

Public Comment

June 22, 2023

RCEA

Board of Directors

Regular Meeting

3. Non-Agenda Item Public Comment

Hi Lori,

Received this earlier today.

From: Jesse Noell [REDACTED]
Sent: Thursday, June 8, 2023 12:24 PM
To: Redwood Coast Energy Authority <info@redwoodenergy.org>
Subject: Comment for the RCEA Board Meeting

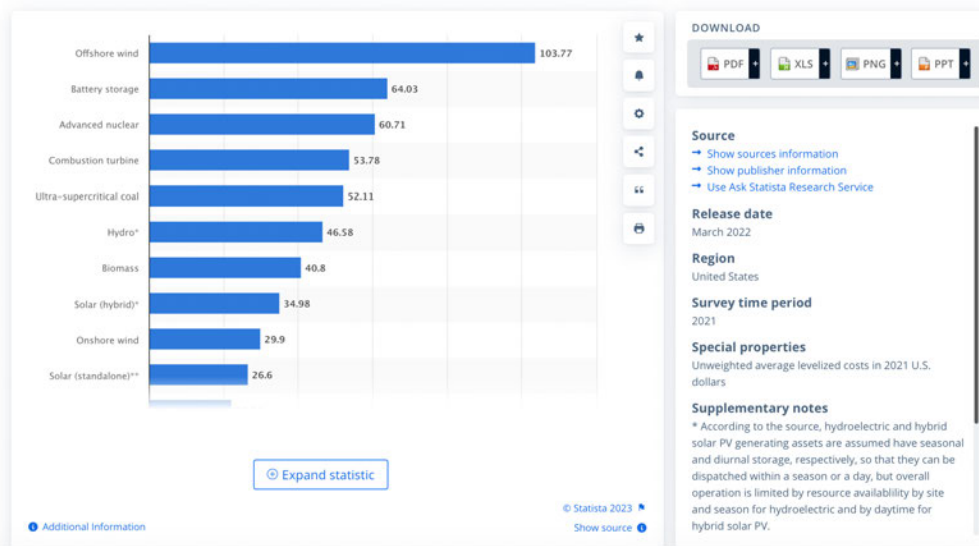
I have several questions for the Board Meeting:

- 1) Has RCEA factored in the impact costs of habitat degradation from utility scale solar's to desert or scrublands ecosystems, and offshore wind's to the marine ecosystem, and biomass's to forestland ecosystems or human health?
- 2) What are the impact costs of placing dark colored solar panels in areas of high albedo desert or grassland, or wind turbines that convert the smooth laminar flow of high humidity air into drier air with high turbulent kinetic energy levels, or biomass's emissions of toxins, heat, and GHGs? These impact costs include the cost of drawdown cooling to offset the heat which otherwise will disrupt the atmosphere (storms, floods, fires), increase crop failures, melt ice caps creating sea level rise, and induce permafrost melt and methane hydrate release and widespread boreal forest fire feedbacks. How do the costs compare with the alternative of solar rooftop + battery and EV transportation?
- 3) Solar rooftop has already achieved grid parity where the cost to the business owner or homeowner of generating electricity is less than the cost of transmitted grid power; so does RCEA's business plan make economic sense?

Relevant supporting information to be considered:

Estimated levelized capital costs of electricity for new power plants in the United States with operation start in 2027, by energy source

(in U.S. dollars per megawatt hour)



Thinking of going solar? Prices are approaching the cost of grid electricity, but only in some places – so far. joncalles/flickr, CC BY-SA

The National Renewable Energy Laboratory this week said that rooftop solar panels have the potential to generate nearly **40 percent of electricity** in the U.S. But what about the cost of going solar?

Many people ask when the cost of producing power from solar photovoltaic (PV) panels will be equal to or less than buying from the grid – a point called “grid parity” that could accelerate solar adoption.

But in asking the question, they often compare apples to oranges and forget that the answer varies from place to place and from one type of installation to another.

For example, electricity from utility-scale solar systems (typically large arrays where panels slowly change tilt and orientation to face the sun all day) usually costs less than electricity produced from solar panels fixed on someone’s home. Also, residential electric rates, on average about **12 cents per kilowatt-hour** in the U.S., are much higher than wholesale electric rates – the price utilities pay to power generators – which are usually **less than 4 cents per kilowatt-hour**.

