

of selling, installing, servicing, and undertaking other activities related to renewable energy and on-site generation.

4. I currently own EvenGreen Technology, a design build Solar and Energy Efficiency Company; Gem State Solar, which designs and installs solar light tubes and attic fans; and Solar Tools USA, a solar tool manufacturing company. I hold an Idaho electrical contractors license and am registered as an Idaho building contractor. I am certified with Lithium Chemistry batteries. I hold a US Patent for tools used in the solar industry.

5. I have been involved with designing and installing solar on-site generation systems in Idaho since 2009. Through this experience, I have interacted with hundreds, if not thousands, of customers who have inquired about, and sometimes installed, solar onsite generation systems. These interactions stem from initial visits, to discussions about the financial viability of system designs, to designing systems, to installing, servicing, and repairing solar onsite generation systems.

6. Through my businesses, and through my involvement with ICEA, I stay up to date on the latest technology for solar onsite generation systems, including technology associated with energy storage (including batteries), inverters, solar panels, and the related technology that can be used to fit customers' particular needs in light of the governing rules and regulations.

7. In addition, during the course of the IPC-E-17-13 case and this case, I have spoken with many customers that have solar onsite generation systems, and with many other persons that have installed solar onsite generation systems.

8. Through this personal experience, I am generally familiar with the types of solar onsite generation systems that have been installed in the Treasure Valley and other locations in Idaho. I am also generally familiar with the factors customers and installers have taken into

account in making decisions on what types of solar onsite generation systems to install, what technologies to install, the costs of various systems and technologies, how technology has evolved over time, and similar issues related to solar onsite generation systems.

9. Through this personal experience, I am generally familiar with the technology and system configurations that are currently available, and that are expected to be available in the future, and how customers may choose to use that technology in making choices about the systems and configurations of solar onsite generation systems.

10. In this affidavit, I use the term "Net Metering Program" to refer to the program established by the Public Utilities Commission that, until the IPC-E-17-13 case, was reflected in Schedule 84. The Commission retained the Net Metering Program but moved it to Schedule 6 and Schedule 8 for certain residential and small general service customers in the IPC-E-17-13 case.

11. I use the term "Net Hourly Billing Program" to refer to the program agreed to in the proposed settlement, which was filed with the Commission on October 17, 2019.

12. I understand that the Net Metering Program has been in place since the early 1980s, and that the key components of the Net Metering Program have been in place since the early 2000s. This understanding comes, in part, from Connie Aschenbrenner's testimony in the IPC-E-17-13 case.

13. In my experience, the Net Metering Program has several key components. In my experience, these key components dictated the decisions that customers made regarding the types of systems to purchase, the size of systems to purchase, the manner in which to configure the systems, and the technologies to use with the systems. These key components of the Net

Metering Program also dictated the decisions that solar installers, such as myself, made when recommending system size, system design, system configuration

14. The first key component is monthly netting. When considering solar onsite generation systems on the Net Metering Program, the customer and the installer typically discussed the customer's monthly energy consumption, the monthly generation of the onsite generation system, and how consumption and generation would match up on a monthly basis. The customer and installer also typically discussed the customer's consumption and anticipated generation of the onsite system on an annual basis, but using the *monthly* data points to frame the discussion. In my experience, neither customers nor installers discussed or considered *hourly* data. Indeed, in my experience, neither customers nor installers even had hourly data readily available. In fact, under the Net Metering Program, I never had a single customer request an analysis of hourly data because this was not relevant to the customer's decision under the Net Metering Program. The customers' decisions, and the installers' recommendations, regarding system size, system orientation, whether to include storage, and other decisions were made on the basis of monthly data. These discussions and considerations were dictated by the monthly netting component of the Net Metering Program.

15. The second key component is the kilowatt-hour-for-kilowatt-hour offset, under which the customers' exported generation is treated the same, financially, as customers' consumed generation. My understanding is that some characteristics of this have changed over time, but the key characteristic has remained the same: the financial impact on a customer was the same whether the generation was consumed on-site or exported. Given this component of the Net Metering Program, customers and installers discussed the optimal system size, orientation, configuration, and associated technologies of a system that made the most financial sense when

the customer was neutral as to whether generation was consumed or exported on a net monthly basis.

16. These two components of the Net Metering Program, which were set by the Commission and that had remained materially the same (as I understand it) throughout the Net Metering Program's history led customers and installers to make particular choices about system configuration. Every customer is different, but speaking in generalities, the following characteristics define common system-related choices made under the Net Metering Program:

- Systems were most often (if not always or nearly always) sized using a customers' annual consumption data and a systems' annual generation data, using monthly consumption data and a systems' monthly generation data, since the customer was neutral between generation that was exported and generation that was consumed, and since net monthly generation was the relevant unit of measurement.
- Systems were most often configured to not include storage or other technology that would enable the customer to control the timing of generation or to reduce exports. Because energy was netted on a monthly basis, the ability of customers to align consumption and generation on an hourly basis was not relevant under the Net Metering Program. Further, because a kWh exported would offset a kWh consumed, storage was not critical. As such, most systems were not configured to include storage or associated technologies.
- Systems were often sized to generate electricity sufficient to offset the customers' annual consumption, as measured using monthly data. As discussed separately below, for customers whose monthly peak consumption occurred in the wintertime, systems were designed to generate exports sufficient in the summer to offset winter consumption.

