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Attorney for Idaho Clean Energy Association Inc.

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE
APPLICATION OF IDAHO POWER
COMPANY FOR AUTHORITY TO
MODIFY ITS NET METERING SERVICE
AND TO INCREASE THE GENERATION
CAPACITY LIMIT

Case No. IPC-E-12-27

DIRECT TESTIMONY OF COURTNEY R. WHITE
ON BEHALF OF IDAHO CLEAN ENERGY ASSOCIATION

May 10, 2013

1 Q. Please state your name and business address.

2 A. Courtney White, Management Department, 1910 University Drive, Boise, ID,
3 83725.

4 Q. What is your present occupation?

5 A. I am an adjunct professor with Boise State University.

6 Q. What is your educational background?

7 A. I have a B.E. in Mechanical Engineering from Vanderbilt University and an
8 MBA from Stanford Graduate School of Business.

9 Q. What are your qualifications?

10 A. I have been employed in various business fields, including roles as a
11 management consultant, a profit-center manager, and an educator. My work throughout
12 each role has focused on making better business decisions through the ability to gather
13 observations, analyze data, and interpret the implications. Business decisions often rely
14 on forward-looking analyses to project the impact of those decisions and to weigh both
15 the upside and downside of various options, thus my work tends to center around those
16 types of analyses.

17 Q. What is the purpose of your testimony?

18 A. Through review of the changes proposed by the Company, I have found that the
19 filing creates more problems than it claims to solve. The purpose of my testimony is to
20 identify the issues created by the filing and to put these in context relative to the issues
21 the Company claims to be resolving. I hope to also add a forward-looking perspective
22 and consideration to how the proposed changes will impact decisions, none of which
23 have been addressed to date in the testimony provided by the Company.

1 Q. Please outline the topics of your testimony.

2 A. I will be addressing the following:

3 I. The proposed cap on net metering creates more costs than benefits;

4 II. The filing is inconsistent with state policy;

5 III. The inequity claimed by the Company is driven by a few customers

6 with excess generation; there is no need for a separate rate structure for

7 net metering;

8 IV. The proposed rate structure is inequitable and discriminatory;

9 1. Inequity between standard service and net metering customers;

10 2. Inequity between low usage and high usage customers;

11 V. Excess generation should be given a financial value;

12 VI. The filing will likely not remain revenue neutral;

13 Q. Please describe Exhibit 701.

14 A. In response to Staff Production Request No. 9, the Company submitted a
15 comparison of annual bills for current net meter customers at current and proposed
16 rates. The response contained confidential customer identification information.

17 Subsequent to filing Response No. 9, the Company made a supplemental filing
18 updating kWh consumption for some customers. Exhibit 701 incorporates the
19 corrections provided by the Company in the supplemental filing and replicates the
20 updated summary data from Response No. 9 with confidential customer identification
21 removed. Exhibit 701 includes a table of data followed by two graphs to convey this
22 data visually. I will refer to Exhibit 701 at several points in my testimony.

23 I. **The proposed cap on net metering creates more costs than benefits;**

1 Q. What was the explanation for the cap on net metering capacity provided by the
2 Company?

3 A. Idaho Power describes the cap as follows:

4 "If current growth trends continue or increase, it is important to maintain a
5 capacity limit to allow the Company and other stakeholders to evaluate this service as it
6 expands." (Larkin Direct Testimony, page 13, lines 10-12).

7 Q. Is it necessary to have a capacity limit to allow the Company to evaluate the
8 service?

9 A. No. Idaho has a regulatory process that already allows the Company the
10 opportunity to evaluate the service and apply for changes.

11 Q. Is there any guidance at a federal or interstate level with regard to an aggregate
12 capacity limit on net metering?

13 A. The Interstate Renewable Energy Council, Inc. (IREC) works with support from
14 the U.S. Department of Energy to establish best practices in the field of renewables and
15 energy efficiency. In its best practices for net metering, the IREC recommends:

16 "An Electricity Provider shall not limit the cumulative, aggregate generating
17 capacity of net-metered systems in any manner...IREC believes aggregate caps
18 arbitrarily and unnecessarily limit private investment in Renewable Energy Generation
19 and needlessly curtail the flow of benefits that are associated with customer-side
20 Renewable Energy Generation. Moreover, aggregate caps ignore the fact that many
21 large systems do not export energy yet disproportionately count towards meeting a cap,
22 limiting the number of small systems that are eligible. For these reasons, IREC has not

1 adopted an aggregate enrollment cap in these rules.” (IREC MR-NM2009: IREC Model
2 Net-Metering Rules, p. 3).

3 Q. How does the Company’s cap compare to other states with regard to capacity
4 limits on net metering?

5 A. Based on my own research, I have found no other state or investor owned utility
6 outside of Idaho with a cap as low as the Company’s current cap on net metering
7 capacity as a percentage of peak load demand for the prior year. If the cap is doubled
8 as proposed, there still would be no other state in the nation with a lower cap on net
9 metering relative to the prior year’s peak load demand.

10 Q. If there were no cap on net metering in Idaho, would you predict that the net
11 metering capacity in Idaho would rapidly exceed that in other states?

12 A. No. A key variable in evaluating the financial benefits of investing in customer-
13 owned generation is the price of electricity. Idahoans have some of the lowest
14 electricity rates in the country, which is one of the reasons Idaho currently has such a
15 low level of investment in customer-owned generation and which ensures that this state
16 will continue to lag others in terms of net metering capacity as a percentage of total
17 peak load demand. I have not seen evidence from the Company indicating why it is
18 exceptional in needing to limit the capacity of net metering to a far lower level than
19 other states.

20 In sum, I have seen no evidence that the cap is necessary or that Idaho benefits
21 from a cap on aggregate net metering capacity.

22 Q. When will net metering capacity reach the proposed cap?

1 A. I have not independently forecasted the growth in net metering based on the
2 proposed rate structure. As referenced above (Larkin Direct Testimony, page 13), the
3 Company indicates that their filing is made with the assumption that growth trends will
4 continue or increase. If current growth trends continue, the proposed cap would be
5 reached by 2017. If current growth trends increase, the proposed cap would be reached
6 earlier. See Exhibit 702.

7 Q. You have testified above that there is no benefit to having an aggregate capacity
8 limit. Have you identified the costs to having a capacity limit?

9 A. There are at least 3 costs to the capacity limit proposed.

10 **1. The Risk / Return Tradeoff.** In the field for financial analysis, there is a
11 well-established principle often called the risk/return tradeoff – the potential benefits
12 that an investment will return relative to the probability (or risk) of actually achieving
13 those benefits. For example, given a choice between two options that provide the same
14 potential benefits, if one option is riskier, the lower risk option would be the better
15 investment. When the risks associated with an investment increase, the expected cash
16 flows from the investment must increase in order to maintain the same expected value.
17 By proposing a short-term policy with expectation of another review period in 2016
18 prior to reaching the cap, the Company increases the risk level of investments in
19 customer-owned generation. As evidenced by the Application in this case, the
20 Company has also demonstrated its willingness to propose dramatic swings in the
21 variables affecting these investments. To implement the proposed low cap on net
22 metering would maintain an unnecessarily high risk level for potential investors in

1 customer generation. Thus the low cap creates a real cost – the negative impact on the
2 risk/return balance for investments in distributed generation.

3 **2. A strategy built on capacity limits should be evaluated comprehensively,**
4 **not piecemeal.** A decision to constrain one source of capacity is a decision to rely
5 more on another source of capacity. If the Company advocates that capacity limits are
6 necessary to allow the company the opportunity to evaluate its services, then a more
7 equitable and non-discriminatory approach would be to address the appropriate goals
8 and limits on electricity sourced from all types of resources so that the risks and future
9 costs to customers can be considered. The Company has not provided evidence that, in
10 the absence of a cap, the Company will face new risks or costs for net metering which it
11 would have no opportunity to address. Meanwhile, for example, the Company is
12 currently evaluating a \$500 million dollar investment to upgrade the coal plants from
13 which it sources electricity. Many ratepayers would appreciate the opportunity to
14 consider a cap on power sourced from coal. By considering the entire portfolio of
15 resources, Idaho Power and the PUC could better consider the full implications of using
16 capacity limits as a means of evaluating rates and services.

17 **3. Unnecessary disruptions.** The proposed cap leads to unnecessary
18 disruptions for businesses in the market for distributed generation. For example, the
19 pending Application has caused a six month disruption as potential investors in
20 distributed generation wait to learn the price structure that will determine the financial
21 return on their investment. The Company was either aware or should have been aware
22 that the dramatic change in rate structure would have a dramatic change in the
23 economic dynamics of net metering. I would have expected the Company to involve

1 stakeholders to develop a mutually agreeable solution rather than enter an expensive
2 and lengthy period of litigation. I would also have expected the Company to propose a
3 solution it felt confident would be sustainable for more than a few years after its
4 implementation. Instead, the Company describes in its testimony (Larkin Direct
5 Testimony, page 13, line 16) that the program will need to be evaluated again soon:

6 “By increasing the current capacity limit to 5.8 MW, the Company is facilitating
7 the expansion of its net metering service while maintaining the opportunity to
8 appropriately evaluate and request to modify this service as necessary”.

9 Q. If there are no substantial issues with the net metering service, is it reasonable to
10 expect that the Company would simply apply to increase the capacity limit rather than
11 apply for modifications that would lead to another expensive and lengthy review
12 period?

13 A. Prior to this filing, I would have assumed that is reasonable to expect that the
14 company would not apply for changes which would create greater regulatory cost for
15 all parties than the cost of the issue the Company seeks to address, but the Company's
16 actions indicate differently. The Company was aware that the total dollar value of the
17 perceived inequity of the filing was immaterial at apparently \$74,000, and that it was
18 driven by a handful of customers. See, Exhibit 701.

19 Thus, the Company has demonstrated that it does not hold itself accountable for
20 weighing the costs of disruptions and deliberations relative to the value of its
21 application if the Idaho PUC were to again pass a capacity limit as described in the
22 Company's testimony. Given a capacity limit is not necessary to give the Company the
23 opportunity to evaluate and apply for modifications to the service, I recommend that

1 there be no arbitrary capacity limits. This would help ensure that applications to the
2 PUC are driven by material issues. This would also clarify to the Company that the
3 Company should consider the disruption costs and regulatory costs of its applications
4 relative to the value of the issues it claims to address.

5 **II. The filing is inconsistent with state policy;**

6 Q. What is Idaho policy with regard to customer-owned generation?

7 A. The 2012 Idaho Energy Plan adopted by the state legislature states, p. 10:

8 “E10. In accordance with federal law, the Idaho PUC should continue to
9 administer its responsibilities under the Public Utility Regulatory Act in a way that
10 encourages the cost-effective development of customer-owned renewable generation
11 and combined heat and power facilities”.

12 The Energy Plan reiterates in E-11 of page 10:

13 "It is Idaho policy to encourage investment in customer-owned generation"

14 Q. How has the Company described this filing to the public in terms of
15 encouraging or discouraging investment in customer-owned generation?

