

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

IN THE MATTER OF THE PETITION FOR
SWEETMAN CONST. CO. D/B/A KNIFE
RIVER, TO HAVE XCEL ENERGY
ASSIGNED AS ITS ELECTRIC PROVIDER
IN THE SERVICE AREA OF SIOUX
VALLEY ELECTRIC

EL-25-032

**PRE-FILED INTERVENOR TESTIMONY
OF TED SMITH ON BEHALF OF SIOUX
VALLEY-SOUTHWESTERN ELECTRIC
COOPERATIVE, INC.**

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EXHIBITS

- Exhibit_TS-1: Resume
- Exhibit_TS-2: Sioux Valley Energy Distribution Map
- Exhibit_TS-3: Exhibits A and B of Clark Meyer’s Pre-Filed Testimony
- Exhibit_TS-4: Conditional Use Application dated June 26, 2025 (Extract)
- Exhibit_TS-5: Knife River CAD File Overlaid on Sioux Valley Energy Distribution Map

I. INTRODUCTION AND QUALIFICATIONS

- 1
- 2 Q. **Please state your name.**
- 3 A. Ted Smith
- 4 Q. **State your employer and business address.**
- 5 A. Sioux Valley Energy, PO Box 216, Colman, SD 57017.
- 6 Q. **State your current position with Sioux Valley-Southwestern Electric Cooperative, Inc.**
- 7 A. Vice President of Engineering and Operations.
- 8 Q. **How long have you served in that capacity?**
- 9 A. 19 ½ years.
- 10 Q. **What is your educational background?**
- 11 A. I have a Bachelor of Science in Electrical Engineering from South Dakota State University,
- 12 and an MBA from the University of Phoenix, along with a Professional Engineers (PE)
- 13 License from the State of MN.
- 14 Q. **Please provide an overview of your professional work experience.**
- 15 A. 19 ½ years as the Vice President of Engineering and Operations at Sioux Valley Energy.
- 16 Three years at Montana Dakota Utilities, initially as a System Engineer in Bismarck, ND, and
- 17 then an Area Electric Supervisor in Williston, ND. Five years at Northwestern Energy,
- 18 initially as a System Engineer in Huron, SD, and then an Area Manager in Aberdeen, SD. 4 ½
- 19 years as an Electric Power Lineman in the United States Air Force at Beale Air Force Base in
- 20 CA.
- 21 My resume is provided as Exhibit_TS-1.

II. PURPOSE AND BASIS OF TESTIMONY

- 22
- 23 Q. **On whose behalf was this testimony prepared?**
- 24 A. Sioux Valley-Southwestern Electric Cooperative, Inc., doing business as Sioux Valley Energy.

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49 A. The site that is currently owned by Knife River was initially energized on December 12, 2002,
50 for Concrete Materials.

51 Q. **Provide a general overview of what the current electric service entails.**

52 A. There is a primary metering point that is located approximately 150 feet east of SD Hwy 11
53 and 1,500 feet south of 259th Street. There is a total of approximately 12,500 feet of three
54 phase 12 kV underground primary conductor and four separate 500 KVA transformers, two
55 750 kVA transformers, and a 1,500 kVA transformer. See Exhibit_TS-2 (Sioux Valley Energy
56 Distribution Map).

57 Q. **Explain the difference between the distribution infrastructure Sioux Vally Energy would**
58 **employ to provide electric service to a standard large power service requiring less than 2**
59 **Megawatts of capacity compared to the on-site distribution infrastructure that a member**
60 **such as Knife River may employ to receive such service at a larger operation.**

61 A. For a standard “large power” service (less than 2 MW) as defined in Sioux Valley Energy’s
62 rates, Sioux Valley Energy would install all necessary 12 kV distribution line and install a
63 service transformer to fit the members’ needs from the nearest distribution facilities with
64 capacity. The members would be responsible for a contribution in aid to construction based on
65 Sioux Valley Energy’s current line extension policy. This service would be supplied from the
66 common distribution system where other Sioux Valley Energy members are also connected
67 and using capacity. For a larger than 2 MW service such as Knife River, Sioux Valley Energy
68 would evaluate the proposed load size and determine what dedicated facilities would be
69 required to serve that load and provide the requested redundancy from the member.
70 Specifically for this Knife River operation.

