BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Application of PacifiCorp (U 901-E), an Oregon Company, for Approval of its Proposed Net Billing Tariff to Compensate Eligible Customers.	Application No. 19-04-013 (Filed April 19, 2019)

REPLY COMMENTS OF PACIFICORP IN RESPONSE TO OPENING COMMENTS OF THE UTILITY REFORM NETWORK AND THE SOLAR ENGERY INDUSTRIES ASSOCIATION AND IN FURTHER SUPPORT OF ITS APPLICATION FOR APPROVAL OF ITS PROPOSED TARIFF TO COMPENSATE ELIGIBLE DISTRIBUTED GENERATION CUSTOMERS

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I. Introduction

In accordance with the Scoping Memo and Ruling issued on July 3, 2019 (Scoping Memo)[1] in this proceeding, PacifiCorp d/b/a Pacific Power (PacifiCorp) respectfully submits these comments in response to the opening comments submitted to the California Public Utilities Commission (Commission) by the Utility Reform Network (TURN) and the Solar Energy Industries Association (SEIA).[2] PacifiCorp also submits these comments in further support of its April 19, 2019 application for approval of its proposed Net Billing Program (Application), which is designed to encourage the growth of renewable distributed generation in PacifiCorp's service territory following the upcoming closure of PacifiCorp's existing Net Energy Metering (NEM) Program currently scheduled for June 30, 2020.

[1] The parties to this proceeding, PacifiCorp, TURN, and the Public Advocates Office, participated in a settlement conference on August 21, 2019 in accordance with the procedural schedule set forth in the Scoping Memo but were unable to reach a settlement. The Public Advocates Office declined to file opening comments in this proceeding.

[2] SEIA filed a Motion for Party Status together with its opening comments. The company takes no position regarding SEIA's motion other than to request that no delays to the procedural schedule be permitted in order to allow the company sufficient time to implement its proposal, if approved. The company has provided responses to the comments filed by SEIA below.

II. Background

As set forth in its initial Application, PacifiCorp has proposed a Net Billing Program that is designed to provide for the growth of renewable distributed generation in the company's service territory by appropriately compensating customers for excess generation that is supplied to PacifiCorp's system. At the same time, the Net Billing Program is structured to ensure that other customers of PacifiCorp not participating in the Net Billing Program are not harmed.[3] To ensure customers are appropriately compensated for excess generation that is supplied to PacifiCorp's system while seeking to ensure that the Net Billing Program costs approximate the program benefits and do not have negative impacts on non-participants, the Net Billing Program is designed to provide compensation based on costs that PacifiCorp would otherwise incur to obtain electricity.

Through its Application in this proceeding, PacifiCorp requests that the Commission approve the following requests:

(1) Approve the proposed tariff establishing a Net Billing Program for customers that install new customer generation systems, Schedule NB-136 with an effective date of February 1, 2020.[4]

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[3] As noted in D.16-01-044:

> [W]hen a NEM customer's consumption of electricity from the grid is netted against the customer's exports to the grid of energy not used on-site, the NEM customer has a smaller volume of electricity to pay for than the customer would have paid for in the absence of netting. Because the full range of IOUs' costs are mostly recovered in volumetric charges from residential customers, the netting process results in a loss of volume on which the IOU could otherwise collect costs through the volumetric rate, and a consequent increase in rates to balance that out. (D.16-01-044, p. 56, footnote omitted.)

[4] The company recognizes that this date will likely need to be revised based on the current procedural schedule. In order to close the existing NEM Program and implement the proposed Net Billing Program, the company requests sixty days from a final Commission Decision as its Net Billing Program tariff effective date. This is consistent with the proposed procedural schedule included in the company's Application and allows adequate time to update the company's systems. *See* PAC/100, Lockey/4 and PAC/300, Meredith/6-7.

(2) Approve closing the current tariff for Net Metering, Schedule NEM-35 for new service, effective January 1, 2020.

(3) Approve an application fee for customers that apply to interconnect a customer generation system under the proposed Net Billing Program. This fee will reflect the one-time cost to the utility associated with processing and reviewing customer generation interconnection requests.

(4) Acknowledge that sites that have applied for or completed interconnection prior to the closing of the current NEM Program on January 1, 2020, will be grandfathered in the current NEM Program at that site for a 20 year period until January 1, 2040.

(5) Acknowledge that projects that apply for interconnection prior to January 1, 2020 must complete their interconnection by January 1, 2021, in order to be eligible for being grandfathered for participation in the current NEM Program.

(6) Authorize the company to recover the exported energy credits from the proposed Net Billing Program through the company's annual Energy Cost Adjustment Clause (ECAC) application. This is consistent with the methodology approved by the Commission to recover the costs for current net metering surplus compensation.

As detailed below in response to the specific comments submitted by TURN and SEIA, the company is providing sufficient information in support of its Application. However, the company is amenable to implementing certain recommendations set forth in TURN's opening comments. Specifically, PacifiCorp agrees to collect data regarding installation of storage by Net Billing customers and provide this data to the Commission and stakeholders together with a recommendation regarding whether a storage installation cap should be adopted.

