# Solar & Battery Storage Site Selection

Distributed Energy Solutions with Black & Veatch

#### Realizing the Benefits of Distributed Energy Resources (DER)

We are passionate about realizing the potential of DER for utilities, commercial, industrial, and institutional clients. We take care of everything from assessment of the need and optimization of the right solution for your facilities through deployment and delivery of reliable and resilient energy.

No matter the power generation technology: solar photovoltaic, battery energy storage system (BESS), fuel cells, natural gas fueled generation, and combined heat and power, our team of engineers, technicians, and construction professionals are able to tailor solutions that align clients' needs with their expectations for project scope, scale, and schedule.

### **Sustainability and Resiliency**

The global push towards electrification and rapid technology advancements are being driven by climate change policy, decarbonization, and sustainability goals. When combined with the desire for having resilient power under both blue skies and adverse weather event scenarios, this push also provides opportunities for consumers to meet their objective of providing continued service to their customers, while having greater control over their energy investments and costs.

#### **Gating Steps for Site Selection**

It all begins with selecting the most viable sites for deployments, especially if you own and/ or operate or serve several hundred sites. To select the most technically and economically viable sites in an expeditious manner, Black & Veatch uses a gating process for site selection.

For example, this approach helps keep the focus on the sites that are well-suited for solar and/ or BESS installations. The Black & Veatch team develops a list of analysis thresholds for which the sites must stay above to be considered as "potential good candidates" for the solar and/or BESS installations.

#### Conceptual Design Solar + BESS Sites Gating Steps

Evaluation<br/>Process<br/>BaselineDevelop<br/>AssessmentSite Visits<br/>and<br/>Data CollectionSite Structural<br/>Engineering<br/>ReviewSite Electrical<br/>Engineering<br/>ReviewSite Prioritization<br/>and Phased<br/>Development Plan



#### **Proven Experience & Expertise**

We have supported multiple, megawatt (MW)-scale solar and BESS projects over the past several years. As the distributed energy resources industry continues to grow, our extensive experience deploying DERs in a programmatic way, helps our clients anticipate design, construction, and operational requirements for these projects. Using tools such as HelioScope, Aurora, Energy Toolbase and others, we can easily zoom into the most technically and economically deployable sites faster than anyone else in this industry. Once the sites have been selected, we can remain as your owner's engineer or work with you on a larger program of DER deployment.

#### **Projects:**



Confidential National Bank Distributed Solar Deployment Program

**Black & Veatch Solar Solutions** 



San Joaquin Regional Transit District Solar Energy Roadmap

## Production Estimate and Financial Cashflow from Aurora Solar (Example).





City of Glendale Solar/Storage Development & DER Impact Study



Placer County Water Zero Emission Fleet Infrastructure Planning Study

Planning	Development	> Execution >	• Operation
<ul> <li>Market Assessment &amp;Analysis</li> <li>Program Strategy Development</li> <li>Prospecting/Site Identification</li> <li>Feasibility Assessment</li> </ul>	<ul> <li>Project Strategy Management</li> <li>Project Conceptualization</li> <li>Land Acquisition</li> <li>Resource Assessment</li> <li>Environmental Studies</li> <li>Engineering Studies</li> <li>Permitting</li> <li>Project Cost / Schedule Estimating</li> <li>Interconnection Application</li> <li>Financing/Capitalization</li> <li>OFE Procurement Support</li> <li>Execution Contracting Support</li> </ul>	<ul> <li>Program/Portfolio Execution Management</li> <li>Design Reviews</li> <li>Procurement or Procurement Support</li> <li>Construction or Construction Management/ Support</li> <li>Site Surveying &amp; Investigation</li> <li>Electrical Studies &amp; Design</li> <li>Site/Civil Studies &amp; Design</li> <li>Structural/Foundations Studies &amp; Design</li> <li>Commissioning</li> <li>Operator Training</li> </ul>	<ul> <li>Warranty Management</li> <li>Preventative Maintenance</li> <li>Major Corrective Maintenance</li> <li>Predictive Maintenance</li> <li>Performance Improvement</li> <li>Remaining Life Assessment</li> <li>Asset Disposition Studies</li> <li>Decommissioning or Decommissioning Support</li> </ul>

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