# BASIN ELECTRIC POWER COOPERATIVE A Touchstone Energy® Cooperative



Basin Electric is a wholesale power supplier serving 139 electric cooperative members in nine states.

- » Employs 1,900 people
- » Owns and/or operates more than 8,400 megawatts of generation in five states
- » Owns and/or maintains 2,600 miles of high-voltage transmission infrastructure

# **MEETING MEMBER GROWTH**

Member cooperatives are experiencing growth from many different areas including industrial, manufacturing, data processing, residential, small businesses, and agriculture.

Basin Electric has identified the need to develop approximately 1,400 megawatts of reliable, dispatchable power generation to help meet this growth. A natural gasfueled combined-cycle power plant meets this demand.

# COMBINED-CYCLE NATURAL GAS POWER PLANT

A combined-cycle power plant is an efficient way to harness the energy in natural gas by employing both a combustion turbine and a steam turbine to produce electricity.

Natural gas is burned to create energy that turns a combustion turbine, similar to a jet engine. The turbine is connected to a generator, producing electricity.

Exhaust heat from the combustion turbine is captured by a heat recovery steam generator and used to make steam. The steam turns a turbine, which is also connected to a generator, producing electricity.

## **HOW IT WORKS**



# TIMELINE

Approximate development timeline for the Bison Generation Station natural gas-fueled combined-cycle power plant, pending the completion of project development and regulatory processes.



#### PROJECT DEVELOPMENT; REGULATORY REVIEW AND APPROVAL

Federal, state, and county permitting processes

# CONSTRUCTION & COMMISSIONING

Earthwork, equipment delivery, construction, testing, commissioning, and reclamation

#### COMMERCIAL OPERATION

Generating electricity for our members

# RESPONSIBLE FOR OUR NEIGHBORS

Bison Generation Station will be a reliable, dispatchable, and environmentally responsible power plant fueled by a locally produced natural resource.



#### BENEFITS

Tax benefits to Williams County, North Dakota

- » Production tax per megawatt, based on how much electricity is generated annually
- Capacity tax per megawatt, based on the power plant's rated capacity annually



#### WORKFORCE

40-50 full-time jobs for operations, maintenance, and administration.



#### COMMUNITY

ADAPTABILITY

Charitable giving to support community needs for education, health and human services, civic and community betterment; and culture and arts.

About 1,000 workforce positions during

peak construction in the 2027 timeframe.

# LOCATION

LOCAL CONSIDERATIONS

The site takes into consideration several factors including access to natural gas pipelines, water, and high-voltage transmission, as well as environmental considerations and socio-economic impacts.

#### **AIR QUALITY**

Environmental control equipment will consist of the best available control technologies to minimize emissions.

### SOUND

Noise levels from the operating power plant at the nearest occupied residences are expected to be between 36 and 42 decibels, similar to a quiet office. Short-duration construction activities will be louder.



#### WATER

Basin Electric is working with the local rural water system, which has confirmed it can meet the power plant's needs with existing capacity. The facility will use air-cooled condensers to minimize water usage.

#### ROADS

Basin Electric is working with the county and township to identify and mitigate impacts to local roads. Basin Electric and its contractors will properly permit heavy-haul equipment deliveries, and coordinate with the county and township on any necessary roadway improvements and repairs.

#### VIEWSHED

Trees will be planted to reduce visual impacts on neighbors.