BEFORE THE KANSAS CORPORATION COMMISSION
OF THE STATE OF KANSAS

In the Matter of the General Investigation To Examine Issues Surrounding Rate Design for Distributed Generation Customers	)))	Docket No. 16-GIME-403-GIE

REPLY COMMENTS OF CLIMATE AND ENERGY PROJECT

The Climate and Energy Project files its Reply Comments as required by the Joint Motion to Modify Procedural Schedule filed April 28, 2017:

I. Background

1. In the rate case filed in Docket 15-WSEE-115-RTS, Westar proposed new rates for distributed generation (DG) customers, which resulted in the Commission separating in to a "Phase II" evidentiary hearing. Those issues included Westar's proposed Residential Demand Plan and Residential Stability Plan, Community Solar Proposal and Solar Block Subscription Proposal. The Commission granted limited intervention to The Alliance for Solar Choice (TASC), Cromwell Environmental Inc. (CEI), Brightergy LLC, (Brightergy), The Environmental Defense Fund (EDF) and The Climate and Energy Project ("CEP"), referred to as the Solar Parties. Following Phase I of the case which resulted in a Stipulation and Agreement (S&A) between Westar and the remaining Phase I parties, Westar and the Solar Parties began discussions about the S&A and with certain changes, the Solar Parties agreed not to oppose the S&A. The Addendum to the Stipulation and Agreement, Revised Paragraph 39 states:

a. The Parties agree that the issue of whether a separate Residential Standard Distribution Tariff is necessary, and, if so, how to structure the Residential Standard Distributed Generation Tariff in order to properly recover just and reasonable costs from customers with distributed generation should be deferred to a generic docket. Westar and Staff will work together to develop a procedural schedule for that generic docket in order to ensure timely resolution of the issues to be addressed. The parties agree that they will not oppose or seek to limit the participation of The Alliance for Solar Choice, Cromwell Environmental, Inc., The Climate & Energy Project, or the Environmental Defense Fund in the generic proceeding.

2. The Stipulation and Agreement for KCC Docket 15-WSEE-115-RTS was approved September 24, 2015.

3. On March 10, 2016, Commission Staff presented a request to the Commissioners to open a generic docket regarding rate design for distributed generation customers. Their Report and Recommendation called for the "costs and benefits of DG be thoroughly examined." Additionally, the Staff's recommendation states the "goal of this generic docket is to determine the appropriate rate structure for DG customers by evaluating the costs and benefits of DG, as well as by examining potential rate design alternatives for DG Customers...This generic docket is designed to develop policy for DG rate design."

4. On July 12, 2016 the Commission issued an order opening a general investigation for Docket 16-GIME-403-GIE which states "The Commission desires a thorough and thoughtful discussion of the appropriate rate structure for DG including the quantifiable costs and quantifiable benefits of DG." Additionally, the Commission "will permit parties an opportunity to provide evidence showing that costs and benefits can be quantified and allocated in a manner which will result in just and reasonable rates for DG customers." The Commission states DG rate design policy presents an issue of first impression.
5. CEP submitted a Petition to Intervene on August 22, 2016 and on August 28, 2016 submitted our comments regarding how the general investigation should proceed, as requested by the Commission. We suggested a full-day workshop facilitated by a neutral third party to explore rate design options and lessons learned from regulated states with robust DG. We suggested a structure that would fairly and transparently consider a variety of stakeholder interests, including utility, consumer, industry and societal. We recommended public hearings or at minimum, creation of a KCC online portal for comments. Our petition to intervene was granted on September 1, 2016.

