West Riverside Energy Center

Our energy vision

A message from Alliant Energy

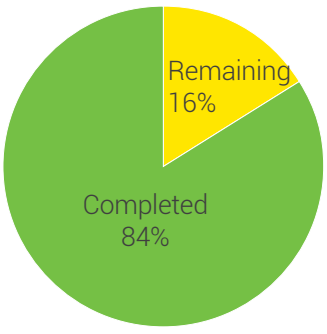
April 2019

Thank you for your continued interest in the West Riverside Energy Center project. With engineering activities nearly complete, the project team continues to make progress on equipment installation and connections inside of the enclosed buildings. Construction remains on schedule as we move into the spring season and proceed toward start up and commissioning activities later this year. This quarterly newsletter summarizes recent project milestones in our efforts to keep you updated on major project activities. We are grateful for the continued support in making this project a reality. If you have questions or concerns for the project team, please reach out at any time. Until then, be safe and stay energized!

Bob Newell, Strategic Projects Manager

Project overview

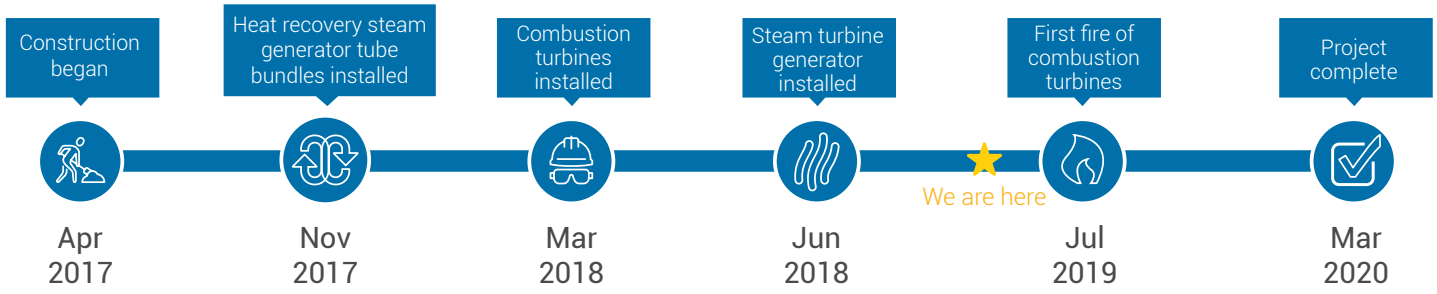
The West Riverside Energy Center is a state-of-the-art, highly efficient, natural gas combined-cycle facility under construction near Beloit, Wisconsin. The generating station will produce enough power for more than 550,000 homes when it goes into service by early 2020.



Project status

Nearly 12% of the project was constructed between January - March 2019.

Project schedule



Safety moment

Many activities we do in our daily routines call for specific tools or materials to get the job done properly and safely. Construction sites, like the West Riverside Energy Center project, require employees to wear Personal Protection Equipment, or PPE, at all times on the job site to ensure a safe working environment.

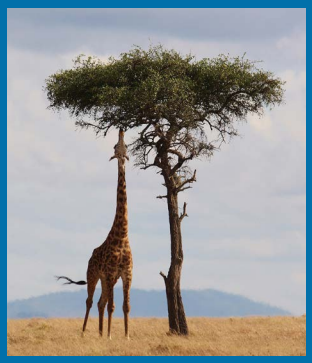
There are several types of PPE on a construction site: hard hats to prevent injury from potential falling objects or overhead obstructions, brightly colored and reflective vests to be visible in all working conditions, steel-toed boots to avoid foot and ankle injuries, glasses or goggles for eye protection from flying particles or chemicals, and gloves to keep hands free from cuts and bruises. Some construction activities require additional PPE for extra safety measures that are specific to the task at hand. Personnel working around loud equipment will wear hearing protection, while a welder will add fire resistant clothing and a face shield to their working wardrobe.

PPE is not only found on construction sites – you can find it almost anywhere in your daily routine. Warm clothes, boots, gloves, and hats are used to protect skin from the cold in winter. You might wear closed-toed shoes when you cut the grass. Even sunscreen and sunglasses are considered PPE to protect you from harmful ultraviolet radiation!

Project snapshot

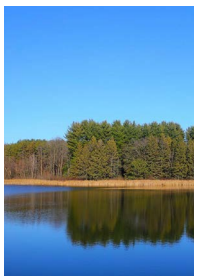
Steam turbine low pressure casing installation.

Fun fact!



Combined cycle power plants consist of several large pieces of machinery working together to generate energy for homes and businesses. The steam turbine, shown being assembled above, is just one of these major components. The turbine elements are protected within an enclosure that is just under 19 feet tall. This is enough room for an adult giraffe to stand up inside!

Environmental stewardship



Water is an important environmental resource needed to support our homes, communities, and industries. Alliant Energy has made water conservation a top priority in the project design by installing a unique treatment program to minimize impacts to local groundwater sources. A pre-treatment system allows water to be recycled through the plant several times, significantly reducing the quantity of water withdrawn from the collector well. Water that is returned to the Rock River is cleaned up in a wastewater treatment system to remove potential pollutants from water prior to being discharged to the river. These efforts are implemented to conserve precious resources while providing a reliable power supply to Wisconsin residents.

Understanding energy:
Heat Recovery Steam Generators

The West Riverside Energy Center uses heat recovery steam generators (HRSGs) to maximize total power generation efficiency. After the natural gas-air mixture is ignited and expanded in the gas turbines to generate electricity, the hot exhaust gas is used further in the power generation cycle to produce three different types of steam, which is key to high steam turbine efficiency. The HRSG has different sections dedicated to heating water, boiling water to become steam, and superheating the steam to make it extra hot for the best efficiency. The HRSG is so efficient at extracting heat from the gas exhaust that when it finally goes up the stack it is not even hot enough to boil water!

This highly efficient steam generation system, when combined with the efficiency of the gas turbines, results in an overall plant efficiency of nearly twice that of a coal power plant. Alliant Energy is using HRSG technology to extract more energy from the natural gas fuel to power more homes and businesses in the process.

Active in the Community

Shop with a Hero

Alliant Energy is committed to giving back to the community. With donations from project employees, union craft members, project vendors, and both AECOM and Alliant Energy, the project team donated $11,000 to the 18th Annual Greater Beloit "Shop with a Hero" event in December. This event allowed 200 children from the Beloit and Beloit Turner School districts to shop for holiday gifts at the local department store. Each participant was partnered with a Beloit police officer or firefighter to choose the perfect gifts for themselves and their families to brighten the holiday season.

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