71 Q. **Provide an overview of Sioux Valley Energy’s distribution infrastructure relative to**
72 **Knife River’s current operations.**

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73 A. The current Knife River operations are fed from a distribution circuit out of the Corson
74 substation similarly to what is proposed for the expansion as well. The difference is that the
75 circuit feeding the current operations is not a dedicated circuit where other Sioux Valley
76 Energy members are fed from that circuit before and after it reaches the Knife River property.
77 The existing circuit is also smaller in size and has less overall capacity. The combination of the
78 additional members, as well as the smaller cable capacity, limits the existing facilities serving
79 the current operation from taking on substantial additional load. The added members on that
80 line also add exposure to those facilities, adding some small reliability risks versus a dedicated
81 feed.

82 **Q. What on-site distribution infrastructure does Knife River utilize for its current**
83 **operations?**

84 A. The current operation at the Knife River plant is fed from approximately 12,500 feet of three
85 phase 12 kV underground primary cable and seven distribution transformers ranging in size
86 and output voltage. All of those facilities are maintained by Sioux Valley Energy, and Knife
87 River is only responsible for all wires and connections beyond the secondary terminals of those
88 seven service transformers.

89 **Q. Who is responsible for the construction, maintenance, and repair of Knife River's on-site**
90 **distribution infrastructure?**

91 A. Sioux Valley Energy is responsible for all maintenance and repair of the existing distribution
92 facilities described above. Sioux Valley Energy would also be responsible for construction of
93 new 12 kV distribution facilities at the current operation and maintaining and repairing those
94 facilities with Knife River only being responsible for contribution in aid to construction costs
95 for those added facilities.

96 **Q. Provide a general overview of Sioux Valley Energy's line crew coverage and 24/7**

97 **dispatch capabilities relative to Knife River’s current operation.**

98 A. Sioux Valley Energy has 24/7 dispatch available in either the Colman dispatch center or fully
99 redundant Brandon backup dispatch center. This includes SCADA control of the distribution
100 substation. East River has a 24/7 dispatch center at their Madison location. Sioux Valley
101 Energy has a total of nine electric linemen that are based in the Brandon service center. These
102 individuals take their work trucks home at night and on weekends and reply directly from the
103 home to any outages that may be reported to the dispatch center. Sioux Valley Energy has
104 spare equipment, for all the equipment to be installed for Knife River, located at either the
105 Brandon or Colman Service Centers. This will allow Sioux Valley Energy to minimize the
106 amount of time for any outage that may happen due to an equipment failure.

107 **IV. SIoux VALLEY ENERGY’S PROPOSAL TO KNIFE RIVER**

108 Q. **Approximately when did Knife River contact Sioux Valley Energy regarding its newly**
109 **anticipated load for the location at issue?**

110 A. Knife River initially made contact with Sioux Valley Energy around June 28, 2024, regarding
111 the anticipated load.

112 Q. **What process did Sioux Valley Energy undertake to provide Knife River with a proposal**
113 **for its newly anticipated load?**

114 A. Sioux Valley Energy’s staking department made contact with Knife River initially on July 1,
115 2024, to inquire about load information anticipated. Sioux Valley Energy and Knife River had
116 several email exchanges, phone calls, and an on-site meeting over the next several months, and
117 after that, discussing details of the project to provide a proposal for service. Sioux Valley
118 Energy also incorporated East River Electric into these discussions to evaluate transmission
119 system and substation upgrades required to serve this anticipated load. A transmission system
120 study was paid for by Knife River in December of 2024. On January 15, 2025, Knife River,

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121 Sioux Valley Energy, and East River Electric personnel had a web based meeting to review
122 study results and discuss the potential improvements required to serve the load and meet the
123 reliability needs of Knife River. This culminated with the presentation of an initial proposal to
124 serve this load to Knife River on January 30, 2025.

