BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

IN THE MATTER OF PACIFICORP, dba PACIFIC POWER, 2019 INTEGRATED RESOURCE PLAN	)))))	Docket No. LC 70

WYOMING COALITION OF LOCAL GOVERNMENTS AND MOFFAT COUNTY, COLORADO JOINT COMMENTS ON PACIFICORP'S UPDATED COAL ANALYSIS

The Wyoming Coalition of Local Governments ("CLG" or "Coalition") and Moffat County, Colorado, submit these joint comments to the Oregon Public Utility Commission ("PUC") on PacifiCorp's 2019 Integrated Resource Plan ("IRP"), and in particular, the Updated Coal Analysis from December 5, 2018 in Docket LC-70, and from the Public Input Meeting on January 24, 2019, February 21, 2019, and March 21, 2019. The Coalition members and Moffat County only recently became aware that PacifiCorp was reconsidering its coal analysis and early retirement of 22 of its coal units, of which 11 units are located in Wyoming and four units are located in Colorado. While the Oregon PUC directed PacifiCorp to complete this analysis on April 27, 2018 (Docket No. LC-67, Order No. 18-138), PacifiCorp made no attempt to involve the affected States, local governments of Wyoming, Colorado, Utah, and Idaho, or other organizations that have a direct stake in the proposed early retirements. PacifiCorp, however, collaborated with the stakeholders involved with the Oregon PUC, most of whom support coal plant closure.

After its December 4, 2018 presentation, PacifiCorp began the process of notifying local governments and communities of Public Input Meetings to be held in January, February, and March of 2019. This notification has been haphazard at best. For instance, Moffat County, Colorado was never contacted. Instead, PacifiCorp is using its own employee meetings to tell resident they will lose their jobs in two years due to plant closures. Similarly, Lincoln County did not receive actual notice and only first heard about it by reading newspaper articles summarizing the December 4, 2018 presentation. The Coalition and Moffat County, through their representatives, have since attended all public meeting held by PacifiCorp.

PacifiCorp states that its Updated Coal Analysis will drive the preferred portfolio for PacifiCorp's 2019 IRP, which will be filed in Wyoming and Utah as well as Oregon, Washington, and Idaho in August of 2019. However, PacifiCorp cannot use the Coal Analysis as it currently stands to make a recommendation related to the companies preferred portfolio because it lacks so much relevant information needed to make an informed decision on retiring the coal plants. PacifiCorp cannot sacrifice its customers in Wyoming and other states for unproven and unreliable renewable resources. Because this process began in the Oregon PUC, the Coalition and Moffat County submit these comments in advance of the filings to be submitted in Wyoming.

I. SUMMARY OF KEY POINTS AND ISSUES THAT PACIFICORP MUST ADDRESS

The Coalition and Moffat County have reviewed the public documents made available in Oregon PUC Docket LC-70 and on PacifiCorp's website, and also attended the recent Public Input Meeting. The Updated Coal Analysis does not address the impact of early retirement of the coal plants will have on the States and local communities where the plants are located. Nor does the analysis document how Rocky Mountain Power will serve these communities when there is no proven storage technology on this scale and such technology is very expensive. Instead, PacifiCorp executives dismiss the economic impacts as minor and as an issue to be addressed later. Publicly available information suggests that PacifiCorp has failed to fully and fairly address the economic impacts especially at the local levels.

- Coal produced on federal land brings in a royalty of 12.5% for surface mines and 8% for underground mines. In 2017, the United States produced about 326 million tons of coal on federal land and received about $543.5 million in royalties. In 2017, Wyoming produced about 273.45 million tons of this coal, which resulted in $427.5 million in royalties. About 2,523,052 tons of this coal were produced on federal land in Sweetwater County. Colorado produced about 5.6 million tons of this coal, which resulted in about $31.8 million in royalties. About 2,257,011 tons of this coal was produced on federal land in Moffat County. The States receive 50% of the total royalties received from federal minerals, on top of the full royalty amount it receives when mining occurs on State lands.

- Wyoming and Colorado also impose severance taxes on all produced coal. In 2017, the Jim Bridger Mine, which PacifiCorp owns two-thirds interest in, had a severance taxable value of about $124.1 million. In 2018, over $6.2 million (about 13.13%) of mineral severance tax on coal was distributed to Wyoming cities, towns, and counties, with another $1.37 million (2.9%) going to the counties for roads. Colorado's net severance tax collections for coal, molybdenum, and metallic minerals was about $6.6 million in 2018. The majority of this comes from coal because molybdenum is about closed and gold mining is very small.

