

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 352

In the Matter of

PACIFCORP, dba PACIFIC POWER,
2019 Renewable Adjustment Clause.

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REBUTTAL AND CROSS-
ANSWERING TESTIMONY OF THE
OREGON CITIZENS' UTILITY
BOARD

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

2 A. My name is Bob Jenks. I am the Executive Director of the Oregon Citizens' Utility
3 Board ("CUB"). My name is William Gehrke. I am an Economist employed by
4 CUB. Our business address is 610 SW Broadway, Ste. 400 Portland, Oregon
5 97205.

6 **Q. Please describe your educational background and work experience.**

7 A. Mr. Jenks' witness qualification statement is found in exhibit CUB/201.
8 Mr. Gehrke's witness qualification statement is found in exhibit CUB/101.

9 **Q. What is the purpose of your rebuttal and cross-answering testimony?**

10 A. We respond to the issues raised by the PacifiCorp ("PAC" or "the Company") in its
11 previously filed Opening Testimony and Reply Testimony. Additionally, we
12 respond to arguments raised in the Opening Testimony of both the Alliance of
13 Western Energy Consumers ("AWEC") and the Public Utility Commission of
14 Oregon Staff ("Staff").

1 **Q. How is your testimony organized?**

2 **A.** Our testimony is organized as follows:

3 **I.** Return on Unrecovered Wind Generation Investment

4 **II.** Floor on Wind Production Tax Credits (PTCs)

5 **III.** Customer Protection Conditions

6 **IV.** Condition of the PTC Safe Harbor Equipment

7 **V.** Conclusion

8 **I. Return on Unrecovered Wind Generation Investment**

9 **Q. Please summarize your position on this issue.**

10 **A.** CUB proposes i) that undepreciated plant associated with the wind repowering be
11 removed from base rates, and ii) that the removed plant should be recovered
12 through a separate regulatory asset pursuant to ORS 757.140(2)(b). Later in this
13 testimony, CUB details two potential carrying charges for the separate regulatory
14 asset that would enable the Company to fairly recover its investment while
15 accounting for the time value of money and would simultaneously protect
16 customers from being overcharged for plant that is no longer in service. CUB
17 opposes the Company earning its authorized rate of return on the unrecovered
18 capital investment that is no longer used and useful in service to customers. In
19 aligning with well-established Commission precedent, CUB does not oppose the
20 Company recovering the return of its investment on the wind repowering removed
21 plant.¹ As the analysis regarding recovering investments for plant that is no longer
22 used and useful requires analysis of prior Commission precedent and relevant

¹ See, e.g., OPUC Order No. 08-487.

1 statutes, CUB will appropriately address the legal issue associated with the
2 Company's wind repowering unrecovered capital investment in briefing. However,
3 we offer a reasonable resolution to the issue in this testimony.

4 **Q. Please summarize the Company's position regarding the treatment of the**
5 **unrecovered capital investment.**

6 **A.** The Company proposes to leave base rates unchanged in this proceeding.² PAC
7 states that since wind repowering requires the replacement of a significant portion
8 of the existing wind turbine equipment, the recovery of and on the undepreciated
9 costs of the replaced equipment is a key element of the project.³ Additionally, PAC
10 argues that barring the recovery of individual cost components would
11 disincentivize the Company from undertaking routine maintenance and upgrades of
12 its resources.⁴ The Company also argues that there is no regulatory or policy
13 justification for adjusting the Company's cost recovery of the undepreciated
14 investment.⁵ As will be detailed in this testimony, CUB takes issue with all these
15 positions.

16 **Q. Does CUB find that the wind repowering projects proposed in UE 352 to**
17 **be prudent?**

18 **A.** Yes. CUB supported acknowledgement of the wind repowering project in
19 PacifiCorp's most recent IRP, LC 67.

² UE 352 – PAC/900/McDougal/1/ Lines 19-20.

³ UE 352 – PAC/600/Lockey/8/Lines 8-10.

⁴ UE 352 – PAC/600/Lockey/10/Lines 1-4.

⁵ UE 352 – PAC/900/McDougal/1/Lines 14-16.

1 **Q. Given that CUB finds the repowering projects to be prudent, does CUB**
2 **oppose the Company collecting the return of its removed plant from wind**
3 **repowering?**

4 **A.** No. CUB does not oppose the Company collecting the return of its wind
5 repowering removed plant because removing the plant was essential to requalify
6 the wind facilities for new PTCs. The PTC benefit to customers was an essential
7 component of CUB’s support in LC 67. Therefore, CUB recommends that the
8 utility be allowed to recover the return of its undepreciated investment, because
9 CUB finds the project to be in the public interest. CUB’s finding that the project
10 was in the public interest includes the retirement of plant that was removed from
11 service. This is consistent with ORS 757.140, which allows recovery in rates of a
12 utility’s undepreciated investment in utility plant when the plant’s early retirement
13 is in the public interest. CUB will expound upon the legal issues surrounding the
14 collection of the return of the undepreciated investment in briefing.

15 **Q. What does the Company argue about the Renewable Portfolio Standard**
16 **(“RPS”) and its associated automatic adjustment clause ratemaking**
17 **mechanism?**

18 **A.** The Company argues that the RPS is designed to allow utilities to recover in rates
19 all prudently incurred costs associated with compliance with the RPS.⁶ The
20 Company asserts that investment in the replaced wind resources constitutes the
21 fixed capital costs of RPS compliance-related resources.⁷ Therefore, the Company
22 is arguing that collecting a return *on* its undepreciated capital investment is akin to

⁶ UE 352 – PAC/600/Lockey/9/Lines 5-6.

⁷ UE 352 – PAC/600/Lockey/9/Lines 4-9.

1 a *cost* that it can collect pursuant to the RPS. The Company’s argument is
2 unavailing because CUB’s proposal allows PAC to recover its cost in the replaced
3 wind resources, while being compensated for the time value of money associated
4 with the replaced wind resources. That is, CUB’s proposal allows the Company to
5 recover all of its *costs*, pursuant to the RPS. Profits are not costs. CUB is planning
6 on further addressing this issue in briefing.

7 **Q. Does the Company cite to prior Commission decisions that examine the**
8 **recovery of costs associated with plant no longer in service?**

9 **A.** Yes. The Company cites to Order No. 99-697 in docket UG 132 to incorrectly
10 draw a comparison to this proceeding since that Order enabled the utility to earn a
11 return on an investment in plant that was no longer used and useful. However,
12 there are substantive differences that render Order No. 99-697 inapplicable in this
13 case. It should be noted that UG 132 was an unusual case and when the
14 Commission issued its order, it cited HB 3220 as allowing “for the possibility of
15 return on investment for plant no longer used or useful.”⁸

16 **Q. Is the repowering conducted by the Company the same type of project that**
17 **was examined in UG 132?**

18 **A.** No. The project at issues in UG 132 differs substantially from the wind repowering
19 project. In that NW Natural rate case, the Commission examined a single project-a
20 new customer information system. NW Natural was developing a new CIS in two
21 phases: a custom CIS and an off the shelf CIS. The Company began developing a
22 custom CIS but it was unable to serve customers adequately. After abandoning the

⁸ OPUC Order No. 99-697, page 53.

1 custom CIS system, NW Natural purchased an off the shelf CIS system. In that
2 case, the Commission found that the custom CIS was reasonably related to the off-
3 the shelf CIS because they were both in reference to a single project. CUB would
4 also like to note that this order was prior to the Trojan remand in 2008, which likely
5 would have changed the outcome as the Trojan case was vetted by the Commission
6 and several Oregon courts.