16 A. The Company published a “Readers View” in the *Idaho Statesman* which
17 describes the filing as follows:

18 “Idaho Power proposal will encourage small-scale renewable projects”

19 (Published: January 17, 2013)

20 [http://www.idahostatesman.com/2013/01/17/2416259/theresa-drake-idaho-
21 power-proposal.html#storylink=cpy](http://www.idahostatesman.com/2013/01/17/2416259/theresa-drake-idaho-
21 power-proposal.html#storylink=cpy)

22

23

1 Q. Do you view that statement as consistent with the information provided by the
2 Company which you have reviewed?

3 A. No I do not. Exhibit 701 shows the impact of the filing on current net metering
4 customers. Of those customers, 75% would be financially worse off due to the impact
5 of the filing. This does not encourage further investment.

6 Q. Do professional installers of customer-owned generation appear to agree with
7 the Company's statement that the proposal will encourage small-scale renewable
8 projects?

9 A. No they do not. The Idaho Clean Energy Association is on record opposing the
10 filing.

11 Q. How else might the Company encourage investment in customer-owned
12 generation?

13 A. As a finance person, I would expect- in general-that a company seeking to
14 encourage investment would do so by increasing the net benefits, lowering the upfront
15 costs, or reducing the risks. As mentioned, the filing worsens the net financial benefits
16 of investing in customer-owned generation. The upfront costs were not lowered, and
17 the Company's request to frequently evaluate the net metering program increases the
18 risks associated with the customer's investment. This filing discourages investment in
19 customer-owned generation, and is therefore inconsistent with Idaho state policy.

20 **III. The inequity claimed by the Company is driven by a few customers with**
21 **excess generation; there is no need for a new rate structure for net metering;**

22 Q. How else might the Company encourage investment in customer-owned
23 generation?

1 A. The company describes the purpose of its filing is to address a potential inequity
2 between net metering and standard service customers (Larkin Direct Testimony, page
3 19):

4 “This creates a potential inequity between net metering customers and standard
5 service customers, as net metering customers are provided the opportunity to unduly
6 reduce collection of revenue requirement by receiving credit for generation at the full
7 retail rate while standard service customers are left to compensate for the revenue
8 shortfall.”

9 Q. What is the dollar value estimated for the potential inequities which the filing
10 addresses?

11 A. **The value is \$74,000.** The Company has proposed implementing Schedule 6
12 and Schedule 8 to correct the potential for an inequitable recovery of revenue
13 requirement between standard customers and net metering customers. Therefore, the
14 difference between current bills and the bills restated under the proposed terms
15 represents the value of the potential inequity the Company claims to correct. The
16 Company discloses that the financial sum of this claimed inequity for current net
17 metering customers, for the year 2012, totals approximately \$74,000. This is the sum of
18 the differences in bills restated under current rates for 2012 and the bills resulting from
19 implementation of Schedule 6 and Schedule 8. See, Exhibit 701.

20 Q. Do you view this as a material issue?

21 A. No. Relative to the scope of impact that the Company’s effectiveness and
22 efficiency can have on power rates, this is not a material dollar figure. Please keep in
23 mind that the \$74,000 figure does not represent a known problem, it is the value of the

1 potential inequity claimed by the Company. For example, much of the \$74,000 is
2 represented by the value of customer-generated electricity which the Company
3 proposes customers should forfeit at the end of December but which the Company will
4 sell to other customers.

5 Q. Is this claimed inequity driven by all net metering customers?

6 A. No, please refer to the graphs in Exhibit 701. As an analyst, when I view this
7 distribution, I notice that the majority of the inequity claimed by the company is driven
8 by customers with very high levels of excess generation. To be clear, I am not
9 asserting that excess generation is a problem. My observation is that the inequity which
10 the Company claims to correct is linked almost entirely to the policy of how annual
11 excess generation is compensated. There is no need for a separate rate structure, or to
12 change the compensation for monthly excess generation.

13 Q. What is the value of the inequity represented by customers who use net
14 metering only to offset their power bills?

15 A. **Less than \$6,000.** Please refer to Exhibit 703. My goal was to understand the
16 degree to which the issues raised by the Company were related to (1) customers who
17 use net metering only to offset their power bills, relative to (2) issues raised by the
18 Company related to excess generation. I found that 86% of net metering customers
19 used net metering in 2012 only to offset their annual power bills. The total value of the
20 inequity claimed by the company for this 86% of customers is less than \$6,000 for
21 2012. See, Exhibit 701.

22 Q. How does this finding affect your characterization of the issues raised by the
23 Company?

1 A. The Company has invested much time in raising the theoretical question of
2 whether net metering customers should be on the current rate schedule or a separate
3 rate schedule, but the actual dollar impact of this theoretical question is less than
4 \$6,000. **The facts are, regardless of whether one agrees or disagrees with the**
5 **Company's concerns, those concerns are driven by the treatment of annual excess**
6 **generation.**

7 Given the scale of issues the PUC and the Company manage, I would
8 characterize that a potential inequity valued at \$6,000 per year is a distraction. There is
9 no need to segregate a sub-class of customers and implement a dramatically different
10 rate structure to address a \$6,000 potential inequity.

11 **IV. The proposed rate structure is inequitable and discriminatory;**

12 Q. Does Idaho state policy address discrimination specific to net metering?

13 A. Yes it does. The 2012 Idaho Energy Plan specifically calls out the need to
14 ensure non-discriminatory policies toward net metering:

15 "E-11. It is Idaho policy to encourage investment in customer-owned
16 generation; therefore, the Idaho PUC, utilities, municipalities, and cooperatives are
17 encouraged to ensure non-discriminatory policies for interconnection and net
18 metering." (page 10).

19
20 Q. Is there any guidance at a federal or interstate level with regard to the
21 establishment of separate tariffs for net metering?

22 A. The Interstate Renewable Energy Council, Inc. (IREC) works with support from
23 the U.S. Department of Energy to establish best practices in the field of renewables and

1 energy efficiency. In its best practices for net metering, the IREC clearly states that net
2 metering customers should not be charged tariffs different than standard customers:

3 “Utilities should not be permitted to force customers to switch to a different
4 tariff.” <http://www.dsireusa.org/solar/solarpolicyguide/?id=17>

5 Q. How would you assess the proposed changes with regard to discrimination?

6 A. The proposed changes are not equitable and are discriminatory. First, I will
7 address why the proposed changes treat net metering customers inequitably relative to
8 standard service customers. Secondly, I will address why the proposed changes treat
9 customers with low energy usage inequitably relative to customers with high usage.

10 **The Inequity Between Standard Service and Net Metering is Four Fold**

11 **1. Standard customers are allowed to lower their bills by lowering**
12 **consumption in a manner that net metering customers would be denied** due to the
13 higher monthly fees proposed in the filing.

14 For example, Exhibit 704 shows the monthly charges proposed for an example
15 net metering customer as calculated by the Company and provided in Response to
16 Staff's Request No. 9 (00101890). In this example, the service charge and basic load
17 charge total \$48 each month, thus no amount of energy conservation would allow the
18 customer to lower his or her bill in the same manner as a standard customer with
19 equivalent usage and demand. A standard customer could work at an out-of-town
20 location for months, leave only the refrigerator on, and pay proportionately less for
21 actual electricity consumed; a net metering customer would be denied this flexibility
22 due to high monthly fees.

1 The testimony filed by the Company, Matthew Larkin states as follows (p. 22, lines
2 5-7):

3 “All residential and Small General Service customers utilize the Company’s
4 distribution system regardless of whether or not they take standard or net metering
5 service.”

6 The Company stresses that the choice to take standard or net metering service
7 does not change the fact that all customers utilize the distribution system. Nevertheless,
8 the Company's proposal is that standard service customers have the flexibility to pay
9 more or less than the average costs of these services, while net metering customers
10 should not. I agree that all customers utilize the distribution system, and acknowledge
11 that there are different policies for how to pay for that use. However, to segregate net
12 metering customers and apply a different policy to those customers is discriminatory.
13 Our country has learned through history that "separate but equal" often does not turn
14 out to be very equal.

15 As shown earlier, the total dollar value of the potential inequity represented by
16 customers who use net metering to offset their power bills is less than \$6,000 in 2012.
17 This does not justify segregating net metering customers and applying a separate rate
18 structure.

19 **2. The proposed changes put a negative value on kWh production for**
20 **numerous customers.**

21 The testimony filed by the Company states as follows:

22 “net metering is intended to allow customers to offset all or a portion of their
23 energy usage” (Larkin Direct Testimony page. 28, line 24 to p. 29, line 1).

1 Nowhere has the Company provided evidence that a kWh produced by a
2 customer should have a negative value. The Company has focused on the recovery of
3 fixed costs, but it has not shown evidence that a customer becomes more costly to serve
4 if the customer lowers his or her kWh consumption. When a ratepayer invests in
5 generating his or her own electricity, and thereby lowers the volume of kWh's supplied
6 by Idaho Power, an equitable policy would allow the customer to reduce his or her bill.

7 Please refer to Exhibit 705. This exhibit describes an analysis to consider the
8 choice net metering customers would have of whether to pay the higher fees resulting
9 from the proposed net metering rate schedule or to turn off their generation systems,
10 generate no electricity, and avoid paying the unfavorable new terms proposed for net
11 metering. In this analysis, we used empirical data provided by the company for net
12 metering customers with 12 months of active billing data in 2012. To more accurately
13 estimate production levels, only solar net metering customers were included.

14 This analysis indicates that if the proposed terms are implemented, over 20% of
15 the net metering customers in the population evaluated **would be financially better off**
16 **(their total bills to the Company would be less) if they turned off their customer-**
17 **owned generation systems** in order to be billed under the same terms as standard
18 customers rather than pay the unfavorable rates proposed for net metering. **A rate**
19 **structure is not equitable if the choice to produce electricity makes a customer**
20 **financially worse off.**

21 **3. A change in tariff policy for residential customers should be**
22 **addressed more readily.** This filing proposes a Basic Load Charge for net metering
23 customers, but not for standard customers. This new tariff is difficult for customers to

1 monitor, predict, or control. Though numerous public comments and media
2 publications reference the formula for this tariff, there is a conspicuous absence of
3 discussion of the actual dollar value this tariff would represent because there is very
4 little understanding of the total dollar value or the behavior of billing demand readings
5 across customers.

6 To be equitable and non-discriminatory, the Company would need to
7 demonstrate that the BLC charge cannot be applied equitably to standard customers.
8 The application and Testimony filed by the Company have not provided evidence
9 demonstrating why this tariff is driven by costs linked to net metering customers only,
10 not to standard service customers. The charge is driven by the customer's peak
11 demand. The sun is typically shining when the Company hits peak demand, thus the
12 majority of net metering customers reduce the costs of meeting aggregate peak demand.

13 My interpretation of the Company's view through their public comments is that
14 they believe higher tariffs to customers, such as the BLC charge, would be appropriate
15 for all standard service customers. If this new tariff were passed for net metering
16 customers, one can expect the Company would use that passage as leverage in seeking
17 to apply the tariff to other customers. Those customers have not been represented in this
18 case before the PUC, and they deserve to be. A dramatically different type of tariff
19 which the Company believes could be applicable to all residential customers should be
20 discussed in the proper venue so that all affected parties can be represented and the full
21 impact of the change in policy can be evaluated.

