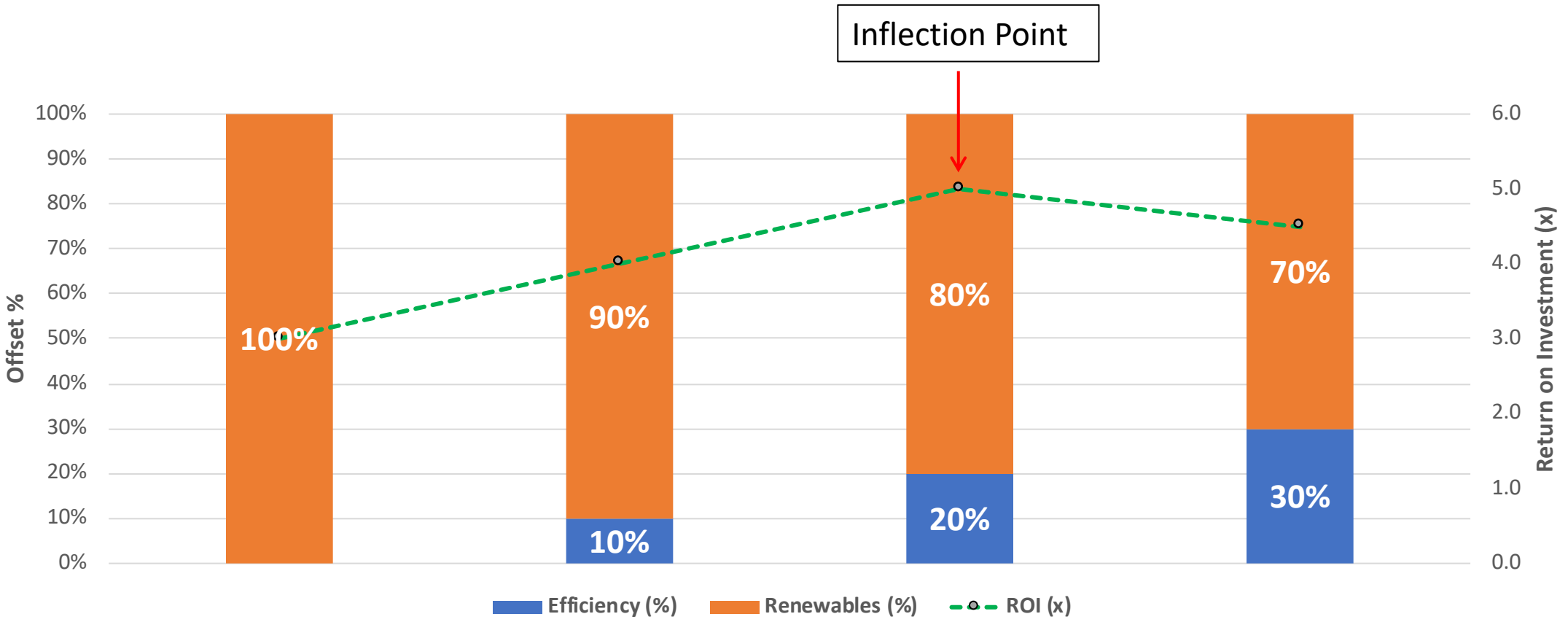
Efficiency Offers Higher Returns and Less Risk than Other Investments



