



Re: IPC-E-20-26, Application for Authority to Modify Schedule 84 Net-Metering Requirement

Comments of Sierra Club and Idaho Clean Energy Association

As testimony by Idaho farmers in the October 13th hearing clearly indicated, power costs for irrigation substantially influence a commodity farmer's ability to compete in national and international markets. Southern Idaho has a great growing season, and irrigation provides protection from drought that farmers in many parts of the country don't enjoy. But irrigation, especially for pumpers, means that southern Idaho farmers have power costs that their competitors don't face. In a very real sense, the future of many Idaho farmers relies on their options for effectively managing power costs.

Agriculture is the single largest contributor to the Idaho economy¹. In any industry, it is a hardship to diminish access to technologies which a business may need to thrive. Access to distributed solar generation technology - like access to Variable Frequency Drives, High Efficiency Pumps, or other technologies - is key to maintaining economic competitiveness for many Idaho Irrigators.

Thus, the repercussions of IPC-E-20-26 docket are very important. A utility should not disrupt access to a technology which has become a vital option to certain CI&I customers.

Some legal scholars suggest that self-generation is a property right² that landowners enjoy. This Commission has previously noted the interest of customers in being able to generate for "some or all" of their power use. Whether a property right or some less formally defined liberty interest, we will show in our comment below, that the relief IPC has requested will serve to harm those Irrigator's rights (or interests) without a compensating benefit to other customer groups.

We believe this docket raises issues and should resolve matters, including:

1. Establish the closing date for grandfathering eligibility for Schedule 84 customers will not occur before successor rate structures to their net-metering are determined
2. Associate any future Schedule 84 grandfathering period with the useful life of the solar assets, that is not less than 25 years, rather than an arbitrary ten-year period,
3. Update the associated constraints placed on each meter point, specifically to change the 100kW size limit to a limit based on total customer load.
4. Order to Idaho Power to immediately undertake a solar cost and benefits study

Thank you for your time and attention to reviewing the reasoning and data we present to support the above recommendations.

¹ Idaho State Department of Agriculture, <https://agri.idaho.gov/main/about/about-idaho-agriculture/>

² The Right to Self-Generate as a Grid-Connected Customer, Jon Wellingshof and Steven Weissman, November 1, 2015

First, we observe that – prior to a holistic study of the cost and benefits of on-site generation – decisions on accessibility to Schedule 84 should not presume that the harm outweighs the benefits when CI&I customers invest in on-site generation.

In fact, the Commission has previously noted that the benefits provided by customers with self-generation may outweigh perceived costs.

“The benefits that on-site generation provide to the Company's infrastructure and resource allocation, once quantified, may well prove to outpace any alleged costs, increases in fixed-cost responsibility or decreases in net excess energy compensation credit.”³

By proposing to close the window for grandfathering eligibility under Schedule 84, the Company's IPC-E-20-26 application inappropriately presumes that access to on-site generation under Schedule 84 does more harm than good. Neither a study nor Idaho Power's application have provided adequate information to conclude who, if anyone, is harmed by new investments in on-site generation by Schedule 84 customers. On the contrary, we believe compelling benefits accrue to all customers when Schedule 84 customers self-generate.

In particular, Irrigation customers who choose to install solar panels on single or dual axis tracking systems provide capacity benefits in the form of eliminating or deferring access to additional generation that Idaho Power would otherwise need to procure. The value of these capacity benefits very likely exceeds any possible “under-collection” of fixed costs due to the reduction in energy purchases that self-generation allows.

When the value of these capacity benefits is combined with the demand charge payments that under the current net-metering program self-generating Irrigation customers still pay and recognizing that Irrigation customers receive lower value energy kWh credits (\$.05 or 06/kwh vs \$.07 to \$.12/kWh) than Residential net-meters receive we believe the data show that under current conditions all customer classes benefit by keeping eligibility for net-metering open to Irrigation customers.

In sum, we believe the data provided below will demonstrate that diminishing access to net-metering for Schedule 84 customers on December 1st as Idaho Power has requested will harm CI&I customers' interests and preclude the provision of benefits that would otherwise accrue to all customer classes.

