

**PUBLIC UTILITIES COMMISSION
MINUTES OF PUBLIC HEARING**

The Public Utilities Commission convened at 1:30 p.m. on Monday, March 28, 2016, in Room 413, Fourth Floor, State Capitol, Pierre, South Dakota.

The purpose of the meeting was to conduct a public hearing on the proposed rules of the Commission numbered 20:10:39:01 to 20:10:39:60 inclusive, adopted under the authority of SDCL 49-47-2.

Members of the Commission in Attendance: Chris Nelson, Chair; Kristie Fiegen, Vice Chair; and Gary Hanson, Commissioner. Chairman Nelson conducted the hearing.

Staff Members of the Commission in Attendance: Rolayne Wiest, Commission Counsel; Karen Cremer, Commission Counsel; Greg Rislov, Commission Analyst; Darren Kearney, Staff Analyst; and Katlyn Gustafson, Administrative Assistant.

Others in Attendance: Jim Johnson, Otter Tail Power Co. (OTP), Devils Lake, ND; Randy Roen, OTP, Fergus Falls, MN; Eric Pauli, Xcel Energy, Sioux Falls, SD; Darla Pollman Rogers, South Dakota Rural Electric Association (SDREA), Pierre, SD; Dave Eide, Codington-Clark Electric, Watertown, SD; Bob Sahr, East River Electric, Madison, SD; Ted Smith, Sioux Valley Energy, Colman, SD; Bob Mercer, Newspapers, Pierre, SD; Roger Scheibe, South Dakota Dairy Producers (SDDP), Brookings, SD; Pam Bonrud, NorthWestern Energy, Sioux Falls, SD; Matt Hotzler, H-D Electric Cooperative, Clear Lake, SD; Steve Willard, South Dakota Electric Utility Companies, Pierre, SD; Brenda Kleinjan, SDREA, Pierre, SD.

Written Testimony

No written comments were received prior to the hearing. Following the hearing, written comments were submitted by Xcel Energy, NorthWestern Energy, SDREA, MidAmerican Energy, and SDDP.

Oral Testimony

Eric Pauli, Xcel Energy, requested a change to 20:10:39:10(3) regarding current measurements. Mr. Pauli requested the subdivision read as follows:

A clamp-on ammeter, digital multi-meter with clamp-on device, or an in-line ammeter is used to measure current between two points. The meters must be capable of separating and independently measuring alternating current and direct current and capable of measuring the true root mean square current. A current measurement can be prone to erroneous results due to instrument wear and influences of surrounding radio frequency signals and electromagnetic fields. If choosing to take current measurements one must also measure the voltage across the 500 ohm resistor to confirm the current measurement satisfies ohms law and meets the accuracy resolution and steady state requirements.

He stated that Xcel's concern is that there are some irrelevancies with current measurements and if current is going to be in there, then the measurement should be clarified.

Darla Pollman Rogers, SDREA, supported the rules as proposed. Ms. Rogers noted that SDREA brought the stray voltage bill to the legislature in 2015 after it formed a stray voltage committee and talked to stakeholders for two years. She stated that SDREA appreciated the opportunities for input on the rules and stated that the rules are consistent with the enabling statutes. Ms. Rogers stated that SDREA did not support the changes requested by Xcel, as the changes were not necessary and not consistent with the statutes. She suggested alternative language, if the Commission decided it wanted to make substantive changes to this section, but SDREA's preference was that the rule not be changed. The alternative proposal was to add the following language to subpart (1) of 20:10:39:10:

If environmental conditions exist that could affect the accuracy of either current or voltage measurements additional measurements should be taken to verify the existence of stray voltage.

Ms. Rogers stated that this was better language because it did not single out one measurement over another. Commissioner Fiegen asked whether SDREA had any changes to the formulas. Ms. Rogers said it was waiting to see if any other comments were submitted regarding changes.

Roger Scheibe, SDDP, stated his group was supportive of the concept of the utilities working with dairy producers if there is a problem. He recommended not using the abbreviations that were proposed by LRC, as the rules were more difficult to read with the abbreviations. For 20:10:39:18, he recommended leaving in the reference to the statute that was deleted by LRC as it was very important to have the rules reference that statute. Mr. Scheibe stated that SDDP is fully supportive of where the rules are at and looked forward to working with the utilities.

Commissioner Nelson then asked those present if they had any comments on certain changes that LRC had proposed in LRC's form and style changes. For 20:10:39:10(3), he asked if the LRC deletions to the first and second sentence should be made. No one expressed a comment on this issue. Commissioner Nelson thought the changes did not change the meaning. Commissioner Fiegen was not sure if the deletions were necessary.