7
8 PacifiCorp's wind repowering project is a different situation than the NW Natural
9 CIS program. The legacy wind generation resources have been in service for
10 several years. For example, Leaning Juniper has served Oregon customers since
11 September 2006. PAC's wind repowering is two separate wind projects, not two
12 separate phases of the same project. Further, in order to comply with the 80/20 rule
13 for PTC qualification, 80% of the fair market value of the repowered turbine must
14 be comprised of new equipment costs. To CUB, if at least 80% of the project is
15 new, it cannot be the same underlying project in the way that the NW Natural
16 project in UG 132 was. The wind repowering project substantively differs from the
17 CIS projects contemplated in UG 132.

18 **Q. You noted that UG 132 was an unusual case. What was unusual about UG**
19 **132?**

20 **A.** Based on CUB's experience, UG 132 was unusual for several reasons.

- 21 • The rate case came at the end of decade where customer growth was greater
22 than 4%.⁹ Because of the new revenue associated with load growth, NW

⁹ <http://www.fundinguniverse.com/company-histories/northwest-natural-gas-company-history/>

1 Natural did not file a rate case for a decade.¹⁰ CUB believed that even with
2 new investment, NW Natural's rates were sufficient.

- 3 • The Commission provided NWN with a rate increase of \$246,000 or 0.1%
4 when NWN had been seeking almost \$15 million.¹¹
- 5 • The biggest issue in the case was the Company's requested ROE. The
6 difference between Staff's recommendation and the Company's request was
7 huge. NWN was seeking a ROE of 11.25% and Staff was recommending a
8 ROE of 8.7%.¹²
- 9 • The outcome of the case cut NWN's authorized ROE by 200 basis points
10 from the last rate case.¹³
- 11 • The CIS at issue in this case was an essential investment, because the old
12 CIS system was not Y2K compliant.¹⁴
- 13 • HB 3220 passed during the case, reversing the Court decision that denied
14 PGE a rate of return on its retired Trojan investment.

15 **Q. What was HB 3220? Please provide some historical context.**

16 **A.** After the Court of Appeals issued its decision on the Trojan litigation, which
17 determined that a utility could not earn a return on retired plant, Portland General
18 Electric turned to the legislature. In 1999, the Legislature passed HB 3220, which
19 retroactively reversed that decision and allowed a return on retired plant. That
20 statute would have gone into effect January 1, 2000. However, CUB and several

¹⁰ https://www.nwnatural.com/uploadedFiles/General_Rate_Case_History_April_2019.pdf

¹¹ OPUC Order No. 99-697, page 1.

¹² OPUC Order No. 99-697, page 5.

¹³ https://www.nwnatural.com/uploadedFiles/General_Rate_Case_History_April_2019.pdf

¹⁴ OPUC Order No. 99-697, page 31.

1 other groups launched a referendum effort that was successful in collecting enough
2 signatures to stop the measure from going into effect and placed it on the 2000
3 ballot as Ballot Measure 9.

4
5 During the November 2000 election, Oregon voted on the measure. The ballot title
6 stated that Ballot Measure 9 “Authorizes Rates Giving Utilities Return on
7 Investments In Retired Property.” Oregon voters rejected giving utilities such a
8 return by a vote of 1,208,545 (88.39%) voting no and 158,810 voting yes (11.61%).
9 Because of the referendum, HB 3220 never went into effect and was rejected by
10 voters.

11 **Q. What did the Commission say about HB 3220 in the NWN rate case order?**

12 **A.** The Commission included the text of HB 3220 in a footnote which stated that HB
13 3220 “expressly provides for the possibility of return on investment for plant no
14 longer used or useful that would otherwise be prohibited by ORS 757.355.”¹⁵

15 While the Commission also found that the custom CIS and the off the shelf CIS
16 were part of a single project that did become used and useful, the Commission
17 incorrectly believed that the prohibition on allowing a return on investments that
18 were not used and useful had been repealed. This incorrect logic is further evidence
19 that Order No. 99-697 is inapplicable in this case, and PAC’s attempt to link this
20 proceeding to that one is unpersuasive.

21 **Q. Are utilities allowed to earn a rate of return on property not presently used**
22 **for utility service?**

¹⁵ *Supra*, note 8.

1 **A.** No. Utilities are not allowed to earn a profit on property not used for utility
2 service but are able to recover the unrecovered capital investment (*i.e.*, return of) in
3 plant that is retired in the public interest. CUB recommends that the unrecovered
4 capital investments associated with repowering are put into a regulatory asset, with
5 a carrying charge that could compensate the utility for the time value of money
6 associated with its capital investment.¹⁶

7 **Q. What is CUB’s response to the Company’s argument that since wind**
8 **repowering requires the replacement of an existing turbine, the recovery of**
9 **and on the undepreciated costs of the replaced equipment is a key element**
10 **of the wind repowering project?**

11 **A.** CUB’s proposal will enable the Company to recover its initial investment
12 associated with the undepreciated costs of the replaced equipment. Utility
13 regulation rewards utilities for capital investments found to be prudent that remain
14 presently used and useful by enabling them to earn a return on those investments.
15 Over the useful life of the capital project, utilities can recover their investments and
16 earn a rate of return, to reward the utilities shareholders and attract equity
17 investments. Under Oregon regulatory view of retired property, utility
18 shareholders are prohibited from earning a profit on an investment when the
19 investment is no longer used and useful in the provision of utility service. The
20 Company argues that the return on investment is essential to repowering. They are
21 incorrect. Oregon’s view on the retired property does not harm the utility. By
22 allowing recovery of the investment and an adjustment to compensate for the time

¹⁶ OPUC Order No. 08-487, pages 69-70.

1 value of money, the Company recovers its investment. However, it is prohibited
2 from earning a profit on plant not used to serve customers.

3 **Q. What is the implication for ratepayers if the Company is allowed to earn a**
4 **profit on the unrecovered capital investment removed in the course of**
5 **repowering?**

6 **A.** If the Company is allowed to earn a profit on both the repowered equipment and
7 removed equipment, the Company would be earning two profit streams on a single
8 project. This has the potential to create damaging precedent that would overcharge
9 customers now, and potentially in future proceedings.

10

11 Under PAC's wind repowering project, at least 80% of the market value of the
12 repowered projects will be removed and replaced with new equipment. The
13 removed equipment—that is no longer serving customers—had an estimated
14 average life of 18.81 at repowering.¹⁷ If the repowering project is approved in
15 Oregon, the Company will earn a profit stream on \$221,098,000 of Oregon
16 allocated plant from repowering.¹⁸ If the Company is allowed to earn a rate of
17 return on the removed plant and the new repowered plant, it would receive profit
18 from its investment into functionally two turbines, with only one turbine being used
19 by customers. The Oregon allocated estimated value net book value of the
20 removed plant at repowering is \$152,938,054.¹⁹ Under the Company's proposal,
21 base rates would remain unchanged.²⁰ CUB's proposal would remove the

¹⁷ This estimate is based on the Company's last approved depreciation study.

¹⁸ UE 352 – PAC/401/McDougal/1/ Line 1/ Column D and H. This number is the summation of 1D and 1H.

¹⁹ CUB Exhibit 202.

²⁰ UE 352 – PAC/900/McDougal/7/Lines 3-9.

