

Proceeding No. 21M-0005E
Black Hills Colorado Electric, LLC d/b/a Black Hills Energy (BHCE)
2021 Rule 3206 Report – Appendix A – Project Sheets

South Fowler Substation

Project Sponsor:	Black Hills Colorado Electric
Additional Project Participants:	
Project Description:	Increase load serving capability and reliability in the La Junta and Rocky Ford areas of BHCE’s service territory.
Voltage Class:	115 & 69 kV
Facility Rating:	80 MVA
Point of Origin/Location:	South Fowler Tap
Point of Termination:	South Fowler Tap
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Substation & Transmission Line
Development Status:	In Construction
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Improved reliability in the Rocky Ford area.
Estimated Cost (in 2021 Dollars):	\$5.1M
Schedule:	
Construction Date:	2020
Planned Completion/In-Service Date:	January 2022
Regulatory Info:	Approved – Colorado PUC Decision No. C19-0638
Regulatory Date:	July 25, 2019
Permitting Info:	
Permitting Date:	
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South Fowler 115 kV Substation

Description. The ‘South Fowler 115 kV Substation’ and the ‘Boone-South Fowler 69 kV to 115 kV Conversion’ projects are intended to replace the previously planned La Junta 115 kV Area Upgrades project. Following a recent review of the integrity of the 69 kV infrastructure in the area, it was confirmed that a significant number of lines need to be rebuilt within the near-term planning horizon. Additionally, requests for load interconnection and requests to wheel energy across the BHCE transmission and sub-transmission system were evaluated. These developments impact the overall needs of the local transmission system, so several alternatives were studied to develop the best comprehensive solution for the area.

A new 115/69 kV South Fowler substation and 80 MVA transformer was selected as the preferred alternative to the La Junta 115 kV Area Upgrades project. The new substation provides several benefits to the local transmission and sub-transmission system. It allows the Boone-La Junta 69 kV line rebuild, which is an asset integrity project, to be rebuilt as a 115 kV line, offering additional capacity to the area. It also provides operational flexibility when rebuilding other aged 69 kV lines in the local area. Another benefit of the project is that it provides a second, geographically diverse 115/69 kV delivery point to the area, as opposed to adding a second transformer to the existing La Junta 115/69 kV substation. Following a detailed project review, it was determined that expanding the existing 115/69 kV La Junta Substation to accommodate a second transformer as initially planned would be very challenging from both a physical space and construction outage standpoint. The new South Fowler substation would facilitate a La Junta substation outage at a later date to upgrade the existing transformer with a larger one if that project is pursued. Finally, the new South Fowler substation will improve the reliability to the local sub-transmission system by sectionalizing the existing Boone-Rocky Ford 69 kV line. The new substation will be designed to accommodate additional reactive voltage support devices as needed.

The engineering and design work associated with the substation portion of the project will be performed to ensure that the completed project will meet the established noise and magnetic field requirements as stated in Rule 3206 (f) and Rule 3206 (e), respectively. Namely, the noise level of the substation will not exceed 50 db(A) at a distance of 25 feet beyond the property line, and the magnetic field level at the property line, one meter above the ground will not exceed 150 MilliGauss.

Consideration of project alternatives including energy storage systems (Rule 3206(d)(I)(D)). Not applicable. The project was designed and planned prior to the rule requirement effective date of March 2, 2019. Additional note: the capacity needs of the South Fowler/La Junta electric system are in excess of what can be cost-effectively provided by energy storage alternatives.

Decision. In Decision C19-0638, the Commission determined that the project was in the ordinary course of business and that a CPCN was no necessary.