Badger Coulee Transmission Line Project

www.BadgerCoulee.com

Winter 2015

Badger Coulee construction to begin in 2016

The Badger Coulee Electric Transmission Line Project was approved by the Public Service Commission of Wisconsin in April 2015. The project will ensure electric reliability in western Wisconsin and improve access to lower-cost power and renewable energy. The 180-mile line will run from the Briggs Road Substation near Holmen to the North Madison and Cardinal substations in Dane County. Construction will begin in early 2016 to meet an in-service date of late 2018.

Badger Coulee at a glance

Voltage: 345 kilovolt

Project cost: Approximately $580 million

Western end point: Xcel Energy's new Briggs Road Substation near Holmen

Eastern end points: ATC's North Madison Substation in the Town of Vienna and Cardinal Substation in the Town of Middleton

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

Visit badgercoulee.com for maps and project information.

Impact payments to benefit municipalities, counties

The counties and municipalities along the project route will receive payments associated with the construction of the project. Under state law, counties and municipalities with a new 345-kV line being constructed will receive a one-time environmental impact payment after project construction starts 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.

What to expect during construction

Project work will be conducted in eight segments, with construction activities beginning on the eastern end of the project in Dane County. Construction completion is expected to take approximately three years and may be conducted concurrently or out of sequence on some construction segments.

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.

Easement acquisition

Real estate contractors began working with affected property owners to obtain easements in spring 2015. Easement acquisition is generally being conducted east to west by segment.

Surveying

Surveyors are currently working in several construction segment areas obtaining necessary data for construction design.

Construction access and right-of-way clearing

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. Construction mats are often used in wet or soft areas to minimize soil compaction, rutting and other disturbances.

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, mats 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 into reinforcing steel. Specialty foundations may be required in areas with poor or rocky soil.

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. Weathering steel poles

are earth-toned and require less maintenance than painted or galvanized steel. The poles are assembled at the site, raised and set in place with cranes or other heavy equipment.

