–BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH–

IN THE MATTER OF THE APPLICATION OF US MAGNESIUM, LLC FOR DETERMINATION OF LONG-TERM RATES, AND TERMS AND CONDITIONS OF INTERRUPTIBLE/DSM ELECTRIC SERVICE BETWEEN IT AND ROCKY MOUNTAIN POWER	))))))))))	**DOCKET NO. 21-035-53** **Exhibit No. DPU 1.0 DIR**

FOR THE DIVISION OF PUBLIC UTILITIES
DEPARTMENT OF COMMERCE
STATE OF UTAH

Direct Testimony of

Casey J. Coleman

April 7, 2022

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INTRODUCTION

Q. PLEASE STATE YOUR NAME, EMPLOYER, AND BUSINESS ADDRESS.

A. My name is Casey J. Coleman. I am employed by the Division of Public Utilities (DPU) for the State of Utah. My business address is 160 East 300 South Salt Lake City, UT 84114.

Q. BRIEFLY OUTLINE YOUR EMPLOYMENT BACKGROUND.

A. I have worked for the DPU for over twenty years, working as both a Utility Analyst and Utility Technical Consultant. One of my primary responsibilities as Utility Technical Consultant for the DPU has been testifying before the Public Service Commission of Utah (Commission) on financial and policy issues.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I received a Bachelor of Science degree in Finance from Weber State University in 1996 and a Master of Business Administration from Utah State University in 2001.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?

A. Yes. I have testified before the Commission as an expert witness in a number of telecommunications, water, and energy dockets, which include Docket Nos. 02-049-82, 03-049-49, 03-049-50, 05-053-01, 05-2302-01, 07-2476-01, 08-2469-01, 10-049-16, 10-2521-01, 10-2526-01, 08-046-01, 15-042-01, 15-2302-01, 17-098-01, and 19-057-02. The most recent testimony I have filed with the Commission was in Docket No. 20-035-04.

SUMMARY

Q. BRIEFLY SUMMARIZE THE WORK AND INVESTIGATIONS THAT YOU HAVE PERFORMED IN THIS MATTER.

A. I have reviewed and analyzed the application filed by US Magnesium, LLC (USMag) and USMag's testimony of witness Mr. Roger J. Swenson. Additionally, I have analyzed and reviewed Rocky Mountain Power's (RMP) response testimony filed by Mr. Craig M. Eller.

As part of the analysis and review performed by the DPU, several working group meetings were held with USMag and RMP. These meetings allowed interested parties to ask questions to each company and gain a more thorough understanding of the issues and proposals of each company. In addition to multiple working group meetings, the DPU sent numerous data requests to RMP and one data request to USMag, in an effort to evaluate this docket, which I reviewed in preparing my testimony.

Q. PLEASE SUMMARIZE AND DESCRIBE THE PURPOSE OF YOUR TESTIMONY.

A. My testimony will review the past special contracts between USMag and RMP.[1] The review will outline some of the steps and decision criteria used in contracts and dockets to determine fair and reasonable rates and how those decisions provide a backdrop for the current situation today between USMag and RMP. My testimony will provide an analysis and review of USMag's application and direct testimony of Mr. Roger J. Swenson, as well as the response testimony filed by RMP's witness Mr. Craig M. Eller. Finally, my testimony will discuss recommendations the Commission should adopt in any contract between USMag and RMP.

Q. IN SHORT, WHAT IS THE DPU'S POSITION IN THIS MATTER?

[1] References in this testimony to PacifiCorp, Rocky Mountain Power, or US Magnesium are intended to refer, as appropriate given the context, to their respective predecessors in interest.

A. Neither the DPU nor the Commission is in a position to negotiate a contract on the parties' behalf and existing tariff rates are ill-suited to USMag's circumstances. Accordingly, the Commission should provide guidance to the parties indicating that provisions of the current and recent USMag contract are no longer in the public interest as structured or administered. It should further indicate to parties that:

- A special contract may be warranted when a customer has unique characteristics not reflected in current rate structures.
- A special contract should cover the actual costs of serving that customer and provide meaningful contributions to overall system costs so other customers are not harmed by the contract.
- An interruptible contract may have value to the system beyond what is available in tariffed rates.
- Load and supply curtailments at times of physical or supply constraint can mitigate RMP's needs for other resources and provide value that warrants recognition in a special contract or other rate mechanism.
- When a customer can provide meaningful value to the utility through curtailment provisions, it may be in the public interest to sell that customer excess supply at rates advantageous to the customer.
- Cost of service measurements should appropriately recognize value provided by the customer. If coincident peaks are used to evaluate that value, their use should reflect the contract's

mechanisms, not adhere to rigid cost of service measures used for other purposes.

- Special terms, including the length of the contract, should allow sufficient flexibility to adapt to changing markets, allocation mechanisms, and the like.

In addition to this guidance, the Commission should address the applicability of tariffs or contracts after the expiration of the current contract on June 30, 2022. In this testimony, I outline why certain elements of the current contract and the existing tariffs are not well-suited to USMag's service. Thus, continuation of the current contract or reversion to tariffed rates are likely not in the public interest. Accordingly, the DPU suggests that during the pendency of any further proceedings toward a contract or tariff creation, the Commission consider some temporary continuation of the current contract with modifications, including allowing the temperature-triggered Temperature Pseudo Curtailment (TPC) to continue, but with buy through pricing paid at actual supply costs to RMP for the buy through. If this suggestion is adopted, the Commission should also clarify that the TPC should not be automatically invoked by RMP regardless of actual conditions. Rather, RMP must exercise its judgment each time the TPC's prerequisite are met to identify whether invoking the TPC is necessary.

UNIQUE NATURE OF THIS APPLICATION AND PROCEEDING

Q. BRIEFLY SUMMARIZE THE UNIQUE CIRCUMSTANCES REGARDING THIS APPLICATION AND PROCEEDING.

A. As advocates for the broad public interest, the DPU finds itself in an unusual position in this docket. Generally, in previous dockets when the DPU has reviewed special contracts or power purchase agreements, there is already an executed contract between two parties. The specific terms have been negotiated in good faith and a final contract is submitted for review. The terms of that

agreement can then be analyzed and compared to other rates in order to determine if the contract rates are just and reasonable and in the public interest.

With this docket, instead of an executed contract to review, the DPU and other parties are asked to help determine the appropriate contract terms between two parties or to cast the customer onto tariffs that were designed without that customer in mind. For the present docket, the parties did not submit a proposed contract as they have typically done in the past. Instead, they submitted testimony regarding what, on their view, a proposed contract should contain. USMag believes the contract going forward should be similar to those executed in the past. In contrast, RMP believes that some of the contract terms used in the past no longer are applicable, and that the general structure of the contract should be changed going forward. There is little if any direction in statute, administrative rules, or other guidance from the Commission about contracts such as this. Similarly, there is limited precedent for navigating expiring contracts where voluntary agreements are not reached and a special contract customer is transitioned to tariffed rates.

The DPU is not in a position to propose specific rates that should apply in this Docket. A contract may be in the public interest but must be negotiated between other parties. Otherwise, the customer should be grouped with similar customers and transitioned to a tariffed rate. The existing tariffs, however, were created assuming this customer was not part of any class. Specific rates should be set by this Commission or negotiated by the various parties impacted by the contract. Simply casting a long-time customer off its expiring contract and onto schedule rates in these circumstances is not likely in the public interest, particularly if that result gives the utility too much bargaining power in its contract negotiations with the customer that has long had contracts recognizing specific customer attributes and potential value to the system. The DPU will review past dockets and decisions and outline the decisions made in those proceedings.

Additionally, the DPU will summarize and analyze competing proposals.