The company also notes that no party has raised concerns regarding the proposed application fee or the proposal to recover the exported energy credits paid to Net Billing customers through PacifiCorp's annual ECAC filing.[5] For this reason, the company does not address these components of its Application in these comments and relies on its initial filing.

III. Response to Comments Filed by TURN and SEIA

A. PacifiCorp is not Required to Continue Offering a Net Metering Program

As set forth in its initial Application and acknowledged by TURN, PacifiCorp is not under any statutory obligation to continue offering a net metering tariff once its current NEM tariff rated generating capacity used by eligible customer-generators exceeds five (5) percent of its aggregate peak customer demand.[6] The company has already exceeded this five percent cap and received approval to continue *voluntarily* offering its current NEM Program but only through June 30, 2020.[7] The Commission was required by Assembly Bill 327 to develop a successor tariff for the existing NEM Program, however, this successor tariff was required only for customers of a large electrical corporation, defined as "an electrical corporation with more than 100,000 service connections in California."[8] The company has only 45,000 customers in California.[9]

SEIA argues that the company has failed to present any evidence in its Application to support "replacing" its NEM Program.[10] However, as detailed above and in its Application, the

[5] These components of the company's Application were identified as issues 5 and 8 in the Scoping Memorandum in this proceeding.
[6] Application at 3 *citing* Pub. Util. Code § 2827(c)(1), *see also* TURN Opening Comments at 2.
[7] The company submitted Advice Letter 567-E to the Commission pursuant to which the company proposed to continue accepting applications for its existing NEM program through June 30, 2020, unless a successor program was approved prior to that time.
[8] Application at 3, *citing* Pub. Util. Code §§ 2827.1(b) and 2827(b)(5).
[9] Application at 1.
[10] SEIA Comments at 3; *see also* SEIA Comments at 10.

company was not required to continue offering its NEM Program once the five (5) percent threshold was reached.[11] In fact, the Commission confirmed in its Decision 13-11-026 that it was the intent of the legislature to limit participation in the NEM Program and therefore once a utility reached its generation limit, no new customers were *permitted* to sign up for the NEM tariff offered by such utility.[12] The company's NEM Program has continued to operate only because the company obtained specific approval from the Commission to do so until June 30, 2020.[13] No new customers will be accepted pursuant to the existing NEM Tariff beyond that date. Therefore, the Commission need not consider whether it is appropriate to terminate the existing NEM Program; this determination has already been made. Instead, the primary focus of this proceeding should be whether the company's voluntary proposal for a Net Billing Program should be approved as a way to support further customer generation. For the reasons set forth in its Application and elaborated on below, the company's proposal represents an appropriate next step to facilitating additional customer generation interconnected to the company's system. The proposal should be approved because it represents an incremental reduction in the cost-shifting from customer generators to non-participating customers relative to the existing NEM Program, while continuing to enable customer-sited solar development in PacifiCorp's California service territory.

Because the company is not subject to the new net metering successor program requirements, it also asserts that the appropriate time to consider a duration of service for the proposed Net Billing Tariff will be if and when the company proposes its replacement.[14] Under

[11] *See* TURN Comments at 2.
[12] Application at 3, *citing* D.13-11-026.
[13] PAC/100, Lockey/3-4.
[14] The scoping memorandum for this proceeding identifies a possible duration of service for the proposed tariff as issue number 7.

the current proposal, the proposed Net Billing Tariff would be effective indefinitely (*i.e.*, there is no duration term for the tariff). SEIA argues that a twenty-year term should be applied to the Net Billing Tariff proposed in this proceeding.[15] However, if a term duration were imposed on the proposed Net Billing Tariff prior to approval of a replacement there would be no customer generation option for the company's service territory in the interim. In order to ensure that a customer generation option is not arbitrarily ended in its service territory, PacifiCorp suggests that consideration of a duration limit be stayed until such time as the company (1) proposes termination of the proposed Net Billing Tariff or (2) proposes a successor to this tariff. At such time, a grandfathering provision for the Net Billing Tariff and applicable closing date for the tariff could be considered and approved by the Commission. This is consistent with the company's proposal in this proceeding to consider the closure of its NEM Program together with consideration of the replacement Net Billing Program.

B. PacifiCorp's Proposed Tariff Structure is Appropriate and Represents an Incremental Improvement in Price Signals for Customers

The company has proposed a Net Billing Tariff pursuant to which customers will be billed under PacifiCorp's standard, applicable tariff for all energy usage and separately compensated for exported energy through an export credit. TURN states in its comments that it would prefer a Value of Distributed Energy (VODE) tariff as a successor to the company's current NEM Tariff.[16] A VODE tariff is akin to a buy-all, sell-all tariff, where all energy generated by a customer generator is purchased by the utility at a set rate, and the customer pays the full retail rate for energy used on-site whether provided by the utility or the customer's on-site generation. While the company is not conceptually opposed to this type of tariff, PacifiCorp

[15] SEIA Comments at 11.
[16] TURN Comments at 2.

