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IDAHO PUBLIC
UTILITIES COMMISSION

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November 4, 2021

Jan Noriyuki, Secretary
Idaho Public Utilities Commission
11331 W. Chinden Boulevard
Building 8, Suite 201-A
Boise, Idaho 83714

Re: Case No. IPC-E-21-37
Application of Idaho Power Company for Authority to Establish A New Schedule to Serve Speculative High-Density Load Customers

Dear Ms. Noriyuki:

Attached for electronic filing, pursuant to Order No. 35058, is Idaho Power Company's Application in the above entitled matter.

If you have any questions about the attached documents, please do not hesitate to contact me.

Sincerely,

Lisa D. Nordstrom

Lisa D. Nordstrom

LDN:sg

Enclosures

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Attorney for Idaho Power Company

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF IDAHO POWER COMPANY FOR AUTHORITY TO ESTABLISH NEW SCHEDULE TO SERVE SPECULATIVE HIGH-DENSITY LOAD CUSTOMERS.	)	CASE NO. IPC-E-21-37 APPLICATION

Surging customer interest from large-scale cryptocurrency mining operators to locate and establish service in Idaho Power Company's ("Idaho Power" or "Company") service area may potentially require significant system resource investment, and creates risk of those investments becoming stranded assets whose costs may ultimately be borne by all Idaho Power customers. The Company has received prospective customer interest of approximately 1,950 megawatts ("MW") in the last few months, and it is likely that if even a fraction of that customer interest ultimately interconnected to Idaho Power's system, the additional load would exceed the Company's ability to serve total system load during the summer season without additional investment in capacity resources. Idaho Power believes now is the time to proactively mitigate potential system cost and reliability

risks by establishing a new service offering that is fair, just, and reasonable for existing and prospective customers.

Idaho Power, in accordance with *Idaho Code* § 61-502 and RP 052*,* hereby respectfully makes application to the Idaho Public Utilities Commission ("Commission") for an order prior to the start of the proposed June 15 to September 15 interruption period authorizing: (1) establishment of a new customer classification applicable to high-density load ("HDL") customers operating in a speculative industry, and (2) approval of Schedule 20, Speculative High-Density Load ("Schedule 20") for HDL customers which includes energy priced at marginal cost and the requirement to be fully-interruptible at the Company's discretion.

I. BACKGROUND

1. Cryptocurrency mining (otherwise known as digital currency mining, including the mining of Bitcoin ("BTC") and other cryptocurrencies) is the process of computers solving complex calculations to validate cryptocurrency transactions on a blockchain network. A blockchain is a decentralized ledger of all transactions across a peer-to-peer network. In exchange for the cryptocurrency miners' work to secure the blockchain network, new digital "coins" are created which incentivize miners to expand their efforts. This makes it most profitable to mine when the cryptocurrency's dollar value is rising. Cryptocurrency has gained momentum worldwide as a means to decentralize payments in a largely unregulated platform.

2. Cryptocurrency mining utilizes powerful computers with significant processing capabilities, and these machines – often bundled together in large volumes – are significant consumers of energy. It is estimated that worldwide, cryptocurrency mining

consumes 143 Terawatt hours per year as of May 2021[1] – or enough energy to power countries like Norway or Argentina.

3. Unlike traditional enterprise data centers that invest significant capital into facilities with state-of-the-art infrastructure, cryptocurrency mining operations have the ability to locate anywhere – from abandoned warehouses to stacked rail cars. This operational flexibility lends itself to cryptocurrency mining operations siting in areas with available electrical capacity that requires minimal electrical distribution infrastructure investment. As significant consumers of energy, the cryptocurrency mining industry is also highly sensitive to rates, often seeking to negotiate rates to secure the lowest cost per kilowatt-hour ("kWh").

Other common attributes that, when combined, demonstrate the nature of cryptocurrency mining operations include:

- High energy use density or intensity of 250 kWh/ft^2 annually;
- High load factor;
- Ability to locate, relocate, aggregate or disaggregate equipment to obtain favorable rates and/or minimize electrical infrastructure upgrades;
- Volatile load growth and load reduction;
- Highly responsive to short-term economic signals or volatile commodity pricing;
- Lack of credit history to demonstrate financial viability.

[1] *Bitcoin Devours More Electricity Than Many Countries*, Forbes, May 5, 2021, https://www.forbes.com/sites/niallmccarthy/2021/05/05/bitcoin-devours-more-electricity-than-many-countries-infographic/?sh=59e844d041a6

4. Recent cryptocurrency mining interest in Idaho Power's service area has been driven by companies mining BTC, but risks are not limited to that single cryptocurrency. By design, BTC's network only releases new cryptocurrency every 10 minutes and the number of coins it releases is set to diminish in the future. This makes the competition to unlock new BTC more energy intensive because the only way to boost one's probability of solving the mathematical calculations is to increase computing power through the number of machines online.[2] Much of the Company's Application discusses impacts from BTC mining as it is the predominant cryptocurrency, founded in 2009 and having the largest market cap, but the considerations and risks hold true for other cryptocurrencies, and proof-of-work applications which also require significant computer processing power.

5. As noted, cryptocurrency miners have the ability to scale or disaggregate operations in a modular manner with mining operations frequently housed in highly portable shipping container "pods" of varying aggregate capacity. A typical cryptocurrency miner's single hardware unit of production is an Application-Specific Integrated Circuit ("ASIC") miner, which ranges from 1.3 kilowatts ("kW") to over 3 kW in demand. Scaling from one to hundreds of ASIC miners in one location offers flexibility to the miner in response to power availability and cost, zoning requirements, ambient temperature and cooling requirements, among other factors.

[2] *Cryptocurrency Companies Are Leaving China in 'Great Mining Migration'*, Wall Street Journal, August 22, 2021, https://www.wsj.com/articles/cryptocurrency-companies-are-leaving-china-in-great-mining-migration-11629624602

II. CURRENT INQUIRIES

6. Idaho Power received limited interest from BTC mining operations between 2019 and 2020; however, recent Chinese restrictions on BTC mining have created a resurgence of interest in Idaho Power's service area largely due to the Company's favorable rates, open parcels of land in the Company's service area, and high reliance on hydroelectric power that can supply operations with desired clean energy. Within the span of several months, Idaho Power received seventeen (17) viable and unique inquires totaling over 1,950 MW. These prospective projects often operate under aggressive, unrealistic timeframes. The projects have expressed a willingness to aggregate or disaggregate operations in order to obtain the most favorable cost structure, both in terms of rates and infrastructure upgrades.

7. Based on the speculative nature of these projects, Idaho Power has communicated that it will not enter into Rule M Facilities Charge service, a non-monopoly service offered at Idaho Power's discretion, for these customers. The Company has also communicated the need for deposits for electric service under Rule L,[3] and the requirement for upfront funding of any necessary infrastructure upgrades.[4]

III. COMMODITY-LINKED INDUSTRY RISK

8. The profitability of cryptocurrency miners is closely related to the commodity price of the respective currency. For example, the commodity price of BTC has proven

[3] Section 2 of Rule L states that a deposit may be required "if the nature of the applicant's business is speculative or subject to a high rate of failure" and the amount shall not exceed two times the actual or estimated highest monthly bill.

[4] Rule H states the rule does not apply to transmission or substation facilities, or to requests for electric service that are of a speculative nature. Separately, the Company's Schedule 9 and 19 require "to the extent that additional facilities not provided for under Rule H, including transmission and/or substation facilities, are required to provide the requested service, special arrangements will be made in a separate agreement between the Customer and the Company."

to be highly volatile. At the time of this filing, BTC set an intra-day high on October 20, 2021 of $66,930/BTC. The previous intra-day high occurred April 14, 2021 at $64,863/BTC, and in the subsequent weeks BTC lost one-half of its value before staging the most recent price rally.

9. Another factor affecting cryptocurrency mining profitability is the complexity of the calculations to be solved. Because the pace of some cryptocurrency creation is based on a predetermined schedule, to maintain that schedule cryptocurrency networks can increase the calculation difficulty when more miners with computer processing power are in operation. Significant BTC mining processing is currently offline due to the aforementioned Chinese regulatory actions, with more recent active enforcement, as well as service shut offs by electric utility companies in June 2021.[5] The impacts from the initiation of Chinese regulatory action in 2019[6] can be seen in the proportion of BTC hashrate[7] from China decreasing from 75 percent of all BTC mining in September 2019, to 46 percent in April 2021[8] and further falling to zero by July 2021[9] as demonstrated in Figure 1 on the next page.