Finally, the DPU will offer more general thoughts about factors in this matter including, the value of interruptible contracts, the appropriate contract length with any future contract, how coincident peaks impacts the cost of service model, and how resource adequacy in today's energy marketplace factors into interruptible contracts.

HISTORICAL BACKGROUND OF US MAGNESIUM'S CONTRACT WITH ROCKY MOUNTAIN POWER.

Q. BRIEFLY SUMMARIZE THE HISTORY THAT HAS OCCURRED BETWEEN USMAG AND RMP WITH THIS SPECIAL CONTRACT.

A. Beginning as early as 1968, USMag and RMP have had an electric service contract whereby USMag takes service as an interruptible customer. The general premise of an interruptible service contract is that RMP can curtail power to the customer (typically a large industrial customer) when peak demand is high. Because the customer is willing to have its power curtailed at certain times, it receives a lower energy price than a "firm" service customer (one whose power cannot be curtailed). This arrangement, allowing large industrial customers with flexible load to utilize the excess capacity of PacifiCorp when demand is low while providing for customer interruption during times of stress, can provide value to all parties, including the utility's other customers.

To ensure rates are just and reasonable for all Utah ratepayers, to the extent possible, prices charged to interruptible customers should not cause other ratepayers to subsidize the cost of service to the large use interruptible customer unless specifically allowed by the Commission after a public interest finding.

Historically, certain large industrial customers were permitted to have a different pricing structure because they agreed to be interruptible customers which can be a benefit to all customers on the system. Using the flexibility of interruptible

customers, RMP could reduce system demand or shave load during critical peaks on RMP's system. By using the option to curtail certain large industrial customers, RMP was making sure the required energy for firm demand customers would be available at critical peak times, helping to reduce the strain on the system. In essence, the utility can plan to serve less load, saving on additional resources because the interruptible customer is willing to have its service altered occasionally to save money on rates at other times.

Prior to 2005, the special contract between RMP and USMag comprised a single agreement. As a result of negotiations between USMag and RMP, in 2005 the parties agreed to enter into two separate agreements, an Electric Service Agreement (ESA) and an Operating Reserve Interruption Agreement (ORIA). The ESA had the terms and conditions dealing with the day-to-day curtailments on a large industrial customer. The ORIA outlines the value of non-spinning reserves that RMP would pay or credit a large industrial customer. RMP and USMag have had this two-part arrangement in place since 2005.

In past dockets that have addressed the contracts, the Commission approved various methods and contract terms that determine the appropriate rates for USMag, the goal of these terms was to capture all of USMag's associated costs. In Docket No. 01-035-38, the Commission recognized the benefit of using an embedded cost of service calculation without any ad hoc adjustments. The Order stated:

> Our justification for a… rate is based on the record before us, which contains embedded cost of service analyses of the value of interruptibility. PacifiCorp, the Division, and the Committee each introduces embedded-cost analysis to support its views of appropriate interruption price and terms. Each of these embedded-cost analyses is consistent with prior Commission rulings.[2]

[2] PSC Report and Order Docket No. 01-035-38, May 24, 2002 page 12—13.

As part of this Docket, USMag provided an embedded-cost analysis to support its proposed terms, but with proposed alterations that reduced the cost of service. The Commission did not adopt USMag's modifications, instead choosing to employ the analyses of PacifiCorp, the DPU, and the Committee to define the areas within which the Commission can consider the value of interruptibility.

In that same Docket, the Commission also discussed the buy through provision contemplated in a special contract between USMag and RMP.

> In an effort to address the impacts on Magcorp's physical plant facilities and production processing, no party opposes a contract provision which would allow Magcorp to buy through a proposed interruption. In a buy through situation, Magcorp has the opportunity to weigh the costs it incurs in accepting an actual interruption of electricity to its plant compared to the costs of continuing processing operations with "alternative" electricity. This alternative electricity would be delivered by PacifiCorp to the Magcorp plant in lieu of a physical interruption of electric power. Its source would vary, based upon available generation sources and transmission capabilities at the time of the proposed interruption.
>
> While a buy through provision can address some of Magcorp's needs, it also raises another area of contention between Magcorp and PacifiCorp, the price for such power. Costs are incurred in securing and delivering electric power when Magcorp elects to buy through. All parties agree that compensation must be paid for electricity that is delivered when Magcorp elects to buy through, rather than have no electricity delivered. Magcorp and PacifiCorp witnesses testify that a price based upon an existing electric power index would provide Magcorp with the cost information needed when deciding whether to buy through an interruption. Other witnesses believe that the actual costs to secure and deliver electricity during a buy through situation likely will vary from an index price.
>
> We will authorize a buy through provision in the contract at a rate based on a published index. When buy through occurs, PacifiCorp must remove Magcorp's load from operational data in order to recognize reduction in load for system and jurisdictional cost of service purposes[3]

[3] Utah Public Service Commission Report and Order Docket No. 01-035-38, May 24, page 8.

For over two decades the Commission has been allowing USMag to use a buy through option when PacifiCorp's system is constrained. The source of the electricity would vary, based upon available generation sources and transmission capabilities at the time of the proposed interruption.

Q. OVER THE HISTORY OF THE CONTRACTS WHAT ELEMENTS HAVE STAYED CONSISTENT?

A. As the DPU has reviewed the past contracts there are some crucial elements that have surfaced. With all the changes occurring in the energy market, it is important for the Commission to address these elements and determine if they are still valid today and still provide guidance for the parties to consider when negotiating special contracts. These elements include:

- Interruptibility.
- Value for interrruptibility and other curtailment.
- Capacity benefits, sales and the like.
- Methods for identifying and allocating cost of service.

These elements have been part of every contract negotiated and approved between RMP and USMag. Of course, the ratemaking challenge is less the identification of these elements and more the determinations of their respective value to the utility, the customer, and other customers. Questions arising from that challenge include:

- What is the value of operational interruptibility and other curtailment mechanisms?
- How does a utility sell excess energy capacity and serve in times of constraint?
- How should a utility value and compensate customer energy and capacity flexibility?

- Should these sorts of customer-based products be compensated through regular rate schedules, special contracts, or some other way?

- How do cost of service approaches account for these products' benefits in evaluating a special contract customer's contribution to overall system costs?

Given the significant industry changes in recent and, likely, coming years the Commission should provide direction regarding these consistent questions. To accurately determine the appropriate rates and terms in any future contract, guidance is needed from the Commission.

SPECIAL CONTRACTS GENERALLY

Q. DOES THE DIVISION SUPPORT SPECIAL CONTRACTS FOR CUSTOMERS?

A. There are circumstances under which special contracts, instead of regular schedule rates, are appropriate. Most utility customers sufficiently resemble one another to be susceptible to categorization and group ratemaking through broadly applicable tariffs, some customers may be ill-suited to this structure. In fact, the Division's statutory objectives contain an anti-discrimination provision that is the basis for this principle. Section 54-4a-6(4)(d) lists among those objectives "provid[ing] for fair apportionment of the total cost of service among customer categories and individual customers and prevent undue discrimination in rate relationships." This anti-discrimination policy requires similarly situated groups of customers to be treated similarly. Its negative inference is that differently situated customers should be treated differently, when appropriate. Thus, just as granting a special contract to a customer that is not sufficiently different from others could violate anti-discrimination provisions, not granting a special contract to one that is sufficiently different could be a violation. While the

inquiry into whether a special contract is appropriate for a specific customer is highly fact dependent, some general principles can be identified.

Q. WHAT ARE SOME OF THOSE GENERAL PRINCIPLES?

A. Given statutory anti-discrimination factors, the first and most obvious is that the customer should be sufficiently unique in its characteristics to warrant different treatment. Of course, there are various ways this could occur. A customer with a unique load and resource profile could qualify because other customers' rate schedules would not adequately reflect the manner and costs of serving that customer or because special contract provision can be used to create value for the other customers, perhaps by avoiding the addition of new assets, increasing the utility's operational flexibility in times of strain, or giving the utility local load and supply resources it can call upon.

