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Portland, Oregon 97232

August 11, 2017

***VIA ELECTRONIC FILING
AND OVERNIGHT DELIVERY***

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

Attn: Filing Center

RE: UM 1810—Stipulation and Joint Testimony

PacifiCorp d/b/a Pacific Power (PacifiCorp) encloses for filing in this docket the following documents:

- The Stipulation between PacifiCorp, Staff of the Public Utility Commission of Oregon, the Oregon Citizens' Utility Board, the Industrial Customers of Northwest Utilities, Forth, Greenlots and the Oregon Department of Energy; and,
- Joint Testimony in Support of the Stipulation.

If you have questions about this filing, please contact Natasha Siores, Manager, Regulatory Affairs, at (503) 813-6583.

Sincerely,

A handwritten signature in black ink, appearing to read "Etta Lockey", with a long, sweeping underline.

Etta Lockey
Vice President, Regulation

Enclosures

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1810

In the Matter of

PACIFICORP d/b/a PACIFIC POWER

Applications for Transportation Electrification
Programs

STIPULATION

1

INTRODUCTION

2

PacifiCorp d/b/a PacifiCorp (PacifiCorp or Company), Staff of the Public Utility Commission of Oregon (Staff), and the Oregon Citizens' Utility Board (CUB), Industrial Customers of Northwest Utilities (ICNU), the Oregon Department of Energy (ODOE), Forth, and Greenlots (collectively the Stipulating Parties) enter into this Stipulation to resolve all issues in docket UM 1810, PacifiCorp's 2017 Transportation Electrification Plan.¹

7

BACKGROUND

8

In accordance with Senate Bill (SB) 1547, PacifiCorp filed its initial transportation electrification applications on December 27, 2016, proposing three pilot programs anticipated to accelerate transportation electrification in PacifiCorp's Oregon service territory.

11

In February 2017, Commission Staff requested additional information to expedite the review process. In response, PacifiCorp filed a supplemental application on April 12, 2017.

13

On May 31, 2017, PacifiCorp hosted a settlement conference where intervening parties expressed support for, concerns with, and suggestions for improvement of various aspects of PacifiCorp's proposed pilot programs.

15

¹ ChargePoint is the only intervening party that does not support the settlement.

1 4. PacifiCorp will schedule a workshop with the Stipulating Parties within 30 days of
2 program approval focused on the further refinement of site evaluation criteria² and
3 monitoring criteria.³

4 5. PacifiCorp will share a list of potential high-value sites for charging pods with
5 Commission Staff before selecting the first site.

6 **With regard to the Outreach and Education Pilot, the Stipulating Parties agree that:**

7 6. The estimated expenses for “Customer Communications” and the estimated expenses
8 for “Community Events” presented in Table 15 of PacifiCorp’s April 12, 2017,
9 supplemental application (Supplemental Application) will be reduced by 50 percent.
10 PacifiCorp will use the funds removed from the Customer Communications and
11 Community Events budget to cover the costs of the projects described in paragraphs 15
12 and 16. The Company clarifies that all line items in the proposed program expenses
13 are O&M items.

14 7. Program expenses during the pilot period, 2017-2019, will be capped at \$1.105 million,
15 less a reduction of 50 percent of the Company’s initial proposed budgets for Customer
16 Communications and Community Events, which the Stipulating Parties agree will be
17 used as described in item 17 below.

² Including objectives for rural versus urban siting, long distance travelers versus urban commuters, and metrics used to locate high-value sites for both types of drivers.

³ Including the specific learnings to be gained from the project, such as the data to be generated and for what purpose; the parties expressed support for a focus on time-varying pricing to drivers and the beneficial integration of EV charging load onto the system.

1 8. PacifiCorp will focus Customer Communications expenses, to the extent practical, on
2 promoting and supporting the success of the Company's transportation electrification
3 pilot programs that are approved by the Commission in this docket.

4 **With regard to the Demonstration and Development Pilot, the Stipulating Parties agree**
5 **that:**

6 9. Program expenses will be capped at \$1.685 million during the pilot period, 2017-2019.
7 The Company clarifies that all line items in the proposed program expenses are O&M
8 items.

9 10. PacifiCorp will apply any value derived from Clean Fuels Program credits, which must
10 be transferred to PacifiCorp by the grant awardee, to reduce the pilot program's cost to
11 PacifiCorp's ratepayers.

12 11. PacifiCorp will submit to Commission Staff for their informal review the criteria that
13 will be used to evaluate applications and examples of projects that may be funded
14 through the pilot program at least 30 days prior to releasing PacifiCorp's first
15 solicitation.

16 12. Application solicitations will include descriptions of the criteria that will be used to
17 evaluate applications and examples of projects that may, or have been, funded through
18 the pilot program. The solicitation will clarify that the examples provided are
19 illustrative and do not preclude alternative project proposals.

20 13. The program is revised to include two separate project funding paths:

21 a) 75 percent of funds in each cycle will be made available for projects evaluated
22 based on the criteria presented in Table 16 of the Supplemental Application. In

1 the following sections of this document, projects evaluated based on these
2 criteria are referred to as “standard review” projects.

3 b) 25 percent of funds in each cycle will be earmarked for projects focused on
4 workplace charging and fleet vehicle electrification. The evaluation criteria for
5 these projects will be the same as those presented in Table 16 of the
6 Supplemental Application, dated April 12, 2017, with the following exceptions:

- 7 i. Educational Benefits will not be considered in application evaluation
- 8 ii. Environmental Benefits will not be considered in application evaluation
- 9 iii. Community Benefits will not be considered in application evaluation

10 Workplace and fleet projects satisfying the criteria presented in Table 16 of the
11 Supplemental Application will be considered for the standard review path. If a
12 separate workplace charging program is approved by the Commission during
13 the pilot period, the two separate project funding paths will be eliminated and
14 all remaining funds will be made available to fund standard review projects.