II. CEP's Position

6. The Commission Order setting the procedural schedule came out on February 16, 2017.
7. In order to provide for thorough and thoughtful discussion, as the Commission has ordered, CEP believes stakeholders should first discuss what constitutes a

good process that will allow us all to have frank discussions around the rapidly changing energy landscape.

a. Kansas is in a fortunate position because we are early in distributed generation penetration, with less than 700 DG systems across the state. This allows us time to go outside the traditional, sometimes confrontational rate-case proceedings and engage collaboratively in stakeholder processes that explore new ways to deal with not only solar or wind DG but more broadly with increased energy efficiency, demand response, electric vehicles and even storage.
b. A rushed process may have long lasting and unintended consequences including slowing deployment of emerging technology, discouraging innovation, reducing customer control over electricity costs and disproportionately harming low-use and low-income customers.
c. As evolving electricity rate-design issues are being discussed across the country, some common themes for good processes are emerging:
    i. Good rate design should include a good process that is transparent, fair, accessible and accountable.
    ii. It should be based on good data and transparent modeling that are credible and available to all parties.
    iii. It should have a good sense of timing (do we need to act immediately because of high penetration or can we take a more measured approach?)

iv. Good rate design processes should involve collaboration, even if it takes longer.

d. Despite the Commission's attempt to design a procedural schedule that will allow thoughtful and thorough discussion of DG rate design, that has not been CEP's experience in this docket. Perhaps due to the timing of initial comments (prior to the workshops), some parties focused on how to frame the workshops, what should be discussed, which process should be followed in making decisions, what kind of data is needed to make decision, the need for rate changes given the low number of DG customers currently; some parties focused on general exploration of several rate design options: Time of Use, Grid Access Charges, Demand Rates, all without specific Kansas data to determine potential unintended consequences of drastically changing the current rate design. During the two face to face workshops, parties presented their positions with little to no discussion on the merits of their suggestions, with parties being unable to even come to consensus on whether or not this docket was to focus on setting DG policy in Kansas.

e. It is our observation that this process may not produce the Commission's desired results given its current trajectory, however, we have retained Vote Solar, a non-profit organization working to foster economic opportunity, promote energy independence, and fight climate change by making solar a mainstream energy resource across the United States to provide expert testimony. Since 2002, Vote Solar has engaged in state, local and federal advocacy campaigns to remove regulatory barriers and implement key policies needed to bring solar to scale. Vote Solar has approximately 90,000 members nationally and over 300 in Kansas. Vote Solar's expert testimony will address:

i. Segregating DG customers into a separate customer class;
ii. The proposed three-part rate structure;
    1. The duck curve;
iii. The benefits of solar and
iv. An appropriate path forward.

We present expert witness Rick Gilliam's testimony as Attachment A.

Attachment A:
TESTIMONY OF RICK GILLIAM ON BEHALF OF THE CLIMATE AND ENERGY PROJECT

I. Qualifications:

1. My name is Rick Gilliam and my business address is 590 Redstone Drive, Suite 100, Broomfield, Colorado. I serve as the Program Director of Distributed Generation ("DG") Regulatory Policy for Vote Solar. I oversee policy initiatives, development, and implementation related to distributed solar generation. I also review regulatory filings, perform technical analyses, and testify in commission proceedings around the country relating to distributed solar generation. Vote Solar is a non-profit public advocacy organization working to foster economic opportunity, promote energy independence, and fight climate change by making solar a mainstream energy resource across the United States. Vote Solar is not a trade group and its members are individuals, not corporations. Since 2002, Vote Solar has engaged in state, local, and federal advocacy campaigns to remove regulatory barriers and implement key policies needed to bring solar to scale. Vote Solar has approximately 90,000 members nationally including more than 300 in Kansas.

2. I have a Masters Degree in Environmental Policy and Management from the University of Denver, Denver, Colorado. I also have a Bachelor of Science Degree in Electrical Engineering from Rensselaer Polytechnic Institute in Troy, New York. Prior to joining Vote Solar in January of 2012, my regulatory experience included five years in the Government Affairs group at Sun Edison as a manager, director, and eventually vice president; 12 years with Western

Resource Advocates (formerly known as the Land and Water Fund of the Rockies) as Senior Policy Advisor; and 12 years in the Public Service Company of Colorado rate division as Director of Revenue Requirements. Prior to that, I spent six years with the Federal Energy Regulatory Commission ("FERC") as a technical witness. All told, I have nearly forty years of experience in utility regulatory matters. I have testified in proceedings before the Arizona Corporation Commission, Colorado Public Utilities Commission, Idaho Public Utilities Commission, Nevada Public Utilities Commission, Utah Public Service Commission, Wisconsin Public Service Commission, Wyoming Public Service Commission, and the FERC.