A customer with significant other options for energy supply could also fit the bill. In a scenario where a customer could completely disconnect itself from the utility's network, it could be advantageous to keep the customer on the system if remaining contributes positively to system costs and benefits other customers.

Sometimes other public interest considerations could warrant unique treatment. A significant economic benefit to the state can be a public interest factor justifying a special contract, particularly when other factors suggesting different treatment exist. Similarly, a broader public interest in the customer's continued service can serve as a factor in this analysis. In this matter, one of those factors could be the public interest in maintaining domestic supplies of magnesium. Similar considerations could include unique environmental benefits, system security or stability, and other factors that can provide value not compensated in the utilities other tariffs.

Q. WHEN DO THESE CONDITIONS, INDIVIDUALLY OR COLLECTIVELY, WARRANT A SPECIAL CONTRACT OR RATE?

A. This question is not susceptible to an easy answer. As noted above, this will necessarily be a heavily individualized inquiry involving these and other factors, the utility's specific circumstances and preferences, and the Commission's weighing of various factors.

Q. ARE THEIR CIRCUMSTANCES WHERE THE PRESENCE OF SOME OF THESE CONDITIONS DOESN'T WARRANT SPECIAL TREATMENT?

A. Yes. One example could be where the customer provides some unique values to the system that others could also provide if tariffs for those services existed. Pertinent to this case, it could be that demand response tariffs could be developed that would enable compensation of US Mag for any value it provides to the system with its curtailments or interruptions while allowing even wider participation. In fact, as energy markets evolve, customers become more sophisticated, and experience reveals reliable mechanisms for this type of compensation, it could be that a prudent utility must offer such programs.

US MAGNESIUM'S PROPOSAL

Q. BRIEFLY SUMMARIZE THE TESTIMONY AND APPLICATION FILED BY US MAGNESIUM IN THIS DOCKET.

A. On September 21, 2021, USMag filed an application and testimony requesting the Commission determine the long-term rates and any demand side management (DSM) benefits for the contract between USMag and RMP. The application and testimony outline the different contracts and agreements reached by USMag and RMP over the 50-year history of these two companies doing business together.

One of USMag's main contentions is that the contracts are a win/win for USMag and other Utah customers because the contracts allow USMag to utilize excess system capacity when available and, when system resources are needed for firm

customers, USMag utilizes on-site resources or outside market resources, if and when available, at its risk and expense.[4]

In lines 93-145 of his Direct Testimony, Roger J. Swenson, discusses the historical reasons for an interruptible service contract in the state of Utah. Generally, the interruptible contract was allowed to provide RMP with the ability to manage its load and avoid coincident system peak load events. On days when RMP's generation capacity was easily able to cover the firm load requirements, USMag would purchase that excess capacity. On high load days when RMP's system was constrained, the service agreements allow the utility to not supply system resources to USMag, and USMag has an option to ask RMP to secure and deliver available market energy, at USMag's risk and expense. If market resources are not available, USMag's load is physically curtailed.

Historically, because USMag was willing to be curtailed, the interruptible contract set rates lower than those of a firm load customer. This lower rate recognized the unique situation of USMag, and its willingness to have its load physically curtailed if market resources are not available.

Over the history of the contracts, there were a number of different methods proposed to determine the inherent value of the interruptible service being provided. Over time, the parties determined an embedded cost of service calculation was the most reasonable method.

In USMag's testimony, it outlines the current method that has been followed for more than a decade in a cost of service calculation. This method was suggested by RMP[5] in Docket No. 03-035-19. Mr. Swenson explains the process RMP goes through in making the cost of service calculation as follows:

[4] US Magnesium Application Docket No. 21-035-53, page 15.
[5] Supplement Testimony of David L Taylor Docket No. 03-035-19 filed October 13, 2004 lines page 1 and 2.

> RMP regularly evaluates the cost of service to USMag as an interruptible customer. RMP performs this analysis utilizing its usual cost of service model with modifications that address the fact that USMag can be interrupted in certain months. That is, to determine the cost of service to serve USMag, RMP does not include USMag's load during the system coincident peaks in the months in which USMag is subject to interruption. For example, if USMag is subject to interruption in the summer months of June, July, August and September, and in the winter months of January and February, RMP's cost of service evaluation does not include USMag's load during the system coincident peaks during those months because USMag is not expected to be operating during the coincident peaks in those months. This reduces the inter-jurisdictional allocation to Utah ratepayers from [RMP's] system.[6]

Using this cost of service method, USMag believes its contract rate is and has been at or very close to its cost of service for many years.[7] Mr. Swenson also argues that:

> Missing coincident peaks provides a direct tie to the cost of service model and provides a pricing basis for interruptible service… [I]t is difficult to come up with a specific cost-based approach for interruptible service rates. Reducing the coincident peak allocation factor provides a reasonable cost basis for pricing the interruptible service.[8]

USMag has also asked to work together with RMP to better understand when the coincident peaks are happening on its system. With greater transparency on the required supply and demand balance for resource adequacy, USMag proposes seeking a collaborative way for parties to better understand how to use USMag as a demand side resource to avoid coincident peaks.

ROCKY MOUNTAIN POWER'S PROPOSAL

Q. BRIEFLY SUMMARIZE THE TESTIMONY FILED BY RMP IN THIS DOCKET.

A. On January 7, 2022, RMP filed the Response Testimony of Mr. Craig M. Eller with accompanying exhibits and work papers. The purpose of Mr. Eller's

[6] Direct Testimony of Roger J. Swenson Docket No 21-035-53 lines 146—156
[7] *Ibid.* lines *157—158*
[8] *Ibid.* lines *474—477*

testimony was to present RMP's proposal for a new Electric Service Agreement (ESA) and Operating Reserve Interruption Agreement (ORIA) between RMP and USMag.

Mr. Eller's testimony outlines two types of curtailments that are currently allowed in the ESA, Temperature Pseudo Curtailments (TPC), and Physical System Reliability Interruptions (PSRI). The terms and conditions of the ESA also specify that USMag may purchase "replacement power" or buy through TPC to avoid physical curtailment. RMP's testimony defines the option to purchase replacement power as the Buy Through Option (BTO).[9]

RMP describes the current situation as follows:

> Currently, US Magnesium pays only volumetric energy charges that vary based upon time of use period and season. The winter season runs from October through April and the summer season runs from May through September. During the winter season, the On-Peak period is 7:00 a.m. to 11:00 p.m., Monday through Friday excluding holidays. During the summer season, the On-Peak period is 1:00 p.m. to 9:00 p.m., Monday through Friday excluding holidays. The Off-Peak period is during all other times. US Magnesium is not subject to Customer Service, Power, or Facilities charges like other large industrial customers. During Temperature Pseudo Curtailment with Customer Buy through Option events, US Magnesium has the option to buy through replacement power at market-based rates.[10]

There are several reasons RMP is suggesting the current ESA should be changed. They are as follows:

> There are three reasons why US Magnesium's current retail pricing is problematic. First, the Temperature Pseudo Curtailments with Buy Through Option construct is an element of US Magnesium's contract that the Company recommends eliminating. Second, the average price US Magnesium pays for the power and energy that the Company provides is too low as it is less than what any other customer class pays and is lower

[9] Rocky Mountain Power Response Testimony of Mr. Craig M. Eller, Docket No. 21-035-53 lines 51—57.
[10] *Ibid.* lines 70—79.

