

BIC

MAGAZINE

BUSINESS & INDUSTRY CONNECTION

November 2018

BICMagazine.com

A **BIC** ALLIANCE Publication

CENTRAL UTILITY SERVICES HELP CREATE COMPETITIVE ADVANTAGES

Veolia's central utility services help industrial customers improve performance, reduce cost and allow manufacturers to focus on core production through its full spectrum of operation and maintenance services.

ALLIANCE SAFETY COUNCIL: ALWAYS ESSENTIAL. NEVER MORE RELEVANT.

Over six decades, Alliance has become a trusted provider of safety training and technology solutions. The organization remains committed to fostering industry collaboration around the critical issue of safety at work and in communities.

FEATURES

'People, planet and prosperity' essential drivers for Covestro

Christopher Bland leads Braskem's Delta polypropylene plant build

Considerations for centralized utility services

Industry making improvements, learning from Hurricane Harvey

ITEP: Giving voice to local leaders, restoring stability

EHCMA, ABC collaborate as PetrochemWorks

Managing large terminal projects requires 21st century approach

Royalty relief would spark Gulf investment

Petrochemical industry worries prompt creativity, innovation



Central Utility Services Help Facility Operators Improve ROI and Focus Resources on Core Production



Central Utility Services Help Facility Operators Improve ROI and Focus Resources on Core Production

Utilities generation, distribution and management play an integral role in the operation of industrial facilities. While equipment configurations and requirements for power, water, wastewater, steam, cooling, etc. vary significantly from industry to industry and process to process, one aspect that every production facility has in common is its efficiency, safety, environmental performance and overall manufacturing competitiveness all hinge on the reliability and performance of underlying utilities.

Plant utilities must perform consistently and reliably to avoid downtime and lost production. Even minor disruptions in electrical supply, for instance, can stop a manufacturing/production process all together. One strategy that has proven effective in helping facility owners and operators avoid these

can free up limited manpower in management, engineering, operations and maintenance, and replace lost proficiency from workforce attrition. Additionally, by eliminating the need to make large up-front investments in utilities, manufacturers can conserve capital, improve return on investment (ROI) and ultimately extend the investment horizon.

- Improve plant efficiency, performance and reliability. With core competencies in critical disciplines, such as power, water, wastewater, cooling, steam, etc., CUS providers are better equipped to manage site utilities and can often implement approaches, technologies and strategies to improve performance, reliability and overall plant efficiency. For example, thermal efficiency gains can be achieved with recovered waste heat and cogenera-

levels necessary to ensure manufacturing/production competitiveness.

Veolia's CUS offering

As a global expert in managing water, waste and energy resources, Veolia understands the complex demands on an industrial facility's central utilities and offers a full spectrum of services for operations and maintenance, either individually or as an integrated package. Its core competencies include:

- Thermal and cooling units. From individual boilers for steam production with associated distribution and heat exchange systems, to large-scale centralized/district heating systems or hot water production and delivery units, Veolia simplifies clients' operations and compliance obligations and makes strong contributions to facility performance. Whether for environmental control or process cooling, Veolia's expertise spans a broad range of equipment and applications, from cooling towers to ultra-cold chilling systems to energy recovery units.

- Water systems. The production and distribution of water and treatment of produced wastewater are areas where Veolia can claim global leadership. From high-purity water systems for pharmaceutical and electronic manufacturing processes, to treatment technologies that ensure in-process uniformity, high-quality boiler feed, thermal transfer fluids, cooling tower systems, certified wastewater treatment performance and corrosion protection, Veolia possesses the capability to design, build, operate and maintain systems across the entire water cycle.

- Electric utilities. With extensive experience in operating and maintaining large industrial equipment and sites, Veolia has the capability to provide services for the full range of electrical installations, including legacy and modern systems, as well as low- and high-voltage distribution infrastructure. Veolia optimizes the reliability of all electrical supply, including transformers, switches, circuit breakers, etc. Through resiliency studies, Veolia identifies opportunities to deliver continuous improvements and ensure regulatory compliance of networks. Data monitoring and energy management tools are used to support sustainability objectives and lower energy expenses. Safety systems (i.e., fire, security, emergency lighting, etc.) are maintained and tested in line with regulations and the manufacturer's requirements. Automated switching systems, backup systems, emergency generators and uninterruptable power supply systems are regularly tested in accordance with approved procedures and maintained to ensure operational readiness.