For 20:10:39:19, Commissioner Nelson asked if the reference to "utility" should be changed to "service provider" as proposed by LRC. No one commented on this issue. Commissioner Fiegen said the service provider could be the utility.

For 20:10:39:22, Commissioner Nelson asked about quantifying the number of ground rods. He stated his preference was to leave the rule as it is currently proposed. No one commented on this issue. Commissioner Nelson asked for comments on this issue in the written comments.

For 20:10:39:26, the question was where the locations of electric fences should be noted. Commissioner Nelson said the locations would likely be in the dairy drawing but he was not sure this needed to be spelled out. No one commented on this issue.

For 20:10:39:38, the question was if the information should be in this rule or in 20:10:39:19. Commissioner Nelson said that it makes more sense to retain the requirement in this rule and delete similar language in 20:10:39:19. No one commented on this issue.

For 20:10:39:45, the question was what would be considered a “significant” voltage drop in the third sentence. Pam Bonrud, NorthWestern Energy, recommended that some sort of range be included to define “significant.” Commissioner Nelson asked for suggestions in written comments.

For 20:10:39:49¹, subdivision (4), Roger Scheibe, SDDP, asked if it made more sense to leave the terms in this subdivision instead of referencing subdivision numbers as recommended by LRC. Commissioner Nelson said that it made sense to leave actual terms in there.

For 20:10:39:50², the question was whether in the last sentence, the word “only” should be inserted regarding which steps needed to be performed for a dairy with three-phase service. Ted Smith, Sioux Valley Energy, stated that the word “only” should probably be added.

For 20:10:39:53, LRC proposed deleting the last sentence that described when it was best to perform the signature test. Ted Smith, Sioux Valley Energy, recommended that this sentence not be eliminated. Commissioner Nelson agreed.

For 20:10:29:59, Commissioner Nelson asked whether the term “reasonable period of time” should be better defined as to when the qualified testing analyst needed to prepare a written report. Roger Scheibe, SDDP, recommended 30 days. Darla Pollman Rogers, SDREA, Pam Bonrud, NorthWestern Energy, and Randy Roen, OTP, all agreed that 30 days would be reasonable.

For the definition of “resistance” in 20:10:39:01(13), Commissioner Nelson asked if the word “quantity” should be changed to “quality” as proposed by LRC. Darla Pollman Rogers, SDREA, stated that it should stay as “quantity.”

For the definition of “voltage” in 20:10:39:01(21), Commissioner Nelson asked if the first part should be deleted as recommended by LRC. Darla Pollman Rogers, SDREA, stated that it should not be deleted.

For 20:10:39:04, Commissioner Fiegen asked whether the word “may” should be changed to “shall” as proposed by LRC regarding when a dairy producer provides notice to the utility. Roger Scheibe, SDDP, recommended the use of “shall.”

For 20:10:39:17, Roger Scheibe, SDDP, recommended leaving in the words that LRC proposed deleting in the first sentence regarding the cow contact and 48 hour test.

Adjournment: 2:15 p.m.

¹ This rule is now 20:10:39:50 in the final rules.

² This rule is now 20:10:39:49 in the final rules.

Commission's Decision

At its Commission meeting held on April 27, 2016, the Commission considered whether to make any changes to the rules and whether to adopt final rules. Commissioner Nelson moved to make certain changes to the rules and accept most of the LRC form and style changes. Action was deferred until May 10, 2016. At its Commission meeting held on May 10, 2016, Commissioner Fiegen moved to amend Commissioner Nelson's motion regarding 20:10:39:57 and 20:10:39:58 and not make changes to these two rules as proposed by some utilities in their written comments. The Commission voted unanimously to approve the amendments to the motion. The Commission then voted unanimously to approve the amended motion. The results of the amended motion, including changes from the rules as proposed, are as follow:

