

June 23, 2021

## VIA ELECTRONIC FILING

Public Utility Commission of Oregon Attn: Filing Center 201 High Street SE, Suite 100 Salem, OR 97301-3398

RE: UM 1857 – PacifiCorp's Community Resiliency Pilot – Phase 2 Proposal

PacifiCorp d/b/a Pacific Power submits the enclosed Community Resiliency Pilot – Phase 2 Proposal in compliance with Oregon House Bill 2193 and Public Utility Commission of Oregon (Commission) Order Nos. 16-504, 17-118 and 18-327.

In this filing, PacifiCorp requests Commission authorization to transition its Community Resiliency Pilot into Phase II as contemplated in the stipulation filed in docket UM 1857 by PacifiCorp on July 18, 2018 (Stipulation). In that Stipulation, PacifiCorp committed to developing a Community Resiliency Pilot² to provide technical and financial assistance to study and deploy energy storage resources to facilities critical to emergency response or disaster recovery. The Stipulation laid out a phased approach for the Community Resiliency Pilot, beginning with a consultant-led technical assistance concept resulting in a limited number of initial studies (Phase I), followed by financial assistance for the installation of energy storage resources for up to four critical facilities (Phase II). The attached Community Resiliency Pilot – Phase 2 Proposal, in which PacifiCorp seeks Commission authorization to spend an additional \$1.6 million to implement Phase 2, is consistent with the Community Resiliency Pilot concept originally proposed in PacifiCorp's April 2, 2018 filing in docket UM 1857 and the terms of the Stipulation.

PacifiCorp respectfully requests that all communications related to this filing be addressed to:

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Additionally, PacifiCorp requests that all formal information requests regarding this matter be addressed to:

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<sup>1</sup> The stipulation was adopted by the Commission in Order No. 18-327 (September 4, 2018).

<sup>&</sup>lt;sup>2</sup> The Community Resiliency Pilot was originally referred to as "Pilot Project #2" in the stipulation.

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By regular mail: Data Request Response Center

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Informal inquiries may be directed to Cathie Allen, Regulatory Affairs Manager, at (503) 813-5934.

Sincerely,

Shelley McCoy

Director, Regulation

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#### I. Introduction

In this proposal, PacifiCorp seeks Public Utility Commission of Oregon (Commission) authorization to spend \$1.6 million dollars to offer an expanded Community Resiliency Pilot that includes ongoing technical assistance and grant funding opportunities for the installation of battery energy storage systems in facilities critical to community emergency management and disaster response. Authorization of this Community Resiliency Pilot would enable PacifiCorp to build on the work that it has done through the Community Resiliency Pilot, offering technical assistance to critical facility customers since 2019. The following Part II provides some background on PacifiCorp's proposed Community Resiliency Pilot; Part III lays out the specific elements of the proposal, budget breakdown, benefits, and proposed cost recovery approach.

#### II. Background

PacifiCorp's proposed Community Resiliency Pilot originates from a statutory directive in HB 2913 (2015) that required Oregon's large investor-owned utilities to submit "one or more proposals to the [Commission] for developing a project that includes one or more energy storage systems" by January 1, 2018. The Commission opened docket number UM 1751 on September 10, 2015 and subsequently adopted guidelines<sup>1</sup> to inform the utilities' development of proposed energy storage projects and programs under the statutory requirements of HB 2913.

In accordance with the Commission's guidelines, PacifiCorp proposed two energy storage projects on December 29, 2017, and subsequently refined those proposed projects in an April 2, 2018 filing.<sup>2</sup> This Community Resiliency Pilot that PacifiCorp is proposing here represents the evolution of the project identified in those filings as "Project #2 – Community Resiliency Pilot Project." Under its original Community Resiliency Pilot proposal, PacifiCorp sought authorization from the Commission to spend up to \$1.8 million to fund technical assistance and project development funding for critical facilities to install energy storage resources for community resiliency purposes. On July 18, 2018, PacifiCorp, Staff, and CUB filed a stipulation requesting, among other things, Commission authorization for PacifiCorp to recover up to \$200,000 to fund a limited number of initial studies (Phase I of the Community Resiliency Pilot). As part of that stipulation, after completing Phase I, PacifiCorp agreed to file a final Phase I report and a revised plan estimating the costs and identifying the anticipated benefits of expanding the Community Resiliency Pilot into Phase II.