- 1 A cutoff of eligibility for grandfathering of Schedule 84 customers under net-metering which precedes any visibility to the successor program structure would harm CI&I customers with no commensurate benefit to other rate classes**

HARM TO CI&I CUSTOMERS

³ Order #34046, page 19

1.1 A fair and assessable opportunity to self-generate is vital to many customers.

As several individuals testified on October 13th, farmers, especially pumpers with large lift loads, are very interested in controlling their exposure to rising power costs by investing in solar to meet some of their power requirements. Testimony showed a broad interest in making very sizable dollar investments in solar generation. The Company's application also points out that an increasing number of Irrigators are determining that on-site generation is their preferred choice for managing future power costs.⁴ And many large customer groups such as Anheuser-Busch, Walmart, WholeFoods, etc. are pushing for farmers and other producers to use more renewable energy in their operations.

1.2 Removing the ability to prudently evaluate on-site generation harms many customers.

The testimony also indicated that farmers would be greatly impeded from such large investment decisions if the Company removes the opportunity to be grandfathered before establishing any visibility into how the output of on-site generation would be valued in the future. While future rates are in general subject to change, IPC-E-20-26 specifically puts customers on notice that Schedule 84 will soon change so substantially that investments made under the current program are at risk if not grandfathered. By filing IPC-E-20-26 prior to completing, or even starting, the cost/benefit study of on-site generation, Idaho Power effectively creates a "wait and see" period when their Irrigation customers cannot prudently evaluate decisions related to investing in on-site generation. This harm may be avoided by setting the closure date for grandfathering eligibility to be coincident with visibility to any successor program.

1.3 The sharp drop-off in residential on-site generation after closure of grandfathering eligibility is indicative of the potential opportunities lost for CI&I customers if grandfathering eligibility were closed prematurely.

By comparing how residential customers reacted to the closing of grandfathering eligibility in their class Idaho Power could predict how their request for a December 1, 2020 cutoff of eligibility in Schedule 84 would affect future solar installations by CI&I customers. CI&I customers considering on-site generation typically engage in more rigorous financial analysis of the investment than Residents. However, even for Residents, the signaling of imminent changes to the program combined with the closure of grandfathering eligibility had the impact of a >40% drop in solar installations.

⁴ Schedule 84 includes commercial, industrial and irrigation customers. But as IPC points out in their application, the vast majority of growth for Schedule 84 applications has been from Irrigation customers, so for simplicity we have focused on those Irrigation customers.

