



ACTUAL PROJECT

Small Industrial Facility

New York

Calibrated building simulation supporting energy-cost allocation and future Building-to-Grid investment screening

BUILDING Manufacturing + office	LOCATION Upstate New York	MODEL RESOLUTION 15-minute	PRIMARY DRIVER Validated energy baseline
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Decision Challenge

The facility needed a defensible separation of manufacturing and office energy use for sales-tax reporting even though the spaces shared part of the electrical service. The client also wanted the analysis to create a reusable energy baseline rather than a one-time allocation exercise.

How the LovEnergy Platform Was Used

The LovEnergy Platform created a whole-building simulation that represented manufacturing and office spaces separately, then calibrated the model against actual utility bills. Simulations were run at 15-minute resolution - 35,040 intervals across a representative year - to allocate shared electric supply and demand costs. **The calibrated model then became a reusable analytical baseline for preliminary solar and future Building-to-Grid investment screening.**

DATA INPUTS Bills, building + operating data	BUILDING MODEL Manufacturing + office zones	CALIBRATION Utility bills + 15-minute simulation	LOAD ALLOCATION Supply + demand cost split	INVESTMENT BASE Solar + future B2G screening
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LovEnergy Platform Capabilities Demonstrated

CALIBRATED SIMULATION Model outputs were checked against actual utility data to improve confidence in the energy allocation.	SUB-BUILDING LOAD ALLOCATION Separated manufacturing and office loads even where electricity was jointly metered.	REUSABLE ENERGY MODEL Turned a tax-allocation study into a reusable software baseline for future efficiency, DER, electrification and resilience decisions.
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Validated Results and Reusable Outputs

OUTPUT	RESULT	PLATFORM BASIS	OWNER IMPLICATION
Manufacturing allocation	~82% of metered supply + demand cost	Modeled manufacturing and office loads plus meter structure	Created a defensible basis for sales-tax reporting.
Annual model calibration	~4% energy variance	Simulation calibrated to actual annual utility energy	Increased confidence that the allocation reflected real operation.
Preliminary solar screen	~+\$4M net value over 25 years*	Calibrated baseline + 2024 incentive / tariff / VDER assumptions	Identified a high-value opportunity for deeper project development.

Client Value and Building-to-Grid Decision

WHY THE SOFTWARE MODEL MATTERED - The mixed meter could not be separated reliably from billing data alone. - The model incorporated occupancy, equipment, lighting, HVAC, construction, and schedules; site review confirmed oil and propane heating served manufacturing only.	OWNER / MANAGER VALUE Established a defensible tax-reporting allocation and a reusable calibrated baseline, reducing uncertainty and duplicated work in future energy-investment analysis. BUILDING-TO-GRID DECISION Reuse the calibrated model as the baseline for future solar, storage, electrification, efficiency, grid, and resilience decisions.
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* Preliminary solar result from the 2024 feasibility screen; dependent on the incentive, tariff and VDER assumptions used at that time.
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