Testimony to UTC

Introduction

Good afternoon. My name is Derf Johnson, and I'm here with the Montana Environmental Information Center, based out of Helena, Montana. I appreciate the opportunity for you to take my comments into consideration today on Puget Sound Energy's IRP process.

Inherent Assumptions in IRP Document

I would like to raise some very specific concerns regarding the estimated increase in costs of coal associated with the Rosebud Mine. Specifically, it is my understanding that in the current IRP, PSE is projecting that the only increased costs associated with the fuel supply for Colstrip is a marginal cost of living increase. Both common sense and hard data provided by the mine and utilities invested in Colstrip show that this is an unreasonable assumption. Increased fuel costs could have a major impact on the costs of running the plant. Colstrip burns an average of 9-10 million tons of coal annually, and its fuel costs represent a significant cost associated with running the plant..

While the IRP document contains no analysis of possible increased mining costs, I am aware that the issue of mining costs was raised by the Advisory Group during the development of the IRP, and it was reported by PSE that they expected no change in costs beyond those associated with inflation or cost of living.

As you already know, because Colstrip is a mine-mouth coal plant, it is currently entirely dependent upon the Rosebud mine for its coal. The owners of the Colstrip plant and Western Energy, the owner/operator of the Rosebud Mine, are currently under two separate contracts for coal supply. Based upon an analysis of their SEC filings, these contracts are cost-plus contracts and are both set to expire in 2019.

Importantly, as noted in the SEC reports, these are not fixed-price contracts, as is typical with long-term coal supply contracts. These are cost-plus contracts that contain price escalators.

Overburden & Least-Cost Mining

Historically, coal has been mined from the Rosebud coal seam since the early 20th century. With the construction of the four Colstrip units, the quantity of coal being removed from the Rosebud coal seam drastically increased.

Western Energy Company, a wholly owned subsidiary of Westmoreland Coal Company, is now the owner and operator of the Rosebud Mine. Western Energy, like many coal mine operations, has approached mining coal at the Rosebud coal mine through a practice called "least-cost" mining. In the least-cost mining method, the operator of the mine first mines the coal that presents the least amount of costs associated with its production, but experiences gradually increasing costs as the operator is forced to mine coal found under higher volumes of overburden.

Following deregulation in Montana in 1997, the power generating assets of Montana's regulated utility, Montana Power Company, were sold off. Pennsylvania Power purchased Montana Power's Colstrip shares. As part of its due diligence before purchase, PPL contracted with the Boyd Corporation to conduct an analysis of costs associated with the Rosebud mine.

The most important take-away from this due-diligence analysis, completed in 2000, comes from the summary in the beginning of the document, which is mentioned repeatedly in the document: *"Current mining plans are reasonable and consistent with the "least-cost" mining approach. This will result in relatively low costs initially, followed by gradually increasing costs over the mine life."*

This issue is not unique among Powder River Basin Mines. An August 9 article by the energy trade journal Platts contained the headline: *Powder River Basin Producers finding it more costly to get to coal reserves.* The article discusses the increased overburden that the region is facing, which pushes up costs for mining and increases the likelihood of increased capitol costs associated with purchasing more equipment to deal with the overburden.

Recognition among utilities invested in Colstrip of increased costs

Other utilities that are invested in Colstrip have noted the steadily increasing costs associated with least-cost mining at the Rosebud Mine. In NorthWestern Energy's most recent resource procurement plan, it notes that:

> *"The Colstrip coal price forecast has been developed for the 2011 RPP and is attached. The chart attached in Appendix 1 below compares the Colstrip coal price forecast with the 2011 RPP base case coal forecast. The minemouth coal mining at Colstrip has entered a stage in which the coal is more difficult to obtain than in previous years and therefore is experiencing about an $8.00/ton premium compared to the base case forecast. This equates to a higher $/MMBtu fuel cost at Colstrip by an annual average $.35. An alternative to mining the more difficult coal at Colstrip would be to mine in the Wyoming Powder River Basin and have it shipped to Colstrip, but the cost of shipping is roughly the same as the $8.00/ton additional cost experienced at Colstrip."*

It's not a secret that the Rosebud Coal mine is an expensive coal to mine. A different Boyd study conducted in 2011, which analyzed all of the coal strip mines in the powder river basin, found that the Rosebud Coal mine had the most expensive production costs in the powder river basin.