Source: Vanguard Group for Stocks and Bonds, ACEEE for Energy Efficiency

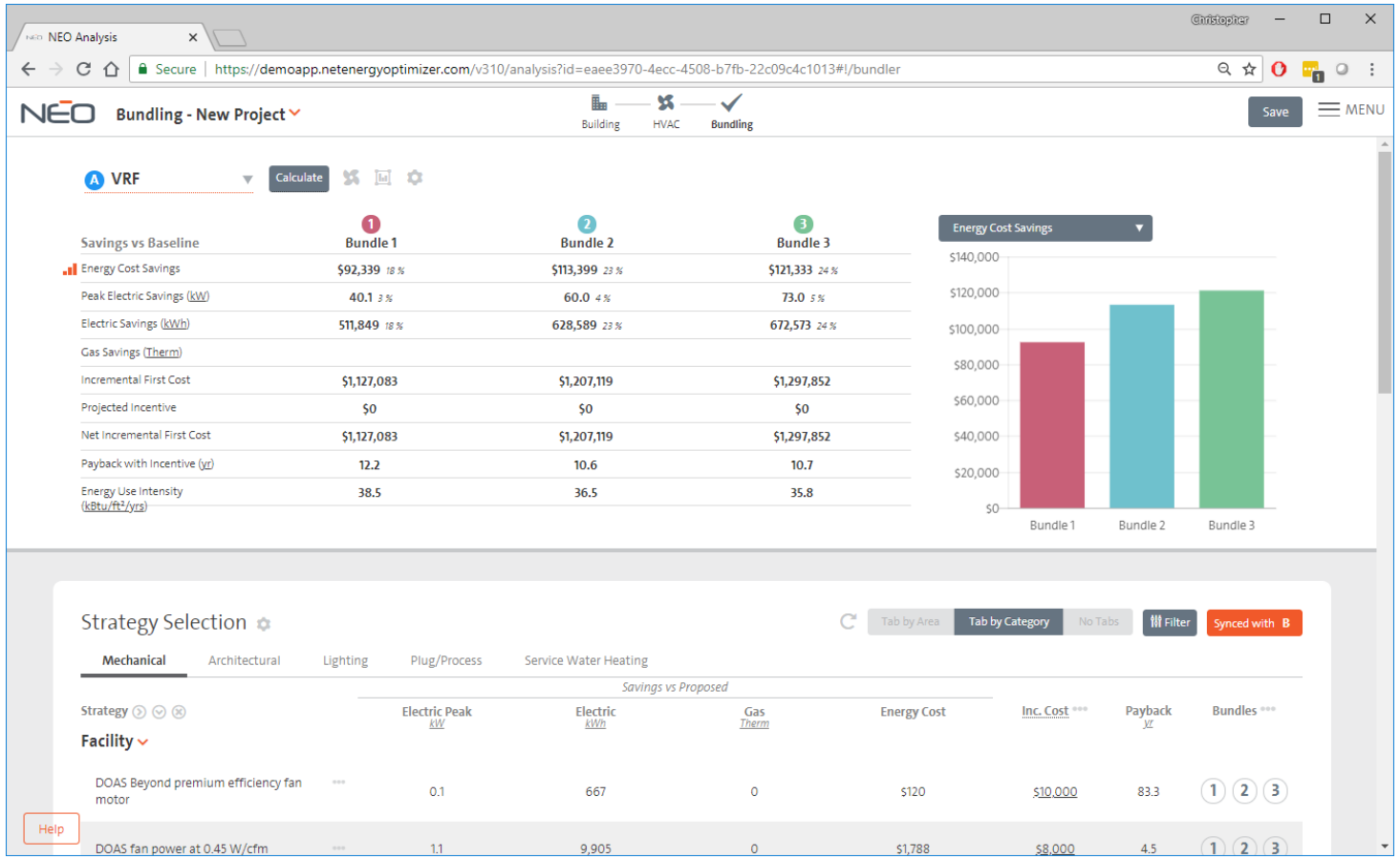
Efficiency and Renewables Relationship to ROI

Each Building will have a unique Inflection point



Energy Modeling

- Create three bundles of efficiency measures
- Compares to Code
- Facilitates conversation around optimal energy solution



