

State of South Dakota

NINETIETH SESSION
LEGISLATIVE ASSEMBLY, 2015

941W0387

SENATE BILL NO. 131

Introduced by: Senators Tidemann, Bradford, Brown, Curd, Ewing, Frerichs, Greenfield (Brock), Heinert, Hunhoff (Bernie), Lederman, Monroe, Olson, Parsley, Peterson (Jim), Rampelberg, Sutton, and Tieszen and Representatives Solum, Bolin, Brunner, Craig, Cronin, Feickert, Hawley, Heinemann (Leslie), Hunt, Klumb, Latterell, Otten (Herman), Qualm, Schaefer, Schoenfish, Sly, Verchio, Westra, Wiik, and Wollmann

1 FOR AN ACT ENTITLED, An Act to establish certain provisions regarding stray electrical
2 current and voltage remediation.

3 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF SOUTH DAKOTA:

4 Section 1. Terms used in this Act mean:

- 5 (1) "Adequate remediation," corrective action by an electric utility that results in, and is
6 reasonably likely to sustain, a reduction of stray current or voltage attributable to the
7 electric utility's distribution system of fifty percent or less of the preventive action
8 level;
- 9 (2) "Commission," the Public Utilities Commission;
- 10 (3) "Cow contact points," any two electrically conductive points that a dairy cow may,
11 in its normal environment, unavoidably and simultaneously contact;
- 12 (4) "Electric utility" or "utility," an electric utility as defined in § 49-34A-1;
- 13 (5) "Preventive action level," stray current or voltage that is either:



1 (a) A steady-state, root mean square (rms), alternating current (AC) of 2.0
2 milliamp (mA) or more through a 500 ohm resistor connected between cow
3 contact points, as measured by a true rms meter; or

4 (b) A steady-state, rms, AC voltage of 1.0 volts or more, across (in parallel with)
5 a 500 ohm resistor connected between cow contact points, as measured by a
6 true rms meter;

7 (6) "Steady-state," the value of a current or voltage after an amount of time where all
8 transients have decayed to a negligible value;

9 (7) "Stray current or voltage,":

10 (a) Any steady-state, 60 hertz (Hz) (including harmonics thereof), root mean
11 square (rms), alternating current (AC) of less than 20 milliamp (mA) through
12 a 500 ohm resistor connected between cow contact points, as measured by a
13 true rms meter; or

14 (b) Any steady-state, 60 Hz (including harmonics thereof), rms, AC voltage of
15 less than 10 volts, across (in parallel with) a 500 ohm resistor connected
16 between cow contact points, as measured by a true rms meter.

17 Section 2. Within twelve months of the effective date of this Act, the commission shall
18 promulgate rules, pursuant to chapter 1-26, concerning:

19 (1) Acceptable standards for measurements of stray voltage;

20 (2) Procedures and requirements for testing used to measure stray voltage;

21 (3) Responsibilities of dairy producers, including notice requirements and cooperation
22 with measuring and testing procedures conducted by electric utilities;

23 (4) Responsibilities of electric utilities, including response to notices from dairy
24 producers;

- 1 (5) Tests used to detect and measure stray voltage;
- 2 (6) Qualifications of persons performing and analyzing results of stray voltage tests;
- 3 (7) Requirements for stray voltage measuring and recording equipment;
- 4 (8) Protocols for persons performing stray voltage tests; and
- 5 (9) Remediation guidelines.

6 The commission shall review the rules from time to time, or upon petition to the
7 commission, to ensure that the rules adopted by the commission to establish uniform procedures
8 and protocols continue to be the most scientifically and technologically accurate and reliable
9 means of detecting stray current or voltage. Any measurements of stray current or voltage not
10 made in compliance with commission rules shall be inadmissible before the commission or in
11 any civil action. The commission rules shall be applicable to dairy producers, electric utilities,
12 and all persons or entities involved in any way in the measurement or remediation of stray
13 current or voltage in this state.