Special Considerations for Units 1-2

Units 1-2 Fuel Supply Requirements

I'm sure that some of you are aware that in 2004, Puget Sound Energy and Pennsylvania Power established a steering committee to identify and evaluate coal supply issues at Colstrip and to evaluate alternative fuel supply arrangements beyond the Rosebud mine.

An important consideration that this steering committee identified is that units 1-2 boilers are quite sensitive to the sodium content of the ash during combustion. The steering committee noted that sodium levels above 1% cause plugging and fouling of the boiler economizers and require frequent outages for cleaning and removal of the plugging. The committee noted that, given these unique design and operating characteristics, the coal supply for units 1-2 must fall within a certain range of qualities.

Currently, Western Energy Company is attempting to permit an additional section of coal, known as Area F. Western Energy needs to permit this expansion to continue coal mining operations. The due diligence analysis released by Boyd in 2000 notes that area F contains a sodium content of 1.05. Presumably, the coal in Area F could not be dedicated to Units 1-2 unless either the coal is planned to be mixed with coal that contains a lower sodium content or the owners of the plant plan on an increased number of outages for cleaning and removal of plugging.

Citizens Suits/Administrative Issues

OSM NEPA Analysis

Area F is currently undergoing a federal NEPA analysis by the U.S. Office of Surface Mining, in cooperation with the State of Montana's Department of Environmental Quality. This analysis is occurring in response to several changes that were made to the Montana Environmental Policy Act that have caused the Office of Surface Mining to no longer consider Montana's MEPA analysis sufficient for complying with federal law. The implications for this decision by OSM on the permitting of Area F are important. Most importantly, section 7 of the Endangered Species Act now applies during the permitting process. This has the potential to impact the permitting process, and OSM may be prevented from issuing a permit to Western Energy if the expansion is found to destroy or adversely modify critical habitat for endangered species, including the pallid sturgeon and the black-footed ferret. There may be also additional potential implications if sage grouse are listed.

SMCRA Suit & CWA Claim

Additionally, my organization is currently alleging that the Montana coal strip mine permitting program is deficient in considering material damage to water bodies outside of the permit boundary of coal mines, with a specific focus on the Rosebud Mine. Based on our concerns, we have brought a citizen enforcement action. If we are meritorious on the claims, coal mine permit renewals and revisions would be impacted. Specifically, the Montana DEQ could not issue a permit for a renewal or revision if they find that there is material damage to the hydrologic balance outside of the permit area. This would effectively prevent mining activities in these areas unless and until a TMDL process is conducted.

Other Issues

Should the owners of Colstrip attempt to establish alternative supply arrangements beyond the Rosebud Mine, there will be additional costs associated with such an arrangement. Importantly, there would be costs associated with hauling the coal by rail from an alternative Powder River Basin mine. There would also be capital and operating costs associated with an on-site railcar unloading facility, which would be necessary for unloading any coal supplied by rail. No such facility currently exists at the Colstrip plant.

Additionally, if Colstrip chose to establish an alternative supply arrangement, additional engineering work would be required to overhaul the boilers in units 1-2. An analysis by Alstom identified that the costs associated with engineering, materials, fabrication, and installation, came to $40 million per unit. Alstom noted that without these modifications, Units 1-2 would require an additional two weeks of outage each year, with an annual cost impact of over $10 million per year.

Another issue that needs to be addressed is the likelihood of increasing fuel costs associated with mining coal seams that are progressively further and further distances from the plant and the conveyor system. The proposed Area F expansion is the furthest that Western Energy has ever mined to the west of the plant. The company identifies that that the coal would be transported by truck to Area B for crushing. I believe it would be very prudent to identify the costs associated with these increased fuel costs, especially with the possibility of rising diesel prices.

Conclusion

In conclusion, we believe that the assumption that fuel supplies will essentially remain flat, beyond cost of living increases, is fatally flawed. There are several different rising costs associated with the Rosebud Mine, and certainly risks faced by both Western Energy and the owners of Colstrip. It is incumbent that this body demands that PSE conduct a full and accurate accounting of the increasing costs and potential risks associated with the fuel supply for Colstrip. Thank you for your time.