
To: Chris Parker, Division of Public Utilities

From: Phil DiDomenico and Dan Koehler, Daymark Energy Advisors

Date: September 21, 2016

Subject: Prudence Review and Treatment of Forced Outages in the EBA
09-035-15, In the Matter of the Application of Rocky Mountain Power for Approval of its Proposed Energy Cost Adjustment Mechanism

The Division of Public Utilities (“the Division”) requested this memo on the appropriate treatment of imprudent forced plant outages in the review of applications to adjust rates through the Energy Balancing Account (“EBA”) mechanism. The EBA allows Rocky Mountain Power (“RMP”), a division of PacifiCorp (“the Company”), to recover prudently-incurred actual net power costs (“NPC”). The Company purchases physical and financial power and transmission for RMP. The EBA adjustment trues up the excess or deficiency of actual NPC as compared to the NPC approved in RMP’s last general rate case and collected through base rates. Forced outages of the Company’s generation units likely increase actual NPC by forcing the Company to rely on a suboptimal portfolio of resources to meet load and contract obligations and make opportunity sales of power. Unless the offline unit is “out of the money” for the entire duration of the outage and therefore would not have run anyway, a forced outage requires the Company to obtain replacement power at a higher cost than it would have paid in incremental fuel and operation and maintenance (“O&M”) cost to run the unit. This memo discusses certain key questions related to outages and their impact on the EBA.

Should the Company recover incremental NPC through the EBA when the outages were imprudent?

No. Utah’s enabling statute predicates the implementation of an EBA on the Commission finding that it is both “in the public interest” and “for prudently-incurred costs” (Utah Code Ann. § 54-7-13.5(2)(b)). Allowing recovery of additional costs through the EBA that are a direct result of imprudent action by the Company fails both conditions. It is self-evident that costs incurred as a direct result of imprudent action are not “prudently-incurred costs”.

Furthermore, it is not in the public interest to force ratepayers to pay through the EBA for outage-related costs that could have and should have been avoided with prudent utility practices because it forces ratepayers, not the Company, to bear the consequences for the Company's imprudence. Allowing the Company to avoid the consequences of its actions removes an important incentive for the Company to maintain prudent practices.

RMP's base rates already take into account forced outages, maintenance outages, planned outages, and outage extensions. A certain level of generation unavailability – planned and unplanned – is inevitable, and allowances for this are made in the setting of base rates. Outages are modeled in the Company's GRID production cost model by de-rating each generation unit's maximum capacity based on its 48-month history of capacity lost due to forced outages, maintenance outages, planned outages and outage extensions. The Company is thus permitted to recover a level of NPC in base rates that already assumes typical forced outage levels as might occur even with prudent utility practices. Absent an EBA mechanism, the Company would not be able to recover from ratepayers increases in NPC due to forced outages between rate cases, creating an additional incentive to follow prudent practices to minimize unnecessary outages. If, on the other hand, the Company is allowed to recover incremental NPC incurred as a result of failing to follow prudent utility practices, the incentive is lost and ratepayers bear responsibility for avoidable outages caused by imprudent actions. It is in the public interest to restore this incentive by disallowing the recovery of incremental NPC related to imprudent outages through the EBA.

What is the standard for determining that an outage is imprudent?

The standard for cost recovery and the Company's burden of proof are the same in the EBA as in a general rate case (Utah Code Ann. § 54-7-13.5(2)(e)). Utah Code (§ 54-4-4(4)) directs commissions to apply the following standards in making a prudence determination when considering an expense incurred by a public utility:

- (i) *ensure just and reasonable rates for the retail ratepayers of the public utility in this state;*
- (ii) *focus on the reasonableness of the expense resulting from the action of the public utility judged as of the time the action was taken;*
- (iii) *determine whether a reasonable utility, knowing what the utility knew or reasonably should have known at the time of the action, would reasonably have incurred all or some portion of the expense, in taking the same or some other prudent action; and*

- (iv) *apply other factors determined by the commission to be relevant, consistent with the standards specified in this section.*

We believe that these standards should be applied to individual outages when reviewing costs requested to be recovered through the EBA. One simple way to frame the question is to ask, “Would a reasonable utility, given the same circumstances and information known or knowable at the time, have taken a course of action that would have led to the same or similar results (i.e. the outage)?” If not, the outage is avoidable.

All imprudent outages are avoidable, but not all avoidable outages are necessarily imprudent. We do not believe that the Company should be held to a “perfection standard” wherein any human error or misjudgment leading to an outage is deemed imprudent and punished with disallowance. For an individual outage to be deemed imprudent, we believe that it must be avoidable to an extraordinary degree. As with many prudence determinations, this is a necessarily subjective standard that can only be determined on a case-by-case basis.

How do your past recommendations align with this standard?

