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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF IDAHO POWER COMPANY'S APLICATION TO APPROVE NEW TARIFF SCHEDULE 63, A COMMUNITY SOLAR PILOT PROGRAM.	**CASE NO. IPC-E-16-14** **COMMENTS OF THE COMMISSION STAFF**

COMES NOW the Staff of the Idaho Public Utilities Commission, by and through its attorney of record, Daphne Huang, Deputy Attorney General, and responds to the Notice of Application and Notice of Modified Procedure issued on August 16, 2016. The Staff submits the following Comments in this case.

BACKGROUND

On June 22, 2016, Idaho Power Company filed an Application with the Commission for authorization to implement an optional program, Schedule 63, Community Solar Pilot Program. Under the program, the Company proposes to build a 500 kilowatt (kW) single-axis tracking community solar array in southeast Boise that will allow a limited number of Idaho Power's customers to subscribe to the generation output. Participating customers would be required to pay a one-time upfront Subscription Fee and would receive a monthly Solar Energy Credit to their bill for their designated share of the energy produced from the array. Application at 2.

Idaho Power states that "[f]or many customers, direct ownership and operation of solar resources is not desirable or feasible. Customer ownership and operation requires upfront capital costs, as well as long-term expenses and liabilities associated with system operation and maintenance." *Id.* at 2. Also, "Customers who reside in rental properties, multi-unit dwellings, or townhomes, as well as customers that have aging rooftops, shading, or unsuitable rooftop orientation are not feasible candidates for rooftop solar." *Id.* The Company's proposed Community Solar Pilot Program is designed to provide an alternative for these customers. *Id.*

Idaho Power states that it "intends for this initial offering to be treated as a pilot program to allow the Company to learn about the complexities associated with offering community solar programs including: customer commitment, construction, contracting, interconnection, maintenance, and billing." *Id.* at 3. According to Idaho Power, the "Program is designed as a new option in response to customers' preference for renewable energy options, and will serve to inform the consideration of potential expanded offerings in the future." *Id.*

Under the Program, "participants may elect to purchase one or more subscriptions in the generation output for the life of the project (25 years)." *Id.* at 4. Eligible Customers' expected annual production associated with their subscription level cannot exceed 100 percent of their usage for the prior 12 months, on a kWh basis. Nonresidential customers are limited to 50 subscriptions each. *Id.* Idaho Power employees and net metering customers will only be able to subscribe after the initial 60-day enrollment period in order to test other customers' commitment to community solar. *Id.*

The Company states that subscriptions "will be awarded on a first-come, first-served basis until Program capacity is reached." *Id.* "The first 60 days of the initial enrollment window will reserve 70 percent of the project for residential customers and 30 percent for nonresidential customers." *Id.* After the first 60 days, "if there is unsubscribed capacity that was reserved for residential customers, it may be opened up to non-residential customers and vice versa." *Id.*

The Company states that it "hopes to have nearly full enrollment 120 days from Commission approval, but may adjust this based on the difficulty of enrolling customers during the holiday season." *Id.* at 5. Idaho Power states that it "reserves the right to discontinue efforts on the Community Solar Pilot Program if the project is not fully subscribed within 120 days after the commencement of the enrollment period." *Id.* However, Idaho Power also states that it "may, at its discretion, elect to continue the Program even if it is not fully subscribed within that time

period, but expects that it would not continue the Program if less than 80 percent of the Program is subscribed within 120 days after the commencement of the enrollment period." *Id.*

The Company proposes a "cost-based method of pricing whereby the Company has set the Subscription Fee for participants to reflect the cost to construct and interconnect the solar PV facility and market the Program, less an IDACORP, Inc. shareholder contribution of 15 percent, as well as ongoing costs such as O&M expenses and property tax." *Id.* at 9. The proposed Subscription Fee is $740 for the equivalent of a 320-watt panel and "is a one-time upfront payment that will result in a Solar Energy Credit on the customer's monthly bill for the 25-year life of the Program." *Id.* at 9-10. According to the Company, there will be approximately 1,563 subscriptions. *Id.* at 10.