22 **4. The difference in bills between net metering and standard customers**
23 **at a high usage level is substantial and unjustified.** The proposed rate structure

1 enables net metering customers with *high* kWh usage to pay lower bills than standard
2 customers with the same net usage. To be non-discriminatory in its rate design the
3 Company would need to explain the cost differences that justify why - for two
4 residential customers with equivalent demand and consumption - the net metering
5 customer costs less to serve than the standard customer. Exhibit 706 provides an
6 example of a net metering customer with average monthly consumption averaging
7 about 5100 kWh/month. A standard service customer with the exact same usage and
8 demand would pay \$1,203 more for the year analyzed (2012, using empirical data
9 provided). Neither the difference in costs nor conditions of use can justify why the
10 standard service customer should be charged \$1,203 more.

11 **Inequity between customers with low energy usage and high energy usage**

12 Q. Why do you assert that the filing is inequitable between customers with low
13 energy usage and customers with high usage?

14 A. When a customer evaluates the net financial benefits relative to the upfront
15 costs of investing in their own generation, the key drivers affecting the net financial
16 benefits are typically the projected value of the kWh produced over time, and the
17 expected timing and volume of production. Through my experience, two customers
18 looking at the same system in similar applications would see similar financial benefits.
19 The proposed changes shift the focus from the economics of the system to the situation
20 of the person investing.

21 Please refer to Exhibit 707. In this analysis, I compared three hypothetical
22 customers: one using 500 kWh per month ("Low"), one using 1050 kWh per month
23 ("Typical"), and one using 5000 kWh per month ("High"). I evaluated the dollar

1 change in an annual bill resulting from the offset of 200 kWh per month through
2 customer-owned generation. Given the seasonality of production can vary, and in order
3 to exclude the impact of excess generation, I made a simplifying assumption - that the
4 production level and consumption level were the same on a monthly basis. The
5 purpose of the analysis is to show the difference in benefits across customers.

6 The first graph in Exhibit 707 shows that, if the three different customers
7 invested in the same system with the same production, the value of the system is similar
8 across the three customers under the current rate structure. It is marginally better for
9 the "High" usage customer given the tiered rate structure.

10 The second graph in Exhibit 707 shows that, if the three different customers
11 invested in the same system with the same production, **the value of the system is**
12 **vastly different across the three customers under the *proposed* rate structure.** In
13 fact, the "Low" usage customer would see a net increase in their power bills. They
14 would be penalized for investing in generation to offset their power consumption. The
15 "High" usage customer would enjoy, in this hypothetical example, a \$1400 savings in
16 his or her power bills. A rate structure is not equitable when people with high usage
17 have the freedom to reap substantial financial benefits by offsetting their energy
18 consumption and thereby getting onto the lower per-kWh rate structure, yet a person
19 with lower usage would be financially worse off if they invested in the exact same
20 system to offset their own consumption.

21 **V. Excess generation should be given a financial value**

22 Q. How does the proposal that customers can accumulate kWh credits rather than
23 financial credits affect customers?

1 A. The Company de-values customer-produced electricity by treating it as a kWh
2 credit rather than a financial credit. To quantify the impact of this proposal, please
3 refer to Exhibit 709. Given the empirical data provided by the Company, five
4 residential customers with excess generation were selected. The first graph shows the
5 monthly net usage for these five customers. For each customer, I have compared their
6 2012 bills under the terms proposed (provided by the Company) relative to their 2012
7 bills under the proposed rate structure but with one single change: that their excess
8 generation is given financial value rather than a kWh credit. This is for exemplary
9 purposes and is not a statistical representation of the net metering population.

10 In the second graph in Exhibit 709, one can see that the 2012 bills for this
11 sampling of customers are increased by 7% to 20% due only to policy of treating their
12 excess generation as a kWh credit rather than a dollar credit. The analysis does not
13 reflect the value lost through the expiration of credits, nor does it reflect the time-value
14 of money.

15 Q. Can you describe why it would be more equitable to give excess generation a
16 financial value?

17 A. I will discuss three issues.

18 **1. Less liquidity = less value.** People familiar with financial theory are aware
19 that two assets are valued very differently if one is more liquid than the other. For
20 example, consider the term “liquidity premium”: if two items have all the same
21 qualities with the exception that one can be traded more easily than the other, the more
22 liquid item is worth more. The Company has acknowledged that excess generation has
23 value and attempted to justify that the rates proposed are equitable. If customers do not

1 receive for their excess generation the rates proposed by the Company on a monthly
2 basis but instead accumulates kWh credits, they are receiving less than the value
3 proposed by the Company.

4 **2. A kWh produced in summer is worth more than a kWh produced in**
5 **non-summer.** The Company has demonstrated that electricity is most costly on hot
6 summer afternoons, and its rates reflect this. Because the Company proposes that
7 excess generation be given no financial value, the seasonal value of power is not
8 reflected in the proposed terms. For example, please refer to the sample set of
9 customers in Exhibit 709. These customers produce excess kWh during the summer,
10 then consume electricity again in the fall. The Company will collect revenue at
11 summer rates, but the customers reduce their energy charges at fall rates. These rates
12 are 40% lower than the rates at which the Company collects revenue for excess
13 generation. Crediting monthly excess generation at retail rates would accurately reflect
14 the seasonal value of electricity.

15 **3. A kWh produced in the day is worth more than a kWh produced at**
16 **night.** Net metering customers with solar produce electricity when the sun is shining.
17 According to the Time of Day rates posted by the Company on its website, the Summer
18 Energy rates are 12.04 cents per kWh from 1pm to 9pm, and 6.59 cents from 9pm to
19 1pm. This is a 5.45 cent difference, a much greater difference than the 2.54 cents in
20 distribution and customer service costs included in the average residential rate.

21 As the Company strives to implement pricing policies that accurately reflect
22 costs and benefits, excess generation needs to be given financial value in order to align
23 with those costs and benefits. The trend for the Company has not been to level all per-

1 kWh prices to a flat rate throughout the day and year, but rather to strive for pricing
2 policies that reflect how the value of a kWh varies throughout the day and year. In
3 order for net metering customers to be treated equitably in both the near term and long
4 term, the value of excess generation should also reflect how the costs of a kWh varies
5 throughout the day and year. Enabling excess generation to be credited at retail rates
6 achieves this.

7 **4. Net metering customers should be allowed to offset distribution costs.**

8 Under the terms proposed, the Company wishes to remove distribution and customer
9 service costs from the energy charges and prevent customers from offsetting these costs
10 through customer-owned generation. The composition of costs incurred by the
11 Company to supply customers is managed by the Company - a utility might invest
12 relatively more in generation and less in the costs of getting power to the point of
13 consumption, or it might choose to import electricity from sources outside the state and
14 thereby may spend relatively less on generation and more on getting each kWh to the
15 point of consumption. Many businesses balance the costs of production with the costs
16 of getting product to the customer, yet the price reflects the value at the point the
17 customer takes title.

18 A net metering customer has chosen to invest in generating electricity close to
19 the point of consumption, and the customer should be allowed to offset the charges
20 billed by the Company to deliver electricity to that same point of consumption.

21 Because the proposed terms remove distribution costs from the per-kWh rates and only
22 allow excess generation to be treated as a kWh credit, the customer is not allowed to
23 apply the value of excess generation to offset the full value of a kWh delivered to the

1 point of consumption. Crediting excess generation with a financial value enables the
2 customer to offset the charges billed by the Company to deliver electricity to the
3 customer.

4 Q. Any additional observations you would like to make regarding the treatment of
5 excess generation?

6 A. Yes. Please note in Exhibit 709 the typical pattern of net usage for this sampling
7 of five solar PV customers. They build credits through excess generation for May
8 through October, begin to consume more than they produce in November and
9 December, then their net usage skyrockets up in January. The Company collects
10 revenue, much of it at summer rates, for the excess generation produced by these
11 customers, yet they are not allowed to carry forward credits to January. **Given the**
12 **seasonality of solar PV, customers who otherwise could offset all of their annual**
13 **consumption are prevented from doing so by the Company's proposal that the**
14 **credits expire in December.**

15 Q. Any additional observations you would like to add?

16 A. In my experience as a strategy consultant, a key question we often assess is this:
17 Is the organization making the best use of its resources? This involves an analysis of
18 how resources are currently being utilized and whether that aligns proportionately with
19 the opportunities to create value. For example, a company focusing too much on
20 thousand dollar issues can make million dollar mistakes.

21 For the Company, a crucial resource is its people's time, and a key source of
22 value is the ability to forecast and manage future supply and demand for power.
23 Investing time to propose and manage a separate rate structure for net metering is not

1 the highest and best use of time. Proposing extreme changes to address immaterial
2 issues is a costly approach and distracts people from activities that create greater value.

3 A question was posed asking whether standard customers are subsidizing net
4 metering customers, and the answer is no. The Company has better opportunities to
5 serve its ratepayers and shareholders than investing time in a separate, unnecessary, and
6 problematic rate structure.

7 **VI. The filing will not remain revenue neutral**

8 Q. The Company has stated that the proposed terms are revenue neutral. Do you
9 have a forward-looking perspective on this?

10 A. I project that overall this proposal may not remain revenue neutral but may
11 increase the revenue requirement burden on lower usage customers.

12 Changing incentives has the impact of changing behavior. The rate structure
13 proposed by the Company increases the monthly fixed fees paid by net metering
14 customers and lowers the per-kWh rates. For example, please refer to Exhibit 708. This
15 empirical example shows how a standard customer can lower their bill by \$5,000 per
16 year by switching from the standard service schedule to the net metering schedule. If
17 fifteen other customers do this, it would offset the increase in fees raised by the
18 proposed terms on current net metering customers. There are thousands of customers
19 who would be eligible to lower their power bills by switching from standard service to
20 net metering. Standard service customers will be left to compensate for this revenue
21 shortfall.

22 Q. Has the Company made the public aware of this issue?

1 A. The Company has publicly conveyed the message that the filing is needed to
2 ensure standard customers are not subsidizing net metering customers. To my
3 knowledge, the Company has not disclosed to the public that standard rate payers will
4 likely be subsidizing high usage customers who opt to take advantage of the proposed
5 net metering schedule.

6 Q. Can you estimate the number of high usage customers who would have a
7 financial incentive to become net metering customers in order to take advantage of the
8 proposed rate schedule?

9 A. Please refer to the scatter chart for residential customers in Exhibit 701. In this
10 chart, one can see a clear correlation between the customer's usage level and the impact
11 of the proposed terms on each customer's current bills if restated for 2012. There is a
12 crossover point at which customers to the right of the line - those customers with higher
13 net usage- will see decreases in their bills. This crossover point represents monthly
14 usage of approximately 1500 kWh, or 18,000 kWh per year.