- The coal plants set for early retirement burned the following amounts of coal in 2017 for a total of over 17 million short tons: (1) Jim Bridger - 6.6 million short tons, (2) Dave Johnston - 3.09 million short tons, (3) Naughton - 2.64 million short tons, (4) Craig - 4.02 million short tons, and (5) Hayden - 1,25 million short tons. Early retirement of the coal plants will result in the direct lost tens of millions of dollars of lost revenue to local communities and the loss of a major tax basis.

- Coal mined in Lincoln County is sold the Naughton plant and coal mined in

Sweetwater County is sold to the Bridger plant. Coal from Campbell County supports the Dave Johnston plant, and coal mined in Moffat and Routt Counties, Colorado supports the Craig and Hayden plants.

- The State of Wyoming imposes a $1.00 per megawatt hour tax on wind production, but the first three years after a turbine is first producing are excluded. In 2016, there was about 4.38 million megawatt hours of wind produced in Wyoming that brought about $3.75 million in revenue from the wind tax. How many megawatt hours will PacifiCorp's future wind power farms produce? How often will the turbines shut down?

- Efforts to compare wind against coal revenues appears to understate revenues to the State and local governments from coal, and to omit the federal royalties distributed by the Interior Department to the States. Coal brings in significantly greater severance tax and royalty payments than wind power, which produce only $1.00 per megawatt hour in Wyoming only. PacifiCorp also cites job creation from its wind power plants, planned and future, while failing to address the lost jobs to Wyoming and Colorado counties from the retirement of the coal fire plants and the shut down of the captive mines.

- The coal plants and mines provide the most and highest paying private employment opportunities in Sweetwater County, Lincoln County, Campbell County, and Moffat County. Sweetwater County has about 4,525 individuals employed in mining, quarrying, and oil and gas extraction, with an additional 343 individuals in the utilities industry. Lincoln County has about 618 individuals employed in mining, quarrying, and oil and gas extraction, and an additional 179 individuals in the utilities industry. Campbell County has about 5,838 individuals employed in mining, quarrying, and oil and gas extraction, and an additional 367 individuals in the utilities industry Moffat County has around 627 coal employees. These employees represent a significant percentage of the work force in these rural communities.

The record provided by PacifiCorp fails to explain how existing and planned wind and solar power can replace the early retirement of more than one coal power unit. Not only are the wind and solar projects not all built yet, but they cannot be operated year-round. Wind and solar power may be useful in supplementing and diversifying the resource portfolio that has largely relied upon coal and gas power. However, relying solely on wind and solar power as a substitute for coal and gas power will lead to significant reliability problems in the future. PacifiCorp recently admitted that there is a large reliability factor that must be resolved before any coal units are considered for early retirement. Such solutions are also very expensive and PacifiCorp will ask Wyoming ratepayers to under-write such a capital investment.

The amount of revenue and jobs that the coal plant brings in also cannot be replaced.

PacifiCorp has often stated that wind will replace the lost coal tax and revenues, however there is not even a close dollar to dollar comparison. Further, the development of wind power cannot replace the lost jobs from the coal plants and the coal mines. In Moffat County in particular, the U.S. Bureau of Land Management has recognized in the 2011 Little Snake Field Office Resource Management Plan that there is little to no commercial wind potential in Moffat County. Therefore, wind development will not offset the impact the coal plant and mine closures will have on Moffat County because that renewable resource does not exist in the County.

Finally, the Coalition and Moffat County think another alternative must be considered over early retirement of coal - selling the coal plants and the related customer transmission facilities to a willing buyer at a reasonable price. The coal plants in Wyoming and Colorado still have life and are reliable sources of power for the consumers. If PacifiCorp agrees to sell the coal plants, any value must factor in the cost of environmental compliance to keep the plants operational especially since PacifiCorp has delayed making the requisite improvements over the past 10 years.

The Coalition also has additional questions regarding the Updated Coal Analysis:

- Has PacifiCorp prepared an analysis of the Wyoming service area to address how it will meet the needs of Wyoming customers and the need for reliable power? If so, then could you please make it available to the Coalition and Moffat County.

- Does the Updated Coal Analysis account for the current limit of four hours of storage per wind turbine? Or does it assume a higher limit based on possible future advances in technology?

