Intermountain Power Agency
Energy for Today & Tomorrow

August 6, 2020

Public Utilities, Energy, and Technology Chairs
Senator Winterton
Representative Albrecht

Gentlemen,

I have been advised by Sarah J. Balland of your request for information that will assist you in connection with the requirements of Section 54-22-204 of the Utah State Code enacted in 2018 by HB 318 that requires the "Interim Committee to review industry standards and peer reviewed research regarding levels of stray current and voltage and impacts to livestock". I am happy to provide assistance to the Committee in this regard in the format requested including providing testimony before the Committee or by this written response.

Section 54-22-102 sets out certain definitions among which is the following:

(1) "Actionable level" means stray current or voltage that is:
  (a) a steady-state, root mean square, alternating current (AC) of 2.0 milliamps or more through a 500 ohm resistor connected between livestock contact points, as measured by a digital true root mean square meter;
  (b) a steady-state, root mean square AC voltage of 1.0 volt or more across, in parallel with, a 500 ohm resistor connected between livestock contact points, as measured by a true root mean square meter;
  (c) a steady-state direct current (DC) of 2.8 milliamps or more through a 500 ohm resistor connected between livestock contact points, as measured by a digital meter; or
  (d) a steady DC voltage of 1.4 volts or more across a 500 ohm resistor connected between livestock contact points, as measured by a digital meter.

Section 54-22-202 requires certain remediation by an electric entity if it is found to contribute to any stray current or voltage that is 50% or more of the actionable level.

The standards incorporated in the definition of actionable level have been long established by the industry as levels of stray current and voltage impacting livestock. The levels shown in the current code are conservative values established by rigorous scientific validation. There have not been any changes to these standards, resulting from peer reviewed research, since 2018. IPA reviewed the levels with Dr. Douglas J Reinemann, Associate Dean for Extension and Outreach at the College of Agriculture and Life Sciences - University of Wisconsin-Madison, and he confirmed that these levels still represent current industry standards.

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IPA supported HB 318 in 2018 to establish standards for stray current and voltage and provide a more amicable and less costly pathway to remediation. Since its passage, IPA has received no notices from livestock owners or livestock operators of their belief that their livestock was affected by stray current or voltage that may be attributable to the Intermountain Power Project.

Sincerely,

R. Dan Eldredge
General Manager