

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

UM 2152

In the Matter of

PORTLAND GENERAL ELECTRIC  
COMPANY,Detailed Depreciation Study of Electric  
Utility Properties.

ORDER

DISPOSITION: STIPULATION ADOPTED

**I. SUMMARY**

In this order, we adopt the stipulation entered into by Staff of the Public Utility Commission of Oregon, the Oregon Citizens' Utility Board (CUB), and Portland General Electric Company (collectively, stipulating parties) for revised depreciation rates. We find that the stipulation represents a reasonable resolution of the issues in this docket, satisfies the standard in ORS 757.140, and will result in fair, just, and reasonable rates. PGE shall implement the revised depreciation rates from this proceeding in docket UE 394. The exact increase in depreciation expense will be calculated in docket UE 394, pending Commission decision on capital additions through April 30, 2022. In this order, we also note concerns about PGE's responsiveness to discovery in this proceeding. These concerns do not cause us to reach the conclusion that we should reject the stipulation, but we clarify and impose expectations on the company to ensure future responses are more comprehensive and detailed.

**II. PROCEDURAL HISTORY AND BACKGROUND**

On January 15, 2021, PGE filed an application under ORS 757.140(1) to implement revised depreciation rates. PGE's filing is based on a depreciation study of PGE's generation, transmission, distribution, and general plant as of December 31, 2019. The depreciation study included revised depreciation curves, depreciable lives, and net salvage rates (collectively the parameters), and depreciation rates. In its initial filing, PGE also proposed to adjust the Colstrip generating facility's end-of-life from December 31, 2030, to December 31, 2027. PGE's last depreciation study was filed December 23, 2016, based on data as of December 31, 2015. In PGE's previous depreciation docket, we adopted a stipulation with revised depreciation rates effective on January 1, 2018, the rate effective date of PGE's subsequent general rate case, docket UE 319.

On July 9, 2021, PGE filed an application for a general rate revision, docketed as UE 394, seeking a base rate increase of about \$59 million (2.9 percent), effective May 9, 2021. In its base rate filing, the company included \$338.7 million in depreciation expense, based on the proposed depreciation rates in its initial filing in this docket, and projected plant balances as of April 30, 2022.

The Alliance of Western Energy Consumers (AWEC) and CUB intervened in this docket. Prior to the deadline for Staff and intervenor testimony, the parties engaged in settlement discussions. The stipulating parties (*i.e.*, Staff, CUB, and PGE) reached an agreement resolving all issues. The stipulating parties filed a stipulation and supporting testimony on July 29, 2021. The stipulation is attached as Appendix A. AWEC filed an objection to the stipulation with supporting testimony on September 17, 2021. On September 29, 2021, the stipulating parties filed reply testimony. An evidentiary hearing was held on October 11 and 12, 2021. The parties filed opening briefs on November 1, 2021, and closing briefs on November 10, 2021. The ALJ issued a memorandum closing the record on December 7, 2021.

### III. STIPULATION

The stipulating parties agree that the adjustments set forth in the stipulation are a reasonable and appropriate resolution of all issues in this proceeding and will result in rates that are fair, just, and reasonable. The stipulating parties state that they conducted a comprehensive review of the depreciation study. Specifically, Staff explains that it conducted an independent review and developed a set of proposed Iowa survival curves and projection lives, and net salvage rates for each plant account. As a result of Staff's analysis, Staff recommended adjustments to the survival curves, projected lives, and net salvage rates for multiple depreciation groups. Additionally, CUB recommended changing Colstrip's probable retirement date from December 31, 2027, to December 31, 2025. The stipulating parties agree to certain changes to the identified lives, curves, net salvage value, and rates set forth in Exhibit 104 with the remaining parameters to be unchanged from PGE's initial filing. Under the stipulation, PGE's annual depreciation expense, based on depreciable plant as of December 31, 2019, would decrease by approximately \$709,519.

Under the stipulation, PGE would use the average service life procedure for Federal Energy Regulatory Commission accounts related to generating facilities put in service after December 31, 2012, and the Integrated Operations Center, and would continue to use the straight-line, equal life group method for all other assets and accounts. The stipulating parties agree to change the retirement date for the Colstrip assets from December 31, 2027, to December 31, 2025. The stipulating parties also agree to change the expected service life for advanced metering infrastructure (AMI) meters from 15 years to 20 years, and survivor curve type from R3 to R2.5. Further, the stipulation provides that the expected average service life for wind resources in Account 344 will be

changed from 35 years to 30 years. The stipulating parties provided testimony explaining their differing initial positions on AMI, wind generation, net salvage, and Colstrip's probable retirement date, and supporting their resolution of each issue.

The stipulating parties agree that the revised depreciation rates should be implemented on the effective date of PGE's pending general rate case, anticipated to be May 9, 2022. Pursuant to the stipulation, the depreciation parameters set forth in Exhibit 102 would be used until the effective date of the company's next depreciation study. PGE has committed to file another depreciation study no later than December 31, 2026.

#### **IV. POSITIONS OF THE PARTIES**

##### **A. AWEC**

AWEC asserts that the stipulating parties have not demonstrated that the overall depreciation rates resulting from the stipulation are fair, just, and reasonable, or "proper and adequate," as required by ORS 757.140. AWEC contends that the record contains no testimony on PGE's proposed depreciation rates other than those adjusted under the stipulation. AWEC argues that many of the recommendations in the depreciation study are based on "judgment" and without supporting testimony the record is insufficient to evaluate the proposed depreciation rates. AWEC argues that several accounts in which PGE's consultant employed judgment do not reflect actual service life characteristics and result in recommendations that are not statistically supported. AWEC asserts that PGE did not provide specifics regarding the judgment applied or the basis for such judgment. Additionally, AWEC contends that by not filing direct testimony in this case, PGE did not provide a witness to support the depreciation study, and thus eliminated the ability to cross-examine a company witness on the depreciation study and proposed depreciation rates. AWEC argues that the stipulation should either be rejected or modified to include AWEC's adjustments, summarized below. AWEC also contends that each of its recommendations can also stand on its own and points out that the Commission could direct a reserve transfer to buy down the undepreciated value of Colstrip, without accelerating amortization of the remaining reserve balance, or vice versa. AWEC asserts that its recommended adjustments will ensure just and reasonable depreciation rates as a whole.

AWEC argues that PGE's depreciation rates have historically been too conservative, resulting in a theoretical reserve imbalance of \$685 million. AWEC asserts this is an abnormally large amount that should be considered an over-collection of depreciation expense. AWEC maintains that by amortizing a \$685 million theoretical reserve imbalance over the remaining life of PGE's assets, the stipulation results in intergenerational inequity and economically inefficient rates for customers. AWEC proposes to apply \$180 million of the reserve imbalance associated with production and transmission plant to the undepreciated investment in Colstrip. AWEC argues that fully

depreciating Colstrip in 2022 will ensure Colstrip is removed from customer rates by 2027 and ensure that the customers who benefited from the plant bear its costs. AWEC proposes amortizing the remaining reserve imbalance over a 10-year period for accounts with composite remaining lives greater than 10 years, but re-evaluating the amortization level in PGE's next depreciation study to ensure it remains just and reasonable. AWEC asserts that amortizing the reserve imbalance over the remaining life of PGE's plant will virtually ensure that the customers who contributed to that balance will not receive the benefits. AWEC recommends continuing to use the remaining life technique to automatically reconcile minor reserve imbalances after this one-time adjustment. AWEC contends that the stipulation was filed before AWEC raised the issue of the reserve imbalance, and that not all stipulating parties were aware of the magnitude of the imbalance when they entered into the stipulation.

AWEC contends that the stipulation results in unreasonable service lives for certain accounts, including PGE's wind generators, which will unnecessarily increase costs for current customers. AWEC proposes adjustments to retirement curves and lives for nine accounts, including the wind resources account addressed in the stipulation.<sup>1</sup> AWEC contends that Staff's recommendation for the wind generation resources account is flawed, and because it is part of the basis upon which the stipulating parties propose to deviate from filing, the 30-R3-curve for wind generation in the stipulation is unsupported. Additionally, AWEC recommends modifying the Sullivan hydro facility's end of life date by 30 years to reflect PGE's anticipated relicensing. AWEC also proposes rolling book reserves forward when calculating depreciation rates for two accounts (sentinel lighting and helicopter transportation) to address the reserve imbalance in these accounts. AWEC argues that neither account is likely to have material additions or retirements between December 31, 2019, and the rate effective date, and that without the roll-forward, the depreciation rates would be too high. Further, AWEC proposes increasing net salvage to 30 percent for helicopter transportation and to 18 percent for remaining transportation accounts, as compared to net salvage of 15 percent for all transportation accounts in the depreciation study.

Finally, AWEC recommends requiring PGE to file testimony in future depreciation filings addressing "(1) the major changes from the prior depreciation study; (2) the treatment of any significant new assets or new modeling changes; (3) any changes due to legal or policy developments; and (4) how judgment is used to develop depreciation rates and why that judgment is reasonable."<sup>2</sup> AWEC contends that PGE's filing in this case

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<sup>1</sup> Accounts 311.00 (Colstrip structures and improvements), 332.00 (reservoirs, dams, waterways), 341.00 (Beaver, Coyote Springs, Port Westward, Carty BP Pipeline plant structures and improvements), 341.01 (wind structures and improvements), 344.01 (Bigelow Canyon, Tucannon River wind), 345.00 (Beaver, Coyote Springs, Port Westward, Carty BP Pipeline plant accessory equipment), 345.01 (wind accessory equipment), 352.00 (transmission structures and improvements), 356.00 (overhead conductions and devices).

<sup>2</sup> AWEC Opposition at 9-10.



did not contain supporting testimony, included non-transparent adjustments based on judgment, and failed to provide explanations for such judgment when asked.

## **B. Stipulating Parties**

The stipulating parties argue that the terms of the stipulation are reasonable and will result in fair and equitable rates and oppose AVEC's adjustments as incomplete and based on flawed assumptions.

The stipulating parties dispute that the calculated theoretical reserve balance represents an actual excess or historical inaccuracy, and argue that the reserve imbalance changes over time as life and net salvage parameters change due to evolving plant characteristics. The stipulating parties argue that the theoretical reserve imbalance is appropriately addressed under the remaining life technique,<sup>3</sup> which they assert is a widely accepted approach and should be used absent unique and significant circumstances. The stipulating parties assert that it is important to match utilization of assets with the recovery of assets, and that this needs to be done fairly from the beginning of that asset's life to the end. They oppose AVEC's proposed adjustment as representing a material change to the recovery pattern and resulting in a mismatch between utilization and recovery of assets. The stipulating parties argue this approach is not systematic or rational and is inconsistent with standard depreciation practices. The stipulating parties argue that because the book reserve is a reduction to the original cost of plant, there is a built-in smoothing mechanism in the calculation of rate base to account for any potential theoretical reserve imbalance, thus promoting intergenerational equity. As a result, the stipulating parties contend that past, current, and future customers are not harmed from the existence of a theoretical reserve imbalance that develops over many years.

The stipulating parties also contend that the reserve might decrease in the future due to rapid asset replacement associated with transitioning from fossil fuels and damage to the T&D system from increasing storm activity. They note some instances where, when reserve balances were transferred, a subsequent depreciation study resulted in a negative reserve imbalance. Additionally, the stipulating parties argue that customers benefit from the existence of a reserve in the form of lower depreciation expense and rate base. They maintain that the adjustment would result in a short-term reduction in depreciation expense by over \$50 million, with customers experiencing an increase in the longer term when the amortization expires and the higher future depreciation rates resulting from a lower accumulated depreciation balance are implemented. The stipulating parties also contend that transferring reserves across functions is inappropriate and could result in cost allocation and jurisdictional issues. Further, the stipulating parties assert that this

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<sup>3</sup> Under the remaining life approach, the reserve imbalance is spread over the future remaining life of the plant. Public Utility Depreciation Practices at 63-65 (National Association of Regulatory Utility Commissioners August 1996).

adjustment should result in modifications to the depreciation rates for each account, and that AWEC did not provide a calculation of depreciation rates after this adjustment.

The stipulating parties also oppose AWEC's proposed adjustments to survivor curve estimates for nine accounts, and argue that AWEC's estimates are based on the mathematical fit of curves to historic data and do not account for other facts relevant to selecting an estimated survivor curve. The stipulating parties contend that the estimates agreed upon in the stipulation were based on the depreciation study, which considered historical data, the company's practices and expectation for the future, current industry practices, and estimates used by other electric companies. The stipulating parties oppose extending the end of life for the Sullivan hydro facility, and argue that the date they propose is based on the current license and PGE's policy to adjust the schedule only once renewal is obtained. The stipulating parties also oppose AWEC's proposal to roll forward book depreciation for the sentinel lighting and helicopter transportation accounts, and argue that this is an inappropriate policy, and would require updating other parameters for these accounts. The stipulating parties disagree with AWEC's proposed adjustments to the transportation equipment accounts and assert that these accounts were studied together due to limited historic data for each subaccount, and because all are treated similarly in terms of company policies. The stipulating parties oppose AWEC's adjustments to net salvage for these accounts and assert that AWEC's proposed net salvage estimates are based on historic data and do not consider relevant factors regarding the company's practices and outlook.

