MONTANA ENVIRONMENTAL INFORMATION CENTER

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August 16, 2013

Washington Utilities and Transportation Commission
P.O. Box 47250
1300 S. Evergreen Park Dr. SW
Olympia, WA 98504-7250
Docket #UE-120767 (and UG-120768)

Re: Montana Environmental Information Center comments on Puget Sound Energy's Integrated Resource Plan Docket Nos. UE-120767 and UG-120768

Dear Chairman Danner and Commission Members:

The Montana Environmental Information Center submits these comments to the Washington Utilities and Transportation Commission on Puget Sound Energy's Integrated Resource Plan. MEIC is a 40-year strong environmental advocacy organization with members across the country including in Washington State. We work to protect public health and the environment from air pollution, water pollution and climate change. We submit these comments on behalf of all of our members, particularly those in Montana and Washington, to provide information to the Commission on the significant and increasing risks the Colstrip power plant (Colstrip) poses to public health and environment, as well as Puget Sound Energy ratepayers.

As you know, the nation's energy market is engaged in a fundamental shift away from coal-based electricity resources. Most recently Nevada Energy, Nevada's largest utility, received approval from the Nevada legislature to divest itself of its coal generating resources. The northeast is essentially coal free. The Canadian Province of Ontario announced plans to be coal-free by the end of 2014. These examples and many more across the country underscore the fact that less than a decade ago coal generated electricity accounted for 50 percent of our nation's energy portfolio. That number has plummeted, often dipping well below 40 percent in recent years.

The reason for the trend away from coal is multi-faceted but is influenced by the fact that the nation's existing coal fleet is antiquated and in need of expensive repairs. Colstrip is no different. In 2009, Colstrip Unit 4 had a forced outage that lasted about 6 months. Recently it was reported to the Montana Public Service Commission (PSC) that Unit 4 again went down unexpectedly. NorthWestern Energy told the PSC it expects Unit 4 to be offline for repairs until early 2014. Two long-term forced outages in four years undermine any argument that Colstrip is a reliable and cost-effective source of power. Both incidents occurred during summer months, a season with high peak demand.

As an organization with thousands of members across Montana, we urge the Commission to understand these trends and consider the true costs of the outdated, increasingly unreliable, highly polluting, and liability-laden Colstrip plant.

Regulatory Risks of Ownership of the Colstrip

EPA is in the process of finalizing and implementing longstanding Congressional directives. Many of its impending regulations will implement long-overdue requirements to protect public health, the environment, the economy, and property rights. These regulations will have significant impacts on the economics of outdated coal-fired electricity generation facilities. Colstrip is also the subject of several pending citizen enforcement actions that could result in significant modernization and cleanup costs. These regulatory risks must be factored into the estimated cost to ratepayers.

I. Regional Haze

Federal law requires a reduction in air pollution that affects some of our nation's most treasured federal lands. The Clean Air Act's visibility-protection provisions, 42 U.S.C. § 7491, require states and the EPA to adopt plans to eliminate human caused haze from national parks and other protected federal lands, known as Class I areas. The plans must be designed to make reasonable progress toward eliminating human-caused haze pollution by imposing Best Available Retrofit Technology ("BART") pollutant controls on some of the largest and oldest sources of haze-causing pollution. Regional haze regulations generally require installation of additional air pollution controls to reduce harmful emissions of nitrogen oxides, sulfur dioxide, and particulate matter. Colstrip Units 1 and 2 are subject to BART requirements. In September 2013 EPA finalized its BART determination for Colstrip Units 1 and 2 and is requiring these units to reduce their SO_2 emissions to .08 lbs/MMBtu and their NOx emissions to .15 lbs/MMBtu.[1] These new lower NOx emission limits will require the owners of Colstrip to install new air pollution control equipment. To reduce NOx, Colstrip Units 1 and 2 must install combustion controls and Selective Non-catalytic Reduction (SNCR), at a combined estimated capital cost for both units of approximately $27 million, and additional annual costs of approximately $6.5 million. To reduce SO_2, Units 1 and 2 each must install a spare scrubber and conduct lime injection, for a combined estimated capital cost for both units of $56 million, and additional annual costs exceeding $8 million. The total capital costs of regional haze compliance for Units 1 and 2 is thus $83 million, with an additional $14.5 million each year.