- Has PacifiCorp modeled and evaluated the planned wind farms' ability to replace coal-fire power in Western Wyoming? If so, then could you please make it available to the Coalition and Moffat County?

- Has any other utility successfully replaced all carbon power with wind and solar? Please provide details.

- If PacifiCorp uses its wind power in Wyoming and Utah to replace coal then what impacts is there on PacifiCorp's customers elsewhere?

III. COUNTIES' INTEREST

The Coalition is a voluntary association of local governments organized under the laws of the State of Wyoming to educate, guide, and develop public land policy in the affected counties and to protect the natural resources within the respected counties. Wyo. Stat. §§11-16-103, 11-16-122, 18-5-201. Coalition members include Lincoln County, Sweetwater County, Uinta County, Sublette County, Lincoln Conservation District, Sweetwater County Conservation District, Uinta County Conservation District, Sublette County Conservation District, Little Snake River

Conservation District, and Star Valley Conservation District. The Coalition serves many purposes for its members, including helping to develop local government plans and policies, the protection of vested rights of individuals and industries dependent on utilizing and conserving existing resources and public lands, the promotion and support of habitat improvement, the support and funding of scientific studies addressing federal land use plans and projects, and providing comments on behalf of members for the educational benefit of those proposing federal land use plans and land use projects.

Lincoln County and Sweetwater County, Wyoming, heavily depend on natural resources, with a large portion of their private sector employment being related to the natural resources industries. The mining industry accounts for a large part of the property tax base for the county. Even the settlement history of these two Counties is defined by the history of mining and oil and gas development. The beneficial use of natural resources has been the basis for the Counties' economy, custom, and culture. As such, the Counties support environmentally responsible resource exploration and development within their boundaries. Sweetwater County Comprehensive Plan, at p.2.8 (Fall 2002); Lincoln County Public Lands Policy, at pp.3-10, 3-32 - 3-34. Under Wyoming law, the Counties benefit indirectly from the Mineral Leasing Act royalties received from the State through amounts put in the highway fund, public school funding, and given to the cities and towns within the Counties' boundaries. Wyo. Stat. § 9-4-601(a)(i), (ii), (v), (vii). The Counties also benefit from state severance taxes on coal produced in Wyoming. Wyo. Stat. §§ 39-14-104, 39-14-801(e)(v) - (vii).

Moffat County, Colorado, also relies heavily on natural resource extraction and energy production. Along with agriculture, coal mining and power generation is the largest export sector in the County and plays a major role in the County's economy and culture. The top taxpayers in Moffat County are comprised entirely of mineral and energy companies, and the highest paying jobs are linked to mining and public utilities. Moffat County Master Plan, at pp.55-58, 92 (June 2003). Under Colorado law, after the State of Colorado receives its 49 percent share of the royalties royalties earned on federal lands under the Mineral Leasing Act then its distributes a percentage to the counties through direct payments and various grant programs. *See* 30 U.S.C. § 191(a); Colo. Rev. Stat. § 34-63-102(5.4). Moffat County also indirectly benefits from severance taxes paid to the state and deposited in local government severance tax fund. Colo Rev. Stat. §§ 39-26-106(1), 39-29-108(2)(b), 39-29-110(1)(b)(I), 39-29-110(1)(c). The counties use these funds to support planning, construction, and maintenance of public facilities and for the provision of public services.

Of the 22 coal units that PacifiCorp has considered for early retirement, 11 units are located in Wyoming and four units are located in Colorado. The Jim Bridger plant is a four unit coal-fired plant located in Sweetwater County, Wyoming, and PacifiCorp owns a 67 percent share in the plant. The Bridger Mine, which PacifiCorp owns a two-third interest, and Black Butte Mine supply the plant and are also located in Sweetwater County. The Naughton plant is a three unit coal-fired plant located in Lincoln County, Wyoming. PacifiCorp owns the plant and buys coal from the Kemmerer Mine, which is owned by Westmoreland Coal Company. The Dave Johnston plant is a four unit coal-fired plant owned by PacifiCorp and located in Campbell County, Wyoming. The neighboring, reclaimed Dave Johnston Mine supplied the plant and now other mines in Wyoming supply this plant.