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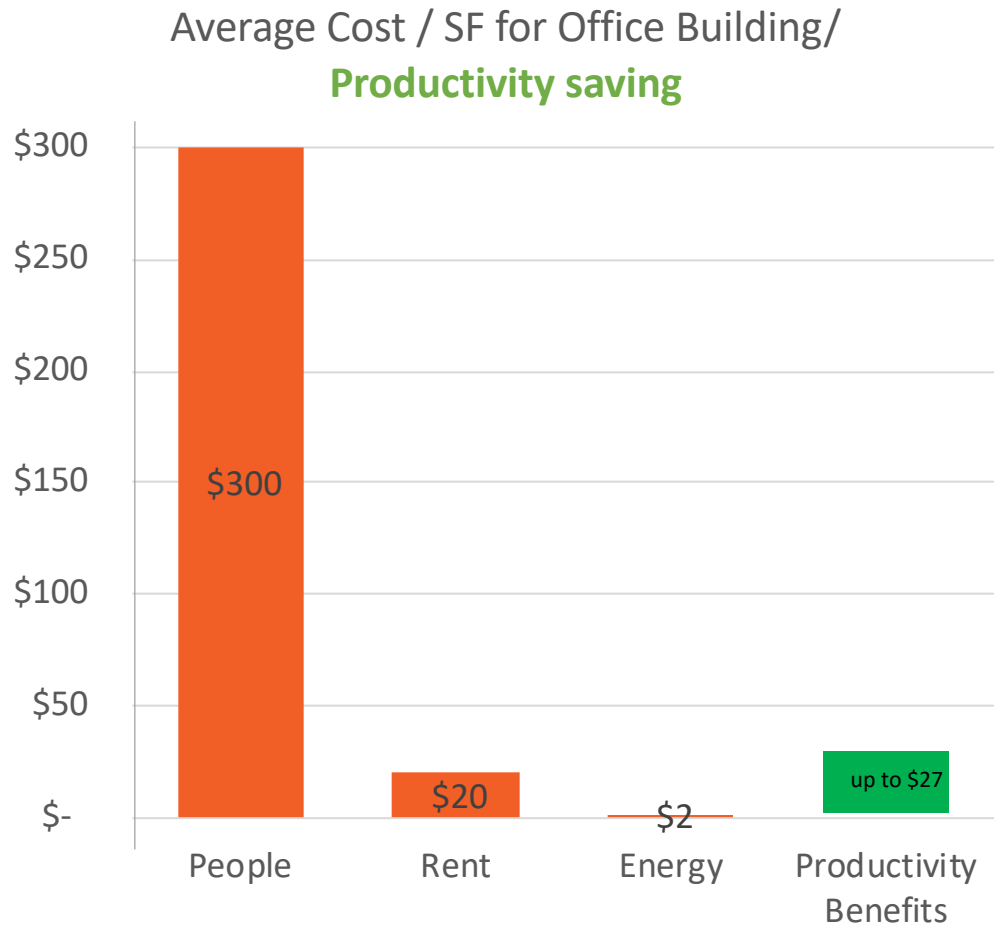
the energy practice of EYP Inc.

Energy Efficiency Benefits Productivity

High Performance Buildings Allow People to be More Productive

- Benefits are harder to measure, so often have been ignored
- Improved lighting: up to 23%
- Better thermal comfort: 9%
- Temperature control: up to 3%
- Quieter workspaces: up to 2%

Source:
http://www.buildingefficiencyinitiative.org/articles/productivity-gains-energy-efficiency