The stipulating parties oppose a need for filing requirements and assert this depreciation study is consistent with prior filings here and in other jurisdictions and argue that the study includes recommendations for each account, supporting calculations, and analysis. The stipulating parties contend that PGE provided responses to numerous data requests for materials to support the proposed depreciation parameters.

## **V. RESOLUTION**

Under ORS 757.140, each public utility must "carry a proper and adequate depreciation account." The statute requires the Commission to determine the "proper and adequate rates of depreciation" for each of the classes of property owned by the public utility. We review the terms of any stipulation for reasonableness and accord with the public interest. Here, we have considered AWEC's arguments and proposed adjustments to determine whether the settlement proposed by the stipulating parties represents an unreasonable resolution of the issues in the case, or is inconsistent with the public interest. For the reasons described below, we are not convinced that AWEC's proposed adjustments are appropriate or necessary, nor that AWEC has demonstrated that the stipulation should be rejected as inconsistent with the public interest or an unreasonable approach to setting PGE's depreciation rates at levels that are proper and adequate in this proceeding.

We review settlements to determine whether, on a holistic basis, they serve the public interest and result in just and reasonable rates. A party may challenge a settlement by presenting evidence that the overall settlement results in something that is not compatible with a just and reasonable outcome. Where a party opposes a settlement, we will review the issues pursued by that party, and consider whether the information and argument submitted by the party (which may be technical, legal, or policy information and argument) suggests that the settlement is not in the public interest, will not produce rates that are just and reasonable, or otherwise is not in accordance with law. We do not, however, require a settling party to continue to litigate each disputed issue in order to support the settlement, as that might require the litigation of disputes that led the party to settle in the first instance. Requiring litigation of each underlying issue in order to sustain a settlement would eliminate benefits of settlement, which include conserving litigation resources, avoiding litigated outcomes and associated risks, and prioritization of efforts. Instead, to support adoption of a settlement, the stipulating parties must present evidence that the stipulation is in accord with the public interest, and results in just and reasonable rates.

We have reviewed the depreciation study, the terms of the stipulation, supporting joint testimony of the parties, and AWEC's opposition and supporting testimony. We find that the parameters set forth in the stipulation represent a reasonable and appropriate resolution of the issues in this docket. We find that the resulting depreciation rates will provide PGE with proper and adequate revenues consistent with the standard in ORS 757.140, and will result in fair, just, and reasonable rates. Additionally, using the average service life procedure for the IOC and for generating facilities put in service after December 31, 2012, and continuing to use the equal life group method for other assets and accounts is consistent with standard practices, as well as the stipulations adopted in dockets UM 1809 and UM 1679.<sup>4</sup>

### ***1. Evidentiary Support***

We disagree with AWEC's position that the overall depreciation parameters and rates resulting from the stipulation and depreciation study are unsupported. As an initial matter, we do not require a utility to file direct testimony addressing each item in a depreciation study. Doing so would be burdensome and impractical. In particular, where the depreciation study itself contains an explanation of the methods used by the consultant and the consultant is made available for cross examination at the evidentiary hearing, we do not find the absence of direct testimony by itself to be critical.

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<sup>4</sup> *In the Matter of Portland General Electric Company, 2015 Detailed Depreciation Study of Electric Utility Properties*, Docket No. UM 1809, Order No. 17-365 (Sep 26, 2017); *In the Matter of Portland General Electric Company, Detailed Depreciation Study of Electric Utility Properties*, Docket No. UM 1679, Order No. 14-297 (Sep 2, 2014).

Here, the depreciation study contained a description of the analyses undertaken in developing the study.<sup>5</sup> Additionally, PGE's consultant provided additional testimony at the evidentiary hearing substantiating that he utilized standard and accepted approaches in developing the study.<sup>6</sup> We look at the evidence in the record as a whole and make our determination based on the preponderance of the evidence, and we find here that the stipulation with its supporting testimony, taken together with the depreciation study, developed by an expert in the field, as well as his testimony at the hearing regarding his approach, represents sufficient evidence to support adoption of the stipulation.<sup>7</sup> Although, as stated above, we appreciate AWEC's robust engagement in evaluating the study and proposed resolution by stipulation, we find that AWEC has not made a showing sufficient to rebut the evidence supporting the reasonableness of the stipulation, nor that adopting it would be inconsistent with the public interest.

## 2. *Reserve Imbalance*

AWEC contends that the \$685 million theoretical reserve imbalance represents an historical over-collection of depreciation expense, and that \$180 million should be used to fully depreciate Colstrip with the remaining balance amortized over ten years, subject to a re-evaluation in five years. We find that AWEC's proposal for an accelerated amortization of the reserve imbalance, and a reserve transfer to the Colstrip plant, would not be in the public interest or result in rates that are more just and reasonable for customers.

We understand AWEC's argument that the reserve has caused its members and customers in general to have "overpaid"<sup>8</sup> for depreciation expense, leading to AWEC's conclusion that there are concerns about intergenerational inequity. However, this concern is, at its core, a concern about the fact that the calculation of depreciation rates is somewhat inexact and influenced heavily by the assets acquired by a utility (the nature of which changes over time, and is likely to change in the future). We are unpersuaded that the theoretical reserve calculated in this proceeding, although large, warrants departure from the remaining life technique. Despite the size of the total theoretical reserve calculated, the reserve imbalances by account vary, with the theoretical reserves for individual accounts being positive and negative.<sup>9</sup> We are persuaded that the remaining life technique will appropriately address the reserve imbalance while avoiding undesirable rate impacts.

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<sup>5</sup> Exhibit. PGE/100 (Depreciation Study), Parts I-V.

<sup>6</sup> Tr. at 56-59, 135-137 (Oct 11, 2021).

<sup>7</sup> Exhibits. PGE/100; Stipulating Parties/100, 200; *see, e.g.*, Tr. at 56-59 (Oct 11, 2021); Tr. at 8-9; 11-15 (Oct 12, 2021) (explaining exercise of judgment in street lighting circuits account analysis); PGE/107, Spanos/1 (witness qualification statement).

<sup>8</sup> AWEC Closing Brief at 6.

<sup>9</sup> AWEC/104; Kaufman/1-2.

Although there is some understandable appeal to the idea offered by AWEC that the Colstrip plant's remaining depreciation expense could be offset by a portion of the reserve imbalance, the record makes clear that this approach would simply defer to future years a rate increase that would be caused by the accelerated amortization.<sup>10</sup> We believe that taking steps now that would cause that result are not warranted. This is especially so where the methods that were employed to calculate past depreciation rates, which led to the theoretical reserve imbalance, were not shown to have been novel or improper. Our decision to reject AWEC's invitation is influenced not only by the concerns we have about the resulting rate increases for future customers, but also by the associated accounting difficulties and complexities that would be necessary to properly implement it, which include some likelihood that a future corrective adjustment would be required if we depart from the generally-accepted remaining life approach.<sup>11</sup> Finally, we also note that one of the benefits of maintaining the remaining life technique, or at least a factor that mitigates our concerns about some of its shortcomings highlighted by AWEC, is that customers benefit from the accumulated reserve in the form of an associated direct offset to rate base.

Similarly, we decline to adopt AWEC's proposal to roll forward book depreciation for the sentinel lighting and helicopter transportation accounts to address account specific reserve imbalances in favor of continuing to rely on the remaining life technique, which we find to be a standard and appropriate approach here.

### 3. *Account-Specific Adjustments*

AWEC also proposes account-specific adjustments for nine accounts, including wind generation.<sup>12</sup> Additionally, AWEC argues that the 30-R3 survivor curve in the stipulation for the wind generation account deviates from the original depreciation study based on a flawed recommendation from Staff, and that the only reliable proposals in the record are PGE's original 35-R3 curve and AWEC's 38-R4 curve. While we recognize that this is not a precise science with a single correct result, and that there is a range of reasonable outcomes, we have concerns regarding the validity and completeness of AWEC's analyses and resulting recommendations.<sup>13</sup> Further, regardless of whether there were any flaws in Staff's initial position for wind generation, we find that the 30-R3 curve ultimately agreed upon by the stipulating parties is reasonable,<sup>14</sup> or not so unreasonable as to lead us to the conclusion that the stipulation, which represents give and take on

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<sup>10</sup> Tr. at 22-23 (Oct 11, 2021).

<sup>11</sup> Tr. at 23-24; 60-62; 69-70, 79, 94, 109-110 (Oct 11, 2021); Tr. 53-54 (Oct 11, 2021), (any future recovery would be over shorter remaining life remaining at that time).

<sup>12</sup> AWEC/100; Kaufman/31-51.

<sup>13</sup> See, e.g., Tr. at 6-7, 21-23; 41-46 (Oct 12, 2021), (indicating average lives and curves in industry statistics not considered together, and lifespan component omitted); AWEC/100, Kaufman/35-51 (analyses based only on PGE's historical data and industry statistics).

<sup>14</sup> Tr. at 15-17, 44-45 (Oct 12, 2021).

multiple issues, is inappropriate or not in accord with the public interest. Parties approach settlement negotiations based on differing positions, and we do not need to determine with finality the appropriateness of each party's initial position if the outcome of the overall settlement is reasonable. We also note that the 30-R3 curve for wind generation agreed to in the stipulation is consistent with what was implemented in PGE's previously-approved depreciation parameters for this account.<sup>15</sup>

Regarding AWEC's remaining proposed adjustments, we find the approach set forth within the depreciation study to be reasonable. We decline to modify the Sullivan hydro facility's end of life date based on anticipated relicensing. We find that basing the end of life date on the current license is not unreasonable, particularly where the existing license does not expire for 14 years and the company will review future facts and information before making a decision about renewal.<sup>16</sup> Further, while AWEC has presented evidence supporting differences in the net salvage rate for helicopter transportation plant, and other transportation equipment,<sup>17</sup> we nonetheless find reasonable PGE's consultant's approach to study transportation equipment accounts together based on limited subaccount data and similar treatment under company policies.<sup>18</sup>

#### **4. *Filing Requirements and Discovery***

Finally, AWEC proposes that we establish filing requirements for depreciation filings. As addressed above, where the depreciation study contains adequate explanation, and the expert who conducted the study is available to respond to discovery and cross examination, we do not require direct testimony be filed. We do, however, expect that the depreciation study itself would include a thorough explanation of the analysis, and address any significant changes from the prior depreciation study.

Finally, we clarify that we do expect that the company will provide comprehensive and specific explanations for specific accounts or adjustments when requested in discovery. This is all the more critical and necessary where the initial study is not supported by testimony. Here, we note that in responding to certain discovery requests from AWEC, PGE provided noticeably general explanations from a PGE employee to justify its approach, rather than detailed explanations of account-specific analysis from PGE's

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<sup>15</sup> Tr. at 57 (Oct 12, 2021); *In the Matter of Portland General Electric Company, 2015 Detailed Depreciation Study of Electric Utility Properties*, Docket No. UM 1809, Order No. 17-365, Appendix A, at 10 (Sep 26, 2017).

<sup>16</sup> Stipulating Parties/200; Peng-Gehrke-Spanos/25.

<sup>17</sup> AWEC/100; Kaufman/52-53; AWEC/108; AWEC/109.

<sup>18</sup> Stipulating Parties/200; Peng-Gehrke-Spanos/28-29.

consultant.<sup>19</sup> In future proceedings, we expect the company to provide more detailed and thorough responses to discovery requests.

## VI. ORDER

IT IS ORDERED that:

1. The stipulation between Portland General Electric Company, Staff of the Public Utility Commission of Oregon, and Oregon Citizens' Utility Board, filed July 29, 2021, attached as Appendix A, is adopted.
2. Portland General Electric Company shall implement the revised depreciation rates authorized in this proceeding in docket UE 394.

Made, entered, and effective Dec 15 2021.



**Megan W. Decker**  
Chair



**Letha Tawney**  
Commissioner



**Mark R. Thompson**  
Commissioner



A party may request rehearing or reconsideration of this order under ORS 756.561. A request for rehearing or reconsideration must be filed with the Commission within 60 days of the date of service of this order. The request must comply with the requirements in OAR 860-001-0720. A copy of the request must also be served on each party to the proceedings as provided in OAR 860-001-0180(2). A party may appeal this order by filing a petition for review with the Court of Appeals in compliance with ORS 183.480 through 183.484.

<sup>19</sup> Compare AWEC/102, Kaufman/2-3, 13-14 (high level response, rather than detailed explanation for each account identified in request) with AWEC/211, Cross/1 (more detailed explanation of analysis for specific account). Both responses were provided by a PGE manager rather than the consultant.

