REDACTED
Rocky Mountain Power
Docket No. 25-035-61
Witness: Marshall Nadel

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

REDACTED
Direct Testimony of Marshall Nadel

November 2025

I. INTRODUCTION OF WITNESS AND QUALIFICATIONS

Q. Please state your name, business address, and on whose behalf you are testifying.

A. My name is Marshall Nadel. I am self employed as a risk and insurance consultant to the power generation and utility industries. My business address is 913 Glenhurst Rd., Keller, Texas 76248. I am submitting this testimony on behalf of PacifiCorp d/b/a Rocky Mountain Power ("Rocky Mountain Power" or the "Company").

Q. Please summarize your education and business experience.

A. I have a Bachelor of Science degree from the U.S. Naval Academy, and an MBA in Finance from DePaul University. Following five years of active service in the U.S. Navy submarine force, I joined the global insurance broker Marsh & McLennan ("Marsh") in 1980. At Marsh, I provided insurance placement and risk management services, first to electric utilities with nuclear power assets, and then to the utility industry more generally. From 1989 to 2020, I was employed by the global insurance broker, Aon, as a Managing Director in the power generation and utilities group. In 1988, I was awarded the Chartered Property Casualty Underwriter ("CPCU") designation. The CPCU is the highest designation in the commercial insurance industry, and requires in-depth experience and understanding of underwriting, risk management, and insurance coverage issues. I also held a Series 3 securities license while working with Aon Securities in 2018 and 2019, which qualified me to sell commodities futures and options in the U.S. derivatives market. Following retirement from Aon at the end of 2019, I have been providing consulting services to insurance brokers and power generation companies. I have filed as Exhibit RMP___(MN-1) a

detailed statement of qualifications that further explains my background and professional experience.

Q. Have you appeared as a witness in previous regulatory proceedings?

A. Yes. In 2025, I provided expert testimony before the Public Utilities Commission of Nevada regarding potential establishment of a self-insurance captive entity to address wildfire liability risk to the NV Energy utilities, and the allocation of wildfire insurance premiums between the Nevada electric utilities.

In 2003, I provided expert testimony to the Public Utility Commission of Texas ("PUCT") on behalf of American Electric Power's Texas Central division regarding storm reserves for potential damages to transmission and distribution lines on the Texas Gulf Coast where commercial insurance was not available. I provided similar testimony on behalf of CenterPoint Energy in 2006. In both situations, regulated electric utilities needed risk financing to fund reserves for low frequency/high severity events.

I have not previously testified before the Utah Public Service Commission ("Commission").

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your direct testimony?

A. My testimony supports Rocky Mountain Power's application to establish a Utah Fire Fund ("Fire Fund"). Along with Rocky Mountain Power's other witnesses, my testimony demonstrates that the Fire Fund proposed by the Company meets the criteria for Commission approval set forth in Utah Code §54-24-301 – 303 (the "Fire Fund statute").

Q. Please summarize your direct testimony.

A. My testimony draws from decades of experience in the insurance industry, much of which has focused on insuring utilities and other power generators in Western U.S. states. I have analyzed actuarial and fire risk data, including studies commissioned by the Company. My investigation was directed toward assessing the amount of liability risk in Utah associated with wildland fire, and the amount of capacity the Company should establish to prudently plan to pay fire-related liability claims.

The Fire Fund is an important tool to protect the Company's financial integrity while enabling it to manage claims that may arise from a catastrophic wildland fire, like the fires electric utilities have experienced in several western states in recent years (*e.g.*, California, Colorado, Hawaii, Oregon, and Texas). The Fire Fund does not replace excess liability insurance ("ELI"), but supplements a utility's insurance coverage in the event a catastrophic fire event exhausts the funds available from insurance to pay fire-related claims. The availability of the Fire Fund is critically important as utilities face increasing risks from often devastating fire events.

My testimony analyzes the appropriate size of the Fire Fund, consistent with measures of risk used to provide insurance coverage for the electric utility industry. Actuarial analysis, along with actual utility experiences with recent wildland fire events, demonstrates that an electric utility operating in Utah should have assets in place to prepare for the level of claims associated with a 1-in-500 year fire event. In light of the amount and types of distribution and transmission assets the Company has in Utah, I recommend that the combination of excess liability insurance (either through

commercial policies or a self-insurance program) and the Fire Fund should position the Company to cover fire liability claims of at least $1 billion.