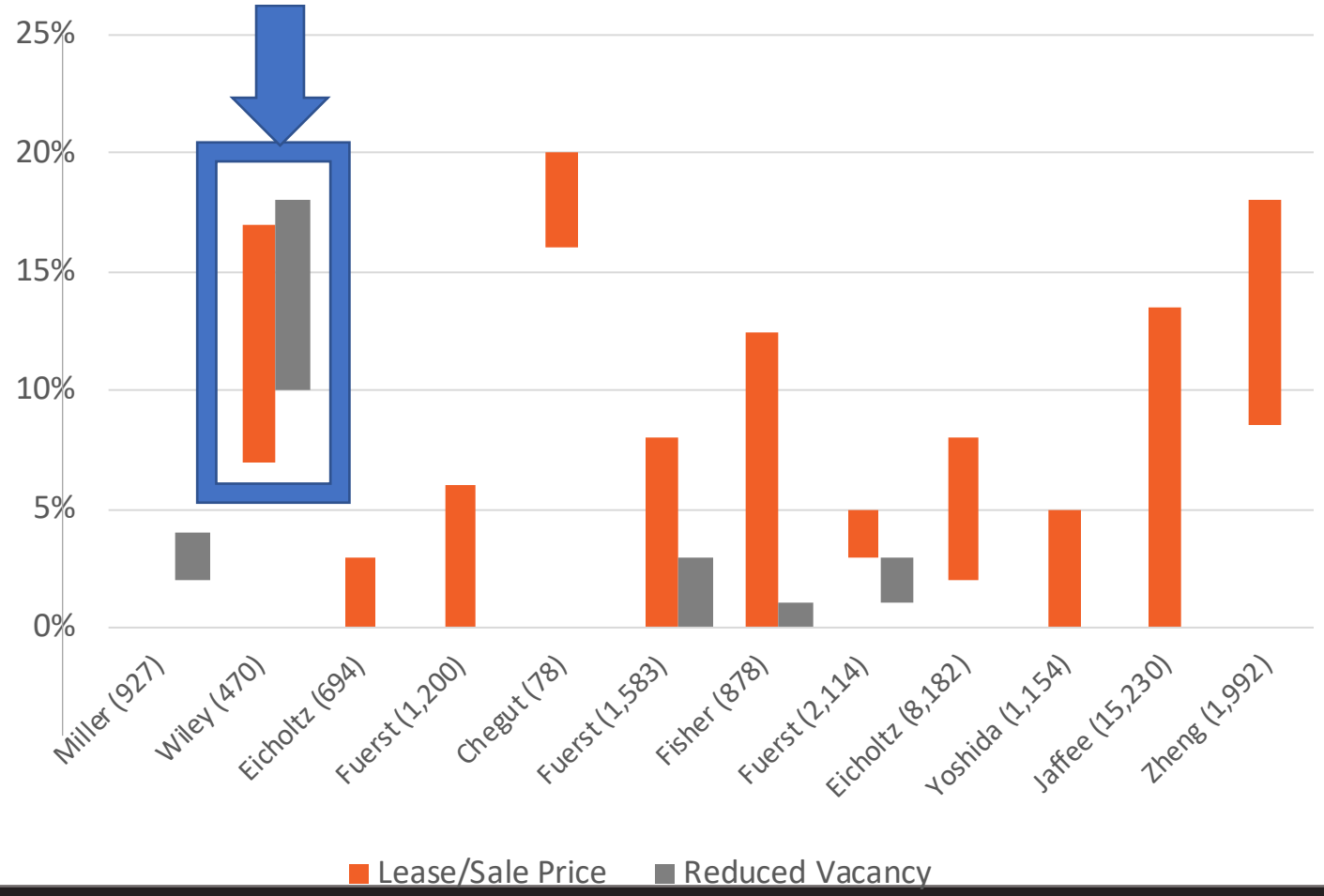


Energy Efficiency Contributes to Asset Value

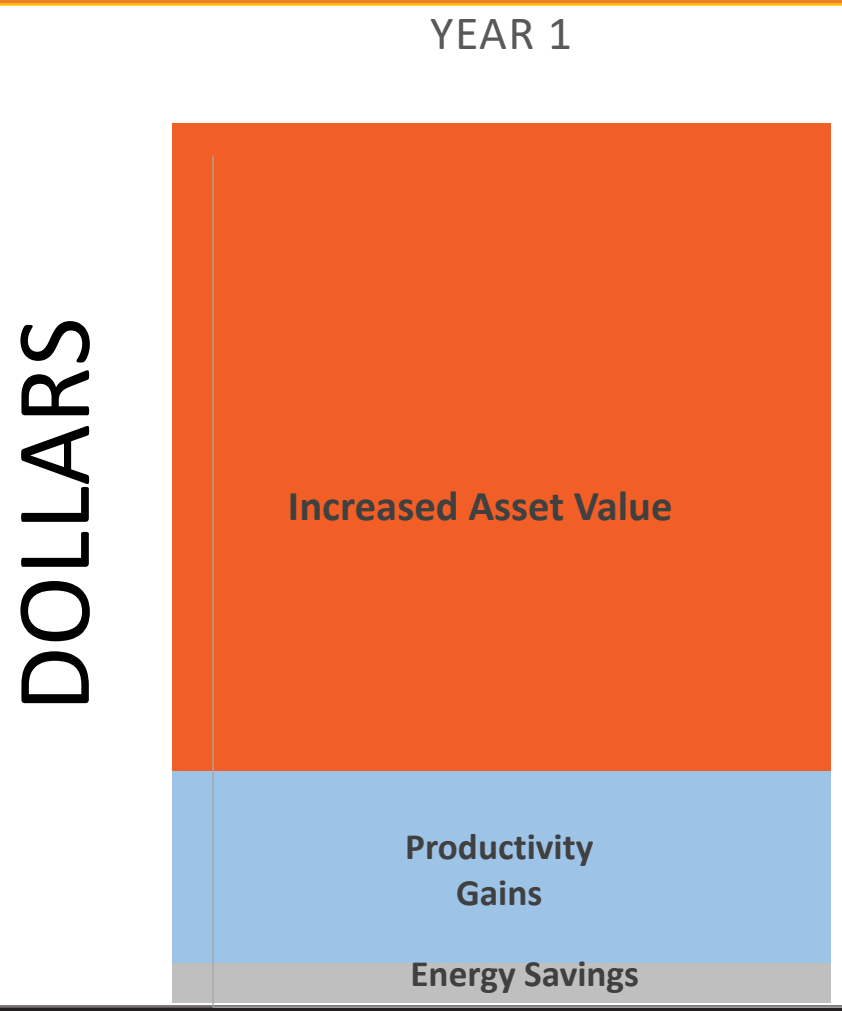
Studies Show Increase Lease and Sales Prices and Decreased Vacancy for LEED and ENERGY STAR Offices

- LEED Rated and ENERGY STAR Certified office buildings have less vacancy and higher lease rates

Source: Pat McAllister
http://www.energycodes.gov/GreenBuildings/documents/green_price_studies.pdf



The Value of Zero Energy



- Payback for Net-Zero
  - Efficiency + Solar: 10 years
  - With productivity gains: 2.5 years
  - With capturing asset value: Instant

Expected Economic Benefits

Applicable Sectors

- **Commercial (Warehouses, Offices, Restaurants, Hotels, Housing, Healthcare)**
- **Schools**
- **Industrial**
- **Municipal**
- **Agriculture**
- **Not-For-Profit**
- **Affordable and Workforce Housing**