3. My comments contained herein address and respond to the initial comments of other parties in this investigatory proceeding. Specifically, I discuss the lack of an evidentiary or rational basis for the separation of DG customers into their own rate class; concerns with the application of a three-part rate structure, i.e. one that includes a demand charge, to residential DG customers (or residential customers in general); and the benefits of distributed solar resources. Finally, I suggest an appropriate path forward for this proceeding.

II. <u>The Creation of a Separate Customer Class for DG customers is Without Basis</u>

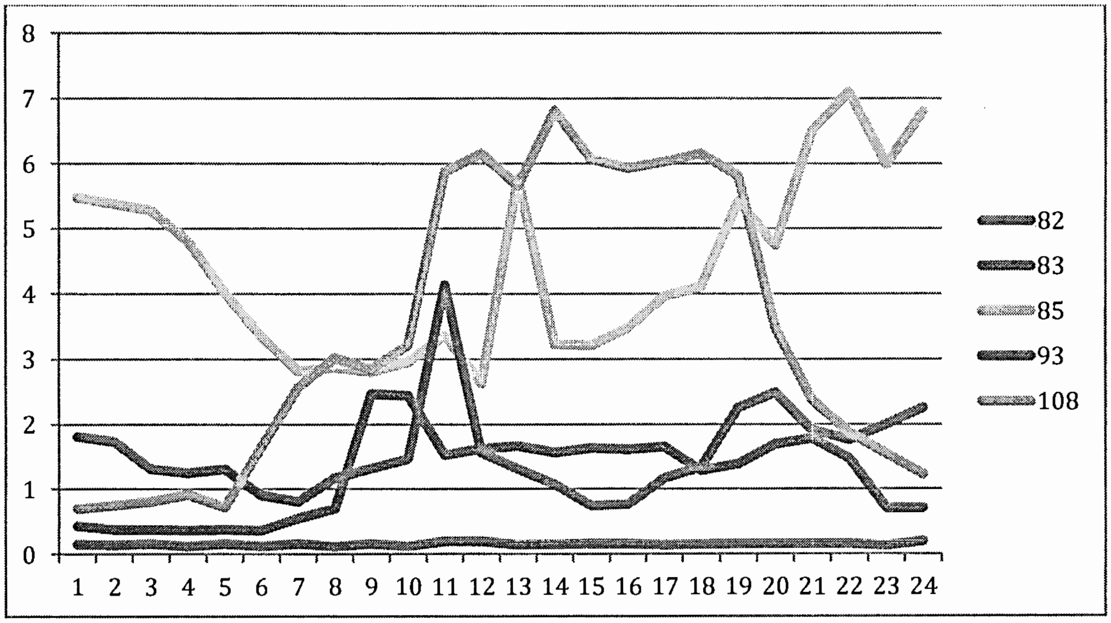
4. Westar argues that DG customers are different than customers without DG, thereby justifying a different rate design. But is has provided no data to justify these alleged differences. Indeed, the residential customer class is very diverse. To support its contention, Westar provides a visual comparison of "average daily load profiles" for small commercial, residential non-DG, and residential DG customers, indicating that the first two are somewhat similar but the third is "significantly different." While interesting, this comparison provides no actual data or analyses addressing the costs of serving one group of customers versus another. Reductions in consumption and peak load in these average profiles will lead to lower levels of costs allocated to the residential class as a result of the customers that have installed DG, especially during higher cost months. However, there is no data available to evaluate these effects.

5. When customers reduce load for any reason, e.g. replacing electric appliances with gas or propane, shrinking households due to kids going off to college, use of more efficient appliances, and so on, there is a reduced contribution to fixed costs. Yet there has been no effort to identify these customers for application of additional charges or a new rate design. Of course, the reverse is also true when customers increase load. Such customers increase their contribution towards the utility's fixed costs.

6. Additionally, it's important to consider the load profiles of *individual* customers, not a mythical average customer as Westar shows, in order to understand the impact of demand charges on real customers. Individual customers do not have the smooth profiles depicted in the non-DG residential chart, but varies widely throughout the day as various appliances kick on and off automatically and others are used when needed. It is the diversity of these individual loads that, when aggregated over hundreds of thousands of customers, results in a smooth curve.

