





**EXPERIENCE • INNOVATIVE • ENGINEERING** 



# Founder's Message



TOBIN BOOTH, PE, Founder & CEO

At Blue Oak Energy we've made building a sustainable energy future our priority. Everything we do is because we believe solar energy should be a high percentage of our energy mix and prioritized over all other energy generation types.

We are focused on bringing clean energy to the forefront by implementing solid quality commercial solar and utility-scale solar projects across the United States. We deliver solar engineering services and full solar energy facilities of the highest quality through our specialized, diverse and integrated team. We are professional, motivated, and enthusiastic in our approach.

Our focus is engineering, construction and system operations for distributed generation solar facilities. This technical depth and clear focus has allowed us to deliver or help deliver some of the most awesome solar projects and solar portfolios in the world.

Blue Oak Energy is one of the leading solar energy companies focused on where the future lies, and we're excited to be on that journey.

Thank you for joining us. Go solar!

Sincerely, Tobin Booth





At Blue Oak Energy, our dedicated team of Professional Engineers, Project Managers and Construction Managers are focused on delivering commercial and utility scale solar photovoltaic (PV) power plants.

We are motivated to help you, step-by-step, the entire way, with comprehensive technical teamwork in the following areas:

#### **CIVIL ENGINEERING**

Experts at work from Conditional Use Permits to Grading and SWPPP Plans.

## STRUCTURAL ENGINEERING

Roof adequacy assessments, foundation design and carport design.

#### **ELECTRICAL ENGINEERING**

Comprehensive DC and AC electrical system engineering, Arcflash studies, SCADA engineering, ETAP studies, conductor optimization and interconnection design.

#### **CONSULTING**

Niche technical services, such as: comprehensive equipment comparison studies, PVSyst energy production reports, specification packages, third party reviews, permitting negotiations and economic analyses.

We have designed solar electric systems on over 500 distinct locations all across the U.S. A large part of our great success lies with our talented technical team, who work solely on commercial and utility solar facilities.

# **Distributed Generation Projects:**

We will begin with a preliminary planning process to help visualize exactly what your completed project will look like – both physically and economically. When going solar, you're making an investment choice to reduce traditional grid electricity consumption and you can count on us to help you make an informed decision.

## **Utility Generation Projects:**

When it comes to free-field solar projects, we understand how critical civil engineering and planning is from the very beginning. Our in-house technical team has extensive experience with securing Conditional Use Permits and Interconnection Agreements. Along the way we expect to guide the project's design to minimize the Levelized Cost of Energy (LCOE) and maximize your investment.

The value of engineering experience is realized first when you obtain your building permits on time, second when you achieve your Commercial Operation Date (COD) on schedule/budget, and third at each and every COD anniversary. We plan to be around to celebrate all of these achievements with you!

"Before partnering with Blue Oak Energy, we literally worked with over a dozen engineering firms trying to find a team that shares our passion for implementing high quality, long lasting solar systems."

- Dan Lichtman, Absolutely Energized Solar



The key difference between Blue Oak Energy and the competition is our core engineering talent upon which the company was founded. Our tenacious and multi-disciplined team is motivated to successfully deliver your solar projects with detailed planning which begins in the office and culminates in the field.



Our complete solar electric system Engineering, Procurement, and Construction (EPC) Services for project developers, long-term asset owners, utility companies and other entities follow a distinct process:

#### **ANALYSIS**

In the beginning, our analysts will assist with defining your solar project and will deliver a comprehensive energy production and economic analysis.

# **PLANNING**

A detailed site assessment will confirm the preliminary engineering and economic analysis. We will collaborate with you to engineer and optimize the project at intervals while aligning expectations and obtaining building permits and interconnection agreements.

# **MOBILIZATION**

We enter jobsites with a dedicated purpose and an intentional, planned end goal. The

mobilization stage is important to initiate safety practices, establish the site's organizational procedures and manage work flow.

#### **DELIVERY**

The project's dedicated Project Manager and Construction Manager will be your point of contact through the entire installation process, linking all activities between project development and final completion.

# **TURNOVER**

After system commissioning and full commercial operation is completed, we will turn over the project with a comprehensive documentation package and system warranty.

Your project deserves the technical continuity and cohesive teamwork achieved when engineering breadth meets construction craftsmanship.



We meticulously design PV systems to meet the economic goals. Ultimately, this means continuous full system operation for 30+ years. Three decades is a long time, and maintenance needs are expected during normal operation due to events such as severe weather, grid fluctuations, rodent intrusions and other occurrences you might not expect.

Since 2003, we have performed commissioning, as well as Operations and Maintenance (O&M), on commercial- and utility-scale solar PV systems across the country. We understand that every project has unique needs, and as a result we will develop an O&M plan specific to your system which includes:

#### **COMMISSIONING**

Our commercial and utility PV system commissioning procedures and performance testing serves as a first-hand benchmark for future diagnostics.

#### **ASSET MANAGEMENT**

Your PV system is continuously monitored with an understanding of the inherent temporal variations in production, as well as nuances of the instrumentation. Discerning between minor inconveniences and actionable site problems is a specialty we take seriously because we are dedicated to protecting your clean energy investment.

## PREVENTIVE MAINTENANCE

Periodic diagnostics and preventive maintenance address any potential issues before they become real problems. We will ensure the system will continue to perform as designed and will deliver the expected economic return.

#### **CORRECTIVE MAINTENANCE**

Our Asset Management team finds issues and isolates failures with extreme accuracy. Our action plan may include remote instructions to a partner; or mobilizing assigned field service personnel for more extensive repairs. Either way, we'll take care of it.