15 To verify whether this is a reasonable crossover point, consider I will estimate
16 the difference in bills for a hypothetical residential customer with usage of 18,000
17 kWh/yr. On average, based on assumptions described in Exhibit 710, I will
18 conservatively assume that the customer would save 2.59 cents/ kWh in energy
19 charges. For a customer with 18,000 kWh/yr, that would amount to an annual savings
20 of \$466 in energy charges to switch to net metering. The incremental service fees
21 would be \$ 191 per year. As long as customers using 18,000 kWh/yr have Basic Load
22 Charges that average \$23/month or less, this is a reasonable breakeven point. The
23 empirical evidence indicates that it is very reasonable to assume that BLC charges

1 would average less than \$23/month at this usage level. Therefore, it is reasonable to
2 estimate that customers with annual usage over 18,000 kWh would be eligible to
3 decrease their bills by shifting to the net metering rate schedule.

4 The Company has disclosed in IPCO Response to ICEA First Production
5 Request that there are 70,000 customers on Schedule 1 with net usage equal to or
6 greater than 18,000 kWh/yr. Thus, this approach indicates that the number of
7 residential customers who could lower their bills by shifting to net metering would be
8 in the 70,000 range. As discussed earlier, the net increase in revenue that would have
9 resulted from the proposed terms for current net metering customers in 2012 is
10 approximately \$74,000. The reduction in revenue collected from thousands of high
11 usage customers who could switch to the lower per-kWh net metering schedule would
12 quickly offset that \$74,000.

13 Q. Can you scope the dollar impact of high usage customers shifting from
14 Schedule 1 to Schedule 6?

15 A. To scope the dollar impact of high usage residential customers shifting to the
16 net metering schedule, please refer to Exhibit 710. This analysis uses the Company's
17 distribution of customers (as provided in IPCO Response to ICEA First Production
18 Request). The analysis estimates, across different usage levels, the net impact of
19 shifting from Schedule 1 (the standard service rate schedule) to Schedule 6 (the
20 proposed net metering rate schedule). The purpose of this analysis is to isolate the
21 impact of changing rate schedules, thus the cost of the generation system and the
22 benefit of the production resulting from such a system were not included.

1 Based on the assumptions as described in Exhibit 710, the total reduction in
2 revenue represented by customers who would have a financial incentive to shift from
3 Schedule 1 to Schedule 6 is in the range of \$14 million.

4 Q. Do you project that all customers able to lower their bills by switching to the net
5 metering schedule would do so?

6 A. No, I would not project that 100% of customers eligible to lower their bills
7 would do so. In my work, in situations like this, we often consider the issue with a
8 what-would-it-take approach: Of the customers able to lower their bills by switching to
9 the net metering schedule, what would it take for this issue to offset the \$74,000
10 potential inequity claimed by the Company? In this case, the \$74,000 potential inequity
11 claimed by the company would be offset if a half a percent or more of the potential
12 reduction in revenue occurs as high usage standard service customers shift to net
13 metering. These estimates clearly indicate that the proposed new rate structure creates
14 issues of greater financial impact than the potential inequity it claims to correct.

15 Q. Which customers would have the greatest incentive to shift from Schedule 1 to
16 Schedule 6, and what is the potential revenue reduction that those customers would
17 represent?

18 A. The higher the customer's usage, the greater the potential savings the customer
19 could incur by becoming a net metering customer. For example, in 2012, the Company
20 had over 5000 residential customers with usage over 36,000 kWh per year. These
21 customers would have the opportunity to save hundreds of dollars per year if billed
22 under the proposed net metering terms rather than the standard service terms, so the
23 filing would create a very strong financial incentive for these customers to shift to net

1 metering in order to benefit from a rate schedule that favors high energy usage. In
2 aggregate, using the same assumptions described in Exhibit 710, the reduction in
3 revenue represented by these customers with usage over 36,000 kWh per year is
4 estimated to be over \$2 million.

5 For clarity, as discussed above, there are far more than 5000 customers who
6 would also have a financial incentive to shift to net metering; this estimate of over \$2
7 million in revenue reduction is provided to help scope the size of this issue represented
8 by the 5000 customers with the greatest financial incentives to shift to the proposed net
9 metering rate schedule.

10 In sum, the proposed rate structure creates greater inequities than it is designed
11 to address.

12 Q. Does this conclude your testimony?

13 A. Yes.

**BEFORE THE
IDAHO PUBLIC UTILITIES COMMISSION**

CASE NO. IPC-E-12-27

IDAHO CLEAN ENERGY ASSOCIATION

WHITE C., DI TESTIMONY

EXHIBIT NO. 701

Source: Response Staff's Request No. 9 (00101890)

Includes Corrections provided by IPC in Supplemental Response to Request No.9, Entered by C. White

BILL COMPARISON BY CUSTOMER, Sorted from Highest to Lowest Difference

CURRENT RATES VS. PROPOSED RATES, Historical Data Year January 2012 through December 2012

Line No.	Rate Schedule	Bill - Current Rates	Bill - Proposed Rates	Difference
15	I84C	(\$17,855.53)	\$269.88	\$18,125.41
26	I84R	(\$13,226.79)	\$402.00	\$13,628.79
5	I84C	(\$8,899.80)	\$382.57	\$9,282.37
14	I84C	(\$3,744.67)	\$202.41	\$3,947.08
4	I84C	(\$2,291.13)	\$278.10	\$2,569.23
66	I84R	(\$1,430.31)	\$339.84	\$1,770.15
98	I84R	(\$1,009.91)	\$384.24	\$1,394.15
37	I84R	(\$1,048.68)	\$313.20	\$1,361.88
163	I84R	(\$931.78)	\$360.75	\$1,292.53
101	I84R	(\$609.44)	\$479.01	\$1,088.45
9	I84C	(\$765.38)	\$286.32	\$1,051.70
211	I84R	(\$636.24)	\$313.20	\$949.44
6	I84C	(\$494.91)	\$269.88	\$764.79
31	I84R	(\$159.03)	\$571.53	\$730.56
23	I84R	(\$346.87)	\$351.28	\$698.16
215	I84R	(\$392.10)	\$268.80	\$660.90
206	I84R	\$88.38	\$743.87	\$655.49
89	I84R	(\$13.35)	\$581.91	\$595.26
58	I84R	(\$234.97)	\$357.60	\$592.57
124	I84R	\$371.88	\$963.38	\$591.51
16	I84C	(\$393.66)	\$190.88	\$584.54
225	I84R	(\$324.21)	\$246.40	\$570.61
213	I84R	(\$120.12)	\$419.76	\$539.88
3	I84C	(\$165.92)	\$363.75	\$529.67
165	I84R	(\$79.28)	\$443.25	\$522.54
231	I84R	(\$144.89)	\$374.76	\$519.65
135	I84R	\$494.78	\$1,005.97	\$511.18
108	I84R	\$162.63	\$662.65	\$500.02
36	I84R	(\$17.71)	\$473.04	\$490.75
172	I84R	\$436.66	\$923.75	\$487.09
113	I84R	(\$20.40)	\$459.34	\$479.74
80	I84R	\$335.96	\$809.02	\$473.06
149	I84R	(\$50.38)	\$417.09	\$467.47
232	I84R	(\$9.37)	\$449.71	\$459.08
84	I84R	\$298.21	\$721.74	\$423.53
10	I84C	(\$69.81)	\$352.09	\$421.90
111	I84R	(\$34.41)	\$384.24	\$418.65
51	I84R	(\$85.26)	\$327.80	\$413.06
156	I84R	(\$13.21)	\$391.81	\$405.02
65	I84R	\$131.51	\$524.16	\$392.65
130	I84R	\$321.56	\$711.87	\$390.31
119	I84R	\$927.27	\$1,312.04	\$384.77
72	I84R	\$0.93	\$375.94	\$375.01
129	I84R	(\$154.93)	\$198.15	\$353.08
227	I84R	\$308.28	\$659.62	\$351.34
32	I84R	\$223.43	\$564.14	\$340.71

176	I84R	\$33.77	\$371.13	\$337.36
94	I84R	\$288.94	\$617.65	\$328.72
47	I84R	\$905.27	\$1,233.50	\$328.23
100	I84R	\$508.29	\$826.89	\$318.59
17	I84C	(\$194.13)	\$122.73	\$316.85
43	I84R	\$867.13	\$1,182.56	\$315.43
57	I84R	\$98.24	\$408.98	\$310.74
48	I84R	\$12.39	\$319.86	\$307.47
122	I84R	\$687.67	\$991.55	\$303.88
76	I84R	\$523.59	\$810.34	\$286.76
115	I84R	\$507.45	\$790.80	\$283.35
45	I84R	\$391.22	\$670.40	\$279.18
179	I84R	\$415.28	\$693.48	\$278.20
103	I84R	\$643.78	\$917.72	\$273.95
207	I84R	\$915.47	\$1,188.68	\$273.22
218	I84R	\$184.77	\$457.68	\$272.91
161	I84R	\$651.99	\$923.23	\$271.24
104	I84R	\$248.36	\$519.41	\$271.05
93	I84R	\$395.08	\$663.85	\$268.76
178	I84R	\$177.04	\$444.95	\$267.91
46	I84R	\$799.22	\$1,066.34	\$267.12
132	I84R	\$22.11	\$287.52	\$265.41
127	I84R	\$575.88	\$836.68	\$260.80
210	I84R	\$58.25	\$317.05	\$258.80
188	I84R	\$167.37	\$425.86	\$258.49
146	I84R	\$361.28	\$613.17	\$251.90
237	I84R	\$23.98	\$274.06	\$250.08
171	I84R	\$248.83	\$493.09	\$244.25
13	I84C	\$122.62	\$364.29	\$241.67
249	I84R	(\$116.92)	\$119.40	\$236.32
77	I84R	\$253.12	\$487.08	\$233.96
40	I84R	\$469.51	\$703.21	\$233.69
189	I84R	\$308.40	\$541.90	\$233.50
125	I84R	\$476.48	\$707.88	\$231.40
34	I84R	\$1,312.03	\$1,543.37	\$231.33
133	I84R	\$601.37	\$827.13	\$225.76
21	I84R	\$416.39	\$640.95	\$224.56
63	I84R	\$531.54	\$753.67	\$222.13
147	I84R	\$748.35	\$970.08	\$221.73
85	I84R	\$560.27	\$781.81	\$221.55
49	I84R	\$345.51	\$566.78	\$221.28
39	I84R	\$319.07	\$540.18	\$221.11
79	I84R	\$306.32	\$522.75	\$216.43
192	I84R	\$376.70	\$587.70	\$211.00
7	I84C	\$282.28	\$491.01	\$208.73
20	I84R	\$453.21	\$656.75	\$203.55
123	I84R	\$561.28	\$764.73	\$203.45
173	I84R	\$374.69	\$577.47	\$202.78
82	I84R	\$392.32	\$589.29	\$196.97
164	I84R	\$1,097.29	\$1,292.83	\$195.54
236	I84R	\$16.24	\$209.88	\$193.64
86	I84R	\$622.52	\$814.67	\$192.15
22	I84R	\$354.94	\$546.31	\$191.37
224	I84R	\$994.95	\$1,185.92	\$190.98