> than US Magnesium's cost of service, if calculated properly. Third, the actual structure of US Magnesium's retail rates with only volumetric energy charges that use outdated time of use periods is inappropriate.[11]

In RMP's proposal, it discusses the challenge of the BTO when TPC events are called. Because USMag chooses to exercise its BTO during a TPC event, in the opinion of RMP, no physical curtailment is taking place, and RMP's obligation to serve USMag and therefore system costs, are not reduced.[12] Ultimately, the BTO during TPC events ends up being a paper exercise with very little or no value for PacifiCorp's customers.

Because USMag is exercising its BTO when RMP determines to curtail, RMP is suggesting a new method to calculate the appropriate cost of service to US Magnesium. Because there is no physical curtailment, RMP believes the correct method is to have USMag transition to RMP's existing Electric Service Schedule No. 31 Partial Requirements Service — Large General Service — 1,000 kW and Over (Schedule 31) with supplemental service provided at Electric Service Schedule No. 9, General Service —High Voltage (Schedule 9). Having USMag move to these schedules would have USMag being charged rates that would be applicable to any other firm price customer meeting schedule 31 criteria.

Additionally, RMP believes the allocation practice (where USMag's coincident peak usage is removed from the system peak if a curtailment event is called in a particular month) provides a large reduction to USMag's cost of service, which RMP believes is no longer justified.[13]

RMP's proposal calculates the cost of service using USMag's load in all 12 months instead of recognizing only six coincident peaks.

[11] *Ibid.* Lines 85—92.
[12] *Ibid.* Lines 97—101.
[13] *Ibid* lines 244—249.

RMP recognizes value in being able to manage its system and having the ability to curtail USMag. The Physical System Reliability Interruption provides valuable physical reserve products to the system and RMP recommends the provision be continued. The best place to accurately reflect this value is in the ORIA agreement.[14]

CURTAILMENT

Q. WILL YOU DISCUSS IN FURTHER DETAIL THE TYPES OF CURTAILMENT IN THE CURRENT CONTRACT?

A. Yes. The current contract has two different types of curtailment. One type of curtailment is the TPC, while the other curtailment is a physical system reliability interruption (PSRI). Whether it is a TPC or PSRI both of those events will curtail USMag's load in some way for system adequacy. To USMag the response that is required to a TPC or PSRI is significantly different. Because both types of curtailment have different characteristics, specific details about both are discussed below.

Q. WHAT IS A TEMPERATURE PSEUDO CURTAILMENT?

A. A TPC is the curtailment that was allowed in the original contract in 1968. It has been modified through the years. The basis of the curtailment was to allow RMP to manage its load during peak times and sell excess capacity to USMag when there was adequate electricity. Adjustments and refinements on how much curtailment and when the curtailment would occur happened over the course of the existing contracts, until the current parameters were accepted by each party. The general parameters of curtailment are as follows:

- Curtailment is at the sole and complete discretion of RMP when prerequisites are met.

[14] *Ibid* lines 235—240.

- RMP has the right to curtail power in certain summer and winter months for certain hours in the day.
- For the summer months curtailment will be based on a temperature index.
- Notice of curtailment occurs the day before the actual system curtailment.
- US Mag can elect to buy through power instead of physically curtailing its load.

This type of curtailment provides some flexibility to USMag to determine whether a physical curtailment is required or if it prefers for electricity to be provided from some supplemental source RMP procures. It appears RMP has been calling TPC curtailment any time the temperature reached the predetermined level even when there are no physical restraints on the system.[15]

Q. WHAT IS A PHYSICAL SYSTEM RELIABILITY INTERRUPTION?

A. A PSRI is different from the TPC described above because USMag has no option to buy energy in this curtailment situation. This type of curtailment is used to meet certain regulatory requirements for reliability. The specific capabilities necessary to provide non-spinning reserves for PacifiCorp's system reliability are discussed below.

Q. WHAT ARE CAPABILITIES THAT US MAGNESIUM MUST HAVE TO BE CONSIDERED FOR PROVIDING NON-SPINNING OPERATING RESERVES?

A. As with other retail customers who are suppliers of contingency non-spinning reserves, USMag must meet the following requirements:[16]

[15] Data Request Response of Rocky Mountain Power to the Division of Public Utilities 4.5 dated March 29, 2022.
[16] See Direct Testimony of PacifiCorp witness Mr. Bruce W. Griswold, Docket No 03-035-19 page 5—6.

1. Available for redeployment after the pre-arranged elapsed time as specified by USMag.

2. In response to the instructions from PacifiCorp, and subject to the declared capabilities of US Mag, US Mag would:

- Reduce specified loads within 7 minutes of a call from PacifiCorp requesting reserves.
- Maintain the stated amount of reserves for up to 60 minutes subsequent to call.
- Return to the non-contingency consumption upon instructions from PacifiCorp.
- Allow real-time telemetry of the real power output of each resource providing reserves.
- Allow approved data communication service between USMag's control room and PacifiCorp.
- Allow approved voice communication service to provide both primary and alternate voice communications between PacifiCorp and USMag's operator controlling the resource.

The TPC curtailment provides 24-hour notice of a curtailment while the PSRI notice requirement is only seven minutes. The invocation of TPC may require no physical system changes for PacifiCorp or USMag, while the PSRI will require physical changes in resources and the availability of supply for USMag.

Q. HAS RMP BEEN IMPLEMENTING PHYSICAL SYSTEM RELIABILITY INTERRUPTIONS SINCE THE FIRST INTERRUPTIBLE CONTRACT?

A. Yes. From the first contract it was contemplated that USMag would be interrupted by RMP. This physical system interruption was necessary to protect the integrity of the entire electrical grid of RMP. As the system operator, RMP would require an industrial customer to curtail usage by physically removing its load from the system. This type of physical interruption or curtailment has been in place from the beginning of the contract between USMag and RMP. With a number of different contracts, parties agreed with this general type of physical

interruption to allow USMag to purchase available electricity in the market with a buy through option.

In 2005, USMag met the regulatory requirements for its load to be considered as non-spinning reserves to RMP. This created an additional kind of curtailment where, as described previously, USMag would have to interrupt its load within 7 minutes of notification from RMP. The amount of notification for this type of physical interruption does not provide an interruptible customer much flexibility to manage its load and keep its production facilities operating. This arrangement can provide value to the customer, the utility, and the utility's other customers. So, in 2005 it seems like an additional type of interruption was allowed by the Commission and agreed upon by the parties.

Q. WHAT IS ONE IMPORTANT POINT WHEN CONSIDERING CURTAILMENT?

A. An important point when looking at curtailment is that PacifiCorp has the sole authority and decision-making power within the contract's constraints. If there is a curtailment event, it is ordered by PacifiCorp. The curtailment should happen because the system is constrained and there is a potential for other customers of RMP to be impacted from the high demand or other operational need.

Q. DOES IT SEEM THAT RMP IS ONLY CURTAILING CUSTOMERS WHEN THERE IS A RESOURCE ADEQUACY ISSUE?

A. No. From the data the DPU reviewed, RMP has used both the curtailment with the buy through option as well as the non-spinning reserves provision to curtail USMag. Even though RMP is choosing to use its option to curtail, it does not always appear that it is because of a system constraint. The question about curtailment is what criteria is being used when PacifiCorp chooses to curtail interruptible customers. If the system has reached capacity and is constrained, it would seem USMag should not be able to buy through. If the system is not physically constrained, the BTO should allow RMP to serve USMag with

resources that leave other customers no worse off. History and the application of this contract has shown that this has not been the case.

When RMP has sent a curtailment notice, USMag has opted to buy through every time. If there are abundant resources available either on PacifiCorp's system or the electricity market, that allows USMag to buy through, how can the system be strained? Is this simply a peak pricing risk transfer rather than an actual intent to curtail? Is the strain isolated to the west side of PacifiCorp's system and the east side is fine? Is the strain caused by a generator that is offline, but market purchases are abundant and economic? So far, there has been enough electricity available in the market for PacifiCorp to buy through when a curtailment notice has been received. Curtailment when there is no immediate physical constraint can provide a valuable service, allowing the utility to reduce the amount of resources it must procure.