The Company proposes a "per kWh Solar Energy Credit calculated as the product of (a) the proposed Solar Energy Credit rate specified in tariff Schedule 63 and (b) the participant's share of the total monthly production for that month." *Id.* The Company further proposes "to base the Solar Energy Credit on its embedded energy-related costs recovered through base rates and update them as needed." *Id.* Idaho Power states that "the total dollar value of the Solar Energy Credit reflected on a customer's bill will fluctuate monthly as production from the solar facility fluctuates." *Id.* Further, "the participant's share of the monthly output will . . . be applied as a kWh credit toward billed kWh subject to the annual PCA rate for billing purposes." *Id.*

STAFF ANALYSIS

Staff supports the Company's development of a community solar program that responds to increasing customer demand options for alternative renewable energy.

Staff believes the Company appropriately considered a variety of factors when designing this pilot. In particular, the Company conducted a robust request for bids (RFB) process, carefully considered the site location, and revised its line loss calculation. Furthermore, the Company offered a 15% shareholder contribution, allowed residential customers to offset 100% of their usage, and preemptively excluded any future change in base rates as a result of community solar related costs. Staff believes a community solar program can be successful. While many aspects of the pilot are well-designed, Staff maintains that two aspects, the subscription method and the Solar Energy Credit, should be modified to encourage participation and help ensure the success of this project.

Subscription Options

Idaho Power has proposed a $740 upfront Subscription Fee, payable by check via mail. Staff is concerned that a high upfront cost and a relatively laborious payment mechanism may stifle participation. Staff believes the upfront Subscription Fee is more likely to be a significant hurdle for residential customers interested in participating rather than for commercial, industrial, or municipal customers. This is an important consideration because 70% of the project will be initially reserved for residential customers. Therefore, Staff recommends subscription options that lower the upfront cost of participation.

For comparison purposes, Staff reviewed Avista's Community Solar Program.[1] Avista's program set a high upfront fee of $1,400 that negatively impacted participation. Even with a short payback period of 3.75 years and financing options through a local bank, Avista's program was slow to fully subscribe. According to Avista, the $1,400 upfront payment deterred many customers.

Accordingly, Staff recommends the Company provide 12 and 24 month payment options in addition to the upfront option. This creates a monthly subscription payment of about $31 to $61, plus a carrying charge, which could make participation more attainable for many residential customers. This type of simple, short-term monthly payment plan is consistent with Flathead Electric Cooperative and Missoula Electric Cooperative Community Solar Programs, both of which Idaho Power cited in a production response as utilities they consulted during program designs. Staff would also support an ongoing, monthly subscription option in which customers pay an additional or fixed amount on each bill, similar to the design of PacifiCorp's Community Solar Program.

Staff understands that a monthly payment plan extends the amount of time over which the Company will collect the project costs. However, Staff believes the total cost to the Company of delayed recovery is minimal. The risk of subscribers dropping out of the program before fully funding their subscription can be mitigated with effective marketing of a program that is economical for participants. Staff maintains that providing a reasonable, short-term monthly payment option will increase participation and assure a more successful program. Staff also recommends that a monthly payment option be offered to customers at the current interest rate on deposits of 1%.

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[1] https://www.avistautilities.com/services/Pages/commsolarfaq.aspx#payback

The Company's proposal allows participants to pay Subscription Fees by check only. However, the Company currently processes payments made by customers towards bills and deposits by phone or electronically via the Company's website. Customers have the option of paying via a checking/savings account or a credit/debit card with a $2.85 transaction fee. Customers enrolled in "My Account" can pay online by checking or savings account with no transaction fees. Allowing participants to pay subscriptions fees online or by phone is not only reasonable, it is a cost-effective alternative payment method that does not create additional cost for the Company. Staff recommends Community Solar participants have the option to pay Subscription Fees through the same payment methods available to customers paying bills or deposits.

Staff understands the Company's desire to move expeditiously, but Staff believes that 120 days may not provide sufficient time to market the program and reach 80% enrollment. Staff encourages the Company to remain flexible on the enrollment period so that potential participants have time to learn about the program and make an informed decision about subscribing.

Idaho Power's Methodology for Determining Solar Energy Credits

In return for the $740 Subscription Fee, participants receive a monthly Solar Energy Credit to their bill based on their share of the Community Solar plant's generation for the 25 year project term. The Company has proposed a cost-of-service methodology to determine the Solar Energy Credit for Schedule 63.

