–BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH–

IN THE MATTER OF THE APPLICATION OF ROCKY MOUNTAIN POWER FOR APPROVAL OF ITS ELECTRIC VEHICLE INFRASTRUCTURE PROGRAM	))))))))	**DOCKET NO. 20-035-34** **Exhibit No. DPU 2.0 DIR**

REDACTED

FOR THE DIVISION OF PUBLIC UTILITIES

DEPARTMENT OF COMMERCE

STATE OF UTAH

Direct Testimony of

DAVID WILLIAMS

October 19, 2021

INTRODUCTION

Q: Please state your name and occupation.

A: My name is David Williams. I am a Utility Technical Consultant at the Utah Department of Commerce-Division of Public Utilities ("Division").

Q: What is your business address?

A: My business address is 160 East 300 South, Heber Wells Building-4th Floor, Salt Lake City, Utah, 84111.

Q: On whose behalf are you testifying?

A: The Division's.

Q: Please describe your educational and professional experience.

A: I have a Bachelor of Science degree in Nuclear Engineering from North Carolina State University in Raleigh, North Carolina. I have a J.D. from the University of Wisconsin, Madison. I have worked in the energy utility field since 2011. I have been employed by the Division since December 2018.

Q: Please describe your current position responsibilities.

A: My responsibilities include policy and program analysis on a wide range of energy regulatory issues. I am also responsible for the preparation and review of comments and testimony for regulatory matters.

Q: Have you previously testified before this commission?

A: Yes. I have testified several times before the Commission.

Q: What is the purpose of your testimony?

A: My testimony evaluates certain aspects of the Electric Vehicle Infrastructure Program ("EVIP" or "Program") proposed by Rocky Mountain Power ("Company" or "RMP"). My testimony takes the legislative objectives as the Division understands them, including the public interest requirement called for by the EVIP enabling statute, and applies these to how the proposed Program will or will not enable competition in the electric vehicle ("EV") charging market.

Q: **Will you describe the specific aspects of the proposed program you wish to address?**

A: I wish to address two items and how they relate to competition: (1) The kWh discount received by Company customers for Schedule 60 fast charging ($0.40 per kWh for non-RMP customers, versus $0.15 per kWh for RMP customers)[1], and (2) the total distribution of Program capital spending proposed for Company-owned charging infrastructure versus make-ready infrastructure.

Q: Would you offer a summary of your conclusions regarding the effect of the proposed EVIP program on competition in EV charging market?

[1] See Rocky Mountain Power's Application for Approval of Electric Vehicle Infrastructure Program Authorized by Electric Vehicle Charging Infrastructure Amendments and Motion for Protective Order, Docket No. Docket No: 20-035-34, August 23, 2020 ("Application"), ¶ 10.

A: RMP's proposed EVIP program has some elements that will help foster competition, but overall, the program as proposed will not sufficiently enable competition to be in the public interest. The two primary reasons for this are: (1) the discount that the Company offers to its own customers is beyond what is justified, and will make it difficult for third-party charging companies to compete with Company-owned charging stations, and (2) the proportion of the proposed spending amounts on charging infrastructure is weighted too heavily toward Company-owned projects.

Q: Please provide your recommendations to the Commission.

A: If the Company bases the energy discount on the amount of surcharge paid by a typical customer, the discount allowed for current Company customers should be no more than around a $0.05 per kWh discount from the rate paid by non-Company customers. If the market rate for DCFC energy charging is around $0.40 to $0.42 per kWh, a $0.05 discount would put the energy charge for Company customers at around a minimum of $0.35 to $0.37 per kWh, rather than the $0.15 proposed by the Company.

The overall spending should be [redacted]

[2] This ratio assumes that there are a sufficient number of projects proposed.

Q: Please summarize statutory sections and public policy considerations relevant to your testimony.

A: Based on Utah statutes and past Public Service Commission ("Commission") decisions, the Division's overall objectives are for rates to be stable, simple, understandable, and acceptable to the public; to be economically efficient; to promote fair apportionment of costs among individual customers within each customer class with no undue discrimination; and to protect against wasteful use of utility services.

Utah Code Annotated Section 54-4-41(4) provides the requirements that RMP's proposed EVIP program must meet for the Commission to find it in the public interest. The fourth requirement is that the program "enables competition, innovation, and customer choice in electric vehicle battery charging services, while promoting low-cost services for electric vehicle battery charging customers."[3]

Regarding utility-owned charging infrastructure and its effect on competition, the Division is guided by several policy considerations.