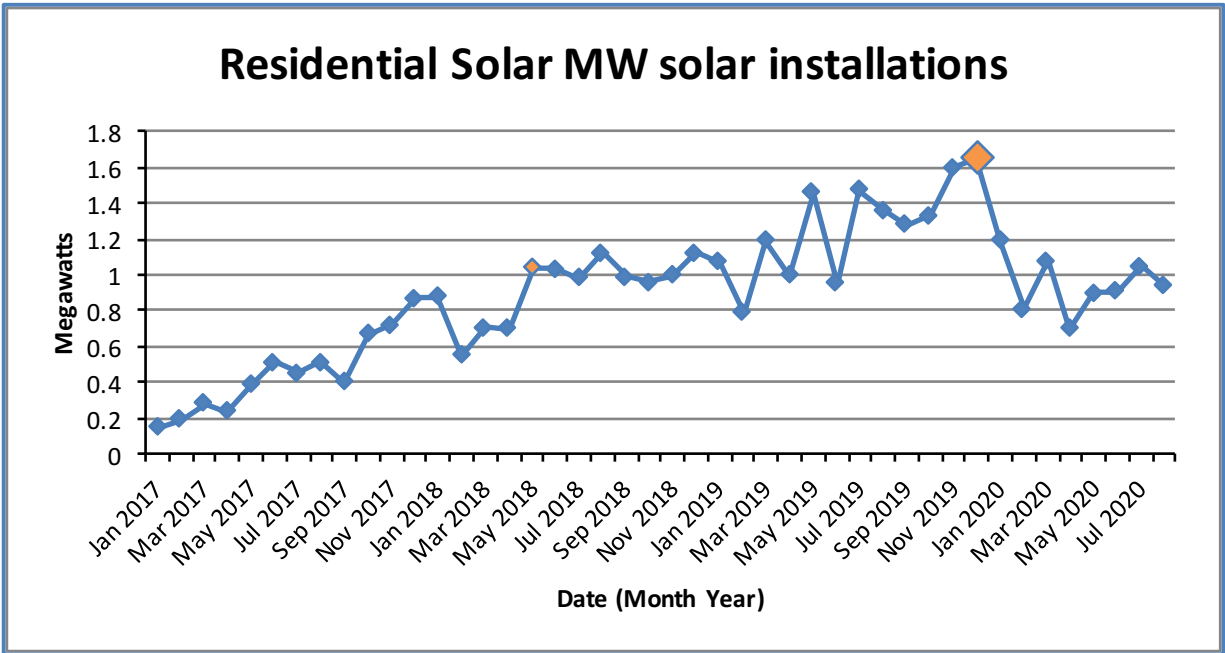


Figure 1 – Residential solar installation growth reverses when Commission closes grandfathering in December 2019

As evidenced in testimony and informed by the above, closing the eligibility for grandfathering among Schedule 84 customers prior to visibility to the new program would remove from many CI&I customers the ability to reasonably evaluate and benefit from investments into on-site generation.

1.4 Now is an exceptionally harmful window of time to impede access to self-generation for Irrigators

- **Loss of REAP grant opportunities.** Delaying Irrigation customer’s decisions on whether to invest in solar generation harms the Idaho economy by allowing federal REAP grants to be allocated to farmers in states other than Idaho.
- **Declining federal tax credits.** Disrupting access to solar in the face of declining federal tax credits simply adds to the opportunities foregone for Idaho farmers to benefit from federal government programs.
- **Irrigators are at risk of a rate increase.** The fixed cost report resulting from IPC-E-18-16 shows that Irrigators may be substantially subsidized by other classes. As Idaho moves toward alignment of costs with cost causation and toward class neutrality, the heavy load irrigators draw during summer peaks may draw higher cost allocations and thereby rate increases. This time period prior to a general rate case is a crucial time for farmers to have the option to solarize in order to minimize exposure to future rate increases.
- **Self-generating Irrigators help all Irrigation customers.** All Irrigators face the risk of increased costs in a future rate case. By reducing the portion of total peak loads caused by Irrigation customers, self-generation by Irrigation customers can reduce some of the fixed costs allocated to the Irrigation class.

The “wait and see” process implicit in Idaho Power’s filing this docket prior to completing the cost/benefit study it has been repeatedly ordered to perform is harming Irrigation customers by infringing on their right to self-generate some or all of their power requirements.

BENEFITS TO OTHER CUSTOMERS

Rather than causing intra or inter class cost subsidies, allowing Irrigation customers to install more solar powered self-generation will provide benefits to all customers through avoiding or deferring the time when Idaho Power needs to procure more resources to meet its projected continuing peak load growth.

1.5 Idaho Power forecasts show continuing need for capacity resources

Figure 2, displays Idaho Power’s peak annual loads over the past 15 years and its projected peak loads during the next 18 years.

In its resource planning process Idaho Power uses a 15% planning margin (indicated by the solid line) as the method for estimating the reserves level it should prudently maintain to provide reliable service⁵.

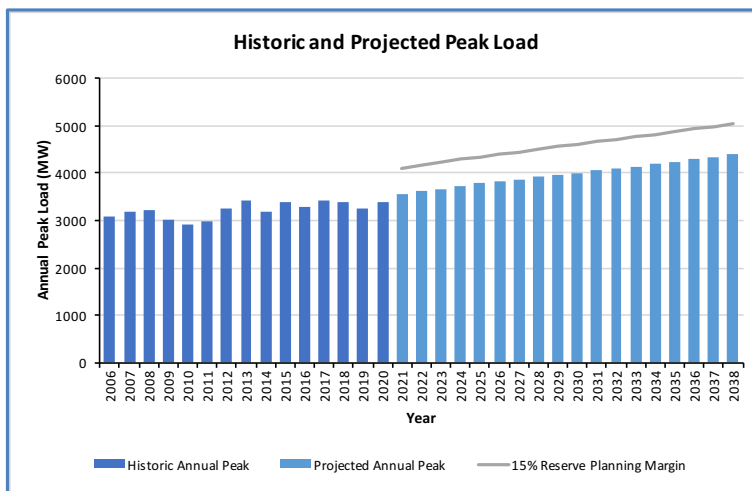


Figure 2 – Idaho Power historic and projected system peak loads

While a more detailed analysis would be required to determine in exactly which year additional capacity resources will be required, to the extent that new solar self-generators supply power during those projected peak hours, those new self-generators provide capacity value.