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**UM 2152**

In the Matter of

PORTLAND GENERAL ELECTRIC  
COMPANY

Detailed Depreciation Study of Electric  
Utility Properties.

**STIPULATION**

1           This Stipulation (“Stipulation”) is between Portland General Electric Company (“PGE”),  
2           Staff of the Public Utility Commission of Oregon (“Staff”), and the Oregon Citizens’ Utility Board  
3           (“CUB”) (collectively, the “Stipulating Parties” or “Parties”).

4           Pursuant to ORS 757.140, which requires that “[e]ach public utility shall conform its  
5           depreciation accounts to the rates so ascertained and determined by the commission” and pursuant  
6           to the Commission Order No. 17-365, issued September 26, 2017, PGE is required to file a detailed  
7           depreciation study no later than December 31, 2022.

8           In compliance with ORS 757.140 and Order 17-365, on January 15, 2021, PGE filed with  
9           the Public Utility Commission of Oregon (“Commission”) the results of a detailed depreciation  
10          study (“2019 Depreciation Study”) of its utility properties as of December 31, 2019, which  
11          included proposed depreciation lives, curves, and net salvage rates (collectively the “parameters”)  
12          and depreciation rates for PGE’s generation, transmission, distribution, and general plant.

13          In July 2021, PGE filed an application for a general rate revision, Docket No. UE 394, for  
14          rates to be effective May 1, 2022. The depreciation rates that will be used in Docket No. UE 394  
15          will be the rates approved by the Commission in this docket.

16          PGE responded to numerous data requests from parties to this docket and a workshop was  
17          held on April 8, 2021. On May 3, 2021, the Alliance of Western Energy Consumers’ (AWEC)  
18          filed a motion to compel production of depreciation data in a native format as machine readable  
19          files. On June 10, 2021, the Commission granted AWEC’s motion to compel, and on  
20          June 24, 2021, PGE provided the data in Excel format to AWEC in compliance with the ALJ’s



1 ruling. On June 24 and 28, 2021, PGE, Staff, CUB and AWEC participated in Settlement  
 2 Conferences. The discussions resulted in a compromise settlement between PGE, Staff, and CUB  
 3 as set forth below. AWEC is not a party to this Stipulation.

4 PGE, Staff, and CUB request that the Commission issue an order in this docket  
 5 implementing the terms of this Stipulation. As a settlement of the issues in dispute, the Parties  
 6 have agreed to depreciation parameters and rates that would result in a decrease of approximately  
 7 \$710,000 on an annual basis from that originally proposed in this docket based on plant data at  
 8 December 31, 2019.

#### TERMS OF STIPULATION

9 1. This Stipulation resolves all issues in this docket.

10 2. The Parties agree that the changes shown in Exhibit “104 – Adjustment-  
 11 Parameter Comparison,” to this Stipulation should be made for the identified lives, curves,  
 12 net salvage value, and rates. With the exception of the parameters set forth in Exhibit “104  
 13 – Adjustment-Parameter Comparison,” the parameters should remain as filed in PGE’s  
 14 2019 Depreciation Study.

15 3. Exhibit “102, Table 1” to this Stipulation is a complete list of all PGE  
 16 depreciation parameters for all plant accounts by location.

17 4. Exhibit “103, Table 2” to this Stipulation provides a comparison of the  
 18 agreed upon net plant depreciation rates and expense to the current net plant depreciation  
 19 rates and expense

20 5. Consistent with the Commission’s order in Docket No. UM 1809  
 21 (Order 17-365), PGE used the Average Service Life depreciation procedure for the FERC  
 22 accounts related to generating facilities placed in service after December 31, 2012 and the  
 23 Integrated Operations Center. PGE will continue to use the straight-line, Equal Life Group  
 24 method for all other assets and accounts.

25 5. The Parties agreed that PGE will change the retirement date for the Colstrip coal

1 plant steam assets from December 31, 2027 as proposed in PGE's initial filing, to  
2 December 31, 2025.

3 6. The Parties agreed that PGE will change the expected average service life for AMI  
4 meters from 15 years to 20 years and survivor curve type from R3 to R2.5 for the 2019  
5 Depreciation Study.

6 7. The Parties agreed that PGE will change the expected average service life for wind  
7 resources in Account 344 from 35 years to 30 years for the 2019 Depreciation Study.  
8 For the 2019 Depreciation Study, PGE agreed to change Survivor Curves and Net Salvage  
9 Percentages for the accounts listed in Exhibit 103.

10 8. The table below provides the summary of overall reductions in PGE annual  
11 depreciation expenses, based on depreciable plant as of December 31, 2019, after updating  
12 the probable retirement date for the Colstrip coal plant, and the Survivor Curves and Net  
13 Salvage Rates for certain PGE accounts.

14 **Estimated Annual Depreciation Expense Comparison:**

Settlement	\$300,427,429
As Filed	\$301,136,948
Reduction	(\$709,519)

15 9. The revised depreciation parameters described above and set forth in Exhibit "102,  
16 Table 1" are reasonable and should be adopted.

17 10. The revised depreciation rates should be implemented on the effective date of  
18 PGE's pending general rate request in Docket UE 394, currently expected to be  
19 May 9, 2022.

20 11. No later than December 31, 2026, PGE shall file with the Commission another  
21 detailed depreciation study of its utility property. The depreciation parameters detailed in  
22 Stipulation Exhibit "102, Table 1" will be utilized until the effective date of the next  
23 depreciation study.

1        12.     The Stipulating Parties recommend and request that the Commission approve the  
2        adjustments described herein as appropriate and reasonable resolutions of all issues in this  
3        docket.

4        13.     The Stipulating Parties agree that this Stipulation is in the public interest and will  
5        result in rates that are fair, just and reasonable and, if approved, will meet the standard in  
6        ORS 756.040.

7        14.     The Stipulating Parties agree that this Stipulation represents a compromise in the  
8        positions of the parties. Without the written consent of all parties, evidence of conduct or  
9        statements, including but not limited to term sheets or other documents created solely for  
10       use in settlement conferences in this docket, are confidential and not admissible in the  
11       instant or any subsequent proceeding, unless independently discoverable or offered for  
12       other purposes allowed under ORS 40.190 Rule 408.

13       15.     The Stipulating Parties have negotiated this Comprehensive Settlement as an  
14       integrated document. If the Commission rejects all or any material part of this Stipulation,  
15       or adds any material condition to any final order that is not consistent with this Stipulation,  
16       each Stipulating Party reserves its right to: (i) withdraw from the Stipulation, upon written  
17       notice to the Commission and other Parties within five (5) business days of service of the  
18       final order that rejects this Stipulation, in whole or material part, or adds such material  
19       condition; (ii) pursuant to OAR 860-001-0350(9), to present evidence and argument on the  
20       record in support of the Stipulation, including the right to cross-examine witnesses,  
21       introduce evidence as deemed appropriate to respond fully to issues presented, and raise  
22       issues that are incorporated in the settlement embodied in this Stipulation; and (iii) pursuant  
23       to ORS 756.561 and OAR 860-001-0720, to seek rehearing or reconsideration or to appeal  
24       the Commission order under ORS 756.610. Nothing in this paragraph provides any Party  
25       the right to withdraw from this Stipulation as a result of the Commission's resolution of

1 issues that this Stipulation does not resolve.

2 16. This Stipulation will be offered into the record in this proceeding as evidence  
3 pursuant to OAR 860-01-0350(7). The Stipulating Parties agree to support this Stipulation  
4 throughout this proceeding and in any appeal, provide witnesses to support this Stipulation  
5 (if specifically required by the Commission), and recommend that the Commission issue  
6 an order adopting the settlements contained herein. The Stipulating Parties also agree to  
7 cooperate in drafting and submitting an explanatory brief and written testimony per  
8 OAR 860-001-0350(7), unless such requirement is waived. By entering into this  
9 Stipulation, no Stipulating Party shall be deemed to have approved, admitted or consented  
10 to the facts, principles, methods or theories employed by any other Party in arriving at the  
11 terms of this Stipulation. Except as provided in this Stipulation, no Stipulating Party shall  
12 be deemed to have agreed that any provision of this Stipulation is appropriate for resolving  
13 issues in any other proceeding.

14 17. This Stipulation may be signed in any number of counterparts, each of which will  
15 be an original for all purposes, but all of which taken together will constitute one and the  
16 same agreement.

PORTLAND GENERAL ELECTRIC COMPANY

By: Loiselle MacIntosh

Date: July 28, 2021

STAFF OF THE PUBLIC UTILITY COMMISSION OF OREGON

By: /s/Jill Goatcher

Date: July 28, 2021

OREGON CITIZENS' UTILITY BOARD

By: W. Phil P. Galt

Date: 7/27/2021

PORTLAND GENERAL ELECTRIC

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2019

ACCOUNT	PROBABLE RETIREMENT DATE	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2019	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	RATE (9)=(8)/(5)	COMPOSITE REMAINING LIFE (10)=(7)/(8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>STEAM PRODUCTION PLANT</b>									
COLSTRIP									
311.00 STRUCTURES AND IMPROVEMENTS	12-2025	90 - S1.5 *	(3)	117,227,390.05	102,160,808	18,583,404	3,120,626	2.66	6.0
312.00 BOILER PLANT EQUIPMENT	12-2025	65 - R3 *	(3)	256,228,932.64	191,047,771	72,868,030	12,310,145	4.80	5.9
COLSTRIP DECOMMISSIONING ACCRUAL					936,206	58,906,565	1,963,552		30.0
314.00 TURBOGENERATOR UNITS	12-2025	55 - R2 *	(3)	72,869,037.81	50,194,898	24,860,211	4,300,909	5.90	5.8
315.00 ACCESSORY ELECTRIC EQUIPMENT	12-2025	60 - R2.5 *	(3)	23,503,445.57	20,506,294	3,702,255	633,037	2.69	5.8
316.00 MISCELLANEOUS POWER PLANT EQUIPMENT	12-2025	60 - R1 *	(3)	6,495,791.35	5,411,803	1,278,862	220,830	3.40	5.8
TOTAL COLSTRIP				476,324,597.42	370,257,780	180,199,327	22,549,099	4.73	8.0
<b>TOTAL STEAM PRODUCTION PLANT</b>				<b>476,324,597.42</b>	<b>370,257,780</b>	<b>180,199,327</b>	<b>22,549,099</b>	<b>4.73</b>	<b>8.0</b>
<b>HYDRAULIC PRODUCTION PLANT</b>									
331.00 STRUCTURES AND IMPROVEMENTS									
FARADAY	06-2055	105 - R2.5 *	(42)	14,154,711.88	2,289,524	17,810,167	536,884	3.79	33.2
NORTH FORK	06-2055	105 - R2.5 *	(71)	9,115,427.21	4,305,433	11,281,948	337,205	3.70	33.5
OAK GROVE	06-2055	105 - R2.5 *	(36)	16,216,461.44	4,598,606	17,455,782	523,127	3.23	33.4
PELTON	06-2055	105 - R2.5 *	(89)	6,262,112.48	3,739,294	8,096,099	246,866	3.94	32.8
RIVER MILL	06-2055	105 - R2.5 *	(87)	7,516,466.06	2,429,094	11,626,698	353,211	4.70	32.9
ROUND BUTTE	06-2055	105 - R2.5 *	(84)	12,483,495.03	5,021,886	17,947,745	543,059	4.35	33.0
SULLIVAN	06-2035	105 - R2.5 *	(29)	18,320,848.20	5,503,339	18,130,555	1,189,618	6.49	15.2
TOTAL STRUCTURES AND IMPROVEMENTS				84,069,522.30	27,887,176	102,348,994	3,729,970	4.44	27.4
332.00 RESERVOIRS, DAMS AND WATERWAYS									
FARADAY	06-2055	105 - R3 *	(42)	32,440,589.78	16,545,932	29,519,705	872,857	2.69	33.8
NORTH FORK	06-2055	105 - R3 *	(71)	86,489,849.56	36,067,446	111,830,197	3,252,125	3.76	34.4
OAK GROVE	06-2055	105 - R3 *	(36)	25,816,529.00	22,416,293	12,694,186	370,715	1.44	34.2
PELTON	06-2055	105 - R3 *	(89)	10,714,550.15	11,103,286	9,147,214	286,356	2.67	31.9
RIVER MILL	06-2055	105 - R3 *	(87)	59,828,508.72	23,362,967	88,516,344	2,588,304	4.33	34.2
ROUND BUTTE	06-2055	105 - R3 *	(84)	111,243,011.26	49,211,426	155,475,715	4,567,336	4.11	34.0
SULLIVAN	06-2035	105 - R3 *	(29)	32,236,102.10	11,793,489	29,791,083	1,940,031	6.02	15.4
TOTAL RESERVOIRS, DAMS AND WATERWAYS				358,769,140.57	170,500,839	436,974,444	13,877,724	3.87	31.5
333.00 WATER WHEELS, TURBINES AND GENERATORS									
FARADAY	06-2055	95 - S0.5 *	(42)	6,752,411.58	2,871,859	6,716,565	218,146	3.23	30.8
NORTH FORK	06-2055	95 - S0.5 *	(71)	11,449,887.54	7,503,451	12,075,857	382,117	3.34	31.6
OAK GROVE	06-2055	95 - S0.5 *	(36)	15,786,077.84	4,455,616	17,013,450	530,889	3.36	32.0
PELTON	06-2055	95 - S0.5 *	(89)	4,414,741.45	5,383,540	2,960,321	98,596	2.23	30.0
RIVER MILL	06-2055	95 - S0.5 *	(87)	6,262,380.96	3,748,280	7,962,372	254,575	4.07	31.3
ROUND BUTTE	06-2055	95 - S0.5 *	(84)	22,023,848.01	10,977,773	29,546,107	928,179	4.21	31.8
SULLIVAN	06-2035	95 - S0.5 *	(29)	10,305,358.91	5,466,871	7,827,042	524,284	5.09	14.9
TOTAL WATER WHEELS, TURBINES AND GENERATORS				76,994,706.29	40,407,390	84,101,714	2,936,786	3.81	28.6
334.00 ACCESSORY ELECTRIC EQUIPMENT									
FARADAY	06-2055	60 - R2 *	(42)	2,737,869.85	1,527,591	2,360,184	86,631	3.16	27.2
NORTH FORK	06-2055	60 - R2 *	(71)	1,097,009.03	897,435	978,450	35,453	3.23	27.6
OAK GROVE	06-2055	60 - R2 *	(36)	7,152,968.88	1,553,435	8,174,603	290,324	4.06	28.2
PELTON	06-2055	60 - R2 *	(89)	11,305,626.59	1,359,158	20,008,476	689,476	6.10	29.0
RIVER MILL	06-2055	60 - R2 *	(87)	2,601,393.20	1,597,438	3,267,167	122,262	4.70	26.7
ROUND BUTTE	06-2055	60 - R2 *	(84)	2,521,196.48	1,147,649	3,491,353	124,459	4.94	28.1
SULLIVAN	06-2035	60 - R2 *	(29)	4,185,469.48	1,800,462	3,598,794	245,647	5.87	14.7
TOTAL ACCESSORY ELECTRIC EQUIPMENT				31,601,533.51	9,883,168	41,879,027	1,584,252	5.04	26.3

