Solution

The CHP Conceptual Study is an invaluable tool in understanding the viability of a CHP project for a customer with energy intensive operations or an electric utility that plans to own a CHP at a customer’s site. CHPs are becoming an important part of sustainable, reliable, resilient and cost-effective energy systems that can also potentially be a crucial link to the success of a microgrid. CHP systems can serve as anchors of microgrids, since they can provide continuous power, while also helping balance variable renewables. Black & Veatch has developed a phased process for evaluating simple to complex CHP applications and optimizing the benefits to the owner, be it the energy intensive user or the utility owning the CHP. We utilize our utility-grade power design knowledge and engineering experience to evaluate generation technology options, size generation resources, define operational characteristics and develop a cost effective, elegant design solution. Most importantly, we also prepare your business case so that the CHP solution can be implemented. The CHP Conceptual Study will provide you with a roadmap for project execution founded on 100+ years of service to the utilities and energy intensive industries.

Key Deliverables

- Design basis and project description
- CHP sizing and operational modes assessment
- Site layout
- State Specific CHP Grant Application Preparation
- Trigeneration (Combined Cooling) potential
- Budgetary capital cost estimate
- Business Case - Financial Proforma
- Carbon Footprint Calculation and Air Permitting Pathway
- Utility Clean Power Plan (CPP) Emission Rate Credits
- Execution schedule

Benefits

- Clear path from conceptual design to commissioning and operating CHPs saves you time and money.
- Clear understanding of critical project aspects and important financial, operational and environmental considerations means the project go/no go decisions are based on a sound business case.
- Access to experienced power industry electrical, civil, mechanical and controls engineering staff, integrated resource plan specialists and cost estimators.

Experience

- CHPs ranging from 800 kW to 1,030 MW, and totaling over 8,000 MW installed.
- Bringing it all together – We not only study the CHP solution but can also build it for you. Our in depth understanding of the Distributed Generation Market and microgrids can help build a comprehensive energy solution to meet your needs.

Background

Integration of on-site power generation, specifically CHP, has the potential to deliver enhanced reliability for critical operations, energy cost savings and ultimately deliver valuable return on investment to your facility. Black & Veatch appreciates that the drivers for on-site generation are highly unique to each facility and, as such, the solutions must be effectively tailored to meet your specific objectives and facility needs.

For electric utilities, the recently finalized CPP is a game changer. Electric utilities that are undecided regarding investment in CHPs can now seriously consider developing and operating new CHPs, subject to certain size limitations, to help meet their existing-source CPP compliance obligations.

Price and Schedule

- Representative Price Range: $15,000 - 50,000
- Typical Report Schedule: 4 - 8 weeks
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BLACK & VEATCH
11401 Lamar Avenue, Overland Park, KS 66211
P  +1 913-458-2000   |   W  bv.com

JASON ABIECUNAS | DISTRIBUTED GENERATION SERVICE AREA LEADER
P  +1 913-458-2114   |   E  AbiecunasJP@bv.com

AJAY KASARABADA | MANAGER, CHP SOLUTIONS
P  +1 913-458-9837   |   E  KasarabadaAN@bv.com