On December 18, 2020, PacifiCorp filed its final Phase I report for the Community Resiliency Pilot. That report contained several notable learnings:

<sup>&</sup>lt;sup>1</sup> See Docket No. UM 1751, Order 16-504 (December 28, 2016).

<sup>&</sup>lt;sup>2</sup> On July 15, 2017, the Commission created Docket No. UM 1857 to serve as the vehicle for considering PacifiCorp's draft storage evaluation and project proposals. These project proposals were filed in Docket No. UM 1857.



- 1) Battery energy storage can reduce critical facility dependency on fuel deliveries and infrastructure corridors that provide relief services during disaster events, contributing to a more resilient back-up system than a standard back-up generator alone may provide.
- 2) There are limited funding opportunities to develop battery energy storage resources, and current rates do not incentivize energy storage. In the absence of an economic case to support battery energy storage adoption, the Pilot suffered lower-than-expected participation and follow-through from initial conversations with many potential program participants.
- 3) Commercial facilities' adoption rates of battery energy storage systems in Oregon remain low, in part because the economics of battery energy storage are not competitive with the alternative fossil fuel back-up power options. Appropriately designed policy mechanisms—including incentives, grant funding programs, and beneficial tariff design—can encourage battery energy storage adoption and promote widespread resiliency benefits throughout Oregon.
- 4) As adoption of commercial-scale battery energy storage resources increases, Pacific Power will need to develop its capabilities to effectively manage battery energy storage resources in order to harness the associated grid services benefits for its ratepayers.

On the basis of those learnings, PacifiCorp believes that an expanded community resiliency offering has the potential to offer an array of benefits to its critical facility customers and the communities they serve, its ratepayers, and the Oregon battery energy storage industry. The following section lays out PacifiCorp's proposal to transition into Phase II of the community resiliency concept, developing and implementing the Community Resiliency Pilot.<sup>3</sup>

# III. Community Resiliency Pilot proposal

PacifiCorp proposes to develop and implement an expanded Community Resiliency Pilot that includes ongoing technical assistance and grant funding opportunities for the installation of battery energy storage systems in facilities critical to community emergency management and disaster response.

PacifiCorp intends to launch Community Resiliency Pilot upon Commission authorization by extending the availability of technical assistance to critical facilities<sup>4</sup> and beginning development of the project development grant offering. PacifiCorp proposes to run the Community Resiliency through early 2023,<sup>5</sup> after which PacifiCorp proposes to reevaluate the continued utility of the Pilot and refile for Commission authorization if needed.<sup>6</sup>

<sup>&</sup>lt;sup>3</sup> This proposal hereafter refers to the Community Resiliency Program rather than Phase II of the Community Resiliency Pilot. PacifiCorp intends this name change to reflect the evolution of the Pilot of limited scope into a Program with potential ongoing benefits to its customers and communities.

<sup>&</sup>lt;sup>4</sup> Currently offered under the Community Resiliency Pilot.

<sup>&</sup>lt;sup>5</sup> Corresponding to the notification of 2022 grant award recipients.

<sup>&</sup>lt;sup>6</sup> PacifiCorp has intentionally framed this proposal as a Program based on its understanding that a program operates on a more ongoing basis than a pilot. PacifiCorp's expectation is that it will evaluate whether to seek Commission authorization to fund continued operation of the proposed Community Resiliency Program at the end of the initial proposed two year term of the Program.



This Part III includes an overview of the proposed Pilot, including program logistics and timelines in Section A, followed by a breakdown of the proposed Pilot budget in Section B, before laying out the customer, ratepayer and storage industry benefits of the Community Resiliency Pilot in Section C. PacifiCorp's proposed cost recovery approach is addressed in Section D.