III. THE RELATIONSHIP OF WILDLAND FIRE INSURANCE COVERAGE AND THE ESTABLISHMENT OF THE FIRE FUND

Q. What is the relationship between the Company's liability insurance coverage and the Fire Fund?

A. Insurance is a financial tool used to stabilize earnings in the event of a catastrophe that is otherwise difficult to fund from a company's operating cash flows. Insurance is a key component of how Rocky Mountain Power, like other utilities, prepares for risks of financial destabilization that can affect the Company, its customers, and the State. The Fire Fund is explicitly designed not as a replacement for ELI or other types of insurance. When it approved the creation of a Utah Fire Fund in S.B. 224, the Utah Legislature explained that it "allows a large-scale electric utility[1] to create a Utah fire fund to supplement other insurance for making certain fire damage payments."[2] The Fire Fund statute sets an expectation that utilities will continue to procure insurance, and that the Fire Fund only comes into play as a supplement to pay liability claims that exceed coverage limits associated with a catastrophic wildland fire event.

Q. Has the availability and cost of ELI policies covering wildfire liability changed in recent years?

A. Yes. Particularly in the Western states, the availability of wildfire insurance has

[1] Utah law defines a "large-scale electric utility" as "a public utility that provides retail electric service to more than 200,000 retail customers in the state." Utah Code 54-2-1(20) (2025). Rocky Mountain Power serves over 200,000 retail customers in Utah and thus qualifies as an eligible "large-scale electric utility."

[2] 2024 Bill Text UT S.B. 224, at 1 (2024) (Enrolled Copy, "Highlighted Provisions"). The Utah Fire Fund provisions of S.B. 224 are codified at Utah Code §§ 54-24-301 and 54-24-302.

decreased while the price has dramatically increased. Due to prolonged drought conditions and increased development in wildland areas, wildfires across the western U.S. have proliferated in the last several years, and these fires have become larger and more destructive. This has resulted in significant increases in wildfire-related costs for utilities and an inability to acquire insurance at rates and coverage levels consistent with past premiums. This is highlighted by Energy Insurance Mutual ("EIM") (one of the three major utility industry mutual liability insurers) reducing wildfire coverage limits over the last three years, even though EIM is an exclusive mutualized insurance company for the gas and electric utility industry. In general, insurers who historically would consider selling wildfire ELI policies will no longer do so, and have been replaced in the insurance market by insurers who require much higher premiums, often for lower levels of coverage.

Q. How has this affected Rocky Mountain Power's ELI procurement?

A. I am not directly involved in the procurement or management of the Company's insurance program, but my understanding is that the Company's Utah ELI wildfire policies expire in February 2026. As of the date of this filing, Rocky Mountain Power is negotiating with its insurers for commercial policy renewals, including for a policy to insure Utah wildfire risks.

Q. Is the potential coverage limit shared with other utilities in the states served by PacifiCorp?

A. Historically, PacifiCorp purchased ELI, including insurance for the risk of wildfire, as part of the overall Berkshire Hathaway Energy ("BHE") insurance program, which also included the exposures of other BHE utilities in the U.S. (for example, NV Energy and

MidAmerican Energy).

However, because such coverage is limited to annual aggregates for wildland fire losses; a loss at any one of the BHE utilities leaves the utilities operating in other states with either reduced or no coverage for the remaining coverage period. To avoid the potential exposure for fire claims in Utah, and respond to states' concerns about paying claims arising in other jurisdictions, it is my understanding that RMP expects to procure separate insurance coverage for wildfire exposure in Utah, up to the insurance limits available at a reasonable cost in the commercial insurance market.

Q. When will the Company have definitive information on the amount of ELI coverage it will have in place for the coming year?

A. The Company's ELI policies expire in February 2026. When the Company and its insurers agree to a new insurance program in February, definitive coverage limits will be available.