With the current contract it appears curtailment is not always tied to the system needs. There are other factors playing into the decision to curtail, which has caused a divergence in the policy goals of curtailment and the actual application of those goals. The parties need to understand the reasons for curtailment, because from the current situation, it seems USMag has exercised its option to buy through when there are adequate resources to meet USMag's requirements or the market price of electricity is lower than the contract price. Because of this situation it is reasonable to conclude the system was not constrained; buying more market energy and transferring to USMag did not result in any system operational problems. As noted, this type of arrangement can still be beneficial if it is structured correctly.

Q. WHAT DOES THE DPU RECOMMEND THE COMMISSION SHOULD ADOPT IN FUTURE INTERRUPTIBLE CONTRACTS?

A. In RMP's proposal, Mr. Eller suggests that the only curtailment that should be allowed is the curtailment for non-spinning reserves. TPC curtailments or any other kind of curtailment should be eliminated according to the utility.

Curtailments with a BTO have been included in contracts between USMag and RMP for decades. Because the Commission has allowed TPC and the associated BTO in past contracts, RMP has been able to curtail USMag for hundreds of hours over the course of a year when the electric system was strained. Its planning needs also have ostensibly benefited. Having the ability to curtail load for a significant number of hours during unusually high generation prices or market energy prices is a benefit that would be forfeited if the Commission only allowed curtailment to occur as recommend by RMP. This flexibility provides a benefit to Utah rate payers helping to ensure adequate resources throughout the entire year.

The Commission should recognize the value of both types of curtailment and recommend RMP to continue the practice of curtailing USMag with some form of a buy through option and a PSRI option. However, the current TPC is not in the public interest because its structure is not sufficiently tied to the value of the service being provided to USMag when buying through and RMP has not administered it properly. A little background on the overall value of interruptibility to the system will be helpful in understanding these points.

COINCIDENT PEAKS

Q. A MAJOR FACTOR IN THE APPROPRIATE COST OF SERVICE FOR AN INTERRUPTIBLE CONTRACT IS THE COINCIDENT PEAKS. WILL YOU EXPLAIN HOW COINCIDENT PEAKS ARE USED IN COST OF SERVICE CALCULATIONS?

A. Yes. The current method being followed was suggested by RMP[17] in Docket No. 03-035-19 by Mr. David L. Taylor in his supplemental testimony. The important points of his testimony are provided below:

Q. Please explain in more detail the proposed change in the curtailment period?

A. Under the current contract [US Magnesium is subject to curtailment six hours a day, five days a week, during four months (June through September) of the year. The Company has proposed to US Magnesium that the curtailment period be extended to include the months of December and January while at the same time reducing the daily curtailment period from six hours to four hours per day. The curtailment period in the summer is scheduled between 2:00 PM and 6:00 PM. Because the system has a dual morning and evening peak in the winter, the curtailment period during December and January would be separated into two periods, 8:00 to 10:00 AM and 5:00 to 7:00 PM.

Q. Are there any other refinements to the economic curtailments periods?

A. Yes. The current contract allows US Magnesium the opportunity to buy through the curtailment periods if they choose. PacifiCorp's proposal still allows US Magnesium to buy through the curtailment periods except for days in July and August when the temperature is forecasted to exceed 100 degrees.

Q. How does the proposed change in the curtailment period help US Magnesium?

A. It provides several benefits to US Magnesium while allowing the Company to receive offsetting commercial value. First, by changing the curtailment period from six hours a day, four months of the year to four hours a day six months of the year, US Magnesium will experience approximately the same number of curtailment hours, but will have a lower cost basis for their service. Under the Company proposal, US Magnesium will be curtailed, and therefore

[17] Rocky Mountain Power Supplemental Testimony of Mr. David L. Taylor, Docket No. 03-035-19, October 13, 2004, pages 1—3.

their loads will be removed during the system peak hours, for six months of the year. Removing their load from system peak for the additional two months (December and January) produces a cost of service for US Magnesium that is three dollars per MWH lower than the per MWH cost of service that was presented in my direct testimony.

Second, under normal market conditions, they will have a reduced exposure to high market prices when they buy through a curtailment. In the summer months we have reduced the curtailment hours from six to four hours when the Palo Verde price is historically the highest. During the winter months, Palo Verde is historically lower. Also, by having the curtailment periods set up in two hour blocks, US Magnesium, as they have previously testified, can physically curtail for up to two hours and avoid market purchases. Lastly, US Magnesium's proposed QF agreement is a non-firm agreement where they have the option of selling their 36MW of power to the Company at the stipulated non-firm price or using the power to offset their own load, thereby having yet another option to reduce their market price exposure.

Q. Are there concurrent benefits to the State of Utah?

A. Yes. Total Company system peak, and Utah's contribution to system peak, will be reduced two additional months of the year as well. This lowers Utah's revenue requirement because it lowers Utah's allocation of generation and transmission costs.[18]

As outlined by Mr. Taylor there are benefits to USMag and the State of Utah by following this method for determining the cost of service for interruptible service. USMag benefits with a lower cost of service because USMag may be curtailed for six months, reducing system needs for USMag and other customers. For Utah rate payers, the benefit is lowering Utah's revenue requirement because it lowers Utah's allocation of generation and transmission costs and RMP's overall system needs. This is not simply a question of whether six or 12 coincident peaks should be used to determine the customer's load. Instead, it is a question about whether

[18] *Ibid.* pages 1—3.

there is an actual reduction of the customer's contribution to system peaks because of the curtailment mechanism.

This reduction in cost of service as outlined in Mr. Taylor's testimony is a direct result of removing USMag's load from the cost of service model used by Rocky Mountain Power for periods when RMP is not obligated to serve USMag without a supplemental purchase of power by USMag. Under the current situation, for the six months that USMag is subject to curtailment, the loads are removed from the cost of service model reflecting the premise that RMP is not responsible for covering the load of USMag. During periods of curtailment with the BTO, the required energy to meet USMag's load will come from sources outside of RMP.[19] In this current situation, six coincident peaks are used to calculate the appropriate cost of service for USMag.

Under RMP's current proposal, it suggests moving to 12 coincident peaks in the cost of service model. What this change indicates is that USMag is no longer going to be an interruptible customer where its load will be removed from the cost of service model. Instead RMP would be planning for and allocating costs to USMag for its load for all 12 months of the year and eliminating any BTO.

Q. HOW DOES THE COINCIDENT PEAK IMPACT THE COST OF SERVICE MODEL CALCULATION?

A. Whether the cost of service model uses six coincident peaks or 12 coincident peaks can have a major impact on the revenue requirement recommended for USMag and other rate payers. As outlined in Mr. Eller's responsive testimony, shifting to 12 coincident peaks results in USMag's rates being lower than the cost of service calculation. Conversely, when calculating the cost of service using six coincident peaks, the calculation develops a revenue requirement for USMag

[19] It is conceivable that RMP's own resources could meet this need if those resources provide a better option than a market purchase. This would not mean RMP was planning for that load, merely that it could serve it well despite not planning for it in that hour.

that is much lower, which leads to a lower rate. Ostensibly, this difference reflects an actual difference in value to the system if RMP recognizes and properly administers one or more interruptibility measures. If in fact, RMP plans to acquire resources to meet USMag's load instead of utilizing a BTO, a shift to 12 coincident peaks would follow. It does not inexorably follow that such a decision is prudent. If foregoing a buy through curtailment mechanism results in RMP having to procure more expensive resources, merely passing that cost to USMag through a revised cost of service calculation does not render the decision to buy more expensive resources a prudent one.