Staff disagrees with this methodology for several reasons. First, although cost-of-service is an appropriate framework for assigning costs, it is not accurate for determining the value a new resource provides to the system. The cost-of-service credit methodology incorrectly assumes that adding a new resource would reduce existing Company generation at average embedded energy costs rather than the most expensive (incremental) resources. Because the Company runs its system to minimize ratepayer costs, the program would avoid using the Company's most expensive resources. To the extent that the generation profile of the new, less expensive resource coincides with system peaks, the new resource would offset capacity in addition to energy. Staff believes the Company's proposed single-axis Community Solar Program will offset the need for some amount of capacity.

Second, the cost-of-service approach produces inconsistent results, such as the different per kWh Solar Energy Credits proposed for each rate class. Staff notes that under the Company's

proposal, participants from all rate classes would pay the same $740 Subscription Fee, but would be credited different per kWh rates. Since the value of the resource does not differ based on which customer class funds it, Staff does not believe there is any justification for this disparity.

Third, in the absence of a recent cost-of-service study approved by the Commission, Staff attempted to independently confirm the Company's calculation of its authorized embedded cost of energy using the Company's most recent Fixed Cost Adjustment (FCA) filing. The current residential retail rate of 10.29¢ per kWh, minus the Company's 3.0246¢ embedded energy rate calculation, leaves 7.27¢ per kWh in fixed cost charges.[2] Staff acknowledges that the authorized fixed costs used to determine the FCA rate were established in the 2011 general rate case. But, absent more recent data, Staff notes the Company's most recently approved FCA filing shows that its authorized fixed cost amount is 5.719¢ per kWh.[3] This indicates that the Company's residential embedded cost of energy is 4.571¢ per kWh rather than 3.0246¢ per kWh. Staff does not believe the Company's cost-of-service based credit methodology properly values the resource, nor is it consistent with variable energy costs approved in the Company's most recent FCA.

Lastly, Staff believes that the Company's proposed rate not only over-collects fixed costs, it creates a return on the invested capital contributed by residential participants. With 70% residential subscription, the Company is estimated to receive $808,820 of the $1.2 million total project costs from residential participants.[4] But the Company's proposed residential bill credit of 3.0246¢ per kWh means that the Company will only be returning $527,289 of the $808,820 invested by residential participants.[5] The difference, $281,531, would be retained by the Company and result in an unauthorized 35% return on residential customer contributed capital[6] or cover additional program costs. Therefore, the Company's artificially low bill credit creates

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[2] According to Idaho Power's United States Securities and Exchange Commission Form 10-K, the Company's 2015 residential retail rate was $0.1029/kWh. While the residential retail rates are calculated on a system-wide basis, Oregon represents roughly 5% of the Company's revenue, as well as energy sales. Removing 5% from both the numerator and denominator results in the same rate calculation of $0.1029/kWh. ($512,068,335/4,977,176MWh) = ($512,068,335 x .95) / (4,977,176MWh x .95) = $0.1029.

[3] Exhibit No. 2 from Company witness Zach Harris in IPC-E-16-02 shows the current Authorized Recovery amount of $272,407,352, with Idaho residential customer sales of 4,762,942,743. $272,407,352/4,762,924,743kWh = $0.05719/kWh.

[4] (1093 Customers x $740/customer) = $808,820.

[5] The total residential Project output is 1093 customers x 53.2 kWh/month per customer x 12 months x 25 years = 17,433,350 kWh. 17,433,350 kWh x $0.0302/kWh = $527,289.

[6] Calculations show the $281,531 is directly related to the over-collected fixed costs: $0.1029/kwh retail rate - $.0302/kWh Solar Energy Credit – $0.0572 Authorized Fixed Cost per Energy = $0.016/kwh over collected Fixed Costs. $0.016 x 17,433,350 = ~$281,531 less rounding errors. ($281,531/$808,820) = .35 or 35%.

inflated fixed cost recovery, which in-turn creates a scenario where the Company earns an unauthorized return from residential participants.

Staff's Methodology for Determining Solar Energy Credits

Staff believes that the Solar Energy Credit rate should be calculated based on the value of the incremental resource that will be avoided based on the Project's generation profile, rather than on the consumption patterns of typical customers within each rate class.