Q. Does your analysis regarding the Fire Fund depend on the terms of Rocky Mountain Power's insurance policies that will become effective in February 2026?

A. No. My analysis focuses on the how the Company should prepare for total potential Utah wildland fire liability exposure. Fortunately, in Utah, the Fire Fund will be available to pay claims that exceed the capacity of available ELI policies. The sources available to pay fire claims – including commercial ELI policies, self-insurance, and deductible amounts paid directly by the Company – may vary over time. In addition, it is important to account for the fact that the Fire Fund will need to be built over time based on the amount that can be collected from the fire surcharge. Even after the Fire Fund is created, the Company will still need to obtain reasonably priced insurance to

manage its wildland fire liability risks in Utah. My recommendation is to establish the Fire Fund at a level sufficient to effectively supplement insurance coverage as contemplated by the Fire Fund statute, and thus promote the financial stability of Rocky Mountain Power at a time of significant financial risk driven by wildland fire liability.

IV. DETERMINING THE SIZE OF THE UTAH FIRE FUND

Q. Did the Company conduct an actuarial analysis of its risks?

A. Yes. In 2024, PacifiCorp retained the global insurance broker Aon to [redacted] ("Aon Report"). Aon was engaged to provide an estimate of potential fire liability, including losses attributable to property damage, fire suppression costs, firefighter and civilian injuries, non-economic damages, penalties, and defense costs. The Highly Confidential Aon Report was presented to stakeholders in Utah and other PacifiCorp states, subject to a non-disclosure agreement, at a workshop convened by the Company in May 2024 and is presented by Company witness Joelle R. Steward as Highly Confidential Exhibit RMP___(JRS-1).

Q. How did Aon conduct its analysis?

A. To estimate third-party property damages (*i.e.,* not including fire damages to PacifiCorp's own property), Aon contracted with Verisk in order to utilize Verisk's industry-leading Catastrophic Wildfire platform (known as "CAT"). Verisk CAT explicitly models the factors that drive fire ignition, and an enhanced spread model realistically captures how wildfires propagate in the wildland-urban interface ("WUI"), providing a more comprehensive understanding of the risk.

Q. Are you familiar with catastrophe risk modeling methodologies?

A. Yes. Catastrophe risk modeling is the practice of using computer programs to mathematically represent the physical characteristics of natural catastrophes, terrorism, pandemics, and extreme casualty events. Catastrophe modeling in the insurance industry is used to help insurers estimate potential losses from future catastrophic events, enabling them to set more accurate premiums and better prepare for claims.

Built from the most current scientific data available, Verisk extreme event risk models capture how catastrophes behave and impact insurable assets using sophisticated simulation methods. All Verisk catastrophe models are based upon a specialized framework:

- Event Generation: Large catalogs of simulated events capture the frequency, severity, location, and other characteristics of the entire spectrum of plausible catastrophes.
- Local Intensity Calculation: For each simulated event, the intensity of the hazard is calculated at each affected site.
- Exposure Data: Information about the property, replacement value, and physical characteristics is input into the model.
- Damage Estimation: Physical damage is calculated for each affected exposure.
- Insured Loss Calculation: Policy terms and conditions are applied to estimate insured losses.

Q. How did the Aon study relate catastrophic fire event risk data to PacifiCorp assets?

A. [redacted]

[redacted]

T&D facilities are the Company assets that are most likely to be involved in potential wildland fire ignition. [redacted]

[redacted] The twenty-year rolling average data was originally developed by the California Department of Forestry and Fire Protection ("CalFire").

Q. How did the study estimate non-property damage losses?

A. Aon [redacted]. Aon included what I found to be reasonable assumptions for modeling the likelihood and scope of the categories of non-economic damages assessed in its analysis. The actuarial analysis, which is detailed in Aon's May 2024 report, was performed using generally accepted actuarial principles and in accordance with all relevant Actuarial Standards of Practice. In addition, Aon used stochastic modeling to capture uncertainty in the estimated loss outcomes.