- Waste-related services. Veolia offers services tailored to specific industries with the goal of minimizing waste and maximizing the potential benefit

Veolia has been involved in the supply of high-quality utilities services at industrial parks for over 15 years and has expertise in managing solutions for shared infrastructure, environmental and energy services.

scenarios and conserve capital is engaging with an experienced third-party provider that can efficiently deliver central utility services (CUS). Doing so eliminates the need for the owner to dedicate its own resources to operate and maintain critical utility infrastructure and, as this article will discuss, can offer a number of financial and operational benefits.

Benefits of CUS agreements

Central utility services are best delivered through performance agreements. In such cases, services are provided as required by the customer to meet demand, quality and availability levels of utilities, which are specified (and often guaranteed) in the agreement. Responsibility for staffing, maintenance and investment associated with upgrading and maintaining the utilities falls solely on the service provider. This approach offers a number of advantages for facility operators by allowing them to:

- Focus financial and manpower resources on core production. Transferring responsibility for utilities to a third-party provider enables manufacturers to focus their resources on core production processes that drive improved business results. Manufacturers

can free up limited manpower in management, engineering, operations and maintenance, and replace lost proficiency from workforce attrition. Overall, by transferring responsibility for utilities to an expert, manufacturers can guarantee high levels of performance and uptime, while mitigating the risk of lost production due to gaps in utility supply and backup capacity and/or water scarcity.

- Offload responsibility and risk to a third party. CUS agreements with performance guarantees provide protection from unanticipated expenses, as their structure places responsibility on the service provider to manage the cost and risk of delivering utilities within a fixed-fee structure. The cost of utilities is predictable and not impacted by changes in staffing level, maintenance expense or major overhauls, which are managed by the service provider to maintain utility delivery. By comparison, operations and maintenance programs based on headcount or a specified maintenance budget typically result in additional cost being passed on to the customer to protect the utility provider. Overall, CUS agreements afford manufacturers the opportunity to engage with a long-term partner that can engineer, implement and guarantee performance

of rational waste strategies, such as reduction, reuse and recycling through direct means or transformation through recovery or incineration. Veolia's solutions and services have been successfully applied in a variety of industries, from pharmaceutical, refining, chemical and electronic manufacturing, to food, beverage and general manufacturing applications.

- Heating, ventilation and air conditioning (HVAC). HVAC systems are at the center of many production environments and represent a combination of heat, energy and air control systems. All of these have the potential to significantly influence energy usage and, in turn, manufacturing competitiveness. By adopting an integrated view of the energy and cost balance within HVAC systems, Veolia has been able to substantially reduce the overall cost of use on clients' sites, while improving comfort levels and working conditions for staff.

CUS for multi-tenant facilities and industrial parks

For industrial parks with multiple tenants, a central utility service can eliminate the distraction inherent in delivering utilities to multiple customers. Veolia has been involved in the supply of high-quality utilities services at industrial parks for over 15 years and has expertise in managing solutions for shared infrastructure, environmental and energy services. Its on-site presence and wide experience enable service and maintenance solutions to meet the needs of a multitude of customers. Veolia is an expert in the implementation of usage concepts for shared platforms that fully leverage possible synergies and offer unique solutions to fairly split utility costs between all tenants.

Veolia's expertise in asset and project management, coupled with experience in third parties' shared assets, supports value creation. Using the assigned assets, Veolia develops businesses and generates new revenues (e.g., available utility capacity, free distillation capacity to recover solvent, free capacity

to incinerate waste solvents and produce steam, free wastewater treatment plant capacity to treat additional wastewater, etc.), helping its clients reduce their total cost of ownership, while contributing to overall park competitiveness and development.

Project references

Veolia's experience in providing CUS spans a wide range of industries and customers. Some of its recent projects include:

- DuPont Spruance Plant. Located in Richmond, Virginia, the Spruance site is a major manufacturing facility and DuPont's largest plant. In 2018, Veolia entered into an agreement to upgrade, operate and maintain the utilities infrastructure at the facility.