7. As an example, the following Chart 1 shows hourly profiles for a random sample of five residential customers in Colorado.

Chart 1: Five Random Residential Colorado Customers, Peak Day 2015



While we do not suggest these profiles be used for Westar territory, the variability and unpredictability of non-DG residential hourly loads is evident and needs to be considered when evaluating the differentiating characteristics of subgroups of customers in Westar's territory. The lack of hourly system and customer load characteristic data (usually derived from statistically valid load research) for the 453 residential DG customers of Westar clearly indicates determination of the propriety of a separate rate class (with different rates), of a significant departure from convention residential rate designs, and of a sense of urgency is both misplaced and premature. This proceeding should be used to gather the data necessary to answer these questions for Westar and Kansas before the discussion and recommendations for segregating a subgroup of residential customers and imposing a very different rate structure.

8. When an individual customer invests in energy efficiency to reduce load, for example, the utility doesn't replace the wires running to that home with smaller wires, it remains able to provide more power when, for example, that residential customer has a party, uses power tools or otherwise has a high-use day. When a customer has a vacation home, the utility doesn't know in advance when the customer will use the home nor does it propose to create a demand charge so that the customer is paying when not using the home. The costs and benefits of any individual residential customer changing its day to day electricity use are irrelevant to the costs of the utility. It is the aggregated total reduction in demand created when customers invest in efficiency and DG that produces net benefits in terms of allowing the utility to invest less in traditional infrastructure, and it is the aggregated total impact of DG on the grid that can also present challenges to the grid at much higher penetration levels than Westar or Kansas currently has.

9. Westar also suggests that the current rate is not cost-justified for DG customers, but again provides no analysis supporting this contention. The traditional two-part residential rate, nor any other rate for that matter, is considered to collect the proper costs for serving each individual customer. Apartment dwellers are likely to have a lower cost of service as a separate group than single-family homes. Rural residential customers would also be expected to have a higher cost of service than more densely populated urban customers, with suburban customers somewhere in between. Each of these subgroups arguably is not paying their proper cost of service and could be considered subject to inequitable or even discriminatory rates.

10. Westar complains that excess energy from a DG system is not physically banked

or stored on the system. We agree completely and urge the Commission to thoroughly consider this important point. Energy that leaves one home for example follows the path of least resistance to the nearest load and is consumed there. This happens instantaneously and there is no incremental cost to the utility. Indeed, the utility has no control over the flow and consumption of exported energy. For example, if a customer with a 5kW system is only using 4 kW, the other kilowatt leaves the home and serves the non-solar neighbor, never leaving the secondary distribution system. The utility only sees a 5 kW reduction at that point in time, but does not know the mix of loads and sources of energy. Moreover, the extra kilowatt reduces the loading on the distribution system at a time of higher utility costs in the middle of the day, a benefit for all.

11. But what does the neighboring customer see? Essentially nothing different. The neighbor does not know whether the electricity he is consuming came from the utility or his solar neighbor. Either way, he pays full retail prices for the electricity. As a result, the utility recovers full retail revenue for solar electricity that is exported to a neighboring home, even if it did not generate, transmit, and distribute it.

12. CURB's concerns largely center on perceived cost shifts to Westar's non-DG customers, however, there is no actual analysis showing this to be true or demonstrating the magnitude. There has been no demonstration supported by actual data of an actual problem to be solved that would warrant creating a new rate class that would be punitive to the very Kansans they are to represent, i.e. Kansans who have invested in resources that will provide substantial benefits to the grid as a whole as well as non-DG customers.

13. To give some indication of the magnitude of a potential cost shift, Westar's witness offers a graph showing the outcome of analyses in different jurisdictions. First, one cannot tell how these analyses were performed to assess their relevance to this proceeding or their accuracy. It isn't evident that the system benefits were adequately considered and netted against the costs. Moreover, the range of outcomes is so broad as to underscore the need for a local analysis, as CURB witness Brian Kalcic asserts when he states in paragraph 15 that "determining the net cost of serving DG customers will require extensive analysis."