1 Company's profit stream from the removed plant at repowering. CUB's position is
2 balanced because it enables the Company to recover the cost of its initial
3 investment, while not charging customers for two streams of profits on a single
4 project. For the Company, it is able to replace one, aging profit stream with a
5 brand new profit stream for the new equipment placed into service during
6 repowering. This benefits the Company's shareholders. It would be inequitable—
7 and as CUB will detail in briefing, illegal—for the Company to retain a profit
8 stream for plant that has been removed from service.

9 **Q. What is CUB's response to the Company's argument that barring the**
10 **recovery of individual cost components would create a disincentive for the**
11 **Company to undertake routine maintenance and upgrades of its resources?**

12 **A.** The Company is conflating the widespread replacement of the Company's wind
13 generation fleet (wind repowering) with upgrades on individual components on a
14 single generation asset. In order for a facility to qualify for repowering, 80% of the
15 fair market value of the repowered turbine must be comprised of new equipment
16 costs. From a cost perspective, the value of repowered equipment is more than
17 50% of the value of fair market value of the repowered turbine. There is a
18 difference between replacing an individual cost component and retiring and
19 replacing the wind generation facility with a new unit.

20 **Q. Does the Commission's treatment of past generation plant upgrades suggest**
21 **a precedent that would control in this matter?**

22 **A.** No. The Company describes turbine upgrades in UE 217 and UE 263. The
23 Company argues that keeping wind repowering equipment in base rates is

1 consistent with prior cases because no party raised concerns about the recovery of
2 replaced turbines under ORS 757.355, and that the full costs of the turbine
3 upgrades were included in rates without objection. There are thousands of line
4 items examined in a general rate case. Silence on a past cost does not mean that
5 CUB agrees with a cost in this instance.

6 **Q. Is it true that not allowing utilities to earn a profit on undepreciated**
7 **equipment will cause uncertainty when modernizing facilities through**
8 **removal and replacement of existing equipment?**

9 **A.** No. The Company wrongly implies that not allowing utilities to earn two streams
10 of profit would hamper utilities from making upgrades to “modernize” equipment.
11 If plant is not used and useful for the use of customers, then the utility is not
12 allowed to earn a profit on unused equipment. If a facility truly needs to be
13 modernized, the Company can invest capital in it, and, if the capital expenditure is
14 prudent, it can create a new profit stream through the return on this capital
15 investment while still recovering the investment in the retired capital investment.
16 CUB fails to see the uncertainty this standard provides to the utility. Utilities are
17 prohibited from earning a rate of return on plant that are not used to serve
18 customers.

19 **Q. What is CUB’s response to the Company’s argument that there is no**
20 **regulatory or policy justification for adjusting the Company’s cost recovery**
21 **of the undepreciated investment?**

22 **A.** In Opening Testimony, CUB clearly presented a policy justification for adjusting
23 the Company’s cost recovery of its undepreciated investment. Utilities earn a rate

1 of return on capital investment in order to compensate its investors for the risks
2 borne by owning and operating plant and equipment. Once the plant associated
3 with retired wind equipment is removed from service, the Company no longer bears
4 the risk associated with operating and maintaining the undepreciated capital
5 equipment.

6 **Q. What does CUB propose with regards to the undepreciated plant associated**
7 **with repowering?**

8 **A.** CUB proposes to amortize the undepreciated plant associated with repowering in a
9 regulatory asset using a sinking fund amortization. CUB has two proposals for the
10 carrying charge associated with repowering. The first proposal is a ten-year
11 amortization, where the carrying charge on the regulatory asset is equal to the
12 average yield of the 10-year United States treasury bond in December 2018. This
13 carrying charge rate is a reasonable proxy for the time value of money. This
14 proposal is enumerated in CUB/204.

15
16 To give the Commission another option, CUB has prepared an alternative for a
17 longer amortization period. The second proposal has the amortization period
18 matches the average depreciable life remaining on the capital equipment.²¹ This
19 carrying charge is a mixture of the Company's embedded cost of debt and a
20 twenty-year United States treasury bond. The Company's cost of debt is 5.26%
21 and it represents 48.49% of their capital structure. The remaining portion is the
22 cost of equity. This portion represents the Company's profit on its investment.

²¹ CUB Exhibit 205.

1 The remaining 51.51% will use the average yield of the 20-year treasury bond from
2 December 2018 to compensate the Company's for the time value of money.²² The
3 use of treasury bond is typically used to represents the risk-free rate of interest.
4 This proposal is enumerated in CUB/207.

5
6 While CUB does not propose any specific monetary adjustment, the Company's
7 base rates would need to be updated for both proposals.

8
9 Beyond striking a fair balance between the Company's shareholders and
10 customers, CUB's proposal is rooted in established Commission precedent. In UM
11 1712, PAC proposed closing its Deer Creek Mine after a determination that doing
12 so was in the public interest. After the mine was closed and its assets were sold,
13 PAC had \$21 million in unrecovered, undepreciated investment.²³ In its Order, the
14 Commission approved a 3.31% interest rate that was applied to the undepreciated
15 investment balance.²⁴ This interest percentage rate was calculated by blending
16 PAC's then currently authorized cost of debt and Treasury bond yields.²⁵ There,
17 the Commission reasoned:

18 [T]his interest rate reasonably reflects the time value of money, and does
19 not represent a return on the undepreciated investment. Allowing
20 PacifiCorp to recover its investment . . . with a rate set to reflect the time
21 value of money, helps balance customer and utility interests by promoting
22 least-cost planning and avoiding rate shock.²⁶

²² CUB Exhibit 206.

²³ OPUC Order No. 15-161 at 7.

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.* at 8, citing *Gearhart v. Pub. Util. Comm'n of Oregon*, 356 Or 216, 250-51 (2014) and *In Re Portland General Electric Co.*, Docket Nos. DR 10, UE 88, and UM 989, Order No. 08-487 at 67 (Sept. 30, 2008).

1 CUB's proposal in this case follows the same logic that the Commission adopted in
2 UM 1712. CUB believes PAC should be entitled to recover the return of its
3 undepreciated investment. However, rather than earn a return on this undepreciated
4 investment, the Company should be compensated for the time value of money to
5 strike a fair balance between the Company and its customers. CUB's proposal does
6 just that and aligns with past Commission practice in the retirement of PAC's Deer
7 Creek Mine and PGE's Trojan plant.

8 **Q. What has Staff proposed regarding the unrecovered wind capital**
9 **investment?**

10 **A.** Staff recommends that PacifiCorp's rates in Schedule 202 reflect the removal of
11 return on plant that is no longer in service because it was removed as part of the
12 repowering project.²⁷ Staff states that requiring ratepayers to pay both the return on
13 and return of a capital investment is unfair because capital recovery is occurring
14 outside of a general rate case.

15 **Q. What is your response to Staff's testimony?**

16 **A.** CUB agrees that the customers should not pay the return on investment associated
17 with wind repowering. However, Staff's proposal in opening testimony does not
18 compensate the Company for the time value of money. CUB's proposal to amortize
19 the unrecovered capital investment with a carrying charge associated with a
20 reasonable proxy for the time value of money.

21 **Q. What has AWEC proposed regarding the unrecovered wind capital**
22 **investment?**

²⁷ UE 352 – Staff/100/Storm/66/Lines 16-18.

