

Hybrid Solar + Storage Retrofit with *No Downtime*

Overview

Transforming a 9 MW solar site into a 30 MWh hybrid asset while keeping operations online.

At an existing 9 MW solar farm, enSights is leading a comprehensive FTM retrofit that will transform the site into a ~30 MWh hybrid solar + storage asset without taking the system offline. The project replaces an aging SCADA system, adds 50 MWh of storage, and connects both solar and storage to the grid through enSights’ secure controller and EMS.



The Challenge

First-time integration with the utility for this IPP

Strict cybersecurity rules limiting external access to site data

Need to interface with third-party cybersecurity hardware while remaining fully compliant

High safety and operational standards at a strategic, high-capacity facility



What enSights Delivers

Modernizing a high-value asset under strict cybersecurity and operational requirements. enSights EMS as the site’s central brain, managing solar + storage with secure grid connectivity.

- Replacement of the legacy SCADA with enSights’ EMS as the central “brain” of the site
- Integrated control of both the 10 MW solar field and 50 MWh storage system
- Optimization of charging, discharging, and production planning for maximum economic value
- Built-in, advanced cybersecurity using enSights’ cyber solution to meet strict grid and IPP requirements

The EMS is already managing the solar assets, and storage integration is in its final stages moving the entire site toward unified, efficient, and profitable energy management.

Cyber & Compliance Requirements

Meeting utility standards, grid-forming control, and advanced cybersecurity integrations.

Impact to date & expected

From 1.5 MWh/day today to unlocking thousands in daily revenue with unified optimization.

1 Existing production: ~1.5 MWh/day from a potential 40 MWh/day

2 Expected: revenue uplift of more than thousands \$ per day once storage is fully optimized

3 enSights EMS maximizes hourly energy potential and orchestrates both generation and storage as one intelligent asset

4 First-of-its-kind hybrid retrofit in the region, creating a repeatable blueprint for future projects

Why it matters

Proving that hybrid retrofits can be executed without downtime and without operational disruption.

This project shows how a complex, high-value solar asset can be upgraded to a hybrid solar + storage site with modern SCADA, EMS, and cybersecurity without sacrificing uptime. It’s a template for IPPs and developers who want to modernize legacy sites, unlock new revenue, and meet stricter grid and cyber requirements.

Interested in a similar retrofit with no downtime?

Reach out to our team to learn more about this confidential project and what’s possible for your portfolio.

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