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Wyoming Energy Authority Comments

Additional submitted attachment is included below.

WYOMING ENERGY AUTHORITY

September 15, 2020

California Energy Commission
Docket Unit, MS-4
Docket No. 19-SB-100
1516 Ninth Street
Sacramento
California 95814

Re: Docket #19-SB-100; Comments on Draft Report – "SB 100 Joint Agency Report: Charting a Path to a 100% Clean Energy Future"

Dear California Energy Commission:

The Wyoming Energy Authority (WEA) is pleased to submit these comments on the referenced report (Report). On July 1, 2020, the Wyoming Infrastructure Authority merged with the Wyoming Pipeline Authority to create WEA. WEA serves as a unifying organization for Wyoming's energy industries and is also the new home of State Energy Office. WEA's mission is to advance Wyoming's energy strategy by driving data, technology, and infrastructure investments. WEA's vision is to support and promote Wyoming's energy sector by implementing the state's energy strategy; delivering positive economic impact and jobs for Wyoming; fostering an environment for the sustainability and growth of Wyoming's economy; and ensuring Wyoming continues to power the nation.

Background

The State of Wyoming is vitally interested in California's implementation of SB 100, which establishes that eligible renewable energy resources and zero-carbon resource supply 100% of all retail sales to California end-use customers by December 31, 2045. SB 100 also requires the California Energy Commission (CEC), the California Public Utilities Commission (CPUC), and the California Air Resources Board (CARB) to complete and submit a joint agency report to the Legislature regarding implementation of the statute by January 1, 2021. The referenced Report is a draft of the forthcoming report.

Wyoming produces prodigious amounts of both fossil and renewable energy. Wyoming produces fifteen times more energy than it consumes, which means it is the largest net energy supplier among the states.[1] Wyoming sends almost three-fifths of the electricity it generates out of state, and several major interstate projects are in development here to transmit even more electricity to western population centers.[2]

[1] Wyoming State Energy Profile (U.S. Energy Information Administration, Feb. 20, 2020) (available at https://www.eia.gov/state/analysis.php?sid=WY).
[2] Id.

Wyoming supplies energy to California. California's leadership on these topics generally also means that whatever decisions California makes are likely to be influential throughout the region and the rest of the United States. Thus, this proceeding will almost certainly impact Wyoming's energy markets, and thus Wyoming's economy.

The State of Wyoming is a leader in low-carbon energy technologies. Wyoming Governor Gordon has emphasized that the end goal should be reducing atmospheric concentrations of carbon dioxide (CO_2) as opposed to penalizing the use of any specific fuel without considering the climate impacts of that policy decision.[3] For example, through technologies such as Bioenergy with Carbon Capture and Storage (BECCS) – which the University of Wyoming (UW) is researching, as discussed below – coal-fired power plant equipped with carbon capture utilization & storage (CCUS) technology can remove CO_2 from the atmosphere while providing reliable, cost-effective baseload electricity.

Wyoming is confident that it can help California achieve its carbon neutrality goals in the decades ahead. It can do so through both renewable energy and lower-carbon fossil energy achieved through technologies such CCUS. Wyoming's leadership on CCUS is notable on several fronts. Wyoming is:

- ✓ One of the only states that has enacted legislation related to CCUS projects – e.g., Wyoming law defines who owns the pore space, a critical aspect of such projects. Wyoming is also one of the only states with existing CCUS-related infrastructure, such as carbon dioxide (CO_2) pipelines.

- ✓ Wyoming is the only state in the Nation to enact a law that creates a low-carbon/CCUS-based standard for coal-fired power plants that are regulated as public utilities. The law – H.B. 200 – was enacted earlier this year and is related to prior legislative enactments related to Wyoming's coal fleet (e.g., S.F. 159).

- ✓ Now only the second state in the Nation to be granted primacy from the U.S. Environmental Protection Agency (EPA) for implementation of the CO_2 injection regulations under the Class VI of the Safe Drinking Water Act's Underground Injection Control program. EPA announced this decision just last week.