PORTLAND GENERAL ELECTRIC

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2019

		PROBABLE RETIREMENT DATE	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2019	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE	
	ACCOUNT							AMOUNT	RATE		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)	
335.00	MISCELLANEOUS PLANT EQUIPMENT										
	FARADAY	06-2055	55 - R0.5	*	(42)	257,629.32	147,345	218,489	10,553	4.10	20.7
	NORTH FORK	06-2055	55 - R0.5	*	(71)	876,758.20	477,667	1,021,590	43,822	5.00	23.3
	OAK GROVE	06-2055	55 - R0.5	*	(36)	294,816.36	92,558	308,392	12,794	4.34	24.1
	PELTON	06-2055	55 - R0.5	*	(89)	226,858.06	199,892	228,870	10,864	4.79	21.1
	RIVER MILL	06-2055	55 - R0.5	*	(87)	412,708.84	21,727	750,039	40,710	9.86	18.4
	ROUND BUTTE	06-2055	55 - R0.5	*	(84)	775,739.92	479,125	948,236	40,740	5.25	23.3
	SULLIVAN	06-2035	55 - R0.5	*	(29)	109,225.68	53,156	87,745	6,320	5.79	13.9
	TOTAL MISCELLANEOUS PLANT EQUIPMENT				2,953,736.38	1,471,470	3,563,361	165,803	5.61	21.5	
336.00	ROADS, RAILROADS, AND BRIDGES										
	FARADAY	06-2055	80 - R1	*	(42)	2,441,324.89	996,114	2,470,567	86,381	3.54	28.6
	NORTH FORK	06-2055	80 - R1	*	(71)	2,767,794.08	1,325,882	3,407,046	118,753	4.29	28.7
	OAK GROVE	06-2055	80 - R1	*	(36)	4,178,799.95	2,701,407	2,981,761	109,173	2.61	27.3
	PELTON	06-2055	80 - R1	*	(89)	3,843,152.28	1,352,128	5,911,430	222,148	5.78	26.6
	RIVER MILL	06-2055	80 - R1	*	(87)	421,796.26	199,671	589,088	19,983	4.74	29.5
	ROUND BUTTE	06-2055	80 - R1	*	(84)	1,739,032.08	756,215	2,443,604	85,547	4.92	28.6
	TOTAL ROADS, RAILROADS, AND BRIDGES				15,391,899.54	7,331,417	17,803,496	641,985	4.17	27.7	
	TOTAL HYDRAULIC PRODUCTION PLANT				569,780,538.59	257,481,460	686,671,036	22,946,520	4.03	29.9	
	OTHER PRODUCTION PLANT										
341.00	STRUCTURES AND IMPROVEMENTS										
	BEAVER - CT	06-2035	70 - R3	*	(7)	38,962,049.24	30,971,857	10,717,536	708,091	1.82	15.1
	COYOTE SPRINGS - CT	06-2040	70 - R3	*	(2)	11,638,830.41	7,862,508	4,009,099	203,607	1.75	19.7
	PORT WESTWARD - CT	06-2050	70 - R3	*	(3)	42,763,287.08	12,196,021	31,850,165	1,103,788	2.58	28.9
	PORT WESTWARD II	06-2060	70 - R3	*	(3)	42,352,598.36	4,513,910	39,109,266	1,000,996	2.36	39.1
	CARTY	06-2061	70 - R3	*	(4)	40,631,268.57	3,143,039	39,113,480	974,132	2.40	40.2
	KB PIPELINE	06-2035	70 - R3	*	(20)	36,850.67	0	44,221	2,885	7.83	15.3
	TOTAL STRUCTURES AND IMPROVEMENTS				176,384,884.33	58,687,335	124,843,767	3,993,499	2.26	31.3	
341.01	STRUCTURES AND IMPROVEMENTS - WIND										
	BIGLOW CANYON WIND FARM	06-2057	40 - R4	*	(5)	34,859,161.02	11,567,734	25,034,385	908,385	2.61	27.6
	TUCANNON RIVER WIND FARM	06-2064	40 - R4	*	(4)	18,859,060.20	2,411,603	17,201,820	499,990	2.65	34.4
	TOTAL STRUCTURES AND IMPROVEMENTS - WIND				53,718,221.22	13,979,337	42,236,205	1,408,375	2.62	30.0	
342.00	FUEL HOLDERS, PRODUCERS AND ACCESSORIES										
	BEAVER - CT	06-2035	50 - R3	*	(7)	63,762,993.96	50,040,567	18,185,837	1,271,464	1.99	14.3
	COYOTE SPRINGS - CT	06-2040	50 - R3	*	(2)	36,914,405.86	24,850,588	12,802,106	711,318	1.93	18.0
	PORT WESTWARD - CT	06-2050	50 - R3	*	(3)	10,367,528.61	5,528,025	5,150,529	192,458	1.86	26.8
	PORT WESTWARD II	06-2060	50 - R3	*	(3)	7,576,319.26	690,888	7,112,721	190,885	2.52	37.3
	CARTY	06-2061	50 - R3	*	(4)	7,601,494.92	565,753	7,339,802	193,231	2.54	38.0
	KB PIPELINE	06-2035	50 - R3	*	(15)	21,034,115.83	17,603,557	6,585,676	463,818	2.21	14.2
	TOTAL FUEL HOLDERS, PRODUCERS AND ACCESSORIES				147,256,858.44	99,279,378	57,176,671	3,023,174	2.05	18.9	
344.00	GENERATORS										
	BEAVER - CT	06-2035	45 - R1.5	*	(7)	119,584,617.99	77,376,472	50,579,069	3,716,435	3.11	13.6
	COYOTE SPRINGS - CT	06-2040	45 - R1.5	*	(2)	138,636,687.61	74,808,034	66,601,387	3,938,629	2.84	16.9
	PORT WESTWARD - CT	06-2050	45 - R1.5	*	(3)	208,909,668.88	68,410,712	146,766,247	6,466,715	3.10	22.7
	PORT WESTWARD II	06-2060	45 - R1.5	*	(3)	220,371,510.51	31,500,981	195,481,675	5,893,360	2.67	33.2
	CARTY	06-2061	45 - R1.5	*	(4)	392,107,417.22	37,691,801	370,099,913	10,791,269	2.75	34.3
	TOTAL GENERATORS				1,079,609,902.21	289,788,000	829,528,291	30,806,408	2.85	26.9	

PORTLAND GENERAL ELECTRIC

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2019

	ACCOUNT	PROBABLE RETIREMENT DATE	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2019	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	RATE (9)=(8)/(5)	COMPOSITE REMAINING LIFE (10)=(7)/(8)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
344.01	GENERATORS - WIND									
	BIGLOW CANYON WIND FARM	06-2057	30 - R3 *	(5)	874,997,026.50	344,073,054	574,673,824	32,404,575	3.70	17.7
	TUCANNON RIVER WIND FARM	06-2064	30 - R3 *	(4)	445,497,641.72	76,684,568	386,632,979	15,664,916	3.52	24.7
	TOTAL GENERATORS - WIND				1,320,494,668.22	420,757,622	961,306,803	48,069,491	3.64	20.0
344.02	GENERATORS - SOLAR		20 - L2.5	(2)	4,427,436.32	(244,508)	4,760,493	346,773	7.83	13.7
345.00	ACCESSORY ELECTRIC EQUIPMENT									
	DISPATCH GENERATION		50 - R2.5	(5)	13,996,916.68	3,186,823	11,509,940	326,895	2.34	35.2
	BEAVER - CT	06-2035	50 - R2.5 *	(7)	26,831,244.66	15,342,640	13,366,792	916,472	3.42	14.6
	COYOTE SPRINGS - CT	06-2040	50 - R2.5 *	(2)	12,041,369.00	8,572,579	3,709,617	209,893	1.74	17.7
	PORT WESTWARD - CT	06-2050	50 - R2.5 *	(3)	9,298,345.47	3,577,640	5,999,656	234,506	2.52	25.6
	PORT WESTWARD II	06-2060	50 - R2.5 *	(3)	17,167,891.17	1,928,647	15,754,281	438,123	2.55	36.0
	TOTAL ACCESSORY ELECTRIC EQUIPMENT				79,335,766.98	32,608,329	50,340,286	2,125,889	2.68	23.7
345.01	ACCESSORY ELECTRIC EQUIPMENT - WIND									
	BIGLOW CANYON WIND FARM	06-2057	30 - S2.5 *	(5)	27,268,897.82	9,796,105	18,836,238	1,035,352	3.80	18.2
	TUCANNON RIVER WIND FARM	06-2064	30 - S2.5 *	(4)	14,532,301.12	2,317,913	12,795,680	520,313	3.58	24.6
	TOTAL ACCESSORY ELECTRIC EQUIPMENT - WIND				41,801,198.94	12,114,018	31,631,918	1,555,665	3.72	20.3
346.00	MISCELLANEOUS PLANT EQUIPMENT									
	BEAVER - CT	06-2035	60 - R2.5 *	(7)	4,529,017.54	3,781,466	1,064,583	72,944	1.61	14.6
	COYOTE SPRINGS - CT	06-2040	60 - R2.5 *	(2)	3,194,615.77	1,603,386	1,655,122	86,192	2.70	19.2
	PORT WESTWARD - CT	06-2050	60 - R2.5 *	(3)	3,225,810.51	995,116	2,327,469	85,347	2.65	27.3
	PORT WESTWARD II	06-2060	60 - R2.5 *	(3)	3,200,074.57	383,087	2,912,990	77,535	2.42	37.6
	CARTY	06-2061	60 - R2.5 *	(4)	27,694,943.99	2,238,095	26,564,647	685,920	2.48	38.7
	KB PIPELINE	06-2035	60 - R2.5 *	(5)	126,138.21	74,949	57,496	3,902	3.09	14.7
	TOTAL MISCELLANEOUS PLANT EQUIPMENT				41,970,600.59	9,076,099	34,582,307	1,011,840	2.41	34.2
346.01	MISCELLANEOUS PLANT EQUIPMENT - WIND									
	BIGLOW CANYON WIND FARM	06-2057	45 - R2.5 *	(5)	1,575,389.08	425,988	1,228,171	43,657	2.77	28.1
	TUCANNON RIVER WIND FARM	06-2064	45 - R2.5 *	(4)	534,993.90	72,067	484,327	13,324	2.49	36.3
	TOTAL ACCESSORY ELECTRIC EQUIPMENT - WIND				2,110,382.98	498,055	1,712,498	56,981	2.70	30.1
TOTAL OTHER PRODUCTION PLANT					2,947,109,920.23	936,543,665	2,138,119,239	92,398,095	3.14	23.1
TOTAL PRODUCTION					3,993,215,056.24	1,564,282,905	3,004,989,602	137,893,714	3.45	
TRANSMISSION PLANT										
352.00	STRUCTURES AND IMPROVEMENTS		70 - R2.5	(20)	30,274,033.29	10,495,308	25,833,532	561,186	1.85	46.0
353.00	STATION EQUIPMENT		62 - R2	(20)	491,807,390.44	152,461,350	437,707,519	10,846,742	2.21	40.4
354.00	TOWERS AND FIXTURES		70 - S3	(10)	48,824,327.14	28,284,490	25,422,270	907,266	1.86	28.0
355.00	POLES AND FIXTURES		52 - S0	(50)	83,364,422.45	48,312,653	76,733,981	2,489,182	2.99	30.8
356.00	OVERHEAD CONDUCTORS AND DEVICES		65 - R2.5	(20)	169,438,107.06	118,529,590	84,796,138	1,814,594	1.07	46.7
359.00	ROADS AND TRAILS		65 - R3	0	286,332.32	182,621	103,711	3,553	1.24	29.2
TOTAL TRANSMISSION PLANT					823,994,612.70	358,266,012	650,597,151	16,622,523	2.02	39.1
DISTRIBUTION PLANT										
361.00	STRUCTURES AND IMPROVEMENTS		70 - R2	(25)	46,326,091.45	18,502,597	39,405,017	906,387	1.96	43.5
362.00	STATION EQUIPMENT		59 - S0	(20)	559,680,234.50	172,063,320	499,552,961	14,608,815	2.61	34.2
363.00	STORAGE BATTERY		15 - L3	(5)	393,190.82	153,981	258,869	34,830	8.86	7.4
364.00	POLES, TOWERS AND FIXTURES		50 - R0.5	(45)	420,065,793.24	251,862,062	357,233,338	13,769,129	3.28	25.9
365.00	OVERHEAD CONDUCTORS AND DEVICES		60 - R1	(65)	664,059,808.73	423,135,365	672,563,319	19,405,228	2.92	34.7
366.00	UNDERGROUND CONDUIT		85 - R4	(10)	29,515,628.47	10,876,607	21,590,584	334,458	1.13	64.6