First, there is a concern that a monopoly utility with a rate of return will not have the same incentive to keep costs down, pick profitable charging locations, or to follow trends in technology and market, that a private company would.[4] The private company will sink

[3] Utah Code Annotated § 54-4-41(4)(d), available at https://le.utah.gov/xcode/Title54/Chapter4/54-4-S41.html?v=C54-4-S41_2020051220200512. Note that the pricing provisions proposed might also implicate Subsection 54-4-41(4)(b) if the anti-competitive provisions suppress investment that would occur in the absence of the large subsidy proposed.

[4] See, e.g., Harper, McAndrews and Byrnett, *Electric Vehicles: Key Trends, Issues, and Considerations for State Regulators*, NARUC October 2021, pp. 20, 22, for possible arguments against utility-owned charging infrastructure:

or swim based on its reading of the market, whereas the monopoly utility with a rate of return will for the most part face fewer consequences for any poor market decisions.

Second, if a utility offers charging at a cost substantially lower than the market cost, competition will not be enabled, as private companies will not be able to match the artificially low cost.

Third, a discounted charging price will result in negative consequences when the price is ultimately moved to a cost of service price (as the Company intends), for example: rate shock, customer complaints, or customer inertia (staying with the Company's charging services out of habit). The Commission faced a similar issue in Docket No. 07-057-13. In that docket the Division received hundreds of complaints from natural gas vehicle owners who were irate that the price of compressed natural gas was moving towards cost of service pricing after having been artificially low for years.

Fourth, the capital spending balance between Company-owned projects and third-party projects (e.g. make-ready spending) should in a rough sense reflect the state of the EV DCFC market. For example, it does not make sense for the current or future market to

"Opponents also contend that ownership of charging infrastructure by a monopoly utility with a guaranteed rate of return would crowd out investment from private companies and limit the growth of the EV charging industry. … Opponents also note that, as utilities enjoy a publicly guaranteed rate of return on their investment regardless of usage of a given charger, utility ownership could lead to overbuilding of chargers and the potential for stranded assets." https://pubs.naruc.org/pub/32857459-0005-B8C5-95C6-1920829CABFE

consist mainly of third-party-owned DCFC charging stations, but have the Proposed Program [redacted]

Q: Has the Company met the public interest requirement in Utah Code Annotated Section 54-4-41(4)(d) with its filing?

A: No. The proposed DC fast charging rate in the Application gives too large of a discount to Company customers. Third-party charging companies will not be able to compete with this artificially low price.

Q: How did the Company arrive at its Schedule 60 charges?

The Company decided on Schedule 60 charges composed of a session fee and an energy charge. The Company "wanted to set its price for non-Rocky Mountain Power customers at a level that was comparable to similar services offered in the marketplace."[5] The Company took the example of a 100 kWh charge at a 150 kW charger, and made its 100 kWh session at Schedule 60 prices roughly the same cost as a 100 kWh charging session at an Electrify America station.[6] According to the Company, Electrify America "has charging stations that are the most like the ones the Company plans to deploy."[7] The Electrify America stations charge $0.43 per kWh, with no session fee, and so a 100 kWh session would be $43.00 (again, this is at a 150 kW CCS charger). A 100 kWh charge at

[5] See Direct Testimony of Mr. Robert M. Meredith for Rocky Mountain Power, Docket No. 20-035-34, August 23, 2021 ("Meredith Testimony"), lines 101-3.

[6] Id. lines 104-7.

[7] Id. lines 103-4.

a proposed Company owned station would be $41.00 for non-Company customers ($1 for the session fee, plus $0.40 per kWh times 100 kWh).

For the same charging session, a Company customer would again pay the $43.00 at the Electrify America station, but would pay only $16.00 ($1.00 session fee, plus $0.15 per kWh times 100 kWh). Companies such as Electrify America (who are presumed by the Company to be charging at or near the market rate) will not be able to compete with the Company prices when it comes to Company customers. And since a large majority of the Utah population is served by RMP, that means that most Utah residents would pay $16.00 for a typical 100 kWh charging session at an RMP station, but $43.00 per session at an Electrify America station. Electrify America and other third-party charging companies will find it difficult to compete with this discounted price.

Q: What reason did the Company give for the Company customer discount from $0.40 per kWh to $0.15 per kWh for DC fast charging?

A: The Company proposed "that its Utah customers would receive a 75 percent discount on the proportion of the cost for DC fast charging service that is above the utility's marginal cost of service."[8] The Division asked in a data request how the 75% discount was calculated, and the Company stated:

> No particular analysis was completed. Seventy-five percent is a discount level that the Company believes is reasonable and appropriate to provide a benefit for

[8] Meredith Testimony lines 109-12.

Rocky Mountain Power customers, since they will pay the proposed Schedule 60 surcharge that funds the program.[9]

Q: Is the Company's reasoning for the discount sound?

A: No. In most cases, the discount a typical residential Company customer will receive at Company-owned DCFC stations over a year will outweigh the extra surcharge they pay in Schedule 60 surcharges. In many cases, the discount they receive will far outweigh their paid surcharge.