III. Addressing the three-part rate structure

14. In its initial comments, Westar suggests a three-part rate including a demand charge would be better for residential DG customers using much of the same rationale that other utilities, but with many more DG customers, have used in other jurisdictions. Westar's Dr. Faruqui notes that demand is usually measured over 15 minute, 30 minute, or 60 minute intervals. Thus, the charge would be based on a single very short period out of the entire 720-hour typical month, with each customer's bill enormously impacted by its load in whichever random 15 to 60-minute period their maximum demand occurs, regardless of any coincidence with the peak demand of the system. Because a customer's individual peak demand can occur at any time of day and not necessarily during the hour when system costs are greatest, the standard demand charge does not reflect cost causation.

15. Because of their diversity in energy usage, customers' individual non-coincident maximum loads usually do not occur at the same time as the peaks on the system as a whole — or even at the same time as peaks on the local distribution system. Thus, in addition to not reflecting the customer's contribution to utility costs, billing on the customer maximum demand does not effectively encourage customers to reduce their contribution to costs, and may result in customers moving load from the times of their individual maximum demands to times of high system loads and costs.

16. Demand charges that seek to collect the fixed costs of the utility, in Westar's case 73% of its costs, are especially problematic for customers. Imposition of this structure would collect 73% of the customer's total revenue for the month on this one-time maximum demand period, of which the customer is unlikely to have much knowledge and control.

17. Many residential customers have limited choice or control over when they use appliances. For example, electric furnaces and water heaters can consume significant levels of electricity, with common models drawing 10.5 kW and 4.5 kW, respectively. Air conditioners draw from 2 kW for a one-ton capacity model to 9 kW for a five-ton model. In addition, common hair dryers typically draw 1 kW and often more; the average microwave or toaster oven can draw 1 kW; and an electric kettle can draw 1 kW.

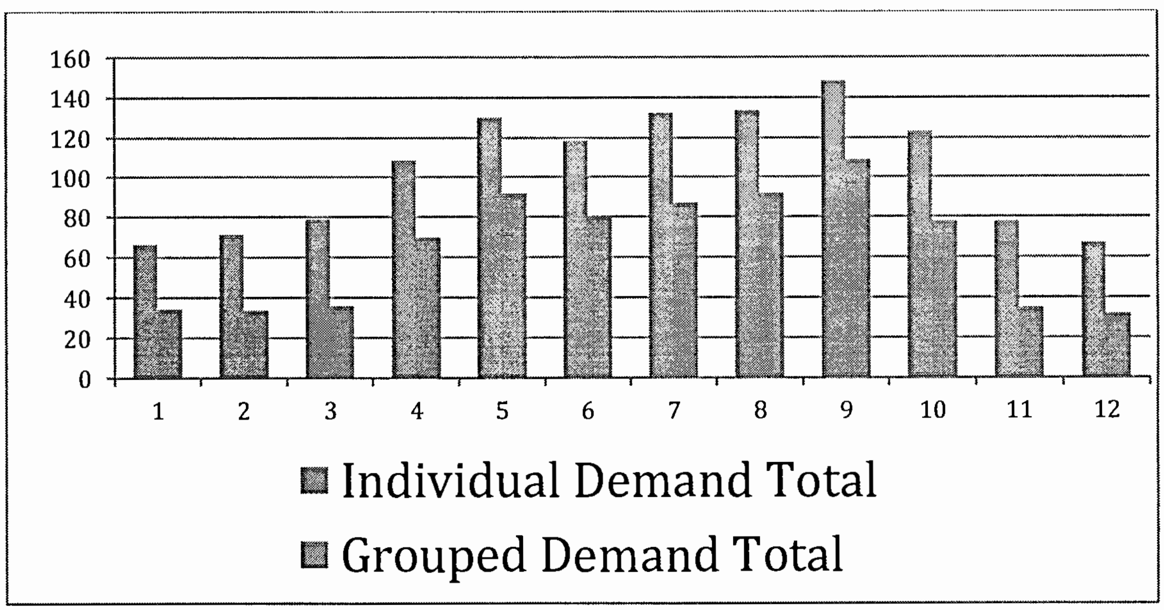
18. It is easy to see how the typical morning routine for a family could result in an instantaneous peak demand of as much as 18 kW and demand over a one-hour period in excess of 10 kW. A billed demand of 10 kW or more would result in high and hard-to-avoid charges, in addition to a fixed monthly charge, meaning that this household would have little to no control over the bulk of its monthly bill.