81	I84R	\$232.32	\$419.86	\$187.53
38	I84R	\$452.43	\$638.47	\$186.04
230	I84R	\$893.31	\$1,076.72	\$183.41
61	I84R	\$373.33	\$550.31	\$176.98
177	I84R	\$408.68	\$582.50	\$173.82
158	I84R	\$832.92	\$1,000.14	\$167.22
255	I84R	\$11.51	\$178.40	\$166.89
53	I84R	\$645.99	\$812.64	\$166.66
198	I84R	\$674.94	\$840.94	\$166.00
195	I84R	\$812.29	\$977.42	\$165.14
29	I84R	\$651.77	\$816.52	\$164.75
261	I84R	(\$25.15)	\$136.96	\$162.11
162	I84R	\$663.30	\$824.25	\$160.95
257	I84R	\$261.97	\$422.58	\$160.61
194	I84R	\$299.40	\$457.82	\$158.41
92	I84R	\$594.38	\$751.40	\$157.03
74	I84R	\$712.00	\$865.78	\$153.79
91	I84R	\$604.73	\$758.34	\$153.62
157	I84R	\$847.47	\$1,001.01	\$153.54
219	I84R	\$794.41	\$947.68	\$153.27
191	I84R	\$718.53	\$870.62	\$152.09
55	I84R	\$103.35	\$253.39	\$150.04
27	I84R	\$592.76	\$741.44	\$148.68
183	I84R	\$1,070.08	\$1,218.64	\$148.56
42	I84R	\$797.71	\$941.01	\$143.30
187	I84R	\$865.89	\$1,004.48	\$138.59
95	I84R	\$758.95	\$896.35	\$137.40
167	I84R	\$308.33	\$444.71	\$136.38
209	I84R	\$771.05	\$905.38	\$134.33
235	I84R	\$283.44	\$416.61	\$133.17
142	I84R	\$540.70	\$671.02	\$130.31
90	I84R	\$767.07	\$893.83	\$126.76
41	I84R	\$716.76	\$842.34	\$125.58
116	I84R	\$296.05	\$418.57	\$122.52
174	I84R	\$971.60	\$1,093.12	\$121.52
144	I84R	\$599.09	\$719.04	\$119.95
253	I84R	\$86.09	\$201.89	\$115.80
136	I84R	\$170.78	\$286.42	\$115.64
106	I84R	\$666.56	\$782.04	\$115.48
59	I84R	\$1,067.74	\$1,182.40	\$114.66
239	I84R	\$231.00	\$345.19	\$114.19
75	I84R	\$2,855.96	\$2,969.24	\$113.27
148	I84R	\$680.30	\$791.25	\$110.95
217	I84R	\$768.79	\$877.22	\$108.43
2	I84C	\$510.91	\$616.53	\$105.62
126	I84R	\$699.65	\$804.23	\$104.57
200	I84R	\$620.32	\$724.40	\$104.08
18	I84C	(\$6.97)	\$96.24	\$103.21
168	I84R	\$335.35	\$435.65	\$100.30
154	I84R	\$969.93	\$1,065.36	\$95.43
248	I84R	\$274.94	\$364.68	\$89.74
233	I84R	\$544.42	\$633.03	\$88.61
260	I84R	\$10.73	\$98.38	\$87.65
246	I84R	\$214.34	\$301.85	\$87.51

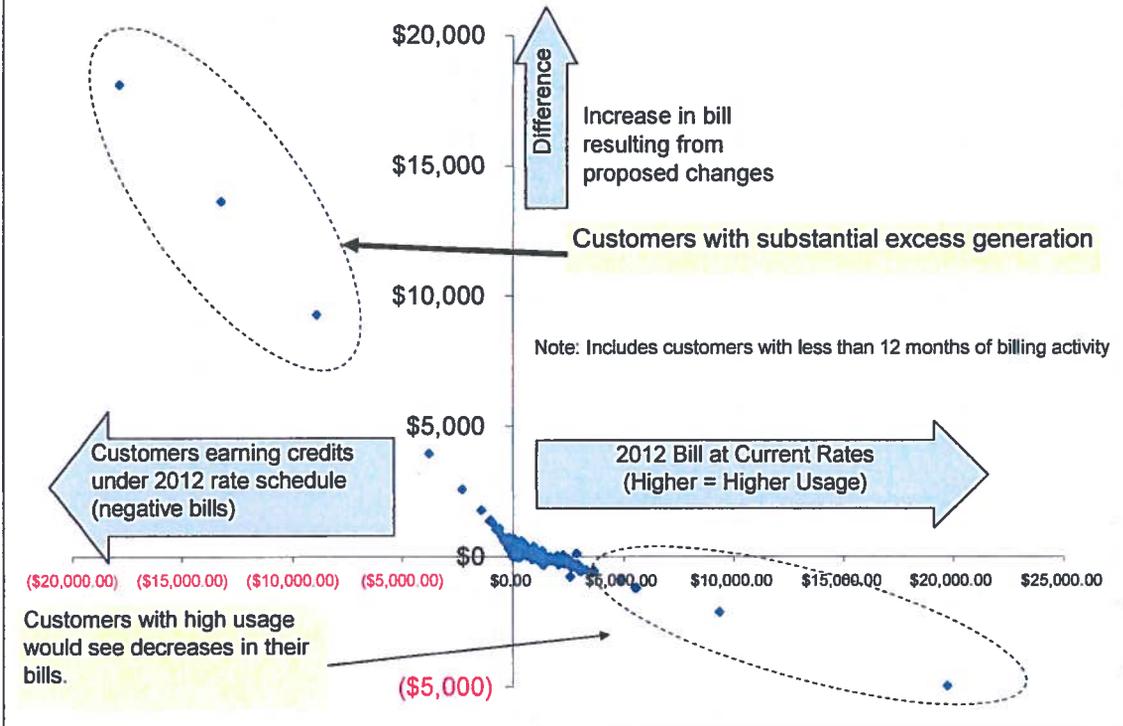
50	I84R	\$192.00	\$276.89	\$84.89
268	I84R	\$183.57	\$266.80	\$83.23
251	I84R	\$195.45	\$278.08	\$82.63
269	I84R	\$10.37	\$91.62	\$81.25
138	I84R	\$1,319.77	\$1,400.94	\$81.17
197	I84R	\$799.86	\$880.29	\$80.43
256	I84R	\$250.69	\$329.92	\$79.23
254	I84R	\$398.51	\$477.13	\$78.62
242	I84R	\$257.78	\$335.96	\$78.18
114	I84R	\$1,162.96	\$1,239.18	\$76.22
78	I84R	\$1,192.82	\$1,268.08	\$75.26
28	I84R	\$1,247.53	\$1,322.52	\$74.99
252	I84R	\$476.92	\$551.90	\$74.98
258	I84R	\$119.22	\$193.67	\$74.45
118	I84R	\$686.35	\$759.79	\$73.44
169	I84R	\$1,119.04	\$1,191.97	\$72.93
241	I84R	\$328.38	\$401.05	\$72.67
24	I84R	\$747.57	\$818.59	\$71.03
212	I84R	\$571.63	\$640.91	\$69.28
245	I84R	\$449.26	\$517.62	\$68.36
276	I84R	(\$17.94)	\$49.04	\$66.98
134	I84R	\$1,071.68	\$1,133.58	\$61.90
238	I84R	\$731.57	\$789.59	\$58.02
266	I84R	\$59.06	\$116.72	\$57.66
262	I84R	\$204.36	\$260.57	\$56.21
83	I84R	\$1,203.67	\$1,257.59	\$53.93
244	I84R	\$305.23	\$358.89	\$53.66
243	I84R	\$333.53	\$386.75	\$53.22
182	I84R	\$888.85	\$939.96	\$51.11
19	I84C	\$49.14	\$100.08	\$50.94
102	I84R	\$2,243.33	\$2,292.09	\$48.76
71	I84R	\$978.07	\$1,026.42	\$48.35
267	I84R	\$150.81	\$198.22	\$47.41
229	I84R	\$153.99	\$198.13	\$44.14
259	I84R	\$122.25	\$165.75	\$43.50
228	I84R	\$763.28	\$803.06	\$39.79
274	I84R	\$7.18	\$44.80	\$37.62
250	I84R	\$378.81	\$415.82	\$37.01
270	I84R	\$64.05	\$92.88	\$28.83
88	I84R	\$1,981.69	\$2,010.11	\$28.42
62	I84R	\$56.02	\$77.13	\$21.12
175	I84R	\$620.46	\$641.28	\$20.83
263	I84R	\$204.90	\$225.60	\$20.70
120	I84R	\$1,467.24	\$1,487.59	\$20.35
272	I84R	\$143.38	\$160.87	\$17.49
181	I84R	\$2,231.95	\$2,248.94	\$16.99
203	I84R	\$1,398.58	\$1,414.91	\$16.33
264	I84R	\$4.93	\$20.92	\$15.99
277	I84R	\$27.94	\$41.30	\$13.36
216	I84R	\$54.42	\$65.89	\$11.48
44	I84R	\$1,171.53	\$1,182.77	\$11.23
56	I84R	\$1,338.33	\$1,347.88	\$9.55
265	I84R	\$329.86	\$338.24	\$8.38
271	I84R	\$253.39	\$259.79	\$6.39

280	I84R	\$86.80	\$90.76	\$3.97
205	I84R	\$1,088.58	\$1,091.31	\$2.73
204	I84R	\$866.38	\$868.52	\$2.14
201	I84R	\$1,478.00	\$1,477.04	(\$0.96)
281	I84R	\$256.13	\$252.74	(\$3.39)
279	I84R	\$111.11	\$106.07	(\$5.05)
240	I84R	\$6.49	\$0.00	(\$6.49)
275	I84R	\$99.28	\$91.13	(\$8.15)
150	I84R	\$1,675.68	\$1,662.86	(\$12.82)
170	I84R	\$1,448.90	\$1,430.89	(\$18.01)
190	I84R	\$1,530.39	\$1,512.17	(\$18.22)
70	I84R	\$2,262.01	\$2,242.45	(\$19.56)
193	I84R	\$1,147.76	\$1,122.43	(\$25.33)
273	I84R	\$322.80	\$291.53	(\$31.28)
220	I84R	\$1,182.03	\$1,148.56	(\$33.47)
221	I84R	\$1,554.33	\$1,520.27	(\$34.06)
278	I84R	\$209.52	\$169.05	(\$40.48)
99	I84R	\$1,384.16	\$1,343.09	(\$41.08)
97	I84R	\$1,595.68	\$1,538.18	(\$57.50)
155	I84R	\$2,139.24	\$2,080.22	(\$59.02)
52	I84R	\$1,574.49	\$1,515.10	(\$59.39)
1	I84C	\$832.28	\$769.86	(\$62.42)
186	I84R	\$1,666.58	\$1,576.84	(\$89.74)
222	I84R	\$863.45	\$772.16	(\$91.29)
152	I84R	\$2,495.37	\$2,398.91	(\$96.46)
196	I84R	\$2,119.03	\$2,022.27	(\$96.76)
87	I84R	\$1,458.52	\$1,357.42	(\$101.10)
109	I84R	\$1,600.35	\$1,496.91	(\$103.44)
11	I84C	\$882.88	\$769.35	(\$113.54)
247	I84R	\$906.19	\$791.61	(\$114.58)
69	I84R	\$2,419.69	\$2,303.77	(\$115.92)
223	I84R	\$2,347.05	\$2,230.84	(\$116.21)
131	I84R	\$2,514.52	\$2,393.99	(\$120.53)
107	I84R	\$2,444.55	\$2,320.44	(\$124.11)
160	I84R	\$1,114.46	\$990.25	(\$124.21)
159	I84R	\$1,684.53	\$1,544.47	(\$140.06)
25	I84R	\$2,454.70	\$2,309.48	(\$145.21)
139	I84R	\$1,739.28	\$1,590.06	(\$149.22)
214	I84R	\$1,935.00	\$1,783.45	(\$151.56)
202	I84R	\$2,085.63	\$1,928.84	(\$156.79)
208	I84R	\$1,842.95	\$1,677.33	(\$165.62)
96	I84R	\$2,223.94	\$2,039.33	(\$184.61)
151	I84R	\$2,164.89	\$1,964.22	(\$200.67)
234	I84R	\$1,421.57	\$1,215.95	(\$205.62)
199	I84R	\$2,634.66	\$2,412.38	(\$222.28)
143	I84R	\$2,167.78	\$1,939.51	(\$228.26)
166	I84R	\$2,693.15	\$2,460.48	(\$232.67)