⁵ To our knowledge, Idaho Power adds a second reserve component, one which is used to address the potential error in their variable energy resources production forecasts.

1.6 The appropriate basis for measuring capacity value - <100 hours in 105 years

It is important when reviewing the value of new resources to distinguish methods designed to quantify the present dollar benefit of a resource that will defer the acquisition of a future capacity resource (one such method is referred to as the Surrogate Avoided Resource – SAR – method) from methods designed to indicate the quantity of reserves required to maintain a target loss of load exposure⁶ when performing comprehensive resource planning.

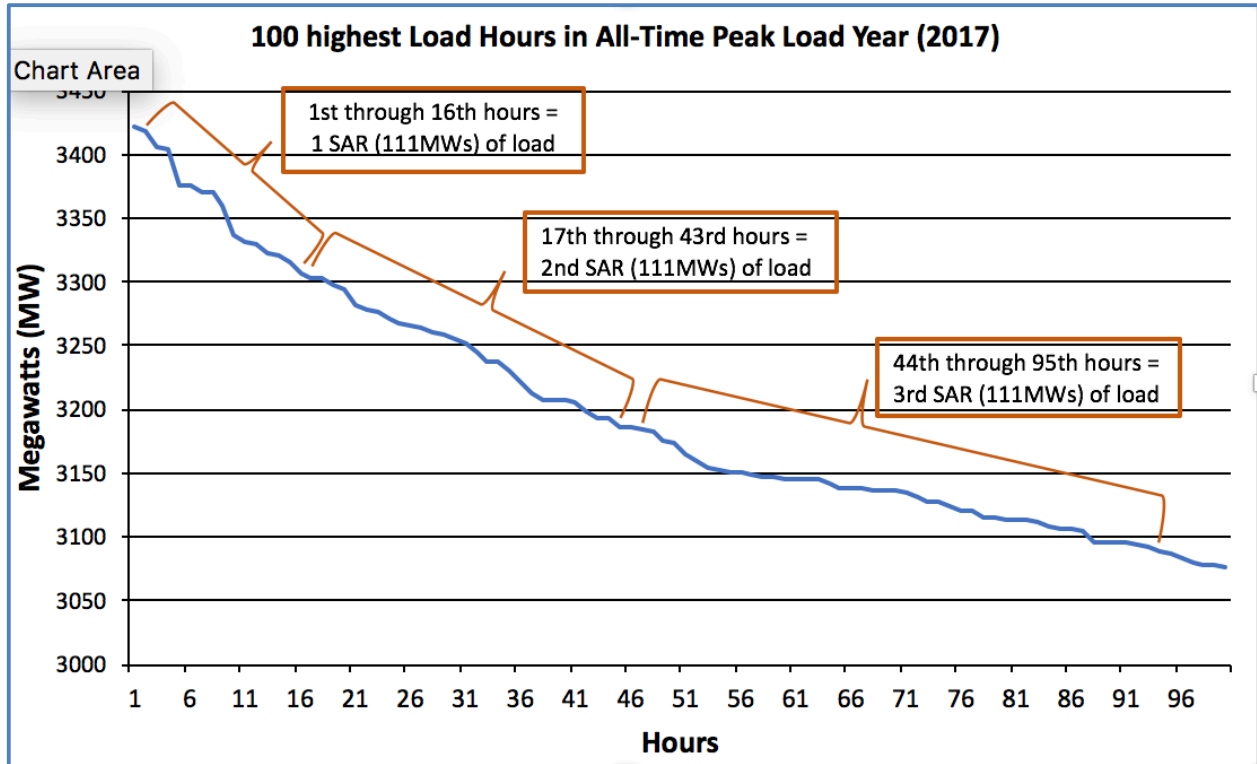


Figure 3 – 100 Top load hours = more than 3 incremental SARs

The SAR method requires analyzing the hours when loads require incremental resources. Traditionally the surrogate avoided resource was a single cycle combustion turbine with a rated capacity of approximately 160MWs. In the 2019 Integrated Resource Plan Idaho Power shifted to using a group of six natural gas fired reciprocating engine powered generators with a collective rated capacity of 111MWs.