19. While families may be able to understand *how* this peak demand occurs, school schedules and work schedules may allow little flexibility to do anything about it. Further, many of these devices are designed to be automatically controlled by thermostats that would be difficult to override on a short-term basis to avoid demand charges. Moreover, these overlapping appliance demands do not drive costs on the system. This example shows the electric demand of a morning weekday schedule, while peak system demands often occur later in the day. In addition, customer diversity can spread these demands out, diluting any effect on peak system demand.

20. Demand charges have historically only been applied to large commercial and industrial customers, with many such loads served through a single meter, and generally a dedicated transformer or transformer bank. For very large industrial customers, there is typically a dedicated distribution circuit or even distribution substation. So for these customers, diversity occurs on the customer's side of the meter, such as when copiers, fans, compressors, and other equipment cycles on and off in a large office building.

21. For residential consumers, there is also diversity — but it occurs on the utility's side of the meter as customers in different homes and apartments connected to the same transformers and circuits use power at different moments in time. The point is that the type of rate design that is appropriate for industrial customers, who may have a dedicated substation or circuit, is not necessarily appropriate for residential customers who share distribution components down to and including the final line transformer.

22. Because many apartments are served through a single transformer and meter bank, what actually matters to system design is not the individual demands of each apartment, but the combined (diverse) demand of the building or complex. **Chart 2**, below, shows how the sum of individual apartments' maximum hourly demands in one apartment building (in the Los Angeles area) compares to the combined maximum hourly demand for the complex:



Source: RAP Demand Charge Webinar, Dec. 2015

Chart 2: Individual vs. Grouped Demand Total

Imposition of demand charges on residential customers runs counter to the ratemaking principles of simplicity, understandability, public acceptability, and feasibility of application. Westar suggests that customers would have a strong incentive and the ability to lower their bills by reducing their kW demands. It has not set forth a plan to educate customers in the meaning of billing demand, the factors driving it, and how to control and manage it either behaviorally or technologically. Indeed, RMI[1] notes that "[w]hile it's possible that, if customers are sufficiently educated about a demand charge rate, they will reduce peak demand in response, no reliable studies have evaluated the potential for peak reduction as a result of demand charges." The same RMI report indicates that time-varying energy charges are more effective at reducing peak demands than are demand charges. Additionally, the Brattle Group reported a peak load reduction of less than 2% for residential demand charges, compared with reductions as great as 40% for critical peak pricing energy rates.[2]

23. There is no information in this investigatory docket that shows individual residential load patterns that a customer might be able to manage in advance, which is the knowledge required in order to control a peak demand occurrence. In part this is due to a mix of appliances that are set to turn on and off automatically as needed (e.g. air conditioning, hot water heaters, refrigerator) and others that are under the control of the home (e.g. lighting, hair dryers, kitchen appliances, television). Without sophisticated load control and automation devices, it is unclear how small customers could manage peak loads. Without broad adoption of such load control technology, a demand charge is not an effective price signal. Importantly, a demand charge only serves as a price signal if the customer can respond to it. If not, it becomes an unmanageable fixed charge with a

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[1] A Review Of Alternative Rate Designs Industry Experience With Time-Based And Demand Charge Rates For Mass-Market Customers; Rocky Mountain Institute, p. 76, May 2016 download at: www.rmi.org/alternative_rate_designs

[2] Presentations of Ahmad Faruqui and Ryan Hledik, EUCI Residential Demand Charge Summit, 2015.

substantially random character.

