

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

**North Penrose 115 kV Distribution Substation**

<b>Project Sponsor:</b>	Black Hills Colorado Electric
<b>Additional Project Participants:</b>	
<b>Project Description:</b>	New 115 kV distribution substation near Penrose, CO; will intersect the West Station-Hogback 115 kV line.
Voltage Class:	115 kV
Facility Rating:	25 MVA
Point of Origin/Location:	Penrose, CO
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Distribution
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
<b>Purpose of Project:</b>	Load service
<b>Estimated Cost (in 2021 Dollars):</b>	\$6.7 Million
<b>Schedule:</b>	
Construction Date:	2021
Planned Completion/In-Service Date:	January 2022
Regulatory Info:	Approved - Colorado PUC: Decision No. C20-0477
Regulatory Date:	
Permitting Info:	
Permitting Date:	
<b>Contact Information:</b>	Lindsay Briggs, Supervisor Transmission Planning
Email	Lindsay.briggs @blackhillscorp.com
Phone	605-721-2240

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**North Penrose Area 115 kV Distribution Substation**

**Description.** This project consists of constructing a new distribution substation by intersecting BHCE’s planned West Station-Hogback 115 kV transmission line on the north side of Penrose, CO. The substation will be built to ultimately accommodate two 115/13.2kV, 25 MVA transformers, but only one bank will be installed initially. The community of Penrose is currently served via radial 69 kV line with limited contingency backup alternatives. This proposed distribution substation would provide an additional source to the community of Penrose as well as offload the 115/69 kV transformers at Portland, deferring the previously identified capacity constraint on the existing 42 MVA Portland #1 transformer.

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.

The completion date of the substation coincides with the completion of the West Station-Hogback 115 kV line in January 2022.

**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: Providing back-up energy to radial loads under contingency conditions is a benefit provided by energy storage technology; however, the magnitude of the Penrose substation demand exceeds what could be cost-effectively served with an energy storage project.

**Decision requested.** In Decision No. C20-0477, the Commission determined that the project was in the ordinary course of business and that a CPCN was not necessary