Figure 3 shows the 100 highest load hours in 2017 (the year when Idaho Power experienced its all-time system peak load). Note that only 16 of those hours were within 111MWs of the peak load that year (111MWs being the incremental generating capacity that the new SAR would

⁶ While the NREL 100 highest load hours method is used for estimating reserve adequacy requirements using a Loss of Load Event (LOLE) method, as was noted in Figure 2 above, Idaho Power uses a 15% planning margin instead of an LOLE calculated margin in its resource planning process. Another use for the 100 hour NREL based analysis of changes to the highest load hours is to calculate changes to marginal resource capacity values over time. To our knowledge, Idaho Power has not used this method of updating marginal solar capacity value over time in its resource planning process either.

provide. To serve the incremental load represented by the 100 highest hours, that is the difference between a 3,422MW load in the highest hour and a 3,077MW load in the 100th highest hour would require more than three installations of SARs⁷.

1.7 Peak loads (within SAR size) occur between 2 and 8pm

Importantly for our purposes, reviewing the 100 highest load hours each year not only grossly over-states the number of hours before an incremental SAR will be required (e.g. the 345MWs range of loads experienced in the highest 100 load hours vs 111MW size of the SAR). More significantly, it incorrectly identifies the range of hours when incremental reserves will be required.

The top 16 load hours (the number of hours in 2017 when system loads were within 111MWs of the peak) all occurred between the hours ending 3pm and 8pm, a period when solar panels on single and dual axis tracking systems are producing substantial output and thus would provide significant future capacity value (see Figure 4 below). By comparison the top 100 load hours in 2017 stretched from 1pm to 10pm falsely suggesting that a SAR would be needed in hours after the sun sets.

2017 was not an exception. If we look historically over Idaho Power’s entire 100+ year history, only 60 load hours have been within 111MWs of the all-time system peak and **100% of those hours have occurred between the hours ending 2pm and 8pm** (see Table 1 below).

Hour Ending	2012 & earlier	2013	2014	2015	2016	2017	2018	2019	2020	Total (occurrences)
2pm				1						1
3pm		2		2		1				5
4pm		2		1		1	1		2	7
5pm		2		2		2	3		2	11
6pm		2		2		3	4		3	14
7pm		2		2		5	3		2	14
8pm		1		1		4	1		1	8
Totals	0	11	0	11	0	16	12	0	10	60

Table 1 – 60 load hours (by year and hour ending) within 111MWs of all-time system peak

⁷ 3,422 less 3,077 = 345MWs, which is more than 3 * 111 = 333MWs

Viewed through a focus on the actual number of high load hours in each year, rather than an arbitrary selection of 100 hours each year, we get a different perspective on the capacity value of certain solar resources. We can see that it is only during a few hours each year and not in all years that loads can be expected to rise to levels that cause future costs to be incurred.

In sum, on-site generation that is productive between 2pm and 8pm, which is particularly the case for solar panels installed by Irrigators, reduces the future costs necessary to serve Idaho Power’s system peak loads.

1.8 The way the Irrigation Peak Rewards program is structured and used is consistent with peak loads between 2 and 8pm as shown in Table 1.

In recent years Idaho Power has become very accomplished in using the Peak Rewards program to “level” late afternoon and early evening load on peak load days.

As shown in Figure 4, the peak rewards program is used to provide the maximum load reduction during the hour between 5 and 6pm.

