

October 30, 2017

The Honorable Rick Perry
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

Re: EERE-2017-OT-0056

Costs and Benefits of Net Energy Metering: Request for Information; Notice of request for information (RFI)

Dear Secretary Perry:

As the Department of Energy continues to develop policy recommendations, it is important it use taxpayer money wisely by ensuring robust policy analysis, not biased studies that serve the interest of fossil fuel interests, ALEC, and the Koch Brothers. Given the anti-renewable energy bias shown by the current administration, we view this proposed study as an attempt to undermine the growth and benefits of clean, renewable energy by rolling back net metering in the United States. We hope this is not the case.

Net metering has made it economically possible for homeowners and communities to invest in a more robust distributed solar energy system, while saving money on energy needs.¹ This innovative public policy has helped fuel the acceleration of rooftop solar; if structured properly, it can also foster equitable and rapid development of clean renewable energy. Public policies that support net metering at the retail rate are essential to continuing progress towards a clean energy future.

As the Department makes policy recommendations for net metering, or any matter of our energy future, it must consider avoided costs of climate change and related public health impacts. The Department should also include an analysis of the ways that net metering policies can help increase access to affordable clean energy in low-income communities. Excluding these factors in a study of net metering, as the Department of Energy is attempting to do, will fail to provide an accurate picture of our energy system.

The Department must include costs and benefits of distributed solar generation beyond distributed solar's impact on net metering, as well as indirect cost/benefits (e.g., societal impacts, network effects) that go beyond what is included in existing analyses. Limiting the scope of the study in this way, as the Department proposes, will assure that the results are skewed towards policy decisions that will undermine progress toward a renewable energy future and will harm US citizens in years to come.

¹ Gagnon, Pieter and Ben Sigrin. NREL. "Distributed PV Adoption—Sensitivity to Market Factors." February 2016 at 4 and 24.

Grid Costs

Distributed generation can reduce cost of energy grids by reducing the need to make costly upgrades to expensive and damaging energy distribution systems.² The rise of distributed solar can also “significantly increase the resiliency of the electricity system” according to the Department’s own analysis.³ Rooftop solar provides reliable power during the peak, late afternoon demand periods when utilities need it most, reducing the need for costly capacity upgrades and reliance on dirtier fossil fuel “peaker” power plants.⁴

Limitations on Net Metering Hinder Solar Development

Limitations on net metering have throttled the development of renewable energy. In Massachusetts, \$78 million in potential solar energy is not being developed because of caps on net metering.⁵ In Hawaii, imposition of fixed costs, as well as decreasing rates energy producers receive, resulted in steep declines in solar energy development.⁶ The Nevada Public Utility Commission (PUC) allowed utilities to triple rooftop solar fees, but also cut the price paid to homeowners for surplus electricity by two-thirds. This led to a massive reduction in solar installations, creating significant job loss, before the policy was reversed.⁷

Reduce Energy Generation Costs

The cost of solar panels and accompanying batteries are dropping rapidly, due to economies of scale and technological breakthroughs. Despite the downward trend in cost, the upfront cost of solar panels and batteries can put them out of reach for many people. Net metering has helped offset the cost of financing solar panels and batteries, reducing the payback period and incentivizing conservation.

More than half the costs of rooftop solar are not the panels themselves but installation, permitting, financing and other business costs.⁸ Today, a typical rooftop solar array can cost about \$20,000 to install — still \$14,000 after federal tax rebates.⁹ Purchasing rooftop solar may make the most financial sense, but these upfront costs force most people to take out loans, while

² Poullikkas, Andreas. “A comparative assessment of net metering and feed in tariff schemes for residential PV systems.” *Sustainable Energy Technologies and Assessments* 3. April 10, 2013. At 2.

³ DOE. National Renewable Energy Laboratory (NREL). “Distributed Solar PV for Electricity System Resiliency.” NREL/BR-6A20-62631. November 2014 at 1.

⁴ Farrell, John. Institute for Local Self-Reliance. “Rooftop Revolution: Changing Everything with Cost-Effective Local Solar.” March 2012 at 16; Acadia Center. “Value of Distributed Generation.” April 2015 at 2; Rogers, John and Laura Wisland. Union of Concerned Scientists. “Solar Power on the Rise.” August 2014 at 3.