does not think that this is an appropriate time to implement a VODE tariff (notably, TURN is similarly not requesting that the Commission require a VODE-style tariff for all utilities at this time). PacifiCorp recommends that this type of tariff could be revisited for a future customer generation program if the proposed Net Billing program were to need replacement. A VODE-style tariff would require the installation of expensive production metering equipment for each customer generator. Installation of this type of meter in PacifiCorp's Rocky Mountain Power's[17] Utah service territory was approximately $3,000/meter. This level of expenditure is not supported at this time because results similar to those achieved through a VODE tariff can be achieved through PacifiCorp's proposed export credit structure and without the installation of additional metering.[18] TURN expresses concerns that the company's proposed tariff will not send the appropriate pricing signals to customers.[19] This desire to send pricing signals to customers is precisely why PacifiCorp's proposed export credit methodology includes a distinction between on-peak and off-peak rates[20] and allows customer generators to save more when their generation matches their own load. In contrast, the VODE tariff proposed by TURN fails to distinguish between when energy is or is not contributing to the needs of the company or the customer (*i.e.*, a VODE tariff would not distinguish between energy exported to the grid or consumed on-site). Compensating customers the same rate for all generation, particularly at

[17] Rocky Mountain Power is an affiliate of PacifiCorp d/b/b Pacific Power.
[18] As part of TURN's VODE proposal it suggests including an adder that would ensure system payback within a ten-year timeframe through a ten-year fixed compensation rate. Turn Comments at 2. While the company is not opposed to considering a VODE tariff at a future date, it does not agree that inclusion of an arbitrary adder to achieve a particular payback period should be included as part of such a tariff. This proposal runs counter to important principles such as the avoidance of cost-shifting and sending appropriate price signals to customers; both of these goals are supported by TURN and would not be achieved by including this fixed ten-year compensation plug value. The company's proposal sends a more appropriate price signal to customers.
[19] TURN Comments at 2.
[20] PAC/200, MacNeil/4-5, 8-11.

elevated levels for generation provided at times when demand is low would create an inappropriate incentive.[21]

Finally, while PacifiCorp acknowledges that the proposed export credit methodology (discussed at length below) does not capture all value associated with customer generation with perfect precision, the export credit methodology represents an important incremental improvement over the existing NEM Program while maintaining a structure that is easy for customers to understand. Under the existing NEM Program, a customer's kilowatt-hours billed are reduced by energy exported to the grid from their system. This results in customer generators being compensated for their exported energy at a rate equal to retail energy charges even though the value of their exported energy may be more or less than these retail rates. Under the proposed Net Billing Tariff, customers will instead be compensated through an export credit that accounts for the difference in value that results from exporting energy at specific times (*i.e.*, peak versus non-peak). The ability to provide credits that more accurately reflect the value of a customer's exported generation ensures that costs are not shifted onto other customers and that the prices paid evolve with their value over time.[22] Further, the Net Billing program offers the opportunity to reduce retail charges when customer generation is used by the customer on-site to meet their own needs. This structure will consequently encourage customers to invest in innovation and to make more conscious energy choices at home. Ultimately, these changes in customer behavior will lead to a more efficient power grid and lower net power costs for all customers.[23]

[21] The company reserves the right to provide additional comments regarding the specifics of a VODE tariff should the Commission's final order direct adoption of such a program.
[22] PAC/300, Meredith/2.
[23] PAC/300, Meredith/4.

C. The Proposed Net Billing Tariff Results in Equitable Compensation

TURN argues that while the proposed Net Billing tariff represents an improvement over the existing NEM Program, the component of the proposed tariff that provides customer compensation through avoidance of retail rates creates an inequitable compensation structure.[24] The company appreciates TURN's interest in reaching the most equitable compensation for all net billing customers, but disagrees that it is improper to credit customers for exported energy at an appropriate cost-based level, while also letting customers offset retail rates for energy consumed onsite.[25]

While reliance on retail rates as the price signal for customer use creates different outcomes between rate classes (specifically between customers that pay the company's full retail rate and customers who receive the low-income California Alternate Rates for Energy (CARE) rate), eliminating these differences through the use of a "buy-all/sell-all" program structure as envisioned by TURN would compromise the important price signals that the proposed Net Billing program would create and would require expensive metering, administrative complexity and potentially more confusion for customers. These aforementioned associated costs are particularly difficult to justify based on PacifiCorp's small customer base in California.[26] The company's proposed compensation structure encourages customer behavior that can minimize the impact of customer generation on the grid by encouraging customers to size their generation to more closely match their own load requirements, and to modify their load to make better use of their generation. Both of these changes reduce the "duck" curve[27] conditions that are

[24] TURN Comments at 3-4. *See also* scoping memo issue 3 (inquiring whether the impacts of the proposal on non-participating customers is reasonable).
[25] TURN Comments at 3-4.
[26] As noted above, the company has only 45,000 customers in California.
[27] As discussed below, the "duck" curve is a phenomena created by increased use of renewables that results in low net load during the middle of the day and significant increases in load after the sun sets.

prevalent across the western grid and increase the value of customer generation. In addition, TURN's concern that the costs recovered by the company through its retail rates are not actually avoided through self-generation and instead shifted to non-participating customers, is directly addressed by the company's proposal to require all customers to contribute basic charges.[28] This requirement ensures that all customers remain responsible for basic charges and partially mitigates cost shifting concerns. While TURN is correct that costs could be shifted when customers avoid retail charges by consuming their own generation on-site, this concern is also present in other situations such as when a customer invests in energy efficiency or switches to natural gas. However, Net Billing represents a step change reduction in cost shifting relative to net metering, while preserving the ability of a customer generator to reduce the energy it purchases from the utility. The company is open to evaluating the program after it gains some experience.