24. *Addressing the Infamous Duck Curve*

To understand whether the duck curve is really a *chicken little* curve, it's instructive to look at the illustrative chart included in Westar's comments at page 18. Clearly at current penetration levels, reported by Westar in Docket 12-WSEE-669-CPL at the end of 2016, where they reported 453 residential systems totaling 2.79 MW of DG, there is no issue. The next point of reference is when installations reach 300 MW, or about 78 *times* the amount deployed currently. For comparison purposes, Public Service Company of Colorado has approximately 300 MW of distributed solar, but it also has about twice the number of retail customers and 250 to 300 solar installers in the State. With those advantages, it took Colorado about 11 years to get to 300 MW. There is no sense of urgency based on experience elsewhere.

IV. <u>The Benefits of Solar Have Been Found to Outweigh the Costs in Unbiased Studies</u>

25. We agree that Value of Solar studies can be subjective, as Westar says, so we look to studies that have been performed by a state agency. A 2016 paper[3] from the Brookings Institute summarized five recent studies sponsored by agencies of state governments as follows: [b]y the end of 2015, regulators in at least 10 states had conducted studies to develop methodologies to value distributed generation and net metering, while other states conducted less formal inquiries, ranging from direct rate design or net-metering policy changes to general education of decision makers and the public. And there is a degree of consensus. What do the commission sponsored analyses

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[3] Muro, M and Saha, S, "Rooftop solar: Net metering is a net benefit," Brookings Institute, May, 2016.

show? A growing number show that net metering benefits all utility customers: In 2013 Vermont's Public Service Department conducted a study that concluded that "net-metered systems do not impose a significant net cost to ratepayers who are not net-metering participants." The legislatively mandated analysis deemed the policy a successful component of the state's overall energy strategy that is cost effectively advancing Vermont's renewable energy goals.

26. In 2014 a study commissioned by the Nevada Public Utility Commission itself concluded that net metering provided $36 million in benefits to all NV Energy customers, confirming that solar energy can provide cost savings for both solar and non-solar customers alike. What's more, solar installations will make fewer costly grid upgrades necessary, leading to additional savings. The study estimated a net benefit of $166 million over the lifetime of solar systems installed through 2016. Furthermore, due to changes to utility incentives and net-metering policies in Nevada starting in 2014, solar customers would not be significantly shifting costs to other ratepayers.

27. A 2014 study commissioned by the Mississippi Public Services Commission concluded that the benefits of implementing net metering for solar PV in Mississippi outweigh the costs in all but one scenario. The study found that distributed solar can help avoid significant infrastructure investments, take pressure off the state's oil and gas generation at peak demand times, and lower rates. (However, the study also warned that increased penetrations of distributed solar could lead to lower revenues for utilities and suggested that the state investigate Value of Solar Tariffs, or VOST, and other alternative valuations to calculate the true cost of solar.)

28. In 2014 Minnesota's Public Utility Commission approved a first ever statewide "value of solar" methodology which affirmed that distributed solar generation is worth more than its retail price and concluded that net metering undervalues rooftop solar. The "value of solar" methodology is designed to capture the societal value of PV-generated electricity. The PUC found that the value of solar was at 14.5 cents per kilowatt hour (kWh)—which was 3 to 3.5 cents more per kilowatt than Xcel's retail rates—when other metrics such as the social cost of carbon, the avoided construction of new power stations, and the displacement of more expensive power sources were factored in.

29. Another study commissioned by the Maine Public Utility Commission in 2015 put a value of $0.33 per kWh on energy generated by distributed solar, compared to the average retail price of $0.13 per kWh — the rate at which electricity is sold to residential customers as well as the rate at which distributed solar is compensated. The study concludes that solar power provides a substantial public benefit because it reduces electricity prices due to the displacement of more expensive power sources, reduces air and climate pollution, reduces costs for the electric grid system, reduces the need to build more power plants to meet peak demand, stabilizes prices, and promotes energy security. These avoided costs represent a net benefit for non-solar ratepayers.

30. These generally positive PUC conclusions about the benefits of net metering have been supported by research done by a national lab and several think tanks. Important lab research has examined how substantially higher adoption of distributed resources might look.