15 c) In each funding cycle, if the total amount of funding awarded to fleet and
16 workplace charging projects is less than the total allotment for these projects,
17 remaining funds will be made available to fund standard review projects.

18 14. PacifiCorp will provide an informational report to Commission Staff after each funding
19 cycle containing information about each project that was approved for grant funding,
20 including the amount of money granted, total project costs, the site of each project
21 funded, the entity receiving the grant funds, information about the entity, why the
22 project was chosen for funding, what PacifiCorp will learn from each project, how the
23 project will be evaluated, expected life of the project, any identifiable non-energy

1 benefits, and how the project can reduce or offset the customer investment in the
2 project.

3 **With regard to additional items, the Stipulating Parties agree that:**

4 15. PacifiCorp will support and fund developing an attribution model and cost-
5 effectiveness framework and toolset to inform evaluation efforts and potential future
6 transportation electrification program development. The Company will coordinate
7 these efforts with Portland General Electric, if possible, and development will include
8 a process for input from the Stipulating Parties.

9 16. PacifiCorp will develop and conduct an initial pilot study of potential system impacts
10 of residential electric vehicle adoption in a selected portion of the Company's Oregon
11 service territory. Before beginning the study, PacifiCorp will share its proposed pilot
12 study objectives, timeline and expected cost with the Stipulating Parties.

13 17. The activities included in paragraph 15 and 16 will be funded with costs removed from
14 the Outreach and Education Pilot, per paragraph 6. The costs for these activities will
15 be recovered through Schedule 95 and will be capped at the amount of 50 percent of
16 the Company's initial proposed Outreach and Education budgets for Customer
17 Communications and Community Events.

18 **With regard to all PacifiCorp pilot programs in this Stipulation, the Stipulating Parties**
19 **agree that:**

20 18. PacifiCorp's programs approved in this docket are pilot programs, meaning they are
21 time-limited, cost-limited, and require specific learnings; further, Commission
22 approval of this Stipulation does not imply that these pilots meet the six statutory
23 factors established in Section 20(4) of Senate Bill 1547.

1 19. All program costs are subject to annual reporting and a prudence review. PacifiCorp
2 plans to recover program costs through Schedule 95.

3 20. If PacifiCorp forecasts or has reason to suspect that additional funds may be required
4 to successfully continue a pilot program, PacifiCorp will notify Staff and subsequently
5 file a request in this docket (not an advice filing) for approval of additional funds that
6 details the need for and proposed use of additional funding.

7 21. PacifiCorp will provide a progress update on all transportation electrification pilot
8 programs and pilots to the Commission by March 31, 2019.

9 22. PacifiCorp will provide a report to the Commission on all pilot activities, including the
10 results of program evaluation activities, by June 30, 2020.

11 23. The Stipulating Parties recommend and request that the Commission approve this
12 Stipulation as an appropriate and reasonable resolution of the issues in this docket.

13 24. The Stipulating Parties agree that this Stipulation represents a compromise in the
14 positions of the Stipulating Parties. Without the written consent of all Stipulating
15 Parties, evidence of conduct or statements, including but not limited to term sheets or
16 other documents created solely for use in settlement conferences in this docket, and
17 conduct or statements made at settlement conferences, are confidential and not
18 admissible in the instant or any subsequent proceeding, unless independently
19 discoverable or offered for other purposes allowed under ORS 40.190.

20 25. The Stipulating Parties have negotiated this Stipulation as an integrated document. If
21 the Commission rejects all or any material part of this Stipulation, or adds any material
22 condition to any final order that is not consistent with this Stipulation, each Stipulating
23 Party reserves its right: (i) to withdraw from the Stipulation, upon written notice to the

1 Commission and the other Stipulating Parties within five (5) business days of service
2 of the final order that rejects this Stipulation, in whole or material part, or adds such
3 material condition; (ii) pursuant to OAR 860-001-0350(9), to present evidence and
4 argument on the record in support of the Stipulation, including the right to cross-
5 examine witnesses, introduce evidence as deemed appropriate to respond fully to issues
6 presented, and raise issues that are incorporated in the settlements embodied in this
7 Stipulation; and (iii) pursuant to ORS 756.561 and OAR 860-001-0720, to seek
8 rehearing or reconsideration, or pursuant to ORS 756.610 to appeal the Commission
9 order. Nothing in this paragraph provides any Stipulating Party the right to withdraw
10 from this Stipulation as a result of the Commission's resolution of issues that this
11 Stipulation does not resolve.

12 26. This Stipulation will be offered into the record in this proceeding as evidence pursuant
13 to OAR 860-001-0350(7). The Stipulating Parties agree to support this Stipulation
14 throughout this proceeding and in any appeal, provide witnesses to support this
15 Stipulation (if specifically required by the Commission), and recommend that the
16 Commission issue an order adopting the settlements contained herein. By entering into
17 this Stipulation, no Stipulating Party shall be deemed to have approved, admitted or
18 consented to the facts, principles, methods or theories employed by any other
19 Stipulating Party in arriving at the terms of this Stipulation. Except as provided in this
20 Stipulation, no Stipulating Party shall be deemed to have agreed that any provision of
21 this Stipulation is appropriate for resolving issues in any other proceeding.

22 27. This Stipulation may be signed in any number of counterparts. Each counterpart is an
23 original. Together, all counterparts form one single document.