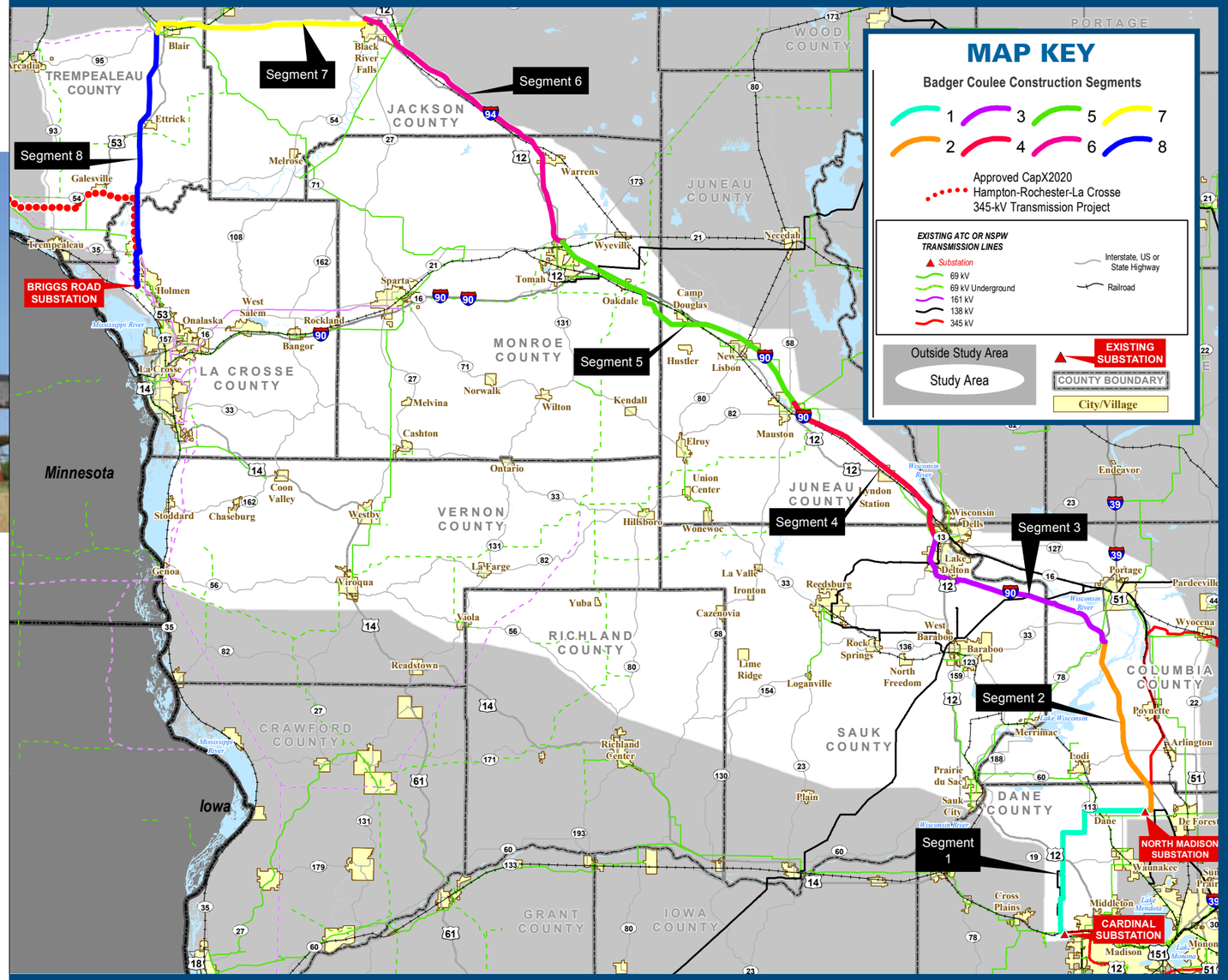
Wire stringing

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, repairing ruts, tilling, seeding, and in certain areas, wetland restoration. If damage occurred to crops or other non-restorable property during construction, the project will reimburse landowners for the damage.

Badger Coulee Project construction segments



Anticipated schedule:

Spring 2015 through 2017:	Obtain easements from affected property owners
Spring 2016 through Spring 2018:	Pre-construction open houses
Spring/summer 2016:	Start construction
Late 2018:	Line in service

Get up-to-date project information and maps at www.BadgerCoulee.com

Who we are

American Transmission Co. is a Wisconsin-based transmission-only utility that owns, operates, builds and maintains transmission facilities in portions of the Upper Midwest. For more information about ATC and our projects, visit www.atc-projects.com.

Xcel Energy is a major U.S. electricity and natural gas company with retail operations in eight Western and Midwestern states, including Wisconsin. Xcel Energy provides a comprehensive portfolio of energy-related products and services to 3.4 million electricity customers and 1.9 million natural gas customers through its regulated operating companies. For more information about Xcel Energy, visit www.xcelenergy.com.

Dairyland Power Cooperative, Southern Minnesota Municipal Power Agency – Wisconsin, and WPPI Energy are also owners for the portion of the project between the Briggs Road and North Madison substations.

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Working with federal, state officials to protect bats

Federal rules designed to protect the habitat of the northern long-eared bat went into effect earlier this year and will have an impact on aspects of transmission line construction. The bat's population has experienced a steep decline due to white-nose syndrome, a fungal disease that spreads quickly when bats congregate; the condition affects the bats' hibernation, causing them to starve or dehydrate.

"Because the threat to the bat is from a disease and not from human activity, there are very limited options to try to protect them," said Nayo Parrett, senior environmental project manager. "The federal rules place restrictions on tree removal in areas to protect bat habitat during certain months, which will improve breeding opportunities and give newborn bats a chance to grow."

ATC environmental professionals are working with the U.S. Fish and Wildlife Service and Wisconsin Department of Natural Resources to determine how to avoid impacts to the bat on the Badger Coulee Project as well as other ATC construction projects.