[5] *China is rationing hydropower—and Bitcoin mines are getting cut off*, Fortune, June 22, 2021, https://fortune.com/2021/06/22/china-bitcoin-mining-ban-sichuan-hydropower/

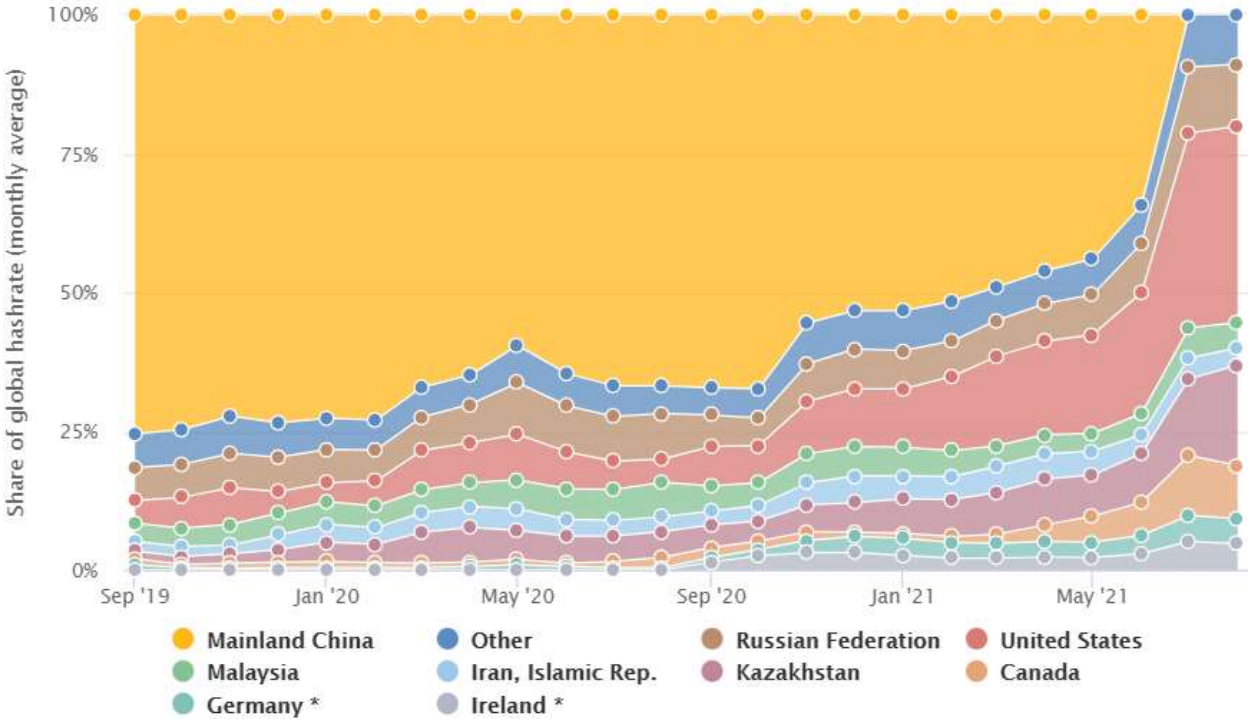
[6] *China wants to ban bitcoin mining*, Reuters, April 8, 2019, https://www.reuters.com/article/us-china-cryptocurrency/china-wants-to-ban-bitcoin-mining-idUSKCN1RL0C4

[7] Hashrate is the speed of mining; it a measure of the computational power used per second.

[8] Distribution of Bitcoin Mining Hashrate from September 2019, to April 2021, buy country. Statista.com https://www.statista.com/statistics/1200477/bitcoin-mining-by-country/

[9] *US overtakes China as biggest bitcoin mining hub after Beijing ban*, Financial Times, October 13, 2021, https://www.ft.com/content/50acdea5-cad1-4f39-8e6a-9be7ab78485d

Figure 1. Evolution in Country Share[10]



10. With the large number of Chinese BTC mining operations recently going offline, mining difficulty declined by nearly 40 percent in May and June 2021, as demonstrated in Figure 2. Remaining BTC miners are experiencing improved profitability while the price of BTC remains elevated, and those profitability levels are enticing new market entrants.

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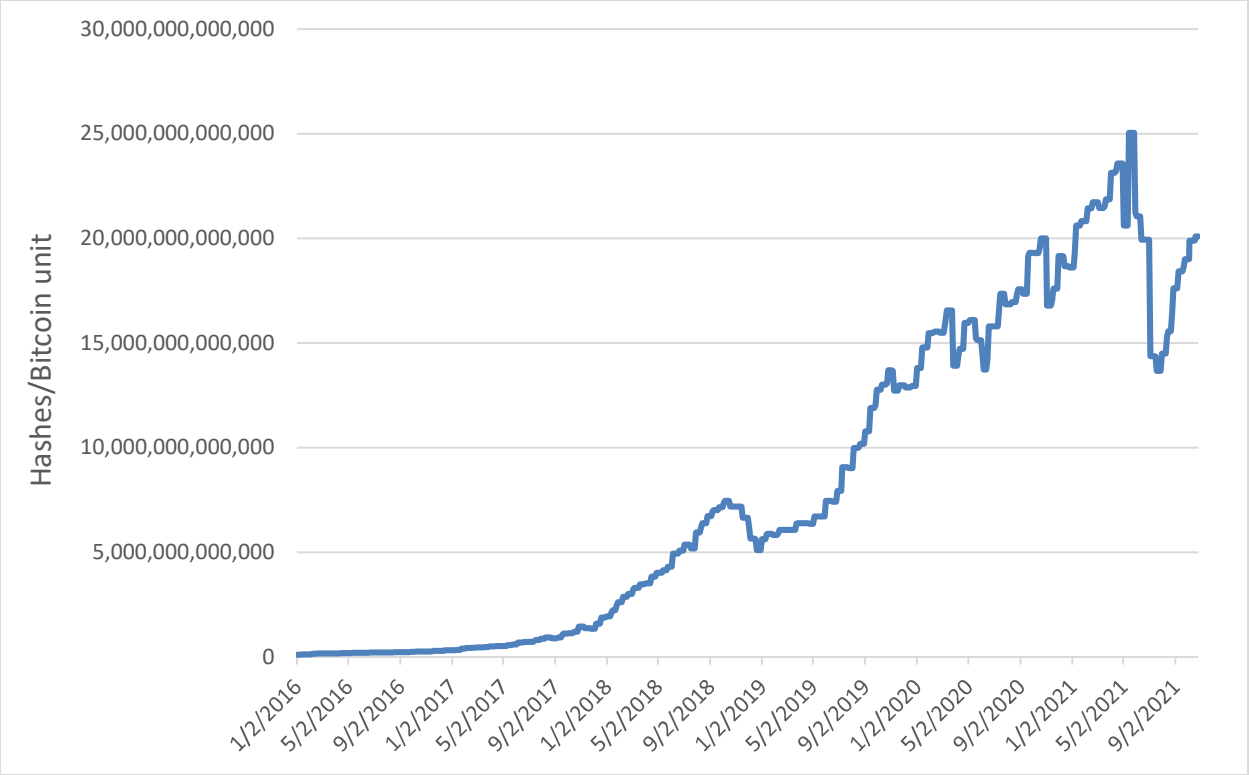
[10] *Bitcoin Mining Map Visualisation*, Cambridge Bitcoin Electricity Consumption Index, accessed October 27, 2021, https://cbeci.org/mining_map

** To our knowledge, there is little evidence of large mining operations in Germany or Ireland that would justify these figures. Their share is likely significantly inflated due to redirected IP addresses via the use of VPN or proxy services.*

Figure 2. Bitcoin Mining Difficulty[11]



There is high probability[12] that Chinese BTC miners will relocate their hardware to other countries in the next few months, which will result in hashrate returning to prior

[11] *Network Difficulty*, Blockchain.com Mining Information, accessed October 27, 2021, https://www.blockchain.com/charts/difficulty

[12] *Cryptocurrency Companies Are Leaving China in 'Great Mining Migration'*, Wall Street Journal, August 22, 2021, https://www.wsj.com/articles/cryptocurrency-companies-are-leaving-china-in-great-mining-migration-11629624602

Bitcoin Miners Navigate Extreme World of Crypto Power-Hunting, Bloomberg, July 13, 2021, https://www.bloomberg.com/news/features/2021-07-13/bitcoin-miners-building-rigs-must-navigate-world-of-crypto-power-hunting