The company's proposed Net Billing Program enables prospective customer generators to continue to interconnect in the company's service territory while reasonably balancing the benefits to customer generators and minimizing cost shifting to non-participants. Taken as a whole, the Net Billing proposal appropriately balances the multiple and often competing principles of rate design. In his seminal work, Principles of Public Utility Regulation, Dr. James C. Bonbright listed several criteria of a desirable rate structure.[29] Fairness, simplicity, and economic efficiency are important themes to his list. Net Billing is fair because it compensates customer generators for the value of the energy that they export to the grid such that other customers are economically indifferent between receiving energy from a customer generator or from another source. Net Billing is also fair in that it preserves the ability for a customer

[28] PAC/300, Meredith/6.
[29] See pages 290-291 of Principles of Public Utility Regulation.

generator to avoid purchasing energy from the utility when their generation coincides with their usage.

Additionally, Net Billing is simple for a customer to understand and for an installer to explain. A customer generator saves on their bill for what they avoid in purchases from the utility and they get a credit for what they deliver to the grid. The company has experience with a similar program structure in Utah[30] where customer generators receive a financial credit for exports. Based on the company's experience, it has been easy for customers and installers to understand its billing mechanics.

Net Billing promotes economic efficiency, because it encourages customer generators to use their own generation when possible, timing their usage with renewable output. As renewables become ever more prevalent, a phenomena known as the duck curve has manifested itself where net load is very low in the middle of the day and ramps up significantly as the sun sets. Net Metering, which effectively provides the same level of compensation for each kilowatt-hour (kWh) generated irrespective of timing, has the potential to exacerbate the duck curve. In contrast, Net Billing with time-varying exports sends an important price signal for customer generators to better align their generation and usage, and thus helps alleviate the impacts of the duck curve.

The company also notes that it meets the unique needs of certain customers (who may have less access to the benefits of Net Metering) by participating in the California Solar on Multifamily Affordable Housing (SOMAH) Program. The SOMAH Program is a virtual net metering program that provides financial incentives for installation of photovoltaic energy systems on multi-family affordable housing by covering 100% of the cost associated with the

[30] As of August 30, 2019, there were 5,630 customers participating in the Rocky Mountain Power's Utah Schedule 136.

portion of a solar facility that serves low income customers. While not all CARE customers will qualify for the SOMAH Program, it is another tool to ensure that the benefits of customer generation are accessible to as many customers as possible. The company is not proposing any changes to the SOMAH program in this application. The company remains committed to working with TURN and other stakeholders to further reduce the different impacts of customer generation programs on specific rate classes in potential future iterations of its tariffs.

D. The Company's Proposed Export Credit Should be Approved Without Modification

TURN argues that the export credit methodology proposed by PacifiCorp results in an artificially low rate because TURN alleges that the rate fails to include the following "real-world values:" avoided generation capacity need; ancillary services costs; and marginal avoided transmission, sub transmission, and distribution costs.[31] SEIA also asserts that avoided transmission and distribution costs should be included in the calculation of PacifiCorp's proposed export credit value.[32]

The proposed export credit rate does not include consideration of capacity benefits, but the Net Billing program taken in its entirety is fair and reasonable, since participants are able to avoid paying for generation, distribution, and transmission costs that are collected through retail rates, by consuming their own generation on-site. These costs are primarily attributed to peak demand, so to the extent customer generation is reducing retail load during peak periods, it is reasonable for customers to be compensated in this manner. During a heat wave or cold snap that would likely trigger peak load conditions, it is more probable that a customer is utilizing the entire output of their generation, and would accordingly be compensated for generation,

[31] TURN Comments at 5-6.
[32] SEIA Comments at 4.

distribution, and transmission costs through retail rates. Because only generation in excess of customer load is compensated at the export credit rate under the Net Billing program, it is more likely to be delivered on relatively mild days than during days when peak demand conditions could warrant additional compensation.

In addition, the solar resources expected to comprise the significant majority participation on the Net Billing program will not necessarily allow PacifiCorp to avoid future generation, transmission and distribution investment. PacifiCorp's resource portfolio includes over 1,800 megawatts of utility-scale solar resources that are expected to be online by the end of 2020. As a result of the supply provided by these resources, PacifiCorp's generation capacity needs have shifted into the evening hours, such that additional solar resources provide limited incremental benefit. This is particularly true with respect to excess generation output, since customers are more likely to use all of their generation on-site as solar generation tapers off in the evening hours.

With respect to potential transmission and distribution deferral, PacifiCorp's California service territory is not projected to have significant growth-related investment. Due to a variety of factors including local conditions and demand-side management programs, the majority of PacifiCorp's California distribution substations are forecasted to have zero or even declining load growth, while many others have adequate capacity to supply forecasted growth over the next twenty years. As a result, even if excess customer generation purchased under the Net Billing program helped reduce peak requirements, which it may not, the cost savings that would accrue to non-participating customers would be very small.

