Solar+ Battery Storage

Statement of Qualifications
NLS Engineering is an established professional engineering services firm specializing in solar and battery storage. Our team of multi-disciplined integrators are experts in electrical design, SCADA, plant control programming, data management systems and commissioning.

As a vendor agnostic engineering firm, we work with utilities, developers and EPCs where our ultimate goal is to find the best solution for all stakeholders. Our extensive knowledge of design, commissioning, plant control, and grid support in both the C&I and utility scale space includes storage + solar applications and is leveraged by some of the largest producers of renewable energy in the world.

We are intimately familiar with energy engineering from conception through to power generation. Utility owners, developers and EPCs count on NLS to deliver projects with the utmost cost-effectiveness and technical proficiency.
Substantial Experience

We have completed 2GW+ of utility solar SCADA design, programming, and commissioning in the United States and Canada in the past three years. Our focus is solar power and battery storage.

Hardware & Software

We supply, configure, and install SCADA servers, software, plant control PLC hardware, network panels, network switches, fiber, MET stations, and inverter SCADA PCS panels so you can hit the ground running.

Comprehensive Services

We offer electrical engineering, PLC programming, SCADA, networking and telemetry, data management and reporting, commissioning and corporate systems integration.

Project Management

We take a lead role throughout the life-cycle of a project. From planning and design, to implementation of control all the way to testing, commissioning and on-going support.

Global Service

NLS is set up to deliver projects globally. We can step in at any point in a project to maximize efficiency, quickly apply solutions to issues, and to aggressively drive projects to closure.

Commissioning

Leveraging considerable project commissioning field experience, NLS is known to aggressively push projects forward to power generation & COD.
Utility Scale Solar

Engineering Design
- Electrical, instrumentation & controls
- SCADA panel design and equipment specifications
- Fiber and copper structured cabling

Plant Control Programming
- Functional needs assessments and regulator/off-taker specifications
- Plant control strategy, optimization, and narrative development
- RTU configuration & PLC programming
- Voltage step testing, power factor, reactive power, grid support
- Active power control, automatic voltage regulation, and curtailment

SCADA
- SCADA design specifications, standards
- Process control narrative development
- System audits, Support & Maintenance
- Modern and intuitive HMI development
- Plant simulation & software Factory Acceptance Testing
- Data management and reporting
- Energy Management System
- Corporate systems integration
- Cloud SCADA Infrastructure (AWS, Azure)

Networking & Telemetry
- Fiber/copper/wireless network and telemetry design
- Network and field device equipment specification & configuration
- Fiber termination, testing and certification
- NERC CIP compliance and reporting

Commissioning
- Cold/Hot commissioning test planning document development
- Pre-Commissioning site wiring, communications, server checks & verification
- RTU/Substation & SCADA operational point check-outs and plant tuning
Commercial & Industrial

Engineer
From electrical to instrumentation and controls engineering, we have you covered. We use industry-standard, off the shelf components and a vendor agnostic approach to ensure the best value for our customers.

- SCADA Design
- Network Design
- Field Equipment Specifications
- Plant Control Programming
- SCADA/Monitoring System Development

Procure
We provide turn-key supply and installation of SCADA field equipment and software. This gives our customers everything they need to get a solar site up and running.

- Fiber/Copper/Wireless Network
- Meters, CT/PT, Protection, RTUs
- SCADA, Fiber, Communications Panels
- MET Stations
- SCADA Hardware & Software

Commission
We offer commissioning services for new and retrofit sites. Our team of experienced integrators work with your medium-voltage contractors on the ground.

- Networks, Terminations, Testing
- Plant Control & SCADA Commissioning
- Field Equipment Configuration
- Project Management
Powerful Monitoring Solutions.

Our centralized solution offers unlimited data points, users, and 24/7 support. No monitoring fees.
Rugged and dependable hardware.