'Up to 1 million' bitcoin processors could be relocated to Alberta from China under energy firm's proposal, CBC, August 10, 2021, https://www.cbc.ca/news/canada/calgary/bitcoin-mining-black-rock-petroleum-company-1.6106978

Bitcoin mining crackdown in China is a boon for Texas, yahoo! finance, August 3, 2021, https://finance.yahoo.com/news/bitcoin-mining-crackdown-in-china-is-a-boon-for-texas-182139400.html

China is kicking out more than half the world's bitcoin miners – and a whole lot of them could be headed to Texas, CNBC, June 15, 2021, https://www.cnbc.com/2021/06/15/chinas-bitcoin-miner-exodus-.html

highs, reducing or eliminating profitability for less experienced BTC miners. The United States has emerged as the new hub for cryptocurrency mining, recently becoming home to more than one third of all global computing power dedicated to mining BTC.[13]

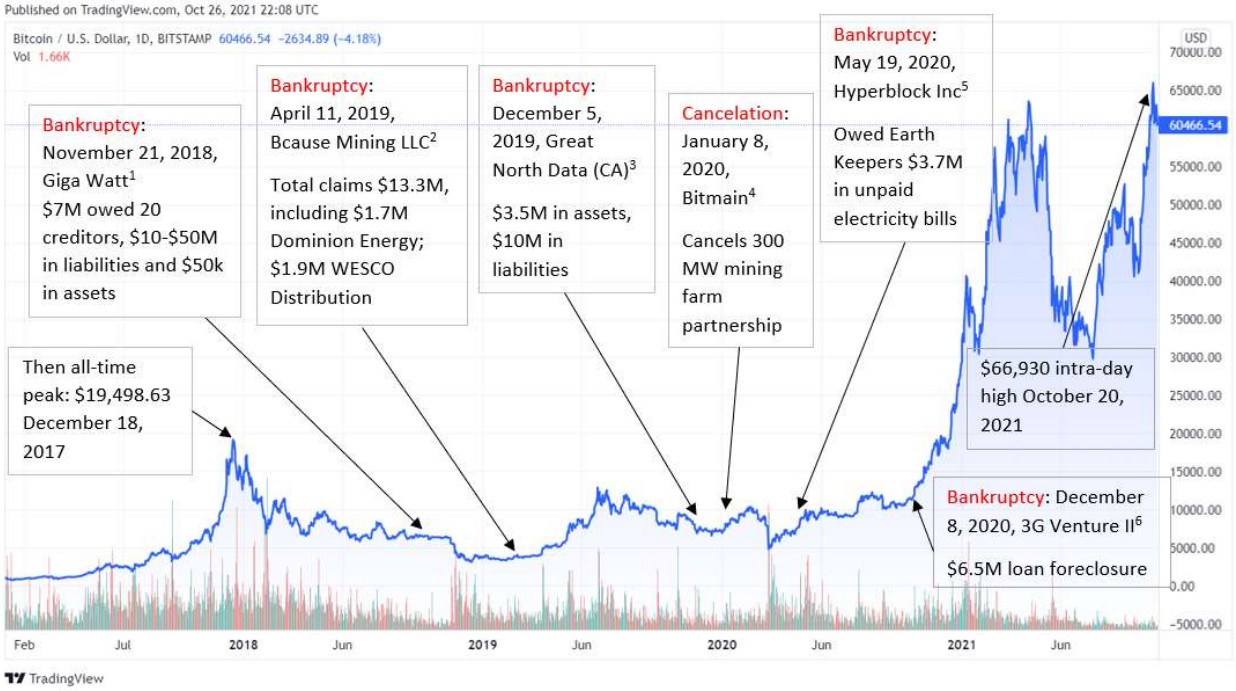
11. BTC price increases and demand to establish new mining operations in the last few months closely resemble the period beginning in mid-2017 to the end of 2017 when BTC price increased nearly ten-fold, from approximately $2,000/BTC in June 2017 to nearly $20,000/BTC, by December 2017. As the price of BTC rose, multiple new large BTC mining operations were established in the U.S., and Idaho Power also saw customer interest in excess of 500 MW, including several projects that funded upgrades[14] to Idaho Power's system. However, no large-scale cryptocurrency mining projects went into service even though they had funded infrastructure investment, largely a result of the volatile nature of the BTC market. After the peak in December 2017, BTC experienced a significant price decrease, with prices below $4,000/BTC by the end of 2018. The price of BTC continued to trade well below the December 2017 highs through 2020, and many new market entrants who announced or established large mining operations canceled development, or declared bankruptcy, frequently with electric service providers listed as creditors and owed multimillions of dollars. Figure 3 plots the timing of five of these bankruptcies and one cancellation with respect to BTC's price.

Bitcoin mining comes to Pennsylvania coal country—and raises tough questions, Fortune, August 18, 2021, https://fortune.com/2021/08/18/bitcoin-mining-stronghold-pennsylvania-waste-coal-co2-emissions-btc-miners/

[13] *U.S. Takes Bitcoin Mining Crown After China Crackdown*, The Wall Street Journal, October 27, 2021, https://www.wsj.com/articles/u-s-takes-bitcoin-mining-crown-after-china-crackdown-11635327002

[14] Two prospective customers funded approximately $200,000 for facilities including feeder upgrades and various distribution system investment in 2018 but did not ultimately take service from Idaho Power.

Figure 3. BTC Price and Bankruptcies and Cancelations[15]



As demonstrated above, the BTC commodity price-linked nature of business success indicates a speculative investment cycle for miners. The most recent BTC price gains and mining industry interest have created the potential for greater bankruptcy losses from a protracted BTC price decline from current levels.

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15 [1] https://www.coindesk.com/markets/2018/11/21/bitcoin-mining-firm-giga-watt-declares-bankruptcy-owing-millions/

[2] https://www.pilotonline.com/business/vp-bz-bcause-bankruptcy-liquidation-20191009-lwot3gx5pnd6di4byqdg3q7tdi-story.html https://www.financemagnates.com/cryptocurrency/news/us-court-orders-bitcoin-mining-firm-bcause-to-liquidate-its-assets/

[3] https://www.coindesk.com/business/2019/12/05/canadian-government-assisted-bitcoin-miner-files-for-bankruptcy-owing-millions/

[4] https://www.wired.com/story/hard-luck-texas-town-bet-bitcoin-lost/

[5] https://apnews.com/article/technology-toronto-financial-markets-bitcoin-montana-30443b6a900b0e6835baf29cb453319a
https://coingeek.com/poor-business-model-not-covid-19-behind-hyperblock-early-struggles/

[6] https://gazette.com/business/colorado-springs-bitcoin-mining-operation-files-chapter-11-bankruptcy/article_4b42b558-39a7-11eb-a680-bfab3259233b.html

IV. IDAHO POWER SUMMER SYSTEM CONTRAINTS

12. On June 30, 2021, Idaho Power set a new all-time peak load of 3,751 MW, and by the end of July, load exceeded the previous 2017 peak demand of 3,422 MW more than sixty (60) separate hours on twelve (12) different days during the 2021 summer season.[16] Separately, in April 2021 Idaho Power filed to acknowledge an exit date of 2025 for the Company's North Valmy Unit 2 power plant,[17] recognizing that keeping the 134 MW of Valmy Unit 2 generation online was the most economic path for system reliability through 2025. As further described in the Valmy Unit 2 filing, a request for proposal for the delivery to Idaho Power of firm capacity and energy during the summer months through 2025 received no bids, and could be indicative of evolving market conditions, which factor into the Company's consideration of reliability.[18]

13. While some limited near-term summer capacity may come online in conjunction with the addition of Jackpot Solar in 2022 and potential modification to the Company's demand response programs,[19] it is likely that summer-season peak constraints on Idaho Power's system may be present until the anticipated completion of the Boardman to Hemingway transmission line in 2026. Further, extreme regional summer temperatures have created significant upward pressure on market energy prices,

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[16] IDACORP, Inc Q2 2021 Earnings Call Corrected Transcript, FACTSET: callstreet, July 29, 2021, p. 4. https://s26.q4cdn.com/720254477/files/doc_financials/quarterly/2021/q2/CORRECTED-TRANSCRIPT_-IDACORP-Inc.(IDA-US)-Q2-2021-Earnings-Call-29-July-2021-4_30-PM-ET.pdf

[17] *Application for the Determination Acknowledging its North Valmy Power Plant Exit Date*, Case No. IPC-E-21-12, filed April 30, 2021.