PORTLAND GENERAL ELECTRIC

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2019

ACCOUNT	PROBABLE RETIREMENT DATE	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2019	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	RATE (9)=(8)/(5)	COMPOSITE REMAINING LIFE (10)=(7)/(8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
367.00 UNDERGROUND CONDUCTORS AND DEVICES		65 - S1	(55)	907,226,216.69	525,453,052	880,747,584	20,412,932	2.25	43.1
368.00 LINE TRANSFORMERS		52 - R2.5	(10)	469,865,715.01	215,375,023	301,477,264	8,588,138	1.83	35.1
369.01 SERVICES - OVERHEAD		55 - R1.5	(30)	81,320,051.24	47,251,341	58,464,726	1,744,137	2.14	33.5
369.03 SERVICES - UNDERGROUND		55 - R4	(30)	414,063,514.45	299,302,891	238,979,678	5,850,994	1.41	40.8
370.00 METERS		28 - R2	(2)	9,657,143.69	1,467,083	8,383,204	535,375	5.54	15.7
370.01 METERS - AMI		20 - R2.5	(2)	168,652,947.59	70,653,254	101,372,753	8,365,697	4.96	12.1
370.02 METERS - RETAINED		16 - L0.5	(2)	6,976,674.60	5,044,542	2,071,666	302,401	4.33	6.9
371.00 INSTALLATIONS ON CUSTOMERS' PREMISES		30 - R4	0	1,749,713.13	304,152	1,445,561	58,028	3.32	24.9
373.01 CIRCUITS - OTHER		40 - L2.5	(25)	25,077,570.66	19,265,150	12,081,813	528,497	2.11	22.9
373.02 FIXTURES, ORNAMENTAL POSTS AND DEVICES		28 - L1	(25)	83,684,633.42	38,911,879	65,693,913	3,953,547	4.72	16.6
373.07 SENTINEL LIGHTING EQUIPMENT		30 - L0.5	(25)	8,491,048.00	10,562,085	51,725	3,198	0.04	16.2
<b>TOTAL DISTRIBUTION PLANT</b>				<b>3,896,805,975.69</b>	<b>2,110,184,384</b>	<b>3,261,373,975</b>	<b>99,401,791</b>	<b>2.55</b>	<b>32.8</b>
<b>GENERAL PLANT</b>									
390.00 STRUCTURES AND IMPROVEMENTS		42 - R0.5	(5)	120,715,526.93	38,410,129	88,341,174	3,845,938	3.19	23.0
390.10 STRUCTURES AND IMPROVEMENTS - LEASE									
CSS	12-2028	SQUARE *	0	16,087.41	14,951	1,136	127	0.79	8.9
EASTPORT	12-2020	SQUARE *	0	58,754.96	58,755	0	0	-	-
ERC TUALATIN	12-2028	SQUARE *	0	414,255.32	388,782	25,473	2,830	0.68	9.0
HILLSBORO	12-2020	SQUARE *	0	93,336.06	93,336	0	0	-	-
SALEM	12-2020	SQUARE *	0	13,580.71	13,581	0	0	-	-
WILSONVILLE	12-2021	SQUARE *	0	272,342.13	249,669	22,673	11,335	4.16	2.0
WTC	09-2043	SQUARE *	0	24,503,645.04	9,064,675	15,438,970	650,064	2.65	23.7
<b>TOTAL STRUCTURES AND IMPROVEMENTS</b>				<b>25,372,001.63</b>	<b>9,883,749</b>	<b>15,488,252</b>	<b>664,356</b>	<b>2.62</b>	<b>23.3</b>
OFFICE FURNITURE AND EQUIPMENT									
391.10 FURNITURE AND EQUIPMENT		15 - SQ	0	27,575,296.84	11,495,053	16,080,244	1,622,109	5.88	9.9
391.20 COMPUTERS AND EQUIPMENT		5 - SQ	0	132,932,472.59	71,660,244	61,272,229	22,880,453	17.21	2.7
<b>TOTAL OFFICE FURNITURE AND EQUIPMENT</b>				<b>160,507,769.43</b>	<b>83,155,297</b>	<b>77,352,473</b>	<b>24,502,562</b>	<b>15.27</b>	<b>3.2</b>
TRANSPORTATION EQUIPMENT									
392.04 HEAVY DUTY TRUCKS		20 - S0	15	26,034,187.32	8,901,768	13,227,291	1,133,927	4.36	11.7
392.05 MEDIUM DUTY TRUCKS		15 - S2	15	27,983,974.27	12,134,378	11,652,000	1,007,460	3.60	11.6
392.06 LIGHT DUTY TRUCKS		13 - L2.5	15	13,283,121.90	5,240,003	6,050,651	725,094	5.46	8.3
392.08 TRAILERS		30 - S0	15	6,347,528.20	3,043,068	2,352,331	136,945	2.16	17.2
392.09 AUTOS		12 - S1.5	15	2,043,598.35	978,168	758,891	96,225	4.71	7.9
392.10 HELICOPTER		20 - S4	15	2,764,850.25	1,270,504	1,079,619	125,178	4.53	8.6
<b>TOTAL TRANSPORTATION EQUIPMENT</b>				<b>78,457,260.29</b>	<b>31,567,889</b>	<b>35,120,783</b>	<b>3,224,829</b>	<b>4.11</b>	<b>10.9</b>
393.00 STORES EQUIPMENT		20 - SQ	0	3,877,884.26	1,478,661	2,399,223	186,677	4.81	12.9
394.00 TOOLS, SHOP AND GARAGE EQUIPMENT		20 - SQ	0	23,093,382.44	7,656,948	15,436,434	989,883	4.29	15.6
395.00 LABORATORY EQUIPMENT		15 - SQ	0	8,901,073.61	5,143,832	3,757,242	704,398	7.91	5.3
POWER OPERATED EQUIPMENT									
396.01 MAN LIFT		14 - S1.5	10	29,181,884.43	8,557,908	17,705,788	2,126,759	7.29	8.3
396.02 DIGGER		15 - S2	10	3,512,905.88	1,846,351	1,315,264	260,499	7.42	5.0
396.03 CRANE		23 - S2.5	10	4,882,319.58	2,957,218	1,436,870	104,278	2.14	13.8
396.07 CONSTRUCTION EQUIPMENT		20 - L2	10	7,053,658.20	4,139,890	2,208,402	194,594	2.76	11.3
<b>TOTAL POWER OPERATED EQUIPMENT</b>				<b>44,630,768.09</b>	<b>17,501,367</b>	<b>22,666,324</b>	<b>2,686,130</b>	<b>6.02</b>	<b>8.4</b>
COMMUNICATION EQUIPMENT									
397.01 LINE EQUIPMENT		15 - SQ	0	21,148,863.01	4,353,078	16,795,785	1,436,883	6.79	11.7

PORTLAND GENERAL ELECTRIC

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2019

ACCOUNT		PROBABLE RETIREMENT DATE	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2019	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	RATE (9)=(8)/(5)	COMPOSITE REMAINING LIFE (10)=(7)/(8)
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
397.03	RADIO, MICROWAVE AND TERMINAL EQUIPMENT		15 - SQ	0	154,202,962.59	75,242,516	78,960,447	7,976,799	5.17	9.9
397.06	MOBILE RADIO EQUIPMENT		15 - SQ	0	2,987,372.42	397,615	2,589,757	209,578	7.02	12.4
397.07	TELEPHONE EQUIPMENT		15 - SQ	0	889,801.05	755,880	133,921	17,128	1.92	7.8
	TOTAL COMMUNICATION EQUIPMENT				179,228,999.07	80,749,089	98,479,910	9,640,388	5.38	10.2
398.00	MISCELLANEOUS EQUIPMENT		20 - SQ	0	1,295,281.80	187,686	1,107,596	64,240	4.96	17.2
	<b>TOTAL GENERAL PLANT</b>				<b>646,079,947.55</b>	<b>275,734,647</b>	<b>360,149,411</b>	<b>46,509,401</b>	<b>7.20</b>	<b>7.7</b>
	<b>TOTAL DEPRECIABLE PLANT</b>				<b>9,360,095,592.18</b>	<b>4,308,467,948</b>	<b>7,277,110,139</b>	<b>300,427,429</b>	<b>3.21</b>	<b>24.2</b>
<b>NONDEPRECIABLE / ACCOUNTS NOT STUDIED</b>										
	BOARDMAN									
311.00	STRUCTURES AND IMPROVEMENTS				141,673,188.64	103,571,464				
312.00	BOILER PLANT EQUIPMENT				348,354,026.03	301,878,080				
312.01	RAIL CARS				9,727,440.25	9,691,114				
314.00	TURBOGENERATOR UNITS				115,881,281.67	83,273,696				
315.00	ACCESSORY ELECTRIC EQUIPMENT				31,763,936.00	23,145,963				
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT				8,520,340.99	6,068,922				
353.00	STATION EQUIPMENT - BOARDMAN				7,964,879.32	5,752,880				
	TOTAL BOARDMAN				663,885,092.90	533,382,119				
302.00	FRANCHISES AND CONSENTS				195,264,817.73	77,431,013				
303.00	MISCELLANEOUS INTANGIBLE PLANT				563,164,236.70	288,693,036				
310.00	LAND AND LAND RIGHTS				4,161,624.80					
317.00	STEAM PRODUCTION PLANT - ARO				75,980,569.68	43,595,692				
330.00	LAND AND LAND RIGHTS				6,053,902.82	1,512,364				
337.00	HYDRAULIC PRODUCTION PLANT - ARO				5,127.87	3,374				
340.00	LAND AND LAND RIGHTS				26,960,038.01					
347.00	OTHER PRODUCTION PLANT - ARO				22,576,353.45	2,370,720				
350.00	LAND AND LAND RIGHTS				17,269,684.75	(379,614)				
359.10	TRANSMISSION PLANT - ARO				34,108.66	34,086				
360.00	LAND AND LAND RIGHTS				19,294,221.61	(1,625,965)				
374.00	DISTRIBUTION PLANT - ARO				476,732.46	398,934				
389.00	LAND AND LAND RIGHTS				9,622,354.56	(630,238)				
399.00	GENERAL PLANT - ARO				65,288.96	64,564				
	<b>TOTAL NONDEPRECIABLE / NOT STUDIED</b>				<b>1,604,814,154.96</b>	<b>944,850,085</b>				
	<b>TOTAL ELECTRIC PLANT</b>				<b>10,964,909,747.14</b>	<b>5,253,318,033</b>	<b>7,277,110,139</b>	<b>300,427,429</b>		

\* CURVE SHOWN IS INTERIM SURVIVOR CURVE. EACH FACILITY IN THE ACCOUNT IS ASSIGNED AN INDIVIDUAL PROBABLE RETIREMENT YEAR.