The difference between using six coincident peaks or 12 coincident peaks can be substantial. Let me use a hypothetical to illustrate this point. Suppose in the most recent general rate case the cost of service model followed the six coincident peaks (this is the current method). Using this structure, once the calculation was completed in the cost of service model, assume the model calculated a revenue requirement for US Mag of $25 million. Including all of USMag's load in each month's coincident peak increases the purported cost to serve USMag, but also allocates some set of resources at RMP's disposal to USMag. Because RMP is required to provide the full load to USMag for the full calendar year, the associated revenue requirement would also increase. When making the appropriate adjustments to the cost of service model for 12 coincident peaks the hypothetical calculation determines the revenue requirement for USMag would increase to $36 million.

The challenge in trying to determine the appropriate cost of service is: identifying the actual value to the system of lowering USMag's planned load in certain months and evaluating whether that value is properly reflected to USMag and the rest of the system.

The answer to what is the appropriate revenue requirement to use when determining cost of service rates, greatly depends on the value placed on

curtailing the system with a BTO. If the curtailment when combined with a BTO has little to no value, then 12 coincident peaks may be the correct choice. Likewise, if a curtailment with BTO still has value to Utah rate payers by reducing costs necessary to plan for the load during six months of peak hours, then using six coincident peaks in the cost of service model is the appropriate choice.

Whatever method is used, the evaluation of USMag's cost of service should reflect the actual value to the system of the curtailment resource. As near as possible, such mechanisms should be built to reflect the reality of system planning and use. If the curtailment allows the utility to avoid acquiring additional resources, that should be reflected. In order to maximize the accuracy, it is necessary to have contracts reflecting modern conditions, which have shifted away from rigid definitions of on-peak and off-peak hours and old notions of when the system will be stressed.

Q. WILL YOU DISCUSS RMP'S POSITION THAT CURTAILMENT AND A BUY THROUGH OPTION HAS NO VALUE BECAUSE IT IS A PAPER EXERCISE?

A. Yes. In Mr. Eller's responsive testimony he states "the Buy Through Option during Temperature Pseudo Curtailment events ends up being a paper exercise with very little or no value for PacifiCorp's customers. The Company therefore believes that it is appropriate to revise the practice of eliminating US Magnesium's coincident peak loads and allocate demand-related costs to US Magnesium according to its actual usage during the 12 coincident monthly peaks"[20]

As PacifiCorp has administered the TPC buy throughs, it has minimized value to other ratepayers by routinely invoking the TPC whenever temperature requirements are met, irrespective of system need. This is especially problematic

[20] Rocky Mountain Power Responsive Testimony, Mr. Craig M. Eller, January 7, 2022, lines 115—120.

when the price USMag pays for the buy through does not accurately reflect the cost of supplying the power purchased for buy throughs. The use of an index price is likely no longer a suitable mechanism for pricing the buy through, particularly as markets have evolved and real-time pricing in the Western EIM is publicly visible. A curtailment with a buy through should not require the utility or other customers to be worse off when accounting for the bought-through resources.

However, removing USMag's load for planning purposes in times of expected peaks can provide benefits to the system and Utah ratepayers if it reduces system needs and Utah allocations. Mr. Taylor's own testimony supports that underlying principle. He explained: "Total Company system peak, and Utah's contribution to system peak, will be reduced [six] months of the year. This lowers Utah's revenue requirement because it lowers Utah's allocation of generation and transmission costs."[21]

Q. WHAT IS THE DPU'S POSITION ON COINCIDENT PEAKS?

A. RMP should pursue any interruptibility provisions that could lower system requirements and costs. Those interruptibility provisions must be properly reflected in cost of service calculations for customers participating. RMP has not provided sufficient evidence that it has properly considered appropriate interruptibility measures given USMag's willingness to offer those provisions as a service.

Almost 20 years ago, RMP outlined benefits to the State of Utah and USMag of interruptibility provisions properly calculating costs using six coincident peaks. Even though the market has changed over the last 20 years, the benefits to Utah

[21] Rocky Mountain Power Supplemental Testimony of Mr. David L. Taylor, Docket No. 03-035-19, October 13, 2004, pages 1—3.

ratepayers and USMag may still exist, particularly if new provisions better match system and industry changes.

RMP has indicated that using 12 coincident peaks is what is done with all the other customers and, moving USMag to 12 coincident peaks would treat them like all other customers. It is true that using 12 coincident peaks would treat USMag similar to all other customers, but USMag's willingness to curtail and ability to curtail its load, may warrant treating USMag different than other industrial customers. The DPU does not believe treating all industrial customers the same is a strong enough reason for RMP to ignore potential benefits of interruptibility provisions that may use six, or some other number of, coincident peaks.

Additionally, the claim that curtailment with a BTO has little to no value is not supported. There are clear benefits to Utah customers of allowing a well-administered provision that can reduce planned system needs that requires six coincident peaks for evaluating cost of service. Whatever mechanism is used, the Commission should order that coincident peak provisions in cost of service evaluations match the benefits from that mechanism. If it reduces system needs in times of strain in six months in ways that provide value to the system, a six month measurement is appropriate.

Q. IS THERE AN ADDITIONAL ISSUE THE COMMISSION WOULD NEED TO ADDRESS IF USMAG'S CURRENT COST OF SERVICE MEASUREMENT CHANGES SIGNIFICANTLY?

A. Yes. If the Commission were to adopt a different measure for USMag's cost of service and additional revenue were realized, RMP would receive a windfall if other ratepayers were not credited for the additional contribution. Without adjusting all the other classes of service to reflect the higher revenues collected from USMag, RMP would be collecting an additional $11 million under my earlier hypothetical each year until the next rate case. The actual number would differ.

DPU'S OBSERVATIONS WITH THE CURRENT INTERRUPTIBLE CONTRACTS

Q. WHAT IS WORKING IN THE CURRENT ESA AND ORIA CONTRACTS?

A. There are parts of the contract that are working as contemplated by the DPU, the Commission and other parties. As discussed above, the current contract uses six coincident peaks to determine the cost of service for USMag. The way RMP and USMag have structured the contract and calculated the current cost of service follows the Commission's recommendations and orders. This method provides benefits to rate payers in the State of Utah as well as USMag.

Over the history of the various contracts between USMag and RMP, the Commission has been comfortable with allowing USMag to buy through. In the Commission's Order in Docket No. 01-035-38 the Commission discussed the following:

> In an effort to address the impacts on Magcorp's physical plant facilities and production processing, no party opposes a contract provision which would allow Magcorp to buy through a proposed interruption. In a buy through situation, Magcorp has the opportunity to weigh the costs it incurs in accepting an actual interruption of electricity to its plant compared to the costs of continuing processing operations with "alternative" electricity. This alternative electricity would be delivered by PacifiCorp to the Magcorp plant in lieu of a physical interruption of electric power. Its source would vary, based upon available generation sources and transmission capabilities at the time of the proposed interruption.[22]

This Commission order shows that the Commission was comfortable with USMag purchasing power during times of curtailment from sources other than RMP. The Commission consented to have the alternative electricity delivered by PacifiCorp to the Magcorp plant in lieu of a physical interruption of electric power. The Commission fully intended for PacifiCorp to purchase power from other market sources during times of curtailment.

[22] Report and Order Docket No. 01-035-38 Utah Public Service Commission, May 24, 2002, page 12.

As early as 2004, the DPU was outlining that the BTO was allowing for pseudo curtailment. In her surrebuttal testimony, Dr. Andrea Coon stated, "USMag is not strictly an interruptible customer because it does not want to be physically interrupted, but demands a buy through option."[23] She continues to outline that because USMag desires a buy through option, "[USMag] does not want to lose its status as an interruptible customer, but would rather not be interruptible"[24] That USMag chooses to purchase electricity from the market when RMP chooses to curtail is well understood by the Commission and has been an important element of the contracts between USMag and RMP. The current ESA outlines the buy through option that was ordered by the Commission.

