



Oregon

Kate Brown, Governor

Public Utility Commission

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October 18, 2022



BY EMAIL

Idaho Power Company

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RE: Advice No. 22-04

At the public meeting on October 18, 2022, the Commission adopted Staff's recommendation in this matter docketed as ADV 1428. The Staff Report and a receipted copy of the sheets in your advice filing are attached.

Nolan Moser

Chief Administrative Law Judge

Public Utility Commission of Oregon

(503) 378-3098

**PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: October 18, 2022**

REGULAR **CONSENT** **EFFECTIVE DATE** October 19, 2022

DATE: October 10, 2022

TO: Public Utility Commission

FROM: Ryan Bain

THROUGH: Caroline Moore, and Scott Gibbens **SIGNED**

SUBJECT: IDAHO POWER COMPANY:
(Docket No. ADV 1428/Advice No. 22-04)
Revision to Rule K (K-1), Customer's Load and Operations.

STAFF RECOMMENDATION:

Approve Idaho Power Company's (IPC or Company) ADV 1428, which revises Rule K, Customer's Load and Operations ("Rule K"), to conform with the current title of the Institute of Electrical and Electronic Engineers ("IEEE") Standard 519 as referenced in Section 2 of Rule K.

DISCUSSION:

Issue

Whether the Commission should approve IPC's proposed revision to Rule K to reflect the IEEE updated naming convention.

Applicable Rule

The Commission may approve tariff changes if they are deemed to be fair, just, and reasonable. ORS 757.210. Under ORS 757.205(2), a public utility shall file with and as part of every such schedule all rules and regulations that in any manner affect the rates charged or to be charged for any service. Tariff revisions or corrections may be made by filing revised sheets with the information required under the Commission's administrative rules, OAR 860-022-0025.

Filings that propose any change in rates, tolls, charges, rules, or regulations must be filed with the Commission at least 30 days before the effective date of the change. ORS 757.220; OAR 860-022-0015. Tariff filings to be effective on less than 30 days following notice of the change may be authorized with a waiver of less than statutory notice pursuant to ORS 757.220 and OAR 860-022-0020.

Analysis

IPC filed Advice No. 1428 on September 15, 2022, to revise Rule K reflecting an update to the title of the IEEE's Standard 519 as referenced in Section 2 of Rule K. The revision would conform the title of Standard 519, *Practices and Requirements of Harmonic Control in Electric Power Systems*, to the current IEEE naming convention for Standard 519, *Standard for Harmonic Control in Electric Power Systems*. The IEEE Standards Association Standards Board approved the new naming convention on May 13, 2022. IPC submitted "First Revised Sheet No. K-1" to replace "Original Sheet No. K-1," reflecting the updated name for Standard 519.

Idaho Power's Rule K includes requirements for customers whose loads may have a negative effect on the power quality of other area customers on the system. Such negatively impactful loads may be intermittent loads subject to voltage fluctuations or voltage notching, or loads that draw a nonsinusoidal (harmonically distorted) load current. One requirement under Rule K is that customers comply with the IEEE Standard 519, which provides standards for harmonic control in electric power systems. In 2022, IEEE updated the engineering standards for IEEE 519 and changed its name to *Standard for Harmonic Control in Electric Power Systems*. Staff discussed the engineering changes with the Company and does not believe that the elements of that standard that were updated will require changes to customer operations or equipment or otherwise impact customers. Staff believes the impact on customers of the proposed change to Rule K is to make it easier for customers to locate the standard in reference.

Therefore, Staff believes that it is in the public interest to keep Rule K's application of Standard 519 in conformity with the IEEE's current standards.

Conclusion

The revision the Company proposes will update Rule K's Section 2 reference to IEEE Standard 519 to the current IEEE Standard 519 title, *Standard for Harmonic Control in Electric Power Systems*. Staff has reviewed the change and the implications for the updated standard and finds that they are in the public interest. After consulting with the Company, Staff is satisfied that the update to IEEE Standard 519 will not negatively

affect customers.¹ Staff finds that the Company's proposed tariff revision results in fair, just, and reasonable rates.

PROPOSED COMMISSION MOTION:

Approve Idaho Power Company's Advice No. 1428, which updates Rule K, effective on and after October 19, 2022.

ADV 1428

¹ Per correspondence from IPC, "The current distortion limits (applied to customer loads) in the 1992, 2014, and 2022 editions of Std. 519 are effectively identical. Similarly, 519-2022 does not change the voltage distortion limits for Idaho Power's transmission and distribution system or for its services to customers. This means that Idaho Power will not need to change the limits used when evaluating voltage and current distortion, and customers who met 519-1992 or 519-2014 will still meet 519-2022's distortion limits and will therefore not be required to make any changes to their equipment/operations or pay for new Idaho power equipment as a result of the Company updating Rule K's reference of IEE Standard 519 to its current naming convention."

RULE K
CUSTOMER'S LOAD AND OPERATIONS

1. Interference with Service. The Company reserves the right to refuse to supply loads of a character that may seriously impair service to any other Customers, or may disconnect existing service if it is seriously impairing service to any other Customers. In the case of pump hoist or elevator motors, welders, furnaces, compressors, and other installations of like character where the use of electricity is intermittent, subject to voltage fluctuations, voltage notching or draws a nonsinusoidal (harmonically distorted) load current, the Company may require the Customer to provide equipment, at the Customer's expense, to reasonably limit such fluctuations.
2. Practices and Requirements of Harmonic Control. Customers are required to comply with the *Standard for Harmonic Control in Electric Power Systems* as set forth in the current Institute of Electrical and Electronic Engineers (IEEE) Standard 519. The values indicated by IEEE Standard 519 apply at the point where the Company's equipment interfaces with the Customer's equipment. (C)
3. Change of Load Characteristic. The Customer shall give the Company prior notice before making any significant change in either the amount or electrical character of the Customer's electrical load thereby allowing the Company to determine if any changes are needed in the Company's equipment or distribution system. The Customer may be held liable for damages to the Company's equipment resulting from the Customer's failure to provide said notice of change in electrical load.
4. Protection of Electrical Equipment. The Company reserves the right to refuse single phase service to motors larger than 7 ½ horsepower.

The Customer is solely responsible for the selection, installation, and maintenance of all electrical equipment and wiring (other than the Company's meters and apparatus) on the load side of the Point of Delivery. All motor installations should include effective protection apparatus or have inherent construction within the motor to accomplish equivalent protection as follows:

- a. Overload or overcurrent protection for each motor by suitable thermal relays, fuses or circuit interrupting devices automatically controlled to disconnect the motor from the line to protect it from damage caused by over-heating. Installation or protection in each conductor connected to three-phase motors is recommended.
- b. Open phase protection on all polyphase installations to disconnect motors from the line in the event of opening of one phase.
- c. All polyphase motors for the operation of passenger and freight elevators, cranes, hoists, draglines, and similar equipment will be provided with reverse phase relays or equivalent devices, for protection in case of phase reversal.
- d. Motors that cannot safely be subjected to full voltage at starting should be provided with a device to insure that, on failure of voltage such motors will be disconnected from the line. It is also recommended that such device be provided with a suitable time delay relay.

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