# A. Community Resiliency Pilot overview

The following subsections include a discussion of the program administration required to implement the proposed Pilot (in Subsection 1), followed by a description of the two proposed Community Resiliency Pilot offerings—technical assistance (Subsection 2) and project development grant funding (Subsection 3). Subsection 3 describes PacifiCorp's evaluation plan as it relates to the Pilot. Subsection 4 includes a proposal to revise the definition of the term "critical facility" to expand the types of facilities eligible for these Pilot offerings.

#### 1. Administration

PacifiCorp intends to leverage its existing contractual relationship with a third-party consultant, TRC, as well as the processes PacifiCorp and TRC established during the Community Resiliency Pilot to quickly develop and launch the proposed Community Resiliency Pilot. PacifiCorp identified TRC through a competitive solicitation and entered into a contract with it prior to the launch of the Community Resiliency Pilot in 2019. Since then, TRC has provided both technical and program support to PacifiCorp to operate the Pilot. Anticipating the potential expansion of its community resiliency offerings, PacifiCorp drafted its contract terms to permit the parties to extend TRC's technical assistance work through the proposed lifetime of the Community Resiliency Pilot, and to expand TRC's scope of work to include grant evaluation and additional program support functions.

## 2. Technical assistance

Under the proposed Community Resiliency Pilot, PacifiCorp will continue to make technical assistance available on a first come, first served basis at no cost to eligible critical facility customers. In addition to meeting the expanded definition of "critical facility" proposed below, a prospective site will be required to pass through a preliminary screening process to ensure, among other things, that the facility is a suitable host for the necessary battery energy storage and associated equipment.

From the perspective of the critical facility customer, the technical assistance process will be free, but will require approximately four to five hours of time from facility representatives over the course of two months. The process will involve: 1) filling out an interest form; 2) a preliminary call to introduce the Pilot, process and team; 3) responding to a pre-site visit information checklist; 4) a "virtual" site visit that requires someone with access and familiarity to lead the facility walkthrough; 5) receipt and review of the site evaluation report; and 6) a call to debrief on the results of that report.

The product of PacifiCorp's technical assistance will be a site-specific report that details the costs, benefits and technical requirements to install and integrate a battery energy storage system at the facility. The information contained in the report will be aligned with the information requested in the project development grant application.



As of March 2021, PacifiCorp is continuing to provide technical assistance to critical facilities under its original Community Resiliency Pilot budget. Commission authorization of this Pilot will permit PacifiCorp to continue providing technical assistance uninterrupted. PacifiCorp's proposed Community Resiliency Pilot would include the availability of technical assistance on an ongoing basis through the end of the second grant application window in October 2022.

## 3. Project development grant funding

PacifiCorp proposes to make project development grant funding available to eligible critical facilities through two grant application windows. A facility will not be required to have received technical assistance through PacifiCorp to apply for a project development grant. Applicants will be able to request grants in an amount up to 100% of eligible project expenses, although applicants that bring other funding sources may receive higher scores in the evaluation process, as described below. Grant awards will be conditioned on grant recipients permitting PacifiCorp to actively manage a portion of the battery energy storage system during normal system operations.

PacifiCorp anticipates that interest in project development grant funding will exceed the available budget, which will result in a competitive grant evaluation process. PacifiCorp will work with TRC to develop evaluation criteria for inclusion in a grant evaluation manual, which will guide grant award recommendations and decisions. The evaluation criteria will award priority to projects with the greatest likelihood of successful development, <sup>7</sup> projects that leverage additional available funding sources, <sup>8</sup> geographically diverse projects, projects that represent diverse categories of critical facilities, and other qualitative factors.