Using the avoided resource methodology, Staff calculated a single, year-round Solar Energy rate credit for all classes by applying Company-produced Demand-Side Management (DSM) avoided cost rates to the Project's generation profile. Staff modeled the Project's hourly generation profile using equipment data sheets provided by the Company. Staff's model used 15 years of hourly weather data obtained from the National Oceanic and Atmospheric Administration (NOAA) solar observatory located at the Boise Airport. Despite minor differences in Staff's modeling methodology, Staff's annual production estimate (974,310 kWh per year) was nearly identical to that generated by the Company (996,977 kWh per year). By applying the Company's DSM avoided costs to Staff's solar generation profile, Staff computed a first year Solar Energy Credit rate of 3.7924¢ per kWh. Staff's methodology increases bill credits about 25% for residential and small commercial customers, 27% to 36% for large general and power service, 42% for irrigation customers, and up to 52% for special contract customers. The increase in the bill credit for non-residential customers is capped because they are limited to 50 subscriptions each, rather than 100% of usage as is the case for residential customers. Staff also maintains that correctly valuing the resource will properly incent customers to participate.

Staff believes that using the Company's DSM avoided costs as the value of the Community Solar Program is preferable to the Company's cost-of-service methodology because it reflects the Company's regularly updated analysis of its incremental resource needs. In each new Integrated Resource Plan (IRP), the Company updates its DSM avoided cost forecast. The hours of each year are broken down into five price blocks based on the Company's forecasted load profile—Summer On-Peak, Summer Mid-Peak, Summer Off-Peak, Non-summer Mid-Peak, and Non-Summer Off-Peak. Each of the five price-blocks reflects the incremental resource that the Company has determined it will have to acquire in each of those years to meet demand.

For all price blocks except for Summer On-Peak, the avoided cost price is based on the wholesale market purchase price forecast. For the Summer On-Peak, the alternate cost is the per-

kWh cost of a simple-cycle combustion turbine, which represents the capacity value. As a result, there are relatively few hours each year valued at the highest incremental resource cost (Summer On-Peak) and many more hours each year valued at the lowest incremental resource costs (Non-Summer Mid-Peak and Non-Summer Off-Peak).

It is important to note that DSM avoided costs are occasionally mischaracterized as only being used to determine cost-effectiveness of DSM resources. That is not correct. A more accurate description is that DSM avoided costs represent the threshold by which cost-effectiveness is determined. Even though Staff's methodology proposes to credit Community Solar participants based on the cost of the Company's avoided resources, participants continue to pay the full embedded cost of existing resources through base rates and the FCA. Because the FCA rate is applied to participants' total usage, not usage net of generation from the Community Solar Program, the Company's embedded fixed costs are fully recovered (i.e., no lost fixed margin). Consequently, when the Company pays participants the value of the avoided resource, it pays a price that it would have paid for a new resource absent the Community Solar Program.

In addition to clearly laying out the value of incremental resources, the DSM avoided cost methodology has several advantages over the cost-of-service framework. First, avoided cost methodology has been used without controversy to value DSM resources for many years, if not decades.[7] Second, the avoided costs are directly calculated by the Company for its DSM programs. Third, the avoided costs are updated as part of a regular, public process every two years in the IRP as the Company's resource needs change. In contrast, cost-of-service inputs are verified and updated only when the Company files a general rate case, which for Idaho Power was five years ago. Cost-of-service methodologies are also contentious, updated less frequently, and seldom receive widespread agreement.

Staff believes that using the Company's long-standing, internal analysis to produce transparent, non-controversial, frequently updated avoided cost is the appropriate method for determining community Solar Energy Credits.

Staff further believes that avoided costs are historically low right now. If the Company were to offer a fixed, levelized bill credit based on its current avoided cost figures, Staff believes it would almost certainly pay customers less than the actual value of the resource over time.

[7] *See e.g.* Order Nos. 33365, 33441, 33161, 33161 Erratta, and 32980.

However, Staff prefers updating the Solar Energy Credit with each IRP cycle in order to ensure that the resource continues to be accurately valued.