NOTES:

ACCRUAL RATES FOR FACILITIES TO BE PLACED IN SERVICE AFTER DECEMBER 31, 2019 ARE AS FOLLOWS.

		RATE	SURVIVOR CURVE	NET SALVAGE PERCENT
<b>WHEATRIDGE WIND</b>				
341.00	3.57	40 - R4	*	(3)
344.00	3.93	30 - R3	*	(3)
345.00	3.94	30 - S2.5	*	(3)
346.00	3.74	40 - R2.5	*	(3)
<b>INTEGRATED OPERATIONS CENTER</b>				
390.00	2.12	60 - R1.5	*	(5)

PORTLAND GENERAL ELECTRIC

TABLE 2. COMPARISON OF PROPOSED NET PLANT ACCRUALS AND PRO FORMA ACCRUALS  
AS OF DECEMBER 31, 2019

		ORIGINAL COST	BOOK	NET PLANT		CURRENT	CURRENT	CURRENT	
ACCOUNT		AS OF	DEPRECIATION	FUTURE	ANNUAL ACCRUAL	COMPANY	NET PLANT	PRO FORMA	ACCRUAL
		DECEMBER 31, 2019	RESERVE	ACCRUALS	AMOUNT	NET PLANT	RATE	ACCRUAL	DIFFERENCE
(1)		(2)	(3)	(4)	(5)	(7)	(8)	(9)=(7)x(8)	(10)=(5)-(9)
STEAM PRODUCTION PLANT									
	COLSTRIP								
311.00	STRUCTURES AND IMPROVEMENTS	117,227,390.05	102,160,808	18,583,404	3,120,626	16.79	19,755,678	6.92	1,367,093
312.00	BOILER PLANT EQUIPMENT	256,228,932.64	191,047,771	72,868,030	12,310,145	16.89	75,430,319	6.89	5,197,149
	COLSTRIP DECOMMISSIONING ACCRUAL		936,206	58,906,565	1,963,552	-			1,963,552
314.00	TURBOGENERATOR UNITS	72,869,037.81	50,194,898	24,860,211	4,300,909	17.30	25,588,901	7.27	1,860,313
315.00	ACCESSORY ELECTRIC EQUIPMENT	23,503,445.57	20,506,294	3,702,255	633,037	17.10	3,937,289	7.25	285,453
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	6,495,791.35	5,411,803	1,278,862	220,830	17.27	1,343,820	7.30	98,099
	TOTAL COLSTRIP	476,324,597.42	370,257,780	180,199,327	22,549,099		126,056,007		8,808,107
	TOTAL STEAM PRODUCTION PLANT	476,324,597.42	370,257,780	180,199,327	22,549,099		126,056,007		8,808,107
HYDRAULIC PRODUCTION PLANT									
331.00	STRUCTURES AND IMPROVEMENTS								
	FARADAY	14,154,711.88	2,289,524	17,810,167	536,884	3.01	20,074,921	2.72	546,038
	NORTH FORK	9,115,427.21	4,305,433	11,281,948	337,205	2.99	11,920,027	2.71	323,033
	OAK GROVE	16,216,461.44	4,598,606	17,455,782	523,127	3.00	20,861,238	2.76	575,770
	PELTON	6,262,112.48	3,739,294	8,096,099	246,866	3.05	13,544,136	2.75	372,464
	RIVER MILL	7,516,466.06	2,429,094	11,626,698	353,211	3.04	12,679,003	2.86	362,619
	ROUND BUTTE	12,483,495.03	5,021,886	17,947,745	543,059	3.03	17,198,735	2.73	469,525
	SULLIVAN	18,320,848.20	5,503,339	18,130,555	1,189,618	6.56	18,496,972	5.25	971,091
	TOTAL STRUCTURES AND IMPROVEMENTS	84,069,522.30	27,887,176	102,348,994	3,729,970		114,775,032		3,620,540
332.00	RESERVOIRS, DAMS AND WATERWAYS								
	FARADAY	32,440,589.78	16,545,932	29,519,705	872,857	2.96	34,710,200	2.72	944,117
	NORTH FORK	86,489,849.56	36,067,446	111,830,197	3,252,125	2.91	117,884,486	2.65	3,123,939
	OAK GROVE	25,816,529.00	22,416,293	12,694,186	370,715	2.92	18,115,658	2.71	490,934
	PELTON	10,714,550.15	11,103,286	9,147,214	286,356	3.13	18,468,872	2.87	530,057
	RIVER MILL	59,828,508.72	23,362,967	88,516,344	2,588,304	2.92	96,892,336	2.65	2,567,647
	ROUND BUTTE	111,243,011.26	49,211,426	155,475,715	4,567,336	2.94	148,801,134	2.65	3,943,230
	SULLIVAN	32,236,102.10	11,793,489	29,791,083	1,940,031	6.51	30,435,805	5.21	1,585,705
	TOTAL RESERVOIRS, DAMS AND WATERWAYS	358,769,140.57	170,500,839	436,974,444	13,877,724		465,308,491		13,185,630
333.00	WATER WHEELS, TURBINES AND GENERATORS								
	FARADAY	6,752,411.58	2,871,859	6,716,565	218,146	3.25	7,796,951	2.89	225,332
	NORTH FORK	11,449,887.54	7,503,451	12,075,857	382,117	3.16	12,877,349	3.02	388,896
	OAK GROVE	15,786,077.84	4,455,616	17,013,450	530,889	3.12	20,328,526	2.90	589,527
	PELTON	4,414,741.45	5,383,540	2,960,321	98,596	3.33	6,801,146	3.24	220,357
	RIVER MILL	6,262,380.96	3,748,280	7,962,372	254,575	3.20	8,839,106	2.88	254,566
	ROUND BUTTE	22,023,848.01	10,977,773	29,546,107	928,179	3.14	28,224,676	2.76	779,001
	SULLIVAN	10,305,358.91	5,466,871	7,827,042	524,284	6.70	8,033,149	5.32	427,364
	TOTAL WATER WHEELS, TURBINES AND GENERATORS	76,994,706.29	40,407,390	84,101,714	2,936,786		92,900,903		2,885,043
334.00	ACCESSORY ELECTRIC EQUIPMENT								
	FARADAY	2,737,869.85	1,527,591	2,360,184	86,631	3.67	2,798,243	3.33	93,181
	NORTH FORK	1,097,009.03	897,435	978,450	35,453	3.62	1,055,241	3.31	34,928
	OAK GROVE	7,152,968.88	1,553,435	8,174,603	290,324	3.55	9,676,726	3.48	336,750
	PELTON	11,305,626.59	1,359,158	20,008,476	689,476	3.45	29,844,371	3.25	969,942
	RIVER MILL	2,601,393.20	1,597,438	3,267,167	122,262	3.74	3,631,362	3.29	119,472
	ROUND BUTTE	2,521,196.48	1,147,649	3,491,353	124,459	3.56	3,340,081	3.19	106,549
	SULLIVAN	4,185,469.48	1,800,462	3,598,794	245,647	6.83	3,682,503	5.43	199,960
	TOTAL ACCESSORY ELECTRIC EQUIPMENT	31,601,533.51	9,883,168	41,879,027	1,594,252		54,028,527		1,860,782

PORTLAND GENERAL ELECTRIC

TABLE 2. COMPARISON OF PROPOSED NET PLANT ACCRUALS AND PRO FORMA ACCRUALS  
AS OF DECEMBER 31, 2019

ACCOUNT (1)	ORIGINAL COST AS OF DECEMBER 31, 2019 (2)	BOOK DEPRECIATION RESERVE (3)	FUTURE ACCRUALS (4)	NET PLANT ANNUAL ACCRUAL AMOUNT RATE (5) (6)=(5)/(4)		CURRENT COMPANY NET PLANT (7)	CURRENT NET PLANT RATE (8)	CURRENT PRO FORMA ACCRUAL (9)=(7)x(8)	ACCRUAL DIFFERENCE (10)=(5)-(9)
335.00 MISCELLANEOUS PLANT EQUIPMENT									
FARADAY	257,629.32	147,345	218,489	10,553	4.83	259,709	4.53	11,765	(1,212)
NORTH FORK	876,758.20	477,667	1,021,590	43,822	4.29	1,082,963	4.06	43,968	(146)
OAK GROVE	294,816.36	92,558	308,392	12,794	4.15	370,304	4.21	15,590	(2,796)
PELTON	226,858.06	199,892	228,870	10,864	4.75	426,236	4.65	19,820	(8,956)
RIVER MILL	412,708.84	21,727	750,039	40,710	5.43	807,818	3.71	29,970	10,740
ROUND BUTTE	775,739.92	479,125	948,236	40,740	4.30	901,692	4.06	36,609	4,131
SULLIVAN	109,225.68	53,156	87,745	6,320	7.20	89,930	6.00	5,396	924
TOTAL MISCELLANEOUS PLANT EQUIPMENT	2,953,736.38	1,471,470	3,563,361	165,803		3,938,652		163,117	2,686
336.00 ROADS, RAILROADS, AND BRIDGES									
FARADAY	2,441,324.89	996,114	2,470,567	86,381	3.50	2,861,179	3.20	91,558	(5,177)
NORTH FORK	2,767,794.08	1,325,882	3,407,046	118,753	3.49	3,600,791	3.29	118,466	287
OAK GROVE	4,178,799.95	2,701,407	2,981,761	109,173	3.66	3,859,309	4.19	161,705	(52,532)
PELTON	3,843,152.28	1,352,128	5,911,430	222,148	3.76	9,254,972	3.20	296,159	(74,011)
RIVER MILL	421,796.26	199,671	589,088	19,983	3.39	648,139	3.11	20,157	(174)
ROUND BUTTE	1,739,032.08	756,215	2,443,604	85,547	3.50	2,339,262	3.36	78,599	6,948
TOTAL ROADS, RAILROADS, AND BRIDGES	15,391,899.54	7,331,417	17,803,496	641,985		22,563,652		766,644	(124,659)
<b>TOTAL HYDRAULIC PRODUCTION PLANT</b>	<b>569,780,538.59</b>	<b>257,481,460</b>	<b>686,671,036</b>	<b>22,946,520</b>		<b>753,515,257</b>		<b>22,481,757</b>	<b>464,763</b>
<b>OTHER PRODUCTION PLANT</b>									
341.00 STRUCTURES AND IMPROVEMENTS									
BEAVER - CT	38,962,049.24	30,971,857	10,717,536	708,091	6.61	10,327,915	7.05	728,118	(20,027)
COYOTE SPRINGS - CT	11,638,830.41	7,862,508	4,009,099	203,607	5.08	4,358,264	4.29	186,970	16,637
PORT WESTWARD - CT	42,763,287.08	12,196,021	31,850,165	1,103,788	3.47	33,560,696	3.08	1,033,669	70,119
PORT WESTWARD II	42,352,598.36	4,513,910	39,109,266	1,000,996	2.56	40,803,370	2.33	950,719	50,277
CARTY	40,631,268.57	3,143,039	39,113,480	974,132	2.49	40,332,418	2.29	923,612	50,520
KB PIPELINE	36,850.67	0	44,221	2,885	6.52	44,221	1.71	756	2,129
TOTAL STRUCTURES AND IMPROVEMENTS	176,384,884.33	58,687,335	124,843,767	3,993,499		129,426,884		3,823,844	169,655
341.01 STRUCTURES AND IMPROVEMENTS - WIND									
BIGLOW CANYON WIND FARM	34,859,161.02	11,567,734	25,034,385	908,385	3.63	26,080,160	3.22	839,781	68,604
TUCANNON RIVER WIND FARM	18,859,060.20	2,411,603	17,201,820	499,990	2.91	17,767,591	2.61	463,734	36,256
TOTAL STRUCTURES AND IMPROVEMENTS - WIND	53,718,221.22	13,979,337	42,236,205	1,408,375		43,847,751		1,303,515	104,860
342.00 FUEL HOLDERS, PRODUCERS AND ACCESSORIES									
BEAVER - CT	63,762,993.96	50,040,567	18,185,837	1,271,464	6.99	17,548,207	7.76	1,361,741	(90,277)
COYOTE SPRINGS - CT	36,914,405.86	24,850,588	12,802,106	711,318	5.56	13,909,538	4.69	652,357	58,961
PORT WESTWARD - CT	10,367,528.61	5,528,025	5,150,529	192,458	3.74	5,565,231	3.35	186,435	6,023
PORT WESTWARD II	7,576,319.26	690,888	7,112,721	190,885	2.68	7,415,774	2.46	182,428	8,457
CARTY	7,601,494.92	565,753	7,339,802	193,231	2.63	7,567,847	2.44	184,655	8,576
KB PIPELINE	21,034,115.83	17,603,557	6,585,676	463,818	7.04	5,533,970	7.29	403,426	60,392
TOTAL FUEL HOLDERS, PRODUCERS AND ACCESSORIES	147,256,858.44	99,279,378	57,176,671	3,023,174		57,540,567		2,971,043	52,131
344.00 GENERATORS									
BEAVER - CT	119,584,617.99	77,376,472	50,579,069	3,716,435	7.35	49,383,223	7.83	3,866,706	(150,271)
COYOTE SPRINGS - CT	138,636,687.61	74,808,034	66,601,387	3,938,629	5.91	70,760,488	5.31	3,757,382	181,247
PORT WESTWARD - CT	208,909,668.88	68,410,712	146,766,247	6,466,715	4.41	155,122,634	4.21	6,530,663	(63,948)
PORT WESTWARD II	220,371,510.51	31,500,981	195,481,675	5,893,360	3.01	204,296,535	2.82	5,761,162	132,198
CARTY	392,107,417.22	37,691,801	370,099,913	10,791,269	2.92	381,863,135	2.82	10,768,540	22,729
TOTAL GENERATORS	1,079,609,902.21	289,788,000	829,528,291	30,806,408		861,426,015		30,684,454	121,954
344.01 GENERATORS - WIND									
BIGLOW CANYON WIND FARM	874,997,026.50	344,073,054	574,673,824	32,404,575	5.64	600,923,735	4.84	29,084,709	3,319,866
TUCANNON RIVER WIND FARM	445,497,641.72	76,684,568	386,632,979	15,664,916	4.05	399,997,909	3.51	14,039,927	1,624,989
TOTAL GENERATORS - WIND	1,320,494,668.22	420,757,622	961,306,803	48,069,491		1,000,921,644		43,124,635	4,944,856