#### **CLEANING**

On average, regular solar array cleaning will increase annual solar energy production by five to ten percent in climates with a dry season. Our team will research and recommend optimal times for cleaning based on local weather patterns.

As with any investment, regular monitoring, attention and care is required in order to ensure the maximum economic return. This is something we take seriously, as your business is a relationship we work hard to continuously earn over the lifetime of your solar facility.

"Blue Oak has a well-earned reputation for technical thoroughness and practical problem solving that shows in their execution of solar installations across industry segments and regardless of scale."

- Glenn Harris, CEO, SunCentric Inc.

# Licenses

Blue Oak Energy holds professional engineering licenses in the following states:



- Blue Oak Energy Licensed Engineer
- Blue Oak Energy Licensed Engineer & Contractor



We have completed over 700 MW of utility scale solar projects. This includes systems which are interconnected to Southern California Edison, Pacific Gas & Electric, National Grid, Puget Sound Energy, the Long Island Power Authority and more. We provide design activities for all civil, electrical and mechanical engineering trades from point of connection from the ground to the grid. Our teams also have the experience and track record to integrate 1500Vdc utility grade systems into your projects.



# **WEST ANTELOPE SOLAR FARM**

28.4 MW across Los Angeles County and San Bernardino County, California Utility Company: Southern California Edison

#### Served as

• Full scope Civil, Structural and Electrical Engineering

# Work completed

- CAISO metering design and approvals
- Prepared the full Civil Engineering plans including hydrology, civil grading plans, storm water pollution prevention, road design and array design within a complex property
- · Comprehensive electrical engineering plans coordinated with our internal civil documents
- Submitted for, negotiated, and obtained Conditional Use and Building permits across 2 counties
- Provided Construction Phase Engineering to support the commercial operation schedule

# Utility

#### **GILLESPIE SOLAR FARM**

20.2 MW in Maricopa County, Arizona Utility Company: Arizona Public Service

#### Served as

• Full scope Civil, Structural and Electrical Engineering

#### Work completed

- Complete Civil Engineering including hydrology, road design, civil grading and storm water pollution prevention plans
- Comprehensive electrical engineering plans coordinated with the civil engineering documents
- Engineered a dynamic power curtailment system to meet utility company requirements
- Provided Construction Phase Engineering to support the commercial operation schedule



#### **GREEN ACRES SOLAR FARM**

5 MW in Elk Grove, California Utility Company: SMUD

#### Served as

• Full scope Structural and Electrical Engineer of Record

#### Work completed

- Produced a fully value engineered project across challenging FEMA floodplain requirements
- Designed the electrical system to meet rigorous utility requirement
- Engineered a custom inverter platform to be more than 14 feet above surface grade
- Provided Construction Phase Engineering and final As-Built drawings



# **PUTAH CREEK SOLAR FARM**

2.6 MW in Yolo County, California Utility Company: Pacific Gas & Electric (PG&E)

# Served as

• Engineering, Procurement and Construction Contractor

# Work completed

- Complete Electrical, Civil and Structural Engineering
- California Independent System Operator (CAISO) and PG&E coordination
- Equipment planning, procurement and installation
- Comprehensive testing and startup to meet CAISO point-to-point communications testing





Blue Oak Energy has completed over 500 distributed generation solar projects across commercial and public facilities. Our team understands the specific concerns of the building owner: maximizing the economic return, minimizing site impact, developing clear mobilization plans, working clearance around existing infrastructure, weatherproofing, and creating minimally invasive interconnection points. More than a decade of experience in the PV industry has honed our expertise to efficiently balance expectations in quality, service and urgency with everyone involved.



#### **FIRST SOLAR MESA PLANT**

4.1 MW in Mesa, Arizona Utility Company: Salt River Project

#### Served as

- Full service EPC Contractor
- Overall Engineer and Contractor of Record

#### Work completed:

- Started with a 3 month engineering contract to jumpstart the schedule and accurately define the project
- Full material procurement excluding major solar gear
- Interfaced with building and roofing contractors to ensure continuous warranty coverage
- Worked with all stakeholders to make this 1000Vdc rooftop solar facility a success

# **Distributed**

#### RECREATIONAL EQUIPMENT, INC.

2.5 MW aggregate on 23 sites across 8 states Utility Companies: 15 different utility companies

#### Served as

- Developer
- Full service EPC Contractor
- Overall Engineer and Contractor of Record

#### Work completed

- Full service engineering and permitting
- Managed suppliers and contractors to achieve consistency across all project sites
- On-site construction management
- Asset management, operations and maintenance.



#### **GOOGLE**

2.1 MW in Mountain View, California Utility Company: PG&E

#### Served as

- Full service EPC Contractor for 200kW expansion
- Overall Engineer of Record on the original 1.9MW rooftop and carport system

#### Work completed

- Worked with a multidisciplinary team to define the original campus solar project across 3 types of rooftops and across 2 different parking lots.
- Helped develop and define the expansion projects to meet corporate goals and objectives
- Deployed the customer's first solar-powered electric vehicle charging carports



# **WAL-MART**

14.0 MW across 22 sites in California and Hawai'i Utility Companies: Southern California Edison, Hawai'i Electric

#### Served as

• Overall Electrical Engineer of Record

#### Work completed

- Full service Electrical Engineer of Record
- On-site construction management across 12 sites
- Delivered consistency across all engineering and construction activities
- Concurrently managed QA/QC and specific customer security requirements





# **OUR MISSION**

We deliver real-world energy solutions today to build a sustainable tomorrow.

## **OUR VISION**

The transition to clean, renewable energy is a compelling and irreversible trend.

## **OUR VALUES**

We are intelligent, responsible, and professional leaders in our industry.

