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April 12, 2019

Public Utility Commission of Oregon
Attn: Filing Center
201 High Street, S.E.
P.O. Box 1088
Salem, OR 97308-1088

RE: UE 319 / Order No. 17-511 Compliance Report for PGE's Low Clearance Correction Program in 2018

Pursuant to Commission Order No. 17-511, following Docket No. UE 319, Portland General Electric Company (PGE) hereby submits its 2018 annual report for the Low Clearance Correction Program.

The Low Clearance Correction Program focuses on correcting noncompliant service connections discovered over a 10-year inspection cycle for service connections with points of attachment (POA) and/or weatherheads below 8 feet, and between 8 feet and 10 feet. Once a service line or facility has been identified as needing a clearance correction, PGE determines whether the issue can be mitigated without action by the customer, or if additional non-utility work on the customer's side of the service is needed. While the program operates on a 2-year correction cycle (i.e., low clearance conditions will be corrected within two years following discovery), the aim is to work the correction within the year it is discovered.

Low vertical clearance speaks to the measurement from pedestrian surfaces (e.g., walkways, driveways, porches) to the point of a customer's service attachment, where PGE service would attach to the customer's residence. Circumstances leading to low service conditions may include: non-compliant customer-owned facilities such as a low weatherhead (a weatherproof electric service drop entry point where overhead wires enter a customer's building); inadequate height of a suitable attachment point on the structure; or, customer structure alterations or additions such as new/raised decks and patios, staircases, carports, outbuildings, etc., that result in reduced clearance from a pedestrian surface. These issues were contested during PGE's UE 319 general rate case and resulted in a settlement that was adopted by the Commission in its Order.

Low service conditions are identified via PGE's annual Facility Inspection and Treatment to the National Electrical Safety Code (NESC) Program (i.e., FITNES Program). PGE inspects to the

most current edition of the NESC adopted by the Commission.¹ Every year, PGE inspects approximately 28,000 PGE poles and related overhead facilities under the FITNES Program. During this inspection, PGE records NESC violations including service clearance conditions. Dedicated two-man repair crews are dispatched typically within 6-9 months after condition discovery to correct as many conditions as possible. These two-man repair crews are typically able to correct many of the PGE conditions on this first pass. Conditions that cannot be corrected by the two-man crews are returned to the PGE FITNES group and follow-up work orders are initiated to address the conditions that require alternative crew configurations and/or different materials and equipment. The work that cannot be completed by the FITNES Program is covered by the Low Clearance Correction Program.

Implemented in 2018, PGE's Low Clearance Correction Program operates under the following guidelines:

1. If the service line/equipment was installed prior to 1977² and the POA (e.g. existing bracket, house knob) can be raised to 10 feet (through the installation of a new POA) then this work is generally addressed as part of PGE's annual FITNES Program.
2. If the service line/equipment is between 8 feet and 10 feet and was installed prior to 1977 and the POA cannot be raised to 10 feet because the building's construction will not accommodate raising it to 10 feet, then guarding material (an insulating tape that consists of a dielectric, synthetic, silicone material) is applied to the service conductor at the service point) may be installed to correct the low clearance condition.
3. If the customer-owned weatherhead on a building that was constructed prior to 1977 is between 8 feet and 10 feet and the POA is at 10 feet or can be raised to 10 feet, then guarding material may be installed to correct the low clearance condition.
4. If the POA and/or the customer-owned weatherhead on a building that was constructed prior to 1977 has less than 8 feet vertical clearance and raising the POA cannot be addressed by modifications to PGE-owned equipment alone (as described above), then PGE's Low Clearance Correction Program will work with the customer and a licensed electrical contractor to make the repair. This may include replacing the customer-owned weatherhead, modifying the building's envelope to extend the weatherhead, replacing the meter base, replacing the service entrance conductors, or replacing or relocating the breaker panel.

¹ See OAR 860-024-0010.

² The 1977 edition of the NESC included several code changes.