The current contract also has the provisions necessary to allow PacifiCorp an ability to manage its system to meet the requirements to provide adequate resources to all Utah customers. If PacifiCorp's system is constrained, for any number of reasons, USMag's load is available to mitigate those system constraints.

As noted earlier, the current pseudo curtailment mechanism under the TPC is likely not in the public interest because it likely no longer matches market mechanisms and has been too rigidly administered by RMP, minimizing its value.

Q. WHAT ELEMENTS OF THE CURRENT ESA AND ORIA CONTRACTS ARE NOT WORKING?

A. Curtailments have a useful place in the utility's system but the current construction and administration of USMag's curtailments is not a good fit to that place. A curtailment should occur because there are extenuating forces causing PacifiCorp's system to be constrained or because the customer's load has not been planned for and cannot otherwise be served without additional resources.

[23] Division of Public Utilities Surrebuttal Testimony, Dr. Andrea Coon, November 12, 2004, page 12.
[24] *Ibid.*

The choice to curtail would be made by the system experts at PacifiCorp who thoroughly understand the electrical grid and what is needed to ensure a reliable system. USMag's load can be an asset in a program like that.

The current application of the temperature determined curtailment is the portion of the contract that is not working as intended. Currently, RMP's day to day decisions do not follow the sound public policy objectives and the mechanisms pricing structure is not accurate enough to reflect actual buy through costs.

Currently, the decision to curtail is not based on PacifiCorp's system needs, but instead on relatively crude temperature criteria and rote decision-making by RMP. In the past, temperature could have been an accurate indicator of times when the system load would be at its peak. Today there are numerous other factors that can impact when PacifiCorp's system would be constrained. The introduction in recent years of growing amounts of intermittent generation has pushed peaks later in the day and somewhat diminished the connection between system stress and temperature. Using temperature as the determining criteria for when a curtailment should occur is not useful enough in current conditions.

Similarly, it appears that RMP has routinely invoked the TPC buy through provisions when its system is not strained but temperatures are sufficiently high. In other words, it seems to automatically trigger a buy through option when temperature conditions are met rather than exercising its discretion to evaluate operating conditions and decide whether that curtailment is reasonably necessary. While it is true that RMP has not planned to meet USMag's load, in those circumstances, nothing should prevent RMP from servicing USMag's load in the most economical way possible.

Rather than leaving curtailment as a resource adequacy asset, RMP appears to have relied on the contract provision as mandatory, not discretionary. When asked by the DPU if TPC is optional RMP shared the following response:

> Paragraph 4.1.6 of the ESA states, in part, 'Purchaser and Seller agree that the intent of curtailment allowed hereunder is to reduce Purchaser's demand during Seller's system coincident peak each month as coincident peak is measured and defined for Seller's ratemaking, and not to derive economic benefits for either Party from the disparity between market prices and the pricing provided herein'. This language has been understood by the Company to mean that it cannot elect not to provide a curtailment notice for reasons which do not directly pertain to the probability of the hours in question constituting a coincident peak (CP) (e.g., avoidance of issuing a curtailment notice due solely to low market prices). Since the instance of the CP cannot be determined until an after-the-fact analysis of historic loads is conducted, the Company has in practice provided curtailment notices whenever the temperature thresholds have been reached. [25]

The DPU does not interpret the provision as RMP does. Indeed, RMP's interpretation seems to provide USMag exactly the arbitrage opportunity it suggests the provision is meant to bar. Regardless of whether RMP is correctly administering the provision, its result is not in the public interest any longer.

Q. IF THE DECISION TO CURTAIL SHOULD BE CLOSELY TIED TO ACTUAL RESOURCE ADEQUACY, CAN YOU PROVIDE MORE DETAILS ABOUT CURRENT THINKING ON RESOURCE ADEQUACY AND HOW IT HAS CHANGED OVER TIME?

A. Yes. In 2021 WECC published its report on resource adequacy. That report details the following points:

> Typical approaches to evaluating resource adequacy are based on a comparison of expected peak demand and resource nameplate capacity.

[25] Data Request Response of Rocky Mountain Power to the Division of Public Utilities 4.5 dated March 29, 2022.

> These capacity-based methods work when the resource performance and demand patterns are predictable and resource output is largely controllable. However, the capacity of a resource is how much power the resource can potentially produce and does not account for how much energy the resource can actually produce at any given time. Because resource variability has to do with changes in actual energy output, approaches based solely on capacity fail to fully account for variability. As a result, based on traditional capacity-based approaches, the West may appear resource adequate but could be resource inadequate in terms of its ability to produce energy when needed.

> Traditional approaches plan the system by focusing on the peak hour, based on the logic that planning the system to the time of greatest strain means the system will be resource adequate at all other times. While the logic is sound, the approach relies on the assumption that the system is most strained during the peak demand hour. Historically, this was usually the case. However, drivers like extreme weather, changing climate patterns, customer choice, and changing resource mix are resulting in situations in which the times of highest strain do not coincide with the peak demand. Resource planning that focuses solely on the peak hour ignores that the system experiences more strain and is at higher risk of being resource inadequate at other times.[26]

In the past, looking at the time of highest peak demand and planning the system to that time of greatest strain meant the system would be resource adequate at all other times. Unfortunately, that logic is not as valid now as it was in the past. It is possible for the system to be constrained at times other than exclusively on the peak hours.

Looking at the next ten years in the west, there remain concerns about resource adequacy. It is anticipated the west will continue to be resource constrained because of extreme weather situations. In the same report mentioned above WECC stated:

> Weather creates variability, and weather is growing more erratic and extreme—a pattern that is expected to continue over the next decade. Based on data reported by Balancing Authorities (BA), demand and resource variability have increased and will continue to increase over the next decade. In addition, predictions about more extreme weather and

[26] WECC 2021 Western Assessment of Resource Adequacy page 3.

> changing climate patterns portend increases in variability, likely beyond what entities currently predict.
>
> Given these changes and current PRM [planning reserve margins] calculated using traditional methods, the number of hours at risk for load loss shows an increase compared to the results of the 2020 Western Assessment. This increase indicates resource adequacy planning may be failing to account for the increasing variability. Over the next 10 years, the hours at risk increase, even with planned resource additions.
>
> Entities typically meet their PRM by building or purchasing resources within their area, contracting to import energy, or both. Changes in climate, weather, load patterns, resource location, and resource availability have altered how and when entities can rely on import capacity and the capability of the transmission system to move power. However, based on the increasing number of hours in which demand is at risk, entity resource adequacy planning practices largely have yet to account for this change. Entities who rely heavily on imported energy and do not change their resource planning practices to account for these changes could encounter resource adequacy challenges.
>
> All subregions rely on imports to remain resource adequate today and in the future. If all Tier 1 and Tier 2 resources are built as currently planned, by 2025, even with imports, every subregion shows enough hours with demand at risk to fall below the one-day-in-ten-years, or 99.98%, reliability threshold—meaning every subregion could suffer a resource deficit. If current demand and resource projections hold or worsen, entities will have to take additional actions by 2025 to reduce the number or hours at risk for load loss. Because some solutions have long lead times, it is critical that entities act now to address long-term (years 5–10) resource adequacy concerns. If the current long-term issues are not addressed immediately, they may be insurmountable when they become near-term issues.[27]

Because the current contract focuses on coincident peaks and lowering them, it uses the wrong criteria to bolster resource adequacy in our evolving markets. Over the next few years, systems are going to experience even more challenges in remaining resource adequate.