24

For PacifiCorp:

Signature: 

Name: ETTA LOCKEY

Title: VP, REGULATION

Date: AUGUST 10, 2017

For Staff:

Signature: _____

Name: _____

Title: _____

Date: _____

For ICNU:

Signature: _____

Name: _____

Title: _____

Date: _____

For CUB:

Signature: _____

Name: _____

Title: _____

Date: _____

For Forth:

Signature: _____

Name: _____

Title: _____

Date: _____

For Greenlots:

Signature: _____

Name: _____

Title: _____

Date: _____

For PacifiCorp:

Signature: _____

Name: _____

Title: _____

Date: _____

For ICNU:

Signature: _____

Name: _____

Title: _____

Date: _____

For Forth:

Signature: _____

Name: _____

Title: _____

Date: _____

For Staff:

Signature: Kaylee Klein

Name: Kaylie Klein

Title: AAG for Staff

Date: 8/10/17

For CUB:

Signature: _____

Name: _____

Title: _____

Date: _____

For Greenlots:

Signature: _____

Name: _____

Title: _____

Date: _____

For PacifiCorp:

Signature: _____

Name: _____

Title: _____

Date: _____

For Staff:

Signature: _____

Name: _____

Title: _____

Date: _____

For ICNU:

Signature: _____

Name: Jesse Cowell

Title: Attorney for ICNU

Date: 8-11-17

For CUB:

Signature: _____

Name: _____

Title: _____

Date: _____

For Forth:

Signature: _____

Name: _____

Title: _____

Date: _____

For Greenlots:

Signature: _____

Name: _____

Title: _____

Date: _____

Title: _____

Title: _____

Date: _____

Date: _____

For ICNU:

For CUB:

Signature: _____

Signature: Michael P. Goetz

Name: _____

Name: Mike Goetz

Title: _____

Title: Staff Attorney

Date: _____

Date: 8/9/17

For Forth:

For Greenlots:

Signature: _____

Signature: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

For ODOE:

Signature: _____

Name: _____

For PacifiCorp:

Signature: _____

Name: _____

Title: _____

Date: _____

For Staff:

Signature: _____

Name: _____

Title: _____

Date: _____

For ICNU:

Signature: _____

Name: _____

Title: _____

Date: _____

For CUB:

Signature: _____

Name: _____

Title: _____

Date: _____

For Forth:

Signature: Janette Shaw

Name: Janette Shaw

Title: Director of Government Relations

Date: August 10, 2017

For Greenlots:

Signature: _____

Name: _____

Title: _____

Date: _____

For PacifiCorp:

Signature: _____

Name: _____

Title: _____

Date: _____

For Staff:

Signature: _____

Name: _____

Title: _____

Date: _____

For ICNU:

Signature: _____

Name: _____

Title: _____

Date: _____

For CUB:

Signature: _____

Name: _____

Title: _____

Date: _____

For Forth:

Signature: _____

Name: _____

Title: _____

Date: _____

For Greenlots:

Signature:  _____

Name: Thomas Ashley

Title: VP, Policy

Date: August 10, 2017

For ODOE:

Signature: 

Name: Daniel S. Avery

Title: Senior Policy Analyst

Date: 8/11/2017

1

Docket No. UM 1810
Stipulating Parties/100
Witnesses: Morris-Klotz-
Mullins-Jenks-Allen-Ashley-
Avery

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

PACIFICORP

**Stipulating Parties' Joint Testimony of
Eli Morris, Jason Salmi Klotz, Bradley Mullins, Bob Jenks,
Jeff Allen, Thomas Ashley, Dan Avery**

August 2017

UM 1810

PacifiCorp Applications for Transportation Electrification Programs

Joint Testimony in Support of Settlement Stipulation

1 **Q. Please state your name, business address, and present position.**

2 A. My name is Eli M. Morris. My business address is 825 N.E. Multnomah
3 Street, Suite 1500, Portland, Oregon, 97232. My title at PacifiCorp is Customer
4 Solutions Program Manager. My qualifications appear in my Direct Testimony in
5 Exhibit PAC/100.

6 My name is Jason R. Salmi Klotz. My business address is 201 High Street
7 SE, Salem, Oregon 97301. I am a Principle Executive Manager, Climate Change
8 Lead, employed in the energy Resources and Planning Division of the Public Utility
9 Commission of Oregon (Commission). My qualifications appear in Staff Reply
10 Testimony, Exhibit Staff/101 (filed May 24, 2017).

11 My name is Bradley G. Mullins. My business address is 333 SW Taylor,
12 Suite 400, Portland, Oregon, 97204. I am a consultant testifying on behalf of the
13 Industrial Customers of Northwest Utilities (ICNU). My qualifications appear in
14 Exhibit ICNU/101.

15 My name is Bob Jenks. My business address is 610 SW Broadway, Suite 400,
16 Portland, Oregon, 97205. I am the Executive Director of the Oregon Citizens' Utility
17 Board (CUB), and am testifying on behalf of CUB. My qualifications appear in
18 Exhibit CUB/101.

19 My name is Jeff Allen. My business address is 1732 NW Quimby Street
20 #240, Portland, Oregon, 97209. I am the Executive Director of Forth. My
21 qualifications appear in Exhibit Forth/101.

22 My name is Thomas Ashley. My business address is 925 N. La Brea Avenue,
23 6th Floor, Los Angles, California, 90068. My title at Greenlots is Vice President,

1 Policy. I previously submitted testimony in this docket in Exhibit Greenlots/100.

2 My name is Dan Avery. My business address is 550 Capital Street N.E., 1st
3 floor, Salem, Oregon 97301. I am a Senior Policy Analyst with the Oregon
4 Department of Energy (ODOE). My qualifications appear in Exhibit Stipulating
5 Parties/101.

6 **Q. What is the purpose of the joint testimony in this proceeding?**

7 A. This joint testimony describes the terms of the settlement (Settlement Stipulation)
8 reached by PacifiCorp, Public Utility Commission of Oregon Staff (Staff), ICNU,
9 CUB, Forth, Greenlots, and ODOE (collectively, the Stipulating Parties). This joint
10 testimony also asks the Commission to: (1) approve the pilot programs proposed by
11 PacifiCorp, as modified by the terms of this settlement agreement; and (2) authorize
12 recovery of pilot program costs, subject to the requirements of this settlement.

13 **Q. How was the settlement reached?**

14 A. In accordance with Senate Bill (SB) 1547, PacifiCorp filed its initial transportation
15 electrification program applications on December 27, 2016. The application
16 proposed three pilot programs anticipated to accelerate transportation electrification
17 in PacifiCorp's Oregon service territory: (1) Outreach and Education Pilot; (2) Public
18 Charging Pilot; and (3) Demonstration and Development Pilot.