Typical Economics

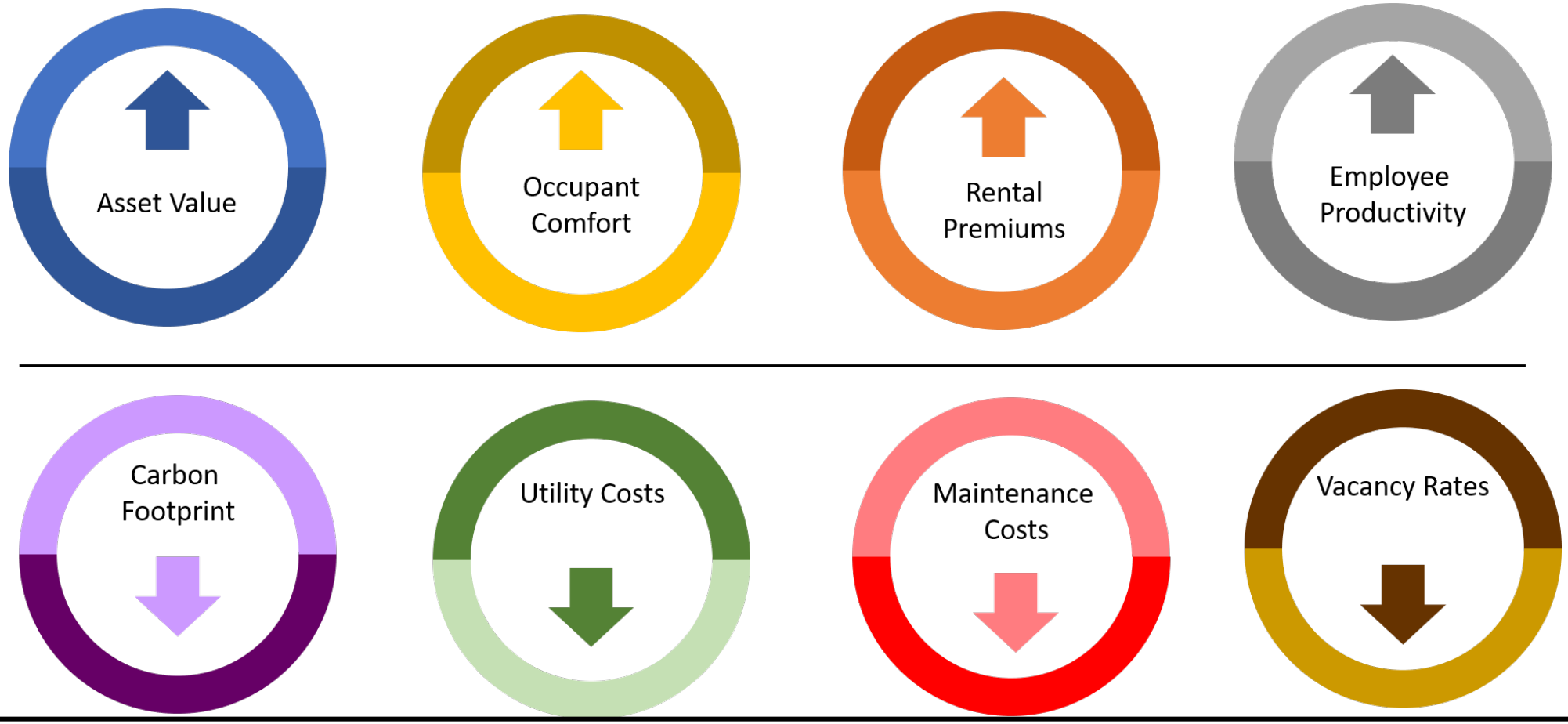
- **% of Construction: 3-5%**
- **$ Savings (%): 20-50%**
- **Payback (Years): 5-10 years**
- **Internal Rate of Return (%): 10-25%**
- **Return on Investment (x): 1-3x**
- **Upfront Costs (%): Up to 100% financing (including Soft Costs)**

Source: Rocky Mountain Institute

Financing Options

Decision Factor	Cash	Term Loan	Tax Lease	Capital Lease	Power Purchase Agreement (PPA)	Property Assessed Clean Energy (PACE)
Upfront Costs	100%	10-30%	0%	0%	0%	0%
Ownership	Yes	Yes	No (Early Buyout Option)	Yes	No	Yes
Term (years)	n/a	10-25 years	7-12 years	7-12 years	~20 years	20 years
Construction Financing	n/a	3-12 months	3-12 months	3-12 months	n/a	n/a
Collateral	n/a	Real Estate	Equipment	Equipment	n/a	Property Tax Lien
Tax Incentives Available	ITC; MACRS	ITC; MACRS	None	ITC; MACRS	None	ITC; MACRS
Payback (years)	5-7	5-10	7+	5-10	n/a	n/a
IRR (%)	10-20%	20%+	n/a	n/a	n/a	n/a
ROI (x)	2.0-4.0x	1.0-2.0x	1.0-2.5x	1.0-2.0x	n/a	n/a

Value of Zero Energy Building Solution



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