184	I84R	\$2,156.50	\$1,923.07	(\$233.43)
117	I84R	\$1,997.33	\$1,763.07	(\$234.26)
140	I84R	\$2,320.12	\$2,050.53	(\$269.58)
12	I84C	\$1,314.30	\$1,040.94	(\$273.36)
153	I84R	\$2,116.35	\$1,842.87	(\$273.48)
145	I84R	\$2,470.61	\$2,178.07	(\$292.54)
128	I84R	\$2,909.29	\$2,614.27	(\$295.02)
141	I84R	\$2,079.13	\$1,773.52	(\$305.61)
60	I84R	\$1,413.03	\$1,087.93	(\$325.10)
110	I84R	\$2,785.86	\$2,433.84	(\$352.02)
226	I84R	\$3,028.00	\$2,646.70	(\$381.30)
180	I84R	\$2,653.45	\$2,229.62	(\$423.83)
105	I84R	\$3,096.00	\$2,632.89	(\$463.11)
73	I84R	\$3,303.64	\$2,798.94	(\$504.70)
185	I84R	\$3,046.53	\$2,528.69	(\$517.84)
54	I84R	\$3,622.48	\$3,101.32	(\$521.16)
35	I84R	\$3,006.46	\$2,457.42	(\$549.04)
68	I84R	\$3,673.60	\$3,117.84	(\$555.76)
64	I84R	\$3,078.95	\$2,501.78	(\$577.17)
30	I84R	\$3,639.40	\$3,032.75	(\$606.66)
8	I84C	\$2,598.87	\$1,822.69	(\$776.18)
67	I84R	\$4,936.79	\$4,026.92	(\$909.87)
137	I84R	\$5,603.42	\$4,402.83	(\$1,200.59)
121	I84R	\$5,558.42	\$4,354.90	(\$1,203.52)
33	I84R	\$9,364.90	\$7,235.57	(\$2,129.33)
112	I84R	\$19,718.02	\$14,754.18	(\$4,963.84)
282			TOTAL	\$73,929.34

Correlation of Change in Bill with Usage

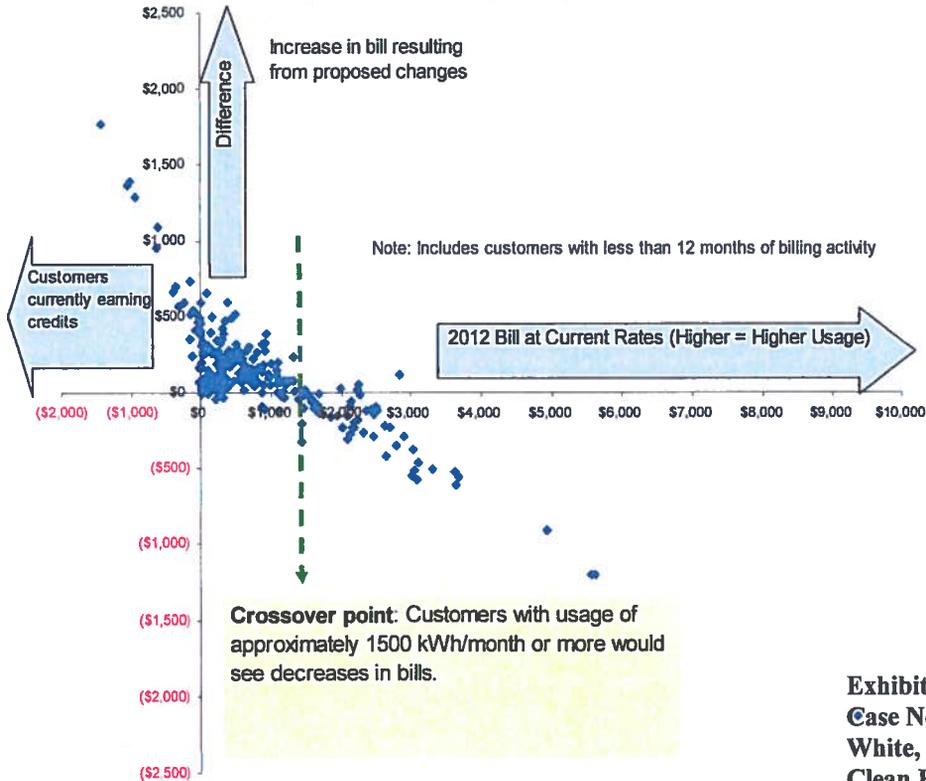
Includes 281 Net Metering Customers



Zoom in on correlation between Usage and the Change in Bill

Includes Residents Only

Y Axis scaled between \$2500 Increase or decrease to better view majority of customers



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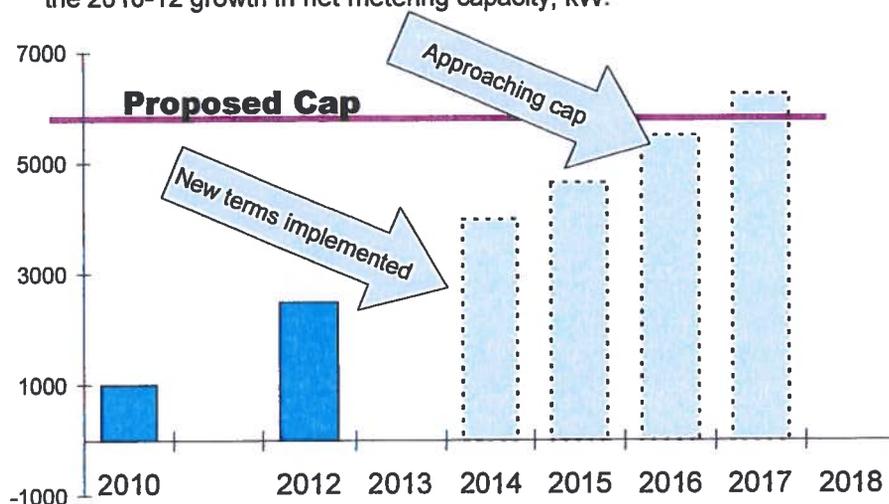
IDAHO CLEAN ENERGY ASSOCIATION

WHITE C., DI TESTIMONY

EXHIBIT NO. 702

If growth trends continue or increase, the cap would be reached by 2017

The growth trend provided below reflects a linear continuation of the 2010-12 growth in net metering capacity, kW.



“the installed capacity of net metering systems steadily increased from 39 kW to just under 1000 kWh between 2002 and 2010. Since 2010, growth increased sharply, rising by nearly 1,500 kW over approximately two years.” (Page 12 of Direct Testimony, Matthew Larkin, Idaho Power)

“If current growth trends continue or increase, it is important to maintain a capacity limit to allow the Company and other stakeholders to evaluate this service as it expands.” (Page 13 of Direct Testimony, Matthew Larkin, Idaho Power)

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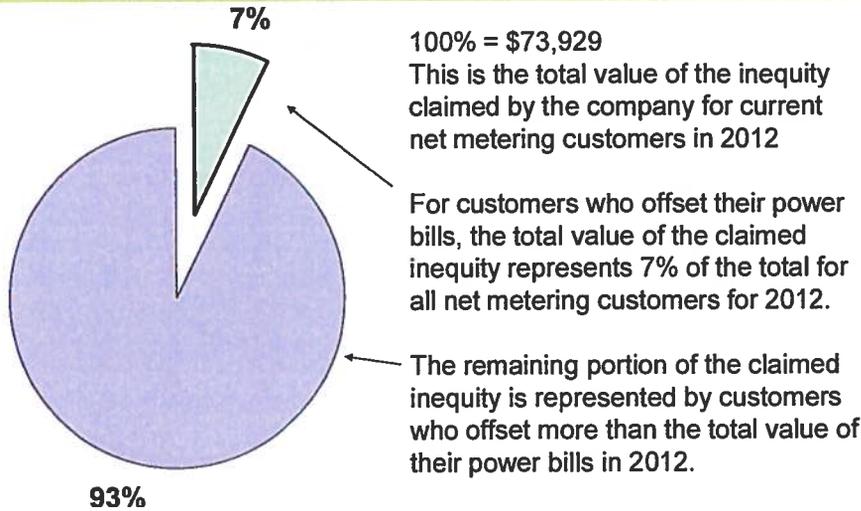
IDAHO CLEAN ENERGY ASSOCIATION

WHITE C., DI TESTIMONY

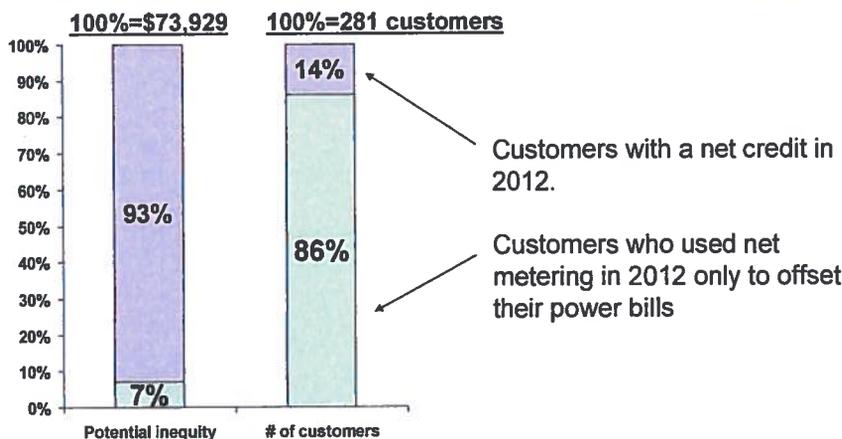
EXHIBIT NO. 703

The value of the potential inequity claimed by the Company relates to annual excess generation, not to customers who use net metering to offset their power bills. A separate rate structure is unnecessary.

