SOLAS ENERGY®

Energy Storage Modelling Services

Solas Energy® provides technical and financial services for energy storage and hybrid energy systems. We support clients across North America in evaluating, designing, and optimizing battery energy storage systems (BESS) for utility-scale and distributed energy projects.

Project Evaluation | Decision Support | Revenue and Market | Battery Optimization

Project Evaluation & Strategy

- Assess project economics to determine the value of adding energy storage to new or existing projects.
- Determine how storage can help manage curtailment risk, voltage regulation and ramp-rate compliance.
- Identify whether it is more optimal to charge from the grid or charge from your renewable resource.
- Model IRR, CAPEX/OPEX, cost savings, sensitivity analysis and investment returns.

Technical System Design

- Identify optimal system sizing (in MW and MWh) for your site specific renewable resource, duty cycle, and augmentation planning.
- Evaluate optimal charge and discharge profiles to determine what technology is required for your renewable generation profile.
- Analyze degradation, round-trip efficiency and capacity augmentation.

Revenue & Market Analysis

- Quantify and stack revenues from energy, ancillary services, capacity, and grid support.
- Identify optimal dispatch strategy.
- Account for market volatility, operational limits, technical constraints, and regulatory/tariff impacts.

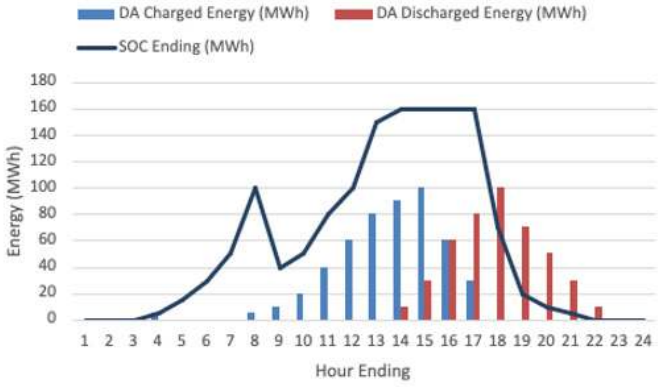
Key Deliverables

- Executive summary, definitions, and financial summary tables.
- Able to compare and customize scenarios with:
  - **Inputs:** battery specs, augmentation, interconnection limits
  - **Outputs:** Revenues by category/application, average state of charge, required revenues

Key Questions the Model can Answer

- What are the potential revenue streams?
- When should the system charge from the grid or from the renewable resource?
- How can charging and discharging cycles be optimized for performance and lifespan?
- What is the BESS utilization rate (cycles per day)?
- How much of the BESS should be allocated for ancillary services?
- What is the extent and duration of curtailment available for storage?
- What are the optimal BESS capacity and energy discharge configurations?

Snapshot



Navigating Complexity.
Storage Modelling that Powers Growth.

Contact Us Today to Learn More

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Innovative.
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Trusted.