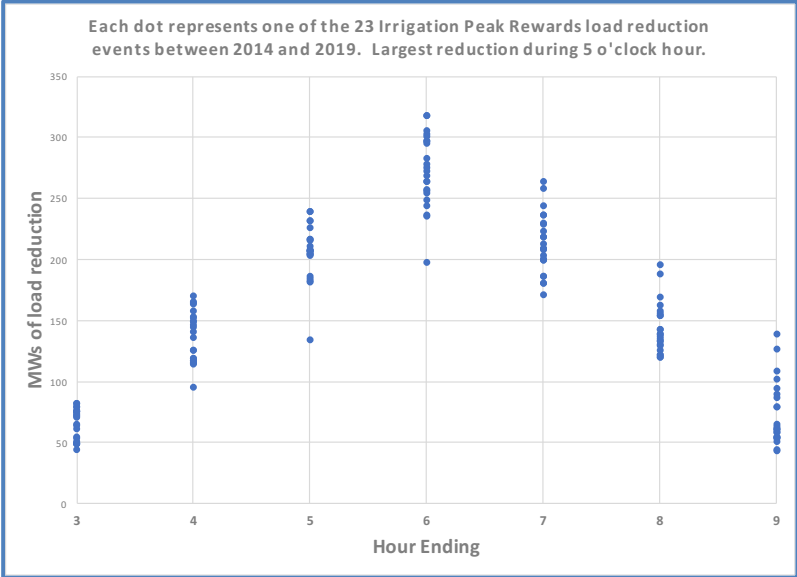


Figure 4 – Peak rewards maximum reduction during 5 o'clock hour

1.9 Output from panels mounted on tracking systems align with peak load periods

In contrast to the fixed “rooftop” panel installations used by the majority of R&SGS customers, Irrigators install solar panels in areas where such roofs don’t exist. Absent roof structures on which to affix the solar panels they overwhelmingly choose to mount their solar panels on devices that allow the panels to be shifted during the day to follow the sun’s path across the sky.

By shifting the surface of the solar panel throughout the day to better align it with the sun's rays, tracking systems produce much more output during the high load late afternoon and early evening hours during the summer than the same panel mounted on fixed southern facing alignment can provide.

New tracking solar systems, provided at private expense, will be producing during those relatively few peak load hours and thereby reducing capacity cost incurrence to the benefit of all customers.

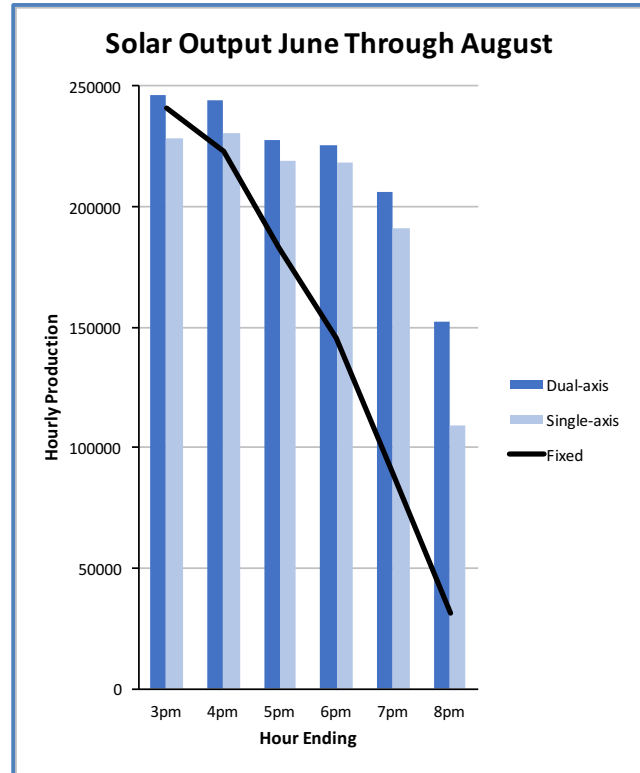


Figure 5 –Output of solar tracking systems during months of June, July and August

1.10 Tracking solar systems produce capacity benefits

We would summarize the data related to the capacity benefits supplied by solar panels mounted on tracking systems as follows:

- Idaho Power projects peak load growth over the next two decades
- System peak loads occur between 2 and 8pm
- Solar tracking systems are producing significant amounts of power during those peak hours allowing deferral in acquiring new capacity resources

Customer supplied self-generation via solar tracking systems will provide a significant, even if at this time not precisely quantified, capacity value to all customers.

1.11 Irrigators self-consume their generation during peak summer months, pay Demand charges, and get lower \$/kWh benefit for exports due to lower energy charges

Figure 6 shows irrigator load variation compared with total system load variability on July 7, 2017 when the system experienced its all-time peak load.