[18] *Supplement to Application for the Determination Acknowledging its North Valmy Power Plant Exit Date*, Case No. IPC-E-21-12, June 30, 2021.

[19] *In the Matter of Idaho Power Company's Application for Approval to Modify its Demand Response Programs*, Case No. IPC-E-21-32, October 1, 2021.

which traded over $1,000 per MWh in August 2020[20] and nearly $500 per MWh in June 2021,[21] and have caused regional capacity constraints.

V. NEW SPECULATIVE HDL CUSTOMER CLASSIFICATION

14. Idaho Power requests Commission authorization to create a new classification to take service under the Company's speculative HDL rate comprised of customers taking primary or transmission level service which are able to relocate quickly in response to short-term economic signals, register a metered demand not exceeding 20,000 kW from service at one or more Points of Delivery on the same Premises, and meet four (4) or more of the following characteristics:

- High energy use density;
- High load factor;
- Load that is portable and distributable;
- Highly variable load growth or load reduction as an individual customer and/or in aggregate with similar customers in the Company's service area;
- High sensitivity to volatile commodity or asset prices;
- Part of an industry with potential to quickly become a large concentration of power demand;
- Lack of credit history or ability to demonstrate financial viability.

[20] *Palo Verde on-peak day-ahead power hits record $1,643.25/MWh, conservation urged*, S&P Global, August 19, 2020 https://www.spglobal.com/platts/en/market-insights/latest-news/electric-power/081920-palo-verde-on-peak-day-ahead-power-hits-record-164325mwh-conservation-urged

[21] *California urges power conservation in heat wave, prices soar*, Reuters, July 28, 2021, https://www.reuters.com/business/environment/california-urges-power-conservation-heat-wave-prices-soar-2021-07-28/

15. Schedule 19 – Large Power Service, requires customers with aggregate power requirements receiving service at one or more Points of Delivery on the same Premises exceeding 20,000 kW (20 MW) to make special contract arrangements with the Company. Each special contract customer has its own customer class and rates. Because the Commission must review each special contract to determine fair, just, and reasonable rates for the special contract customer, as well as assess impacts to all other Idaho Power customers, the Company believes the special contract process allows for sufficient opportunity to establish appropriate, cost-based rates for cryptocurrency mining customers exceeding 20 MW.

16. As noted previously, cryptocurrency miners are uniquely situated where the mining operation can scale up or down from several kW to hundreds of MW at a location. Scalability, plus the ability to relocate mining pods, allow miners to easily disaggregate customer load to fall under Idaho Power's 20 MW special contract threshold. It is the combination of ability to disaggregate load (thus avoiding establishing service under a special contract subject to the review of the Commission) ***plus*** business viability linked to a speculative, volatile commodity, that differentiates these customers and creates a higher risk to Idaho Power and its customers that costs created by cryptocurrency miners may become the responsibility of all customers.

VI. PROPOSED SCHEDULE 20 RATES

17. Due to the potential for significant load growth from a speculative, power-intensive industry exacerbating current summer season system constraints, and from HDL customers' ability to disaggregate load and establish service under the Company's existing Schedule 9 or 19 to avoid cost assignment under a special contract

determination, Idaho Power is concerned the Company may need to acquire new resources that may ultimately become stranded when the economics of cryptocurrency change. To mitigate that risk while meeting its obligation to reliably serve all customers, the Company proposes to implement Schedule 20. The proposed Schedule 20 can be found as Attachment 1 to this Application.

18. The rates included in the proposed Schedule 20 incorporate three (3) modifications to Schedule 9's and Schedule 19's rate design to better align the system constraints and the speculative nature of the HDL customer class:

1) Service to be fully interruptible by Idaho Power June 15 to September 15 between the hours of 1:00 p.m. and 11:00 p.m., Monday through Friday, excluding holidays, mirroring the Company's recently proposed season for its demand response programs based on updated capacity deficiency analysis.[22] Customers would receive notification at least two (2) hours prior to an interruption event, events may last a maximum of ten (10) hours per event, and total annual event hours would not exceed 225 hours per year, however the Company would have the option to interrupt beyond the 225 hours per year in the event of a system emergency;

2) Idaho Power proposes to reallocate the portion of cost-of-service derived summer generation capacity costs currently collected in an on-peak demand charge to be included in the standard demand charge for Schedule 20. The incremental addition for these capacity costs is $0.23/kW for Large General Service Rates and $0.24/kW for Large Power Rates;

[22] *In the Matter of Idaho Power Company's Application for Approval to Modify its Demand Response Programs*, Case No. IPC-E-21-32, October 1, 2021.

3) The Company proposes to price energy at a marginal cost in all pricing periods, based on Avoided Cost Averages as listed in Technical Report Appendix C of the Company's most recently acknowledged Integrated Resource Plan ("IRP").[23] Energy rates will be updated at the time of any change to fixed cost revenue requirement for Schedule 9 or Schedule 19, and annually on January 1 for the energy marginal cost component to correspond to that years' IRP Avoided Cost Average. The Company proposes that within 45 days of acknowledgement of a subsequent IRP by the Commission, it be required to file updated energy rates for the Commission's approval.

These three modifications to Schedule 9's and Schedule 19's existing rate design are included in the proposed Schedule 20 tariff found as Attachment 1, and rate design workpapers for modifications two and three can be found as Attachment 2 to this Application.

19. The Company proposes Power Cost Adjustment ("PCA") treatment for Schedule 20 be modified as compared to other Idaho Power customer classes in recognition of the marginal cost energy pricing. First, Schedule 55, the Power Cost Adjustment rate, will not apply to energy sales to Schedule 20 customers because these customers pay a marginal energy rate. Second, all costs of supplying power to Schedule 20 will be included in the PCA, and third, revenues received by Idaho Power from Schedule 20 energy sales will be treated in the same manner as a surplus sale and will act as an offset to power supply costs. Finally, Schedule 20 energy sales would not be included as Idaho retail sales for the purposes of the sales based adjustment in the PCA,

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[23] *In the Matter of Idaho Power Company's 2019 Integrated Resource Plan*, Second Amended Appendix C: Technical Report, Case No. IPC-E-19-19, page 18, filed October 2, 2020, acknowledged March 16, 2021.

rather treating the energy sales as if they were an off-system sale for PCA accounting purposes.

20. During the pendency of this case, the Company proposes to place any new customers who may otherwise qualify for the proposed Schedule 20 service offering on Schedule 9 or 19, as applicable. Upon Commission approval of a new schedule, the Company will transition qualifying customers the Commission-approved Schedule 20.

VII. COMMUNICATIONS AND SERVICE OF PLEADINGS

21. While the Company is not aware of any existing customers who would qualify for Schedule 20, this Application will be brought to the attention of prospective customers seeking to site in Idaho Power's service area through a press release that accompanies this Application and information posted on the Company's website. Idaho Power will also keep its Application open for public inspection at its offices throughout the state of Idaho. Idaho Power believes these efforts will provide appropriate notice to ventures likely to be impacted by the Company's Application; however, the Company will, in the alternative, bring the Application to the attention of its affected customers through any other means directed by this Commission.

22. Communications and service of pleadings with reference to this Application should be sent to the following:

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VIII. MODIFIED PROCEDURE

23. Idaho Power believes that it would be appropriate to process this case by means of Modified Procedure (i.e., by written submissions rather than by hearing) in accordance with the provisions of RP 201-210 *et seq.*

IX. CONCLUSION

24. Idaho Power respectfully requests that the Commission issue an order prior to the start of the proposed June 15 – September 15 interruption period (1) establishing a new customer classification applicable to HDL customers operating in a speculative industry, and (2) authorizing implementation of Schedule 20 for new HDL customers to include marginal energy pricing and the requirement to be fully interruptible between June 15 and September 15 at the Company's discretion.

DATED at Boise, Idaho, this 4th day of November 2021.

Lisa D. Nordstrom

LISA D. NORDSTROM
Attorney for Idaho Power Company

BEFORE THE

IDAHO PUBLIC UTILITIES COMMISSION

CASE NO. IPC-E-21-37

IDAHO POWER COMPANY

ATTACHMENT 1

SCHEDULE 20

SCHEDULE 20
SPECULATIVE HIGH-DENSITY LOAD

AVAILABILITY

Service under this schedule is available at points on the Company's interconnected system within the State of Idaho where existing facilities of adequate capacity and desired phase and voltage are available. If additional distribution facilities are required to supply the desired service, those facilities provided for under Rule H will be provided under the terms and conditions of that rule. To the extent that additional facilities not provided for under Rule H, including transmission and/or substation facilities, are required to provide the requested service, special arrangements will be made in a separate agreement between the Customer and the Company.