The Craig Station plant is a three unit coal-fired plant located in Moffat County, Colorado. PacifiCorp owns 19 percent share in the plant, with Platte River Power Authority, Salt River Project, Tri-Stat Generation and Transmission Association, and Public Service Company of Colorado making up the remaining interests. The Colowyo Mine in Rio Blanco County, Colorado, and the Trapper Mine in Moffat County, Colorado, sell to the Craig Station plant. These two mines account for 25 percent of the total coal production in Colorado. The Hayden Station plant is a two unit coal-fired plant located in Routt County, Colorado. PacifiCorp owns 24 percent interest in Hayden Unit 1 and a 13 percent interest in Hayden Unit 2, with Excel Energy and Salt River Project contributing the remaining ownership interest. It is powered by the coal from the Twentymile Mine also located in Routt County, Colorado.

IV. ECONOMIC IMPACTS TO THE STATES AND COUNTIES

PacifiCorp states in its December 5, 2018 Updated Coal Analysis presentation that it "understands the impact of its resource decision on its customers and communities," but saves analysis of these impacts for later "before future resource decisions are made." However, PacifiCorp admits that the Updated Coal Analysis will be a driving factor in developing the Company's 2019 IRP.

The current analysis support early retirement of 13 units by 2022. Included in the early retirement are units from Jim Bridger, Naughton, Craig, and Dave Johnston. Oregon PUC, Dkt. No. LC-70, 2019 IRP Public Input Meeting December 3-4 Presentation at 8-13 (Dec. 5, 2018). The closure of these plants will not only impact the local economies through the loss of jobs, but will also impact the supplying coal mines, miners' jobs, and income the States and counties receive from royalties and severance taxes on coal production.

A. Federal Land Royalties and State Severance Taxes on Coal

For coal produced on federal land, the federal government is authorized to set a royalty at or above 12.5% for surface mines and a rate of 8% for underground mines. 30 U.S.C. § 207(a); 43 C.F.R. §§ 3473.3-2(a)(1) - (a)(2). The states receive 49% of the total royalties from coal produced on federal lands. 30 U.S.C. § 191(a). Pursuant to Wyoming law, the federal royalties received by the State are deposited in the School Foundation Program, Highway Fund, University of Wyoming, to cities and towns for the construction and maintenance of public facilities, and other funds. Wyo. Stat. § 6-4-601(a). The State also distributes 2.25% of the federal royalties to the Highway Fund for construction and maintenance of county roads in the counties where the royalties are attributed. Wyo. Stat. § 9-4-601(a)(i). Pursuant to Colorado law, a percentage of the royalties received by the State are distributed to the counties through direct payments and various grant programs. Colo. Rev. Stat. §§ 34-63-102(5.4)(b) - (c). Generally, the counties where the coal was mined receives the royalties. *Id.*

In 2017, the United States produced about 326 million tons of coal on federal land and received about $543.5 million in royalties. U.S. Department of the Interior, Natural Resources Revenue Data, *Explore Data* (last visited Feb. 6, 2019), https://revenuedata.doi.gov/explore/. Wyoming produced about 273,457,717 tons of this coal, which resulted in about $427,495,146 of royalties. U.S. Department of the Interior, Natural Resources Revenue Data, *Explore Data/Wyoming* (last visited Jan. 21, 2019), https://revenuedata.doi.gov/explore/WY/. About 2,523,052 tons of this coal were produced on federal land in Sweetwater County, Wyoming. *Id.* Colorado produced about 5,608,162 tons of coal on federal land, which resulted in about $31,841,105 in royalties. U.S. Department of the Interior, Natural Resources Revenue Data, *Explore Data/Colorado* (last visited Jan. 21, 2019), https://revenuedata.doi.gov/explore/CO/. About 2,257,011 tons of this coal was produced on federal land in Moffat County, Wyoming. *Id.* In 2018, Moffat County received $382,194.16 from the total royalties received from federal land natural resource development. Colorado Department of Local Affairs, *Direct Distribution - Severance Tax & Federal Mineral Lease* (Aug. 29, 2018) https://www.colorado.gov/pacific/dola/direct-distribution-severance-tax-federal-mineral-lease.

The State of Wyoming receives a royalty of not less than five cents per ton on coal produced from State lands, including the school lands, and as well as a monthly or annual minimum rental payment that is fixed by the board of land commissioners. Wyo. Stat. § 36-6-101(c). The State of Colorado allows the State Board of Land Commissioners to set the royalty on minerals produced on State lands. Col. Rev. Stat. § 36-1-113(1). An advanced minimum and production royalties are determined when the lease is issued and are based on the mineral being mined, the potential for production, and the location. There is a substantial amount of coal that is produced on State lands and the 100% of the royalties received from development on these lands goes directly to support the school systems in each state.