PacifiCorp proposes to make grant funding under the Community Resiliency Pilot available through two application windows. Under PacifiCorp's proposed timeline, the first grant window would be open from August 2021 through October 2021, and the second grant window would open August 2022 and run through October 2022. PacifiCorp would evaluate grant applications and notify grant award recipients by the end of February in the year following the closure of the grant application window. Under this proposed timeline, PacifiCorp would know the amount of remaining funding available under the Community Resiliency Pilot budget when evaluating 2022 grant applications. Assuming sufficient customer interest, this would enable PacifiCorp to make grant award decisions that efficiently deploy the entirety of Pilot funds.

#### 4. Evaluation plan

PacifiCorp developed the Community Resiliency Pilot evaluation plan to identify key learnings and indicators of success throughout the life of the Pilot, and to enable PacifiCorp to adapt its

<sup>7</sup> Likelihood of successful development will be evaluated based on factors that include whether the application includes well-defined technical specifications, clear timelines, and demonstrates strong engagement on the customer's behalf.

<sup>&</sup>lt;sup>8</sup> PacifiCorp's evaluation with consider whether other grant funding sources are or may be available to the applicant. If so, applicants that leverage those funding sources will receive priority in the grant evaluation scoring.

<sup>&</sup>lt;sup>9</sup> Depending on the timing of the Commission's authorization of PacifiCorp's Community Resiliency Program proposal.



implementation in response to those lessons. At the conclusion of the Pilot, if deemed successful and meaningful to continue, PacifiCorp may propose to scale the Pilot into a longer-term program offering.

The goal of the Community Resiliency Pilot is to provide back-up power services to critical facilities throughout Oregon. The Pilot will uncover the benefits that accrue to ratepayers, critical facilities and battery storage vendors when critical facilities install battery energy storage systems for resiliency purposes. PacifiCorp has established the following research objectives:

- 1. Ensure reduced disruption and outage minutes for critical facilities during outage events,
- 2. Develop a concrete understanding of the value of grid services that accrue to rate payers, and
- 3. Increase the number of behind-the-meter battery storage projects in Oregon.

The Pilot will create opportunities for critical facilities to receive technical assistance and capital funding to implement battery projects. PacifiCorp will establish a formal EM&V framework prior to Pilot launch to ensure that baseline information is captured ahead of time, and that the correct data points will be gathered post pilot completion. Upon receiving approval to implement the Pilot, PacifiCorp will develop the formal EM&V plan for the Pilot.

PacifiCorp proposes to use of an impact evaluation that will include process questions. Preliminary information will be gathered from the Pilot after one year, and a comprehensive impact evaluation will be completed upon Pilot end. The one-year evaluation will provide data to allow for midcourse corrections. An evaluation of the grid services benefits associated with the Pilot will require 12-months of data following the installation of the battery energy storage systems.

#### The one-year evaluation will include:

- Responses to process questions regarding program participation, customer satisfaction, process improvements, etc.
- Market awareness of the Pilot

#### The final impact evaluation will include:

- A summary of Pilot findings and recommendations
- An analysis of Pilot impact
- An investigation into the achievement of research objectives
- A benchmark of Pilot performance against other relevant programs

PacifiCorp will seek answers to the following questions in developing its final impact evaluation:

- How might PacifiCorp appropriately design incentives and tariffs to encourage storage adoption and compensate owners for system benefits provided?
- How can PacifiCorp effectively manage battery storage resources to capture grid services benefits?
- How should PacifiCorp include storage in distributed energy resource planning processes in light of the Pilot's success and failure?
- How should PacifiCorp value intra-hour battery energy storage in its planning processes?
- How can PacifiCorp encourage greater participation with customers?
- How does the Pilot support battery vendor participation in the Oregon market?



- How did the Pilot ensure resiliency of critical facilities during outage events?
- What challenges appeared for customers when working through the installation process of batteries?