Of the total value of the potential inequity claimed by the Company, 7% is linked to customers who use net metering only to reduce their annual power bills



86% of customers use net metering to offset their annual bills; they represent 7% of the claimed inequity... less than \$6,000.



Source: Data provided by IPC in response to staff request #9; includes impact of corrections submitted by the Company in its Supplemental Response to staff request #9.

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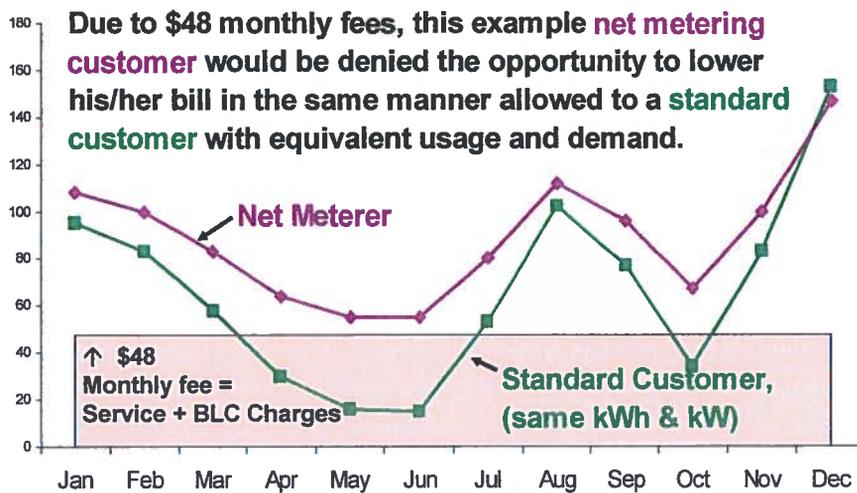
WHITE C., DI TESTIMONY

EXHIBIT NO. 704

Below is one example of how high monthly fees prevent net metering customers from lowering their bills in the same manner standard customers are allowed.

Using the empirical data provided by the Company in response to Staff Request #9 (00101890), the following graph shows the monthly bills in 2012 as restated by the Company for an example net metering customer under the proposed rate structure. These are compared to the monthly bills for a hypothetical standard customer with the same energy usage and demand.

Standard customers can lower their bills in a manner denied to Net Meterers



Source: Customer data provided by Idaho Power in response # 9

There are many cases which would demonstrate this issue further but for which empirical data is not available. For example, a net metering customer who is absent from their home for months would not have the same freedom as a standard customer to lower their power bills due to the high monthly fees. A customer with a primary home poorly suited for customer-owned generation and a vacation home well-suited for customer-owned generation would be unnecessarily discouraged from offsetting their total power bills through net metering at the vacation home due to high monthly fees. A net metering customer considering the rental of power tools for a Saturday afternoon project must consider the risk of creating a high billing demand that would drive up the customer’s monthly BLC charges for a year. Evidence has not been provided that justifies why a net metering customer’s choices should be more constrained than a standard service customer.

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WHITE C., DI TESTIMONY

EXHIBIT NO. 705

Many net metering customers would be better off turning off their generation systems

This exhibit describes an analysis which was done in order to consider the choice net metering customers would face of whether to pay the higher fees resulting from the proposed new rate schedule or to turn off their generation systems, generate no electricity, and avoid paying the unfavorable new terms proposed for net metering.

Sources: Data was combined from the following:

(8) CONFIDENTIAL Attachment - Supplemental Response to Staff's Request No. 8 (00101622)

(9) CONFIDENTIAL Attachment - Response Staff's Request No. 9 (00101890)

Attachment 3 - Response to Staff's Request No. 1_Net Meter Rate Development (00101171)

Premise Numbers were referenced on documents (8) and (9) to merge the "Operation Date", "Resource", "Total Watts", and Bill "Difference".

Customers: With regard to the customers referenced in this analysis, please note the following:

- Within document (9), a total of 281 customers with billing info are referenced.
- Within document (8), a total of 331 customers with system info are referenced.
- Nine of the customers with billing info had no corresponding "Premise No." on the system info document.
- Fifty-two customers were not included in the analysis because there was not twelve months of active billing data.
- This leaves 220 customers with 12 months of billing data. Of these, 158 utilized solar PV as the "Resource". To most accurately estimate production levels, only the solar customers were evaluated.

Production estimate: The "Total Watts" for each solar system is estimated to generate 1.4 times this value in kWh per year in Southern Idaho. This estimate is based on National Renewable Energy Lab System Advisor Model simulations using Typical Meteorological Year weather data for the Boise area.

Production value: The total annual value of solar generation is then calculated using the average 2012 value of $0.0792 \text{ \$/kWh} = (\$385,511,114 + \$13,764,710) / (4,896,272,827\text{kWh} + 144,888,296\text{kWh})$ from the rate design on Attachment 3. For each customer, the increase in bills the customer would incur as a standard service customer result from turning off the generation system was compared to the change in bills the customers would incur due to the proposed rate structure for net metering.

Finding: Based on the empirical data and methodology above, 37 out of the 158 solar net metering customers with active billing data throughout 2012 would be better off shutting off their systems in order to avoid the unfavorable new rate structure. The increase in their bills would be more than the value of the energy they would generate.

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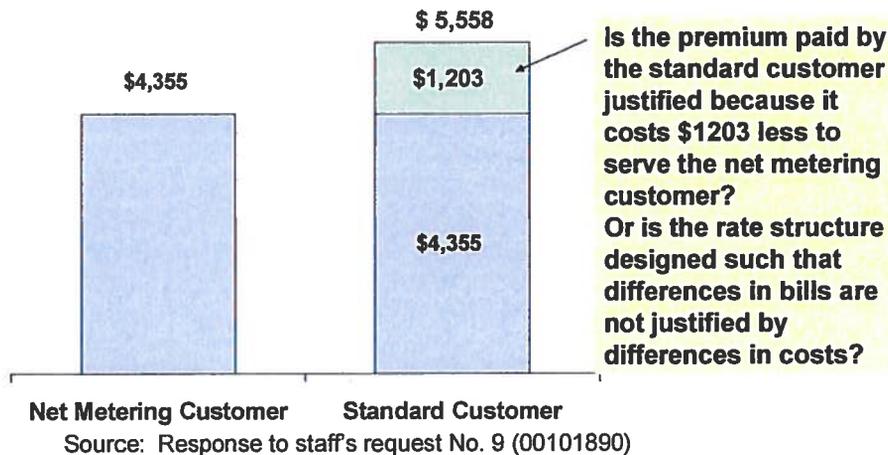
WHITE C., DI TESTIMONY

EXHIBIT NO. 706

The premium paid by standard customers relative to net metering customers at high usage levels demonstrates discrimination.

Customers with the same consumption would be charged differently

This empirical example provided by the Company shows, for a customer averaging ~5100 kWh/ month, **a 12-month total bill** based on the proposed net metering rates. A standard customer with the same consumption would be charged \$1,203 more.



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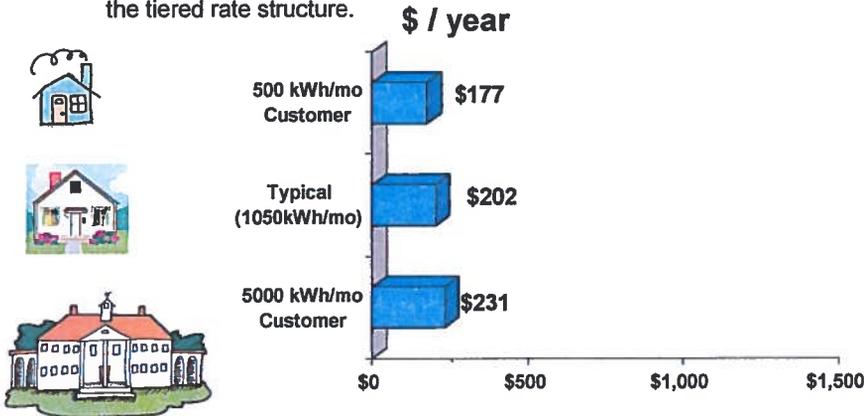
WHITE C., DI TESTIMONY

EXHIBIT NO. 707

The filing changes the economics of investing in customer-owned generation to discriminate against low usage customers

Currently, the financial benefit of generating one's own electricity is similar across residential customers

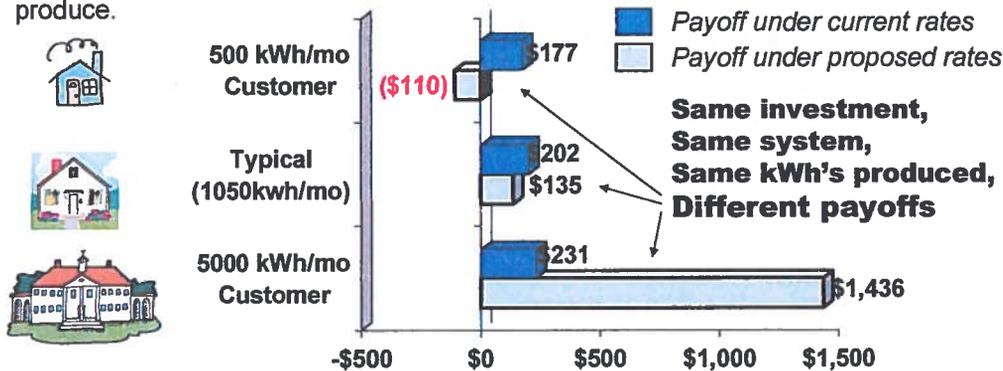
Below is the \$ benefit of offsetting 200 kWh per month for three hypothetical customers. The value is slightly higher for customers with higher usage given the tiered rate structure.



Note: For simplicity, both the production level (200 kWh/mo) and kWh consumption levels were assumed to be equal on a monthly basis.

The proposed rate structure will cause the financial benefit of generating one's own electricity to vary dramatically across residential customers

For the 3 hypothetical customers previously evaluated, the net benefit of investing in a system that produces 200kWh/month varies greatly. For the low usage customer, it is a loss. For the high usage customer, the benefit is driven by the value of getting onto the net metering rate schedule more so than the value of the kWh's the customer would produce.



Note: The above is provided as an exemplary comparison; these are not statistically representative. The kW demand figures used for calculating the Basic Load Charge included: 7.16kW for the "Typical" customer, and empirical examples of the monthly kW demand for customers with annual kWh consumption approximating 500 kWh/month and 5000 kWh/month above provided in IPC response to staff request (9).

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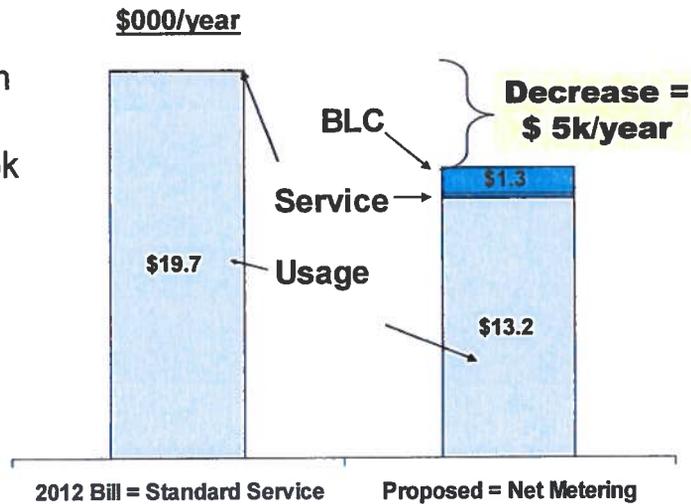
WHITE C., DI TESTIMONY

EXHIBIT NO. 708

Empirical example of how high usage customers can lower their bills

High usage customers will be able to substantially lower their bills by changing to the net metering rate schedule

For this empirical example provided the Company of a very high usage customer, the customer would pay \$5k less per year if on the net metering rate schedule rather than standard service rate schedule.