In keeping with the “extraordinarily avoidable” standard, we have recommended only nine (9) separate outage events for disallowance due to imprudence in the first five EBA dockets for deferral periods stretching from October 2011 through December 2015. This represents a small fraction of all forced outages that occurred over the same time period. Examples of outages recommended for disallowance include the following:

- In late 2011, [REDACTED] was on outage for [REDACTED] hours due to [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- In 2012 [REDACTED] experienced a [REDACTED] hour outage due to the [REDACTED]
[REDACTED] Root cause analysis determined [REDACTED]
[REDACTED]
[REDACTED]
- On [REDACTED], [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

These incidents provide examples of outages that are sufficiently avoidable to be considered imprudent in our review of individual outages. All were clearly avoidable if the Company had been following reasonable utility practices. The nine imprudent outages cited in our EBA audit reports added more than \$14 million to Total Company NPC in replacement power costs.

Should the Company be held responsible for an imprudent outage even if the outage was caused by a third party operator or contractor?

Yes. In some cases, when outages have occurred at a jointly-owned plant operated by a third party, or as a result of negligence by an outside contractor working on the unit, the Company has argued that it is unreasonable to penalize PacifiCorp for a third party's performance when PacifiCorp has no contractual ability to seek recourse from that third party. We disagree. PacifiCorp recovers the cost of its investment in owned and jointly owned generation resources, and earns a return or profit on that investment. As an owner, the Company is responsible for the performance of that asset, and cannot and does not absolve itself of that responsibility simply because it has delegated the operation or repair of that asset to another entity. Certainly, as between the Company and its ratepayers, the Company is in a much better position to influence the operation of plants where it is not the operator. If the Company operated in a regulatory system without an EBA the Company would not recover any of the replacement power costs related to the forced outage.

The Company, either directly or through agreement, chooses to enter into a contract with the third party and the Company is in a position to negotiate favorable terms with that third party whereas the ratepayer is not. Many operating agreements contain provisions that require the chosen operator to follow Good Utility Practice or otherwise perform its duties prudently. If PacifiCorp entered into a contractual arrangement that provided it with no recourse for negligent acts, so be it. Such a contract provision is imprudent. Ratepayers should not be required to absorb the costs of negligent operation or imprudent contracting.

Is it more appropriate to consider fleet performance through comparison of Equivalent Availability Factor ("EAF")¹ to NERC industry averages than to examine individual outages?

No. In prior EBA cases the Company has argued that outages should be evaluated based on the performance of the Company's entire thermal generation fleet, rather than individual outages. The

¹ Equivalent availability factor is the fraction of a given operating period in which a generating unit is available without any outages and equipment or seasonal deratings.

Company typically compares its generation fleet's EAF to NERC industry averages. If its own units have a higher EAF than the average EAF for a comparable cohort, the Company argues that it evidences prudent management of the generation fleet overall, and singling out individual outages for scrutiny holds the Company to an "unreasonable standard of perfection." We disagree.

Just because the Company's generating fleet has a higher EAF than the NERC industry averages, it does not necessarily follow that all outage-related expenses were prudent. While NERC industry averages are useful benchmarks to assess performance of a fleet of generating units at a high level, they are not dispositive determinants of the prudence of specific outages and their associated costs. For example, a plant could experience an outage that was the result of gross negligence and imprudence, and be part of a fleet that has a higher EAF than the industry average. The Company, not ratepayers, should pay for the replacement costs of this type of outage.

In addition, if the approach of deeming prudence based on EAF performance is adopted, then the converse must also apply. This is to say, any performance that is below industry average must be automatically deemed to be imprudent, regardless of the cause. If an outage occurred that was not the result of Company imprudence but caused a unit's EAF to fall below industry average (say, for instance, that a tornado causes damage that takes a unit offline for most of a year), then the cost of that outage would be borne by the Company and not ratepayers under this approach.

Furthermore, NERC industry averages are determined for large categories of plants, such as all coal plants within a certain nameplate rating range. Within these categories, there are many differences in the design and operation of individual generating units that could cause outages that are not captured in the industry average statistics.

For these reasons, we believe it is appropriate to review each individual outage and assess if each outage was prudent or not. Under this approach, the Company has the opportunity to explain the cause of each outage and provide supporting documentation, allowing the Commission to determine whether that outage was prudent or not. Relying on a single availability statistic is not an appropriate standard by which the prudence of the Company's operation should be determined.

How should the EBA be adjusted for outage-related costs?

Replacement power costs related to imprudent outages should be estimated using a reasonable methodology. Replacement power costs should reflect the difference between 1) actual NPC (with the outage); and 2) what actual NPC *would have been* had the outage not occurred. The second part of this formula is a backward-looking forecast, or "backcast" of a counterfactual scenario (i.e. an alternative history that might have but didn't occur), and therefore subject to inevitable uncertainty. The most comprehensive method for estimating replacement power costs would be to use a production cost

model (such as the Company's GRID model) with meticulously calibrated historical inputs to backcast the period with and without the subject unit in service. Proper execution of this method would require intensive effort and review. In past EBA cases, given the time allowed for the EBA audit, we have generally advocated for a simpler yet still reasonable approach making a number of simplifying assumptions about the operation of the unit had it remained in service, and the cost of the next best alternative called upon with the unit out of service. Methods will vary based on the type of unit and the duration of the outage.