## 5. Critical facility eligibility

PacifiCorp proposes to expand eligibility for the Community Resiliency Pilot from the Federal Emergency Management Agency's (FEMA) definition of "critical facility" <sup>10</sup> used in the Community Resiliency Pilot to include the critical facilities identified in California's definition of "Non-Residential Customers with Critical Resiliency Needs". <sup>11</sup> That definition encompasses:

Police stations; fire stations; emergency response providers... emergency operations centers; 911 call centers, also referred to as Public Safety Answering Points; medical facilities including hospitals, skilled nursing facilities, nursing homes, blood banks, health care facilities, dialysis centers and hospice facilities; public and private gas, electric, water, wastewater or flood control facilities; jails and prisons; locations designated by the IOUs to provide assistance during PSPS events; cooling centers designated by state or local governments; and, homeless shelters supported by federal, state, or local governments; grocery stores, corner stores, markets and supermarkets that have average annual gross receipts of \$15 million or less as calculated at a single location, over the last three tax years; independent living centers; and, food banks.<sup>12</sup>

PacifiCorp believes that this broader definition will better account for the needs of its communities, especially the smaller and more rural areas that may not host any facilities meeting the narrower FEMA concept of critical facility. In particular, this expanded definition will allow PacifiCorp to evaluate and offer grants to sites like small grocery stores, corner stores, and markets that may serve as de facto community gathering places in the event of a disaster, in addition to permitting PacifiCorp to consider a

A critical facility provides services and functions essential to a community, especially during and after a disaster. Examples of critical facilities requiring special consideration include:

FEMA Fact Sheet, Critical Facilities and Higher Standards at 1.

<sup>&</sup>lt;sup>10</sup> PacifiCorp used the following FEMA definition in the Community Resiliency Pilot:

Police stations, fire stations, critical vehicle and equipment storage facilities, and emergency
operations centers needed for flood response activities before, during, and after a flood

Medical facilities, including hospitals, nursing homes, blood banks, and health care facilities (including those storing vital medical records) likely to have occupants who may not be sufficiently mobile to avoid injury or death during a flood

Schools and day care centers, especially if designated as shelters or evacuation centers (see Figure 1 for an example of an elevated school)

Power generating stations and other public and private utility facilities vital to maintaining or restoring normal services to flooded areas before, during, and after a flood

<sup>•</sup> Drinking water and wastewater treatment plants

<sup>•</sup> Structures or facilities that produce, use, or store highly volatile, flammable, explosive, toxic, and/or water-reactive materials

<sup>&</sup>lt;sup>11</sup> California Public Utilities Commission, D. 20-01-021 (January 27, 2020) at 48.

<sup>&</sup>lt;sup>12</sup> *Id*.



broader array of facilities serving vulnerable community members, such as nursing homes, hospice facilities, independent living centers and homeless shelters.

## B. Community Resiliency Pilot budget breakdown

PacifiCorp is seeking Commission authorization to spend an additional \$1.6 million to fund the Community Resiliency Pilot, which would include four separate cost categories: 1) ongoing technical assistance, 2) project development grant funding, 3) administrative costs, and 4) evaluation costs.

PacifiCorp proposes to cap the administrative costs at 10% of the Pilot budget, or \$160,000, but to otherwise allow customer interest to drive the budget allocations among the technical assistance and project development grant funding cost categories. The Pilot evaluation costs are anticipated to be around 5% of the overall budget. The Pilot budget breakdown is as follows.

Community Resiliency Pilot Budget Breakdown				
Cost Category	Anticipated Cost/Unit	Total Units	Total Budget	
Technical Assistance	\$15,000/report	4 – 10 reports	\$60,000 - \$150,000	
Project Development Grant Funding	\$275,000/grant award	+/- 5 grant awards	\$1,210,000 - \$1,300,00	
Administrative Costs	-	-	\$160,000	
Evaluation Costs	-	-	\$80,000	
Total	-	-	\$1,600,000	

The following subsections discuss in more detail the cost streams associated with each cost category: technical assistance (Subsection 1); project development grant funding (Subsection 2); and administrative costs (Subsection 3).

