

## MARKETS

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Education

Industrial

Healthcare

Transportation

Government

Utilities

## ENERGY PERFORMANCE



Boston Cedar Rapids Chicago Fargo Dallas Houston Minneapolis-St. Paul  
Rochester Washington D.C. West Palm Beach

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Integrating the management of energy use, demand, and generation to deliver an optimal energy solution.

## PROFILE

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**The goal of Sebesta Blomberg's energy performance team is to provide clients with a cost-effective and reliable long-term energy strategy that includes management of energy demand, use, and energy generation systems.**

Because we have expertise across all types of energy technologies and markets, we are able to help clients take advantage of opportunities through load shaping and efficiency, fuel switching, aggregation, and cogeneration and renewable energy sources. With extensive in-house capabilities in engineering design, energy engineering, environmental consulting, commissioning and retrocommissioning, and facility operations, Sebesta Blomberg is able to provide a well-coordinated progression of energy performance services to a wide variety of facility owners and operators, from conception through implementation and monitoring and verification.

As one of the nation's premier consulting firms, Sebesta Blomberg has helped clients save millions of dollars in energy and operations costs. We help facility owners and operators identify and implement energy performance strategies that improve their operating efficiency, reduce their greenhouse gas emissions, and create real benefits.

# An Integrated Approach

Custom solutions that fit your needs

## EXPERTISE

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ENERGY AUDITS  
DEMAND SIDE ENERGY MANAGEMENT  
ENERGY MASTER PLANNING  
RETROCOMMISSIONING  
GREENHOUSE GAS REDUCTION  
DEMAND RESPONSE

HIGH PERFORMANCE BUILDING SYSTEMS  
ENERGY MODELING  
HIGH PERFORMANCE UTILITY SYSTEMS  
COGENERATION  
RENEWABLE SYSTEMS



## PORTFOLIO

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### STATEWIDE ENERGY MASTER PLAN State of South Dakota

In response to passage of Senate Bill 202, the State of South Dakota contracted with Sebesta Blomberg to create an Energy Master Plan for energy usage and cost reduction in over 14 million square feet of facilities. Sebesta Blomberg provided a strategic process to address these goals that included quantification of State energy consumption, and on-site assessment of facilities within the State of South Dakota's campus portfolio. The energy assessment process quantified current energy consumption by state agencies, identified cost effective energy efficiency measures that could be taken by State agencies to achieve a reduction in energy consumption, and estimated the costs and savings associated with the energy efficiency measures.

Overall, Sebesta Blomberg identified and quantified 1,168 energy reduction measures in 14 million square feet of facilities that will reduce the State of South Dakota's energy consumption by over 22%.



### INTEGRATED ENERGY ASSESSMENT Worldwide Beverage Company

Sebesta Blomberg was retained by a worldwide beverage company to provide integrated energy assessments for multiple international facilities. The goal of the project was to develop an Integrated Energy Management Program which would result in lower utility consumption and cost.

Sebesta Blomberg identified several potential energy cost reduction measures and quantified their energy savings and associated implementation costs. Opportunities included optimization of steam, compressed air and ammonia refrigeration systems, heat recovery, variable flow conversions, expansion of energy monitoring capabilities, system controls upgrades, lighting controls upgrades, and peak load reduction and control. Upon completion of the energy assessment, Sebesta Blomberg worked with the facility staff to provide engineering support for project implementation.



#### ENERGY ASSESSMENTS AND RETROCOMMISSIONING Marriott International

Sebesta Blomberg has a National Agreement with Marriott International to provide energy assessments and retrocommissioning studies for their facilities. The process includes identifying and quantifying costs and savings for both low cost/no cost retrocommissioning opportunities, and for more capital-intensive energy efficiency projects.

To date, Sebesta Blomberg has provided energy assessments for over 25 hotels around the country totaling 15 million square feet, and has identified over \$7.4 million/yr in utility savings opportunities. For selected facilities, Sebesta Blomberg has provided follow on implementation assistance to Marriott, including design and commissioning services.



#### ENERGY MASTER PLANNING AND ASSESSMENT Air National Guard

Sebesta Blomberg is working with the Air National Guard to develop Facility Energy Assessments and Energy Master Plans to help meet their goals of sustainability, compliance, energy efficiency, and environmental stewardship. Assessment efforts include audits of existing facilities, utility rate tariff analysis, review of renewable energy technologies, and recommendations to meet energy mandates. Energy Assessment services have been provided to the ANG for several airbases with multiple facilities, totaling over 9 million square feet. Cost effective utility reduction strategies have been identified that will reduce energy usage on average by over 18 percent. Sebesta Blomberg also provides follow on retrocommissioning and implementation services at selected facilities.



#### UTILITY AND ENERGY INFRASTRUCTURE RENEWAL PROGRAM Brandeis University

Sebesta Blomberg worked with Brandeis University to conceptualize and implement a multi-phased utility infrastructure renewal program to address needs associated with the limited capacity, age, and performance of the campus' electrical, steam, chilled water, and potable water systems. Sebesta Blomberg served as the engineer of record for over \$9 million in utility and energy infrastructure upgrades, including a new electrical substation, two new chiller plants, and installation or replacement of steam and condensate distribution systems. Sebesta Blomberg also worked to negotiate with the electric utility for an upgrade of electric distribution system capacity, and a revision to the environmental permit for the steam plant, allowing an interruptible gas service to the campus.

Sebesta Blomberg also identified and implemented facility energy efficiency improvements for the 2-million-square-foot campus. Energy audits of the major campus buildings were conducted, identifying an approximate 30 percent energy savings potential with a 2-year simple payback. Follow-on design and project management services assisted with implementing several energy efficiency improvements to the campus' HVAC, controls, steam plant and steam distribution, and lighting systems.



#### CENTRAL PLANT/TERMINAL ENERGY INITIATIVES AND GREENHOUSE GAS REDUCTION Dallas/Forth Worth International Airport

Sebesta Blomberg assisted in the design and served as owner's representative for a \$125 million upgrade and expansion to the district heating and cooling plant, replacing all chillers, boilers, and lighting and automated controls with more efficient equipment. A large 6-million-gallon thermal storage system was also installed to shift electrical load off-peak. Several energy management initiatives were investigated to reduce energy use in DFW's new and existing passenger terminals and supporting airport facilities. From commissioning and energy retrofits, to efficient building design and adherence to energy codes, DFW's energy use was reduced by 28 percent and NOx emissions were reduced by 90 percent.