NOR-CAL CONTROLS
ENERGY SOLUTIONS
Your Project. Our Passion.

TOTAL ENTERPRISE
CONTROL

OPERATIONS & MAINTENANCE (O&M) ENTERPRISE SCADA
SYSTEMS FOR PV PLANT OPERATORS

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NOR-CAL'S SCADA SYSTEMS ARE ALL **OPEN-ARCHITECTURE** (OPEN SOURCE).

By using accessible, "off the shelf" hardware and software components, our clients can have peace of mind knowing that their system will continue to be supported throughout the life of their project.

Open-architecture allows your system many accessible options regarding maintenance and upgrades into the future.

NERC CIP
MEIDUM-IMPACT READY

Our SCADA system solution is designed with NERC CIP requirements in mind. By providing a flexible virtualized atchitecture, not only does the SCADA system benefit from the redundnacy and resiliency that virtualization brings, but also the support from security tools that can easily be deployed and configured. The resulting single-rack provides all the necessary hardware and software to operate a CIP medium-impact SCADA system.

As part of our initial implementation, Nor-Cal works with our clients to establish hardened, baseline configurations to support CIP-002, CIP-005, CIP-007, CIP-009 and CIP-010 requirements.

SOLAR PV OPERATIONS TRAINING
(*PLATFORM SPECIFIC) VIRTUALLY & IN PERSON AT OUR NORTHERN CALIFORNIA TRAINING FACILITY*

Your operators can attend one of our reoccurring courses, or alternatively can schedule a private session.

DEVELOPMENT ENVIRONMENTS
FOR TESTING CHANGES BEFORE GOING LIVE

Following best practices, we will test all changes in a developoment test environment system prior to migration over to the production "live" environment system.

FULL REDUNDANCY
INCLUDING VIRTUALIZATION (HARDWARE AND SOFTWARE)

Our enterprise SCADA solution designs can incorporate fully redundant hardware and software, including virtualization redundancy.

ENTERPRISE HISTORIAN
FOR PERFORMANCE QUERIES AND REPORT GENERATION

Our optional, enterprise historian servers come installed with software for off-site data storage and PV site data archiving, enabling operators and project stakeholders to report on historical trends, and query raw and calculated data at 1 second time stamps. Our on-site historian software can also generate advanced reports.

ENTERPRISE HUMAN MACHINE INTERFACE (HMI)
GRAPHICAL MACHINES FOR OPERATORS

We work closely with our clients to develop custom tailored graphical screens and dashboards, enabling operators' total visitbility and control over all site inverters and devices within their PV operating portfolio. Includes real-time and historical alarm viewer to trend performance data.

All HMI graphical screens are tailored to meet the client's desired look, feel & functionality.

BENEFITS OF NOR-CAL TOTAL ENTERPRISE CONTROL

➤ Total control and visibility of your entire operating portfolio through a single operating platform solution

➤ Eliminate inefficiencies and liability associated with having to operate multiple third-party SCADA system platforms

➤ Save on costs by training operators on a single SCADA system platform

➤ Operators can finally focus on what they excel at: operations

➤ Seamlessly integrate with any third-party offtakers, including utility entities

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