#### 1. Technical assistance

Cost Category	Anticipated Cost/Unit	Total Units	Total Budget
Technical Assistance	\$15,000/report	4 - 10 reports	\$60,000 - \$150,000

As part of the original Community Resiliency Pilot, PacifiCorp's third-party consultant, TRC, has performed technical assistance and prepared site-specific reports for participating critical facility customers. During that time, PacifiCorp and TRC streamlined the technical assistance processes and refined the information presented in the site-specific reports. Based on this experience, PacifiCorp expects technical assistance and the production of each site-specific report to cost approximately \$15,000 per site in the Community Resiliency Pilot. The number of reports produced will depend on customer interest; however, PacifiCorp expects to fund 4-10 reports over the life of the Pilot. In order to ensure that adequate funding is available to the project development grant funding cost category, PacifiCorp will limit technical assistance to 10 sites over the two years of the Pilot.



# 2. Project development grant funding

Cost Category	Anticipated Cost/Unit	Total Units	Total Budget
Project Development Grant	\$275,000/grant	+/- 5 grant awards	\$1,210,000 - \$1,300,000
Funding	award		

PacifiCorp proposes to dedicate any Community Resiliency Pilot funding unspent in the technical assistance or administrative cost categories to project development grant funding. The overall budget available for project development grant funding will likely be around \$1.3 million, depending on customer interest in the technical assistance offering and actual administrative costs. Based on the results of the technical assistance that PacifiCorp provided in the Community Resiliency Pilot, the average grant award will likely to be around \$275,000,<sup>13</sup> depending on system size and a facility's ability to leverage other funding sources. PacifiCorp expects sufficient funding to award grants for around 5 projects in a competitive grant evaluation process.

#### 3. Administrative costs

Cost Category	Anticipated Cost/Unit	Total Units	Total Budget
Administrative Costs	-	-	\$160,000

PacifiCorp proposes to limit administrative costs to 10% of program costs, or \$160,000. Internal PacifiCorp administrative expenses will include program support by incremental employees. Program support responsibilities include serving as PacifiCorp's point-of-contact for internal and external stakeholders for the Community Resiliency Pilot, in addition to managing the contract and relationship with the third-party consultant for the Pilot. External administrative expenses will include third-party support for marketing, outreach and grant evaluation services.

# 4. Evaluation costs

Cost Category	Anticipated Cost/Unit	Total Units	Total Budget
Evaluation costs	-	-	\$80,000

PacifiCorp estimates that the evaluation costs of the Pilot will be approximately 5% of the overall program budget, or \$80,000. This estimate includes the costs of hiring a consultant to conduct the research and polling necessary to perform a robust evaluation of the Pilot.

<sup>&</sup>lt;sup>13</sup> Battery energy storage system sizes identified in the final Phase I report ranged from 20 kW/175 kWh to 100 kW/500 kWh. This estimate of the average grant award was developed using the California Self-Generation Incentive Program "Non-Residential Storage Equity" incentive rate of \$0.85/Wh. https://wwwelfgenca.com/home/program\_metrics/.



# C. Community Resiliency Pilot benefits

PacifiCorp's proposed Community Resiliency Pilot will offer an array of monetary and non-monetary benefits to its critical facility customers, communities, PacifiCorp ratepayers, and the battery energy storage industry. These benefits are discussed in Subsections 1-3 respectively.

# 1. Critical facility customer and community benefits

The most visible benefits of the proposed Community Resiliency Pilot will accrue to the critical facility and community it serves. A battery energy storage system integrated into a critical facility's existing building systems has the potential to reduce the likelihood that that facility experiences an electricity outage in the event of a disruption to its utility power supply. Even in the case of a facility with existing fossil-fuel based backup generation, battery energy storage can reduce critical facility dependency on fuel deliveries and infrastructure corridors that provide relief services during disaster events, contributing to a more resilient back-up system than a standard back-up generator alone may provide. The value of this enhanced resiliency to a critical facility can be quantified using the FEMA cost benefit analysis tool, which assigns values to avoided property loss, mortality and injury depending on the type of facility being evaluated.<sup>14</sup>

