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Sent: Sunday, March 24, 2019 2:30 PM  
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Subject: Case Comment Form: Russell Graves

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Name of Utility Company: Idaho Power

Comment: As Idaho Power evaluates the costs and benefits of solar on the grid, I would like to request that they also re-evaluate their solar permitting process in light of modern equipment costs and system designs.

When going through the permitting process for a large, flexible, battery backed solar install, I discovered that the system size limits are based purely around panel nameplate capacity, regardless of panel orientation, inverter configuration, or any other system parameters. If the STC nameplate capacity of the panels (which is a poor estimate of real world production to start with) exceeds the local transformer capacity, the system is not allowed. Even if installed inverter capacity cannot damage the transformer, a significantly overpaneled system cannot be installed under current Idaho Power guidelines due to concerns about transformer damage.

As the cost of panels continues to drop, this limit should be relaxed to allow for "grid-friendly" systems that have a higher panel to inverter ratio than a south facing system. A system consisting of east and west facing panels, paired to less inverter capacity than the panel area, will cost effectively provide a far better match between production and consumption for a typical residential home, and better match grid demands - but this sort of system (if large) is difficult to get approved right now, because of the overly simplistic guidelines for permitting.

If and when Idaho Power changes their rate schedules for solar customers away from a pure 1:1 kWh net metering, the changes must allow for more flexible system design. As storage costs drop and panel costs drop, system designs can become more flexible to better match production and consumption - to the benefit of both the customer and the larger grid. Allowing for flexible system design helps reduce use of the grid without paying for it, as the current net metering schedule allows.

I encourage Idaho Power to relax the restrictions on system design, and to use an engineering-based analysis to protect their power system instead of a simple comparison. A system with 11kW of inverter export capability cannot damage a 15kW transformer, even if 20kW of panel is connected to charge batteries. But, that 20kW of panel area can both provide for home power and export surplus during times of peak demand, and can allow the home to run with minimal grid interaction during partly cloudy days that, currently, would require pulling from the grid.

If the rate schedules are to change away from 1:1 net metering, I would like to see time of use schedules for solar customers that encourage matching with the grid needs. Expensive morning and evening

power, paired with very cheap overnight power (from the base load generated by the dams) would match well with grid needs, and would encourage systems that match generation and demand. Inexpensive overnight power would also be useful for those with electric vehicles, which make a tremendous amount of sense for those in rural areas.

Thank you for your consideration!

Russell Graves

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