BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

In the Matter of the Application of MONTANA-DAKOTA UTILITIES CO. for Approval to Implement New Rate Schedule High Density Contracted Demand Response Rate 45	))))))	Docket No. EL22-____

I. Summary of Application

Montana-Dakota Utilities Co. (Montana-Dakota, Applicant, or the Company), the Applicant in the above-entitled proceeding, herewith submits this application requesting South Dakota Public Utilities Commission (Commission) approval to implement a new electric rate schedule, High Density Contracted Demand Response Rate 45 (Rate 45), designated as Original Sheet Nos. 20 through 20.2 of Section 3 of the Company's electric tariff. The new rate schedule is being proposed in response to recent inquiries for electric service to facilities housing blockchain technology where the load characteristics of such facilities far exceed those of a typical general electric service customer today and whose unique operations require terms and conditions specific to these customers. The proposed new rate schedule is attached hereto as Exhibit 1, along with a corresponding change to the electric Table of Contents, included in Section 1 of the Company's electric tariff, reflecting the insertion of the new rate schedule.

II. Description of Applicant

Montana-Dakota is a Delaware corporation duly authorized to do business in the State of South Dakota as a foreign corporation and doing business in the

State of South Dakota as a public utility. The Applicant's Certificate of Incorporation and Amendments thereto have been previously filed with the Commission and such Certificate and Amendments are hereby incorporated by reference as though fully set forth herein.

III. Blockchain Customer Inquiries

Blockchain Customer Interest.

Montana-Dakota has recently received a number of inquiries from potential customers interested in locating their facilities in the Company's service territory. These potential customers are unique in regard not only for the type of relatively new business being conducted within their facilities but also for their ability to quickly relocate their facilities to new locations throughout the globe and their "super user" load requirements.

Cryptocurrency mining is the process of computers solving complex calculations to validate cryptocurrency transactions on a blockchain network. A blockchain, in simple terms, is an unchangeable digital ledger which is managed by a decentralized network. The blockchain is a public ledger of every transaction ever processed for a particular cryptocurrency. In the early stages of Bitcoin, home computers could be used to mine coins. However, as the Bitcoin Blockchain has grown, more power is needed. Today, "containers" or warehouses can be used to house servers to crypto-mine which require a significant amount of electricity.

Typical racks of servers for normal data centers and business transactions require 5 to 7 Kw of capacity to serve each rack. A blockchain or crypto-mining

server rack typically requires 2 to 3 times that amount per rack or 15 to 18 Kw of capacity. A typical crypto-mining 40-foot container typically requires 1 MW of power. The servers' consumption is, for the most part, continuous, meaning the data center operates at a high load factor.

These servers can be housed in an established brick and mortar type structure or quickly setup through container or trailer type structures. This housing structure flexibility allows these facilities to locate almost anywhere around the globe where there is access to available electrical capacity and energy at an affordable cost to the owner of the facility.

Other High Density Computer Processing Technology Facilities.

While recent customer interest has primarily been for electric service to facilities housing blockchain technology, the Company did not want to limit the new rate schedule's availability to include only that type of high density computer processing technology. Therefore, in recognition that there are facilities housing other high density computer processing technology that may be similar in size and operations to that of a blockchain customer, the Company is proposing that the new rate schedule be available to any data center-type facility that houses these high density computer processing technology where the customer's facility meets the minimum size and load factor requirements and be able to interrupt service within minutes.

IV. Proposed High Density Contracted Demand Response Rate 45

For the reasons outlined above, Montana-Dakota finds value in proactively

establishing a new rate schedule that outlines the availability of such a rate schedule as well as the billing and general terms and conditions of service required for continued service under Rate 45. As such, Montana-Dakota is proposing High Density Contracted Demand Response Rate 45, included herein as Exhibit 1. Each section of the proposed rate schedule is further defined below.

Availability

Montana-Dakota is proposing two main requirements for electric service under Rate 45: (1) a customer's minimum load requirements and (2) the ability to interrupt a customer's electric service. First, Montana-Dakota is proposing that a customer must have (1) an expected demand of at least 10,000 Kw (10 MW) per month metered at a single delivery point and (2) an expected minimum load factor of 85 percent. This ensures that only the largest of customers are eligible for service under this new rate schedule that provides for an individualized rate structure reflective of each customer's load characteristics. Second, Montana-Dakota is proposing that the Company be able to interrupt a customer's service up to 200 hours annually or as outlined in the customer's electric service agreement. The ability to interrupt a customer's service provides reliability protection for all customers during system emergencies and the utilization of the customer's load to meet the peak demand and planning reserve margin requirements within the MISO resource adequacy requirements that the Company operates under.

Customers who do not maintain these requirements will have their electric service moved to the otherwise applicable rate schedule.