19 In February 2017, Commission staff requested additional information from the
20 Company to expedite the review process. In response, PacifiCorp filed a
21 supplemental application on April 12, 2017 (Supplemental Application). On May 31,
22 2017, PacifiCorp hosted a settlement conference where intervening parties expressed
23 support for, concerns with, and suggestions for improving various aspects of

1 PacifiCorp's proposed pilot programs. Based on this discussion, the Stipulating
2 Parties worked collaboratively to reach consensus on clarifications, modifications and
3 additional requirements for the proposed pilot programs. Seven of the eight parties to
4 this docket reached agreement and have joined the Stipulation. ChargePoint is the
5 only intervening party that does not support the settlement.

6 **Q. Please summarize the settlement.**

7 A. The Stipulation modifies the three transportation electrification pilot programs
8 proposed by PacifiCorp and settles all issues in this docket. Specifically, the
9 settlement clarifies certain aspects of pilot programs proposed in PacifiCorp's
10 Supplemental Application, modifies aspects of the Outreach and Education and
11 Demonstration and Development pilot programs, adds additional engagement of
12 Stipulating Parties to the Public Charging pilot program, and creates two additional
13 PacifiCorp work streams to inform potential future programs. All three pilots are
14 time-limited, cost-limited, and provide data collection and specific learnings.

15 **Q. Please summarize the Stipulation terms regarding the Public Charging Pilot**

16 A. The following terms now apply to the proposed Public Charging Pilot:

17 **1.** Program expenses are capped at \$1.85 million during the 2017-2019 pilot period.

18 The Stipulation clarifies how program expenses will be treated (capital expenses
19 versus operations and maintenance (O&M) costs).

20 **2.** PacifiCorp will apply any revenue from drivers' use of pilot program stations, less
21 the Company's cost to deliver the electricity to the station, and any value derived
22 from Clean Fuels Program credits generated by the stations to reduce the pilot
23 program's cost to PacifiCorp's Oregon ratepayers.

1 **3.** PacifiCorp will schedule a workshop with the Stipulating Parties within 30 days
2 of program approval by the Commission focused on the further refinement of site
3 evaluation criteria and monitoring criteria.

4 **4.** PacifiCorp will share a list of potential high-value sites for charging pods with
5 Commission staff before selecting the first site.

6 **Q. Please summarize the Stipulation terms regarding the Outreach and Education**
7 **Pilot**

8 **A.** The following terms now apply to the proposed Outreach and Education Pilot:

9 **1.** The estimated expenses for “Customer Communications” and the estimated
10 expenses for “Community Events” presented in Table 15 of the Supplemental
11 Application will be reduced by 50 percent. PacifiCorp will use the funds
12 removed from the Customer Communications and Community Events budget to
13 cover the costs of the projects described in paragraphs 15 and 16 of the
14 Settlement Stipulation; specifically, an attribution model/cost-effectiveness
15 framework/toolset and study of system impacts of residential plug-in electric
16 vehicles (PEVs) to PacifiCorp’s Oregon service territory. The Company clarifies
17 that all line items in the proposed program expenses are O&M items.

18 **2.** Program expenses during the pilot period, 2017-2019, will be capped at \$1.105
19 million, less a reduction of 50 percent of the Company’s initial proposed budgets
20 for Customer Communications and Community Events, which the Stipulating
21 Parties agree will be used as described in item 17 of the Settlement Stipulation.

22 **3.** PacifiCorp will focus Customer Communications expenses, to the extent
23 practical, on promoting and supporting the success of the Company’s

1 transportation electrification pilot programs that are approved by the
2 Commission in this docket.

3 **Q. Please summarize the Stipulation terms regarding the public charging**
4 **Demonstration and Development Pilot.**

5 **A.** The following terms now apply to the proposed Demonstration and Development:

- 6 1. Program expenses will be capped at \$1.685 million during the pilot period,
7 2017-2019. The Company clarifies that all line items in the proposed program
8 expenses are O&M items.
- 9 2. PacifiCorp will apply any value derived from Clean Fuels Program credits,
10 which must be transferred to PacifiCorp by the grant awardee, to reduce the
11 pilot program's cost to PacifiCorp's Oregon ratepayers.
- 12 3. PacifiCorp will submit to Commission staff for their informal review the criteria
13 that will be used to evaluate applications and examples of projects that may be
14 funded through the pilot program at least 30 days prior to releasing PacifiCorp's
15 first solicitation.
- 16 4. Application solicitations will include descriptions of the criteria that will be
17 used to evaluate applications and examples of projects that may, or have been,
18 funded through the pilot program. The solicitation will clarify that the examples
19 provided are illustrative and do not preclude alternative project proposals.
- 20 5. The program is revised to include two separate project funding paths:
 - 21 a) 75 percent of funds in each cycle will be made available for projects
22 evaluated based on the criteria presented in Table 16 of the Supplemental
23 Application and provided below. In the following sections of this

1 document, projects evaluated based on these criteria are referred to as
2 “standard review” projects.

| Criteria | Measures |
|---|--|
| Project Feasibility/ Utilization | <ul style="list-style-type: none"> • Readiness of the project team and reasonableness of the project plan and timeline. • Feasibility study¹ results, including compliance with national, state and local safety and accessibility requirements. • Expectation that the EVSE will be sufficiently used, based on an assessment of applicant-provided utilization projections (e.g. community needs assessment data, electric vehicle ownership data, survey data). • Project life (as reported by the applicant) and robustness of the ongoing operations and maintenance plan. • Plan to address interoperability with driver technologies and Pacific Power’s system (e.g. capabilities to interact with AMI when installed). • Expected driver payment pricing model, if applicable. |
| Use of Funds | <ul style="list-style-type: none"> • Customer and Company financial commitment and leveraging of funds from other sources. • Alignment of project costs with industry standards. • Reasonableness of the proposed budget (i.e., risk of exceeding budget). • How project is designed to avoid risk of stranded investments. • Applicant and project need for funding support. |
| Innovation | <ul style="list-style-type: none"> • Incorporation of emerging technologies, such as renewable generation, energy storage or direct load control. • Creative project design, partnerships and utilization of resources, particularly in serving underserved populations. |
| Data Availability | <ul style="list-style-type: none"> • Type(s) of data available through the project. • Plan to collect and analyze data. • Mechanism(s) to share data with Pacific Power. • Ability to incorporate potential future electric grid services (e.g., demand response, vehicle-to-grid integration). |
| Educational Benefits | <ul style="list-style-type: none"> • Physical and community visibility. • Education plan and awareness building opportunities. |