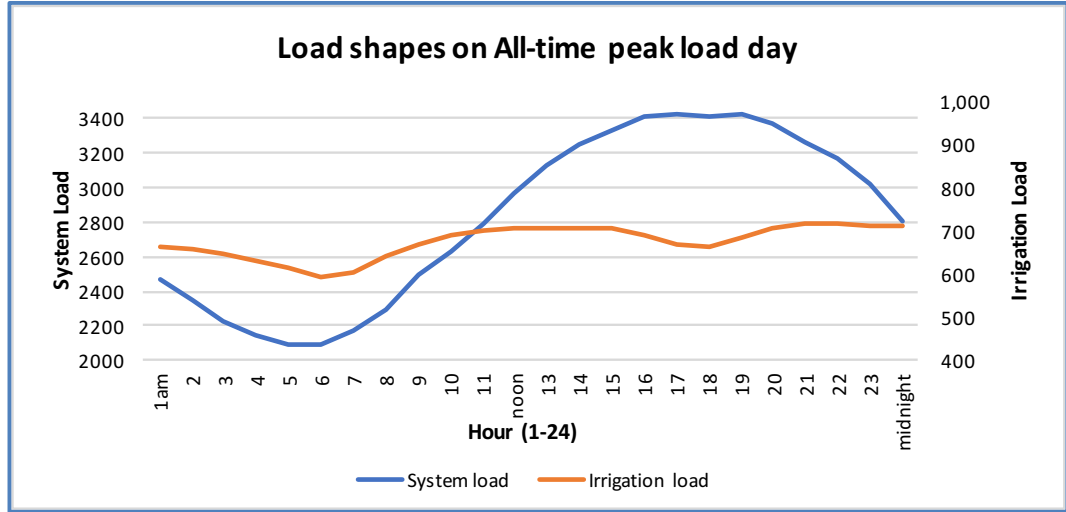


Figure 6 – System vs Irrigation load variation

Irrigation load is relatively flat and shows continued high levels of demand even after sunset. The large diurnal variation in total system load is primarily driven by Residential and Commercial air conditioning showing lower loads in the morning hours and higher levels in late afternoon and evening. In contrast Irrigation load stays relatively flat all day.

One implication might be that R&SGS customers with solar powered self-generation might export power in the mornings of even the highest load days. The flat load curve of Irrigation customers suggests that during the irrigation season these customers will largely self-consume their solar output even if their systems are subject to a size limit based on their maximum load.

In addition to showing a difference in how Residential and Irrigation customers with self-generation use the system to export power, Figure 6 also shows Irrigation customers still have high levels of power usage in hours after solar generation drops off causing them to incur demand charges based on their maximum load.

1.12 Conclusion - Irrigators with tracking system solar panels provide net benefits to all customer classes under the current net-metering arrangement

Because they are subject to demand charges, Schedule 84 customers do pay for system fixed costs. Whether that demand charge is an adequate allocation of fixed costs to the Irrigator class will be reviewed in next general rate case. But under the rate structure in place at this time, Irrigation customers with solar self-generation do

- pay for system fixed costs via a demand charge,

- consume almost all their self-generation during the peak summer period,
- receive a lower credit (compared to R&SGS customers) for any exported power due to their lower per kWh price structure and
- provide a significant capacity value that benefits all customers.

We believe the combination of these value streams distinguishes Schedule 84 customers from treatment R&SGS customers received regarding eligibility for net-metering.

Further, we again note that in any industry, it is a hardship to diminish access to technologies which businesses may need to thrive. On-site generation has become a technology vital to the success of many Idaho businesses, specifically irrigators.

We believe the facts presented in this docket, showing benefits that Schedule 84 customers provide to all other Idaho Power customers, demonstrate that it would be imprudent to close eligibility for grandfathering for the Schedule 84 customers before a comprehensive cost/benefit study is completed.

2 Grandfathering period should be based on the useful life of the solar assets, that is not less than 25 years, rather than an arbitrary ten-year period

The specific ways that Schedule 84 Irrigation customers with solar generation produce power, consume power, and are charged for their use of the electric system provide net benefits both to the non-self-generating portion of the Irrigation class as well as to the benefit of all other Idaho Power customers. Three different aspects of Irrigation customer behavior produce these results

1. Irrigation customers mount solar panels differently from Residential customers
2. They impose loads on the electric system differently from Residential customers
3. They pay for the electric services they receive differently from Residential customers

For these reasons, Schedule 84 customers merit an eligibility for grandfathering that is specific to their circumstance and not tethered to the terms of eligibility established for R&SGS customers. A 25-year grandfathering period, aligned with the asset's useful life, not some arbitrary and un-supported duration like the ten years proposed by Idaho Power, is appropriate for Schedule 84 customers who invest in solar systems for self-generation,

3 By contemplating updates to meter site requirements for Schedule 84 customers with on-site generation, IPC-E-20-26 is the most appropriate opportunity in 18 years for the Commission to address the economic burden of the 100kW cap.