Under a multi-year agreement, Veolia will operate and maintain the site's utilities. In addition, Veolia plans to upgrade the utilities to be more efficient and enhance performance and reliability, ultimately helping DuPont reduce utility costs. Included in Veolia's scope are the operation and maintenance of the cogeneration facility that supplies high-pressure steam to the Spruance powerhouse on the manufacturing campus. Veolia will also continue performing waste collection services for 20 different locations across the site and is responsible for packaging, labeling and manifestation of all waste containers from the storage pad.

The partnership is part of Veolia North America's growing CUS program, providing expertise to the site's utility infrastructure. Veolia's technology application and innovation will help drive improvements, including an in-house ability to design/build enhanced and improved systems. This will result

in reduced fixed costs and improved performance guarantees.

- Industrial Realty Group (IRG). In 2017, Veolia entered into an agreement with IRG to operate and maintain its central utility plant and combined heat and power facility in Pearl River, New York. Veolia manages utilities across 250 acres of property, much of which is dedicated to the pharmaceutical

Under a multi-year agreement, Veolia will operate and maintain the DuPont Spruance Plant's utilities.

and technology industries. The Pearl River site will ultimately be the home of many high-tech and industrial companies, where the highest levels of reliability are required.

Under this contract, Veolia manages the water and energy utilities of IRG's New York City-area campus, including a 23-megawatt cogeneration plant; 18,000-ton chiller plant; 400,000-pound-per-hour boiler plant; 3.1-million-gallon-per-day water and wastewater treatment plant; and electrical, steam and chilled water distribution systems.

With resiliency in mind, Veolia's services allow IRG to focus resources on real estate development, while ensuring the tenants and new customers receive reliable and high-quality utilities.

- Outokumpu Stainless USA. In Calvert, Alabama, Veolia was selected to design, build and operate the water and wastewater infrastructure to support the operations of Outokumpu's stainless steel mill. Veolia also supplies industrial water and wastewater treatment for steelmaking operations that are owned by others at the site but managed through the Outokumpu contract. The system includes a river water intake system, water treatment facility, multiple interim wastewater treatment systems, a terminal wastewater facility and treated water outfall. Veolia treatment technologies at the facility include ACTIFLO® clarification technology, AnoxKaldnes™ moving-bed biofilm reactors and TURBOMIX™ reactors for metals precipitation.

Conclusion

With the consistent drive to improve performance and reduce total cost of ownership, manufacturers are increasingly turning to utility experts to provide steam, cooling, power, water and wastewater treatment for their production facilities. It's important to note there are always some stranded services that best remain with the production facility, especially activities that reside inside the production complex and are uneconomical to separate.

In the end, no two industrial facilities are the same, and each set of services will be unique. The central utility package that delivers the most value over the life of the facility will ultimately be dictated by manufacturer objectives and site-specific variables, such as location, access to water, existing infrastructure, power requirements and regulations. Overall, CUS agreements provide an effective means of improving performance, reducing cost and offloading the expense of upgrades, which is of significant value to industrial sites that desire to increase their focus on core production needs.

For more information, visit www.veolia-northamerica.com or call (713) 672-8004. ●



Central utility services are best delivered through performance agreements where services are provided as required by the customer to meet demand, quality and availability levels of utilities.



With core competencies in critical disciplines, such as water, waste and energy, Veolia understands the complex demands on an industrial facility's central utilities and offers a full spectrum of services for operations and maintenance.



Plant utilities must perform consistently and reliably to avoid downtime and lost production.



Veolia's experience in providing central utility services spans a wide range of industries, allowing customers to focus their resources on core production processes that drive improved business results.



Central utility services to improve efficiency and performance

Delivering reliable performance with zero compromise to safety and quality

As the industrial landscape continues to evolve, companies are placing an increased focus on their core competencies in manufacturing. However, this leaves fewer resources to focus on the utilities required to support them. With proven expertise in managing water, waste and energy resources, Veolia understands the complex demands on an industrial facility's central utilities. Our technical expertise and proven operations experience help customers by:

- Minimizing risk events with performance guarantees
- Improving productivity as a result of regaining valuable resources and time
- Bringing access to state-of-the-art technologies to deliver guaranteed results
- Redirecting capital investment allowing customers to focus on core business
- Reducing operating expenses as a result of improved efficiencies

veolianorthamerica.com

 [@veolia_na](https://twitter.com/veolia_na)

Resourcing the world