Wyoming and Colorado also impose severance taxes on produced coal. Wyoming imposes a severance tax for surface coal at seven percent and a severance tax for underground coal at 3.75%. Wyo. Stat. § 39-14-104. The counties receive 3.88% and cities and towns receive 9.25% of the severance tax totals distributed pursuant to statute. Wyo. Stat. §§ 39-14-801(e)(v) - (vi), (viii). Another 2.9% goes to the road construction and maintenance funds of the counties distributed pursuant to state law. Wyo. Stat. § 39-14-801(e)(vii). In 2018, the mineral severance tax on coal totaled over $120,243,481.53 in Wyoming. Wyoming Department of Revenue, *2018 Mineral Tax Distribution* (2018), http://revenue.wyo.gov/tax-distribution-reports/mineral-tax-distributions. Over $6,207,059.09 of the mineral severance tax on coal was distributed to cities, towns, and counties, and over $1,370,942.23 of the mineral severance tax on coal was distributed to the road construction and maintenance funds of the counties. *Id.* In 2017, the Jim Bridger Mine, which PacifiCorp owns two-thirds interest in, had a severance taxable value of about $124.1 million. Wyoming Department of Revenue, *2018 Annual Report* at 43 (2018), https://sites.google.com/a/wyo.gov/wy-dor/dor-annual-reports.

The State of Colorado's severance tax is thirty-six cents per ton of coal. Colo. Rev. Stat. § 39-26-106(1). From the receipts received from the severance taxes, 50 percent is credited to the local government severance tax fund. Colo. Rev. Stat. § 39-29-108(2)(b). Then 70 percent of the local government severance tax fund is distributed to those political subdivisions that are impacted by mineral development and used for planning, construction, and maintenance of public facilities and for the provision of public services. Colo. Rev. Stat. § 39-29-110(1)(b)(I). The remaining 30 percent of the fund is distributed to each county or municipality based on the calculation provided by state law. Colo. Rev. Stat. §§ 39-29-110(1)(c)(I), (1)(c)(II)(B), (1)(c)(III). The State of Colorado's net severance tax collections for 2018 was $6,613,885 for coal, molybdenum, and metallic minerals. Colorado Department of Revenue, *2018 Annual Report*, at 70 (July 1, 2017 - June 30, 2018). Moffat County received $112,871.36 from the coal severance tax fund in 2018. Colorado Department of Local Affairs, *Severance Direct Distribution and Federal Mineral Lease Distribution* (2018), https://dola.colorado.gov/sdd/ddSDDTier1.jsf.

The States and local governments rely heavily on all royalty and severance taxes on coal production. With the proposed early retirement of the coal plants in Wyoming and Colorado, the local mines, especially the captive mines, will close. Even the non-captive mines sell most of the coal to the power plants. PacifiCorp owns two-thirds interest in the Jim Bridger Mine that supplies coal to the Jim Bridger plant, and owns an interest in the Trapper Mine in Colorado that supplies the Craig plant. Westmoreland owns the Kemmerer mine, which is where the Naughton plant purchases 75 percent of its coal. Westmoreland is currently in bankruptcy and trying to sell the Kemmerer mine, but the loss of significant coal customer from early retirement of the Naughton plant may face mine closure. Other local mines that supply the plants proposed for early retirement include Black Butte Mine, Colowyo Mine, Twentymile Mine, and other mines in the Powder River Basin in Wyoming. The mines that are captive to the power plants, such as Bridger and Black Butte, will probably cease production because transportation barriers preclude sales to other buyers.

The coal plants considered for early retirement burned the following amounts of coal in 2017:

- Jim Bridger Plant - 6,631,930 short tons
- Dave Johnston Plant - 3,092,470 short tons
- Naughton Plant - 2,645,441 short tons
- Craig Plant - 4,023,323 short tons
- Hayden Plant - 1,253,946 short tons

U.S. Department of Energy, The Energy Information Administration, *EIA-923 Monthly Generation and Fuel Consumption Time Series File, 2017 Final Revision.* This is over 17 million short tons of coal that would possibly not be sold by nearby mines in Wyoming and Colorado under the early retirement scenarios described in the December 2018 analysis. As a result, the local mines may will probably close, and the States would see a combined 17 million short tons of coal, or more, removed from production and excluded from severance tax distributions.