APPLICABILITY

Service under this schedule is applicable to electric service supplied to a Customer at one Point of Delivery and measured through one meter delivered at the primary or transmission service level. This schedule is applicable to Customers whose metered energy usage exceeds 2,000 kWh per Billing Period for a minimum of three Billing Periods during the most recent 12 consecutive Billing Periods. Where the Customer's Billing Period is less than 27 days or greater than 36 days, the metered energy usage will be prorated to 30 days for purposes of determining eligibility under this schedule.

Applicable Speculative High-Density Load Large Power Service Rates are mandatory for Customers who register a metered Demand of 1,000 kW or more per Billing Period for three or more Billing Periods during the most recent 12 consecutive Billing Periods.

Customers whose metered Demand per Billing Period has not equaled or exceeded 1,000 kW more than twice during the most recent 12 consecutive Billing Periods will take service under applicable Speculative High-Density Load Large General Service rates.

At their expense, Customers may request to establish an additional circuit for building systems independent of the commercial operational load, such as lighting, climate control, among others, at a separate Point of Delivery. This additional circuit will be separately metered and billed under the applicable rate schedule. The Customer will be responsible for the costs associated with installing the second meter. The Company may refuse to provide service at more than one Point of Delivery at the same Premises if it is determined by the Company that the additional Point of Delivery cannot be provided without jeopardizing the safety and reliability of the Company's system or service to the Customer or to other Customers. Service provided to a Customer at multiple Points of Delivery at the same Premises will not be interconnected electrically.

This schedule is not applicable to service for resale, to shared or irrigation service, to standby or supplemental service, unless the Customer has entered into a Uniform Standby Service Agreement or other standby agreement with the Company, or to multi-family dwellings.

SCHEDULE 20
SPECULATIVE HIGH-DENSITY LOAD
(Continued)

APPLICABILITY (Continued)

Service under this schedule is applicable to and may be mandatory for Customers who have the ability to relocate quickly in response to short-term economic signals and meet four or more of the following criteria:

- High energy use density;
- High load factor;
- Load that is portable and distributable;
- Highly variable load growth or load reduction as an individual customer and/or in aggregate with similar customers in the Company's service area;
- High sensitivity to volatile commodity or asset prices;
- Part of an industry with potential to quickly become a large concentration of power demand;
- Lack of credit history or ability to demonstrate financial viability.

If the aggregate power requirement of a Customer who receives service at one or more Points of Delivery on the same Premises exceeds 20,000 kW, the Customer is ineligible for service under this schedule and is required to make special contract arrangements with the Company.

Contract Option. Customers for which this schedule is applicable may optionally take service under a mutually agreed upon individual special contract between the Customer and the Company provided the Customer contracts for firm electric Demand of 10,000 kW to 20,000 kW and the special contract terms, conditions, and rates are approved by the Idaho Public Utilities Commission without change or condition.

Protection Equipment is the equipment, hardware, and/or software necessary to ensure the protection of the Company's system and could include a circuit-interrupting device, protective relaying, instrument transformers, and associated wiring.

Interconnection Facilities are all facilities which are reasonably required by good practices and the National Electric Safety Code to interconnect the Customer with the capability to remotely interrupt the load at the Point of Delivery. Such improvements include, but are not limited to, reclosers, load control devices, and related equipment.

Upgrades are those improvements to the Company's existing system, which are reasonably required by good practices and the National Electric Safety Code to interconnect the Customer with the capability to remotely interrupt the load at the Point of Delivery. Such improvements include, but are not limited to, additional or larger conductors, transformers, poles, and related equipment.

SCHEDULE 20
SPECULATIVE HIGH-DENSITY LOAD
(Continued)

INTERCONNECTION PROCESS

Once a request for new Schedule 20 service is received, Idaho Power will perform a study or studies to determine what Protection Equipment, Interconnection Facilities, and/or Upgrades are necessary to interconnect the Customer's load to Idaho Power's system. The customer shall pay the actual costs of all required interconnection studies. Any difference between the deposit (if required) and the actual cost of the study shall be paid by or refunded to the Customer, as appropriate. If, during the course of preparing a study, the Company incurs costs in excess of the deposit amount, the Company may require that the deposit amount be replenished in an amount equal to the estimated costs for completion of the study. If a deposit amount sufficient to pay for completion of the study is not maintained, the Company may suspend work on the study.

SCHEDULE 20
SPECULATIVE HIGH-DENSITY LOAD
(Continued)

TYPE OF SERVICE

The Type of Service provided under this schedule is three-phase at approximately 60 cycles and at the standard service voltage available at the Premises to be served.

BASIC LOAD CAPACITY

The Basic Load Capacity is the average of the two greatest monthly Billing Demands established during the 12-month period which includes and ends with the current Billing Period, but not less than 1,000 kW for Large Power Service.

BILLING DEMAND

The Billing Demand is the average kW supplied during the 15-consecutive-minute period of maximum use during the Billing Period, adjusted for Power Factor, but not less than 1,000 kW for Large Power Service.

TIME PERIODS

The time periods are defined as follows. All times are stated in Mountain Time.

Summer Season

On-Peak:	1:00 p.m. to 9:00 p.m. Monday through Friday, except holidays
Mid-Peak:	7:00 a.m. to 1:00 p.m. and 9:00 p.m. to 11:00 p.m. Monday through Friday, except holidays, and 7:00 a.m. to 11:00 p.m. Saturday and Sunday, except holidays
Off-Peak:	11:00 p.m. to 7:00 a.m. Monday through Sunday and all hours on holidays

Non-summer Season

Mid-Peak:	7:00 a.m. to 11:00 p.m. Monday through Saturday, except holidays
Off-Peak:	11:00 p.m. to 7:00 a.m. Monday through Saturday and all hours on Sunday and holidays

The holidays observed by the Company are New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. When New Year's Day, Independence Day, or Christmas Day falls on a Sunday, the Monday immediately following that Sunday will be considered a holiday.

SCHEDULE 20
SPECULATIVE HIGH-DENSITY LOAD
(Continued)

SUMMER AND NON-SUMMER SEASONS

The summer season begins on June 1 of each year and ends on August 31 of each year. The non-summer season begins on September 1 of each year and ends on May 31 of each year.

FACILITIES BEYOND THE POINT OF DELIVERY

Pursuant to Rule B, customers taking Primary or Transmission Service are responsible for providing the transformation of power to the voltage at which it is to be used by the Customer.

INTERRUPTION EVENTS

At its discretion, Idaho Power may call Interruption Events to remotely disconnect electric service to Customer load under the following parameters:

- June 15 through September 15
- 1:00 p.m. to 11:00 p.m. Monday through Friday, excluding Holidays
- Maximum ten (10) hours per interruption event
- Up to 225 hours annually

Customer will be notified of upcoming Interruption Event not less than two (2) hours prior to event start via phone call, or at the Company's discretion via an alternative mutually-agreed upon method.

POWER FACTOR ADJUSTMENT

Where the Customer's Power Factor is less than 90 percent, as determined by measurement under actual load conditions, the Company may adjust the kW measured to determine the Billing Demand by multiplying the measured kW by 90 percent and dividing by the actual Power Factor.

SPECIAL CONDITIONS

The provisions of Interruption do not apply for any time period that the Company requests a load reduction during a system emergency or any other time that a Customer's service is interrupted by events outside the control of the Company.

TEMPORARY SUSPENSION

When a Customer has properly invoked Rule G, Temporary Suspension of Demand, the Basic Load Capacity and the Billing Demand Shall be prorated based on the period of such suspension in accordance with Rule G.

SCHEDULE 20
SPECULATIVE HIGH-DENSITY LOAD
(Continued)

MONTHLY CHARGE

The Monthly Charge is the sum of the following charges, and may also include charges as set forth in Schedule 91 (Energy Efficiency Rider), and Schedule 95 (Adjustment for Municipal Franchise Fees).

