

STAFF REPORT
January 27, 2005

No. 04SR018 - 11-6-19 SDCL Review to allow expansion of a utility substation **ITEM 55**

GENERAL INFORMATION:

PETITIONER	Basin Electric Power Cooperative
REQUEST	No. 04SR018 - 11-6-19 SDCL Review to allow expansion of a utility substation
EXISTING LEGAL DESCRIPTION	NE1/4, Section 34, T1N, R8E, BHM, Pennington County, South Dakota
LOCATION	West of the intersection of Old Folsom Road and Lamb Road
EXISTING ZONING	Limited Agriculture District/General Agriculture District
SURROUNDING ZONING	
North:	General Agriculture District
South:	General Agriculture District
East:	Limited Agriculture District
West:	Limited Agriculture District/General Agriculture District
PUBLIC UTILITIES	Private on-site water and wastewater
DATE OF APPLICATION	03/26/2004
REVIEWED BY	Vicki L. Fisher / David L. Johnson

RECOMMENDATION:

Staff recommends that the 11-6-19 SDCL Review to allow expansion of a utility substation be approved with the following stipulations:

1. That all the improvements shall be constructed in compliance with the design plans submitted for review and approval; and,
2. The converter substation shall be continually operated in compliance with the South Dakota Public Utility Commission requirements.

GENERAL COMMENTS:

(Update January 14, 2005. All revised and/or added text is shown in bold print.) This item was continued at the January 6, 2005 Planning Commission meeting to allow the Planning Commission to tour the site of the metering breaker proposed to be installed on an existing tie line. On January 14, 2005, members of the Planning Commission and Alderperson Karen Olson joined staff and toured the site. Area property owners and members of Basin Electric and Black Hills Electric also joined the tour. At the request of the Planning Commission, the tour was extended to include visiting Jacki and Duane Miller's residence, one of Mike Gould's properties, both located along Old Folsom Road, and an existing metering breaker located within

STAFF REPORT
January 27, 2005

**No. 04SR018 - 11-6-19 SDCL Review to allow expansion of a utility
substation**

ITEM 55

a utility substation located south of Catron Boulevard. Representatives of Black Hills Power and Basin Electric indicated that the existing metering breaker is similar to the one proposed to be installed on the tie line. Please note that no other part of this Staff Report has been revised.

(Update December 26, 2004. All revised and/or added text is shown in bold print.) This item was continued at the December 9, 2004 Planning Commission meeting at the applicant's request to allow additional time to review the operational noise compliance assessment study at the converter substation.

On December 21, 2004 the applicant submitted the results of the operational noise compliance assessment study. A copy of the document is attached. The study identifies that the maximum noise level generated at the converter substation are in compliance with the South Dakota Public Utility Commission requirements of 61 decibels. The applicant has indicated that the noise levels on the east substation fence line, which is closest to the residences, all registered below 49 decibels. The applicant submitted a letter from the South Dakota Public Utility Commission stating that the noise levels at the converter substation are in compliance with their requirements and that they will conduct random reviews of the site.

At several of the previous Planning Commission meetings, area property owners voiced their concern with the noise levels being generated by the converter substation. In addition, City staff met with two of the property owners on December 9, 2004, after the prototype filter reactor silencers had been installed. The area property owners stated that the noise had been lowered but still remained at an unacceptable level for them to enjoy their home.

On May 27, 2004, the applicant signed an agreement to move structures, utility lines, fencing and other utility encroachments located within a distance of 45 feet from the centerline of the section line highway at their expense upon such time as the City requires the additional right-of-way to construct Lamb Road as a principal arterial street. Since the applicant has demonstrated that the noise levels are in compliance with the South Dakota Public Utility Commission standards and have signed the agreement, staff is recommending that the SDCL 11-6-19 Review be approved with the stipulations of approval as identified above.