- ✓ An international leader in many aspects of CCUS technology. Researchers at UW, for example, are currently funded by the U.S. Department of Energy (DOE) to advance a potential large-scale integrated CO_2 storage project in Gillette, Wyoming.[4] Several years ago, comparable geologic assessments were conducted at another site in the state.[5] UW is part of the Montana State University-led WAFERx project, which is funded by the

[3] See https://www.wyofile.com/can-mark-gordon-save-coal-and-stop-climate-change/.
[4] See https://www.uwyo.edu/cegr/research-projects/carbonsafe-p2-dryfork.html.
[5] See https://www.uwyo.edu/cegr/research-projects/project-wy-cusp.html.

- ✓ National Science Foundation to evaluate the feasibility of the widespread adoption of BECCS in the Upper Missouri River Basin.[6]

- ✓ Home to the Wyoming Integrated Test Center, where researchers test the utilization and management of CO_2 that is sourced from a coal-fired power plant.[7]

Comments

SB 100 does not provide a definition for "zero-carbon resource." SB 100 uses the phrase "zero-carbon resources," which the joint agencies have interpreted to mean resource that satisfy either or both of the following criteria: (1) meets the requirements for RPS-eligibility set forth in the most recent RPS Eligibility Guidebook; or (2) has zero onsite greenhouse gas emissions. As to the latter, in the SB 100 implementation process, the joint agencies have taken the position that a "Generic Firm Dispatchable [Zero-carbon] Resource" "could represent several technologies, such as gas with carbon capture and sequestration technologies."[8] We agree.

With respect to a "Generic Firm Baseload Resource [Zero-carbon] Resource, the joint agencies have taken the position that this resource "could represent several technologies, such as imports of emerging nuclear generation technologies …."[9] Unfortunately, the joint agencies have decided to exclude coal-fired generation with CCS because "it is incompatible with the state's environmental and public health priorities."[10] If coal-fired power plants in Wyoming can technically, economically and safely deploy CCS/CCUS technologies – either as retrofits or new builds –that meet all applicable GHG emission standards, we believe that the resulting electricity should qualify in California.

We believe that it is imperative that the joint agencies interpret "zero-carbon resource" to include fossil fuels – including coal – that are equipped with CCS/CCUS.

Wyoming envisions the day when low- or decarbonized fossil energy projects are sited here, with the resulting energy exported to states such as California. For a variety of reasons – e.g., lower population density, reduced seismic risks, existing CCUS infrastructure, existing projects, CCUS-related laws, etc. – Wyoming is poised to support the build-out of a CCUS industry that supports the carbon neutral requirements and goals of states in the region.

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[6] See https://waferx.montana.edu/the_project.html.
[7] See https://www.wyomingitc.org/about/.
[8] "2021 Senate Bill 100 (SB 100) Joint-Agency Report, Modeling Framework and Scenarios Overview," p.3.
[9] Id.
[10] Id. p. 4.

On September 3, 2020, Wyoming Governor Gordon announced that DOE had completed a CCUS study for several Wyoming coal-fired power plants.[11] The study's coal was to evaluate the potential opportunities for retrofitting existing coal-fired power plants in Wyoming with CCUS technology, the economic impact, and the CO_2 emission reductions compared to alternatives. The study compared CCUS use to an alternative case in the most recent PacifiCorp 2019 integrated resource plan (IRP). The results showed CCUS retrofits provided the following potential benefits:

- Reduced CO_2 emissions by 37% (100 million metric tons) more than the 2019 IRP preferred portfolio (henceforth referred to as Baseline IRP);
- Produced avoided costs for CO_2 emissions that are $24 per ton ($21.5/metric ton) less expensive than the Baseline IRP;
- Reduced the amount ratepayers could pay by approximately 10% less per month than the Baseline IRP;
- Lifted Wyoming employment benefits up to 5 times higher than employment benefits from implementing the Baseline IRP; and
- Produced higher local and state revenue from property, sale, severance, and other associated coal taxes as well as higher federal royalty payments.

Financing CCUS projects in Wyoming and elsewhere is anticipated to be facilitated under the amended federal section 45Q tax credit.[12]

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We appreciate the opportunity to submit these comments.

/s

Dr. Glen Murrell
Executive Director

[11] https://governor.wyo.gov/media/news-releases/2020-news-releases/us-department-of-energy-and-state-of-wyoming-partner-on-study-showing-poten.

[12] 26 U.S. § 45Q (2019). Revised guidance to implement this tax incentive should be finalized by the Internal Revenue Service in the coming months.