125 **Q. In developing this initial proposal, what considerations came into play?**

126 A. Sioux Valley Energy had discussions with Knife River during the planning process to
127 determine anticipated load levels, load ramp up schedule, redundancy/contingency
128 requirements of Knife River, as well as reliability discussions with proposed facility options.
129 Ultimately Sioux Valley Energy and East River took into consideration initial overall cost to
130 serve the load, reliability concerns, and risks to both the distribution system and the
131 transmission system to meet Knife River expectations of service, as well as the overall long
132 term plans for the facility.

133 **Q. What did that initial proposal entail?**

134 A. The initial proposal provided to Knife River included a 1.25 mile 115 kV transmission line
135 extension to a new distribution substation with a 10 MVA base capacity on the site of the
136 Knife River facility. Out of this substation, the proposal included 12 kV underground
137 distribution facilities to run to different service locations identified by Knife River. At those
138 locations, the distribution service transformers would also be installed by Sioux Valley Energy,
139 where Knife River would only be responsible for all secondary service wires and connections
140 at the requested secondary service voltages.

141 **Q. Did Sioux Valley Energy provide Knife River with a proposal for electric service to the**
142 **location at issue?**

143 A. Yes, we provided a proposal for service as identified above.

144 **Q. After receiving Sioux Valley Energy's initial proposal, did Knife River engage in further**

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145 **discussions with Sioux Valley Energy before filing its Petition for Electric Service?**

146 A. After the initial service proposal was provided to Knife River on January 30, 2025, Knife
147 River followed up with a request for a monthly bill estimate to determine ongoing power costs.
148 Knife River provided estimated usage rates and load information to Sioux Valley Energy on
149 March 6, 2025. Sioux Valley Energy provided a proposed monthly power cost estimate for
150 Knife River on March 18, 2025, based on some assumptions of initial contribution in aid costs
151 for the facilities proposed as well as usage assumptions based on data from Knife River and
152 estimated rate data at the current time. Following this, Sioux Valley Energy requested a status
153 update from Knife River, of which Knife River had some clarification requests on the billing
154 estimate that were clarified by Sioux Valley Energy on May 30, 2025. No other discussions
155 regarding the proposal for service or the billing estimate were initiated with Sioux Valley
156 Energy before filing the Petition for Electric Service.

157 Q. **Were other options potentially available to serve Knife River's anticipated load?**

158 A. Yes, the initial proposal presented was based on discussion with Knife River and what Sioux
159 Valley Energy and East River felt were going to provide the service expectations requested by
160 Knife River at the time, but other options were certainly available and could have been
161 discussed with Knife River to determine the pros and cons of each option to meet its needs for
162 service and initial costs expectations.

163 Q. **What would that alternative entail?**

164 A. The alternative proposal would have involved serving the anticipated load from the existing
165 Corson substation. New 12 kV distribution facilities would be extended from the Corson
166 substation located approximately 4,000 feet west of the southwest corner of the Knife River
167 property identified in this filing. The distribution facilities would have been routed to different
168 areas of the plant in need of service, and distribution service transformers would be placed on

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169 site similar to the initial proposal that would still provide service to the point where Knife
170 River would take control at the secondary service points on the distribution transformers.

171 **Q. Are there any drawbacks to implementing this alternative relative to Knife River?**

172 A. This alternative would increase the amount of underground distribution facilities required to
173 serve this load that would be located off of the Knife River property. In general, underground
174 distribution facilities are at a higher risk for damage from public activities than overhead
175 transmission facilities, so one drawback would be the added risk of fault situations. Generally,
176 underground facility damage also takes longer to repair potentially increasing outage times at
177 the facility. The long distance of lower voltage facilities also increase voltage drop and system
178 losses, which would be an additional drawback to the system.

