

PacifiCorp - Stakeholder Feedback Form

2021 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 2021 IRP, including, but not limited to the process, assumptions, and analysis. In order to maintain open communication and provide the broader Stakeholder community with useful information, the Company will generally post all appropriate feedback on the IRP website unless you request otherwise, below.

Date of Submittal 2/14/2020

*Name: Kevin Emerson

Title: Energy Efficiency Program Director

*E-mail: kevin@utahcleanenergy.org

Phone: 801-363-4046

*Organization: Utah Clean Energy

Address: 1014 2nd Ave

City: Salt Lake City

State: Utah

Zip: 84103

Public Meeting Date comments address: 2/18/2020

Check here if not related to specific meeting

List additional organization attendees at cited meeting:

Southwest Energy Efficiency Project

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

2021 IRP Conversation Potential Assessment measure list

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

Check here if you do **not** want your Stakeholder feedback and accompanying materials posted to the IRP website.

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

Emerging Technology Question:

In the CPA, how are DSM measures listed as “emerging” treated differently from standard (non-emerging) DSM measures? Does the CPA assume different levels of costs, technical potential, etc. as for emerging measures as compared to standard DSM measures? In addition, what assumptions are made about cost reductions and technological breakthroughs around emerging technologies. Over the twenty year modeling period one would expect emerging technologies to move towards commercialization.

PacifiCorp Response:

The current Conservation Potential Assessment (CPA) methodology does not inherently treat emerging technology differently than a mature measure or an emerging technology that has become a mature measure. In some cases, participation may ramp up faster as the measure matures through utility programs and/or changes in measure costs over time. Measure costs are considered only when a well-vetted source can be referenced (e.g., the Department of Energy’s Solid-State Lighting Projections which forecast increased light emitting diode efficiency and decreased cost throughout the study period).

However, based on stakeholder feedback (e.g., Utah Clean Energy and Southwest Energy Efficiency Project), PacifiCorp is considering an updated approach to emerging technology. If feasible, PacifiCorp will explore the possibility of modeling declining cost within the 2021 Integrated Resource Plan for emerging technologies.

* Required fields

Emerging Technology Feedback and Recommendations:

In the DSM measure lists, AEG defines “emerging technology” as equipment and measures that are “...in the pilot stage with expected near-term commercialization...” or equipment and measures that are “...commercially available but with low market penetration”. We have concerns about grouping these two different categories of measures under one definition. DSM program strategies to deploy measures that are commercially available differ fundamentally from DSM program strategies to help measures that are not commercially available and require additional pilot testing and R&D.

UCE and SWEEP believe that measures that are commercially available and are cost-effective should not be considered “emerging” in the same category as measures that are not yet commercially available. We are concerned that including commercially available measures in the “emerging” list has the potential to omit measures from thorough DSM analysis just because the measures have (or are assumed to have) low market penetration. Arguably, DSM measures with low market penetration should receive additional evaluation to help such measures become more widespread. **UCE and SWEEP recommend excluding measures from the “emerging technologies” measure category that are commercially available, even if they have low market penetration. These measures should be considered with all other commercially available measures.**

PacifiCorp Response:

PacifiCorp will update the definition of emerging technology and its treatment in the 2021 CPA. Please see the response to the preceding question for more details.

Residential Measure List:

We believe that at least two residential measures, “ENERGY STAR Home Design” and “Advanced New Construction Design - Zero Net Energy”, which are included in the emerging technology list are proven practices and shouldn’t be considered “emerging”. Instead, UCE and SWEEP recommend that these two measures be included in the standard DSM measure list.

PacifiCorp Response:

PacifiCorp will remove the “emerging” distinction from these measures in the final list.

Please provide further details about the “Water Heating – Solar System” measure listed as “emerging” in the Res – Meas tab. For example, does this measure include on-site/rooftop solar PV paired with a heat pump water heater? Are there any other technologies that are involved in this type of combined measure?

PacifiCorp Response:

This measure refers to the installation of a solar thermal system and not solar photovoltaic. Since this is a mature technology in other parts of the country, PacifiCorp will remove the “emerging” distinction from this measure in the final list.

Do the Air-Source Heat Pump measures include models that operate in cold climates?

PacifiCorp Response:

Yes, PacifiCorp will clarify this in the final measure list of the 2021 CPA.

Non-Residential Measure List:

The ET Tables tab in the Non-Residential measure list includes “Strategic Energy Management” in its list of “emerging” technologies, whereas in the COM-Meas tab SEM is not listed as emerging. **UCE and SWEEP recommend removing the Strategic Energy Management (SEM) measure from the ET Tables tab as an emerging measure. UCE doesn’t consider SEM to be an emerging technology as this program has been in place for multiple years and is a proven DSM strategy.**

PacifiCorp Response:

PacifiCorp will remove the “emerging” distinction from these measures in the final list.

While the Non-Residential Measure list includes an “Advanced New Construction Designs” measure, it doesn’t specify the level of energy performance, like the two residential measures do (i.e., “ENERGY STAR Home Design” and “Advanced New Construction Design - Zero Net Energy”). More specifically, it doesn’t specify that this is a “net zero

energy” measure. We believe this is a major oversight. UCE and SWEEP recommend updating the Non-Residential Advanced New Construction Designs measure as a specific Net Zero Energy measure given that net zero energy buildings are attainable for most building types in the residential and non-residential sectors.

PacifiCorp Response:

PacifiCorp will add the “Zero Net Energy” suffix to the nonresidential version of this measure in the final list.

Residential and Non-Residential Air Infiltration, Building Shell, and Insulation Measures:

In the measure list there are no details about what type of heating systems are assumed for the following measures: air infiltration, building shell, ducting measures, insulation, and windows measures in both the residential and non-residential measure lists. Given the growing interest in efficient all-electric buildings, **UCE and SWEEP recommend that measures related to building envelope, insulation, and air infiltration should include the measures installed in all-electric buildings in addition to the same measures installed in standard buildings that use natural gas for space heating.**

PacifiCorp Response:

PacifiCorp will consider creating two separate measures for building envelope, insulation and air filtration.