¹ Customers may request a feasibility study under the proposed Outreach and Education pilot or perform a comparable study at their own expense.

| | |
|-------------------------------|--|
| | <ul style="list-style-type: none"> • Exposure in communities currently underserved by EVSE, such as multi-family, low-income and remote areas of the state.² |
| Environmental benefits | <ul style="list-style-type: none"> • Proximity to areas with known air quality issues. • Alignment with the applicant’s broader environmental mission or goals. |
| Community benefits | <ul style="list-style-type: none"> • Benefits provided to underserved populations. • Impact of the applicant on the community. • Use of local labor and/or materials. • Accessibility to the public. |

1 b) 25 percent of funds in each cycle will be earmarked for projects focused
2 on workplace charging and fleet vehicle electrification. The evaluation
3 criteria for these projects will be the same as those presented in Table 16
4 of the Supplemental Application with the following exceptions: (i)
5 Educational Benefits will not be considered in application evaluation; (ii)
6 Environmental Benefits will not be considered in application evaluation;
7 and (iii) Community Benefits will not be considered in application
8 evaluation.
9 Workplace and fleet projects satisfying the criteria presented in Table 16
10 of the Supplemental Application will be considered for the standard
11 review path. If a separate workplace charging program is approved by the
12 Commission during the pilot period, the two separate project funding
13 paths will be eliminated and all remaining funds will be made available to
14 fund standard review projects.

² While Pacific Power has identified examples of underserved populations, there are likely additional segments that will be identified through the Company’s proposed transportation electrification pilots. Applicants will be expected to explain how proposed projects serve an underserved population, if applicable.

1 c) In each funding cycle, if the total amount of funding awarded to fleet
2 and workplace charging projects is less than the total allotment for these
3 projects, remaining funds will be made available to fund standard review
4 projects.

5 6. PacifiCorp will provide an informational report to Commission Staff after each
6 funding cycle containing information about each project that was approved for
7 grant funding, including the amount of money granted, total project costs, the
8 site of each project funded, the entity receiving the grant funds, information
9 about the entity, why the project was chosen for funding, what PacifiCorp will
10 learn from each project, how the project will be evaluated, expected life of the
11 project, any identifiable non-energy benefits, and how the project can reduce or
12 offset the customer investment in the project.

13 **Q. Please describe any additional settlement terms.**

14 A. The Settlement Stipulation includes the following additional terms that represent
15 collaboration and compromise by the Stipulating Parties:

16 1. PacifiCorp will support and fund developing an attribution model and cost-
17 effectiveness framework and toolset to inform evaluation efforts and potential
18 future transportation electrification program development. The Company will
19 coordinate these efforts with Portland General Electric, if possible, and
20 development will include a process for input from the Stipulating Parties.

21 2. PacifiCorp will develop and conduct an initial pilot study of potential system
22 impacts of residential electric vehicle adoption in a selected portion of the
23 Company's Oregon service territory. Before beginning the study, PacifiCorp

1 will share its proposed pilot study objectives, timeline and expected cost with
2 the Stipulating Parties.

3 3. The two activities listed above will be funded with costs removed from the
4 Outreach and Education Pilot. The costs for these activities will be recovered
5 through Schedule 95 and will be capped at the amount of 50 percent of the
6 Company's initial proposed Outreach and Education budgets for Customer
7 Communications and Community Events.

8 The Stipulating Parties also agreed that the following new terms would apply to all three of
9 PacifiCorp's pilot programs discussed above and supported in this inaugural filing:

10 1. PacifiCorp's programs approved in this docket are pilot programs, meaning
11 they are time-limited, cost-limited, and require specific learnings; further,
12 Commission approval of this Stipulation does not imply that these pilots meet
13 the six statutory factors established in Section 20(4) of Senate Bill 1547.

14 2. All program costs allowed up to the stipulated cost caps are subject to annual
15 reporting and a prudence review before collection in customer rates.

16 PacifiCorp plans to recover program costs through its existing Schedule 95,
17 Pilot Program Cost Adjustment, by periodically proposing to decrease or
18 increase the Schedule 95 surcharge.³

19 3. If PacifiCorp forecasts or has reason to suspect that additional funds may be
20 required to successfully continue a pilot program, PacifiCorp will notify Staff
21 and subsequently file a request in this docket (not an advice filing) for approval

³ See PacifiCorp Supplemental Application at 53 (filed April 12, 2017).

1 of additional funds that details the need for and proposed use of additional
 2 funding.

3 4. PacifiCorp will provide a progress update on all transportation electrification
 4 pilot programs and pilots to the Commission by March 31, 2019.

5 5. PacifiCorp will provide a report to the Commission on all pilot activities,
 6 including the results of program evaluation activities, by June 30, 2020.