Q. What scenarios did the study examine that are specific to Utah?

A. The results of Aon's analysis [redacted]

[redacted][3]

[redacted][4]

For purposes of estimating the Company's total liability exposure in the event of a catastrophic wildland fire event, it is critical to take into account the full scope of documented potential risks. Otherwise, the analysis would be based on a comparatively smaller event the Company would reasonably expect to be covered by insurance. To accurately understand the catastrophic fire risk, my analysis relies primarily on the Utah-specific data Aon reported [redacted].

Q. Please explain the Utah-specific conclusions of the study.

A. Aon's [redacted][5] The Highly Confidential Aon Report notes that the "area south of Salt Lake City has high concentration of lines and forested area."[6] [redacted]

[3] *See* Highly Confidential Aon Report at 30-33.
[4] The Utah-specific results are included in the Highly Confidential Aon Report at pages 38, 45, 52, and 59.
[5] Highly Confidential Aon Report at 12.
[6] Highly Confidential Aon Report at 12.

[redacted][7]

[redacted].

Q. Please explain how the insurance industry uses the term "exceedance probability."

A. Loss exceedance probability ("EP") is the probability that a specific financial loss will be exceeded in a given time period, such as a year. It is a key metric for quantifying risk, often visualized in a loss exceedance curve, which shows how the probability of a loss decreases as the loss amount increases. [redacted].[8] This concept is used in the insurance industry to understand and prepare for potential hazards, from natural catastrophes to cybersecurity breaches.

Q. Does EP estimate the probable maximum loss that might result from a specific type of catastrophic event?

A. The insurance industry typically uses a related, but different, metric to estimate the probable maximum loss ("PML") resulting from an event. EP is the probability that a loss will equal or exceed a specific value. PML is a single dollar amount representing the maximum potential loss from a single event under realistic, but severe, conditions. Since it is a specific loss estimate, PML is often tied to a specific event type or return period (like a 1-in-100-year event), whereas EP is a probability measure used to define the likelihood of any loss at or above a certain threshold. The two are used together; for example, a loss amount derived from a specific EP (*e.g.,* the loss with a 1% probability of being exceeded) can be referred to as a "100-year probable maximum

[7] Highly Confidential Aon Report at 52.
[8] Highly Confidential Aon Report at 38.

loss."

Q. How are EP and PML metrics used in estimating losses resulting from catastrophic events?

A. Catastrophe modeling generates a full EP curve, which allows for the calculation of many different PML-like figures at various probabilities. The output is a curve, from which a specific PML can be selected based on various risk levels or a specific return period. The return periods are the various "years" used when estimating the, *e.g.,* "100-year maximum loss" referred to above.

Like the EP metric, insurers use PML to assess risk, set premiums, and limit their exposure to large losses from a single event. For example:

- Property risk management: Engineers and risk managers use PML to identify vulnerabilities in properties and recommend improvements to reduce potential damage.

- Financial planning: PML analysis helps insurance companies and businesses understand how much capital they need to hold in reserve to cover potential claims.

Q. How does the Highly Confidential Aon Report define its use of the term "percentile" in its state-specific loss estimate data?

A. The estimated fire liability figures refer to the various return periods and also to the "percentile" associated with each return period. As Aon explains in its report:

> The percentile in each of the calculations in this presentation is a measure of the probability of an event(s) occurring. Technically, it is the probability that outcomes fall below a certain value. In other words, if the value of the total cost of risk is $200 million at a 95% percentile, there is a 95% chance that the total cost of risk is less than $200 million and a 5% chance that the value is greater than $200 million. If the percentile refers to an annual cost/value, the levels can be translated into 1 in X year probabilities of occurrence.[9]

[9] Highly Confidential Aon Report at 64.

Q. What did Aon estimate as the Company's potential Utah fire losses using these metrics?

A. Rocky Mountain Power's exposures [redacted]

Q. Could Rocky Mountain Power cover such catastrophic losses with its ELI policies?

A. No. The total potential damages associated with any loss EP of 1-in-100 years or more would exceed Rocky Mountain Power's existing ELI policies, and the amount of wildfire ELI coverage the Company expects to be available for Utah in its successor 2026 policies. The Aon analysis thus strongly validates the need for the creation of a Utah Fire Fund to manage catastrophic wildland fire liability risk.