1 Normally, capital investments are examined and eventually brought into rates in a
2 general rate case proceeding. Previously, the Company filed general rate cases
3 concurrently with power cost cases.³¹ This happens every year PAC comes in for a
4 general rate case since the TAM is an annual filing. Since the wind repowering
5 projects are being included in the RAC instead of a general rate case, the
6 appropriate venue to discuss issues related to the benefits of the wind repowering
7 was unclear to CUB. Since this remains a significant outstanding concern for
8 CUB, we wanted to raise the issue in this proceeding

9 **Q. Why is CUB addressing the floor on PTCs in the 2020 TAM?**

10 **A.** Since CUB is not proposing to include the PTC benefits in this proceeding, and,
11 since PTC benefits are historically addressed in the TAM, CUB will address the
12 issue in UE 356.

III. Consumer Protection Conditions

13 **Q. What is CUB's response to the Company regarding CUB's proposed**
14 **Consumer Protection Conditions?**

15 **A.** After reviewing the Company's response testimony, CUB withdraws the following
16 conditions:

- 17 1. The Company bears the risk of PTC qualification.
- 18 2. All liquidated damages received by PacifiCorp flow back to customers.
- 19 3. Construction cost cap.

³¹ See *Generally In the Matter of PacifiCorp, dba Pacific Power, Request for General Revision*, Docket No. UE 246 and *In the Matter of PacifiCorp, dba Pacific Power, 2013 Transition Adjustment Mechanism*, Docket No. 245.

1 The Company has adequately addressed these conditions in testimony. CUB
2 reserves the right to raise issues related to PTC qualification and liquidated
3 damages in future proceedings.

IV. The Condition of the Safe Harbor PTC Equipment

4 **Q. Please summarize your position on this issue.**

5 **A.** CUB has reviewed the Company's Data Responses including records related to the
6 storage of safe harbor PTC equipment. As part of the prudence review process,
7 CUB investigated the storage of the safe harbor PTC equipment to determine
8 whether it had begun to depreciate or degrade while in storage in a manner that
9 would impact its performance. After reading the Reply Testimony of Timothy
10 Hemstreet, CUB believes the Company demonstrated that the PTC safe harbor
11 equipment was stored in a prudent manner.

12 **Q. Why did CUB ask additional discovery data requests regarding safe harbor**
13 **PTC equipment?**

14 **A.** In discovery, CUB asked the Company to provide a narrative explanation of how
15 the Company stored its safe harbor equipment purchases. The explanation
16 provided by the Company was terse, and CUB was unsure whether the PTC safe
17 harbor equipment was stored prudently. At the time of CUB's Opening Testimony,
18 there was insufficient information to determine if the Company storage of the safe
19 harbor equipment was prudently conducted. CUB believed additional analysis was
20 necessary.

21 **Q. What evidence has CUB reviewed in order to determine the prudence of the**
22 **storage of the safe harbor equipment?**

1 **A.** CUB has reviewed the inspection forms for the Company’s safe-harbor purchases
2 from Vestas and General Electric. CUB found significant evidence of the safe
3 harbor equipment being properly maintained and protected while in storage. CUB
4 was also concerned that the equipment was being stored outdoors, exposed to the
5 elements. The Company has assuaged these concerns by detailing how the capital
6 equipment is stored.³² CUB appreciates the Company providing information
7 associated with this capital investment and responding to CUB concerns about the
8 condition of the safe harbor equipment.

V. Conclusion

9 **Q. Does this conclude your testimony?**

10 **A.** Yes.

³² UE 352 – PAC/700/Hemstreet/10/Lines 17-19.

WITNESS QUALIFICATION STATEMENT

NAME: Bob Jenks

EMPLOYER: Oregon Citizens' Utility Board of Oregon

TITLE: Executive Director

ADDRESS: 610 SW Broadway, Suite 400
Portland, OR 97205

EDUCATION: Bachelor of Science, Economics
Willamette University, Salem, OR

EXPERIENCE: Provided testimony or comments in a variety of OPUC dockets, including UE 88, UE 92, UM 903, UM 918, UE 102, UP 168, UT 125, UT 141, UE 115, UE 116, UE 137, UE 139, UE 161, UE 165, UE 167, UE 170, UE 172, UE 173, UE 207, UE 208, UE 210, UE 233, UE 246, UE 283, UG 152, UM 995, UM 1050, UM 1071, UM 1147, UM 1121, UM 1206, UM 1209, UM 1355, UM 1635, UM 1633, and UM 1654. Participated in the development of a variety of Least Cost Plans and PUC Settlement Conferences. Provided testimony to Oregon Legislative Committees on consumer issues relating to energy and telecommunications. Lobbied the Oregon Congressional delegation on behalf of CUB and the National Association of State Utility Consumer Advocates.

Between 1982 and 1991, worked for the Oregon State Public Interest Research Group, the Massachusetts Public Interest Research Group, and the Fund for Public Interest Research on a variety of public policy issues.

MEMBERSHIP: National Association of State Utility Consumer Advocates
Board of Directors, OSPIRG Citizen Lobby
Telecommunications Policy Committee, Consumer Federation of America
Electricity Policy Committee, Consumer Federation of America
Board of Directors (Public Interest Representative), NEEA

UE 352 / PacifiCorp
May 16, 2019
CUB Data Request 30

CUB Data Request 30

Refer to UE 352/PAC/900/McDougal/Page 4/ Lines 6-10, please provide all workpapers used to identify the undepreciated net book value of the plant amount for the replaced equipment at \$587 million.

Response to CUB Data Request 30

Please refer to the company's response to AWEC Data Request 009. The \$587 million used on UE 352/PAC/900/McDougal/Page 4/Lines 6-10 is the sum of the Estimated Net book Replaced at Repower Date column from the table below.

Facility	Original value being Replaced	Estimated Accumulative Reserve at Repower Date	Estimated Net Book Replaced at Repower Date	Estimated Replacement Cost
Glenrock I	\$116,952,332	(\$44,899,854)	\$72,052,477	\$1,479,000
Seven Mile Hill I	\$131,382,281	(\$46,539,318)	\$84,842,963	\$1,683,000
Seven Mile Hill II	\$27,105,247	(\$9,586,572)	\$17,518,675	\$331,500
High Plains	\$145,932,412	(\$51,308,936)	\$94,623,476	\$1,683,000
McFadden Ridge	\$37,402,088	(\$13,257,969)	\$24,144,119	\$484,500
Leaning Juniper	\$107,016,060	(\$45,289,711)	\$61,726,349	\$2,010,000
Marengo I	\$167,445,463	(\$71,696,920)	\$95,748,543	\$2,340,000
Marengo II	\$86,385,845	(\$34,956,430)	\$51,429,415	\$1,170,000
Goodnoe Hills	\$135,844,803	(\$50,836,563)	\$85,008,240	\$1,410,000
		Total	\$587,094,257	

Despite PacifiCorp's diligent efforts, certain information protected from disclosure by the attorney-client privilege or other applicable privileges or law may have been included in its responses to these data requests. PacifiCorp did not intend to waive any applicable privileges or rights by the inadvertent disclosure of protected information, and PacifiCorp reserves its right to request the return or destruction of any privileged or protected materials that may have been inadvertently disclosed. Please inform PacifiCorp immediately if you become aware of any inadvertently disclosed information.