Q: Please provide the analysis that leads to this conclusion.

A: The Division created a spreadsheet that shows how much a typical residential customer will pay in Schedule 60 surcharges. A customer that averages 775 kWh a month and who does not own an electric vehicle will pay around $2.66 annually more under the proposed Schedule 60 surcharge (see Division Exhibit 1, Tab "Home with No Electric Vehicle").[10] For homes with an electric vehicle, I made certain assumptions regarding charging habits. To simplify matters and for illustrative purposes, I assumed that an EV owner charged either at home with a Level 2 charger, or at a Company-owned DCFC using a 150 kW charger. Under the assumptions listed in the worksheet, a Company customer EV owner who drives 11,500 miles per year, and who charges 80% at home/20% at Company 150 kW DCFC chargers, would pay $3.51 more per year on her electric bill due to Schedule

[9] DPU Data Request 1.32, Docket No. 20-035-34, September 23, 2021.

[10] I used residential energy rates effective January 1, 2022, as indicated in the Commission's Order in the last general rate case. See Order, Docket No. 20-035-04, December 30, 2020, p. 109 of the pdf (Exhibit B). Available at: https://pscdocs.utah.gov/electric/20docs/2003504/3168662003504ro12-30-2020.pdf

60 surcharges, but save $172.50 due to the Company customer discount in a year. These assumptions can be modified on the spreadsheet to see how they affect the total surcharge paid, but with even modest Company-owned DCFC charging, Company customers will save far more in discounted energy than they will spend in Schedule 60 surcharges.

As explained by the Company in response to data requests, "no particular analysis was completed" to support the large Company proposed discount. My analysis demonstrates that the discount for Company customers is too high and does not correlate to the surcharge that a typical customer will pay. The Company's proposed discount will stifle competition. If a third party electric station provider were considering entering the Utah market, or expanding their current Utah footprint, the inability to compete with the Company's discount rate (which would be available to a large majority of the state's population) for the next five years could very well cause the third party providers to not invest in Utah charging infrastructure, even with other incentives.

Q: What other problems might the discount cause?

A subsidized discount rate for Company customers will cause other issues as well. Rate shock can occur when the rate is eventually switched to the cost of service rate. Customers may rely on the artificially low rate to make decisions about electric vehicles, and receive a shock when the energy cost rises. This issue arose in Docket No. 07-057-13, where Questar Gas Company (the predecessor of Dominion Energy) had provided compressed natural gas ("CNG") for natural gas vehicles ("NGV") at a low rate for

years.[11] When the subsidy was eliminated, there were hundreds of complaints from Questar customers who had relied on the low rates to make vehicle decisions.[12] There were so many customer complaints from the rate increase that a new docket was opened to discuss the issue.[13]

The Division also has questions regarding whether the Electrify America rate reflects the actual market rate. The Company uses the Electrify America rate as a baseline, but does not present analysis of rates of other third-party DCFC station providers.[14] The Division preserves this issue for rebuttal testimony. The Division does note, however, that Electrify America is a subsidiary of Volkswagen, and Volkswagen used part of its $2 billion settlement regarding emissions to fund Electrify America.[15] A better indication of the "true" market rate[16] might be an independent company. The Division hopes to hear testimony from third-party providers regarding the range of market prices that exist in Utah.

[11] See Report and Order on Cost of Service and Rate Design, Docket no. 07-057-13, December 22, 2008, pp. 40-2.

[12] See Public Comments Regarding CNG from, Docket no. 07-057-13, December 24, 2008 (and continuing for weeks).

[13] See In the Matter of: of the Investigation of Questar Gas Company's Services Associated with Natural Gas Vehicles, Docket no. 08-057-21.

[14] The Division has submitted a Data Request on this topic but has not yet received a reply. The Division also notes that a more appropriate level for the energy charge proposed by the Company for non-Company users might be $0.42, instead of $0.40. See testimony of Abdinasir Abdulle in the present docket.

[15] See, e.g., VW's $2 billion penalty for diesel scam, Electrify America, builds electric charging network across US to boost EV market, CNBC.com, May 10 2019. Available at: https://www.cnbc.com/2019/05/10/vws-2-billion-penalty-for-diesel-scam-builds-ev-charging-network-across-us.html

[16] There is probably not one "true" $/kWh market rate for DCFC fast charging, as costs and demand vary from location to location, and there are often multiple options regarding subscription plans and other factors.

Q: What does the Division recommend regarding the discount?

A: The Division opposes the proposed large discount for Company customers for two reasons: it will not enable competition, and it does not achieve the stated goal of reflecting the surcharge expected to be paid by the EV customers.

