The Empire District Electric Company
A Liberty Utilities Company
Case No. ER-2020-0311
MPSC Data Request – 0001

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Request No. 0001

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Respondent: Aaron Doll/Melody Wright

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REQUEST:

In Case No. ER-2019-0374 the Company stated in OPC DR 8054: "Consuming all of the recoverable coal inventory was not the mentioned fuel quality issue. Prior to Asbury consuming all of its recoverable inventory, the plant was recovering as much fuel as reliably possible. This process increased the occurrence of impurities being introduced into the fuel during the fuel handling process. Additionally, with the lower inventory level of fuel at the plant, maintaining dry fuel became quite challenging due to wet weather the site was receiving during November and early December 2019. These two factors decreased the reliable output of the unit." Please answer the following: 1(a). Please describe the Company's fuel handling process. 1(b). Please explain when the Company became aware of the unusable coal pile. 2. What factors led to the coal inventory adjustments that increased costs by $1.9 million? 3. Were the two factors described in the Company's response above that decreased the reliable output of the unit, out of the Company's control? If so, please explain.

RESPONSE:

1.

a. Operationally a significant challenge experienced in the fuel handling process at Asbury was posed by clay and/or rocks being introduced into the fuel stream as the plant was reclaiming coal close to the base of the pile. The base of the reclaimable coal pile is not a well-defined location. Over the years, clay and/or rocks from the base have migrated leaving a zone with coal mixed with clay and/or rock. In order to reclaim the maximum amount of coal while keeping the impurities to a tolerable level, the plant transitioned to reclaiming stockpile coal on day shift only. During each day shift, dozer operators reclaimed a pile of coal for the night shift to use that night. Reclaiming during day shift maximized the potential for dozer operators to see any clay or rocks that were being reclaimed inadvertently and to be able to quickly react to minimize impurities in the coal.

In addition, daytime reclamation gave the dozer operators the best potential to maintain proper drainage on the coal pile to minimize wet coal issues. When precipitation was forecast, the day shift dozer operators packed the coal pile at the end of shift to minimize potential coal saturation. When precipitation was not forecast, the dozer operators loosened, rolled, and aerated the coal pile to dry it as much as possible.

Finally, as we neared the end of our reclaimable coal, in order to maximize the potential to properly reclaim coal without excess impurities, Empire routinely sent experienced, Empire dozer operators to reclaim coal for our coal handling contractor. While our coal handling contractor was making a good faith effort to reclaim good, usable coal, Empire determined that substituting our operators with several more years dozer experience would allow us to reclaim the maximum amount of good, clean coal for use in generation.

b. Receiving, transferring, storing, using and measuring coal pile inventory levels is an inexact science. While every effort is made to accurately measure and report inventory levels, there are many factors that can and do influence coal inventory values over time. One such factor of inventory valuation concerns the Base mat of the coal inventory. The common industry standard for coal inventory is to create an initial base of packed clay or rock for coal pile storage. Coal deliveries are then placed on the base and packed down using dozers to prevent spontaneous combustion of the coal. As soon as coal deliveries are placed onto the coal pile the weight of the coal and equipment compresses a quantity of the coal into and it mixes with the base. This quantity of the coal becomes unusable as it is contaminated with the clay and rock. This is referred to as unrecoverable coal. There is no reliable method to determine the exact quantity of coal that is unrecoverable until all the recoverable coal is consumed. Even then, if additional coal is placed onto the pile a portion of the new deliveries can become unrecoverable as well depending on multiple factors including environmental factors such as wet weather. Therefore, the Company was aware that a portion of the coal inventory would likely be unrecoverable from initial construction but could not determine the exact quantity.

2. The coal inventory adjustment did not increase overall costs – the coal inventory simply reconciled costs to accurately reflect that a quantity of zero tons of recoverable coal inventory existed as of 12/31/2019. In addition to the factors mentioned above, the additional following factors also contribute to coal inventory adjustments that are normal and recurring adjustments to stay in compliance with GAAP accounting.
    a. Weather impact on measurement
        i. Rain – Significant rain fall events can add moisture content causing the fuel's weight to increase.
        ii. Heat – High temperatures can reduce the moisture content causing the fuel's weight to decrease.

iii. Snow & Ice – Snow and ice weight can increase the measured weight of the fuel. Additionally, slick conditions caused by significant rainfall and winter weather can cause fuel to slide on the belt scale resulting in measuring the same fuel more than once.
iv. Erosion – Windy and rainy conditions can both lead to erosion removing the coal from pile.

b. Belt Scale Limitations
   i. The blend belt specifically at Asbury operates near its design limits introducing the opportunity for error. It is designed to operate at 300 tons/hr but often operated at 300 tons/day or lower.

c. Coal Transfers
   i. Illinois coal transferred from the rail unloading area to the blend pile can lead to inaccuracies as either not enough coal is transferred or too much coal is transferred.

d. Survey Challenges
   i. Inventory Density – Density of the coal varies throughout the pile. This leads to measurement challenges.
   ii. Inventory Shape – The accuracy of measuring the volume of inventory is related to physical shape of the pile. Then more symmetrical the pile the more accurate the measurements. The more asymmetrical the pile with many peaks and valleys the more challenging accurate measurement becomes.

While the above factors presented are not meant to be exhaustive, they represent samples of the major factors that affect the accounting of coal inventories and provide an understanding on why inventory adjustments are necessary and frequent in nature. Refer to the attachment labeled: "Inventory SOX Procedures" for the best practices procedures utilized by the Accounting department to comply with GAAP (specifically ASC 330) as it relates to the valuation of the various Inventory levels used to operate the Company's generating plants.

3. The two factors described in the Company's response in OPC DR 8054 were coal impurities and wet weather both of which impact the fuel's reliable usage. Neither of these factors are within the Company's control without incurring additional material expenditures, which would have increased customers costs.

   Impurities are a result of contamination of the coal inventory by the base as described above. To avoid those impurities would have required the company to cease recovering

the fuel earlier which would have resulted in additional coal inventory adjustments and associated costs.

The Asbury plant had two separate coal piles. Controlling the impacts of wet weather would have required construction of two structures to shed any rainfall away from the coal. Since coal was being recovered from two separate coal piles, it would have been necessary for any such structure to have spanned the whole area and would have needed to be tall enough for the coal pile height plus a safe working distance above the coal handling equipment. Construction of this type of structure would have come at a significant cost.