

PRELIMINARY ANALYSIS

Rooftop Solar + Storage Opportunity

Torrington, CT 06790 · 25-year analysis · cash purchase

A rooftop solar-plus-storage system supplies an estimated **65% of this site's electricity** and cuts the year-one bill by 64%, saving roughly **\$1.96M over 25 years**. After incentives, the net investment of \$234,312 is recovered in about 5.8 years.

25-YR BILL
SAVINGS*



\$1.96M

SIMPLE
PAYBACK



5.8 yrs

RATE OF
RETURN



15 %

NET PRESENT
VALUE



\$237K

*Nominal, pre-tax: year-one savings of \$47,082 escalated 4%/yr over 25 years. Present value after tax at an 8% discount rate: \$528,950.

What gets built

Rooftop solar PV	195 kW
Battery storage	35.8 kW / 255.1 kWh
Solar generation	~240,100 kWh/yr
Renewable share	~65%
Site load	~299,900 kWh/yr

What it costs

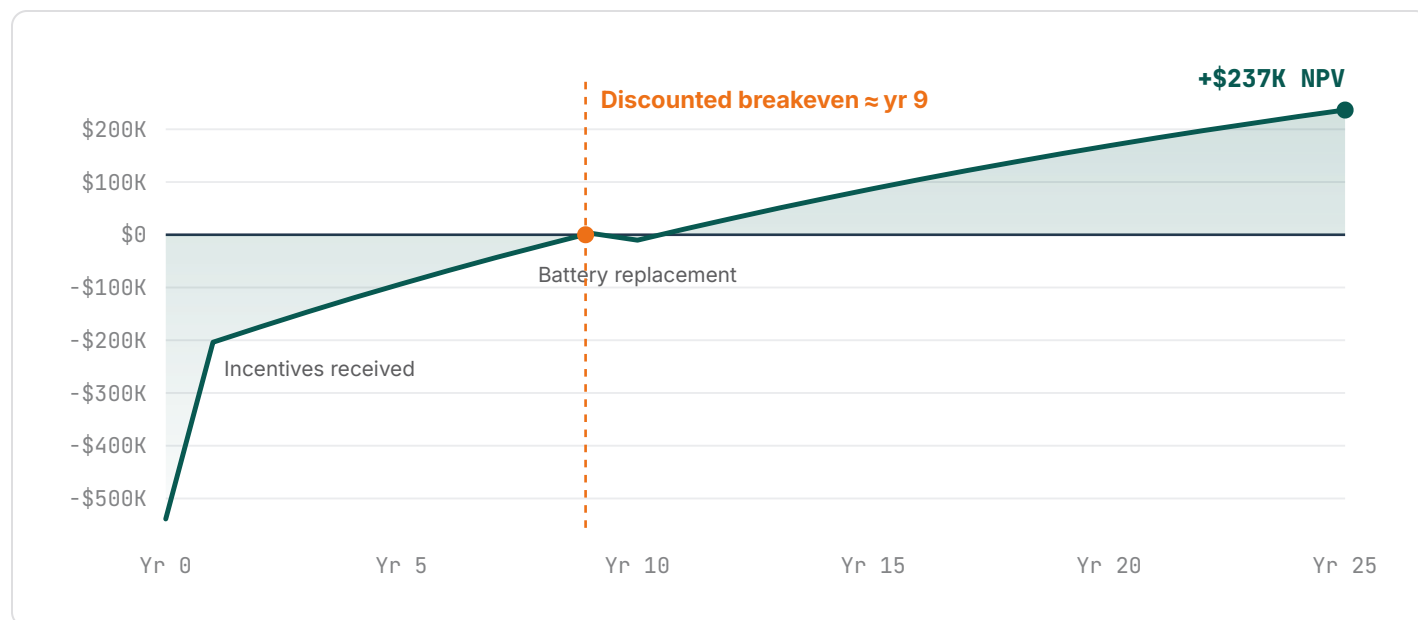
Total installed cost	\$538,937
Incentives & tax credits	-\$304,625
Net investment	\$234,312

Cash purchase. Includes the federal Investment Tax Credit (40% solar with bonus adders, 30% storage). Figures are estimates, not a guarantee.

How the savings add up

Cumulative after-tax cash flow versus doing nothing, discounted to today's dollars at 8%.

Incentives arrive in year one. In discounted terms the system breaks even in year 9, dips briefly below zero with the year-ten battery replacement, and stays positive from year 11 to finish at the \$237K NPV. The 5.8-year simple payback is undiscounted.



Electricity bill: today vs. with the system

Cost item	Do nothing	With system	You save
Year-1 energy charges	\$68,435.79	\$23,762.43	\$44,673.36
Year-1 demand charges	\$5,118.82	\$2,709.83	\$2,408.99
Year-1 total bill	\$73,554.61	\$26,472.26	\$47,082.35 · 64%
25-year electricity cost*	\$826,354	\$297,404	\$528,950

*After-tax lifecycle cost, present value over 25 years.

Environmental impact

97.2 t

CO₂ avoided per year (65% lower)

~2,090 t

CO₂ avoided over 25 years

~65%

of electricity from onsite renewables

KEY ASSUMPTIONS

Annual consumption: **~299,900 kWh** at this site

25-year analysis · 8% discount rate · 29.25% tax rate

Cash purchase; figures are estimates, not a guarantee

Rooftop area available: ~23,800 sq ft

4% annual electricity cost escalation

No export credit assumed (no net metering)