

# Grid Integration (Onshore)



## Connecting new age technology and energy to today's transmission infrastructure.

The energy landscape is rapidly changing, with renewable and distributed energy resources becoming an increasing, critical component.

The sheer scale of this transformation can be hard to manage, but Black & Veatch's grid integration solution allows developers and utilities to seamlessly link these sources to the grid while still making smart investments.

We work with many of the major utilities in the United States, and know their standards and preferences. This, combined with our **generation, grid, data center** and **EV charging hub** experience, allows us to deliver seamless projects.

**Black & Veatch offers a complete solution** from up-front studies, through engineering, procurement, construction, and testing and commissioning for these projects, including:

- Feasibility studies and analysis
- Interconnection studies
- Overhead transmission and distribution lines
- Underground transmission and distribution lines
- Collector substations
- Interconnection switchyards
- Capacitor banks
- GIS substation technology
- System studies
- Relay settings
- SCADA integration



## BV's Grid Integration Capabilities



### Project Experience



#### Lake Placid Solar & BESS

*Duke Energy Florida*

Black & Veatch provided EPC services for the collector substation, overhead transmission gen-tie line, and the upgrades at the interconnect switchyard for the Lake Placid Regulated Solar & BESS project, which included a 45 MW greenfield solar project and 25 MW-hr battery AC-coupled at the collector substation.



#### Pumpkinseed Regulated Solar

*Dominion Energy*

BV designed, procured, and constructed the Pumpkinseed Substation and associated interconnect with a new 115 kV Switchyard. The collector substation served 20 PV inverters using three 34.5 kV feeder circuits with available power generation of 59.6 MWac.



#### Golden Hills Wind HV

*Avangrid Renewables*

Black & Veatch designed and constructed the Golden Hills HV project, located in Sherman County, Oregon, including the Golden Hills substation and associated interconnect with an existing 230kV line. The collector station serves 51 wind turbines with available power generation of 201.3 MW. The transmission line consisted of 4.4 miles of new 230kV transmission line with 35 new steel structures, interconnecting with the existing 230kV BPA line structure.

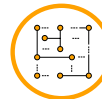


#### Cardinal Point Wind Power

*Capitol Power*

BV provided EPC and commissioning services for this sustainable 60 x 2.5 MW onshore wind facility, including the new Ameren Hornsby Substation and an interconnecting transmission line.

Working together during a fast-paced process, including close technical and commercial engagement, set the stage for the delivery of this project, which is the client's third major wind development project, and furthers its market position in the growing U.S. renewables market.



#### Substation Data Center Design

*Anonymous Technology Company*

Black & Veatch is supporting this confidential client to reach its goal of fast delivery of hyperscale Data Center buildouts. BV's main role is as a services consultant performing detailed design for the client's greenfield substations, which are typically N+1 redundant substations operating at 13.8 kV secondary voltage.