In addition to avoided capacity costs, SEIA argues that the company should have included other avoided cost values used in the Commission's avoided cost calculator that has

been developed and updated through Commission proceeding R.14-10-003.[33] SEIA points to the recently adopted greenhouse gas (GHG) adder adopted in that proceeding pursuant to Decision 19-05-019 as an example of an avoided cost that it alleges should have been included in calculation of the export credit.[34] As an initial matter, the decision referenced by SEIA was issued following filing of the company's Application. Further, the company is not a respondent in proceeding R.14-10-003; the named respondents to that proceeding are the three large investor-owned utilities. As the Commission and Legislature have long recognized, PacifiCorp is differently situated from the large California investor-owned utilities, as a multi-jurisdictional utility with a small California service territory with customers that are largely dispersed. Notably, the successor NEM tariffs approved by the Commission[35] were not required to include compensation for avoided GHG emissions and therefore it would be inconsistent and unreasonable to adopt a more onerous requirement for PacifiCorp. For these reasons, it is not appropriate to impose the requirements regarding avoided cost values or cost-effectiveness tests arising out of proceeding R.14-10-009 on PacifiCorp.

TURN alleges that a lower export credit that does not include these additional costs would likely incentivize installation of on-site storage and enable customers to avoid costs embedded within their retail rate, thereby shifting more costs to non-participating customers.[36] While the company recognizes that a customer generator who also has a battery could offset a greater proportion of its electric bill, the company also notes that such a scenario would be a far better outcome for all customers than the current Net Metering paradigm. If customer generators were to store generation during the middle of the day (*i.e.*, the time of day when net system load

[33] SEIA Comments at 4.
[34] SEIA Comments at 5.
[35] *See, e.g.,* Decision 16-01-044.
[36] TURN Comments at 5.

is lower) and then discharge this stored generation in the evenings when solar generation is not available (and net load is higher) instead of providing generation back to the grid regardless of time of day or customer requirements, the benefits for all customers would be greatly improved. The company believes that TURN's recommendation to increase the export credit out of a fear of cost shifting from batteries is not the right solution and would result in greater, not lesser, levels of cost shifting. TURN requested that PacifiCorp perform an analysis of the potential impact of its proposal on incentives for energy storage.[37] In response to TURN's request, the company performed an analysis of the economic opportunity for installations of rooftop solar and batteries on the company's proposed Net Billing program. Using the same assumptions presented in Exhibit PAC/303 of the Application for typical customer generation characteristics and costs of solar installations, the company considered how the installation of a Tesla Powerwall[38] would impact the annual bill of a customer generator as well as the simple payback that a customer would experience on its investment. Please refer to Attachment A for the results of this analysis. For the typical customer generator, the company estimates that the addition of a battery would reduce exported energy from 56.6 percent of generation to 23.7 percent and would lengthen the payback period from 12.5 to 14.1 years. The annual bills for such a customer would be $1,482 or about $259 less than the alternative scenario with no battery installation.

Further, while sympathetic to TURN's concern that not all customers will be able to benefit from the possibility of pairing storage with net metering, the company does not think the appropriate solution is to limit the adoption of storage technologies at this time. Instead, the

[37] TURN Comments at 6 (*requesting* that the Commission direct the company to model the potential impact of its NEM tariff on incentives for energy storage).
[38] Per https://www.tesla.com/powerwall, the company assumed an all-in cost of $7,600 for a single 13.5 kWh Powerwall net of the 30 percent investment tax credit.

company proposes collecting data and ongoing monitoring of the Net Billing program. The results of this data collection could be used to determine if adjustments to the program are needed.[39]

E. Appropriateness of Utilizing Time of Use Rates

As detailed in the Application, the company is proposing to use Time of Use (TOU) export rates.[40] The proposed export rates are differentiated between on-peak and off-peak periods in order to provide a greater customer benefit for exporting generation during times that the grid will most benefit. The company has defined this on-peak period as 4-10 p.m., Monday through Friday with all other times being defined as off-peak. SEIA is correct that the company does not currently offer time of use rates for residential customers in its California service territory.

The company's most recent general rate case did not include a proposal for time of use rates because the company had not fully deployed Advanced Metering Infrastructure (AMI) (smart meters) in its California service territory at the time of filing. AMI meters enable a low cost implementation of time-varying rates. Further, having at least a full year of interval data from AMI can be instructive for designing optional time-varying rates in a more meaningful way. AMI meters have now been deployed in the company's California service territory and the company anticipates including time-varying rate proposals in its next general rate case. However, this does not necessitate a delay in time-varying export credit prices associated with the company's proposed customer generation successor program. The company now has AMI

[39] TURN Comments at 7 (*requestin*g that the Commission consider possible mitigation measures including a cap on eligible solar/storage capacity and require PaciCorp to track the number of new installations that include storage).
[40] MacNeil 8-9; see also Exhibit PAC/201.

meters and can implement time-varying export rates without incremental metering cost. Time-varying export rates are more accurate and fair[41] and there is therefore no justification for delaying their implementation. SEIA's statement that customers should not be expected to take service under a Net Billing construct with time-varying export credits if they have no sense of their time-varying consumption is not supported.[42] There is no reason why time-varying export credits for customer generators are dependent upon the availability of optional time of use rates for consumption. Cost-shifting occurs when the export rates paid to participating customers do not accurately reflect the benefit to the grid. Differentiating the time of export increases accuracy and more fairly compensates customer generators. For these reasons, the company's proposal to use time-varying export rates should be accepted and approval of the Application should not be negatively impacted because time-varying rates are not yet available for all of the company's customers. This delay would be arbitrary and inconsistent with the goal of achieving fairness for all ratepayers.