Author

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Disclosure statement

Joshua Rhodes abides by the disclosure policies of the University of Texas at Austin. The University of Texas at Austin is committed to transparency and disclosure of all potential conflicts of interest. He has filed all required financial disclosure forms with the university. Joshua Rhodes has not received any research funding that would create a conflict of interest or the appearance of such a conflict. In addition to research work on topics generally related to energy systems at the University of Texas at Austin, Joshua Rhodes is an equity partner in IdealSmith LLC, which consults on topics in the same areas of interests. The terms of this arrangement have been reviewed and approved by the University of Texas at Austin in accordance with its policy on objectivity in research.

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Cost benefits of scaled Community Solar:

Residential Photovoltaics (RPV)

Residential PV systems are small DPV systems installed on rooftops, most commonly on tilted roof surfaces that face roughly south (± 90 degrees). Reducing LCOE for RPV systems requires improvements in the same parameters listed in Table I. In addition, the size of a residential system has a significant impact, with larger systems having a lower cost per watt and a lower LCOE. Residential systems are typically sized so that their annual energy production matches the energy consumed on-site. In 2020, this typically required 10 – 30 modules.²⁹ By 2030, increasing use of electric vehicles and building electrification could more than double the number of modules needed per residence, so that the size of RPV systems will increasingly be limited only by the amount of suitable roof space.

The financial arrangements for RPV systems are quite different from UPV systems, because residential systems are typically financed by the homeowner rather than by investors. For homeowners who have equity in their homes, the lowest-cost financing available is a mortgage-backed home-equity loan. The discount rate that describes how homeowners perceive the value of benefits that won't be received until years later is also different from that of investors who fund UPV systems. Also, since homeowners are not in the business of selling the electricity they produce, there is no profit on which to pay taxes and no asset depreciation to deduct. Despite these extensive differences between the financing of RPV versus UPV, the effective cost of capital taking into account the perceived time value of money is remarkably similar, at 5 – 7% per year.

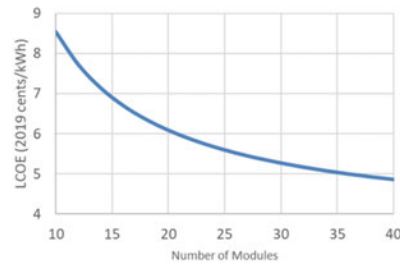
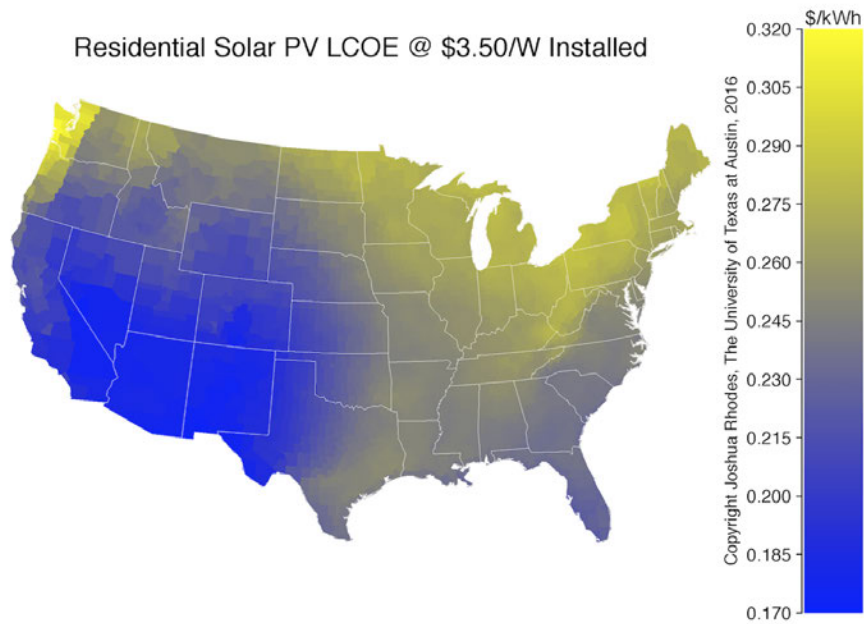


Figure 5. Impact of RPV system size on LCOE (1.63 m² modules @ 25% efficiency).



LCOE of residential solar across the U.S.

