

# ENERGY RESILIENCE

Supporting the federal government's need for resilient and sustainable energy infrastructure

**Michael Baker**

INTERNATIONAL



# SUPPORTING THE TRANSITION TO MORE RESILIENT AND EFFICIENT ENERGY INFRASTRUCTURE

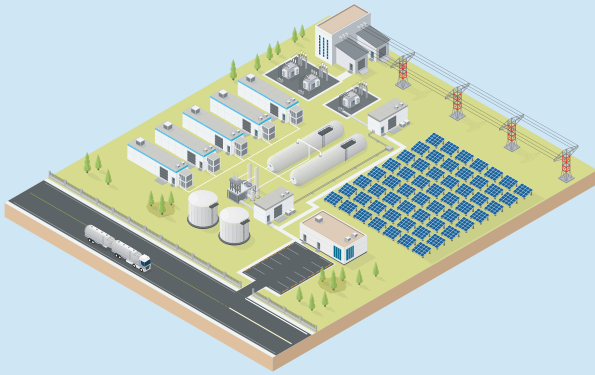
Today's military demands reliable, efficient and high-quality energy infrastructure to execute defense missions, sustain installation operations and withstand, respond to and recover from disruptions.

Our Federal team is here to help you develop and execute a resilient energy strategy. We are familiar with the modern challenges you face and have the knowledge and experience to develop customized solutions that balance short-term needs with long-term goals. We can help you mitigate risks and enhance your ability to achieve your global missions essential to our national security.

## BUILDING ENERGY RESILIENCE THROUGH DIVERSIFICATION



*We Make a Difference*



## DEVELOPING FUTURE-FOCUSED, TARGETED TECHNOLOGY SOLUTIONS THAT MEET TODAY'S DEMANDS AND TOMORROW'S NEEDS.

Interconnected Smart Microgrid for United States Army  
Reserve 63rd Readiness Division Headquarters,  
Mountain View, California

## PROTECTING THE MISSION THROUGH RESILIENT ENERGY STORAGE SOLUTIONS.

Alamitos Battery Energy Storage System  
Environmental Services  
Long Beach, California



## LEVERAGING RENEWABLE TECHNOLOGIES FOR A DIVERSIFIED ENERGY PORTFOLIO.

23.8-Megawatt Photovoltaic Solar Energy Plant,  
Stillwater Power North America  
Fallon, Nevada



## CAPABILITIES

### Consulting Services

- Deal & Site Due Diligence
- Economic & Community Development
- Energy Management
- Financial Modeling
- Technology Assessments

### Planning, Environmental & Regulatory

- Alignment Studies
- Concept Design & Front-End Engineering Design
- Environmental Resource Surveys
- FERC Applications & Licensing
- Permitting
- National Environmental Policy Act (NEPA)  
& California Environmental Quality Act (CEQA)  
Compliance
- Siting Alternatives

### Data Collection

- Geotechnical
- LiDAR
- Mapping (GIS)
- Seabed & Ocean Assessments
- Surveying

### Design

- Architecture
- Civil & Structural
- Mechanical, Electrical & Plumbing
- Systems & Controls

### EPC/Design-Build & Project Management

- Commissioning on Solar & Hydro Projects
- Construction, Engineering & Inspection
- Construction Management
- Designer of Record
- Program Management
- Systems Integration

### Operate & Maintain

- Building Assessments
- Decommissioning & Repurposing
- Facility Efficiency Audits & Plans
- Regulatory & Compliance

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and iconic projects.

## CONTACTS

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Antelope Valley Solar Ranch 1, Los Angeles County, California

### Antelope Valley Solar Ranch 1

#### Los Angeles County, California

With nearly four million solar panels, the 242-megawatt facility is one of the largest solar photovoltaic facilities in the world. Michael Baker provided final engineering design, construction water supply design, and operations and maintenance building plans for this large photovoltaic solar facility spanning nearly 2,100 acres. The facility generates enough renewable energy to power 75,000 homes per year.

### NAVFAC Electrical Study Installations

#### Lemoore, Seal Beach, Norco, Fallbrook and Fallon

Michael Baker is providing site characterization and field verification of the condition, configuration and demand on the existing electrical system. The team is evaluating all safety issues associated with the electrical system and documenting concerns in the Navy's geospatial information system database at five installations. Additionally, the team is developing an electronic model of the entire system using SKM Power Tools software. Michael Baker will use this model to conduct short-circuit analysis to obtain available fault current and ampere interrupting capacity throughout the electrical distribution system, load flow with power factor data, and protective device coordination with proper protective device settings that will quickly isolate system faults and minimize system damage and downtime.

### Mountain View Microgrid

#### Mountain View, California

The smart microgrid system will incorporate several distributed energy resources, including a roof-mounted 750kW solar photovoltaic system with low-voltage switchgear for building energy shifting; a 750kWh battery energy storage system; and an 800kW diesel backup generation system with a 10,000-gallon fuel storage tank. The microgrid system will include a master microgrid controller, automatic smart switches controlling the generation resources within the Reserve Center, and an energy management control system with advanced metering. To ensure the system is cybersecure, the smart microgrid will be installed on a closed restricted network requiring an authority to operate. The project is funded through the Department of Defense Energy Resilience and Conservation Investment Program.

### Connecticut State Pier Offshore Wind Infrastructure Improvements

#### New London, Connecticut

To support the \$24-billion offshore wind market, the Connecticut Port Authority is transforming the State Pier into a heavy-lift-capable world-class port that can accommodate wind-turbine generator staging and assembly, resulting in approximately 400 new offshore wind-related jobs. Michael Baker supports the construction administrator by providing schedule and invoice tracking, agency coordination, preconstruction (supply chain alternatives, procurement, submittal/product reviews), design reviews and construction assurance.