B. Wind Power Revenues

PacifiCorp executives have dismissed the coal revenues as insignificant. For comparison purposes, only the State of Wyoming imposes a $1.00 per megawatt hour tax on wind production. Wyo. Stat. §§ 39-22-103, 39-22-104. However, electricity produced from a wind turbine is not subject to the tax until three years after the turbine first produced electricity for sale. Wyo. Stat. § 39-22-105. The proceeds from the tax are split with 60% distributed to the counties where the generating facility is located and 40% deposited in the state general fund. Wyo. Stat. § 39-22-111. In 2016, there was 4,389,338 MWh of wind produced in Wyoming with the state collecting $3,754,699 from the wind tax. U.S. Department of the Interior, Natural Resources Revenue Data, *Explore Data/Wyoming* (last visited Jan. 21, 2019), https://revenuedata.doi.gov/explore/WY/. The new wind that PacifiCorp intends to build to replace coal will not produce until 2021 and then is exempt from taxation until 2024. Even there-after, this is projected to increase to about $14,000,000 in tax revenue by 2024. This will not replace the hundreds of millions of dollars received from the coal industry.

C. Employment at Coal Plants and Coal Mines

The Wyoming counties and Moffat County both rely upon coal mining as a source of revenue, as well as for employment for its residents. Sweetwater County has about 4,525 individuals employed in the mining, quarrying, and oil and gas industry, which makes up about 20 percent of the employment in the County. Wyoming Department of Administration & Information, Economic Analysis Division, *Sweetwater County Profile* at p. 5 (2017), *available at* http://eadiv. state.wy.us/demog_data/County_Profile.html. The County also employs around 343 individuals in the utilities industry. *Id.* Lincoln County has about 618 individuals employed in the mining, quarrying, and oil and gas industry, which makes up about 10.1 percent of the employment in the County. Wyoming Department of Administration & Information, Economic Analysis Division, *Lincoln County Profile* at p. 5 (2017), *available at* http://eadiv.state.wy.us/demog_data/ County_Profile.html. The County also employs around 179 individuals in the utilities industry. *Id.* Campbell County employs about 5,838 individuals in the mining, quarrying, and oil and gas industry, which makes up about 23.4 percent of the employment in the County, as well as 367 individuals in the utilities industry. Wyoming Department of Administration & Information, Economic Analysis Division, *Campbell County Profile* at p. 5 (2017), *available at* http://eadiv. state.wy.us /demog_data/County_Profile.html. This does not account for the individuals who may commute into the Counties for related work. The Jim Bridger plant employs about 350 people, the Naughton plant employs about 140 people, and the Dave Johnston plant employs around 200 people. The coal mines that supply these plants also average around 300 to 400 employees.

Moffat County has around 627 coal employees. Better City, *Moffat County Comprehensive Economic Development Strategy (CEDS) September 2016 to September 2021*, at 7, *available at* https://www.colorado.gov/pacific/sites/default/files/Moffat%20County%20 CEDS.pdf. The most concentrated industries in the County are utilities, mining, and oil and gas. *Id.* at 32. Craig Station Plant employs about 283 people and the Hayden Station Plant employs around 85 people. The three mines that supply these plants average around 180 to 285 employees.

If PacifiCorp decides that early retirement is the "lowest risk, lowest cost" option for all of the four coal plants, then Sweetwater County, Lincoln County, and Moffat County will see a loss of hundreds of jobs that employ their residents. These job loses cannot be easily replaced and will be devastating for the low populated, rural communities located near the plants and coal mines. The proposed closure will hollow out local communities and economies. Residents probably leave the County for work resulting in the decline of the rural communities and closure of schools and other facilities.

The local governments have also relied upon PacifiCorp's past assurances that any retirement of coal plants, outside of Naughton Unit 3, would not to start for another 10 plus years. Even in PacifiCorp's Energy Vision 2020, the Company described wind power as providing "benefits of diversifying the economy without threatening existing industries and jobs" and that *"[c]oal and gas will remain important industries in Wyoming."* Wyoming PSC, Docket No. 20000-520-EA-17, Rocky Mountain Power Application for Certificate of Public Convenience and Necessity and Nontraditional Ratemaking for Wind and Transmission Facilities, Direct Testimony of Cindy A. Crane at p. 13. PacifiCorp has also said the wind was not for Wyoming customers. PacifiCorp's current Coal Analysis, however, is showing that the coal industries in Wyoming and Colorado are now under a much earlier threat.

