Surface Parking & Solar — 40-Year Insights

Fresno's Chaffee Zoo Corporation | Decision-focused review of the selected 40-year cash-flow model | August 26, 2026

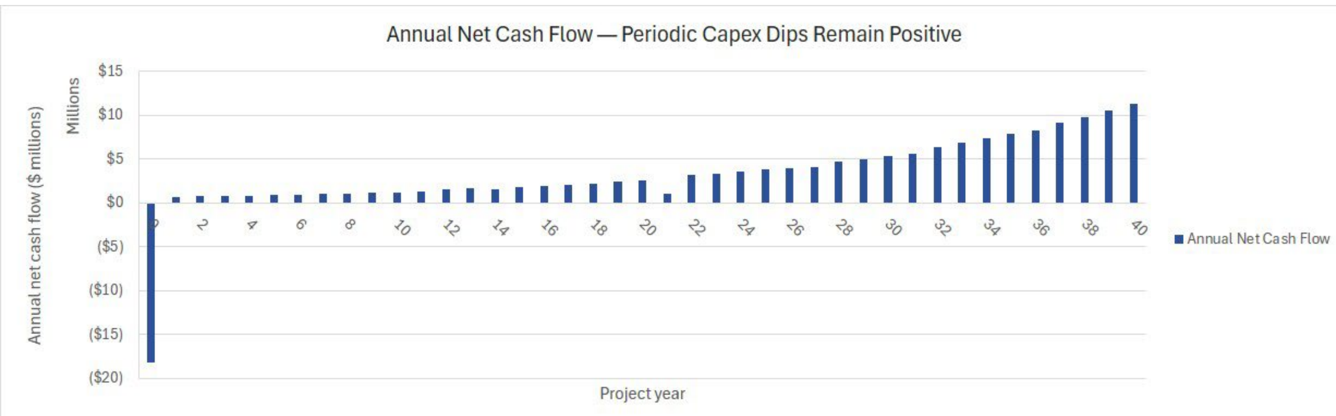
SIMPLE PAYBACK	YEAR-20 CUMULATIVE CASH	YEAR-40 CUMULATIVE CASH	40-YEAR IRR
15.7 years	**$9.9M**	**$131.2M**	**9.1%**

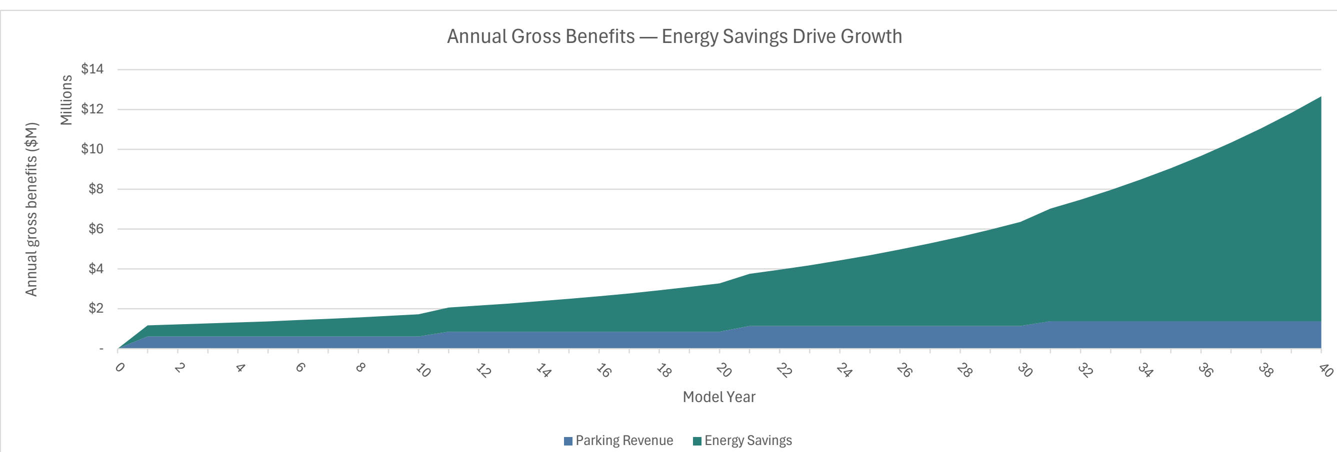
STORY IN BRIEF

The model begins with a $18.2M net outlay and crosses into positive cumulative cash at approximately 15.7 years. Cumulative cash reaches $9.9M by Year 20 and $131.2M by Year 40. Energy savings provide 78% of modeled gross benefits and compound at 8% annually, making long-term returns highly sensitive to utility escalation and sustained solar performance.

KEY FINDINGS

Metric	Live result	What it means
Initial net outlay	$18,247,485	The project starts with the $18.0M build plus the initial lease payment.
40-year simple ROI	718.9%	Nominal cash generation is strong over 40 years, but the long duration is essential to the result.
Energy share of gross benefits	78.5%	Energy savings dominate the benefit mix, so the 8% annual escalation assumption is the largest return driver.
NPV at 5% hurdle rate	$22,509,436	This tests the full 40-year cash flow against a 5% required return.
Largest ongoing capex (Year 21)	$1,913,010	The Year-21 repavement-led event causes the sharpest interruption in annual cash generation.
Operating cost CAGR	4.1%	Operating costs rise materially, but much slower than the modeled 8% annual growth in energy savings.





KEY MODEL ASSUMPTIONS

Assumption	Current input	Decision relevance
Parking stalls	558	Sets parking capacity and the base revenue ceiling.
Fee per stall	$5 starting; $1 every 10 years	Starts at $5; the $1 step every 10 years raises modeled fees to $6 in Years 11–20, $7 in Years 21–30, and $8 in Years 31–40.
Daily utilization	60%	Starts at 60% and increases by 10% every 10 years.
Energy usage offset	55%	Determines the Year-1 savings captured from the electricity baseline.
Energy escalation	8%	Compounds energy savings and drives most of the long-run value.
Annual Lease Payment	$247,485	Moves with parking fee increases rather than annual CPI in this summary.