Currently, Idaho Power's DSM avoided costs rates only include avoided energy and capacity costs. However, the Company has committed to including the value of deferred transmission and distribution in its DSM avoided costs going forward. To the extent an incremental amount of deferred transmission should be included in the avoided cost given site locations, Staff believes that these values should be included in the Solar Energy Credit. Because the Community Solar plant will use the distribution system to transfer energy from the plant to consumers, Staff does not believe that this Project will avoid any distribution. However, locally generated energy does reduce use of the transmission system, so Staff believes it is appropriate to include that value in the bill credit.

Lastly, basing the Solar Energy Credit on the DSM avoided cost moves the payback period for customers from over 38 years under the Company's proposal to approximately 19 years. This makes Community Solar a viable alternative to net metering, where payback periods under the current structure range from about 12 to 20 years.

Operations, Maintenance, Administrative, and General Costs

Staff agrees with the Company that this Project should be treated as a pilot program. In addition to the Company's stated learning objectives, Staff is interested in tracking Operations and Maintenance (O&M) and Administrative and General (A&G) costs incurred by the Company. Staff believes that the Company should track costs associated with warranty items and service agreements. Staff also believes that the Company should track the costs of recurring maintenance items, such as cleaning and vegetation removal, that are not included in the Company's service agreements.

Bill Presentment

Staff has reviewed the Company's proposal regarding how the Solar Energy Credit will appear on customer bills. A line item will inform participants of the total credit applied to their bill based upon their portion of energy produced by the solar project. Staff recommends the Company add "per kWh" to the line to make it consistent with how other cents per kWh rates appear on bills. Staff recommends approval of the Solar Energy Credit as a line item to be applied to participants' bills.

Participant Agreement

Staff reviewed the Company's proposed Terms and Conditions regarding the refund of Subscription Fees (Pengilly Direct, Exhibit No.3 at 2) in the event that the Company decides to cancel the program after some subscriptions have been collected. The Company references "Idaho Public Utility Commission Rule 101" for applying interest if the Company is required to return a participant's Subscription Fee. This reference is incorrect and should read "Utility Customer Relations Rule 106.02." IDAPA 31.21.01.106.02. Staff recommends that this correction be made to the Participant Agreement.

Reporting Requirements

In order to monitor and evaluate the Community Solar Pilot Program, Staff recommends that the Company file an annual report updating the Commission and stakeholders on:

- Evaluation of marketing results, including time to subscribe;
- Subscriptions, demographics, transfers, move-outs, and customer feedback;
- Tracking and verification of system output, including allocation among subscribers;
- Tracking financial variables and budget management, including:
    - Operation and maintenance (O&M) expenses;
    - Administrative and General (A&G) expenses;
    - Warranty items and service agreements; and
    - Recurring maintenance items, particularly those not included in the Company's service agreements.

Staff recommends that the Company file its annual Community Solar report coincidently with its Net Metering and Green Power reports. Staff understands that the Green Power report is only required to be filed bi-annually, but understands that the Company does not object to making that report an annual filing.

RECOMMENDATION

Based on Staff's analysis, Staff recommends that the Commission approve Idaho Power's request to offer a Community Solar Pilot Project. However, Staff recommends the following changes to the program:

1. Use the 2015 IRP DSM avoided costs including the value of deferred transmission as the basis for the Solar Energy Credit, to be updated with each IRP cycle;
2. With respect to the Subscription Fee, offer: (a) 12 and 24 month payment plans with a 1% carrying charge in addition to the upfront payment option, and (b) the option to pay by phone or electronically via the Company's website;
3. Include the Solar Energy Credit as a line item to be applied to participants' bills with "per kWh" added to the line;
4. Replace the reference to "Idaho Public Utility Commission Rule 101" for applying interest if the Company is required to return a participant's Subscription Fee with "Utility Customer Relations Rule 106.02" in the Participant Agreement; and
5. Provide an annual Community Solar report filed coincident with the Company's annual Net Metering and Green Power reports.

Respectfully submitted this 1st day of September 2016.

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS 1st DAY OF SEPTEMBER 2016, SERVED THE FOREGOING **COMMENTS OF THE COMMISSION STAFF** IN CASE NO. IPC-E-16-14, BY MAILING A COPY THEREOF, POSTAGE PREPAID, TO THE FOLLOWING:

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