The National Parks Conservation Association, along with MEIC and Sierra Club, believe that EPA's proposal did not go far enough. We appealed EPA's Colstrip BART decision to the 9th Circuit Court of Appeals. We are seeking to reduce emissions limits on all four Colstrip units beyond what the EPA proposed. We believe the record demonstrates that the installation of industry-standard pollution controls like Selective Catalytic Reduction (SCR) are cost-effective, demonstrated to be more effective at removing NOx pollution than SNCR, and are required under the law. Over three hundred coal units across the country have

[1] 77 Fed. Reg. 57864.

already installed SCR technology, including a coal plant in Montana. According to EPA, SCR would have an approximate capital cost of $156 million at Colstrip Units 1 and 2 and an approximate increased annual operation and maintenance cost of $20 million.[2] This appeal also seeks to require additional pollution controls at Colstrip Units 3 and 4 under the reasonable progress program. That appeal is now awaiting a decision by the Ninth Circuit Court of Appeals.

These potential costs must be accounted for in the planning process.

II. Greenhouse Gas Regulations

Coal-fired power plants are the largest industrial source of carbon dioxide emissions today. According to the Environmental Protection Agency's greenhouse gas database that encompasses large emissions sources, Colstrip alone was responsible for about two-thirds of Montana's greenhouse gas emissions in 2011.[3]

On June 25, 2013 President Obama delivered a speech about his plan to make the reduction of greenhouse gas emissions a centerpiece of his second term. He immediately followed this speech with a directive to EPA to move forward with regulating greenhouse gas emissions from new *and existing* power plants. In a memo issued to the Administrator of EPA, the President directed the agency to finalize regulations for greenhouse gas emission from existing power plants by June 1, 2015.

Many western utilities are planning for some form of carbon regulation before 2018. These utilities are planning for a carbon cost in the range of $10-$80/ton. For example, the Northwest Power Planning and Conservation Council uses an average carbon cost of $45 per ton. Many utilities rely on the Council's estimates to plan future resource needs. In California's initial carbon bidding for its cap-and-trade program the cost was about $10/ton, and most experts expect this price to rise. British Columbia has a $30 per ton carbon tax. In addition, federal imposition of a revenue neutral carbon cost is quickly gaining momentum on both sides of the political spectrum, and could occur by 2018.[4]

Until a greenhouse gas regulation is finalized, the exact financial impacts to Colstrip are unknown, but are predicted to be significant. Colstrip emitted 17 million tons of greenhouse gases in 2010 and about 14 million tons in 2011. In evaluating the cost of future resources, the UTC should plan on a carbon price of $25/ton beginning in 2017-2018 that increases from there.

These potential costs must be accounted for in the planning process.

III. Prevention of Significant Deterioration Permitting

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[2] 77 Fed. Reg. 23988
[3] http://ghgdata.epa.gov/
[4] http://www.nationaljournal.com/magazine/the-coming-gop-civil-war-over-climate-change-20130509

The Clean Air Act's Prevention of Significant Deterioration permitting program requires new and modified pollution sources that have the potential to degrade air quality to conduct an analysis prior to receiving a permit for proposed changes. The analysis is intended to verify that cost-effective pollution controls will be installed to protect against unnecessary degradation of air quality. In 2003 and again in 2012, the EPA requested information from the Colstrip owners in investigations of potential violations of these permitting requirements. EPA and PPL resolved the initial request without providing the public with PPL's complete response. EPA's investigation of the 2012 request into potential violations is ongoing.

In April 2010 we requested a copy of PPL's response to EPA's 2003 request. After years of haggling, EPA finally agreed in April 2012 to release important documents to the public. PPL promptly sued EPA to keep that information secret. We are still awaiting the outcome of that court action.

Also in April 2012 the Billings Gazette published a newspaper article entitled, "Buzzing with Activity. $70 million maintenance project brings upgrades to Colstrip plant. More than 500 workers busy refurbishing massive boiler in Unit 1." Shortly thereafter, EPA sent PPL an information request regarding the upgrades. After the article, we also began investigating these reported upgrades to determine if they were done in compliance with the permitting provisions of the Clean Air Act. Our investigation uncovered what appeared to be a dozen instances in which all four Colstrip units have been upgraded without obtaining the necessary prevention of significant deterioration permits. In March 2013 we filed a citizen enforcement action in federal district court in Montana.

The outcome of this citizen initiated enforcement action could be a requirement for the Colstrip owners to go through a permitting process and install modern air pollution control equipment at all four units. These potential costs must be accounted for in the planning process.

IV. National Ambient Air Quality Standards

National Ambient Air Quality Standards (NAAQS) generally impose ambient air quality standards for ozone, lead, particulate, sulfur dioxide, nitrogen dioxide and carbon monoxide. A NAAQS by itself does not require emissions reductions from a specific source. Instead emissions reductions from specific sources could be required if the source causes or contributes to an exceedance of an ambient standard.

EPA is required to regularly review and revise NAAQS based on current health-based scientific literature. It has done so recently for sulfur dioxide, particulates, oxides of nitrogen and ozone. If a source contributes to an exceedance of the standard, it could be required to install updated air pollution control equipment. As previously mentioned, updating air pollution control equipment for sulfur dioxide or nitrogen oxides could cost several million dollars to several hundred million dollars depending on the facility and the extent of the exceedance.