31. The five referenced studies are available at:

Me. Pub. Utils. Comm'n, *Maine Distributed Solar Valuation Study* 6 (Apr. 2015), *available at* http://www.maine.gov/mpuc/electricity/elect_generation/documents/MainePUCVOS-FullRevisedReport_4_15_15.pdf.

Elizabeth A. Stanton et al., Synapse Energy Econ., Inc., *Net Metering in Mississippi: Costs, Benefits, and Policy Considerations* 43 (Sept. 2014), *available at* http://www.synapse-energy.com/sites/default/files/Net%20Metering%20in%20Mississippi.pdf.

Energy & Envtl. Econ., *Nevada Net Energy Metering Impacts Evaluation* 93 (July 2014), *available at* http://puc.nv.gov/uploadedFiles/pucnvgov/Content/About/Media_Outreach/Announcements/Announcements/E3%20PUCN%20NEM%20Report%202014.pdf?pdf=Net-Metering-Study.

Peter Fairley, *Minnesota Finds Net Metering Undervalues Rooftop Solar*, IEEE Spectrum (Mar. 24, 2014), *available at* http://spectrum.ieee.org/energywise/green-tech/solar/minnesota-finds-net-metering-undervalues-rooftop-solar.

Vt. Pub. Serv. Dep't, *Evaluation of Net Metering in Vermont Conducted Pursuant to Act 99 of 2014*, at 17 (Nov. 2014), *available at* http://psb.vermont.gov/sites/psb/files/Act%2099%20NM%20Study%20Revised%20v1.pdf.

32. Each of these studies, performed in different states around the country, found that the benefits of solar generation exceed the costs. This demonstrates why it is important to give due consideration to the benefits of interconnecting distributed generation, as required by the statute.

V. An Appropriate Path Forward

33. If after review, the commission concludes that even at just 690 residential DG customers across the state there is a problematic cost shift to address, there remains no consensus that a separate customer class or demand charges are an appropriate remedy, particularly in light of the lack of usable Kansas-specific date and analysis. Utilities and other stakeholder alike need to collaboratively consider the range of options that can address the issue with a minimum of unintended consequences.

34. The utilities have not asserted any actual under-collection of their authorized revenue requirement.

35. We suggest that this proceeding has been a good start for a more in-depth evaluation of the effects, the costs and benefits, and the potential future growth rates anticipated using local information and analysis, and informed by experience in other states. Therefore, we urge the Commission to proactively establish a more appropriate path forward towards resolution of the issues at play here. Specifically, we recommend the following:

a. Engage an independent expert, chosen by stakeholder consensus and directed by the Commission, to perform a full and fair analysis of the costs and benefits of DG in Kansas.

b. Determine an appropriate trigger based on DG penetration that would warrant a transition to an alternative rate design.

c. Assess and analyze state conditions using sound data to determine the need and pace for customer segregation and rate-design change.

d. Explore the range of rate-design options in advance of the next rate case for each utility, using data-driven analytical methods. Approve actual utility by utility alternative rate designs only after a fully contested case and the triggering penetration threshold has been reached for each utility.

e. Utilize pilot programs, shadow billing and other means of testing novel or untested rate designs prior to wide-scale adoption;

f. Consider and accommodate the needs of low-income and vulnerable customers in rate design; and

g. Require the education of customers (and develop appropriate tools) regarding new or significantly shifting rate designs well in advance of their implementation.

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AFFIDAVIT OF RICK GILLIAM

State of COLORADO

County of BROOMFIELD

Rick Gilliam, being first duly sworn on oath, deposes and states as follows:

1. I am the Program Director of DG Regulatory Policy for Vote Solar.

2. I was retained by The Climate And Energy Project to provide testimony in the above-captioned proceeding.

3. I prepared and, on May 5, 2017, caused to be served and pre-filed, my Testimony in this proceeding, and have knowledge of the matter set forth herein.

4. I hereby swear and affirm that the information contained in my affidavit is true and accurate to the best of my knowledge.

Dated: May 5, 2017.

Rick Gilliam

Signed and sworn to before me
this 5th day of May, 2017.

Notary Public
My commission expires: 09-30-2019

BAILEY BALMUS
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20154038739
MY COMMISSION EXPIRES 09-30-2019