F. The Company's Net Billing Proposal will Facilitate Customer Generation

As detailed above, the company will not be required to continue offering a NEM program following the closure of its existing NEM Program on June 30, 2020.[43] PacifiCorp has specifically submitted this Application in an effort to facilitate further on-site renewable development by continuing to provide a customer generation option. In addition, SEIA's argument that the proposal will impede solar access is based on a misunderstanding of the

[41] SEIA Comments at 6.
[42] *See* SEIA Comments at 6.
[43] For this reason, the company takes no position with respect to SEIA's argument that this proposal should not set a precedent for the larger investor owned utilities operating in California. *See* SEIA Comments at 9. As has been long recognized by the Commission and legislature, PacifiCorp is a small, multi-jurisdictional utility. While the company has proposed a net metering program that represents incremental improvements to its own current offering, it does not take any position on whether the proposal would be appropriate for larger and differently situated utility companies.

proposal itself. The company's Net Billing program proposal does not require that systems be owned and operated by the participating customers. Leased or power purchase agreement solar systems are both permitted under the proposal. The language in the Applicability section of the proposed Net Billing tariff that references a "Customer that owns and operates a renewable electricity generation facility" was taken directly from the company's current Net Metering tariff. The company does not intend for this to restrict systems that are leased or are part of a power purchase agreement. To provide further clarity for customers, the company supports a change to this language to read "Customer that owns and operates, leases or purchases the output of a renewable electricity generation facility," if the Commission deems this modification helpful. The company also notes that its SOMAH Program (detailed above) provides an additional method for ensuring that customers historically without access to solar can participate in customer generation programs.

With respect to SEIA's argument regarding the payback period resulting from the Net Billing Program, the company agrees that this length of time may not create an attractive investment for all customers. However, customers often choose to invest in renewable resources for reasons beyond the financial benefits.[44] The company also agrees that a "simple" payback period metric does not fully incorporate the time value of money; however, this calculation provides a reference point to which it is easy for people to relate. For example, it might be commonplace for someone to say to her friends that the LED light bulbs she installed paid for themselves in two years. If that person were to say instead that the levelized cost of energy differential for her investment was $40 a megawatt-hour, that would likely have less meaning

[44] Return on investment is not the sole driving force behind all expenditures; for example, consumers may spend more money for organic produce based on health concerns. Similarly, utility customers concerned with climate change may choose to invest in solar even if the payback period is lengthy or not certain.

and be more challenging for a others not involved in the calculation to understand. Further, the discount rate used to determine the time value of money will be different for different customers whose financial circumstances vary. While the company's calculation does not incorporate the time value of money, it otherwise employs relatively conservative assumptions. For example, it does not assume any escalation of retail rates or export credits that could shorten the payback period.

The company also acknowledges that its proposal to pay Net Billing program customers for renewable energy credits if such customers register the Renewable Energy Certificates (RECs) with the Western Renewable Energy Generation Information System (WREGIS) may not be viable for most participating customers (*i.e*., the additional payment may not offset the cost of WREGIS registration). The company believes, however, that this value could be worth pursuing for some larger customers who choose to participate in Net Billing, as participation in the company's California service territory is not limited to residential and smaller commercial customers. As of September 9, 2019, the company had 17 California customers participating in its NEM Program whose system sizes were over 100 kilowatts. Regardless of how beneficial the proposed renewable attributes adder option could or could not be for participants, RECs that are not registered with WREGIS do not qualify for RPS compliance and therefore fail to provide value to all customers. It would therefore be inappropriate for the company's export calculation to incorporate any value for unregistered RECs.

G. The Proposed Closure of the Existing NEM Tariff Provides Adequate Notice and Protections for Customers[45]

PacifiCorp has proposed to close its existing NEM Tariff to new customers as of January 1, 2020 with all interconnections required to be complete by January 1, 2021.[46] Sites operating under the existing NEM Program will be grandfathered under the existing tariff for a twenty (20) year period from the date the existing program ceases operation or until January 1, 2040. This twenty (20) year grandfathering period acknowledges the investments made by customers and the need for reasonable certainty in order to recover the costs associated with these investments.[47] To provide further certainty to customers, the company's proposal is to apply this "grandfathering" to specific sites; this allows the value of a customer generation system to be sold with the property on which it is located.[48]

SEIA agrees that this proposal is reasonable but makes one recommended modification to this grandfathering proposal such that the requirement to be "successfully interconnected" by January 1, 2021 be changed to "mechanically complete" by January 1, 2021 in order to qualify for the existing NEM program.[49] SEIA argues that the customer and solar installer cannot control the date of interconnection and therefore "mechanically complete" is the more appropriate standard. The company disagrees with this proposed change because it creates more uncertainty regarding whether a generation project should be eligible for the existing NEM program. It would be very difficult for the company to determine whether a project is "mechanically complete;" by maintaining a requirement that a project be interconnected there is

[45] The reasonableness of the company's proposed method for closure of its existing NEM tariff is identified as issue 4 in the scoping memorandum.
[46] The reasonableness of the company's proposed rules for legacy status under the existing NEM tariff was identified as issue 6 in the Scoping Memorandum.
[47] PAC/100, Lockey/6.
[48] *Id*.; *see also* PAC/300, Meredith/6.
[49] SEIA Comments at 11.

a very clear requirement and determination. Further, by providing a full year to interconnect a project there is ample time for a customer that submits an application by January 1, 2020 to successfully complete the process.