Carrying Charge Calculation:		10 Year Treasury
		10-Year
Annual Yield as of: Thursday, December 6th 2018		2.87
Annual Yield as of: Thursday, December 13th 2018		2.91
Average Yield		2.89
Carrying Charge		2.89

Amortization schedule for Regulatory Asset at Ten Year Treasury Bond

Amortization Inputs:	
Oregon SE	26.05%
Net Book Value for October Plant	\$ 236,140,465
Oregon Allocated Plant for October 1st, Effective Date	\$ 61,514,591
Net Book Value of November Plant	\$ 350,953,793
Oregon Allocated Plant for December 1st, Effective Date	\$ 91,423,463.08

Amortization Schedule:			
Carrying Charge	2.89%		
	Ending Balance	Interest	Equal Payment
2019 October	\$ 61,514,591		
2019 November	\$ 61,662,739	\$ 148,148	
2019 December	\$ 153,234,349	\$ 148,504	\$ 1,471,874
2020 January	\$ 152,131,515	\$ 369,039	\$ 1,471,874
2020 February	\$ 151,026,024	\$ 366,383	\$ 1,471,874
2020 March	\$ 149,917,870	\$ 363,721	\$ 1,471,874
2020 April	\$ 148,807,048	\$ 361,052	\$ 1,471,874
2020 May	\$ 147,693,551	\$ 358,377	\$ 1,471,874
2020 June	\$ 146,577,372	\$ 355,695	\$ 1,471,874
2020 July	\$ 145,458,504	\$ 353,007	\$ 1,471,874
2020 August	\$ 144,336,943	\$ 350,313	\$ 1,471,874
2020 September	\$ 143,212,680	\$ 347,611	\$ 1,471,874
2020 October	\$ 142,085,709	\$ 344,904	\$ 1,471,874
2020 November	\$ 140,956,025	\$ 342,190	\$ 1,471,874
2020 December	\$ 139,823,619	\$ 339,469	\$ 1,471,874
2021 January	\$ 138,688,487	\$ 336,742	\$ 1,471,874
2021 February	\$ 137,550,621	\$ 334,008	\$ 1,471,874
2021 March	\$ 136,410,014	\$ 331,268	\$ 1,471,874
2021 April	\$ 135,266,660	\$ 328,521	\$ 1,471,874
2021 May	\$ 134,120,553	\$ 325,767	\$ 1,471,874
2021 June	\$ 132,971,686	\$ 323,007	\$ 1,471,874
2021 July	\$ 131,820,052	\$ 320,240	\$ 1,471,874
2021 August	\$ 130,665,644	\$ 317,467	\$ 1,471,874
2021 September	\$ 129,508,456	\$ 314,686	\$ 1,471,874
2021 October	\$ 128,348,481	\$ 311,900	\$ 1,471,874
2021 November	\$ 127,185,713	\$ 309,106	\$ 1,471,874
2021 December	\$ 126,020,144	\$ 306,306	\$ 1,471,874
2022 January	\$ 124,851,768	\$ 303,499	\$ 1,471,874
2022 February	\$ 123,680,578	\$ 300,685	\$ 1,471,874
2022 March	\$ 122,506,568	\$ 297,864	\$ 1,471,874

2022 April	\$ 121,329,730	\$ 295,037	\$ 1,471,874
2022 May	\$ 120,150,058	\$ 292,202	\$ 1,471,874
2022 June	\$ 118,967,545	\$ 289,361	\$ 1,471,874
2022 July	\$ 117,782,185	\$ 286,514	\$ 1,471,874
2022 August	\$ 116,593,969	\$ 283,659	\$ 1,471,874
2022 September	\$ 115,402,892	\$ 280,797	\$ 1,471,874
2022 October	\$ 114,208,946	\$ 277,929	\$ 1,471,874
2022 November	\$ 113,012,125	\$ 275,053	\$ 1,471,874
2022 December	\$ 111,812,421	\$ 272,171	\$ 1,471,874
2023 January	\$ 110,609,829	\$ 269,282	\$ 1,471,874
2023 February	\$ 109,404,339	\$ 266,385	\$ 1,471,874
2023 March	\$ 108,195,947	\$ 263,482	\$ 1,471,874
2023 April	\$ 106,984,645	\$ 260,572	\$ 1,471,874
2023 May	\$ 105,770,425	\$ 257,655	\$ 1,471,874
2023 June	\$ 104,553,281	\$ 254,730	\$ 1,471,874
2023 July	\$ 103,333,206	\$ 251,799	\$ 1,471,874
2023 August	\$ 102,110,192	\$ 248,861	\$ 1,471,874
2023 September	\$ 100,884,233	\$ 245,915	\$ 1,471,874
2023 October	\$ 99,655,322	\$ 242,963	\$ 1,471,874
2023 November	\$ 98,423,451	\$ 240,003	\$ 1,471,874
2023 December	\$ 97,188,613	\$ 237,036	\$ 1,471,874
2024 January	\$ 95,950,801	\$ 234,063	\$ 1,471,874
2024 February	\$ 94,710,008	\$ 231,082	\$ 1,471,874
2024 March	\$ 93,466,227	\$ 228,093	\$ 1,471,874
2024 April	\$ 92,219,451	\$ 225,098	\$ 1,471,874
2024 May	\$ 90,969,671	\$ 222,095	\$ 1,471,874
2024 June	\$ 89,716,882	\$ 219,085	\$ 1,471,874
2024 July	\$ 88,461,076	\$ 216,068	\$ 1,471,874
2024 August	\$ 87,202,246	\$ 213,044	\$ 1,471,874
2024 September	\$ 85,940,383	\$ 210,012	\$ 1,471,874
2024 October	\$ 84,675,482	\$ 206,973	\$ 1,471,874
2024 November	\$ 83,407,534	\$ 203,927	\$ 1,471,874
2024 December	\$ 82,136,533	\$ 200,873	\$ 1,471,874
2025 January	\$ 80,862,471	\$ 197,812	\$ 1,471,874
2025 February	\$ 79,585,340	\$ 194,744	\$ 1,471,874
2025 March	\$ 78,305,134	\$ 191,668	\$ 1,471,874
2025 April	\$ 77,021,844	\$ 188,585	\$ 1,471,874
2025 May	\$ 75,735,464	\$ 185,494	\$ 1,471,874
2025 June	\$ 74,445,986	\$ 182,396	\$ 1,471,874
2025 July	\$ 73,153,403	\$ 179,291	\$ 1,471,874
2025 August	\$ 71,857,706	\$ 176,178	\$ 1,471,874
2025 September	\$ 70,558,889	\$ 173,057	\$ 1,471,874
2025 October	\$ 69,256,944	\$ 169,929	\$ 1,471,874
2025 November	\$ 67,951,863	\$ 166,794	\$ 1,471,874
2025 December	\$ 66,643,640	\$ 163,651	\$ 1,471,874
2026 January	\$ 65,332,266	\$ 160,500	\$ 1,471,874
2026 February	\$ 64,017,733	\$ 157,342	\$ 1,471,874

