HOW BATTERY OPERATORS USE MOLECULE.

MOLECULE

Client profiles and workflows across battery energy storage portfolios

Molecule is the system of record for several battery energy storage operators trading across power markets. These operators range from pure day-ahead and ancillary services participants to firms managing offtake agreements, indexed sales, and multi-asset renewable portfolios. In each case, Molecule replaces spreadsheet-based tracking with automated trade capture, real-time position management, ISO-connected award ingestion via Elektra (supporting every North American ISO, including AESO and CENACE), and consolidated P&L reporting, giving trading desks and their boards a single source of truth as portfolios scale from one asset to many.

Client Profiles

Four battery operator patterns, each representing a distinct trading profile and Molecule configuration.

Offtake + Indexed Sales + Ancillaries

Manages battery assets under offtake agreements with indexed sales pricing. Charges batteries when prices are low (or behind the meter) and captures ancillary services revenue. Each battery is modeled as an Asset in Molecule with its own book; related transactions share that book for consolidated reporting across offtake income, ancillary awards, and charging costs, replacing multiple spreadsheets with a single, real-time position view.

Day-Ahead Awards + Ancillaries Only

The simplest battery pattern: pure day-ahead bidding and ancillary services participation with no term contracts. Elektra handles ISO connectivity and automated award ingestion from ERCOT. Demonstrates how Molecule serves as the book of record for short-term market activity with minimal configuration overhead.

Solar + BESS Revenue Modeling

Renewable portfolio operator running solar and battery assets across multiple US ISOs. DART reporting (forecast vs. actual), DAM/FMM/RTM market logic, charge/discharge capacity representation, REC tracking, and contracted revenue structures. Battery assets integrate with the customer's forecast model for dispatch optimization alongside Molecule's position and P&L reporting.

Power Trading + FTR Awards

Power trader with FTR positions cascading from monthly to daily to hourly via Elektra. Automated product creation from public award files, day-ahead awards, and ancillary services. Demonstrates the full ISO connectivity and automated trade capture workflow that replaces manual award tracking.

Workflows

How battery operators use Molecule across the trading lifecycle — from trade capture through board-level reporting.

Asset Modeling & Trade Capture

Each battery is implemented as an Asset in Molecule with a dedicated book. All related transactions — charge/discharge cycles, offtake agreements, capacity commitments, ancillary service awards — are assigned to that book for consolidated reporting. Trades are captured automatically via Elektra (ISO awards) or API from optimization and dispatch systems. Molecule supports the full range from simple day-ahead awards to offtake agreements with indexed pricing to complex PPA and contracted revenue structures.

ISO Connectivity via Elektra

Elektra connects to every North American ISO: ERCOT, PJM, CAISO, MISO, ISONE, NYISO, SPP, AESO (Alberta), and CENACE (Mexico). Awards flow automatically into Molecule: FTRs/CRRs, day-ahead, real-time, and ancillary services. LMP and SPP pricing at the node level. Settlement reconciliation against ISO statements. Product creation for new FTR paths is scripted and semi-automated. For battery operators, this replaces the manual process of downloading award files, copying into spreadsheets, and reconciling against invoices.

Forecast Integration

Battery assets can be integrated with the customer's dispatch optimization and forecast models, either using models the customer already operates or custom-built alongside them. Forecast data flows into Molecule for comparison against actual dispatch and settlement, enabling DART reporting (day-ahead vs. real-time vs. forecast vs. actual) that is critical for understanding dispatch value and optimizing bidding strategy.

Position, P&L & Reporting

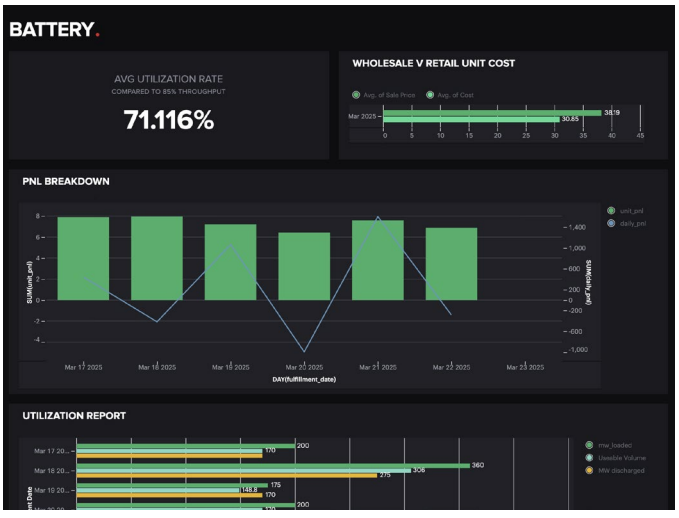
Real-time view across all revenue streams — offtake, ancillaries, DA/RT spread, contracted revenue — in one consolidated position per asset and across the portfolio. Because each battery's book aggregates all related transactions, P&L is visible at both the individual asset and portfolio level without manual assembly. This is what our customers' boards ask to see; they expect to answer arbitrary questions quickly and with a high degree of accuracy.

Scalability: 1 Battery → N Batteries

Each incremental battery asset reuses existing market logic, data pipelines, and reporting frameworks. We are actively driving onboarding time toward self-service (sub-day) as battery portfolios scale. The same pattern applies to geographic expansion across ISOs and to adjacent asset types (solar, wind, data centers).

Sample Reports

Representative views from Molecule battery operator deployments.



Battery Position & P&L Report

DART / Forecast vs. Actual Report

For a tailored demonstration of these workflows with your specific asset portfolio and market participation, contact your Molecule representative.

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