

Montana Renewables Development Action Plan

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Bonneville
POWER ADMINISTRATION



Introduction

As the Pacific Northwest's energy economy increasingly relies on clean energy, the state of Montana has an opportunity to play a significant role by growing its renewable resource base. Montana currently has more than 700 megawatts of installed wind capacity, but data shows that the state has the potential to develop significantly more renewable resources. This paper addresses the barriers to tapping Montana's renewable energy potential.

Background

Over the last decade, renewable resources in the Northwest have grown exponentially. In 2005, the Northwest Power and Conservation Council's (Council) Fifth Power Plan identified up to 6,000 megawatts of developable and potentially cost-effective wind power in the region. The power plan also recognized barriers and uncertainties surrounding the development of wind power. Accordingly, the Council called for a strategy to resolve those uncertainties. In response, a broad assembly of stakeholders produced the Northwest Wind Integration Action Plan in March 2007, and many of that plan's action items have been achieved. Today, more than 7,800 megawatts of wind capacity is installed in the Northwest.

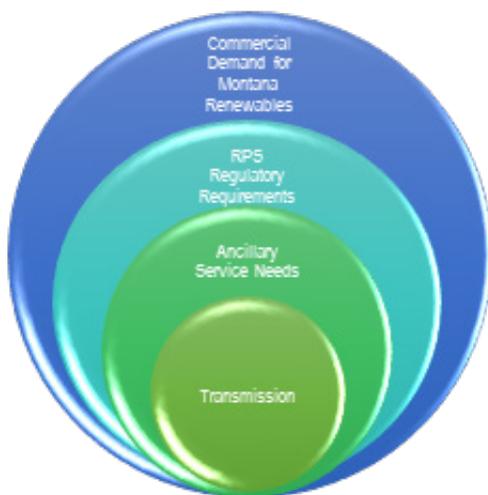
Eleven years later, this Montana Renewables Development Action Plan supplements that plan to specifically address potential barriers to development of wind and other renewable resources in Montana.

The action plan is the result of a partnership between the state of Montana and the Bonneville Power Administration with critical contributions from stakeholders, who jointly hosted a series of conversations focused on the potential to develop a sustainable long-term strategy to support the development of potential new renewable energy resources in Montana. The extensive participation of many parties, including public and private utilities, regulators, advocates and renewable resource developers, has improved regional understanding of the opportunities and barriers to development of renewable resources in Montana. Through this collaboration, the region is moving forward to make new resources in Montana a reality.

Several developments are driving the focus on this geographic area:

- The cost of utility-scale renewable resources continues to decline.

- Although there is not an abundance of flexible reserves, utilities have gained experience and developed new tools for integrating renewables.
- Montana adopted a renewable portfolio standard of 15 percent by 2015.
- Oregon's renewable portfolio standard calls for 25 percent by 2025, and 50 percent by 2040.
- Washington's current renewable goal is 15 percent by 2020.
- Utilities are actively soliciting bids for renewable resources in the Pacific Northwest, not only to meet regulatory requirements, but to serve voluntary green power programs and the need for energy and capacity generally.
- Production tax credits for wind energy production and the investment tax credits for solar energy production will begin to phase out by the end of 2019, which means wind and solar resources will be most competitive in the near term.
- Units 1 and 2 of the Colstrip coal-fired power plant in Montana will retire from power production no later than 2022.



Factors influencing the development of renewables in Montana

The factors influencing the development of Montana's renewable resources are nested, with the availability of transmission being an important element. Other trans-

mission factors include transmission service rates and how transmission providers manage their queues for providing new transmission service. Developers must also acquire the ancillary products and services needed to balance and move the energy to load, as well as consider the characteristics the resources must have to count toward the renewable portfolio standard requirements of the western states. These are all elements of supply and demand, which will ultimately determine how much and how soon Montana-based renewable generation will be acquired by purchasers outside of Montana.

The intent of this project was to explore the physical and process issues facing Montana renewable resource development. The project arose from a diverse array of interested stakeholders with a mutual desire to explore the opportunities and challenges facing that development. The project's activities have culminated in this action plan, which includes an exploration of these nested issues, clarification of facts, development of a range of potential solutions to each of the barriers identified, and recommendations for resolution.

This effort has produced significant findings regarding the ability of Montana to provide renewable resources to the Pacific Northwest and has resulted in recommendations to enable this resource development. This action plan identifies 28 significant findings and 19 actions intended to remove barriers to the development and export of Montana renewable resources.

Project structure

The project was sponsored by Montana Governor Steve Bullock and BPA Administrator Elliot Mainzer. It was organized in a structure of three working subcommittees, guided by a steering committee. The work addressed (1) commercial policy, (2) planning, and (3) operational issues.

The three subcommittees worked collaboratively toward consensus of recommendations to resolve issues. All decisions, options or recommendations developed in this process regarding BPA are subject to additional subsequent processes, such as a BPA rate case, tariff filing or policy process before they may be adopted. In addition, jurisdictional entities are subject to state and Federal Energy Regulatory Commission filings and other regulatory requirements before adoption.

Summary of conclusions

The project subcommittees concluded that the environment for Montana renewables development is positive and would be enhanced by the actions recommended in this report beginning on Page 16. One of the project's significant conclusions is that the delivered cost of Montana renewables appears to be competitive with other renewable resources in the Northwest.

Even without further action, this process identified enough transmission capacity to move 360 megawatts of new renewables from Montana to parts of the Northwest. More transmission capacity will be available after the retirement of two units at the Colstrip Power Plant by no later than 2022, and the capacity could be increased further with the investment of relatively minor transmission upgrades, compared to the cost of building new transmission lines.

The process found that the existing transfer capability of the Colstrip Transmission System can, with relatively minor investments (compared to new line builds), support a one-for-one replacement of Colstrip generation with new resources, including variable energy resources.

In addition, there is enough available Dynamic Transfer Capacity (DTC) today at the Garrison interchange to accommodate the dynamic transfer of over 1,000 megawatts of wind. DTC is necessary for integrating variable resources—it is consumed when resource output fluctuates within the operating hour. The existing DTC can be doubled at relatively low cost if necessary.

Some of the actions identified in this process have already been completed. For example, BPA and NorthWestern Energy resolved a long-standing dispute over 184 megawatts of available transmission capacity from Montana to BPA. The resolution gives certainty to potential transmission customers looking for transmission capacity from Montana to markets in the west. Going forward, potential purchasers can acquire transmission capacity from either BPA or NorthWestern. If requested from NorthWestern, the capacity will be purchased from BPA at BPA's posted rate, and will result in the provision of a continuous path from Montana to BPA's network without being charged BPA's Montana Intertie rate. The Colstrip parties will receive any appropriate credit for any capacity purchased from BPA.¹

By following through on the remaining action items, the conditions for developing renewable resources would be further enhanced. These recommended actions range from modifying transmission agreements that may be needed to enable other parties to use the Eastern Intertie, to following through with work underway to relieve congestion on BPA's system to aid in delivery to Pacific Northwest load centers.

¹ Details of the agreement between NorthWestern and BPA can be found at Appendix D. The resolution must be approved by FERC.