17. While most (if not all) customers' and installers' decisions were influenced by these key components of the Net Metering Program, specific subsets of customers were influenced very strongly by these characteristics. I have personally interacted with many customers who rely on electric heating. These customers tend to be more rural, and less affluent, than customers that rely on natural gas heating. These customers tend to be particularly concerned with their energy bills during the winter months. Their peak consumption typically

occurred during winter months. These customers typically sized their system to offset the peak consumption. However, their peak consumption occurred when generation was low. Because energy was netted on a monthly basis, and because the customer was neutral between exports and consumption, these systems typically exported large amounts of energy in the summer months. In my experience, these customers' decisions regarding whether to invest in onsite generation, the size of the system, and the configuration of the system, depended heavily on monthly netting and the one-to-one ratio between exports and consumption. It is safe to say that most, if not nearly all, of these customers would have made different choices about whether to invest, system size, and system configuration if those components of the Net Metering Program were different, or if those components of the Net Metering Program had changed throughout the years.

18. If the Net Hourly Billing Program set forth in the proposed settlement is adopted, I anticipate that customers and installers will make different choices in how to size their systems, how to configure their systems, and how to take advantage of storage and other technologies.

19. First, because the Net Hourly Billing Program nets on an hourly basis rather than a monthly basis, customers and installers will have to obtain and rely upon hourly consumption and generation data rather than monthly consumption and generation data. Based on hourly data that I have reviewed for potential customers, I anticipate that the net hourly exports will differ more greatly across customers than net monthly exports. Stated another way, I anticipate that customers and installers will have to give greater attention to each customers' specific consumption profile, and more closely tailor particular systems' generation profiles. This will be a very difficult task and, I anticipate, will lead to more diversity in the types of systems that

customers install, as well as more diversity in the configurations of these systems, the types of technologies used, and other information.

20. Second, the Net Hourly Billing Program will increase the importance of the timing of customers' consumption and the systems' generation. I anticipate that customers will make different choices about system size than customers have made under the Net Metering Program. While, as noted above, I anticipate more diversity, as a general rule I anticipate that customers will choose smaller systems than they would have under the Net Metering Program. Whether or not systems are sized smaller, larger, or there is simply more diversity in customers' choices, customers and installers will make decisions that are influenced more by the timing of consumption and generation.

21. Third, and relatedly, because the Net Hourly Billing Program increases the importance of the timing of a customers' consumption and generation, I anticipate that customers will choose systems that are configured to include storage or other associated technologies. These technologies will enable customers to match generation with consumption on a more granular basis than was necessary under the Net Metering Program.

22. Fourth, the proposed settlement includes a non-export option. I anticipate that more customers will choose the non-export option, with the associated storage and other technologies, which was not formalized under the Net Metering Program.

23. The decisions that customers and installers made, based on the key components of the Net Metering Program, typically cannot easily be undone. For example, it is not financially feasible for a Net Metering Program customer to decrease their system size. They have already made the investment and have little reason to incur the additional expense of (for example)

removing panels, reconfiguring wiring, and making the other changes necessary to decrease system size.

24. In addition, customers that configured their system to match monthly consumption and generation cannot typically economically retrofit their systems to match consumption and generation on a more granular basis. For example, a customer whose system did not initially include battery storage cannot just simply buy batteries. Instead, the customer would have to completely reconfigure their system.

25. To provide another example, while a new customer could take advantage of technologies to match consumption with generation by diverting energy for consumption purposes, such as electric vehicle charging, existing customers whose system was configured under the Net Metering Program would not likely be able to incorporate these technologies without completely reconfiguring their systems, which is cost prohibitive.

26. Recently, I have discussed the possibility of incorporating storage or other technologies with customers who designed and installed their systems under the Net Metering Program. The cost of reconfiguring the systems was prohibitively expensive for all of these customers. If these customers had made their decisions based on Net Hourly Billing Program, the incremental cost of a system that included storage or other technologies would not be near this amount—the system would have been designed to incorporate those technologies from the outset.

27. Finally, while a new customer has the option to configure their installation to be a non-export system, customers that configured their systems to meet the components of the Net Metering Program typically cannot economically alter their systems to take advantage of the non-export option. Transforming an exporting system to a non-export system would require a

complete reconfiguration of the system. While I do not have specific figures on what that would cost, in my experience it would be at least as much, and perhaps more, than reconfiguring a system to include storage or other technologies.

28. In my experience and opinion, the Net Metering Program and the Net Hourly Billing Program are two separate programs. The key components of the Net Metering Program that drove customer decision making—monthly netting and a kilowatt-hour credit for exports—have changed. This is more than a change in rates. It is a change in *programs*. Under the Net Metering Program, customers made decisions regarding the configuration of their systems, and indeed whether or not to invest in onsite generation, according to the components of the program in place at the time. Those decisions cannot be undone.