H. Annual Updates to the Export Credit Rates will Allow Adjustments to Ensure Accuracy

PacifiCorp has proposed to make annual Tier 1 Advice Letter filings to update the export credit rate. These annual updates will allow the company to make appropriate updates as the components of the export credit rate change. SEIA requests that the export rates be approved for five-year terms in order to provide a measure of "foresight and certainty" when investments are considered.[50] The company disagrees that a five-year term is appropriate. The company's proposed Net Billing program already provides for a level of certainty for investors and developers associated with their ability to avoid retail rates for generation consumed on-site. It is also important to consider that annual updates may both increase and decrease the credit over time. An export credit value that is locked-in for five years may actually serve to undermine the benefits enjoyed by customer generators if the value trends upward. The annual updates will ensure that the most accurate and currently available pricing is used. This prevents locking in a value that is otherwise too-low or too-high for multiple years.

PacifiCorp also disagrees that requiring a Tier 3 advice letter would be an efficient method of updating the export credits associate with this program on an annual basis. A Tier 1 advice letter is appropriate for "a change in a rate or charge pursuant to an index or formula that the Commission has approved for use in an advice letter by the Utility submitting the advice letter…"[51] Stakeholders, including SEIA, will be afforded the opportunity to file a protest in

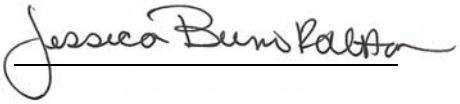
[50] SEIA Comments at 12.
[51] CPUC General Order 96-B, Energy Industry Rule 5.1(3).

response to the Tier 1 advice letter should there be concerns about the updated rate calculation.[52] The lengthy Tier 3 process recommended by SEIA is not justified for a simple rate change. As detailed above, the export credit creates an easy-to-understand framework for providing customers with the benefit of their generation. This straightforward methodology lends itself to an annual Tier 1 advice letter filing where only the values used to calculate the export credit are changed.

IV. Conclusion

PacifiCorp respectfully requests that the Commission approve its Net Billing Application. As detailed above, the company is amenable to the following proposals set forth in TURN's initial comments and asserts that adoption of these proposals does not preclude the Commission from approving the Application: (1) the company will collect data regarding the installation of storage by Net Billing program customers; and (2) the company will provide the data collected regarding installation of storage by Net Billing program participants together with recommendations for modifications to the program, if necessary.

Respectfully submitted,



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[52] CPUC General Order 96-B, § 7.4.

Attachment A

PACIFICORP
State of California
Estimated Simple Payback Period Under Proposed Net Billing Programs

PACIFICORP
State of California
Estimated Simple Payback Period Under Proposed Net Billing Programs

Assumptions					
System Size (kW^{DC})	7	Annual Energy Usage (kWh)[4]	17,150	Storage System Capacity (kWh)[6]	13.5
				Total Potential Exports Avoided	4,928
System Azimuth	180°	Average Rate ($/kWh)[4]	0.1663	Estimated Actual Exports Avoided	3,449
System Degradation Rate[1]	0.5%	System cost ($/$W^{DC}$)[5]	2.75	Exports On-peak	4%
Annual System Generation (kWh)[2]	10,471	Application Fee ($)	75	Exports Off-Peak	96%
Off-peak Generation[3]	93%	System Cost ($)	19,325	System Efficiency Rate	92.5%
On-peak Generation[3]	7%	30% Federal Income Tax Credit ($)	5,798	System Cost ($)	7,600
Off-Peak Credit ($/kWh)[3]	0.03320	Net Cost ($)	13,528	30% Federal Income Tax Credit ($)	2,280
On-Peak Credit ($/kWh)[3]	0.04418			Net Cost ($)	5,320