179 **Q. Are there any drawbacks to implementing this alternative relative to Sioux Valley**
180 **Energy's distribution system?**

181 A. The facilities identified in the initial proposal as well as what is identified as the alternative for
182 serving from the Corson substation would both be dedicated facilities to Knife River, so affects
183 to the overall Sioux Valley Energy distribution system are minimal. This would add load to a
184 substation facility that also serves additional Sioux Valley Energy members, but we do not feel
185 this would propose a substantial additional risk that would be a drawback for the Sioux Valley
186 Energy distribution system.

187 **Q. In terms of cost/benefit/risk to Knife River, how would you compare Sioux Valley**
188 **Energy's initial proposal to an alternative proposal?**

189 A. The initial proposal identified would be at a higher initial cost than the alternative proposal but
190 would provide some additional benefit and lower risk. The added benefit would be limiting
191 underground distribution facility lengths, which would improve voltage drop on the system as
192 well as provide lower distribution system losses, given that both options would be metered at

193 the substation sites. The decrease in underground distribution facilities also lowers the risk of
194 potential damage to those facilities, which would cause longer system outages. The alternative
195 proposal is a substantially lower initial cost but increases losses and voltage drop, as well as
196 exposes the Knife River facility to additional risk of damage on underground facilities, which
197 would cause prolonged outage situations.

198 **V. SDCL 49-34A-56 (Large Load Statute)**

199 **Q. Working in your current capacity with Sioux Valley Energy, have you become familiar**
200 **with the language of SDCL 49-34A-56?**

201 **A. Yes.**

202 **A. Current Customer**

203 **Q. What is the average load currently provided to Knife River's Concrete Sand facilities?**

204 **A. Over the last 24 months, the current Knife River facility averages 870 kW of peak load and**
205 **consumes 125,700 kWh monthly.**

206 **Q. Does that load currently provide electric service to Knife River's Concrete Sand Washing**
207 **Plant and its Concrete Sand Deposit?**

208 **A. Yes.**

209 **Q. Based upon your review of Knife River's responses to data requests, as well as the pre-**
210 **filed testimony of Clark Meyer, is it your understanding that the proposed facilities will**
211 **be owned and operated by the same entity that is currently a customer of Sioux Valley**
212 **Energy?**

213 **A. Yes.**

214 **Q. Does Sioux Valley Energy consider Sweetman Const. Co., doing business as Knife River,**
215 **to be a new customer?**

216 **A. No.**

217

B. Same Location

218 Q. **Provide an overview of Sioux Valley Energy’s distribution infrastructure that currently**
219 **serves Knife River’s Concrete Sand facilities.**

220 A. Please see attached Exhibit_TS-2 (Sioux Valley Energy Distribution Map). There is a primary
221 metering point that is located approximately 150 feet east of SD Hwy 11 and 1,500 feet south
222 of 259th Street. There is a total of approximately 12,500 feet of three phase 12 kV
223 underground primary conductor and four separate 500 KVA transformers, two 750 kVA
224 transformers, and a 1,500 kVA transformer.

225 Q. **Based upon your review of Exhibit_TS-3 (Exhibits A and B of Clark Meyer’s pre-filed**
226 **testimony), where is the existing Sand Washing Plant located as compared to the**
227 **proposed Quartzite Processing/Crushing Plant?**

228 A. The sand washing plant is located between the two portions of Knife River’s proposed
229 Quartzite plant.

230 Q. **Based upon your review of Exhibit_TS-3 (Exhibits A and B of Clark Meyer’s pre-filed**
231 **testimony), where is the existing Concrete Sand Deposit located as compared to the**
232 **proposed Quartzite Rock Deposit?**

233 A. The quartzite rock deposit is located adjacent to southeast of the existing concrete sand
234 deposit.

235 Q. **Based upon your review of Exhibit_TS-4 (an extract of Knife River’s Conditional Use**
236 **Application dated June 26, 2025, to Minnehaha County), how would you characterize the**
237 **proposed Quartzite facility as compared to Knife River’s current operations?**