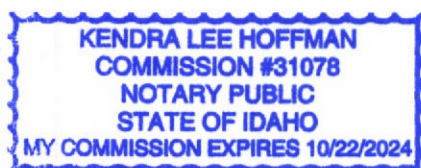
29. In my opinion, customers that made decisions under the Net Metering Program are differently situated than customers that will make decisions under the Net Hourly Billing Program. I urge the Commission to allow existing customers to continue under the Net Metering Program as specified in the proposal in ICEA's comments.


DATED: November 12, 2019.



Kevin King

SUBSCRIBED AND SWORN to before me this 12th day of November, 2019.





Notary Public of Idaho
Residing at: Boise, Idaho
My Commission Expires: 10/22/24

CERTIFICATE OF SERVICE

I certify that on November 13, 2019, a true and correct copy of the foregoing comments were served upon all parties of record in this proceeding via the manner indicated below:

Commission Staff

Diane Hanian, Commission Secretary
Idaho Public Utilities Commission
11331 W. Chinden Blvd., Bldg. 8, Ste. 201-A
Boise, ID 83714
Diane.holt@puc.idaho.gov

Hand Delivery & Electronic Mail

Edward Jewell, Deputy Attorney General
Idaho Public Utilities Commission
11331 W. Chinden Blvd., Bldg. 8, Ste. 201-A
Boise, ID 83714
Edward.Jewell@puc.idaho.gov

Electronic Mail

Via Electronic Mail

Lisa D. Nordstrom
Regulatory Dockets
Idaho Power Company
1221 West Idaho Street (83702)
P.O. Box 70
Boise, ID 83707
lnordstrom@idahopower.com
dockets@idahopower.com

Benjamin J. Otto
Idaho Conservation League
710 North 6th Street
Boise, Idaho 83702
botto@idahoconservation.org

Idaho Irrigation Pumpers Association, Inc.
c/o Anthony Yankel
12700 Lake Avenue, Unit 2505
Lakewood, Ohio 44107
tony@yankel.net

Timothy E. Tatum
Connie Aschenbrenner
Idaho Power Company
1221 West Idaho Street (83702)
P.O. Box 70
Boise, ID 83707
ttatum@idahopower.com
caschenbrenner@idahopower.com

Idaho Irrigation Pumpers Association, Inc.
c/o Eric L. Olsen
Echo Hawk & Olsen, PLLC
505 Pershing Avenue, Suite 100
P.O. Box 6119
Pocatello, Idaho 8305
elo@echohawk.com

Idahydro
c/o C. Tom Arkoosh
Arkoosh Law Offices
802 W. Bannock Street, Suite LP 103
P.O. Box 2900
Boise, ID 83701
Tom.arkoosh@arkoosh.com
Erin.cecil@arkoosh.com

Ted Weston
Rocky Mountain Power
1407 West North Temple, Suite 330
Salt Lake City, UT 84116
ted.weston@pacificorp.com

Briana Kober
Vote Solar
358 S. 700 E., Suite B206
Salt Lake City, UT 84102
briana@votesolar.org

Al Luna
Aluna@earthjustice.org

Abigail R. Germaine
Boise City Attorney's Office
105 N. Capitol Blvd.
P.O. Box 500
Boise, ID 83701-0500
agermaine@cityofboise.org

Zack Waterman
Mike Heckler
Idaho Sierra Club
503 W. Franklin Street
Boise, ID 83702
zack.waterman@sierraclub.org
Michael.p.heckler@gmail.com

NW Energy Coalition
c/o Benjamin J. Otto
Idaho Conservation League
710 N. 6th Street
Boise, ID 83702
botto@idahoconservation.org

Micron Technology, Inc.
c/o Austin Rueschhoff
Thorvald A. Nelson
Holland & Hart, LLP
555 Seventeenth Street, Suite 3200
Denver, CO 80202
darueschhoff@hollandhart.com
tnelson@hollandhart.com

Yvonne R. Hogle
Rocky Mountain Power
1407 West North Temple, Suite 330
Salt Lake City, UT 84116
yvonne.hogle@pacificorp.com

David Bender
Earthjustice
3916 Nakoma Road
Madison, WI 53711
dbender@earthjustice.org

Nick Thorpe
nthorpe@earthjustice.org

Idaho Sierra Club
c/o Kelsey Jae Nunez
Kelsey Jae Nunez LLC
920 N. Clover Drive
Boise, ID 83703
kelsey@kelseyjaenunez.com

F. Diego Rivas
NW Energy Coalition
1101 8th Avenue
Helena, MT 59601
diego@nwenergy.org

Jim Swier
Micron Technology, Inc.
8000 S. Federal Way
Boise, ID 83707
jswier@micron.com

Industrial Customers of Idaho Power
c/o Peter J. Richardson
Richardson, Adams, PLLC
515 N. 27th Street
P.O. Box 7218
Boise, Idaho 83702
peter@richardsonadams.com

Industrial Customers of Idaho Power
Dr. Don Reading
6070 Hill Road
Boise, Idaho 83703
dreading@mindspring.com

Russell Schiermeier
29393 Davis Road
Bruneau, Idaho 83604
buyhay@gmail.com



Preston N. Carter