2026 March	\$ 62,700,035	\$ 154,176	\$ 1,471,874
2026 April	\$ 61,379,163	\$ 151,003	\$ 1,471,874
2026 May	\$ 60,055,110	\$ 147,821	\$ 1,471,874
2026 June	\$ 58,727,868	\$ 144,633	\$ 1,471,874
2026 July	\$ 57,397,430	\$ 141,436	\$ 1,471,874
2026 August	\$ 56,063,788	\$ 138,232	\$ 1,471,874
2026 September	\$ 54,726,934	\$ 135,020	\$ 1,471,874
2026 October	\$ 53,386,860	\$ 131,801	\$ 1,471,874
2026 November	\$ 52,043,559	\$ 128,573	\$ 1,471,874
2026 December	\$ 50,697,023	\$ 125,338	\$ 1,471,874
2027 January	\$ 49,347,244	\$ 122,095	\$ 1,471,874
2027 February	\$ 47,994,214	\$ 118,845	\$ 1,471,874
2027 March	\$ 46,637,926	\$ 115,586	\$ 1,471,874
2027 April	\$ 45,278,371	\$ 112,320	\$ 1,471,874
2027 May	\$ 43,915,542	\$ 109,045	\$ 1,471,874
2027 June	\$ 42,549,431	\$ 105,763	\$ 1,471,874
2027 July	\$ 41,180,030	\$ 102,473	\$ 1,471,874
2027 August	\$ 39,807,331	\$ 99,175	\$ 1,471,874
2027 September	\$ 38,431,326	\$ 95,869	\$ 1,471,874
2027 October	\$ 37,052,007	\$ 92,555	\$ 1,471,874
2027 November	\$ 35,669,366	\$ 89,234	\$ 1,471,874
2027 December	\$ 34,283,396	\$ 85,904	\$ 1,471,874
2028 January	\$ 32,894,087	\$ 82,566	\$ 1,471,874
2028 February	\$ 31,501,433	\$ 79,220	\$ 1,471,874
2028 March	\$ 30,105,424	\$ 75,866	\$ 1,471,874
2028 April	\$ 28,706,054	\$ 72,504	\$ 1,471,874
2028 May	\$ 27,303,313	\$ 69,134	\$ 1,471,874
2028 June	\$ 25,897,194	\$ 65,755	\$ 1,471,874
2028 July	\$ 24,487,689	\$ 62,369	\$ 1,471,874
2028 August	\$ 23,074,789	\$ 58,975	\$ 1,471,874
2028 September	\$ 21,658,487	\$ 55,572	\$ 1,471,874
2028 October	\$ 20,238,773	\$ 52,161	\$ 1,471,874
2028 November	\$ 18,815,640	\$ 48,742	\$ 1,471,874
2028 December	\$ 17,389,080	\$ 45,314	\$ 1,471,874
2029 January	\$ 15,959,085	\$ 41,879	\$ 1,471,874
2029 February	\$ 14,525,645	\$ 38,435	\$ 1,471,874
2029 March	\$ 13,088,753	\$ 34,983	\$ 1,471,874
2029 April	\$ 11,648,401	\$ 31,522	\$ 1,471,874
2029 May	\$ 10,204,580	\$ 28,053	\$ 1,471,874
2029 June	\$ 8,757,282	\$ 24,576	\$ 1,471,874
2029 July	\$ 7,306,498	\$ 21,090	\$ 1,471,874
2029 August	\$ 5,852,220	\$ 17,596	\$ 1,471,874
2029 September	\$ 4,394,440	\$ 14,094	\$ 1,471,874
2029 October	\$ 2,933,148	\$ 10,583	\$ 1,471,874
2029 November	\$ 1,468,338	\$ 7,064	\$ 1,471,874
2029 December	\$ (0)	\$ 3,536	\$ 1,471,874

Calculation of Weighted Average of Remaining Life of Wind Plant

Column	[A]	[B]	[C]	[D]	[E]
Source	UM 1647	UE 352	[C] = [A] - [B]	[D] = [C] / 12	
	Retirement Date	Repower Date	Life Left (Months)	Life Left (Years)	Estimated Net Book Replaced
Leaning Juniper	December-36	October-19	206	17.17	\$ 16,079,714
Seven Miles Hill I	December-38	October-19	230	19.17	\$ 22,101,592
Seven Miles Hill II	December-38	October-19	230	19.17	\$ 4,563,615
Glenrock I	December-38	October-19	230	19.17	\$ 18,769,671
Goodnoe Hills	December-38	December-19	228	19.00	\$ 22,144,647
High Plains	December-39	December-19	240	20.00	\$ 24,649,415
Mcfadden Ridge	December-39	December-19	240	20.00	\$ 6,289,543
Marengo I	December-37	December-19	216	18.00	\$ 24,942,495
Marengo II	December-37	December-19	216	18.00	\$ 13,397,363

Weighted Average Deprecable Life of Repowered Wind Generation
 18.81 Years

Convert 18.81 years to months
 225.72 Round -> 226

Carrying Charge Calculation:		18.83 Year Amortization	
Authorized Capital			
Capital Structure	Structure	Capital Cost	Weighted Cost
Debt	48.49%	5.26%	2.55%
Preferred	0.02%	6.75%	0.00%
Common	51.49%	9.80%	5.05%
Total			7.60%
Authorized Capital			
Capital Structure	Structure	Cost	Weighted Cost
Debt	48.49%	5.26%	2.55%
Preferred	0.02%	3.03%	0.00%
Common	51.49%	3.03%	1.56%
Total			4.11%
Carrying Charge		4.11%	
20-Year			
Annual Yield as of: Thursday, December 6th 2018			3.01
Annual Yield as of: Thursday, December 13th 2018			3.05
Average Yield			3.03

Amortization schedule for Regulatory Asset at Weighted Average Life of Plant

Amortization Inputs:	
Oregon SE	26.05%
Net Book Value for October Plant	\$ 236,140,465
Oregon Allocated Plant for October 1st, Effective Date	\$ 61,514,591
Net Book Value of November Plant	\$ 350,953,793
Oregon Allocated Plant for December 1st, Effective Date	\$ 91,423,463

Amortization Schedule:			
Carrying Charge	4.11%		
	Ending Balance	Interest	Equal Payment
2019 October	\$ 61,514,591	\$ -	\$ -
2019 November	\$ 61,725,279	\$ 210,687	\$ -
2019 December	\$ 153,359,429	\$ 211,409	\$ 975,862
2020 January	\$ 152,908,823	\$ 525,256	\$ 975,862
2020 February	\$ 152,456,673	\$ 523,713	\$ 975,862
2020 March	\$ 152,002,975	\$ 522,164	\$ 975,862
2020 April	\$ 151,547,723	\$ 520,610	\$ 975,862
2020 May	\$ 151,090,911	\$ 519,051	\$ 975,862
2020 June	\$ 150,632,535	\$ 517,486	\$ 975,862
2020 July	\$ 150,172,589	\$ 515,916	\$ 975,862
2020 August	\$ 149,711,068	\$ 514,341	\$ 975,862
2020 September	\$ 149,247,966	\$ 512,760	\$ 975,862
2020 October	\$ 148,783,278	\$ 511,174	\$ 975,862
2020 November	\$ 148,316,998	\$ 509,583	\$ 975,862
2020 December	\$ 147,849,121	\$ 507,986	\$ 975,862
2021 January	\$ 147,379,642	\$ 506,383	\$ 975,862
2021 February	\$ 146,908,555	\$ 504,775	\$ 975,862
2021 March	\$ 146,435,855	\$ 503,162	\$ 975,862
2021 April	\$ 145,961,535	\$ 501,543	\$ 975,862
2021 May	\$ 145,485,591	\$ 499,918	\$ 975,862
2021 June	\$ 145,008,017	\$ 498,288	\$ 975,862
2021 July	\$ 144,528,807	\$ 496,652	\$ 975,862
2021 August	\$ 144,047,955	\$ 495,011	\$ 975,862
2021 September	\$ 143,565,457	\$ 493,364	\$ 975,862
2021 October	\$ 143,081,306	\$ 491,712	\$ 975,862
2021 November	\$ 142,595,498	\$ 490,053	\$ 975,862
2021 December	\$ 142,108,025	\$ 488,390	\$ 975,862