To implement the program in 2018, PGE hired two incremental staff (a project manager and field inspector) to ensure strong linkage between FITNES and the Low Clearance Correction Program. The project manager is responsible for supporting the program and coordinating with contractors, PGE personnel, and external stakeholders to ensure program costs, scope, quality and timelines are managed effectively. The field inspector oversees the day to day inspection and correction work results related to the low services.

In 2018, PGE inspected 16,800 overhead service connections for POA and/or customer weatherhead height. These inspections identified 1,700 low clearance conditions for service connections between 8 feet and 10 feet and 47 low clearance conditions (i.e., approximately 3% of all low clearance conditions) for service connections that were below 8 feet. The 2018 inspection areas included PGE map grids with a relatively high percentage of underground services compared to overhead, and as a result, PGE identified fewer service connections requiring corrective action than previously projected. In UE 319, PGE forecasted that approximately 3,000 low service conditions could be identified, on average, during each year of the program's 10-year inspection cycle. This estimate was based on a snapshot of historical FITNES Program data, where over 3,000 low service conditions were documented during a single year of inspections. Additionally, a pilot study was conducted to estimate work on customer-owned equipment and found that approximately 17% of low service conditions could require corrections on the customer-side. This analysis informed the basis for the annual cost that PGE expected to incur for the Low Clearance Correction Program.³

Furthermore, PGE found that most low services in the area where inspections occurred could be corrected via installation of guarding material, which is significantly less expensive compared to corrections on customer-side equipment. This reduced amount of customer-side work, combined with the fewer than expected low clearance conditions identified, resulted in a lower annual program cost in 2018.

PGE completed corrections for 352 of the 1,700 service connections between 8 feet and 10 feet and the total cost for those corrections is \$132,703. The remaining 1,348 corrections will continue in 2019. Corrections were completed for 6 of the 47 service connections below 8 feet and the total cost for those corrections is \$19,399. An additional 3 corrections were completed through means outside of the Low Clearance Correction Program, resulting in 38 corrections that will continue in 2019. The total cost for all corrections completed in 2018 is \$152,102.

As of March 2019, PGE has corrected 37 of the 38 remaining service connections below 8 feet that were identified in 2018. PGE will continue to work through the remaining 1,348 service

³ The resulting settlement in UE 319 that was adopted by the Commission in its order provided \$1,583,742/year plus the loaded labor expenses associated with the two staff for the Low Clearance Correction Program.

connections between 8 feet and 10 feet to correct as many as possible in 2019 by a combination of raising POAs and the application of guarding. Inspections in 2019 are ongoing and PGE will perform corrections as additional low service conditions are identified. PGE is also accelerating the Low Clearance Correction Program by including FITNES Program discoveries from inspections conducted in prior years.⁴ Thus far, the program is committed to correct 260 additional service connections below 8 feet in 2019.

Given the availability of guarding to fix the low clearance services and the geographic area of our service territory where inspections occurred in 2018, the program cost and number of needed low clearance corrections, is much lower to date than PGE estimated in the UE 319 general rate case. We expect the number of low clearances needing correction that we find in the next several years to be higher based on estimates from field inspections that informed the rate case testimony and settlement discussions. In addition, we plan to accelerate this correction program to complete it before ten years.

A summary for the 2018 program year is provided below:

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|---|--------------------------|
| 2018 annual program cost ⁵ | \$152,102 |
| Amount of costs capitalized | \$132,703 |
| Number of connections inspected for POA height | 16,800 connections |
| Number of connections found to have POA/weatherhead below 8 feet | 47 connections |
| Number of connections found to have POA between 8 and 10 feet | 1,700 connections |
| Number of sub-8-foot connections corrected and the cost of correction | 6 corrected; \$19,399 |
| Number of 8 to 10-foot connections corrected and the cost of correction | 352 corrected; \$132,703 |

Please direct all formal correspondence and requests regarding this filing to the following email address: pge.opuc.filings@pgn.com.

Sincerely,



Jay Tinker
Director, Regulatory Policy & Affairs

cc: OPUC Safety Manager, Lori Koho

⁴ PGE has provided Low Clearance Correction Program updates to OPUC Safety Staff during two meetings (October 29, 2018; March 22, 2019).

⁵ Annual total does not include the costs of the two incremental staff.