⁵ <https://www.seia.org/research-resources/stalled-projects-massachusetts-due-nem-caps>

⁶ <https://www.greentechmedia.com/articles/read/rooftop-solar-in-hawaii-crashes-with-loss-of-net-metering-lack-self-supply#gs.S1xgDfM>

⁷ <https://www.greentechmedia.com/articles/read/nevada-regulators-retore-retail-rate-net-metering-in-sierra-pacific-territo>

⁸ Motyka, Marlene and Susanna Sanborn. Deloitte Center for Energy Solutions. “US Solar Power Growth through 2040: Exponential or Inconsequential?” September 2015 at 7.

⁹ Gorey, John. “Are solar panels worth it?” *Boston Globe*. February 14, 2017.

solar companies also offer to finance rooftop panels that homeowners either lease or pay a monthly fee for lower-cost solar power.¹⁰

Subsidies

Net metering is not a subsidy, but rather a way for distributed solar energy producers to get a fair price for the energy they generate. If distributed solar energy producers are reimbursed at less than the retail electricity rate, then the electricity they generate can serve as a subsidy for the utilities that will sell this power for more than they pay the party who generated the energy.

Not only will utilities unduly profit from underpaying solar electricity suppliers, but any fair study of net metering must also consider the ongoing, direct subsidies to the fossil fuel companies. When evaluating costs of renewable energy, it is important to consider the cost of subsidies of energy and not just the cost at the customer's meter. The United States subsidizes the use of fossil fuels at an estimated \$20 billion per year. This does not include avoided costs of health, or costs associated with the military's role in securing fossil fuel delivery networks. Taking avoided cost into account, the International Monetary Fund estimates that global subsidies for fossil fuels are at around \$1.6 trillion¹¹.

Making these panels more affordable for all

Despite dropping prices for solar panels and battery storage, upfront cost can make solar economically inaccessible for many lower-income households.¹² Nationally, families earning under \$40,000 annually (about two-fifths of all households) account for less than 5 percent of rooftop solar panels.¹³

Arizona, New Jersey and Missouri have had more families buying rooftop solar, with the majority installed in modest, median-income neighborhoods.¹⁴ But more innovative and targeted policies are needed to ensure that all homeowners can access rooftop solar.¹⁵ The California Multi Family Affordable Solar Housing program provides fixed, up front, capacity-based incentives for qualifying solar energy systems. In Minnesota, the Rural Renewable Energy Alliance helps make solar affordable through programs targeted at low-income communities. The Roanoke Rural Electric Cooperative in North Carolina is utilizing Pay As You Save and Inclusive Financing to help expand net metering benefits to low-income households, including

¹⁰ PwC. "Financing US Residential Solar: Owning, Rather than Leasing, Will Bode Well for Homeowners." August 2015 at 2 to 6; Rogers, John and Laura Wisland. Union of Concerned Scientists. "Solar Power on the Rise." August 2014 at 5.

¹¹ Coady, David. IMF Working Paper: How Large Are Global Energy Subsidies?". May 2015. At 29.

¹² Feldman, David, Anna M. Brockway, Elaine Ulrich and Robert Margolis. "Shared Solar: Current Landscape, Market Potential, and the Impact of Federal Securities Regulation." National Renewable Energy Laboratory. April 2015 at 1.

¹³ Mueller, James A. and Amit Ronen. "Bridging the Solar Income Gap." GW Solar Institute. 2015 at 2.

¹⁴ Rogers, John and Laura Wisland. Union of Concerned Scientists. "Solar Power on the Rise." August 2014 at 6; Missouri Energy Initiative. "Net Metering: The Benefits and the Costs." Winter 2015 at 12.

¹⁵ Rogers, John and Laura Wisland. Union of Concerned Scientists. "Solar Power on the Rise." August 2014 at 6.

low-income families who are not homeowners. Net metering, alongside programs like these, can help ensure low-income communities are able to access the benefit of clean, renewable energy.

Net metering can help support community solar projects, which expand access to clean renewable energy to people who otherwise would not have access to clean energy. Renters, people with low-incomes and people with property limitations for solar panels can join these projects, which allow community members to build solar farms to share the benefits of net metering.

As the Department proceeds with this study, it must take into account the full picture of net metering's benefits, including the financial, social, public health and environmental benefits of promoting and encouraging a rapid transition to clean, renewable energy sources. Any study that fails to do so would be an abdication of the Department's legal obligation. Furthermore, limiting the scope of the study will only lead to poor policy choices that benefit outmoded sources of electric power generation, and threaten the transition to the clean, renewable energy which our nation needs, and our citizens deserve.

Sincerely,

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