Source: Response to Staff Request No. 9 (00101890)

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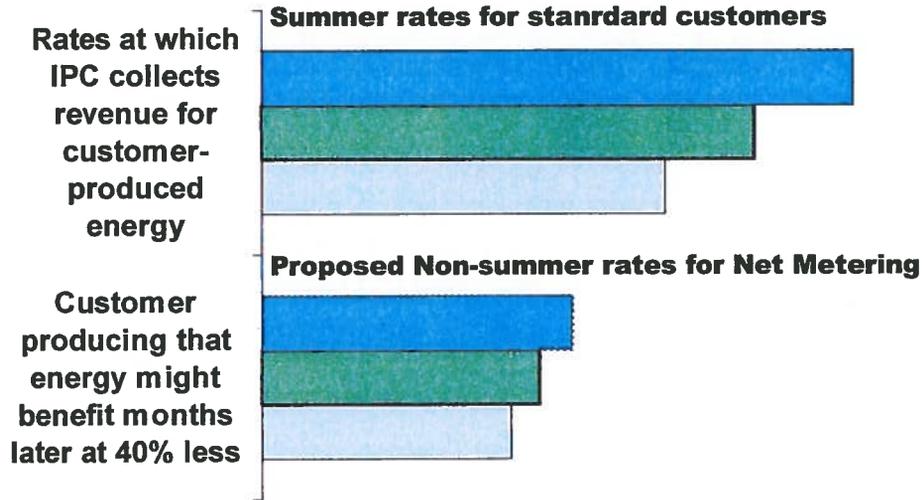
IDAHO CLEAN ENERGY ASSOCIATION

WHITE C., DI TESTIMONY

EXHIBIT NO. 709

A kWh produced in Summer does not equal a kWh offset in Fall. The Company collects revenue for customer produced energy in summer at full retail summer rates, but customers producing that energy can only offset kWh when they are again consuming more than they produce

Per-kWh Rates, Residential

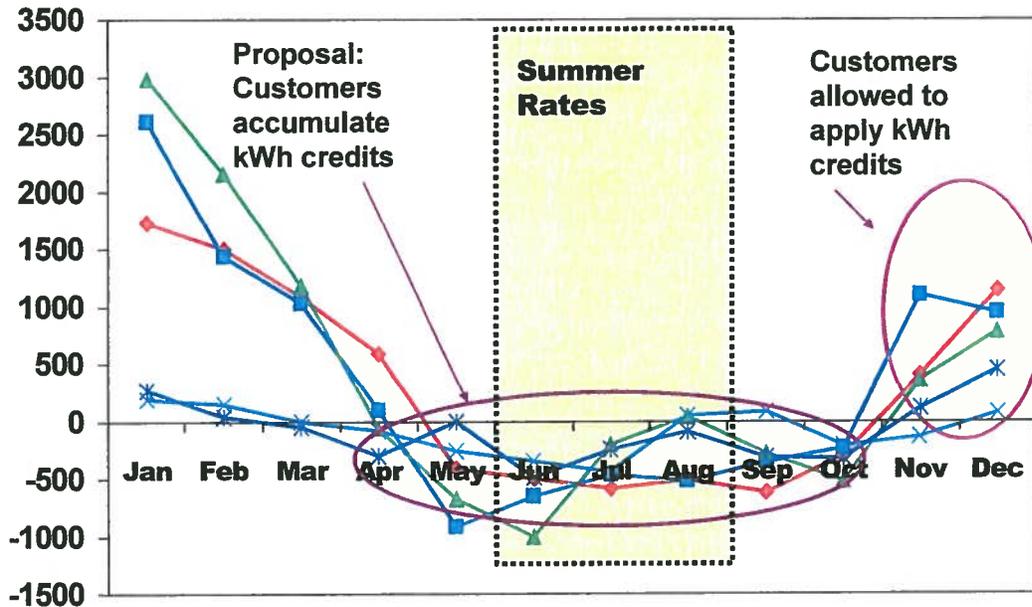


Note - Customer forfeits any balance of credits on Dec 31.

The kWh Usage Pattern of a sampling of 5 residential solar customers

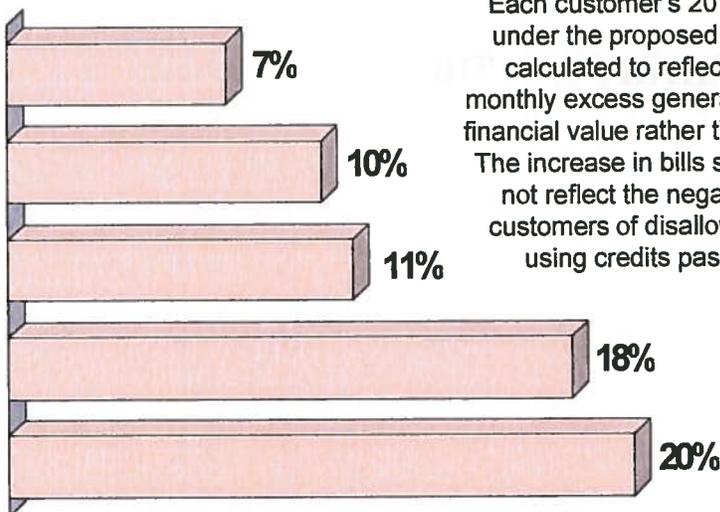
kWh Net Usage Pattern

Sampling of 5 residential net metering customers



Increase in bills resulting from proposal to give no \$ value to excess generation

- Sampling of 5 residential net metering customers -



Each customer's 2012 monthly bills under the proposed terms were recalculated to reflect one change: monthly excess generation was given a financial value rather than a kWh credit. The increase in bills shown here does not reflect the negative impact on customers of disallowing them from using credits past December.

Source: Customer data provided by Idaho Power in response # 9

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WHITE C., DI TESTIMONY

EXHIBIT NO. 710

Estimation of the potential revenue reduction which high usage customers on Schedule 1 could achieve by shifting to the proposed net metering schedule:

Energy Usage Range kWh / year	# of Customers in Usage Range ¹	Average per-customer calculations					Aggregate change in revenue (reduction) ⁶
		Peak kW ²	BLC Charge ³	Change in service fees ⁴	Change in Energy Usage fees ⁵	Net change in bill	
18,000 - 21,000	26,058	11	\$198	\$191	-\$506	-\$117	-\$3,052,353
21,001 - 24,000	16,679	13	\$228	\$191	-\$584	-\$165	-\$2,744,640
24,001 - 27,000	10,322	15	\$259	\$191	-\$662	-\$212	-\$2,187,938
27,001 - 30,000	6,500	16	\$289	\$191	-\$739	-\$259	-\$1,685,972
30,001 - 33,000	3,948	18	\$319	\$191	-\$817	-\$307	-\$1,211,215
33,001 - 36,000	2,433	20	\$350	\$191	-\$895	-\$354	-\$861,778
36,001 - 39,000	1,553	21	\$380	\$191	-\$973	-\$402	-\$623,709
39,00 - 42,000 est.	1,205	23	\$411	\$191	-\$1,051	-\$449	-\$541,078
42,001-45,000 est.	1,205	25	\$441	\$191	-\$1,129	-\$496	-\$598,209
Over 45,000 est.	1,205	27	\$472	\$191	-\$1,207	-\$544	-\$655,341
Total	71,108						\$14,162,234

The purpose of this analysis is to scope the range of revenue reduction represented by residential customer who could lower their bills by becoming net metering customers due to the savings resulting from lower per-kWh rates net of the increase in service and BLC charges. The calculations presented above indicate this potential for revenue reduction among residential customers with usage over 18,000 kWh/year is in the \$14 million range. Due to limited empirical data, this is not a projection exercise but a scoping of the size of this potential revenue reduction opportunity which can be compared to the \$74,000 increase in revenue collection estimated for 2012 and provided in response to Staff's Request No. 9. This analysis indicates that the potential for revenue reduction is a multi million dollar issue.

Please note:

- This analysis does not project the percentage of the 70,000+ customers eligible to lower their power bills who would act on the opportunity.
- In order to isolate the impact of shifting rate schedules, the potential costs and benefits of customer-owned generation are not included above.
- This analysis involves several assumptions, as described below, which result in a range of uncertainty. Results are presented above without rounding, but the significant digits presented in the results are not an indicator of precision.

Methodology and Assumptions

1. The distribution of residential customers on Schedule 1 in 2012 was provided by the Company in IPCO Response to ICEA First Production Request (0014128) for the ranges of kWh/ year listed above with the exception of usage over 39,000 kWh/year. The IPCE

response disclosed that there are 3,615 customers with usage over 39,000 kWh / year; for purposes of the estimations above, this distribution was assumed to be evenly distributed across the ranges 39,001 – 42,000; 42,001-45,000, and over 45,000.

2. To estimate Peak kW, the first step was to estimate a Load Factor. From Attachment - Supplemental Response to Staff's Request No. 2 (00101621): Sum the Residential Service kWh for the 12 months of 2011 and divide by 8,760 hours/year = 571,185kW. The average of the Largest and Second Largest Estimated Billing kW for Residential Service = 2,857,948 kW. The Load Factor = $571,185\text{kW} / 2,857,948\text{kW} = 0.1999$. This is the Average Residential Load Factor for the Billing kW in 2011.
For the average kWh/year in each of the above usage ranges, divide by 8760 hours in a year to get average kW. Divide this by the average Load Factor of .1999 to get the average peak kW for billing.
Note this method assumes the load factor is consistent across usage ranges.
3. The BLC charge = $\$1.48 \times (\text{Peak kW}) \times 12$
4. The increase in service charge = $(\$20.92 - \$5) \times 12$
5. The savings due to lower kWh rate is estimated to equal \$.025946 times the average kWh per year. From Attachment 3 - Response to Staff's Request No. 1_Net Meter Rate Development (00101171), Rate Design, on Line No. 15:
Residential Service Net Metering Revenue Requirement Adjustment /
IPC-E-12-24 Test Year Usage Total Energy:
 $F27/C27 = \$127,038,981 / 4,896,272,827 \text{ kWh} = \$0.025946 / \text{kWh rate discount}$
This is a conservative estimate given customers with higher usage see savings at the higher end of the tiered rate structure.
6. Aggregate change in revenue = Net change in bill per customer x Number of customers in kWh/year Usage Range

CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of May, 2013, I caused to be served, via the method(s) indicated below, true and correct copies of the foregoing document, upon:

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