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
kWh Usage	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150	17,150
kWh Generation	10,471	10,418	10,366	10,314	10,263	10,211	10,160	10,110	10,059	10,009	9,959	9,909	9,859	9,810	9,761	9,712	9,664	9,615	9,567	9,519
Delivered kWh	12,606	12,628	12,651	12,674	12,696	12,718	12,740	12,762	12,784	12,806	12,828	12,850	12,871	12,892	12,914	12,935	12,956	12,977	12,998	13,019
Exported kWh (56.6%)	5,926	5,897	5,867	5,838	5,809	5,780	5,751	5,722	5,693	5,665	5,637	5,608	5,580	5,552	5,525	5,497	5,470	5,442	5,415	5,388
Non-Customer Generator Bill	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05	$ 2,852.05
Proposed NB-136 Bill	$ 1,741.19	$ 1,746.75	$ 1,752.27	$ 1,757.77	$ 1,763.24	$ 1,768.69	$ 1,774.11	$ 1,779.49	$ 1,784.86	$ 1,790.19	$ 1,795.50	$ 1,800.79	$ 1,806.04	$ 1,811.27	$ 1,816.48	$ 1,821.65	$ 1,826.81	$ 1,831.93	$ 1,837.03	$ 1,842.11
Savings from NB-136	$ 1,110.85	$ 1,105.30	$ 1,099.77	$ 1,094.27	$ 1,088.80	$ 1,083.36	$ 1,077.94	$ 1,072.55	$ 1,067.19	$ 1,061.85	$ 1,056.54	$ 1,051.26	$ 1,046.00	$ 1,040.77	$ 1,035.57	$ 1,030.39	$ 1,025.24	$ 1,020.11	$ 1,015.01	$ 1,009.94
Proposed NB-136 Payback	$ (12,416.65)	$ (11,311.35)	$ (10,211.58)	$ (9,117.31)	$ (8,028.51)	$ (6,945.15)	$ (5,867.21)	$ (4,794.66)	$ (3,727.47)	$ (2,665.62)	$ (1,609.08)	$ (557.82)	$ 488.18	$ 1,528.96	$ 2,564.53	$ 3,594.92	$ 4,620.16	$ 5,640.27	$ 6,655.28	$ 7,665.22
Years to Payback	**12.5**																			
Delivered kWh	9,415	9,438	9,461	9,483	9,505	9,528	9,550	9,572	9,594	9,616	9,637	9,659	9,680	9,702	9,723	9,744	9,765	9,786	9,807	9,828
Exported kWh (23.7%)	2,477	2,447	2,418	2,389	2,359	2,330	2,302	2,273	2,244	2,216	2,187	2,159	2,131	2,103	2,075	2,048	2,020	1,993	1,966	1,939
Avoided kWh Exports	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449	3,449
Proposed Bill with Storage	$ 1,482.42	$ 1,487.19	$ 1,491.94	$ 1,496.67	$ 1,501.37	$ 1,506.05	$ 1,510.71	$ 1,515.35	$ 1,519.96	$ 1,524.54	$ 1,529.11	$ 1,533.65	$ 1,538.17	$ 1,542.67	$ 1,547.14	$ 1,551.59	$ 1,556.02	$ 1,560.43	$ 1,564.81	$ 1,569.18
Savings From Storage	$ 1,369.63	$ 1,364.85	$ 1,360.10	$ 1,355.38	$ 1,350.67	$ 1,345.99	$ 1,341.33	$ 1,336.70	$ 1,332.09	$ 1,327.50	$ 1,322.94	$ 1,318.39	$ 1,313.88	$ 1,309.38	$ 1,304.90	$ 1,300.45	$ 1,296.02	$ 1,291.62	$ 1,287.23	$ 1,282.87
Payback	$ (17,477.87)	$ (16,113.02)	$ (14,752.91)	$ (13,397.54)	$ (12,046.87)	$ (10,700.88)	$ (9,359.54)	$ (8,022.84)	$ (6,690.76)	$ (5,363.25)	$ (4,040.32)	$ (2,721.92)	$ (1,408.05)	$ (98.67)	$ 1,206.23	$ 2,506.69	$ 3,802.71	$ 5,094.32	$ 6,381.55	$ 7,664.42
Years to Payback	**14.1**																			

Footnotes

1. Median degradation rate according to Degradation Rates - An Analytical Review published by the National Renewable Energy Labs Photovoltaic (https://www.nrel.gov/docs/fy12osti/51664.pdf)
2. Generation estimated from online National Renewable Energy Labs PVWatts Calculator (https://pvwatts.nrel.gov/)
3. Daniel J. MacNeil's testimony
4. Exhibit PAC 302
5. See Table 5 on Page 16 of Navigant's Private Generation Long-Term Resource Assessment (2019-2038) Prepared for PacifiCorp dated August 15, 2018
6. Storage system specifiactions based on Tesla Powerwall 2 System.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of PacifiCorp (U 901-E), an Oregon company, for Approval of its Proposed Net Billing Tariff to Compensate Eligible Customers.	Application No. 19-04-013

CERTIFICATE OF SERVICE

I hereby certify that I have this day served, the following document in A.19-04-013, **REPLY COMMENTS OF PACIFICORP IN RESPONSE TO OPENING COMMENTS OF THE UTILITY REFORM NETWORK AND THE SOLAR ENGERY INDUSTRIES ASSOCIATION AND IN FURTHER SUPPORT OF ITS APPLICATION FOR APPROVAL OF ITS PROPOSED TARIFF TO COMPENSATE ELIGIBLE DISTRIBUTED GENERATION CUSTOMERS** on all known parties to the attached service list by transmitting an e-mail message with the document attached to each person named in the official service list.

A paper copy is also being provided via FedEx to the following recipient:

ALJ Patrick Doherty
California Public Utilities Commission
Division of Administrative Law Judges
Room 5044
505 Van Ness Avenue
San Francisco, California 94102
Email: pd1@cpuc.ca.gov

(See the attached Service List A.19-04-013)

Executed on October 7, 2019, at Portland, Oregon.

Katie Savarin
Coordinator, Regulatory Operations

CPUC Home

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