In 2010 EPA updated the NAAQS for sulfur dioxide. Sierra Club contracted with independent air pollution modelers to review Colstrip compliance with the new sulfur dioxide standard. That air dispersion modeling found that Colstrip's emissions likely violate the one-hour sulfur dioxide NAAQS.[5],[6] Nonattainment status for a county requires those sources causing or contributing to the violation to decrease emissions by installing updated pollution controls or curtailing operations. As mentioned above, this cost could be significant.

The potential NAAQS violation near Colstrip place it under a significant risk of requiring additional sulfur dioxide pollution controls. Colstrip has already been ordered to meet lower sulfur dioxide emission limits as a result of EPA's BART determination mentioned above. However, EPA's BART decision was modest. Colstrip may have to meet far lower emission limits in order to comply with the new health-based sulfur dioxide NAAQS.

Again, these potential costs must be accounted for in the planning process.

V. Mercury and Air Toxics Rule

Montana coal-fired power plants are required to control mercury under a state rule adopted in 2007. While all required facilities have been controlling mercury since January 1, 2010, the EPA's more recent Mercury and Air Toxics (MATs) rule is slightly different from the state rule in that it establishes emission limits from coal-fired power plants for ten non-mercury metals, and acid gases in addition to mercury. The rule also establishes work practices to minimize creation of dioxin and furans. Sources could be required to control toxic emissions by installing updated air pollution equipment (i.e., scrubbers for acid gases and baghouses for metals). Generally, the compliance deadline for MATs will be 2015, with an opportunity for a one-year extension for facilities that demonstrate an inability to comply with MATs by the deadline notwithstanding diligent efforts. The units with the greatest potential compliance costs are unscrubbed coal units and those without baghouses. Because the rule does not allow trading, coal units that fail to comply must cease operation.

Colstrip does not have baghouses or modern sulfur dioxide controls. Colstrip must upgrade its technology to comply with MATs. Recent stack tests for Colstrip Units 1 and 2 demonstrate particulate emissions at or above the particulate MATs standard of 0.30 lb/MMBtu. While Colstrip is investigating whether upgrades to existing equipment may suffice, baghouses may be required. PPL submitted an analysis of potential particulate control technologies to EPA that estimated annual costs of an ESP or baghouse at $16-21 million for each unit.[7] Upfront capital costs would be much higher: Multiplying PPL's

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[5] "Air Dispersion Modeling Analysis For Verifying Compliance with the One-Hour SO2 and NO2 NAAQS: PPL Montana – Colstrip Power Plant," Prepared by Camille Marie Sears, June 11, 2012

[6] Memo to Jenny Harbine from Lindsey Sears, Colstrip S02 modeling, Sept. 21, 2012

[7] PPL Montana, Best Available Retrofit Technology (BART) Assessment, Colstrip Generating Station (Aug. 2007).

capital cost estimate at PPL's Corette plant by the four Colstrip units, shows the capital cost of baghouses at two Colstrip units could be $76 million.

Again, these potential costs must be accounted for in the planning process.

VI. Coal Combustion Waste

Colstrip has hundreds of acres of wet coal combustion waste surface impoundments. The State of Montana has acknowledged that Colstrip's impoundments have likely been leaking since they were built in the 1980's. Contamination from these leaking impoundments has already resulted in multiple lawsuits in which Colstrip's owners paid neighboring landowners over $25 million. The cost to actually remediate the hundreds of acres of leaking sludge impoundments will likely be far more expensive.

In June 2010, EPA proposed two primary regulatory options for regulation of coal waste disposed of in landfills and/or surface impoundments: (1) regulation of the materials as hazardous wastes under Subtitle C of the Resource Conservation and Recovery Act ("RCRA"); or (2) regulation of the materials as non-hazardous wastes under Subtitle D of RCRA. The proposed regulatory requirements of both options likely would lead to the accelerated closure of all existing unlined landfills and unlined wet surface impoundments, although the agency's "D Prime" option would allow for the continued use of existing landfills and surface impoundments through their useful life as long as certain environmental and safety standards were met. Under the two primary options being considered by EPA, coal waste disposal practices will be impacted significantly and likely result in significant compliance costs and/or may lead to the closure of existing disposal facilities. EPA's regulations will generally require groundwater monitoring, double lined landfills, closure of existing facilities, and possible conversion to dry ash disposal facilities, at a cost of several million dollars to several hundred million dollars at each coal plant.

EPA is expected to finalize the coal waste rule in 2014. Compliance deadlines are expected in the 2016-2018 timeframe. Puget Sound Energy, a 1/3rd owner of Colstrip, already estimated the costs to comply with EPA's CCW regulations could exceed $300 million.[8] Until EPA finalizes this rule, the total cost of complying with the regulations at Colstrip remains uncertain.