(Update November 24, 2004. All revised and/or added text is shown in bold print.) This item was continued at the October 7, 2004 Planning Commission meeting to allow the applicant additional time to install prototype filter reactor silencers in the converter substation. On November 24, 2004, the applicant indicated that the silencers have been installed; however, the final report with the results from the subsequent noise testing will not be complete by the December 9, 2004 Planning Commission meeting. As such, the applicant has requested that this item be continued to the January 6, 2005 Planning Commission meeting. The applicant has also indicated that the final report will identify if the converter substation is in compliance with the noise standards established by the Public Utility Commission as part of this permit. Staff is recommending that the SDCL 11-6-19 Review be continued to the January 6, 2005 Planning Commission meeting as requested by the applicant. Please note that no other part of this Staff Report has been revised.

STAFF REPORT
January 27, 2005

No. 04SR018 - 11-6-19 SDCL Review to allow expansion of a utility substation **ITEM 55**

(Update September 27, 2004. All revised and/or added text is shown in bold print.) This item was continued at the August 26, 2004 Planning Commission meeting at the applicant's request in order to construct a noise barrier wall. However, the applicant has now indicated that in lieu of a noise barrier wall, the noise will be treated at the source utilizing filter reactor silencers within the existing equipment. The applicant has indicated that a prototype filter reactor silencer will be on-site during the week of October 11, 2004 and if determined successful, production of the remaining 15 silencers will be ordered and installed. As previously indicated, the applicant has indicated that the silencers will be installed within existing equipment. As such, a subsequent SDCL 11-6-19 Review is not needed for the improvement since it does not create an expansion and/or change of use on the property. The applicant is requesting that this SDCL 11-6-19 Review be continued to the December 9, 2004 Planning Commission meeting to allow the silencers to be installed and tested accordingly. Staff is recommending that the SDCL 11-6-19 Review be continued as requested. Please note that no other part of this Staff Report has been altered.

(Update August 13, 2004. All revised and/or added text is shown in bold print.) This item was continued at the August 5, 2004 Planning Commission meeting to allow the applicant to submit additional noise data. On August 11, 2004, the applicant submitted an action plan to mitigate the noise at the converter station. In particular, the action plan identifies that the transformers will be filled with sand to minimize any noise and/or frequencies generated by the units. In addition, the action plan identifies that an acoustic fence will be constructed along portions of the converter station to absorb noise. Staff has informed the applicant that the proposed expansion to the converter station will require the review and approval of a SDCL 11-6-19 Review. As such, the applicant has requested that this item be continued to the September 23, 2004 Planning Commission meeting to allow a SDCL 11-6-19 Review to be submitted and reviewed by the Planning Commission and to construct the improvements as identified. Please note that no other part of this Staff Report has been altered.

(Update July 28, 2004. All revised and/or added text is shown in bold print.) This item was continued at the July 22, 2004 Planning Commission meeting to allow the Planning Commission to meet at the site of an area property owner on July 26, 2004 in order to further review the noise issue relative to the converter substation. At the meeting, the Public Utility Commission Chairperson Sahr indicated that the designer of the facility, ABB Power Technologies, will be submitting a report on potential options to attenuate the noise nuisance. To date, the information has not been submitted for review. As such, staff is recommending that the SDCL 11-6-19 Review be continued to the August 26, 2004 Planning Commission meeting to allow the applicant's designer of the facility additional time to submit the information and to allow staff time to review the data. (Please note that the applicant has signed a waiver to allow additional time before the Planning Commission must act on this item.)

(Update July 12, 2004. All revised and/or added text is shown in bold print.) This item was continued at the June 24, 2004 Planning Commission meeting to allow the applicant to address noise issues relative to the converter substation located west of the proposed metering breaker. To date, staff is not aware if the noise issue has been resolved. Staff will inform the Planning Commission at the July 22, 2004 Planning Commission meeting if any additional information has been submitted since the writing of this Staff Report.