7 **Q. As modified by the Stipulation, what is the total capped budget for the 2017-**
 8 **2019 period?**

9 A. The total capped budget for all pilot programs and activities is \$4.64 million. Capped
 10 budgets for individual pilot programs and activities are provided in the table below.

| Program or Activity | Capped Budget (2017-2019) |
|--|----------------------------------|
| Outreach and Education Pilot | [REDACTED] |
| Public Charging Pilot | \$1,850,000 |
| Demonstration and Development Pilot | \$1,685,000 |
| Attribution Model and Cost-effectiveness Framework Development | [REDACTED] |
| Residential System Impact Pilot Study | |
| Total | \$4,640,000 |

11 **Q. Do the Stipulating Parties believe the settlement aligns with the intent of SB**
 12 **1547?**

13 A. Yes. The proposed pilot programs are designed to accelerate transportation

1 electrification in PacifiCorp’s service territory and to gather data to inform future
2 system and program planning. The settlement will increase access to electricity as a
3 transportation fuel, encourage public and private investment, stimulate innovation,
4 competition and customer choice, investigate the potential impacts of increased
5 electric vehicle adoption on the grid and strategies to mitigate these impacts, and
6 establish cost-effectiveness and attribution frameworks that will be valuable for
7 reviewing and assessing future transportation electrification programs.

8 **Q. What is PacifiCorp’s position on how the six factors established in Section 20(4)**
9 **of SB 1547 for Commission consideration in approving transportation**
10 **electrification programs and cost recovery inform the settlement?**

11 A. As explained in detail in PacifiCorp’s supplemental pilot program application, the
12 transportation electrification market is under- or un-developed in much of
13 PacifiCorp’s service territory. While, pursuant to the Commission’s transportation
14 electrification rules found at OAR 860-087, PacifiCorp’s Supplemental Application
15 explained how the proposed pilot programs address the six factors, the lack of
16 available data and experience specific to PacifiCorp’s service area make it difficult to
17 provide the Commission with sufficiently reliable data to determine how to apply
18 standard Commission practices for review of utility investment to transportation
19 electrification, particularly as it relates to prudence and the “used and useful”
20 standard. As such, the Stipulating Parties recommend the proposed programs be
21 approved as pilots, and the settlement includes new work streams to be undertaken by
22 PacifiCorp to inform application of the six factors in future program proposals.
23 Significantly, SB 1547 only requires the Commission to *consider* the six factors.

1 This language indicates that the six factors provide guidance for the Commission, as
2 opposed to substantive obligations that must be satisfied before a transportation
3 electrification program is approved.

4 **Q. What is the likely impact of the proposed pilot programs on the market for**
5 **electric vehicle charging services in PacifiCorp's service territory?**

6 A. The proposed pilot programs will increase the use of electricity as a transportation
7 fuel, stimulate the development of customer-owned electric vehicle charging stations,
8 and increase the availability of publicly available fast charging stations in areas where
9 drivers have few, if any, options today. Technical assistance and grant funding for
10 non-residential customer projects offered through the Outreach and Education and
11 Demonstration and Development pilot programs, respectively, will directly address
12 awareness, technical, and financial barriers to electric vehicle charging station
13 development. Concurrently, the Public Charging Pilot will deploy visible and reliable
14 public charging stations in strategic locations across the state that can provide
15 solutions for local commuters, drivers without access to residential off-street parking,
16 and long distance travelers.

17 There is no evidence that the proposed pilot programs will have a negative
18 impact on the market for electric vehicle charging services. On the contrary,
19 increasing the availability of visible, reliable, and accessible charging stations is
20 likely to increase demand for charging services and stimulate competition in the
21 market, particularly in areas where a market does not currently exist. As discussed on
22 page 25 of the Supplemental Application, a study by the National Renewable Energy

1 Laboratory⁴ found that the existence of visible public EVSE can help improve
2 consumer perception and willingness to consider PEVs. Respondents who answered
3 yes to “Are you aware of any electric vehicle charging stations along the routes you
4 drive and the places you visit in a typical day that you could use if you drove an
5 electric vehicle?” were the most likely to believe that PEVs were as good or better
6 than gasoline vehicles and to consider acquiring a PEV. Improving awareness and
7 increasing the adoption of PEVs will increase the need and demand for charging
8 services, helping, not hindering, the competitive market.

9 As of February 2017, there were only three locations in PacifiCorp’s Oregon
10 service area with publicly available fast chargers capable of charging any PEV, and
11 only one of these stations was located outside of Portland. It is likely that customers
12 and third-party electric vehicle charging service providers are not investing in
13 PacifiCorp’s service area because there is insufficient demand for these services to
14 justify a business case. SB 1547 established a clear directive for utilities to increase
15 access to electricity as a transportation fuel and by investing in these areas,
16 PacifiCorp will make it possible for additional drivers to adopt PEVs and for existing
17 PEV owners to meet more of their driving needs with electricity. Promoting
18 customer choice in transportation fuel will increase demand for electric vehicle
19 charging services and stimulate private investment in public charging infrastructure

⁴ Mark Singer, *Consumer Views on Plug-in Electric Vehicles – National Benchmark Report (Second Edition)*, (Dec. 2016), available at http://www.afdc.energy.gov/uploads/publication/consumer_views_pev_benchmark_2nd_ed.pdf (last visited Apr. 11, 2017).

1 that has not occurred at sufficient scale to support a robust market in PacifiCorp's
2 Oregon service territory to date.

3 **Q. Does the electric vehicle charging industry support the proposed pilot**
4 **programs?**

5 A. Yes. Companies that produce and manage electric vehicle supply equipment support
6 the proposed pilot programs. Greenlots, a provider of electric vehicle charging
7 management solutions, is a stipulating party to this settlement and joined
8 Eluminocity, EV Connect, ABB Inc., OPConnect, LLC, SemaConnect, Control
9 Module, Inc., Efacec USA, Inc., and Shorepower Technologies in expressing support
10 for PacifiCorp's proposed pilot programs through a letter of support included as
11 UM1810/Forth 102. ChargePoint is the only company that expressed concerns with
12 aspects of proposed pilot programs through this docket.