2022 January	\$ 141,618,882	\$ 486,720	\$ 975,862
2022 February	\$ 141,128,065	\$ 485,045	\$ 975,862
2022 March	\$ 140,635,566	\$ 483,364	\$ 975,862
2022 April	\$ 140,141,380	\$ 481,677	\$ 975,862
2022 May	\$ 139,645,502	\$ 479,984	\$ 975,862
2022 June	\$ 139,147,925	\$ 478,286	\$ 975,862
2022 July	\$ 138,648,645	\$ 476,582	\$ 975,862
2022 August	\$ 138,147,654	\$ 474,872	\$ 975,862
2022 September	\$ 137,644,947	\$ 473,156	\$ 975,862
2022 October	\$ 137,140,519	\$ 471,434	\$ 975,862
2022 November	\$ 136,634,363	\$ 469,706	\$ 975,862
2022 December	\$ 136,126,473	\$ 467,973	\$ 975,862
2023 January	\$ 135,616,844	\$ 466,233	\$ 975,862
2023 February	\$ 135,105,469	\$ 464,488	\$ 975,862
2023 March	\$ 134,592,343	\$ 462,736	\$ 975,862
2023 April	\$ 134,077,459	\$ 460,979	\$ 975,862
2023 May	\$ 133,560,812	\$ 459,215	\$ 975,862
2023 June	\$ 133,042,395	\$ 457,446	\$ 975,862
2023 July	\$ 132,522,203	\$ 455,670	\$ 975,862
2023 August	\$ 132,000,229	\$ 453,889	\$ 975,862
2023 September	\$ 131,476,468	\$ 452,101	\$ 975,862
2023 October	\$ 130,950,912	\$ 450,307	\$ 975,862
2023 November	\$ 130,423,557	\$ 448,507	\$ 975,862
2023 December	\$ 129,894,395	\$ 446,701	\$ 975,862
2024 January	\$ 129,363,421	\$ 444,888	\$ 975,862
2024 February	\$ 128,830,628	\$ 443,070	\$ 975,862
2024 March	\$ 128,296,011	\$ 441,245	\$ 975,862
2024 April	\$ 127,759,562	\$ 439,414	\$ 975,862
2024 May	\$ 127,221,276	\$ 437,577	\$ 975,862
2024 June	\$ 126,681,147	\$ 435,733	\$ 975,862
2024 July	\$ 126,139,167	\$ 433,883	\$ 975,862
2024 August	\$ 125,595,332	\$ 432,027	\$ 975,862
2024 September	\$ 125,049,633	\$ 430,164	\$ 975,862
2024 October	\$ 124,502,066	\$ 428,295	\$ 975,862
2024 November	\$ 123,952,623	\$ 426,420	\$ 975,862
2024 December	\$ 123,401,298	\$ 424,538	\$ 975,862
2025 January	\$ 122,848,085	\$ 422,649	\$ 975,862
2025 February	\$ 122,292,978	\$ 420,755	\$ 975,862
2025 March	\$ 121,735,969	\$ 418,853	\$ 975,862
2025 April	\$ 121,177,052	\$ 416,946	\$ 975,862
2025 May	\$ 120,616,221	\$ 415,031	\$ 975,862
2025 June	\$ 120,053,469	\$ 413,111	\$ 975,862
2025 July	\$ 119,488,790	\$ 411,183	\$ 975,862
2025 August	\$ 118,922,176	\$ 409,249	\$ 975,862
2025 September	\$ 118,353,623	\$ 407,308	\$ 975,862
2025 October	\$ 117,783,121	\$ 405,361	\$ 975,862
2025 November	\$ 117,210,666	\$ 403,407	\$ 975,862

2025 December	\$	116,636,250	\$	401,447	\$	975,862
2026 January	\$	116,059,867	\$	399,479	\$	975,862
2026 February	\$	115,481,510	\$	397,505	\$	975,862
2026 March	\$	114,901,171	\$	395,524	\$	975,862
2026 April	\$	114,318,845	\$	393,537	\$	975,862
2026 May	\$	113,734,525	\$	391,542	\$	975,862
2026 June	\$	113,148,203	\$	389,541	\$	975,862
2026 July	\$	112,559,874	\$	387,533	\$	975,862
2026 August	\$	111,969,529	\$	385,518	\$	975,862
2026 September	\$	111,377,162	\$	383,496	\$	975,862
2026 October	\$	110,782,766	\$	381,467	\$	975,862
2026 November	\$	110,186,335	\$	379,431	\$	975,862
2026 December	\$	109,587,861	\$	377,388	\$	975,862
2027 January	\$	108,987,337	\$	375,338	\$	975,862
2027 February	\$	108,384,756	\$	373,282	\$	975,862
2027 March	\$	107,780,111	\$	371,218	\$	975,862
2027 April	\$	107,173,396	\$	369,147	\$	975,862
2027 May	\$	106,564,602	\$	367,069	\$	975,862
2027 June	\$	105,953,724	\$	364,984	\$	975,862
2027 July	\$	105,340,753	\$	362,892	\$	975,862
2027 August	\$	104,725,683	\$	360,792	\$	975,862
2027 September	\$	104,108,506	\$	358,685	\$	975,862
2027 October	\$	103,489,215	\$	356,572	\$	975,862
2027 November	\$	102,867,803	\$	354,451	\$	975,862
2027 December	\$	102,244,263	\$	352,322	\$	975,862
2028 January	\$	101,618,587	\$	350,187	\$	975,862
2028 February	\$	100,990,768	\$	348,044	\$	975,862
2028 March	\$	100,360,799	\$	345,893	\$	975,862
2028 April	\$	99,728,673	\$	343,736	\$	975,862
2028 May	\$	99,094,381	\$	341,571	\$	975,862
2028 June	\$	98,457,917	\$	339,398	\$	975,862
2028 July	\$	97,819,273	\$	337,218	\$	975,862
2028 August	\$	97,178,441	\$	335,031	\$	975,862
2028 September	\$	96,535,415	\$	332,836	\$	975,862
2028 October	\$	95,890,186	\$	330,634	\$	975,862
2028 November	\$	95,242,748	\$	328,424	\$	975,862
2028 December	\$	94,593,092	\$	326,206	\$	975,862
2029 January	\$	93,941,211	\$	323,981	\$	975,862
2029 February	\$	93,287,097	\$	321,749	\$	975,862
2029 March	\$	92,630,743	\$	319,508	\$	975,862
2029 April	\$	91,972,141	\$	317,260	\$	975,862
2029 May	\$	91,311,283	\$	315,005	\$	975,862
2029 June	\$	90,648,162	\$	312,741	\$	975,862
2029 July	\$	89,982,769	\$	310,470	\$	975,862
2029 August	\$	89,315,098	\$	308,191	\$	975,862
2029 September	\$	88,645,140	\$	305,904	\$	975,862
2029 October	\$	87,972,887	\$	303,610	\$	975,862