STAFF REPORT
January 27, 2005

No. 04SR018 - 11-6-19 SDCL Review to allow expansion of a utility substation **ITEM 55**

(Update June 11, 2004. All revised and/or added text is shown in bold print.) On May 28, 2004, the applicant submitted a signed agreement stating that Basin Electric Power Cooperative shall either relocate all proposed structures and utility lines a minimum distance of 45 feet from the centerline of a section line as previously required, or shall enter into an agreement to move structures, utility lines, fencing and other utility encroachments located within a distance of 45 feet from the centerline of the section line highway at their expense upon such time as the City requires the additional right-of-way to construct Lamb Road as a principal arterial street. The proposed agreement will be considered by the Legal and Finance Committee on June 16, 2004 and likely be acted on by the City Council on June 21, 2004. Staff will notify the Planning Commission at the June 24, 2004 Planning Commission meeting if the Council City does not authorize the Mayor to sign the agreement. Please note that no other part of this Staff Report has been revised.

(Update May 31, 2004. All revised and/or added text is shown in bold print.) This item was continued at the May 27, 2004 Planning Commission meeting at the applicant's request. Please note that no other part of this Staff Report has been revised.

(Update May 14, 2004) This item was continued at the May 6, 2004 Planning Commission meeting at the applicant's request. Please note that no other part of this Staff Report has been revised.

(Update April 25, 2004) This item was continued at the April 22, 2004 Planning Commission meeting at the applicant's request. Please note that no other part of this Staff Report has been revised. The applicant has submitted a SDCL 11-6-19 Review to install a metering breaker on an existing utility structure and to enclose the improvement with a fence. On April 25, 2002, the Planning Commission approved a SDCL 11-6-19 Review to construct a utility substation on property located east of the subject property. In addition, the SDCL 11-6-19 Review allowed the construction of transmission lines extending from the utility substation, including the structure being expanded as a part of this review, as a tie line from its interconnector eastern generation facilities to this area of the South Dakota and Wyoming.

The Pennington County Planning Department has indicated that the County Board of Commissioners have reviewed and approved a Conditional Use Permit to allow the metering breaker and a Variance to the Zoning Ordinance to reduce the front yard setback for the structure.

South Dakota Codified Law 11-6-19 states that "...whenever any such municipal council has adopted a comprehensive plan, then no street, park or other public way, ground, place, space, no public building or structure, no public utility, whether publicly or privately owned, if covered by the comprehensive plan or any adopted part thereof, shall be constructed or authorized in the municipality or within its subdivision jurisdiction until and unless the location and extent thereof shall have been submitted to and approved by the Planning Commission". The proposed metering breaker is a part of a public utility and the property is identified as a part of the Rapid City Comprehensive Plan requiring that the proposed expansion be reviewed and approved by the Rapid City Planning Commission.

STAFF REPORT
January 27, 2005

**No. 04SR018 - 11-6-19 SDCL Review to allow expansion of a utility
substation**

ITEM 55

STAFF REVIEW:

Staff has reviewed the request and has identified the following considerations:

Lamb Road: Lamb Road is located along the north lot line of the subject property and is classified as a principal arterial street on the City's Major Street Plan requiring a minimum 100 foot wide right-of-way. Currently, Lamb Road is located within a 66 foot wide section line highway. As such, a stipulation of approval of the original SDCL 11-16-19 Review to allow the substation and the tie lines required that "...all proposed structures and utility line(s) shall be located a minimum distance of 45 feet from the centerline of the section line highway". The applicant's site plan identifies that the proposed fence as well as several utility poles and/or structures are located approximately 37 feet from the centerline of the section line highway. As such, staff is recommending that prior to Planning Commission approval, Basin Electric Power Cooperative either relocate the poles and/or structures as previously required or enter into an agreement to move structures, utility lines, fencing and other utility encroachments located within a distance of 45 feet from the centerline of the section line highway at their expense upon such time as the City requires the additional right-of-way to construct Lamb Road as a principal arterial street.

Design Standards: The applicant's site plan identifies that the metering breaker will be constructed on an existing utility structure. In addition, the improvement will be enclosed with a seven foot high chain link fence with three strands of barbed wire for a total fence height of eight feet. Staff is recommending that the improvement be constructed in compliance with the design plans submitted for review and approval.