A discount for Company customers is allowed by Utah statute.[17] The Division recommends that the Company be required to produce analysis regarding how much an average or typical EV customer might pay in surcharge per year, and use that as a starting point for a discount.[18] The Division expects that a more appropriate discount would be a Company customer energy charge of around $0.35 per kWh, instead of $0.15 per kWh.[19]

The Division-proposed energy charge of $0.35 was based on an outlier case where a residential customer had a much higher annual non-EV electricity usage (2,000 kWh per month), and only used company-owned DC fast chargers for 5% of their charging (with the rest at home). In that case, if we assume a RMP customer price of $0.35 per kWh, the customer would pay $8.45 annually as a result of the surcharge, and receive a discount of $8.63 for the year—the annual discount would roughly equal the surcharge paid.[20]

[17] See Utah Statute § 54-4-41(2)(b)(iii).

[18] This analysis is based on residential EV owners, since the usage ranges and assumptions for commercial EVs would be more complicated. However, if the Company can produce similar analysis for commercial EVs, it would certainly be relevant.

[19] Again, the recommended energy charge of $0.35 is based on the assumption that the $0.40 proposed by the Company is close to the fair market price of DC fast charging energy.

[20] See David Williams Exhibit 1, Tab "Residential Home with EV (high)"

As an alternative to the Division's recommended $0.35 energy charge for Company customers, the Company could propose that the entire class of residential EV owners receive a discount roughly equal to the entire surcharge paid by the class of residential non-EV owners. For example, if we assume that the Company has around 830,000 Utah residential customers who don't own an EV, and 10,000 customers that do, the annual surcharge paid by the non-EV owners (830,000 * $2.66, or around $2.2 million) could be used to formulate a discounted energy rate for the EV owners. More analysis would be required by the Company to show how this would work, and the issue of competition would still have to be factored in.

Q: Please explain your views on the Company's proposed capital spending.

A: In Confidential RMP Exhibit 2 to James Campbell's testimony, the Company goes over its proposed capital and expense spending amounts. Its proposed capital spending is broken down into [redacted] relate to Company-owned chargers.[21] [redacted].

The total proposed capital spending on the first three categories [redacted] The total proposed capital spending on make-ready infrastructure [redacted][22] These totals

[21] See Rocky Mountain Power witness Mr. James A. Campbell, Direct Testimony, Docket No. 21-035-34, August 8, 2021 ("Campbell Testimony"), lines 223-6.

[22] Campbell Testimony, Confidential Exhibit JAC 2, tab "Expenditures".

should be more in proportion to the total number of DC charging stations expected to be operating in Utah over the next five years.

According to the U.S. Department of Energy Alternative Fuels Data Center, the total number of DC fast charging stations in the state is currently around 63.[23] If the Company adds 20 to 25 charger stations and no other DC fast charger stations are added, it would have around 25% to 30% of the fast charger stations in the state. A more probable outcome is that third-party companies will add more DC fast chargers over the next five years, and so in 2026 the Company will likely own fewer than 20% of the DC fast charging stations in the state. [redacted] The Program should enable competition in order to be in the public interest, and capital spending that disproportionally goes to Company-owned charging stations does not enable competition.

Alternatively, if we look at the number of future DC fast chargers contemplated by the Utah Statewide Charging Plan, the gap analysis calls for 37 DCFC sites along highway corridors, and the analysis of urban DCFC gives the need for 88 urban public FDC EVSE units (at the lowest category of light duty EV penetration).[24] At the highest studied level

[23] See the following website, accessed 10/12/2021: https://afdc.energy.gov/fuels/electricity_locations.html#/find/nearest?fuel=ELEC&ev_levels=dc_fast&country=US&location=utah

[24] Campbell Testimony Exhibit JAC-4, Utah Statewide Charging Plan, Table 1 (Gap Analysis Summary, p. 11) and Appendix C (Urban EVSE Needs, p. 34).

of EV penetration, there would be the need for 280 urban public FDC EVSE units. Thus the Company's proposed 20-25 Company-owned DCFC stations will likely be a small percentage of the new DCFC stations in the next ten years. The [redacted] is not justified by the proportion of new Company-owned DCFC stations to total Utah DCFC stations going forward.

Q: Please summarize the Division's conclusions regarding the effect of RMP's proposed infrastructure plan on competition.

A: The discount allowed for current Company customers should be no more than around a $0.05 per kWh discount from the rate paid by non-Company customers. If the market rate for DCFC energy charging is around $0.40 to $0.42 per kWh, a $0.05 discount would put the energy charge for Company customers at around a minimum of $0.35 to $0.37 per kWh, rather than the $0.15 proposed by the Company.

The overall spending should be tilted more towards make-ready investments, and less towards Company-owned charging stations. [redacted]

Q: Does this conclude your direct testimony?

A: Yes.