V. Mass Exodus of Coal Without a Proven Replacement

The Wyoming Counties and Moffat County question whether PacifiCorp could feasibly retire 13 coal plant units, or any combination thereof, and still meet load and reliability requirements in all states PacifiCorp provides power, including Wyoming. These issues were preliminarily assessed in the December 2018 and January 2019 updates under the capacity contribution and reliability assessment. These assessments raise more questions than answers.

In its latest assessment, PacifiCorp analyzed the nine units judged to save the most in early retirement for a stacked analysis[1] - Hayden 1 and 2, Naughton 1 and 2, Jim Bridger 1 and 2, Craig 1 and 2, and Dave Johnston 3. Oregon PUC, Docket No. LC-70, PacifiCorp's Updated Coal Analysis (Dec. 5, 2018). Hayden 1 (44 MW) and 2 (34 MW) produce about 77 MW of power. Naughton 1 (156 MW) and 2 (202 MW) produce about 357 MW of power. Jim Bridger 1 (354 MW) and 2 (359 MW) produce about 713 MW of power. Craig 1 (79 MW) and 2 (82 MW) produce about 161 MW of power. Finally, Dave Johnston 3 produces about 220 MW of power. In total, these units produce about 1,529 MW of power.

PacifiCorp 2017 IRP and the Certificate of Public Convenience and Necessity ("CPCN") proceedings before the Wyoming PSC in 2018 showed that PacifiCorp will only produce 1,311

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[1] The stacked analysis looked at various combinations of early retirement of the coal plant units, including retirement of two and up to nine units in 2022.

MW of wind by end of 2021. Wyoming PSC, Dkt. No. 20000-520-EA-17, 2017 IRP Update at p. 101 (May 5, 2018). PacifiCorp also stated that there was no need for additional power in Wyoming and the Energy Gateway West transmission line would carry wind power to western customers. The wind projects included the development of the following four wind farms: TB Flats I & II (Carbon and Albany Counties) - 500 MW, Cedar Springs (Converse County) - 400 MW, Ekola Flats (Carbon County) - 250 MW, and Uinta (Uinta County) - 161 MW. *Id.* PacifiCorp considered another nine possible wind power sites. While there may also be about 427 MW of new solar in Oregon and Utah by 2021, that power will not serve Wyoming. *See* PacifiCorp July 26-27, 2018, Public Input Meeting Presentation.

It is clear from the outset, and aside from reliability issues, the proposed wind power and solar projects will not cover Wyoming and other States' needs if all nine units are retired. In the 2017 IRP, PacifiCorp showed a resource need of 527 MW in 2017 that would rise to 1,023 MW in 2021 without considering the new wind projects or any early retirement of the coal plants. Wyoming PSC, Docket No. 20000-520-EA-17, Rebuttal Testimony of Rick T. Link, at p.9 (Dec. 18, 2017) (referencing Table 5.14 of PacifiCorp's 2017 IRP, Volume I). The proposed 1,100 MW of wind projects would only meet 174 MW of the 1,023 MW system capacity need in 2021, with the remaining resource need being met by front office transactions (FOT). *Id.* at pp.9-10. PacifiCorp amended its 2017 IRP to show a capacity need of 204 MW in 2018 and rising to 539 MW by 2027. Wyoming PSC, Docket No. 20000-512-EA-17, 2017 IRP Update, at pp.4-5, Fig. 1-3 (May 1, 2018). This reflected the planned closure of Naughton 3 (280 MW) (presumably to avoid scrubber upgrades) by end of January this year. *See* Wyoming PSC, Docket No. 20000-512-EA-17, 2017 IRP, Volume I, Table 8.17. p.269. Wind and solar will have to replace an additional 280 MW on top of the resource need and lost power from any other early retirement of the coal plant units. The current projects fail to meet these needs. PacifiCorp has also admitted that it would need several years of operations "to fairly judge the capacity factor of individual projects of the Company's wind portfolio as a whole." *See* Wyoming PSC, Docket No. 20000-520-EA-17, Rebuttal Testimony of Chad A. Teply, at pp.14-15 (Dec. 18, 2017). Gas and front office transactions will help to meet load and reliability requirements, but the question is how much additional of both sources are available to cover the lost coal power when both are currently factored into the equation to meet those requirements now?