13 **Q. Why does PacifiCorp support the settlement?**

14 A. While PacifiCorp believes the pilot programs proposed in the Supplemental
15 Application represent appropriate initial efforts to accelerate transportation in its
16 service territory and were worthy of Commission approval as proposed, we also
17 recognize Stipulating Parties' concerns and believe the settlement is a fair
18 compromise that will allow the Company to accelerate transportation electrification in
19 its service territory in accordance with the objectives of SB 1547. In addition to
20 helping move the electric transportation market forward, the pilot programs and the
21 two new work streams created through the settlement will provide critical experience,
22 data, and frameworks to support PacifiCorp's future system and program planning.

1 **Q. Why does Commission Staff support the settlement?**

2 A. **Overview**

3 The settlement collaboratively reached between the parties represents an important
4 opportunity for PacifiCorp to understand how various programmatic efforts affect the
5 electric vehicle market and its utility system operations. The pilot programs proposed
6 and funded by this settlement are a small, but necessary, investment of ratepayer
7 dollars that allow PacifiCorp to fulfill the requirements of SB 1547 while at the same
8 time protecting ratepayers' interests in reliable service at just and reasonable rates.

9 Further, the pilots proposed by PacifiCorp are designed to be small in scale in order to
10 not cause disruption or distortion of the electric vehicle charging market place.

11 However, perhaps most importantly for Staff, the inaugural programs and
12 expenditures agreed to between the stipulating parties result in the development of
13 necessary data and tools for analysis of the electric vehicle market in PacifiCorp's
14 service territory and will help inform what approaches by Oregon utilities will best
15 and properly accelerate transportation electrification.

16 **The settlement fulfills the requirements of Section 20(4) of SB 1547.**

17 Staff, in testimony,⁵ found that as pilot projects, PacifiCorp's three proposed
18 programs could help develop information and data that would better allow the
19 Commission, Staff, and stakeholders to understand which activities undertaken by
20 regulated utilities would most effectively fulfill the legislative intent and requirements
21 of SB 1547, Section 20. Transportation has traditionally been a distinct sector of the
22 economy that Oregon's regulated utilities and its regulators have limited past

⁵ Staff Reply Testimony at 6-10 (May 24, 2016).

1 engagement. However, the Oregon legislature has expressly instructed electric
2 companies to propose programs to the Commission that accelerate transportation
3 electrification⁶—transportation electrification meaning “[t]he use of electricity from
4 external sources to provide power to all or part of a vehicle.”⁷ Arguably, the
5 impending increase in adoption of electric vehicles may require a change of the utility
6 role in the transportation sector as it pertains to electric vehicles. Thus, the present
7 settlement strikes the balance of allowing PacifiCorp to pilot a series of well-thought
8 out and thoroughly-debated and modified programmatic activities at minimal cost to
9 ratepayers. The pilots will benefit ratepayers by allowing the utility, Staff, and
10 stakeholders to better understand: the proper and most effective role of the utility
11 within the electric vehicle market, the most effective programmatic efforts a utility
12 can undertake to accelerate adoption and utilization of electrified transportation
13 without overburdening the market or competitors, and how to begin capturing the
14 benefits of electrified transportation for utility ratepayers.

15 **Staff expects to gain information and important learnings from the pilot**
16 **programs and activities reached in this settlement.**

17 The settlement reached by the stipulating parties will allow three pilot programs to
18 reach the field relatively quickly and advance the collection of data necessary to
19 understand the electric vehicle and transportation market in Oregon and in the service
20 territories of individual utilities. In its Reply Testimony, Staff noted that a significant
21 hurdle to confidence in program approval is understanding (in advance of program

⁶ SB 1547, Section 20(3).

⁷ SB 1547, Section 20(1)(b)(A). Please also see the additional definitions of “Transportation electrification” found at Section 20(1)(b)(B)-(C).

1 rollout) how any one of the proposed programs will likely affect the market
2 positively, or negatively.⁸ The judicious expenditures agreed upon in this settlement
3 will fund three limited pilot programs, and the evaluation of those programs, in such a
4 manner as to develop a record of information, qualitative and quantitative, that will
5 assist regulators and stakeholders in understanding how best to guide investment by
6 the utilities in the future.

7 **Staff joins the settlement based on the package of programs and**
8 **additional items offered.**

9 The package of programs approved in settlement tests the effectiveness of many
10 different approaches to utility activity in the electric transportation market. In
11 particular, PacifiCorp will undertake two different approaches to public charger
12 investment, each of which is adequately limited so as to not disrupt or unfairly
13 compete in the currently struggling market. The settlement allows PacifiCorp to
14 make direct investment and ownership decisions in utility-owned infrastructure in the
15 Public Charging Pilot, as well as investments to support third-party-owned
16 infrastructure through an innovative grant program called the Demonstration and
17 Development Pilot. Evaluation of these two different approaches will help inform
18 Staff and stakeholders on ways to serve market needs consistent with SB 1547 and
19 increase ratepayer benefits and lower ratepayer costs. Additionally, the settlement
20 reached by the Stipulating Parties will allow for further investment in workplace
21 charging, which Staff and other parties expressed is a necessary component of market
22 development and advancing electric vehicle adoption. Taking into account the

⁸ Staff Reply Testimony at 7-10 and 18-20 (May 24, 2017).

1 positions of other parties, the settlement package also allows PacifiCorp to make
2 limited investments in non-infrastructure activities such as education and outreach to
3 help determine the efficacy and likely benefits of this approach. Lastly, the pilot
4 programs require PacifiCorp to collect data and improve its understanding of how
5 increased prevalence of transportation electrification will affect utility system
6 operations and reliability.