Order 29094 established both dual meters as well as a 100kW cap at each meter point for CI&I customers choosing Schedule 84. In that Order, the Commission noted

The Farm Bureau contends that the better approach would be not to restrict the nameplate capacity, but to allow generation up to a certain percentage over consumption at each meter—say 3 to 5% on an annualized basis. That way, it contends, farmers could take advantage of economies of scale and more cost effective equipment. Accord: MPI, Idaho Rural Council, and Dan Hennis.⁸

The Commission went on in that Order to approve the Company's application without modification, noting:

While the suggested changes to the Company's proposal were thoughtful, what we want at this time is to implement the program. If needed, it can be modified as we gain experience⁹.

Over the past 18 years, the Company has to our knowledge never filed an application evaluating the appropriateness of the 100kW cap. The Company has been aware since Schedule 84 was approved for CI&I customers that the cap diminishes the economics of on-site generation for many customers. The public re-iterated in the testimony provided on October 13th that the existing 100kW cap impedes irrigators from installing solar panels in the most economically appropriate manner.

In sum, when IPC-E-02-4 considered and established meter site requirements for Schedule 84, farmers raised issues with the cap. When IPC-E-19-15 considered meter site requirements, parties raised issues with the cap. Now in IPC-E-20-26, the meter site requirements are again being considered, and farmers again are raising issues with the cap. Removing the 100kW cap and tying the size limit to consumption is long overdue, and this docket is the most appropriate venue afforded to customers for doing so.

4 Order Idaho Power to immediately undertake a solar cost and benefits study

Two and half years ago, the Commission called for a cost / benefit study of on-site generation¹⁰. The Company points out in their application opening IPC-E-19-15¹¹ that irrigation net metering applications average 99kW in size, reflecting the Company's awareness that the 100kW cap is a constraint to irrigators.

Had Idaho Power followed Commission direction and submitted a cost/benefit study, issues related to sizing customer self-generation limits to their maximum AC load would have been resolved by this time. Rather than proceed with that cost/benefit study, or include solutions to the capacity constraint proposed by other parties who invested time and money to intervene in

⁸ Order # 29094, page 3

⁹ Order # 29094, page 11

¹⁰ Order # 34046, page 36

¹¹ IPC-E-19-15 application, page 6: "Within the last two years, nearly all of the active or pending irrigation net metering customers in 2018 and 2019 have installed or requested to install, on average, 99 kW systems to comply with the 100-kW limit at an individual meter point."]

IPC-E-19-15, the Company has filed IPC-E-20-26 as its next step in updating the terms and conditions for Schedule 84 customers.

“A Credible and Fair Study on the Costs and Benefits of Distributed On-Site Generation to the Company’s System”¹² is urgently required to conclusively resolve a variety of open issues related to the appropriate treatment of Idaho Power customers who choose to self-generate some or all of their power requirements.

But Idaho Power has yet to formally start such a study process. Completion of that study will at best be many months in the future. In the mean-time, we believe that a careful review of the issues raised in this docket shows it is likely that the particular conditions associated with Schedule 84 Irrigation customers that self-generate is an instance where the net benefits outpace any associated costs.

With net benefits outpacing associated costs, we believe a fair balancing of “the interests of customers with net metering, and customers without net metering”¹³, requires a different closing date for Schedule 84 self-generators eligibility for grandfathering than the Company has proposed.

Therefore, we ask that the Commission take notice of the testimony offered by farmers and solar installers on October 13th as well as these comments and

1. Establish that Schedule 84 customers are eligible for grandfathering and that the closing date for grandfathering eligibility for Schedule 84 customers will not occur before successor rate structures to the current net-metering methods are determined
2. Associate any Schedule 84 grandfathering period with at least the 25-year useful life of the solar assets, not an arbitrary ten-year period,
3. Update the constraints placed on each meter point, specifically to change the 100kW size limit to a limit based on total customer AC load.
4. Order Idaho Power to immediately undertake a solar cost and benefits study

Respectfully submitted on October 27th, 2020

signature

Michael Heckler
Idaho chapter, Sierra Club

signature

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Idaho Clean Energy Association

¹² Order # 34509, page 9

¹³ Order # 34509, page 15