## 2. Ratepayer benefits

The proposed Community Resiliency Pilot will also offer meaningful benefits to PacifiCorp ratepayers, including grid services benefits and opportunities for PacifiCorp to advance its understanding of the integration and management of distributed energy storage resources. In the Phase I report, PacifiCorp and TRC estimated up to \$20 million in grid services benefits that would accrue with the installation of approximately 22 MW worth of battery energy storage through 2030.<sup>15</sup> In addition, the proposed Community Resiliency Pilot will present an opportunity for PacifiCorp to test the benefits and limitations of the virtual power plant model, by making several commercial-scale, Community Resiliency Pilot-funded battery energy storage systems available for management by PacifiCorp system operators. PacifiCorp has gained significant experience leveraging residential storage facilities in a coordinated fashion for grid benefit through the Soleil project in Utah. However, at this point there are no commercial systems participating in the Soleil project. Systems funded through this program will provide PacifiCorp with the opportunity to build on its experience integrating and managing residential storage and test the differences between residential and commercial storage facilities. PacifiCorp will specifically seek to answer the following questions:

• What challenges are encountered interconnecting commercial scale storage control systems into the existing distributed battery grid management system?

<sup>&</sup>lt;sup>14</sup> For example, the value of installing a battery energy storage system at fire station is about \$0.25 per community member in avoided property loss, and \$0.75-\$0.85 per community member in avoided mortality and injury. *See* Docket No. UM 1857, *PacifiCorp's Final Phase I Report on Community Resiliency Pilot* (December 18, 2020) at 33-35.

<sup>&</sup>lt;sup>15</sup> For a full discussion on valuing grid services benefits, please see PacifiCorp's Final Phase I Report on the Community Resiliency Pilot. Docket No. UM 1857, *PacifiCorp's Final Phase I Report on Community Resiliency Pilot* (December 18, 2020) at 33-35.



- How do commercial load shapes alter the available capacity for utility dispatch of a storage facility as compared to residential systems?
- How do commercial rate structures that include demand charges impact the dispatch flexibility?
- Do net billing rate structures with differentiated rates for exported power limit the available capacity from commercial storage facilities?

These lessons will accelerate PacifiCorp's development of processes and policies to support distributed storage.

## 3. Battery energy storage industry benefits

Finally, the proposed Community Resiliency Pilot will be a useful first step in a layered approach to promoting distributed battery energy storage. As part of the Community Resiliency Pilot, TRC conducted vendor interviews with battery energy storage installers operating (or with aspirations of operating) in Oregon. The conclusions from those interviews included revelations that Oregon lacks the incentive structure, tailored rate design, and targeted policies to enable the success of the battery energy storage industry. While incentive programs, rate design, and policies will be important for the success of the industry in the future, they will take some time to develop. PacifiCorp is in a position to launch the Pilot immediately following Commission authorization, making the proposed Community Resiliency Pilot a concrete step that PacifiCorp can take right now. The Pilot's project development grant funding will encourage early adoption of battery energy storage technologies, the first step towards bolstering the nascent battery energy storage industry in Oregon, and will allow PacifiCorp to work through any growing pains of learning how to integrate these systems. As well as injecting money into the industry in the form of grant funding, the proposed Community Resiliency Pilot will signal the emergence of Oregon as a market for the battery energy storage industry in the future.

#### D. Recovery

Following Commission approval of this proposed Community Resiliency Pilot, PacifiCorp intends to seek Commission authorization to defer the actual costs associated with the of Community Resiliency Pilot, up to the identified budget limit of \$1.6 million. PacifiCorp will continue to evaluate the appropriate mechanism through which to recover those costs and seek Commission approval of its eventual proposed approach.

#### IV. Conclusion

PacifiCorp appreciates the opportunity to present this Community Resiliency Pilot concept to the Commission and looks forward to continuing to discuss how best to support the evolving needs of its customers and communities.