Billing

Montana-Dakota is proposing that any incremental costs be paid for by the customer as specified in an electric service agreement entered into by and between the Company and the customer and that the electric service agreement be approved by the Commission. Costs included in the electric service agreement will be reflective of the costs required to provide electric service to the customer and will be identified in the electric service agreement filed with the Commission.

While the presentation of the rate schedule's charges does not conform to the presentation of rates currently reflected on the Company's other electric rate schedules, Rate 45 provides the Company with the ability to provide an individualized pricing structure reflective of each customer's load requirements when entering into an agreement. This flexibility lends itself to an overall lower energy bill while also incentivizing these customers to locate in the communities served by Montana-Dakota. This in turn benefits all Montana-Dakota customers through lower transmission-related costs.

Additionally, Montana-Dakota is proposing that the Company be allowed to offer a billing frequency to Rate 45 customers that may deviate from the standard "thirty-day" monthly bill. Montana-Dakota finds value in being able to bill Rate 45 customers on a more frequent basis due to the potential size of these customers' bills. The billing arrangement would be identified within the electric service agreement filed with the Commission.

General Terms and Conditions

Montana-Dakota is proposing a number of general terms and conditions a

Rate 45 customer must meet in order to initiate, and continue, service under proposed Rate 45. Under the proposed General Terms and Conditions:

- A customer shall execute an electric service agreement with the Company which shall be filed and approved by the Commission prior to the commencement of service under Rate 45.
- The electric service agreement shall have a minimum term of at least three years but not to exceed five years.
- Each electric service agreement shall define:
    - The number of hours a customer may be interrupted in an annual period, which is further defined as an annual period beginning June 1 and ending May 31 of the following year.
    - The length of time (in minutes) in which the customer must interrupt their service following receipt of the Company's signal to interrupt.
    - The amount of firm load not subject to interruption.
    - The deposit amount required prior to the commencement of service. Any deviations, from the deposit requirements outlined in Section 20:10:19 of the South Dakota Administrative Code and the Company's General Provisions Rate 100, Section III(2) Consumer Deposits, will be requested as part of the electric service agreement filed with the Commission.
- Service shall be extended to a customer in accordance with paragraph

10 of Rate 45's General Terms and Conditions. The inclusion of this proposed provision recognizes and addresses the level of uncertainty regarding the permanency of these customers. The provision follows much of the Company's Electric Service Rules and Regulations Rate 110, Section 200, subpart 203 Temporary Service. Under this subpart, a customer shall make a deposit in advance in the amount of the Company's estimated cost of installing and furnishing such service facilities, including the cost of disconnecting and removing the same facilities. The final billing will reflect credit for the salvage value of materials used in providing electric service to customer's facilities. Any deficiency in such advance payment shall be paid by the customer upon presentation of a bill by the Company. Any amount deposited in excess of final billing by the Company will be refunded to the customer.

While this potential load is not temporary such as those identified in subpart 203, there does exist a degree of uncertainty regarding the long-term nature of these loads due to the ability of these customers to relocate in a relatively short time frame. As such, Montana-Dakota believes there is a parallel between Rate 45 customers and temporary customers regarding the recovery of any extension costs.

In addition, the Company believes any new investment required to serve a Rate 45 customer should be borne solely by that customer. By requiring a Rate 45 customer to pay a non-refundable contribution

prior to the start of construction, the Company can ensure (1) any cost responsibility is borne solely by the cost causer and (2) the Company's other customers will not bear the cost of any extension of facilities should the customer leave as the Company's rate base will remain unchanged as a result of the treatment of these contributions.

Therefore Montana-Dakota is proposing that the Company collect a Contribution in Aid of Construction (CIAC) from Rate 45 customers, in lieu of the extension of electric facilities under the Company's Electric Extension Policy Rate 112.

- The general terms and conditions also outline the demand response requirements a customer must adhere to for continued service under Rate 45. The Company is proposing that customers under Rate 45 be allowed to be interrupted at any time up to 200 hours per year or as included in the electric service agreement.

V. Conclusion

Montana-Dakota is proposing a new rate schedule in response to recent inquiries for service whose size and operations sets these customers apart from the Company's other customers. Montana-Dakota finds value in proactively establishing a new rate schedule that the Company believes recognizes these customers' unique operations and provides these "super users" of energy with a lower overall per unit energy cost while also providing a benefit to all Montana-Dakota customers through lower transmission-related costs. The proposed rate

schedule also provides assurances that these new customers will pay the incremental costs incurred for the provision of service to them. Rate 45 also provides an additional resource that the Company can utilize in times of system constraints.

Montana-Dakota respectfully requests Commission approval of High Density Contracted Demand Response Rate 45 and the corresponding changes to its Electric Table of Contents.

Dated this 21st day of September 2022.

/s/ Travis R. Jacobson
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