

PacifiCorp - Stakeholder Feedback Form

2017 Integrated Resource Plan

PacifiCorp (the Company) requests that stakeholders provide feedback to the Company upon the conclusion of each public input meeting and/or stakeholder conference calls, as scheduled. PacifiCorp values the input of its active and engaged stakeholder group, and stakeholder feedback is critical to the IRP public input process. PacifiCorp requests that stakeholders provide comments using this form, which will allow the Company to more easily review and summarize comments by topic and to readily identify specific recommendations, if any, being provided. Information collected will be used to better inform issues included in the 2017 IRP, including, but not limited to the process, assumptions, and analysis. In providing your feedback, PacifiCorp requests that the stakeholders identify whether they are okay with the Company posting their comments on the IRP website.

Yes No May we post these comments to the IRP webpage? Date of Submittal 8/19/2016

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*Organization: Utah Clean Energy

Address: 1014 2nd Avenue

City: Salt Lake City State: UT Zip: 84103

Public Meeting Date comments address: [Click here to enter date.](#) Check here if not related to specific meeting

List additional organization attendees at cited meeting: [Click here to enter text.](#)

***IRP Topic(s) and/or Agenda Items:** List the specific topics that are being addressed in your comments.

Utah Clean Energy requests that the IRP include modelling of distributed storage resources with the cost of the resource based upon a review of storage incentive programs across the country. Utah Clean Energy will be happy to assist in the development of the cost assumptions for distributed battery storage.

Check here if any of the following information being submitted is copyrighted or confidential.

***Respondent Comment:** Please provide your feedback for each IRP topic listed above.

Utah Clean Energy requests that the IRP include modelling of distributed storage resources with the cost of the resource based upon a review of storage incentive programs across the country. Utah Clean Energy will be happy to assist in the development of the cost assumptions for distributed battery storage.

As the Battery storage technology advances we suggest PacifiCorp review and update their Energy Storage modelling assumptions. We request that both utility-scale storage and distributed storage are modelled in the 2017 IRP. The 2015 IRP only modelled utility scale energy storage, in the form of large batteries, pumped hydro and compressed air systems. Now with the declining cost of battery storage and new utility programs with incentives for storage, we recommend that the 2017 IRP include modelling of distributed energy storage on the customer side of the meter. Several utilities across the country provide incentives for customer-sited battery storage. For example Vermont, New York and California have established programs that offer customers incentives for battery storage.

Please see below for description of three storage incentive programs.

In Vermont, Green Mountain Power (GMP) has developed a specialized pilot program with Tesla Powerwall batteries for its customers. The program includes incentives for installation of batteries and bi-directional inverters along with providing GMP access such the utility can discharge batteries for demand response. Customers need to pay \$6,501 to participate in the program, where the cost includes the cost of Tesla Powerwall, bi-directional inverter, sales tax GMP

* Required fields

costs. For customers who participate in GMP access program, GMP will discharge batteries during times of high market prices to help lower its energy costs and times of peak load to help reduce significant capacity and transmission expenses, along with offering a monthly bill credit of \$31.76 to the customers for participation. Customers also have an option of participating in the program without GMP access in which case they won't receive a bill credit.

Further program information can be found here:

http://www.greenmountainpower.com/upload/photos/426Hudson_12.02.2015_-_Tesla_Pilot_Filing.pdf

In New York, NYSEDA and Con-Edison are helping customers manage their energy usage and save money. Building owners and managers are eligible for enhanced incentives based on demand reduction for energy efficiency and demand management projects completed prior to June 1, 2016. The qualifying measures for demand management incentives include battery storage and the existing incentives on battery storage have been increased from \$600/kW to \$2,100/kW.

Further program information can be found here:

http://www.coned.com/energyefficiency/demand_management_incentives.asp

In California, the California Public Utility Commission has established a Self-Generation Incentive Program (SGIP) to provide incentives for new and existing distributed energy resources. Advanced energy storage installed on the customer's side of the utility meter qualifies for rebates under this program. The incentive for advanced energy storage stands at \$1.31/W. The SGIP program is overseen by the California Public Utilities Commission and is available to retail electric and gas customers under California's four investor-owned utilities - Pacific Gas & Electric; Southern California Edison; Southern California Gas; and San Diego Gas & Electric.

Further program information can be found here:

1. https://www.pge.com/en_US/business/solar-and-vehicles/your-options/solar-programs/self-generation-incentive-program/self-generation-incentive-program.page?WT.mc_id=Vanity_sgip

2. https://www.sce.com/wps/portal/home/business/generating-your-own-power/incentive-program!/ut/p/b1/hc_NjolwFAXgZ5kFy6EHMljuiiG1SGz8yYjdGDBYSZAaRilvb8e40Yzj3Z2b7yT3EkISluvsUqqsLXWdVb9Z-hsnYHTMF-Ai5D54OKIjIWkgBwPWBuDNuHzqr4h8JkE4CAyZJJGTulwvxvAI277vg8U-UiNBx0XMfYMAQjWNhwHLMgXszTBeUeoD_AP8cGROpKp3fH17TOvcCRWRT7lqmaOxzY9b7tj2ehhYsdf1nK61VVdhbfbdwV2WvTy1JnyU5HIKU_Fvm1-7rBkntmow!/dl4/d5/L2dBISEvZ0FBIS9nQSEh/?from=sgip

Data Support: If applicable, provide any documents, hyper-links, etc. in support of comments. (i.e. gas forecast is too high - this forecast from EIA is more appropriate). If electronic attachments are provided with your comments, please list those attachment names here.

See above.

Recommendations: Provide any additional recommendations if not included above - specificity is greatly appreciated.

We recommend PacifiCorp review and revise the modelling assumptions for Energy Storage to include both utility scale and distributed scale storage. We recommend that the cost for distributed storage be comparable to existing utility storage incentive programs. At a minimum the company should run sensitivity analysis on distributed battery storage.

Thank you for participating.