238 A. I feel that this is, in Knife River’s words on the cover page, clearly an expansion of the existing
239 operation. The map, captioned “Corson Quarry/Existing Conditions (August 2024),” clearly
240 labels the areas both north and south of the existing quarry permit area as a South Quarry

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241 Permit Expansion and a North Quarry Permit Expansion. I do not understand how this could
242 be characterized as an expansion when applying for the conditional use permit and yet it is
243 Knife River’s wish to classify this as a new customer at a new location to meet the criteria of
244 SDCL 49-34A-56. Knife River is not a new customer, and this is not a new location, as Sioux
245 Valley Energy has had a service to this site for over 20 years (since 2002).

246 Q. **Does Sioux Valley Energy consider the Knife River’s proposed Quartzite facilities to be**
247 **operated at a new location?**

248 A. No.

249 C. **SDCL 49-34A-56(1): “The electric service requirements of the load to be served;”**

250 Q. **Based on the discussions that Sioux Valley has had with Knife River, what do you**
251 **ascertain as to the requirements of the expansion project?**

252 A. It is our understanding that there will be approximately 11.9 MW of load added to the existing
253 load at the existing Knife River plant site.

254 D. **SDCL 49-34A56(2) – “The availability of adequate power supply;”**

255 Q. **In your current capacity with Sioux Valley Energy, and based upon Sioux Valley**
256 **Energy’s all requirements contract with East River Electric Power Cooperative, Inc., do**
257 **you have an opinion as to whether there is an adequate power supply available for Sioux**
258 **Valley Energy to serve Knife River’s anticipated 11MW load?**

259 A. There is adequate power supply available to serve this anticipated load expansion.

260 E. **SDCL 49-34A-56(3): “The development or improvement of the electric system of the**
261 **utility seeking to provide the electric service, including the economic factors relating**
262 **thereto;”**

263 Q. **How would the initial proposal to Knife River develop or improve Sioux Valley Energy’s**
264 **distribution system?**

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265 A. The facilities identified in the initial proposal to Knife River would be dedicated facilities to
266 serve the Knife River operation and would not provide any improvement to the overall Sioux
267 Valley Energy distribution system.

268 Q. **In terms of economic factors, how are the costs for providing and servicing such an**
269 **anticipated large load addressed across Sioux Valley Energy's cooperative membership?**

270 A. Sioux Valley Energy has always strived to avoid cross subsidization in its membership
271 whenever possible, and specifically for these larger loads. We believe that costs should be
272 allocated to the areas responsible for causing those costs and also the rates should be set to
273 recover those costs as much as possible so that cross-subsidization is avoided throughout the
274 membership as much as possible.

275 Q. **If Sioux Valley Energy were to serve Knife River's proposed Quartzite operations, can**
276 **you explain how the costs for construction, maintenance, and repair are allocated in**
277 **terms of distribution and on-site distribution?**

278 A. Since the facilities required to serve the Quartzite operations are dedicated facilities, the
279 construction costs for those facilities are allocated directly to Knife River in the form of a
280 contribution in aid to construction requirement. The initial proposal identified those costs, and
281 the bill estimate provided to Knife River assumed 100% contribution up front for those costs,
282 but Sioux Valley has always been open to discussion on the terms of payment for those costs
283 either up front or over time. As far as maintenance and repair, there is an ongoing monthly
284 service charge that is structured to provide revenue to cover ongoing maintenance and repair
285 costs over the life of those facilities identified in the proposal.

286 Q. **Based upon your review of Knife River's and Xcel Energy's responses to your data**
287 **requests, what is your understanding of how costs for construction, maintenance and**
288 **repair are allocated in terms of distribution and on-site distribution?**

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289 A. I understand that Xcel does not require a CIAC for the 10 miles of 34.5 kV distribution line
290 that it is building to the plant expansion. Xcel will install a primary (34.5 kV) metering point
291 somewhere either on or close to the Knife River property. I can only assume that the rate that
292 will be charged to Knife River will provide for the cost of this 10 mile line extension, or
293 alternatively, other Xcel customers are subsidizing this line extension.