PORTLAND GENERAL ELECTRIC

TABLE 2. COMPARISON OF PROPOSED NET PLANT ACCRUALS AND PRO FORMA ACCRUALS  
AS OF DECEMBER 31, 2019

	ACCOUNT (1)	ORIGINAL COST AS OF DECEMBER 31, 2019 (2)	BOOK DEPRECIATION RESERVE (3)	FUTURE ACCRUALS (4)	NET PLANT ANNUAL ACCRUAL AMOUNT RATE (5) (6)=(5)/(4)		CURRENT COMPANY NET PLANT (7)	CURRENT NET PLANT RATE (8)	CURRENT PRO FORMA ACCRUAL (9)=(7)x(8)	ACCRUAL DIFFERENCE (10)=(5)-(9)
344.02	GENERATORS - SOLAR	4,427,436.32	(244,508)	4,760,493	346,773	7.28	4,760,493	5.13	244,213	102,560
345.00	ACCESSORY ELECTRIC EQUIPMENT									
	DISPATCH GENERATION	13,996,916.68	3,186,823	11,509,940	326,895	2.84	11,509,940	3.07	353,355	(26,460)
	BEAVER - CT	26,831,244.66	15,342,640	13,366,792	916,472	6.86	13,098,479	7.54	987,625	(71,153)
	COYOTE SPRINGS - CT	12,041,369.00	8,572,579	3,709,617	209,893	5.66	4,070,858	5.08	206,800	3,093
	PORT WESTWARD - CT	9,298,345.47	3,577,640	5,999,656	234,506	3.91	6,371,590	3.68	234,475	31
	PORT WESTWARD II	17,167,891.17	1,928,647	15,754,281	438,123	2.78	16,440,997	2.61	429,110	9,013
	TOTAL ACCESSORY ELECTRIC EQUIPMENT	79,335,766.98	32,608,329	50,340,286	2,125,889		51,491,864		2,211,365	(85,476)
345.01	ACCESSORY ELECTRIC EQUIPMENT - WIND									
	BIGLOW CANYON WIND FARM	27,268,897.82	9,796,105	18,836,238	1,035,352	5.50	19,654,305	4.85	953,234	82,118
	TUCANNON RIVER WIND FARM	14,532,301.12	2,317,913	12,795,680	520,313	4.07	13,231,649	3.50	463,108	57,205
	TOTAL ACCESSORY ELECTRIC EQUIPMENT - WIND	41,801,198.94	12,114,018	31,631,918	1,555,665		32,885,954		1,416,342	139,323
346.00	MISCELLANEOUS PLANT EQUIPMENT									
	BEAVER - CT	4,529,017.54	3,781,466	1,064,583	72,944	6.85	1,019,293	7.32	74,612	(1,668)
	COYOTE SPRINGS - CT	3,194,615.77	1,603,386	1,655,122	86,192	5.21	1,750,961	4.53	79,319	6,873
	PORT WESTWARD - CT	3,225,810.51	995,116	2,327,469	85,347	3.67	2,456,501	3.38	83,030	2,317
	PORT WESTWARD II	3,200,074.57	383,087	2,912,990	77,535	2.66	3,040,993	2.46	74,808	2,727
	CARTY	27,694,943.99	2,238,095	26,564,647	685,920	2.58	27,395,495	2.42	662,971	22,949
	KB PIPELINE	126,138.21	74,949	57,496	3,902	6.79	57,496	7.29	4,191	(289)
	TOTAL MISCELLANEOUS PLANT EQUIPMENT	41,970,600.59	9,076,099	34,582,307	1,011,840		35,720,739		978,931	32,909
346.01	MISCELLANEOUS PLANT EQUIPMENT - WIND									
	BIGLOW CANYON WIND FARM	1,575,389.08	425,988	1,228,171	43,657	3.55	1,275,432	3.58	45,660	(2,003)
	TUCANNON RIVER WIND FARM	534,993.90	72,067	484,327	13,324	2.75	500,376	2.69	13,460	(136)
	TOTAL ACCESSORY ELECTRIC EQUIPMENT - WIND	2,110,382.98	498,055	1,712,498	56,981		1,775,808		59,121	(2,140)
	<b>TOTAL OTHER PRODUCTION PLANT</b>	<b>2,947,109,920.23</b>	<b>936,543,665</b>	<b>2,138,119,239</b>	<b>92,398,095</b>		<b>2,219,797,719</b>		<b>86,817,463</b>	<b>5,580,632</b>
	<b>TOTAL PRODUCTION</b>	<b>3,993,215,056.24</b>	<b>1,564,282,905</b>	<b>3,004,989,602</b>	<b>137,893,714</b>		<b>3,099,368,983</b>		<b>118,107,328</b>	<b>19,786,386</b>
	<b>TRANSMISSION PLANT</b>									
352.00	STRUCTURES AND IMPROVEMENTS	30,274,033.29	10,495,308	25,833,532	561,186	2.17	24,319,830	2.41	586,108	(24,922)
353.00	STATION EQUIPMENT	491,807,390.44	152,461,350	437,707,519	10,846,742	2.48	413,117,149	2.77	11,443,345	(596,603)
354.00	TOWERS AND FIXTURES	48,824,327.14	28,284,490	25,422,270	907,266	3.57	25,422,270	3.23	821,139	86,127
355.00	POLES AND FIXTURES	83,364,422.45	48,312,653	76,733,981	2,489,182	3.24	72,565,760	3.34	2,423,696	65,486
356.00	OVERHEAD CONDUCTORS AND DEVICES	169,438,107.06	118,529,590	84,796,138	1,814,594	2.14	76,324,233	2.13	1,625,706	188,888
359.00	ROADS AND TRAILS	286,332.32	182,621	103,711	3,553	3.43	103,711	3.12	3,236	317
	<b>TOTAL TRANSMISSION PLANT</b>	<b>823,994,612.70</b>	<b>358,266,012</b>	<b>650,597,151</b>	<b>16,622,523</b>		<b>611,852,953</b>		<b>16,903,231</b>	<b>(280,708)</b>
	<b>DISTRIBUTION PLANT</b>									
361.00	STRUCTURES AND IMPROVEMENTS	46,326,091.45	18,502,597	39,405,017	906,387	2.30	39,405,017	2.52	993,006	(86,619)
362.00	STATION EQUIPMENT	559,680,234.50	172,063,320	499,552,961	14,608,815	2.92	499,552,961	3.20	15,985,695	(1,376,880)
363.00	STORAGE BATTERY	393,190.82	153,981	258,869	34,830	13.45	258,869	9.27	23,997	10,833
364.00	POLES, TOWERS AND FIXTURES	420,065,793.24	251,862,062	357,233,338	13,769,129	3.85	357,233,338	3.77	13,467,697	301,432
365.00	OVERHEAD CONDUCTORS AND DEVICES	664,059,808.73	423,135,365	672,563,319	19,405,228	2.89	705,766,310	3.33	23,502,018	(4,096,790)
366.00	UNDERGROUND CONDUIT	29,515,628.47	10,876,607	21,590,584	334,458	1.55	21,590,584	2.08	449,084	(114,626)
367.00	UNDERGROUND CONDUCTORS AND DEVICES	907,226,216.69	525,453,052	880,747,584	20,412,932	2.32	1,016,831,516	2.81	28,572,966	(8,160,034)

PORTLAND GENERAL ELECTRIC

TABLE 2. COMPARISON OF PROPOSED NET PLANT ACCRUALS AND PRO FORMA ACCRUALS  
AS OF DECEMBER 31, 2019

		ORIGINAL COST	BOOK	NET PLANT		CURRENT	CURRENT	CURRENT		
ACCOUNT		AS OF	DEPRECIATION	FUTURE	ANNUAL ACCRUAL	COMPANY	NET PLANT	PRO FORMA	ACCRUAL	
		DECEMBER 31, 2019	RESERVE	ACCRUALS	AMOUNT	NET PLANT	RATE	ACCRAUL	DIFFERENCE	
(1)		(2)	(3)	(4)	(5)	(7)	(8)	(9)=(7)x(8)	(10)=(5)-(9)	
					(6)=(5)/(4)					
368.00	LINE TRANSFORMERS	469,865,715.01	215,375,023	301,477,264	8,588,138	2.85	301,477,264	3.03	9,134,761	(546,623)
369.01	SERVICES - OVERHEAD	81,320,051.24	47,251,341	58,464,726	1,744,137	2.98	58,464,726	3.03	1,771,481	(27,344)
369.03	SERVICES - UNDERGROUND	414,063,514.45	299,302,891	238,979,678	5,850,994	2.45	238,979,678	2.74	6,548,043	(697,049)
370.00	METERS	9,657,143.69	1,467,083	8,383,204	535,375	6.39	9,155,775	6.17	564,911	(29,536)
370.01	METERS - AMI	168,652,947.59	70,653,254	101,372,753	8,365,697	8.25	114,864,988	9.96	11,440,553	(3,074,856)
370.02	METERS - RETAINED	6,976,674.60	5,044,542	2,071,666	302,401	14.60	2,629,800	14.19	373,169	(70,768)
371.00	INSTALLATIONS ON CUSTOMERS' PREMISES	1,749,713.13	304,152	1,445,561	58,028	4.01	1,445,561	6.92	100,033	(42,005)
373.01	CIRCUITS - OTHER	25,077,570.66	19,265,150	12,081,813	528,497	4.37	12,583,365	4.32	543,601	(15,104)
373.02	FIXTURES, ORNAMENTAL POSTS AND DEVICES	83,684,633.42	38,911,879	65,693,913	3,953,547	6.02	67,367,605	6.57	4,426,052	(472,505)
373.07	SENTINEL LIGHTING EQUIPMENT	8,491,048.00	10,562,085	51,725	3,198	6.18	221,546	6.29	13,935	(10,737)
TOTAL DISTRIBUTION PLANT		3,896,805,975.69	2,110,184,384	3,261,373,975	99,401,791		3,447,828,903		117,911,002	(18,509,211)
GENERAL PLANT										
390.00	STRUCTURES AND IMPROVEMENTS	120,715,526.93	38,410,129	88,341,174	3,845,938	4.35	88,341,174	4.93	4,355,220	(509,282)
390.10	STRUCTURES AND IMPROVEMENTS - LEASE									
	CSS	16,087.41	14,951	1,136	127	11.18	1,136	33.34	379	(252)
	EASTPORT	58,754.96	58,755	0	0	-	0	100.00	0	0
	ERC TUALATIN	414,255.32	388,782	25,473	2,830	11.11	25,473	41.32	10,525	(7,695)
	HILLSBORO	93,336.06	93,336	0	0	-	0	-	0	0
	SALEM	13,580.71	13,581	0	0	-	0	-	0	0
	WILSONVILLE	272,342.13	249,669	22,673	11,335	49.99	22,673	-	0	11,335
	WTC	24,503,645.04	9,064,675	15,438,970	650,064	4.21	15,438,970	3.60	555,803	94,261
	TOTAL STRUCTURES AND IMPROVEMENTS	25,372,001.63	9,883,749	15,488,252	664,356		15,488,252		566,707	97,649
	OFFICE FURNITURE AND EQUIPMENT									
391.10	FURNITURE AND EQUIPMENT	27,575,296.84	11,495,053	16,080,244	1,622,109	10.09	16,080,244	10.20	1,640,185	(18,076)
391.20	COMPUTERS AND EQUIPMENT	132,932,472.59	71,660,244	61,272,229	22,880,453	37.34	61,272,229	32.97	20,201,454	2,678,999
	TOTAL OFFICE FURNITURE AND EQUIPMENT	160,507,769.43	83,155,297	77,352,473	24,502,562		77,352,473		21,841,639	2,660,923
	TRANSPORTATION EQUIPMENT									
392.04	HEAVY DUTY TRUCKS	26,034,187.32	8,901,768	13,227,291	1,133,927	8.57	15,049,684	6.30	948,130	185,797
392.05	MEDIUM DUTY TRUCKS	27,983,974.27	12,134,378	11,652,000	1,007,460	8.65	13,610,878	10.12	1,377,421	(369,961)
392.06	LIGHT DUTY TRUCKS	13,283,121.90	5,240,003	6,050,651	725,094	11.98	6,980,469	11.50	802,754	(77,660)
392.08	TRAILERS	6,347,528.20	3,043,068	2,352,331	136,945	5.82	2,796,658	5.69	159,130	(22,185)
392.09	AUTOS	2,043,596.35	978,168	758,891	96,225	12.68	901,942	18.61	167,851	(71,626)
392.10	HELICOPTER	2,764,850.25	1,270,504	1,079,619	125,178	11.59	1,273,158	8.24	104,908	20,270
	TOTAL TRANSPORTATION EQUIPMENT	78,457,260.29	31,567,889	35,120,783	3,224,829		40,612,789		3,560,194	(335,365)
393.00	STORES EQUIPMENT	3,877,884.26	1,478,661	2,399,223	186,677	7.78	2,399,223	9.49	227,686	(41,009)
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	23,093,382.44	7,656,948	15,436,434	989,883	6.41	15,436,434	8.15	1,258,069	(268,186)
395.00	LABORATORY EQUIPMENT	8,901,073.61	5,143,832	3,757,242	704,398	18.75	3,757,242	20.26	761,217	(56,819)
	POWER OPERATED EQUIPMENT									
396.01	MAN LIFT	29,181,884.43	8,557,908	17,705,788	2,126,759	12.01	17,705,788	12.51	2,214,994	(88,235)
396.02	DIGGER	3,512,905.88	1,846,351	1,315,264	260,499	19.81	1,315,264	10.81	142,180	118,319
396.03	CRANE	4,882,319.58	2,957,218	1,436,870	104,278	7.26	1,436,870	7.62	109,489	(5,211)
396.07	CONSTRUCTION EQUIPMENT	7,053,658.20	4,139,890	2,208,402	194,594	8.81	2,208,402	8.50	187,714	6,880
	TOTAL POWER OPERATED EQUIPMENT	44,630,768.09	17,501,367	22,666,324	2,686,130		22,666,324		2,654,378	31,752