Q. What level of overall coverage should the Company prudently attempt to maintain?

A. I am not aware of any specific, industry standard PML to which a utility should be covered (by insurance or a catastrophic fire fund) for wildland fire risk. The utility industry does have an example, however, of a woefully insufficient PML estimate. In 2018, in order to obtain additional insurance capacity for wildfire liability, Pacific Gas & Electric ("PG&E") issued a catastrophe bond to support captive reinsurance that was to attach coverage after $1.25 billion of wildfire claims were paid. Industry sources indicated that the probability of occurrence was deemed to be the 1-in-100 year event.

The bond was issued for a three-year term. Shortly thereafter the Camp Fire occurred, which blew past the $1.25 billion attachment point, with a nominal $10 billion in subsequent settlements (as noted in the Highly Confidential Aon Report).[10] The use of the 1-in-100 year event standard was proven lacking in contemporary utility wildfire liability circumstances.

By contrast, financial institutions investing in new generation resources require assurances based on much more conservative risk estimates. In my experience, for non-recourse financed or tax equity financed plants in the power generation industry, investors have historically required insurance for catastrophe events at a limit equivalent to the 1-in-500 year PML.

Q. How would using a 1-in-500 year estimate impact the size of the Utah Fire Fund?

A. The Company is not proposing that the Fire Fund cover the total estimated 1-in-500 year losses for Utah, [redacted]. But the data make clear that the Fire Fund should be large enough to cover (along with insurance) total Utah wildland fire losses of at least $1 billion.

Q. Please explain the $1 billion figure.

A. [redacted][11] [redacted].[12]

[10] *See* Highly Confidential Aon Report at 16.
[11] As noted above, Aon developed estimates for the following non-property losses: bodily injury (for firefighters and for civilians); fire suppression costs; non-economic damages, penalties, and defense costs).
[12] Highly Confidential Aon Report at 52.

[redacted]. Planning based on that metric, as PG&E experienced, does not adequately account for potential wildland fire liability risks.

In addition, [redacted][13] [redacted] do not likely capture the full range of liability risk in a catastrophic wildland fire event where the Fire Fund may be needed. Nevertheless, [redacted].

Q. Is using only the property damages category in the Aon data a realistic measure of liability risk?

A. Not at all, and I do not recommend it. The state-specific [redacted][14] [redacted]. While the limits on non-economic damages enacted in Utah in 2024 (and more recently in Idaho and Wyoming) certainly lower the dollar amount of expected claims at various EP levels, those limits do not eliminate what could be hundreds of millions of dollars of claims in the event of a catastrophic wildland fire in Utah. For this reason, I emphasize the importance of sizing the Fire

[13] Highly Confidential Aon Report at 59 ("Scenario 1.2 – Utah").
[14] Highly Confidential Aon Report at 35-40.

Fund, which is created to help manage losses for catastrophic wildland fire, be based on the full range of damage claims that should be reasonably expected in the unfortunate circumstances of such a catastrophic event occurring in Utah.

Q. Is the approximately $1 billion Fire Fund you recommend within the Fire Fund statute's limits on the size of a Fire Fund?

A. Yes. As explained by Company witness Steward, the Fire Fund statute appears to cap a Fire Fund for the Company at a maximum of $1.22 billion. The Company's proposal to create a surcharge for the Fire Fund capable of collecting $1.090 billion over ten years is below the maximum Fire Fund asset limit authorized by the Utah Legislature.

V. CONCLUSION

Q. Does this conclude your direct testimony?

A. Yes.

Rocky Mountain Power
Exhibit RMP___(MN-1)
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BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Direct Testimony of Marshall Nadel

Statement of Qualifications

November 2025

MARSHALL NADEL, CPCU, MBA

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Insurance, Risk Management and Financial Services Leader with extensive experience working with major renewable energy power generation and project developers. Expertise in property and casualty insurance for all sources of power generation. Strong background in power and commodity risk management and leadership of financial services teams. Strong client focus with established senior industry relationships and associated recognition. Proven abilities in producing consulting and placement of complex risk management programs. Key skills:

- Risk Assessment
- Insurance Consulting
- Military Leadership Experience
- Energy Commodity Risk Management
- Risk Management Effectiveness
- Defense/ Military Intelligence

PROFESSIONAL EXPERIENCE

NADEL & ASSOCIATES LLC CONSULTING- **2020 TO PRESENT**
Actively serving as risk management and insurance consultant for one of the fastest growing renewable energy companies in the US, Leeward Renewable Energy. Coordinated several $million in claims settlements, negotiated insurance renewal terms with brokers and underwriters, also managing fee agreements with brokers and tax equity consultants. Actively led in the negotiation of risk and insurance provisions in several EPC contracts. Several $million in savings resulted from initiative with property insurance captive formation, insurance renewal negotiations, and revision of service contracts.

AON RISK SOLUTIONS AND AON SECURITIES, DALLAS, TX **1989-2019**
Managing Director, Power and Utilities Practice Leader
Managing Director and a leader in the Aon Global Power Specialty Group in the United States. Extensive experience in the insurance industry have been devoted exclusively to addressing the risk management needs of the energy industry, gas and electric utilities which includes independent power, renewable energy and nuclear generation, domestically and overseas.

- Starting from scratch, produced, coordinated insurance placements and developed and managed teams to become one of Aon's largest offices for power generation, renewable energy and utility business.
- Provided innovative solutions for the nuclear industry including introduction of new coverages, capacities and insurance companies for uranium enrichment operations and nuclear generation globally.
- Coordinated largest global net lines insurance programs for uranium enrichment facilities under construction and in operation. Introduced new insurance capacity to the US market via EMANI.
- *Developed innovative solutions for the renewable energy industry, including transaction liability tax insurance products (PTC and ITC) and offering of hedges for wind/solar resource and electricity price*.
- Led Aon US efforts in developing derivative products for energy resource risk management.
- Provided expert testimony as respects risk transfer for high severity low frequency events for AEP Texas Central and Centerpoint Energy rate cases (storm damage reserve issues).

MARSH & MCLENNAN **1980-1989**
Vice President and Account Executive
Oversaw and coordinated the insurance placements for major power generation and utility businesses including managing the insurance placements for 50% of US nuclear generation.

MILITARY EXPERIENCE

CAPTAIN, US Naval Reserve and Lieutenant, US Nuclear Submarine Force **1974-1998**

- As a Naval Reserve Captain, commanded one of the largest joint military reserve units in the United States, a Naval Intelligence Unit and also served as Reserve Intelligence Area Commander.

- As a nuclear submarine officer, spent five years as an active duty officer in the U.S. Navy's Nuclear Submarine Force, and completed qualifications as Chief Engineer, aboard two of the (at that time), newest submarines in the US fleet.
- Service as a Naval Academy Information Officer, interviewing and counseling high school students as part of the Naval Academy admissions process.

EDUCATION

Bachelor of Science, Oceanography and Naval Science
US Naval Academy, Annapolis, Maryland

Masters of Business Administration, Finance
DePaul University, Chicago, Illinois

PROFESSIONAL DEVELOPMENT

Numerous programs, conferences and seminars including Renewable Energy, Energy Trading, and insurance industry conferences and seminars on power generation and utilities

LEADERSHIP EXPERIENCE

- Elected to USO, Inc. Board of Governors/ currently serving on its Foundation Board
- Accepted appointment to Advisory & Executive Board of Cost Containment Advisors, a leading property tax consulting firm
- Represented Aon to the American Wind Energy Association, the Electric Power Supply Association, the Edison Electric Institute, the Nuclear Energy Institute, and the US Nuclear Contractors' Working Group on Liability.
- Currently also serving on the Advisory Board of NARDAC (www.nardac.com) a fast growing renewable energy wholesale insurance broker, MGA, and Lloyd's broker.

INDUSTRY RECOGNITION

Who's Who in Energy- 2015
Risk & Insurance Power Broker – Eight Years

AFFILIATIONS

Chartered Property & Casualty Underwriters (CPCU)

LICENSES

Property & Casualty Insurance Broker/Agent- Texas
Series 3 Securities License (expired)(Options/Commodities/Derivatives)