294 Q. **In terms of development or improvement of Sioux Valley Energy's distribution system,**
295 **and in light of any relevant economic factors, how would you compare and contrast the**
296 **initial proposal to Knife River with the alternative to which you have testified**
297 **previously?**

298 A. In terms of development or improvement of Sioux Valley Energy's distribution system, both
299 the initial proposal and the alternative proposal provide dedicated facilities to Knife River, and
300 neither option provides improvement to the overall Sioux Valley distribution system. Both the
301 initial proposal and the alternative have different advantages and disadvantages from a cost,
302 benefit, and risk standpoint, but do not provide improvement to the overall distribution system
303 of Sioux Valley Energy.

304 Q. **Based upon your review of Exhibit_TS-5 (Knife River CAD File Overlaid on Sioux**
305 **Valley Energy Distribution Map), what impact do you foresee on the respective**
306 **distribution systems of Sioux Valley Energy and Xcel Energy should Knife River's**
307 **Petition be granted?**

308 A. I do not see any way that this system can be built without crossing and intermingling with the
309 existing Sioux Valley Energy facilities. There is significant danger to anyone working on
310 either of these systems, as the intermingling of two separate electric distribution systems at
311 different voltages will be a complicated, convoluted system that is unlike anything that Sioux
312 Valley Energy has ever dealt with. I feel this would create a significant safety issue. This is

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313 unique enough of a situation that Sioux Valley Energy line workers would be challenged to
314 keep everything clear. I do not believe Xcel Energy will work on the system beyond their
315 primary metering point. This concerns me greatly, as now you have electricians that may not
316 be as qualified as a line crew, that work with high voltage daily, having to perform work on the
317 Knife River distribution system. I am extremely concerned with safety at this site.

318 **F. SDCL 49-34A-56(3): “The proximity of adequate facilities from which electric service**
319 **of the type required may be delivered;”**

320 Q. **What distribution infrastructure would Sioux Valley Energy have to build in order to**
321 **serve Knife River’s anticipated load of 11 MW at its proposed Quartzite facilities?**

322 A. The alternative proposal currently being presented by Sioux Valley Energy would require
323 substation upgrades at the Corson substation by East River to provide the required capacity.
324 From the distribution side, Sioux Valley Energy would need to install a minimum of two
325 dedicated 12kV underground distribution circuits over to the plant. On site at the plant, Sioux
326 Valley Energy would also have to install several pieces of switchgear to properly sectionalize
327 the feeds, as well as install distribution transformers at identified locations. From these
328 transformers, Knife River would take service at the secondary terminals of the transformer.
329 These two circuits would provide nearly zero redundancy to Knife River when the plant is
330 running at full capacity and it would be recommended to install a third distribution feeder to
331 the plant site if Knife River was wanting redundancy incorporated into that service.

332 Q. **Based upon your review of Xcel Energy’s responses to your data requests, what is your**
333 **understanding of the necessary distribution infrastructure that would have to be built?**

334 A. My understanding is that Knife River will be responsible for all onsite distribution from the
335 above primary metering point to include any and all primary voltage switchgear, system
336 protection and all conductor up to and including the distribution transformers. We have

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337 estimated that it will require approximately **[PROTECTED DATA BEGINS]**
338 **[PROTECTED DATA ENDS]** to provide all associated switchgear, conductor and multiple
339 distribution transformers to supply energy in the locations and at the voltages needed for the
340 plant expansion. This estimate was created using costs for 12.47 kV equipment, as that is the
341 voltage we are familiar with. I assume the costs will be higher for a 34.5 kV on-site
342 distribution system.

343

344 Dated this 17th day of February, 2026.

345

346 \s\ Ted Smith

347

348 Ted Smith, Vice President of Engineering and Operations, Sioux Valley Energy