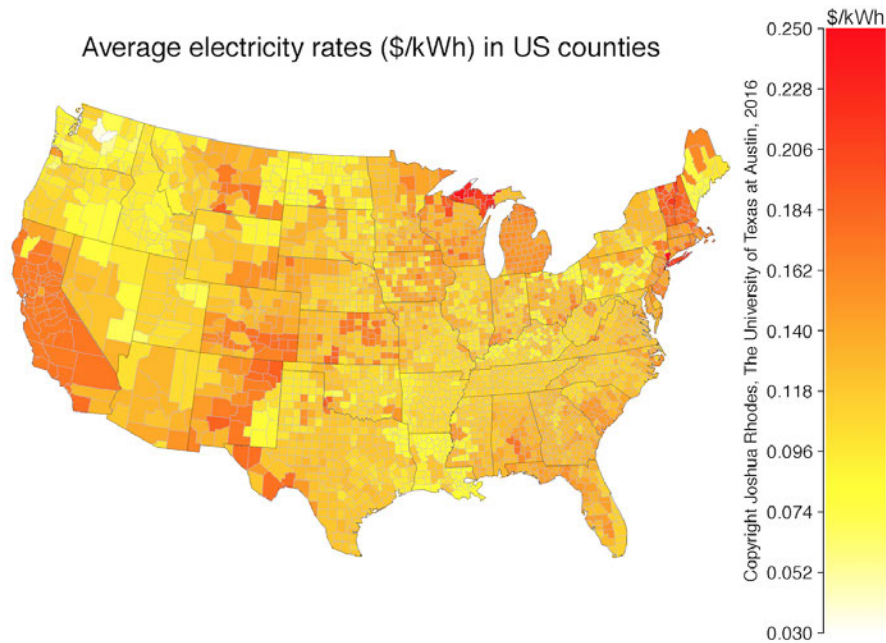
The data on the residential solar costs were pulled together from an ongoing large-scale campus-wide research project at the Energy Institute at The University of Texas at Austin. The main assumptions behind the data are a total cost of US\$3.50/Watt for the solar PV installation for a fixed array pointing south with a tilt of 25 degrees. Solar production data are based on a 2013 National Renewable Energy Laboratory study.

That southern orientation and tilt represent a rule of thumb and might not be the optimal solar placement in every locale.

[we-expand-solar-power-dramatically-without-damaging-protected-lands-49429](#)

and stated goal of lowering

The Energy Information Agency (EIA) has created a [map of average electricity rates by zip code](#), averaged to the county level and remade by the author in the map below. The deep red (or darker) colors indicate higher average residential electricity rates.



Map of average electricity rates across the U.S. EIA

Electric rates vary a great deal across the country, and these differences could be caused by a number of economic, historical or regulatory reasons. Likewise, the costs of solar and the availability of the solar resource (i.e., how often and how strong the sun shines) also are not homogeneous throughout the U.S. The figure below shows the LCOE of residential solar across all counties nationwide.

4.4 - RCEA Banking Services Fossil Fuel Divestment Request

From: [ja savage](#)
To: [Lori Taketa](#)
Subject: Re: Agenda Item 4.4 Wells Fargo
Date: Thursday, June 22, 2023 11:17:53 AM

I realized after I sent that that RCEA probably cannot use a credit union and needs a bank, but there has to be a few with more responsible investment

J. A. Savage

On Thu, Jun 22, 2023, 10:44 AM Lori Taketa <LTaketa@redwoodenergy.org> wrote:

Hello J.A.,

Thank you for your email. It will be included as public comment for this afternoon's meeting and also posted on [the Board of Directors webpage](#).

Best Regards,

Lori Taketa

Executive Support Specialist & Clerk of the Board | Redwood Coast Energy Authority

(707) 269-1700 |

[Wwww.RedwoodEnergy.org](http://www.RedwoodEnergy.org)

Pronouns: she, her, hers

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From: ja savage
Sent: Thursday, June 22, 2023 7:28 AM
To: Public Comment <publiccomment@redwoodenergy.org>
Subject: Agenda Item 4.4 Wells Fargo

June 22, 2023

Re: Agenda Item 4.4 Banking - Fossil Fuels Divestment

Dear RCEA Board:

Asking Wells Fargo to "please stop investing in fossil fuels" is like sparrow farts at a wind turbine. Moving our money to a more responsible and responsive institution like Coast Central Credit Union is about the only way to effect change. Please do that. In addition, given the shaky ground of First Republic, y'all should try to move any funds out of that one too.

J. A. Savage