Large General Service Rates

PRIMARY SERVICE	Summer	Non-summer
Service Charge, per month	$285.00	$285.00
Basic Charge, per kW of Basic Load Capacity	$1.28	$1.28
Demand Charge, per kW of Billing Demand	$5.30	$4.67
Energy Charge, per kWh		
On-Peak	7.1423¢	n/a
Mid-Peak	4.9789¢	4.1868¢
Off-Peak	4.3573¢	3.5888¢

TRANSMISSION SERVICE	Summer	Non-summer
Service Charge, per month	$285.00	$285.00
Basic Charge, per kW of Basic Load Capacity	$0.68	$0.68
Demand Charge, per kW of Billing Demand	$4.99	$4.51
Energy Charge, per kWh		
On-Peak	7.0647¢	n/a
Mid-Peak	4.9167¢	4.1365¢
Off-Peak	4.3034¢	3.5504¢

SCHEDULE 20
SPECULATIVE HIGH-DENSITY LOAD
(Continued)

MONTHLY CHARGE (Continued)

Large Power Service Rates

PRIMARY SERVICE	Summer	Non-summer
Service Charge, per month	$299.00	$299.00
Basic Charge, per kW of Basic Load Capacity	$1.26	$1.26
Demand Charge, per kW of Billing Demand	$6.25	$4.70
Energy Charge, per kWh		
On-Peak	7.4593¢	n/a
Mid-Peak	4.6039¢	4.0372¢
Off-Peak	3.7813¢	3.1600¢

TRANSMISSION SERVICE	Summer	Non-summer
Service Charge, per month	$299.00	$299.00
Basic Charge, per kW of Basic Load Capacity	$0.70	$0.70
Demand Charge, per kW of Billing Demand	$6.07	$4.57
Energy Charge, per kWh		
On-Peak	7.4002¢	n/a
Mid-Peak	4.5748¢	4.0187¢
Off-Peak	3.7572¢	3.1436¢

PAYMENT

The monthly bill for service supplied hereunder is payable upon receipt, and becomes past due 15 days from the date on which rendered.

BEFORE THE

IDAHO PUBLIC UTILITIES COMMISSION

CASE NO. IPC-E-21-37

IDAHO POWER COMPANY

ATTACHMENT 2

Large General Service Peak-Demand Costs to Demand Charge Derivation

(a)	January 1, 2021 - December 31, 2021 Test Year On-Peak Demand Recovered in On-Peak Demand Charge	$331,732
(b)	2021 test year kW	1,423,581
(a / b)	**Demand-Peak added to Demand Charge $/kW**	**$ 0.23** <----Adder to Demand rate

Idaho Power Company
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Large General Service
Schedule 9 Primary Service

Line No	Description	(1) Use	(2) Current Base Rate	(3) Current Base Revenue	(4) Proposed Base Rate	(5) Proposed Base Revenue	(6) Revenue Difference	(7) Percent Change
1	Service Charge	2,967.5	$285.00	$845,738	$285.00	$845,738	$0	0.00%
2	Minimum Charge	0.0	10.00	$0	10.00	$0	$0	0.00%
3	Basic Charge							
4	Total Basic Charge	1,737,459	1.28	$2,223,948	1.28	$2,215,424	$(8,523)	(0.38)%
5	Demand Charge							
6	Summer	371,535	5.09	$1,891,112	5.07	$1,883,865	$(7,248)	(0.38)%
7	Non-Summer	1,036,397	4.46	$4,622,330	4.44	$4,604,615	$(17,715)	(0.38)%
8	Total Demand (b)	1,407,932		$6,513,442		$6,488,480	$(24,963)	(0.38)%
9	On-Peak Summer	347,641	0.95	$330,259	0.95	$328,993 (a)	$(1,266)	(0.38)%
10	Energy Charge							
11	On-peak	39,826,737	0.048776	$1,942,589	0.048589	$1,935,144	$(7,445)	(0.38)%
12	Mid-peak	63,686,362	0.045007	$2,866,332	0.044835	$2,855,347	$(10,985)	(0.38)%
13	Off-peak	41,164,468	0.042542	$1,751,219	0.042379	$1,744,507	$(6,711)	(0.38)%
14	Summer Energy Charge	144,677,566		$6,560,140		$6,534,998	$(25,142)	(0.38)%
15	Mid-Peak	247,895,939	0.040359	$10,004,832	0.040204	$9,966,489	$(38,343)	(0.38)%
16	Off-peak	153,878,694	0.039003	$6,001,731	0.038854	$5,978,729	$(23,001)	(0.38)%
17	Non-Summer Energy Charge	401,774,634		$16,006,563		$15,945,218	$(61,345)	(0.38)%
18	Total Energy Charge	546,452,200		$22,566,703		$22,480,217	$(86,486)	(0.38)%
19	Total Revenue			$32,480,089		$32,358,851	$(121,238)	(0.37)%

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Large General Service
Schedule 9 Transmission

Line No	Description	(1) Use	(2) Current Base Rate	(3) Current Base Revenue	(4) Proposed Base Rate	(5) Proposed Base Revenue	(6) Revenue Difference	(7) Percent Change
1	Service Charge	48.0	$285.00	$13,680	$285.00	$13,680	$0	0.00%
2	Minimum Charge	0	10.00	$0	10.00	$0	$0	0.00%
3	Basic Charge							
4	Total Basic Charge	20,005	0.68	$13,603	0.68	$13,551	($52)	(0.38)%
5	Demand Charge							
6	Summer	3,455	4.78	$16,517	4.76	$16,453	($63)	(0.38)%
7	Non-Summer	12,194	4.30	$52,433	4.28	$52,232	($201)	(0.38)%
8	Total Demand Charge (b)	15,649		$68,949		$68,685	($264)	(0.38)%
9	On-Peak Summer	2,894	0.95	$2,749 (a)	0.95	$2,739	($11)	(0.38)%
10	Energy Charge							
11	On-peak	219,977	0.047997	$10,558	0.047813	$10,518	($40)	(0.38)%
12	Mid-peak	388,207	0.044383	$17,230	0.044213	$17,164	($66)	(0.38)%
13	Off-peak	207,718	0.042001	$8,724	0.041840	$8,691	($33)	(0.38)%
14	Summer Energy Charge	815,902		$36,512		$36,372	($140)	(0.38)%
15	Mid-Peak	1,767,577	0.039854	$70,445	0.039701	$70,175	($270)	(0.38)%
16	Off-peak	1,042,695	0.038618	$40,267	0.038470	$40,112	($154)	(0.38)%
17	Non-Summer Energy Charge	2,810,272		$110,712		$110,288	($424)	(0.38)%
18	Total Energy Charge	3,626,174		$147,224		$146,660	($564)	(0.38)%
19	Total Revenue			$246,206		$245,315	($891)	(0.36)%

Current 9P Rates

Charge Type	Summer	Non-Summer
Service Charge (per customer)	$ 285.00	$ 285.00
Basic Charge per kW of BLC	$ 1.28	$ 1.28
Demand Charge per kW	$ 5.07	$ 4.44
On-Peak Demand charge per kW	$ 0.95	n/a
On Peak Energy Charge per kWh	$ 0.048589	n/a
Mid Peak Energy Charge per kWh	$ 0.044835	$ 0.040204
Off Peak Energy Charge per kWh	$ 0.042379	$ 0.038854

Current 9T Rates

Charge Type	Summer	Non-Summer
Service Charge (per customer)	$ 285.00	$ 285.00
Basic Charge per kW of BLC	$ 0.68	$ 0.68
Demand Charge per kW	$ 4.76	$ 4.28
On-Peak Demand charge per kW	$ 0.95	n/a
On Peak Energy Charge per kWh	$ 0.047813	n/a
Mid Peak Energy Charge per kWh	$ 0.044213	$ 0.039701
Off Peak Energy Charge per kWh	$ 0.041840	$ 0.038470

	DSM Avoided Cost ($/kWh)	S	NS
(a)	On-Peak	$ 0.050020	
	Mid-Peak	$ 0.032140	$ 0.028850
	Off-Peak	$ 0.028380	$ 0.024220

(b) Peak Demand Adder ($/kW) **$ 0.23**

(c) Embedded Energy Rate ($/kWh) **$ 0.027186**

Proposed Schedule 20 Large General Service Primary Rates

	Charge Type	Summer	Non-Summer
	Service Charge (per customer)	$ 285.00	$ 285.00
	Basic Charge per kW of BLC	$ 1.28	$ 1.28
(rate + b)	Demand Charge per kW	$ 5.30	$ 4.67
	On-Peak Demand charge per kW	n/a	n/a
(rate - c + a)	On Peak Energy Charge per kWh	$ 0.071423	n/a
(rate - c + a)	Mid Peak Energy Charge per kWh	$ 0.049789	$ 0.041868
(rate - c + a)	Off Peak Energy Charge per kWh	$ 0.043573	$ 0.035888