Also, to operate the system reliably, PacifiCorp must be able to move its resources to manage for variations in load, solar resources, and wind resources. As PacifiCorp stated in its August 14, 2018 filing before the Oregon PUC, "[a]s additional units are retired, the risk of impacts to system reliability increases and more in-depth studies will be necessary to determine possible transmission mitigation ...." Oregon PUC, Docket No. LC-70, PacifiCorp's Coal Analysis (Aug. 14, 2018). PacifiCorp's preliminary reliability assessment also shows that "portfolios in early coal-retirement cases can stress system reliability." Oregon PUC, Docket No. LC-70, PacifiCorp's Updated Coal Analysis (Dec. 5, 2018). The December analysis, showed capacity shortfalls on the two stacked cases analyzed ranging from four to sixteen hours on the peak shortfall day. PacifiCorp is attempting to remedy the reliability issues by adding wind and solar regulation reserves, hydro-resource reserves, increased front office transactions, and battery storage. However, the January 24th presentation continued to show capacity shortfalls in the stacked case that shows early retirement of only three coal units.

Further, the model runs assume normal weather and the cost to remedy these issues has not been factored into the analysis. When more extreme weather conditions are considered, then the possibility of shortfall increases. The modeled runs may show little to no shortfall, but this is not exactly true because the weather on any given day or particular season could change the result. Also, it is unclear whether the model runs take into account the wake effect (both internal and external), which considers the impact the wind turbines from neighboring and within the same wind farm have on each wind turbine's energy production. Finally, PacifiCorp states that it has been running the models to remedy the reliability issues, but there are still questions as to whether the additional reserves are even feasible at the operational stage. These issues with the analysis must continue to be discussed and addressed because the results shared with the public may paint another picture in terms of the potential "benefits" of retiring the coal plants early.

VI. ALTERNATIVE OF SELLING COAL PLANTS

The Oregon PUC directed PacifiCorp to consider early retirement of the coal plants. However, part of PacifiCorp's Integrated Resource Plan should include discussion about the cost/benefit of selling the coal plants to a willing buyer at an appropriate price considering the environmental requirements that must be met to keep the coal plant in operation and ratepayers contribution to capital assets. PacifiCorp's ultimate goal is to go completely renewable, but other companies may want to continue diversification of their resources by continuing to depend upon coal as a flexible and reliable resource. Further, the counties, cities, and/or towns in Wyoming and Colorado support their coal plants and are entitled to acquire the coal plants PacifiCorp intends to retire early. *See* Wyo. Stat. §§ 1-26-804 - 807; Colo. Rev. Stat. §§ 38-1-202(1)(d)-(e), 31-15-707(1)(a)(I).

Also, PacifiCorp has not discussed what the viability of the Jim Bridger, Craig, and Hayden Plants will look like if it walks away from its ownership share in these three Plants. PacifiCorp is the majority owner in the Jim Bridger Plant, but owns a much smaller interest in the two Colorado Plants. Do the other owners intend to keep these three Plants operational and do they intend to purchase PacifiCorp's interest if PacifiCorp walks away? As each ownership share walks away from coal, it reduces the viability of the coal plants and puts a strain on the communities that depend on the plants. A succession plan for these coal plants must be analyzed and considered.

VII. CONCLUSION

PacifiCorp is not in the position to make any recommendation or decision on its preferred portfolio on early retirement of the coal plants. There are a number of unanswered questions regarding reliability of PacifiCorp's power without coal and an incomplete analysis as to the cost of replacing coal power. PacifiCorp cannot sacrifice its customers in Wyoming and other states based on models that speculate on the facts or cannot provide a complete picture of how reliability will be addressed and at what cost.

The Coalition and Moffat County insists that PacifiCorp not rush this decision at the risk of placing unwarranted costs on the ratepayers. PacifiCorp's issues with reliability must be addressed before a preferred portfolio is developed and accepted. PacifiCorp must also conduct an economic analysis that considers the cost of replacing coal power, as well as the impact it will have on the ratepayers and communities that rely upon the coal plants and mines.

The decisions made by PacifiCorp in its Integrated Resource Plan will directly impact the communities and economies of the local governments in Wyoming and Colorado. The Coalition and Moffat County would request that PacifiCorp keep them informed throughout the process and offer the opportunity for the local governments to be heard on the issue of early retirement of coal plants within their borders.

Approved and Submitted by the Coalition of Local Governments on April 3rd, 2019:

Kent Connelly

Kent Connelly, Chairman
Coalition of Local Governments

Approved and Submitted by Moffat County Board of County Commissioners on April 3, 2019:

Don Cook	Ray Beck	Donald Broom
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