LOVENERGY PLATFORM | BUILDING-TO-GRID CASE STUDY

10 MW Green Factory

Grid-aware net-zero investment strategy for a large industrial facility

ACTUAL PROJECT

BUILDING	LOCATION	SITE LOAD	PRIMARY DRIVER
Large industrial	New Mexico	~10 MW	Net-zero target

Decision Challenge

The client had committed to a science-based / net-zero objective without materially changing factory operations. The decision was whether a technically feasible renewable portfolio could also fit the site, connect on the required schedule, and produce an acceptable lifecycle business case.

How the LovEnergy Platform Was Used

The LovEnergy Platform combined hourly load data, DER sizing, economics, land constraints and grid/interconnection risk in one repeatable workflow. **LovEnergy expert review validated assumptions and translated platform outputs into the final investment recommendation.**

HOURLY INPUTS	SCENARIO ENGINE	GRID-AWARE SCREEN	PORTFOLIO ECONOMICS	DECISION INTELLIGENCE
Load profile site + cost data	Wind / solar / BESS portfolio sizing	Queue timing upgrade exposure	Benefit Cost Ratio (BCR) comparison storage value	Advance / defer / revisit

LovEnergy Platform capabilities demonstrated: multi-technology screening • hourly load integration • grid/interconnection risk • portfolio economics • consistent decision logic

Scenario Comparison

PORTFOLIO	SCALE	MODELED ECONOMICS	DECISION IMPLICATION
Wind	**47 MW**	**BCR 0.72**	Strongest economics, but on-site land availability was not practical.
Solar PV	**70 MW**	**BCR 0.46**	Could meet the net-zero target, but economics remained below the investment threshold.
Solar + Storage	**70 MW PV + 33 MW / 348 MWh BESS**	**BCR 0.67**	Storage improved value materially, but the combined portfolio still did not clear a positive business case.

Client Value and Building-to-Grid Decision

WHY THE PROJECT DID NOT ADVANCE

- Economics remained below the client's threshold.
- Wind required impractical on-site land.
- Queue timing and potential grid-upgrade exposure created cost and schedule risk.

REVISIT IF: economics, land strategy and interconnection certainty improve.

OWNER / MANAGER VALUE

The platform-enabled study gave the client a defensible basis to pause a potentially multi-million-dollar investment rather than advance a technically feasible but economically weak portfolio.

B2G DECISION: Use lifecycle economics, land, interconnection timing and grid impacts as hard decision gates—not the emissions target alone.

The LovEnergy Platform is a Building-to-Grid Decision Intelligence Platform designed to standardize and accelerate investment screening. Expert review is applied where engineering judgment, data interpretation or market context is required.

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