Proposed Schedule 20 Large General Service Transmission Rates

	Charge Type	Summer	Non-Summer
	Service Charge (per customer)	$ 285.00	$ 285.00
	Basic Charge per kW of BLC	$ 0.68	$ 0.68
(rate + b)	Demand Charge per kW	$ 4.99	$ 4.51
	On-Peak Demand charge per kW	n/a	n/a
(rate - c + a)	On Peak Energy Charge per kWh	$ 0.070647	n/a
(rate - c + a)	Mid Peak Energy Charge per kWh	$ 0.049167	$ 0.041365
(rate - c + a)	Off Peak Energy Charge per kWh	$ 0.043034	$ 0.035504

Large Power Peak-Demand Costs to Demand Charge Derivation

(a) January 1, 2021 - December 31, 2021 Test Year On-Peak Demand Recovered in On-Peak Demand Charge $1,065,674

(b) 2021 test year kW (all 19) 4,531,197

(a / b) **Demand-Peak added to Demand Charge $/kW** **$ 0.24** <----Adder to Demand rate

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Large Power Service
Schedule 19 Secondary

Line No	Description	Use	(1) Current Base Rate	(2) Current Base Revenue	(3) Proposed Base Rate	(4) Proposed Base Revenue	(5) Revenue Difference	(6) Percent Change
1	Service Charge	12.0	$39.00	$468	$39.00	$468	$0	0.00%
2	Basic Charge							
3	Total Basic Charge	13,274	0.91	$12,080	0.91	$12,033	($46)	(0.38)%
4	Demand Charge							
5	Summer	3,036	5.91	$17,940	5.89	$17,872	($69)	(0.38)%
6	Non-Summer	(b) 9,465	4.24	$40,131	4.22	$39,977	($154)	(0.38)%
7	Total Demand Charge	12,501		$58,072		$57,849	($223)	(0.38)%
8	On-Peak Summer	2,433	1.01	$2,457	1.01	$2,448 (a)	($9)	(0.38)%
9	Energy Charge							
10	On-peak	358,091	0.063573	$22,765	0.063329	$22,678	($87)	(0.38)%
11	Mid-peak	642,496	0.050334	$32,339	0.050141	$32,215	($124)	(0.38)%
12	Off-peak	455,011	0.044671	$20,326	0.044500	$20,248	($78)	(0.38)%
13	Summer Energy Charge	1,455,598		$75,430		$75,141	($289)	(0.38)%
14	Mid-Peak	2,741,279	0.046815	$128,333	0.046636	$127,841	($492)	(0.38)%
15	Off-peak	1,925,207	0.041592	$80,073	0.041433	$79,766	($307)	(0.38)%
16	Non-Summer Energy Charge	4,666,486		$208,405		$207,607	($799)	(0.38)%
17	Total Energy Charge	6,122,084		$283,836		$282,749	($1,088)	(0.38)%
18	Total Revenue			$356,913		$355,547	($1,366)	(0.38)%

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Large Power Service
Schedule 19 Primary

Line No	Description	Use	(1) Current Base Rate	(2) Current Base Revenue	(3) Proposed Base Rate	(4) Proposed Base Revenue	(5) Revenue Difference	(6) Percent Change
1	Service Charge	1,379.90	$299.00	$412,590	$299.00	$412,590	$0	0.00%
2	Basic Charge							
3	Total Basic Charge	5,100,912	1.26	$6,427,149	1.26	$6,402,517	($24,632)	(0.38)%
4	Demand Charge							
5	Summer	1,150,102	6.03	$6,935,114	6.01	$6,908,536	($26,579)	(0.38)%
6	Non-Summer	(b) 3,310,960	4.48	$14,833,102	4.46	$14,776,255	($56,847)	(0.38)%
7	Total Demand Charge	4,461,062		$21,768,216		$21,684,790	($83,426)	(0.38)%
8	On-Peak Summer	1,109,842	0.95	$1,054,350	0.95	$1,050,309 (a)	($4,041)	(0.38)%
9	Energy Charge							
10	On-peak	149,747,199	0.052322	$7,835,073	0.052121	$7,805,045	($30,028)	(0.38)%
11	Mid-peak	255,761,629	0.041606	$10,641,218	0.041447	$10,600,436	($40,782)	(0.38)%
12	Off-peak	189,008,195	0.037123	$7,016,551	0.036981	$6,989,661	($26,891)	(0.38)%
13	Summer Energy Charge	594,517,023		$25,492,843		$25,395,142	($97,700)	(0.38)%
14	Mid-Peak	985,991,495	0.039220	$38,670,586	0.039070	$38,522,383	($148,204)	(0.38)%
15	Off-peak	704,884,293	0.035062	$24,714,653	0.034928	$24,619,935	($94,718)	(0.38)%
16	Non-Summer Energy Charge	1,690,875,789		$63,385,240		$63,142,318	($242,922)	(0.38)%
17	Total Energy Charge	2,285,392,812		$88,878,082		$88,537,460	($340,622)	(0.38)%
18	Total Revenue			$118,540,387		$118,087,666	($452,721)	(0.38)%

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Filed August 21, 2020

Large Power Service
Schedule 19 Transmission

Line No	Description	Use	(1) Current Base Rate	(2) Current Base Revenue	(3) Proposed Base Rate	(4) Proposed Base Revenue	(5) Revenue Difference	(6) Percent Change
1	Service Charge	24.0	$299.00	$7,176	$299.00	$7,176	$0	0.00%
2	Basic Charge							
3	Total Basic Charge	58,887	0.70	$41,221	0.70	$41,063	($158)	(0.38)%
4	Demand Charge							
5	Summer	14,562	5.85	$85,185	5.83	$84,859	($326)	(0.38)%
6	Non-Summer	(b) 43,072	4.35	$187,366	4.33	$186,648	($718)	(0.38)%
7	Total Demand Charge	57,634		$272,552		$271,507	($1,045)	(0.38)%
8	On-Peak Summer	13,649	0.95	$12,966	0.95	$12,917 (a)	($50)	(0.38)%
9	Energy Charge							
10	On-peak	1,929,255	0.051728	$99,797	0.051530	$99,414	($382)	(0.38)%
11	Mid-peak	3,646,494	0.041314	$150,651	0.041156	$150,074	($577)	(0.38)%
12	Off-peak	2,786,887	0.036881	$102,783	0.036740	$102,389	($394)	(0.38)%
13	Summer Energy Charge	8,362,636		$353,231		$351,877	($1,354)	(0.38)%
14	Mid-peak	13,879,185	0.039035	$541,774	0.038885	$539,698	($2,076)	(0.38)%
15	Off-peak	10,540,030	0.034898	$367,826	0.034764	$366,416	($1,410)	(0.38)%
16	Non-Summer Energy Charge	24,419,215		$909,600		$906,114	($3,486)	(0.38)%
17	Total Energy Charge	32,781,851		$1,262,831		$1,257,991	($4,840)	(0.38)%
18	Total Revenue			$1,596,745		$1,590,653	($6,092)	(0.38)%

Current 19P Rates

Charge Type	Summer	Non-Summer
Service Charge (per customer)	$ 299.00	$ 299.00
Basic Charge per kW of BLC	$ 1.26	$ 1.26
Demand Charge per kW	$ 6.01	$ 4.46
On-Peak Demand charge per kW	$ 0.95	n/a
On Peak Energy Charge per kWh	$ 0.052121	n/a
Mid Peak Energy Charge per kWh	$ 0.041447	$ 0.039070
Off Peak Energy Charge per kWh	$ 0.036981	$ 0.034928

Proposed Schedule 20 Large Power Primary Rates

	Charge Type	Summer	Non-Summer
	Service Charge (per customer)	$ 299.00	$ 299.00
	Basic Charge per kW of BLC	$ 1.26	$ 1.26
(rate + b)	Demand Charge per kW	$ 6.25	$ 4.70
	On-Peak Demand charge per kW	n/a	n/a
(rate - c + a)	On Peak Energy Charge per kWh	$ 0.074593	n/a
(rate - c + a)	Mid Peak Energy Charge per kWh	$ 0.046039	$ 0.040372
(rate - c + a)	Off Peak Energy Charge per kWh	$ 0.037813	$ 0.031600