2029 November	\$	87,298,332	\$	301,307	\$	975,862
2029 December	\$	86,621,466	\$	298,997	\$	975,862
2030 January	\$	85,942,282	\$	296,679	\$	975,862
2030 February	\$	85,260,772	\$	294,352	\$	975,862
2030 March	\$	84,576,928	\$	292,018	\$	975,862
2030 April	\$	83,890,741	\$	289,676	\$	975,862
2030 May	\$	83,202,205	\$	287,326	\$	975,862
2030 June	\$	82,511,310	\$	284,968	\$	975,862
2030 July	\$	81,818,049	\$	282,601	\$	975,862
2030 August	\$	81,122,413	\$	280,227	\$	975,862
2030 September	\$	80,424,395	\$	277,844	\$	975,862
2030 October	\$	79,723,986	\$	275,454	\$	975,862
2030 November	\$	79,021,178	\$	273,055	\$	975,862
2030 December	\$	78,315,964	\$	270,648	\$	975,862
2031 January	\$	77,608,333	\$	268,232	\$	975,862
2031 February	\$	76,898,280	\$	265,809	\$	975,862
2031 March	\$	76,185,794	\$	263,377	\$	975,862
2031 April	\$	75,470,868	\$	260,936	\$	975,862
2031 May	\$	74,753,493	\$	258,488	\$	975,862
2031 June	\$	74,033,661	\$	256,031	\$	975,862
2031 July	\$	73,311,364	\$	253,565	\$	975,862
2031 August	\$	72,586,593	\$	251,091	\$	975,862
2031 September	\$	71,859,340	\$	248,609	\$	975,862
2031 October	\$	71,129,596	\$	246,118	\$	975,862
2031 November	\$	70,397,352	\$	243,619	\$	975,862
2031 December	\$	69,662,601	\$	241,111	\$	975,862
2032 January	\$	68,925,333	\$	238,594	\$	975,862
2032 February	\$	68,185,540	\$	236,069	\$	975,862
2032 March	\$	67,443,213	\$	233,535	\$	975,862
2032 April	\$	66,698,343	\$	230,993	\$	975,862
2032 May	\$	65,950,923	\$	228,442	\$	975,862
2032 June	\$	65,200,942	\$	225,882	\$	975,862
2032 July	\$	64,448,393	\$	223,313	\$	975,862
2032 August	\$	63,693,266	\$	220,736	\$	975,862
2032 September	\$	62,935,553	\$	218,149	\$	975,862
2032 October	\$	62,175,245	\$	215,554	\$	975,862
2032 November	\$	61,412,333	\$	212,950	\$	975,862
2032 December	\$	60,646,808	\$	210,337	\$	975,862
2033 January	\$	59,878,661	\$	207,715	\$	975,862
2033 February	\$	59,107,883	\$	205,084	\$	975,862
2033 March	\$	58,334,465	\$	202,444	\$	975,862
2033 April	\$	57,558,398	\$	199,796	\$	975,862
2033 May	\$	56,779,673	\$	197,138	\$	975,862
2033 June	\$	55,998,281	\$	194,470	\$	975,862
2033 July	\$	55,214,213	\$	191,794	\$	975,862
2033 August	\$	54,427,459	\$	189,109	\$	975,862
2033 September	\$	53,638,011	\$	186,414	\$	975,862

2033 October	\$	52,845,859	\$	183,710	\$	975,862
2033 November	\$	52,050,993	\$	180,997	\$	975,862
2033 December	\$	51,253,405	\$	178,275	\$	975,862
2034 January	\$	50,453,086	\$	175,543	\$	975,862
2034 February	\$	49,650,025	\$	172,802	\$	975,862
2034 March	\$	48,844,214	\$	170,051	\$	975,862
2034 April	\$	48,035,643	\$	167,291	\$	975,862
2034 May	\$	47,224,303	\$	164,522	\$	975,862
2034 June	\$	46,410,184	\$	161,743	\$	975,862
2034 July	\$	45,593,276	\$	158,955	\$	975,862
2034 August	\$	44,773,571	\$	156,157	\$	975,862
2034 September	\$	43,951,058	\$	153,349	\$	975,862
2034 October	\$	43,125,728	\$	150,532	\$	975,862
2034 November	\$	42,297,571	\$	147,706	\$	975,862
2034 December	\$	41,466,578	\$	144,869	\$	975,862
2035 January	\$	40,632,739	\$	142,023	\$	975,862
2035 February	\$	39,796,043	\$	139,167	\$	975,862
2035 March	\$	38,956,482	\$	136,301	\$	975,862
2035 April	\$	38,114,046	\$	133,426	\$	975,862
2035 May	\$	37,268,724	\$	130,541	\$	975,862
2035 June	\$	36,420,507	\$	127,645	\$	975,862
2035 July	\$	35,569,385	\$	124,740	\$	975,862
2035 August	\$	34,715,348	\$	121,825	\$	975,862
2035 September	\$	33,858,385	\$	118,900	\$	975,862
2035 October	\$	32,998,488	\$	115,965	\$	975,862
2035 November	\$	32,135,645	\$	113,020	\$	975,862
2035 December	\$	31,269,848	\$	110,065	\$	975,862
2036 January	\$	30,401,084	\$	107,099	\$	975,862
2036 February	\$	29,529,346	\$	104,124	\$	975,862
2036 March	\$	28,654,621	\$	101,138	\$	975,862
2036 April	\$	27,776,901	\$	98,142	\$	975,862
2036 May	\$	26,896,174	\$	95,136	\$	975,862
2036 June	\$	26,012,431	\$	92,119	\$	975,862
2036 July	\$	25,125,662	\$	89,093	\$	975,862
2036 August	\$	24,235,855	\$	86,055	\$	975,862
2036 September	\$	23,343,000	\$	83,008	\$	975,862
2036 October	\$	22,447,087	\$	79,950	\$	975,862
2036 November	\$	21,548,106	\$	76,881	\$	975,862
2036 December	\$	20,646,046	\$	73,802	\$	975,862
2037 January	\$	19,740,896	\$	70,713	\$	975,862
2037 February	\$	18,832,647	\$	67,613	\$	975,862
2037 March	\$	17,921,286	\$	64,502	\$	975,862
2037 April	\$	17,006,804	\$	61,380	\$	975,862
2037 May	\$	16,089,190	\$	58,248	\$	975,862
2037 June	\$	15,168,433	\$	55,105	\$	975,862
2037 July	\$	14,244,522	\$	51,952	\$	975,862
2037 August	\$	13,317,448	\$	48,787	\$	975,862

2037 September	\$	12,387,197	\$	45,612	\$	975,862
2037 October	\$	11,453,761	\$	42,426	\$	975,862
2037 November	\$	10,517,128	\$	39,229	\$	975,862
2037 December	\$	9,577,287	\$	36,021	\$	975,862
2038 January	\$	8,634,226	\$	32,802	\$	975,862
2038 February	\$	7,687,936	\$	29,572	\$	975,862
2038 March	\$	6,738,405	\$	26,331	\$	975,862
2038 April	\$	5,785,622	\$	23,079	\$	975,862
2038 May	\$	4,829,575	\$	19,816	\$	975,862
2038 June	\$	3,870,254	\$	16,541	\$	975,862
2038 July	\$	2,907,647	\$	13,256	\$	975,862
2038 August	\$	1,941,743	\$	9,959	\$	975,862
2038 September	\$	972,531	\$	6,650	\$	975,862
2038 October	\$	(0)	\$	3,331	\$	975,862