PORTLAND GENERAL ELECTRIC

TABLE 2. COMPARISON OF PROPOSED NET PLANT ACCRUALS AND PRO FORMA ACCRUALS  
AS OF DECEMBER 31, 2019

ACCOUNT (1)	ORIGINAL COST AS OF DECEMBER 31, 2019 (2)	BOOK DEPRECIATION RESERVE (3)	FUTURE ACCRUALS (4)	NET PLANT ANNUAL ACCRUAL		CURRENT COMPANY NET PLANT (7)	CURRENT NET PLANT RATE (8)	CURRENT PRO FORMA ACCRUAL (9)=(7)x(8)	ACCRUAL DIFFERENCE (10)=(5)-(9)
				AMOUNT (5)	RATE (6)=(5)/(4)				
COMMUNICATION EQUIPMENT									
397.01 LINE EQUIPMENT	21,148,863.01	4,353,078	16,795,785	1,436,883	8.56	16,795,785	8.16	1,370,536	66,347
397.03 RADIO, MICROWAVE AND TERMINAL EQUIPMENT	154,202,962.59	75,242,516	78,960,447	7,976,799	10.10	78,960,447	13.50	10,659,660	(2,682,861)
397.06 MOBILE RADIO EQUIPMENT	2,987,372.42	397,615	2,589,757	209,578	8.09	2,589,757	8.33	215,727	(6,149)
397.07 TELEPHONE EQUIPMENT	889,801.05	755,880	133,921	17,128	12.79	133,921	9.48	12,696	4,432
TOTAL COMMUNICATION EQUIPMENT	179,228,999.07	80,749,089	98,479,910	9,640,388		98,479,910		12,258,619	(2,618,231)
398.00 MISCELLANEOUS EQUIPMENT	1,295,281.80	187,686	1,107,596	64,240	5.80	1,107,596	5.63	62,358	1,882
<b>TOTAL GENERAL PLANT</b>	<b>646,079,947.55</b>	<b>275,734,647</b>	<b>360,149,411</b>	<b>46,509,401</b>		<b>365,641,417</b>		<b>47,546,087</b>	<b>(1,036,686)</b>
<b>TOTAL DEPRECIABLE PLANT</b>	<b>9,360,095,592.18</b>	<b>4,308,467,948</b>	<b>7,277,110,139</b>	<b>300,427,429</b>		<b>7,524,692,256</b>		<b>300,467,648</b>	<b>(40,219)</b>
<b>NONDEPRECIABLE / ACCOUNTS NOT STUDIED</b>									
BOARDMAN									
311.00 STRUCTURES AND IMPROVEMENTS	141,673,188.64	103,571,464							
312.00 BOILER PLANT EQUIPMENT	348,354,026.03	301,878,080							
312.01 RAIL CARS	9,727,440.25	9,691,114							
314.00 TURBOGENERATOR UNITS	115,881,281.67	83,273,696							
315.00 ACCESSORY ELECTRIC EQUIPMENT	31,763,936.00	23,145,963							
316.00 MISCELLANEOUS POWER PLANT EQUIPMENT	8,520,340.99	6,068,922							
353.00 STATION EQUIPMENT - BOARDMAN	7,964,879.32	5,752,880							
TOTAL BOARDMAN	663,885,092.90	533,382,119							
302.00 FRANCHISES AND CONSENTS	195,264,817.73	77,431,013							
303.00 MISCELLANEOUS INTANGIBLE PLANT	563,164,236.70	288,693,036							
310.00 LAND AND LAND RIGHTS	4,161,624.80								
317.00 STEAM PRODUCTION PLANT - ARO	75,980,569.68	43,595,692							
330.00 LAND AND LAND RIGHTS	6,053,902.82	1,512,364							
337.00 HYDRAULIC PRODUCTION PLANT - ARO	5,127.87	3,374							
340.00 LAND AND LAND RIGHTS	26,960,038.01								
347.00 OTHER PRODUCTION PLANT - ARO	22,576,353.45	2,370,720							
350.00 LAND AND LAND RIGHTS	17,269,684.75	(379,614)							
359.10 TRANSMISSION PLANT - ARO	34,108.66	34,086							
360.00 LAND AND LAND RIGHTS	19,294,221.61	(1,625,965)							
374.00 DISTRIBUTION PLANT - ARO	476,732.46	398,934							
389.00 LAND AND LAND RIGHTS	9,622,354.56	(630,238)							
399.00 GENERAL PLANT - ARO	65,288.96	64,564							
<b>TOTAL NONDEPRECIABLE / NOT STUDIED</b>	<b>1,604,814,154.96</b>	<b>944,850,085</b>							
<b>TOTAL ELECTRIC PLANT</b>	<b>10,964,909,747.14</b>	<b>5,253,318,033</b>	<b>7,277,110,139</b>	<b>300,427,429</b>					

\* CURVE SHOWN IS INTERIM SURVIVOR CURVE. EACH FACILITY IN THE ACCOUNT IS ASSIGNED AN INDIVIDUAL PROBABLE RETIREMENT YEAR.

NOTES:

ACCRUAL RATES FOR FACILITIES TO BE PLACED IN SERVICE AFTER DECEMBER 31, 2019 ARE AS FOLLOWS.

	NET PLANT RATE
<b>WHEATRIDGE WIND</b>	
341.00	3.47
344.00	3.82
345.00	3.83
346.00	3.63
<b>INTEGRATED OPERATIONS CENTER</b>	
390.00	2.02

Portland General Electric

Table 2. Comparison of Estimated Survivor Curves, Net Salvage, and Calculated Annual Depreciation Rates

ACCOUNT DESCRIPTION	ACCOUNT	2019 DEPRECIATION			SETTLEMENT			
		STUDY AS FILED			AGREEMENT			
		Probable Retirement Date	Survivor Curve	Net Salvage Percent	Probable Retirement Date	Survivor Curve	Net Salvage Percent	Estimated Annual Change in Depreciation
Steam Production Plant - Colstrip								
Structures and Improvements	311.00	12-2027	90-S1.5	(4)	12-2025	90-S1.5	(3)	\$ 595,304
Boiler Plant Equipment	312.00	12-2027	65-R3	(4)	12-2025	65-R3	(3)	\$ 2,757,417
Turbogenerator Units	314.00	12-2027	55-R2	(4)	12-2025	55-R2	(3)	\$ 937,560
Accessory Electric Equipment	315.00	12-2027	60-R2.5	(4)	12-2025	60-R2.5	(3)	\$ 117,312
Miscellaneous power Plant Equipment	316.00	12-2027	60-R1	(4)	12-2025	60-R1	(3)	\$ 44,707
Total Steam Production Plant								\$ 4,452,300
Other Production Plant								
Structures and Improvements -Wind	341.01							
Biglow Canyon Wind Farm		06-2057	40-R4	(6)	06-2057	40-R4	(5)	(\$12,726)
Tucannon River Wind Farm		06-2064	40-R4	(5)	06-2064	40-R4	(4)	(\$5,484)
Generators - Wind	344.01							
Biglow Canyon Wind Farm		06-2057	35-R3	(6)	06-2057	30-R3	(5)	\$5,778,804
Tucannon River Wind Farm		06-2064	35-R3	(5)	06-2064	30-R3	(4)	\$2,443,791
Accessory Electric Equipment - Wind	345.01							
Biglow Canyon Wind Farm		06-2057	30-S2.5	(6)	06-2057	30-S2.5	(5)	(\$15,129)
Tucannon River Wind Farm		06-2064	30-S2.5	(5)	06-2064	30-S2.5	(4)	(\$5,912)
Miscellaneous Plant Equipment - Wind	346.01							
Biglow Canyon Wind Farm		06-2057	45-R2.5	(6)	06-2057	45-R2.5	(5)	(\$565)
Tucannon River Wind Farm		06-2064	45-R2.5	(5)	06-2064	45-R2.5	(4)	(\$147)
Total Steam Production Plant								\$8,182,632
Transmission Plant								
Station Equipment	353.00		59-R2	(20)		62-R2	(20)	(\$652,827)



Total Transmission Plant								(\$652,827)
Distribution Plant								
Poles, Towers & Fixtures	364.00		48-R0.5	(45)		50-R0.5	(45)	(\$542,856)
Overhead Conductors and Devices	365		53-R1.5	(65)		60-R1	(65)	(\$1,571,543)
Underground Conductors and Devices	367		60-S1.5	(70)		65-S1	(55)	(\$4,812,657)
Meters	370		28-R2	(5)		28-R2	(2)	(\$19,415)
Meters-AMI	370.01		15-R3	(5)		20-R2.5	(2)	(\$5,132,596)
Meters - Retained	370.02		16-L0.5	(5)		16-L0.5	(2)	(\$33,361)
Total Distribution Plant								(\$12,112,428)
General Plant								
Structures and Improvements	390		42-R0.5	(10)		42-R0.5	(5)	(\$270,489)
Man Lift	396.01		13-S1.5	10		14-S1.5	10	(\$266,531)
Digger	396.02		14-S2	10		15-S2	10	(\$42,176)
Total General Plant								(\$579,196)
Total Estimated Depreciation Change								\$ (709,519)

ACCOUNT DESCRIPTION	ACCOUNT	2019 DEPRECIATION			SETTLEMENT			
		STUDY AS FILED			AGREEMENT			
		Probable Retirement Date	Survivor Curve	Net Salvage Percent	Probable Retirement Date	Survivor Curve	Net Salvage Percent	Estimated Annual Change in Depreciation
Wheatridge Wind								
Generators - Wind	344.00		35-R3	(3)		30-R3	(3)	
Integrated Operations Center								
Structures and Improvements	390.00		60-R1.5	(10)		60-R1.5	(5)	