Current 19T Rates

Charge Type	Summer	Non-Summer
Service Charge (per customer)	$ 299.00	$ 299.00
Basic Charge per kW of BLC	$ 0.70	$ 0.70
Demand Charge per kW	$ 5.83	$ 4.33
On-Peak Demand charge per kW	$ 0.95	n/a
On Peak Energy Charge per kWh	$ 0.051530	n/a
Mid Peak Energy Charge per kWh	$ 0.041156	$ 0.038885
Off Peak Energy Charge per kWh	$ 0.036740	$ 0.034764

Proposed Schedule 20 Large Power Transmission Rates

	Charge Type	Summer	Non-Summer
	Service Charge (per customer)	$ 299.00	$ 299.00
	Basic Charge per kW of BLC	$ 0.70	$ 0.70
(rate + b)	Demand Charge per kW	$ 6.07	$ 4.57
	On-Peak Demand charge per kW	n/a	n/a
(rate - c + a)	On Peak Energy Charge per kWh	$ 0.074002	n/a
(rate - c + a)	Mid Peak Energy Charge per kWh	$ 0.045748	$ 0.040187
(rate - c + a)	Off Peak Energy Charge per kWh	$ 0.037572	$ 0.031436

	DSM Avoided Cost ($/kWh)	S	NS
	On-Peak	$ 0.050020	
	Mid-Peak	$ 0.032140	$ 0.028850
	Off-Peak	$ 0.028380	$ 0.024220

(b) Peak Demand Adder ($/kW) **$ 0.24**

(c) Embedded Energy Rate ($/kWh) **$ 0.027548**

Avoided Cost Averages

year	SONP	SMP	SOFP	NSMP	NSOFP
2021	$ 50.02	$ 32.14	$ 28.38	$ 28.85	$ 24.22
2022	$ 52.88	$ 32.97	$ 28.97	$ 29.62	$ 25.35
2023	$ 54.91	$ 34.45	$ 29.94	$ 30.49	$ 26.42
2024	$ 56.78	$ 36.59	$ 32.11	$ 32.88	$ 27.97
2025	$ 58.50	$ 38.44	$ 33.77	$ 34.49	$ 29.61
2026	$ 60.06	$ 36.45	$ 29.23	$ 35.82	$ 28.36
2027	$ 61.46	$ 38.80	$ 32.47	$ 38.86	$ 31.27
2028	$ 62.79	$ 42.29	$ 35.52	$ 40.54	$ 33.90
2029	$ 64.09	$ 43.66	$ 39.51	$ 42.43	$ 36.96
2030	$ 65.39	$ 44.72	$ 38.76	$ 42.36	$ 36.83
2031	$ 66.67	$ 47.61	$ 42.11	$ 45.57	$ 39.65
2032	$ 67.95	$ 48.68	$ 43.86	$ 47.19	$ 41.24
2033	$ 69.24	$ 49.94	$ 44.90	$ 48.55	$ 42.85
2034	$ 70.55	$ 51.39	$ 46.69	$ 50.04	$ 44.42
2035	$ 71.90	$ 52.98	$ 47.92	$ 52.00	$ 45.97
2036	$ 73.27	$ 55.74	$ 49.99	$ 54.04	$ 47.63
2037	$ 74.88	$ 56.50	$ 52.01	$ 56.40	$ 49.00
2038	$ 76.53	$ 55.18	$ 52.09	$ 55.50	$ 49.35

https://docs.idahopower.com/pdfs/AboutUs/PlanningForFuture/irp/2019/2019IRPTechAppendixUpdated2.pdf

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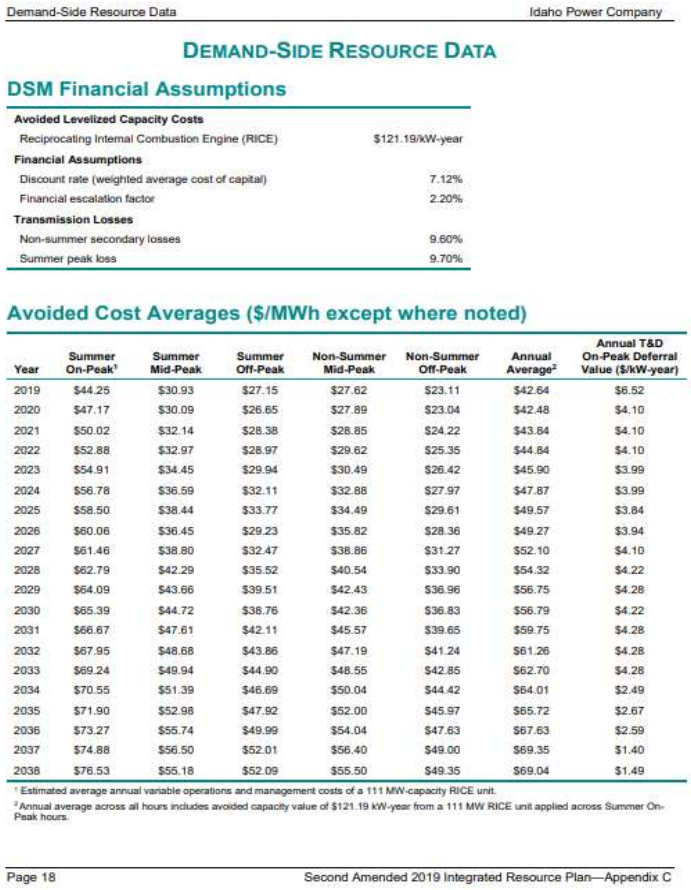

Demand-Side Resource Data — Idaho Power Company

DEMAND-SIDE RESOURCE DATA

DSM Financial Assumptions

Avoided Levelized Capacity Costs	
Reciprocating Internal Combustion Engine (RICE)	$121.19/kW-year
Financial Assumptions	
Discount rate (weighted average cost of capital)	7.12%
Financial escalation factor	2.20%
Transmission Losses	
Non-summer secondary losses	9.60%
Summer peak loss	9.70%

Avoided Cost Averages ($/MWh except where noted)

Year	Summer On-Peak[1]	Summer Mid-Peak	Summer Off-Peak	Non-Summer Mid-Peak	Non-Summer Off-Peak	Annual Average[2]	Annual T&D On-Peak Deferral Value ($/kW-year)
2019	$44.25	$30.93	$27.15	$27.62	$23.11	$42.64	$6.52
2020	$47.17	$30.09	$26.65	$27.89	$23.04	$42.48	$4.10
2021	$50.02	$32.14	$28.38	$28.85	$24.22	$43.84	$4.10
2022	$52.88	$32.97	$28.97	$29.62	$25.35	$44.84	$4.10
2023	$54.91	$34.45	$29.94	$30.49	$26.42	$45.90	$3.99
2024	$56.78	$36.59	$32.11	$32.88	$27.97	$47.87	$3.99
2025	$58.50	$38.44	$33.77	$34.49	$29.61	$49.57	$3.84
2026	$60.06	$36.45	$29.23	$35.82	$28.36	$49.27	$3.94
2027	$61.46	$38.80	$32.47	$38.86	$31.27	$52.10	$4.10
2028	$62.79	$42.29	$35.52	$40.54	$33.90	$54.32	$4.22
2029	$64.09	$43.66	$39.51	$42.43	$36.96	$56.75	$4.28
2030	$65.39	$44.72	$38.76	$42.36	$36.83	$56.79	$4.22
2031	$66.67	$47.61	$42.11	$45.57	$39.65	$59.75	$4.28
2032	$67.95	$48.68	$43.86	$47.19	$41.24	$61.26	$4.28
2033	$69.24	$49.94	$44.90	$48.55	$42.85	$62.70	$4.28
2034	$70.55	$51.39	$46.69	$50.04	$44.42	$64.01	$2.49
2035	$71.90	$52.98	$47.92	$52.00	$45.97	$65.72	$2.67
2036	$73.27	$55.74	$49.99	$54.04	$47.63	$67.63	$2.59
2037	$74.88	$56.50	$52.01	$56.40	$49.00	$69.35	$1.40
2038	$76.53	$55.18	$52.09	$55.50	$49.35	$69.04	$1.49

[1] Estimated average annual variable operations and management costs of a 111 MW-capacity RICE unit.

[2] Annual average across all hours includes avoided capacity value of $121.19 kW-year from a 111 MW RICE unit applied across Summer On-Peak hours.

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