Badger Coulee at a glance

**Voltage:** 345 kilovolts  
**Length:** 186 miles  
**Cost:** Approximately $580 million  
**Western end point:** Xcel Energy’s Briggs Road Substation near Holmen  
**Eastern end points:** ATC’s North Madison Substation in the Town of Vienna and Cardinal Substation in Town of Middleton

Estimated net economic benefits to Wisconsin electric customers: $118 million to $700 million

Project construction progressing

La Crosse County construction to begin in July, pole installation, wire stringing work complete on 5 of 8 construction segments.

Contractors are continuing multi-year construction work on the Badger Coulee Project from Dane County to La Crosse County. The project is expected to be completed and become part of the integrated electric transmission grid late this year.

The Wisconsin State Court of Appeals in May 2018 issued a decision regarding a 7-mile area in La Crosse County. The Court upheld the Public Service Commission of Wisconsin decisions about the project need and routing. Pre-construction work will begin soon in this area and foundation installation is expected to begin in July. There will be transmission lines on both sides of Highway 53 north of Holmen when the project is completed.

Segment 1 in Dane County is complete and has been placed in service. Crews have finished transmission line wire construction in segments 2, 3, 4, 5 and 7. Additionally, restoration efforts are ongoing in segments 3, 4, and 7. Transmission line construction will continue on Segment 6 through fall along Interstate 94 between Tomah and Black River Falls in Trempealeau County.

The $580 million, 186-mile project was approved by the PSC in 2015 and construction began in early 2016. The project will:

- Improve electric reliability,
- Provide economic benefits access to lower-cost power, and
- Bring more wind power to customers throughout the region.

The Badger Coulee Project, along with 16 other Multi-Value Project transmission lines, is expected to reduce carbon emissions by 13 million to 20 million tons annually.
What to expect during construction
Project work, including easement acquisition and permitting, has started or is completed in eight segments. Segment 1 was completed and placed in service in 2017. Work on Construction Segments 2, 3, 4, 5, and 7 has been completed and the project is expected to be energized late this year. Work will generally be conducted in the sequence listed below. The process may vary depending on the design of the line, soil conditions, geology, terrain and other variables. Helicopters and aerial cranes will be used along the route to complete construction.

Construction access and protective mat placement
Before construction begins, crews will develop plans to enter the right-of-way via access lanes or roads. Both the corridor and access lanes need to be cleared of trees and other vegetation to accommodate the use of large construction equipment, including drilling rigs, concrete trucks, cranes, and other vehicles. Protective mats are used in designated areas along the route.

Equipment mobilization and material delivery
Materials, including steel poles, steel casing, rebar cages and other items will be delivered to structure locations prior to installation. Cranes, drill rigs, concrete trucks, boom trucks, trailers and vehicles also may be parked at a construction site. All work will be done within the right-of-way or on the access lanes.

Foundation construction
Drilled foundations for 345-kV structures are typically 30 to 60 feet deep and are usually eight to 12 feet in diameter. After drilling, concrete is poured along with a reinforcing steel cage. Specialty foundations may be required in areas with poor or rocky soil. Some specialty foundations will be installed on the northern portion of Segment 8.

Pole setting
The Badger Coulee Project will generally be constructed with weathering steel single-pole structures. H-frame structures also will be used in select locations. The poles are assembled at the site, raised and set in place with cranes or other heavy equipment.

Wire stringing
After poles have been placed, wires are installed by pulling them from one structure to the next using a temporary pulley system. After stringing conductor through a series of structures, the wires are hung on insulators that are attached to the poles. Trucks, heavy equipment and in some locations, helicopters, will be used to string the wires. Other equipment, including bird flight diverters and devices to prevent the wires from galloping, also may be installed.

Site restoration
When construction is complete and weather conditions permit, the right-of-way is cleaned up and restored. This work may include tile and fence repair, soil decompaction, rut repairs, tilling, seeding, and in certain areas, wetland restoration. If damage occurred to crops or other nonrestorable property during construction, the project will reimburse landowners for the damage.

Did you know?
Earth-toned weathering steel forms a protective rust coating after several wet/dry cycles. This coating, called a patina, protects the steel underneath from further corrosion.

Impact payments to benefit municipalities, counties
$20 million in one-time environmental impact payments, more than $1 million in annual payments to be distributed
The counties and municipalities along the project route receive payments associated with the construction of the project. Under state law, counties and municipalities with a new 345-kV line received a one-time environmental impact payment after project construction began in their area. Municipalities also receive annual impact payments. In addition, counties and towns in which substations are built or expanded may receive additional payments from utility-shared revenue. One-time environmental impact payments to communities total more than $20 million. Annual impact payments to municipalities are expected to total more than $1.2 million.