14 Section 3. Any dairy producer in this state who claims that the producer's dairy cows are
15 being affected by any form or type of electrical energy allegedly attributable to an electric utility
16 including, without limitation, stray current or voltage, shall, as a condition precedent to
17 commencing any civil action against the utility, provide written notice of the affect to the utility.
18 The notice shall specify why the dairy producer believes the producer's dairy cows are being
19 affected by electrical energy attributable to the utility. Within fourteen business days of receipt
20 of the notice, the utility shall take measurements at cow contact points at the dairy producer's
21 dairy to identify the existence and magnitude of stray current or voltage, if any. If the utility
22 finds a level of stray current or voltage at cow contact points in excess of the preventive action
23 level, the utility shall promptly identify that portion, if any, of the stray current or voltage that
24 is attributable to the utility's distribution system. If that portion of the stray current or voltage

1 at cow contact points attributable to the utility's distribution system exceeds fifty percent of the
2 preventive action level, the utility shall, within seven business days, commence and diligently
3 pursue to completion, remedial procedures which shall reduce, and are reasonably likely to
4 sustain, that portion of the stray current or voltage at cow contact points attributable to the
5 utility's distribution system to fifty percent or less of the preventive action level, unless
6 extraordinary circumstances prevent the utility from commencing remedial action within seven
7 business days. In such case, the utility has an additional seven business days to commence and
8 pursue to completion remedial procedures.

9 Section 4. A dairy producer or utility may file a complaint with the commission claiming
10 that there has been a failure to comply with this Act. The commission has exclusive, initial
11 jurisdiction to determine:

- 12 (1) Whether the dairy producer has provided the requisite notice to the electric utility;
- 13 (2) Whether the dairy producer has cooperated with the electric utility to allow the utility
14 to complete measuring and testing;
- 15 (3) Whether a utility has complied with the commission rules regarding measurement of
16 stray current or voltage;
- 17 (4) Whether the utility's measurements demonstrated stray current or voltage at or above
18 the preventive action level;
- 19 (5) Whether the utility has properly identified that portion of the stray current or voltage
20 at cow contact points attributable to the utility's distribution system; and
- 21 (6) Whether the utility has complied with its remediation obligation under this Act.

22 After opportunity for hearing, the commission shall issue a decision finding whether this Act
23 has been complied with or not. If one or more provisions of this Act have not been complied
24 with, the commission shall order compliance within a period of time prescribed by the

1 commission. The commission shall assess its costs associated with the complaint equally
2 between the dairy producer and the utility.

3 Section 5. If, after hearing, the commission determines that a dairy producer made or
4 pursued a claim in bad faith or for purposes of harassment of the utility, the commission shall
5 require the dairy producer to pay the utility's actual costs of investigation. If, after hearing, the
6 commission determines that an electric utility acted in bad faith or for purposes of harassment
7 or delay, the commission shall require the utility to pay the dairy producer's actual costs of
8 investigation, if any.

9 Section 6. No civil action may be commenced by a dairy producer against an electric utility
10 seeking damages or other relief allegedly due to injury caused by stray current or voltage unless
11 the dairy producer has complied with the provisions of section 3 of this Act, and the commission
12 has issued an order pursuant to section 4 or 5 of this Act. In any civil action against a utility for
13 damages or other relief, after the dairy producer has complied with the provisions of section 3
14 of this Act, and the commission has issued an order pursuant to section 4 or 5 of this Act, the
15 commission's order is admissible in evidence in such civil actions. The dairy producer may
16 commence the civil action not later than one year following the issuance of the commission's
17 final order or one year following the completion of any appeals of the commission's final order,
18 whichever occurs later.

19 Section 7. In any civil action against an electric utility for damages pursuant to this Act, a
20 dairy producer is limited to those damages which were incurred by the dairy producer during
21 that period of time commencing twelve months prior to the dairy producer's provision of notice
22 to the utility and ending on the date of completion of adequate remediation, and were caused by
23 that portion of the stray current or voltage attributable to the utility's distribution system.

24 Section 8. Any claim against an electric utility for damages due to stray current or voltage

1 is limited to a claim of negligence, including in the case of a prior determination of the
2 commission pursuant to section 4 or 5 of this Act, negligence per se. In determining whether the
3 utility was negligent, the utility's conduct shall be judged using the commission rules.