The State of Montana currently has jurisdiction over the regulation of Colstrip's waste disposal facilities under the Montana Major Facility Siting Act. In July 2012 the State entered into an Administrative Order on Consent (AOC) with the owners of Colstrip to address certain issues regarding coal ash disposal. In cooperation with the National Wildlife Federation, our organizations brought a citizen-based enforcement action challenging the AOC as inadequate under Montana law. If successful, this litigation could require upgrades to Colstrip's waste impoundments and cleanup of contaminated groundwater. These long-known remediation risks and associated costs must be accounted for in the planning process.

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[8] Puget Sound Energy's 2012 Press Release on CCW rule.

VII. Rosebud Mine

As a mine-mouth operation, Colstrip relies entirely on coal from the adjacent Rosebud Mine. The Rosebud mine is currently owned and operated by Western Energy Company, a subsidiary of Westmoreland Coal. The Rosebud mine has produced coal for decades, and its costs are steadily increasing as the mine moves to new areas with larger volumes of overburden. A recent industry report identified the Rosebud Mine as producing the most expensive coal in the Powder River Basin, at $16 per ton.[9] These increasing costs could be passed on to ratepayers through cost-plus contracts, which are set to expire in 2019. The cost of coal will likely increase further if and when the contracts are renegotiated with Western Energy for coal from the Rosebud Mine.

If the owners of Colstrip seek an alternative supply of coal, most likely from a different Powder River Basin mine, there will be additional costs associated with the permitting and construction of a rail unloading facility. The construction of this facility could cost tens of millions of dollars. An alternative coal supply may also require boiler modifications and/or additional planned outages, as the Colstrip boilers were originally constructed to burn coal from the Rosebud coal seam (for example, Units 1-2 require coal with a relatively low sodium content).

The Rosebud Mine is also the subject of a recent citizen initiated civil enforcement action that could further increase the cost of coal to Colstrip. The enforcement action challenges the adequacy of the State of Montana's coal strip mining regulatory program in complying with the federal Surface Mining Control and Reclamation Act of 1977 (SMCRA). 30 U.S.C. §§ 1201-1328. Specifically, the enforcement action alleges that the Montana regulatory program has exhibited a pattern of failing to ensure that mining activity does not harm water quality or damage the hydrology of streams and groundwater in Montana, as required by SMCRA.

Conclusion

There are multi-million dollar costs and liabilities that loom for the nation's coal-fired electricity resources, including Colstrip. Puget Sound Energy's ratepayers could eventually be on the hook for many of these financial and environmental risks.

PPL apparently recognizes the risks associated with its coal assets. In September 2012, it announced it would "mothball" the Corette plant. Pete Simonich, PPL Montana vice president and chief operating officer, stated in a news release, "[o]ur detailed analysis has shown that to meet the emission reductions required by EPA's mercury and air toxics standards, we would need to invest $38 million in the Corette plant," and "[w]e simply

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[9] Powder River Basin Coal Resource and Cost Study: Campbell, Converse and Sheridan Counties, Wyoming; Big Horn, Powder River, Rosebud and Treasure Counties Montana. Prepared for Xcel Energy by John T. Boyd Company. September 2011.

cannot justify that level of spending in the current wholesale power market in the Northwest."[10]

Utilities across the country are also recognizing the risks and getting out of the coal business. Even Puget Sound Energy acknowledged the risks last year when it's Vice President of Corporate Affairs, Andy Wappler, said, "[w]e know the end of coal is soon.... We know coal is a dead end."[11] Similarly, when NV Energy announced its plan to close its Nevada coal generation plants, its CEO said, "[w]e are looking at the future of Nevada's energy needs and saying that coal is not part of the long-term future of Nevada.... We think the costs are too great, the environmental concerns and the costs associated with those environmental concerns are too great... Coal is a fuel of the past in our state."

There are credible indicators that PPL may be selling its generation resources, including Colstrip. PPL proposed mothballing its Corette plant because of shifting energy markets and regulatory risks. The Colstrip plant is already contaminating groundwater, emitting enormous amounts of air pollution, and is one of the nation's largest sources of greenhouse gas emissions. In light of the above-described risks, the UTC should work to protect consumers and the environment by ensuring that all of the above-described risks are included in the planning process.

Thank you for your careful consideration of the numerous legal and financial liabilities associated with the ownership of the Colstrip.

Sincerely,

Anne Hedges
Program Director

[10] Billing Gazette, September 20, 2012.

[11] http://www.youtube.com/watch?v=JHdS8OBPyhc&feature=youtu.be. See minute 28:22.