We supply DAS panels, MET Stations, Sensors and Meters for your Commercial & Industrial solar projects.
Solar+ Battery Storage

Battery Site Control

We control sophisticated grid-tied and behind-the-meter battery systems. Our fully featured plant controller design includes active and reactive power control loops, as well as voltage, PF and reactive power support.

- Plant Control Programming
- SCADA & Commissioning
- Vendor agnostic
- New Sites & Retrofits

Standalone Battery Storage

We're experts at controlling grid-connected utility scale storage and behind-the-meter microgrid and battery systems. Our control improves ROI and allows our customers to reach new markets.

- Peak Shifting
- Lowered Demand Charges
- Frequency Regulation
- Voltage Support

AC & DC Coupled Battery

NLS develops controls for PV or wind-tied battery storage. Clipping capture traps potentially wasted energy, PV smoothing uses batteries to normalize PV output, and energy firming stabilizes variable generation.

- Clipping Capture
- PV Smoothing
- Energy Firming
Testimonials

“When it comes to controls for Solar + Storage, these guys really know their stuff.”
Hanan Fishman
President
Alencon Systems LLC

“The NLS team performed exceptionally well on our solar project.”
Andi Kasapi
Project Manager
PCL Construction Inc

“One of the best SCADA companies I’ve worked with.”
Yousef Ali
Construction Manager
Bigues Energía

“I’m very satisfied with the work from NLS. Their team was very responsive.”
David Stillman
Project Manager
Borea Construction

“We’re extremely satisfied with the performance of the NLS team.”
Kevin A. Fleming
Controller and Vice President
BMR Energy LLC

“Strongly recommend NLS to anyone looking for SCADA partner and solution provider.”
Aleksey Toporkov
President
ARDA Power
Utility Scale Projects

USVI / BMR ENERGY

St. Croix Solar PV Site

NLS developed a comprehensive PV Solar SCADA system, with the project scope including plant control, networking, programming, engineering design, and commissioning.

FLORIDA / NEXTERA ENERGY

Manatee Solar PV Site

NLS completed a full SCADA implementation for NextEra Energy's 75MW Manatee solar site. The deliverables included plant control, networking, programming, engineering design, and commissioning.

ONTARIO / NEXTERA ENERGY

Elmira Battery Storage Site

NLS completed plant control, networking, programming, and commissioning for NextEra's 2MW/8MWhr battery storage site. The deliverables also included a custom master battery management system (BMS) to maintain battery health.

FLORIDA / NEXTERA ENERGY

Citrus Solar + Battery Storage Site

NLS developed a comprehensive DC coupled battery SCADA system for the Citrus Solar/Battery site. The scope included adding an additional 8MWhr to the existing 74.5MW solar site.
### RECENT UTILITY SOLAR PROJECTS

<table>
<thead>
<tr>
<th>Project</th>
<th>Location</th>
<th>Size (MW)</th>
<th>Project</th>
<th>Location</th>
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### RECENT BATTERY STORAGE PROJECTS

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Commercial & Industrial Projects

UNITED STATES / ECOPLEXUS

Cloud SCADA Portal

NLS developed a central monitoring system for 28 sites (and counting) in an extended C&I solar portfolio. All remote sites communicate with the central AWS cloud instance. Functionality includes live data, inverter-level monitoring, reporting, trending, and export.

UNITED STATES / BLUEARTH RENEWABLES

On-Premise SCADA Portal

NLS provided monitoring for 10 sites 0.8MW to 5MW in size. Each site received a PC-equipped DAS panel which communicates with a central physical server configured by NLS and owned by the customer. NLS was responsible for DAS Design Drawings, SAT Documents & Commissioning.

UNITED STATES / GERONIMO ENERGY

Hydra DAS Panel

NLS provided a complete DAS panel solution for a 1MW solar installation, including MET Stations, Metering, and software. NLS delivered a cutting-edge, responsive web interface for monitoring, trending, and exporting data, as well as DAS Design Drawings, SAT Documents & Commissioning.
### RECENT COMMERCIAL & INDUSTRIAL SOLAR PROJECTS

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