7 **At this time, Staff supports the transportation electrification investments**
8 **outlined in this settlement package.**

9 The three primary investments and additional research items outlined in the
10 settlement agreement are reasonable given the goals of the settling parties, the present
11 maturity of the market, the requirements of SB 1547 Section 20(3) and (4), and the
12 current level of understanding of the electrified transportation market in Oregon.
13 Additionally, Staff supports the small first investment proposed by PacifiCorp, given
14 that the utility could have proposed substantially larger commitments of ratepayer
15 dollars. Such an approach—making extraordinarily large capital investments with
16 recovery of such investments over several decades—would be concerning to Staff at
17 this time in an inaugural filing. Investments in an emerging market are riskier as the
18 market can change rapidly, possibly leaving the utility and ratepayer with stranded
19 costs. Additionally, the small size of the capital investment proposed by PacifiCorp
20 should alleviate concerns of unforeseen detrimental effects to the electric vehicle
21 market, market actors, the utility, and its ratepayers. In sum, the small amount of
22 utility investment agreed to through this settlement protects ratepayers and actors in
23 the market from harm while kick-starting thoughtful new pilot programs to accelerate

1 transportation electrification that will produce data and information necessary to
2 inform and design future transportation electrification proposals.

3 **Q. Why does CUB support the settlement?**

4 A. CUB supports the settlement as a reasonable compromise of the issues raised by the
5 Stipulating Parties in this docket. CUB supports the Company's efforts to work with
6 stakeholders throughout the process in this docket, and believes that the Company's
7 program application furthers the goals contemplated in SB 1547. Based on the
8 Company's original filing, CUB was concerned that there was little focus or concern
9 about the impact that EV's will have on PacifiCorp's service territory. The
10 Settlement Stipulation alleviates CUB's concern because the Company commits
11 to develop and conduct an initial pilot study of potential system impacts of residential
12 electric vehicle adoption in a selected portion of its Oregon service territory. The vast
13 majority of electric vehicle charging continues to occur in single-family residential
14 housing, and the impacts of oncoming electric vehicle charging load will have a large
15 impact on Pacific Power's system. This pilot study will help the Company prepare
16 for a future in which this oncoming load can either have a positive or negative impact
17 on its system. CUB believes the pilot programs contemplated herein will provide
18 valuable knowledge about electric vehicle use and the market in Oregon on a going-
19 forward basis.

20 **Q. Why does ICNU support the settlement?**

21 A. ICNU supports the transportation electrification pilot programs outlined in the
22 Settlement Stipulation because they advance the aims of SB 1547 associated with the
23 acceleration of vehicle electrification. Importantly, the Settlement Stipulation

1 includes additional certainty surrounding the amount of funds available in the
2 Demonstration and Development Pilot for workplace charging and fleet
3 electrification programs, which ICNU considers to be a crucial component of any
4 strategy designed to accelerate adoption of electric vehicles. In addition to addressing
5 two major components of the demand for transportation (i.e., commuter vehicles and
6 fleet vehicles), these programs can be designed to provide direct benefits to large
7 customers, many of whom want charging stations located on their premises for their
8 employees, and where cost effective, are looking closely at electrification strategies
9 for fleet vehicles.

10 **Q. Why does ODOE support the settlement?**

11 A. ODOE believes that the pilot program represents an opportunity to investigate novel
12 and timely opportunities to expand EV infrastructure, support growth of EV
13 ownership, and define key learning opportunities to better inform public and private
14 decision making.

15 **Q. Why does Greenlots support the settlement?**

16 A. The pilots contained within the settlement represent important steps forward for the
17 electric vehicle and electric vehicle charging markets in PacifiCorp's Oregon service
18 territory, and represent critical experience in the grid integration of electric vehicles
19 to be gained by the utility, and data to provide the Commission with greater context to
20 run future analyses on utility applications for transportation electrification
21 investments. While Greenlots agrees with PacifiCorp's assessment that the pilots
22 represented in the Supplemental Application were appropriate as a starting point
23 under SB 1547, Greenlots appreciates the largely collaborative nature of the

1 settlement process and feels the result is a balanced, fair approach to (very modestly)
2 accelerating the market for transportation electrification. Under the settlement there
3 are market opportunities for a range of business models related to providing charging
4 infrastructure and services, and once in place, there will be a modest deployment of a
5 key backbone of reliable, visible, and accessible public fast charging infrastructure in
6 PacifiCorp's service territory.

7 **Q. Why does Forth support the settlement?**

8 A. Forth supports the settlement and appreciates PacifiCorp's efforts in working with
9 the stakeholders throughout the process in this docket. Forth originally argued for
10 larger, bolder programs, particularly with regards to consumer engagement, in order
11 to accelerate transportation electrification more quickly. However, we support this
12 settlement as a reasonable first step that enjoys support from a broad range of
13 stakeholders.

14 **Q. Does this conclude your joint testimony?**

15 A. Yes.

Docket No. UM 1810
Stipulating Parties/101
Witness: Dan Avery

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

PACIFICORP

**Exhibit Accompanying Joint Testimony
Witness Qualifications of Dan Avery**

August 2017

WITNESS QUALIFICATIONS STATEMENT

EMPLOYER: Oregon Department of Energy

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Energy Technology & Policy Section

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EDUCATION: Master of Business Administration – Sustainable Business and Renewable Energy
Marylhurst University, Marylhurst, Oregon

Bachelor of Science, Marine Biology
Texas A&M University, Galveston, Texas

EXPERIENCE: I have worked as a public servant in both the Federal Government and the State Government in Oregon for the last 28 years. I have work as a technical analyst working on Federal Energy Regulatory Commission relicensing projects on major hydropower sites throughout Oregon and Washington. I work on land use developments related to energy and anadromous fish habitat and conducted dozens of Section 7 consultations under the Endangered Species Act. I wrote a policy guidance document outlining standardized analysis approaches for Section 7 of the ESA that has been adopted by multiple federal agencies nationwide. I worked with small rural communities to develop watershed scale habitat conservation plans along the Oregon coast. I have been employed as an energy policy analyst at the Oregon Department of Energy since June 2016.

CERTIFICATE OF SERVICE

I certify that I served a true and correct copy of PacifiCorp's Stipulation and Stipulating Parties' Joint Testimony on the parties listed below via electronic mail and/or or overnight delivery in compliance with OAR 860-001-0180.

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Dated this 11th day of August, 2017.



Katie Savarin
 Coordinator, Regulatory Operations