- For the definition of resistance in 20:10:39:01(13), the Commission did not accept the LRC change of the word "quantity" to "quality." SDREA recommended keeping the word "quantity."
- For the definition of voltage in 20:10:39:01(21), the Commission did not accept LRC's changes that deleted the words "the electrical quantity that describes." SDREA recommended leaving in these words.
- For 20:10:39:04 regarding the notice to utilities, the Commission accepted SDREA's and LRC's proposed changes, except that the Commission changed the "if" to "whether."
- For 20:10:39:10 regarding requirements for measuring and recording, the Commission accepted LRC's changes and did not make the changes that were requested by Xcel to add language to subdivision 3 and that were opposed by SDREA as not consistent with the statutes.
- For 20:10:39:17 regarding the testing sequence, the Commission accepted LRC's changes, including the deletion of the language in the middle of the first sentence.
- For 20:10:39:18 regarding when the preventive action level is not exceeded, the Commission did not accept LRC's deletion of the reference to the statute. SDDP and SDREA recommended leaving it in the rule.
- For 20:10:39:19 regarding when the preventive action level is exceeded, the Commission did not change the word "utility" to "service provider" as questioned by LRC. SDREA recommended leaving it as "utility." In addition, the Commission deleted the last sentence of the rule as that is already covered by 20:10:39:38.
- For 20:10:39:22 regarding the use of remote reference electrodes, the Commission made the changes recommended by both SDREA and LRC. The SDREA changes clarified the use of remote reference electrodes.
- For 20:10:39:23 regarding inspection, repair, and measurement requirements, the Commission did not make LRC's changes that referenced "service provider" instead of "utility." SDREA recommended leaving in "utility."
- For 20:10:39:26 regarding suspension of testing due to safety hazards, the Commission added in the words "in the drawing of the dairy and the report" after the word "noted" in the last sentence. LRC had recommended clarifying where the location of fences and other devices should be noted.
- For 20:10:39:27 regarding the cow contact test, the Commission accepted SDREA's insertion of "where" in place of "at which" and accepted LRC's remaining changes.

- For 20:10:39:32 regarding recording the cow contact test, the Commission did not accept LRC's insertion of abbreviations in place of the actual terms. Both SDREA and SDDP requested the actual terms throughout all of the rules instead of abbreviations.
- For 20:10:39:35 regarding data collection for the 48 hour test, the Commission did not accept LRC's insertion of abbreviations in place of the actual terms. Both SDREA and SDDP requested the actual terms throughout all of the rules instead of abbreviations.
- For 20:10:39:38 regarding the reduced recording period for the 48 hour test, the Commission did not delete the rule. LRC had asked if this rule should be deleted as similar language was in 20:10:39:38. As noted in the explanation for 20:10:39:19 above, that language was deleted in 20:10:29:19 so 20:10:39:38 was retained.
- For 20:10:39:45 regarding the measurements for secondary neutral voltage drop test, the Commission did not define "significantly" as requested by LRC. NorthWestern, Xcel, SDREA, and MidAmerican all recommended not defining "significantly." NorthWestern stated that it is impractical to try to define a standard or range that can be applied to all possible scenarios.
- For 20:10:39:49³ regarding conducting the load box test, the Commission accepted LRC's insertion of "only" in the last sentence and change "service provider" to "qualified testing professional" as recommended by SDREA.
- For 20:10:39:50⁴ regarding data collection for the load box test, the Commission did not accept LRC's substitution of subdivisions for actual terms. SDREA, SDDP, MidAmerican, and Sioux Valley Energy recommended leaving in the actual terms.
- For 20:10:39:51 regarding calculating the K factor for the load box test, the Commission accepted SDREA's change of inserting "divided by" between cow contact voltage and secondary neutral to reference voltage in the first sentence.
- For 20:10:39:53 regarding the signature test, the Commission did not accept LRC's deletion of the final sentence. SDREA, MidAmerican, and Sioux Valley Energy recommended retaining the sentence. MidAmerican stated that a tester should attempt to conduct the test when there is minimal farm electrical activity.
- For 20:10:39:57 and 20:10:39:58 regarding the determination of contributions for single and three phase dairies, the Commission did not accept the changes as proposed by Xcel, NorthWestern, and SDREA. The Commission did not make the changes, as the changes would focus testing on a single point in time, which may fail to adequately measure stray voltage. In addition, the proposed changes did not appear to comport with other testing requirements that would still be required to be done, but then not used in the formulas as proposed by the utilities.
- For 20:10:39:59 regarding the written report, the Commission changed "reasonable period of time" for completion of the written report to 30 days and provided that the copy of the written report to the dairy producer would also be provided in 30 days.
- For the rules in general, the Commission decided to not change references from "utility" to "service provider" as proposed by LRC. This was at the request of SDREA.

³ This rule was 20:10:39:50 in the proposed rules. The order of the rule was changed as suggested by LRC.

⁴ This rule was 20:10:39:49 in the proposed rules. The order of the rule was changed as suggested by LRC.

- For the rules in general, the Commission did not change the terms to abbreviations and proposed by LRC. Both SDREA and SDDP had recommended leaving in the terms to eliminate confusion and the need to refer back to definitions.

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