

# **Renewable Energy Solutions**

DESIGN | DEVELOPMENT | FINANCING | EPC | OPERATIONS AND MAINTENANCE





# A Partner for Your Financial, Sustainability, and Reliability Goals

Black & Veatch's renewable solutions simplify the life of a customer with complex projects. With our integrated technology team and our ability to self-perform, we can provide a single turn-key solution that optimizes schedules, provides cost efficiencies, and ensures quality.

We provide reliable and competitive solutions for solar, wind, energy storage, hydropower and hydraulic structures, and other alternative energy assets that enable our clients to expand their energy portfolios and enhance

the performance of operating facilities. Our industry-leading regulatory, technology and execution expertise enable us to help develop, install, and connect renewable energy to the grid, also influencing the performance of operating assets.

Meet your financial, sustainability and reliability commitments with firm and dispatchable renewable generation delivered by your trusted partner — Black & Veatch.

### Experience Backed by Data

of solar project

experience

 $50 + _{GW} 21 + _{GWh}$ 

of energy storage project experience, globally 56+ gw

global wind project experience 64+ gw

in hydropower design projects completed worldwide

## **Proven Solutions**



#### Solar Power

- Photovoltaic Technologies
- Solar + Storage
- Complex Performance Modeling
- Renewables Integration
- Site Selection and Due Diligence



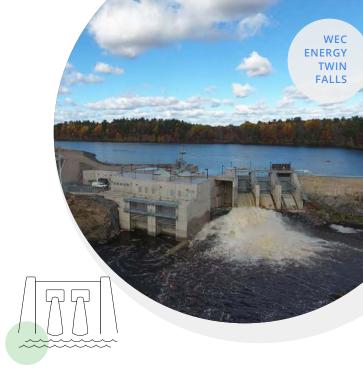
### Battery Energy Storage (BESS)

- Battery Chemistries
- Fully Integrated Battery Solution
- DC Coupling
- Long Duration
- Renewables Integration



#### Wind Power

- Onshore Wind
- Offshore Wind
- New Build
- Repower
- Wind + Storage
- Renewables Integration
- Remaining Life Assessments



## Hydropower & Hydraulic Structures

- Hydropower Plant Engineering
- Pumped Storage and Large Pumping Plants
- Small Hydropower Plant Engineering
- SCADA and Controls Upgrade Engineering
- Fisheries Engineering
- · Licensing & Permitting
- Gates and Penstocks
- Startup and Commissioning
- Large Valves
- Hydrology and Hydraulics
- Asset Management



#### Oceanic and Marine

- Feasibility Study
- Technical, Commercial & Environmental Assessments
- EIA Scoping Report
- Grid Connection



## Guiding You Every Step of the Way

Developing a comprehensive energy portfolio that includes renewable assets can be daunting. Black & Veatch provides a scope of services that spans a project's entire life to simplify the process for our clients and ensure they get a solution that meets their business requirements and operational needs. Our full-service approach brings engineers, consultants, policy experts, construction managers and execution resources together with clients to create a tailor-

made solution. From independent engineering through owner's engineer, including design review and construction management, into detailed design, and full EPC, Black & Veatch is a turnkey partner. We also tackle interconnection challenges, providing a continuous flow of electricity from the source to the grid. We ensure that clients experience safe, seamless and successful projects.

# Supporting Projects Throughout the Infrastructure Lifecycle



#### Plan

- Market Assessment & Analysis
- Program Strategy Development
- Prospecting/Site Identification
- · Feasibility Assessments

#### Develop

- Project Strategy Management
- Project Conceptualization
- Land Acquisition
- Resource Assessments
- Environmental Studies
- Engineering Studies
- Permitting
- Project Cost / Schedule Estimating
- Interconnection Application
- Financing / Capitalization Support
- OFE Procurement Support
- Execution Contracting Support

#### Execute

- Program / Portfolio Execution Management
- Design Reviews
- Procurement / Procurement Support
- Construction / Construction Management / Support
- Site Surveying and Investigation
- Electrical Studies and Design
- Site/Civil Studies and Design
- Structural/Foundations Studies and Design
- Commissioning
- Operator Training

#### Operate

- Warranty Management
- Maintenance / Maintenance Support
- Performance Improvement
- Remaining Life Assessment
- Asset Disposition Studies
- Repowering / Repowering Support
- Decommissioning / Decommissioning Support



## **About Black & Veatch**

Black & Veatch is a 100-percent employeeowned global engineering, procurement, consulting and construction company with a more than 100-year track record of innovation in sustainable infrastructure. Since 1915, we

have helped our clients improve the lives of people around the world by addressing the resilience and reliability of our most important infrastructure assets. Follow us on www.bv.com and on social media.

**ENR Rankings** 

**Top Solar Power Design Firms** 

No. 2 No. 4

**Top Hydroplant** 

