

The Benefits and Costs of Net Metering Solar Distributed Generation in Wyoming

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Executive Summary

This report provides a review of net energy metering (NEM) in Wyoming. The current penetration of renewable distributed generation (DG) (rooftop solar) in Wyoming is relatively low – there are about 10 MW of solar DG on-line today, and this customer-sited resource is growing by about 3 MW per year.

This report includes a benefit-cost analysis of the impacts on ratepayers of the net metering of solar DG in the service territories of several utilities in Wyoming. The utilities covered in this report include PacifiCorp (dba Rocky Mountain Power [RMP]), the largest investor-owned utility (IOU) in the state and two rural electric cooperatives (RECs) – High Plains Power (HPP) and Carbon Power & Light (CP&L).

The principal conclusions of our analysis are as follows:

1. **Net metering does not cause a cost shift to non-participating ratepayers.** As a result, in the long-run, deployment of solar DG will not have an adverse impact on the utility's rates or cost of service. On average, utility bills will decline.
2. **Modifications to net metering are not needed** to recover the utility's full cost of service over time from net metering customers.
3. **Solar owners in Wyoming face a high cost burden because of the economics of electricity prices and system costs.** Any reduction in the compensation provided to rooftop solar customers is likely to be detrimental to the growth of this resource, although these economics may improve as solar costs continue to fall. This cost burden accounts for the modest amount of solar adoption to date in the state.
4. Solar DG is installed based on individual customer decisions, and customers have the right under federal law (PURPA) to interconnect these systems to the grid and to sell their excess generation to the utility at a state-regulated rate based on avoided costs. Although such installations are not planned or controlled directly by utilities, from a resource planning perspective, **solar DG is a cost-effective resource** for utilities in Wyoming.
5. There are **significant, quantifiable societal benefits from solar DG**, including public health improvements from reduced air pollution.
6. Solar DG also provides other important benefits that are difficult to quantify. These include the **enhanced reliability and resiliency** of customers' electric service because solar DG is a foundational element for backup power systems and micro-grids that can provide uninterrupted power when the utility grid is down.
7. Distributed generation also **enhances customers' freedom**, allowing them to choose the source of their electricity, and results in **customers who are more engaged and better informed** about how their electricity is supplied. The choice of using private capital to install solar DG on a customer's private premises **leverages a new source of capital to expand Wyoming's clean energy infrastructure.**