As stated in Mr. Eller's response testimony, given the current contract situation, PacifiCorp could face a moment where PacifiCorp is relying on imported energy

[27]WECC 2021 Western Assessment of Resource Adequacy Page 4.

to meet its resource adequacy needs, at the same moment it is required to buy through energy for USMag. Under the current contract administration, this may be so. But it need not be an issue in a well-constructed future contract.

At a time when RMP's reliability entity is warning that new thinking and flexible approaches are needed to meet system demands, and USMag has indicated a willingness to provide flexible resources, a prudent utility would explore how best to structure a contract to acquire flexible resources and price them appropriately. With a physical curtailment option and a buy through option that could aid USMag when the system is not physically constrained, a contract might help RMP build a portfolio more in line with WECC's thinking in its resource assessment and still satisfy RMPs resource adequacy needs.

Q. IS THERE ANOTHER ISSUE WITH THE CURRENT CONTRACT?

A. Yes. The issue again deals with the criteria PacifiCorp is using to determine when the system is constrained and when curtailment should occur. The current situation allows USMag to purchase energy at a day ahead market index price. According to information provided in Mr. Eller's responsive testimony there were months where the market index price was lower than the contract price in the ESA. The DPU believes this situation should never happen and was not an intended purpose of the buy through option, at least not as contemplated by the DPU.

Allowing USMag to purchase energy at prices lower than the contract price, allows arbitrage between the market and contract price. The premise of PacifiCorp needing to curtail is that the system is constrained, and its resources are not adequate to cover the electricity needs. If the market index price that USMag is going to pay for delivery of other resources when curtailed is less than the contract price, PacifiCorp should not elect to curtail industrial customers' load. Instead, PacifiCorp should be allowed to purchase the electricity to cover

its resource needs. The current contract allowed USMag to pay a lower price using the buy through option.[28]

Q. WHAT DOES THE DPU RECOMMEND?

A. As addressed above there may be benefits to Utah ratepayers, USMag, and RMP with the current contract. Additionally, there are some major issues with the current contract. A new contract with better curtailment mechanisms, well-administered, may serve all parties better than the current one. Moving US Mag to a schedule rate, designed without its inclusion in the rate class could foreclose valuable opportunities for RMP to better meet resource needs. Its filing is insufficient to foreclose this possibility. In the absence of a negotiated contract and the lack of a truly appropriate schedule rate, the DPU can offer no concrete recommendation the Commission can adopt to conclude this matter. However, there are some decisions the Commission could make that can guide the parties to a result that is in the public interest.

The first decision the Commission should recommend is to eliminate the TPC. There is little reason to have the curtailment of RMP's system tied to temperature. The Commission should also acknowledge that various benefits of an interruptible contract could be realized by Utah ratepayers, USMag and RMP if an effective trigger for curtailment is established. A cooperative approach assessing times of most critical system needs and crafting curtailment mechanisms with reasonable pricing structures could yield benefits for all.

Mr. Roger J. Swenson in his direct testimony discussed a desire to have a "transition period which would give interested parties the necessary data to

[28] Rocky Mountain Power Responsive Testimony, Mr. Craig M. Eller, Docket No. 21-035-53 Exhibit CME-2.

understand PacifiCorp's load"[29] With the provided data interested parties could establish "a better need for curtailment."[30]

The DPU recommends the Commission allow for a transition period that would establish a better basis for curtailment. Part of the transition would be establishing what event would trigger curtailment. With resource adequacy in the west under strain, it makes sense to use this opportunity to develop a process that allows PacifiCorp to craft flexible mechanisms to meet its obligations.[31] This proposed flexibility allows PacifiCorp to take advantage of times where there is an abundance of resources and curtail specific customers at critical times. The process should still allow for the current benefits to Utah rate payers to continue while allowing USMag to have the option to buy through in certain curtailment events. If a buy through option is allowed, the price USMag would pay for energy should never be lower than the contract price. Actual physical supply constraints would leave buy throughs unavailable.

The DPU would propose the following during a transition period:

- Continue the current temporary contract, with modifications.
- Allow temporary use of the temperature portion of the TPC as a threshold for the buy through curtailment option.
- Require USMag to pay a price for buy throughs that reflects an actual price paid by PacifiCorp for power supplied to USMag whatever the source.
- Require PacifiCorp to use discretion when invoking the reformed TPC, only acting when there is an actual short position to cover, not merely the existence of the temperature conditions.

[29] US Magnesium Direct Testimony, Mr. Roger J. Swenson, September 21, 2021 lines 602—624.
[30] *Ibid.* lines 623—624.
[31] In the long run, it is likely that broader tariffs for services such as these will be needed, allowing other customers and aggregators to offer demand response products that are more sophisticated than current ones. At that point, a special contract may be far less justified.

With these points in place, in the short-term, parties would be able to collaboratively work together to develop solutions for future contracts.

CONTRACT LENGTH

Q. WHAT CONTRACT LENGTH IS THE DPU COMFORTABLE WITH IN THE FUTURE?

A. Because the energy situation is changing so rapidly, the DPU would recommend a shorter-term contract. There are multiple factors that will be relevant to a future contract's prudence. Evolving electricity markets and prices are one of those. Changing interstate allocations for PacifiCorp also matter. Given how jurisdictional loads have been tied to the USMag contract, a contract term should not be so lengthy that it survives a change in allocations by very long. In past proceedings, the DPU has supported five-year contract lengths or less. One to three years with yearly options to renew seems like a reasonable market choice in current conditions. Limiting the contract length allows the rates and conditions to better reflect the realities in the current and future electric market. Of course, the DPU is in no position to negotiate contracts for parties, but its consideration of the public interest in future cases will be influenced by these factors.

CONCLUSION

Q. WILL YOU SUMMARIZE THE DIVISION'S POSITION?

A. Significant time has passed since the Commission has provided direction to parties regarding interruptible contracts. The Commission should provide direction to parties indicating the potential value of contracts offering unique value to the utility's system. The DPU recommends the Commission provide direction for future interruptible contracts as follows:

- A special contract may be warranted when a customer has unique characteristics not reflected in current rate structures.

- A special contract should generally cover the actual costs of serving that customer and provide some contribution to overall system costs so other customers are not harmed by the contract.
- An interruptible contract may have value to the system beyond what is available in tariffed rates.
- Load curtailments at times of physical or supply constraint can mitigate RMP's needs for other resources and provide value that warrants recognition in a special contract or other rate mechanism.
- When a customer can provide significant value to the utility through curtailment provisions, it may be in the public interest to sell that customer excess supply at other times at advantageous rates.
- Cost of service measurements should appropriately recognize value provided by the customer. If coincident peaks are used to evaluate that value, their use should reflect the contract's mechanisms, not adhere to rigid cost of service measures used for other purposes.
- Special contract lengths should allow sufficient flexibility to adapt to changing markets, allocation mechanisms, and the like.

The DPU sees value in well-constructed interruptible contracts and recommends the Commission recognize curtailment with a reasonable buy through option as a resource the utility should consider. Even though there is value in curtailment with a buy through option, the current framework for curtailment is broken and must be fixed. The Commission should eliminate temperature as the trigger for curtailment and instead allow a transition period where interested parties could work collaboratively to determine the appropriate trigger for a curtailment event and ways to provide the best system value. As noted, a modified version of the current contract may be advisable while a new contract or tariffs are developed.

Because the electricity market is in the middle of a transition period and allocation mechanisms within PacifiCorp are uncertain for future years, the DPU supports a shorter contract length. A one to three year contract with possible annual extensions would protect RMP and other ratepayers from contract terms that become out of line with current market conditions.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

CERTIFICATE OF SERVICE

I certify that on April 7, 2022, I caused a true and correct copy of the foregoing Direct Testimony of Casey J. Coleman to be filed with the Public Service Commission and served by the Utah Division of Public Utilities to the following in Utah Docket 21-035-53 as indicated below:

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/S/ *Madison Galt*
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