

**Exh. JDW-24CTr  
Dockets UE-240006/UG-240007  
Witness: John D. Wilson  
REDACTED**

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,**

**Complainant,**

**v.**

**AVISTA CORPORATION,**

**Respondent**

**DOCKETS UE-240006 & UG-240007  
(Consolidated)**

**REVISED CROSS-ANSWERING TESTIMONY OF**

**JOHN D. WILSON**

**ON BEHALF OF STAFF OF  
WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION**

*Power Costs*

**August 16, 2024**

*Revised August 29, 2024*

**CONFIDENTIAL PER PROTECTIVE ORDER – REDACTED VERSION**

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## LIST OF EXHIBITS

- Exh. JDW-25 Avista's Response to Staff DR No. 227 Supplemental 2
- Exh. JDW-26 Avista's Response to Staff DR No. 227 Supplemental Attach. A – 2024  
WEIM Calcs
- Exh. JDW-27 ICE Futures Daily Market Report for Washington Carbon Allowance  
Vintage 2025 Futures
- Exh. JDW-28C NPE Calculations
- Exh. JDW-29 Ecology Auction, December 2023
- Exh. JDW-30 Ecology Auction, March 2024
- Exh. JDW-31 Ecology Auction, June 2024
- Exh. JDW-32C Staff DR No. 227 Confidential Attachment A, Exh. CGK 2-6 DR 227
- Exh. JDW-33 Attachment A Comparison to File
- Exh. JDW-34 Attachment A Comparison to File
- Exh. JDW-35C Confidential Attachment A CGK 2-6

1 **I. INTRODUCTION**

2

3 **Q. What is the purpose of your cross-answer testimony?**

4 A. My cross-answer testimony responds to the response testimony of AWEC witness  
5 Bradley G. Mullins in Exhibit BGM-1T and Public Counsel witness Robert L. Earle in  
6 Exhibit RLE-1CT regarding Western Energy Imbalance Market (WEIM) costs.

7 I conclude by providing Staff's updated Net Power Expense (NPE)  
8 recommendation for 2025 NPE of \$175,484 and a Washington NPE Revenue  
9 Requirement from \$113,012.

10

11 **Q. Have you prepared exhibits in support of your testimony?**

12 A. Yes. I sponsor Exh. JDW-25 through Exh. JDW-35C:

- 13 • Exh. JDW-25 Avista's Response to Staff DR No. 227 Supp. 2
- 14
- 15 • Exh. JDW-26 Avista's Response to Staff DR No. 227 Supp. Attach. A –
- 16 2024 WEIM Calcs
- 17
- 18 • Exh. JDW-27 ICE Futures Daily Market Report for Washington Carbon
- 19 Allowance Vintage 2025 Futures
- 20
- 21 • Exh. JDW-28C NPE Calculations
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- 23 • Exh. JDW-29 Ecology Auction, December 2023
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- 25 • Exh. JDW-30 Ecology Auction, March 2024
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- 27 • Exh. JDW-31 Ecology Auction, June 2024
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- 29 • Exh. JDW-32C Staff DR No. 227 Confidential Attachment A, Exh.
- 30 CGK 2-6 DR 227
- 31
- 32 • Exh. JDW-33 Attachment A Comparison to File

- Exh. JDW-34 Attachment A Comparison to File
- Exh. JDW-35C Confidential Attachment A CGK 2-6

The information contained in these exhibits is correct to the best of my knowledge and belief.

## II. RESPONSE TO OTHER PARTIES' TESTIMONY ON WEIM

**Q. Please summarize Public Counsel witness Earle's response testimony on the WEIM.**

A. Witness Earle alleges that Avista has underestimated EIM benefits, particularly the benefit of participating in a 5-minute market as compared to an hourly market. To establish the relevance of this, witness Earle states, "[t]he forecasted benefits from participation in the EIM are part of the calculation of the ERM baseline."<sup>1</sup> Witness Earle later concludes that "Avista's estimate of EIM benefits should be rejected."<sup>2</sup>

**Q. Are the forecasted benefits from participation in the WEIM part of the calculation of the ERM baseline?**

A. No, in my review of Avista's net power expense (NPE) forecast, which is the ERM baseline, I did not find that the WEIM benefits calculation referred to by witness Earle is an input into the NPE forecast.

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<sup>1</sup> Earle, Exh. RLE-1CT at 25:7-8.

<sup>2</sup> Earle, Exh. RLE-1CT at 29:15-16.

1 **Q. Why would that be?**

2 A. It is not necessary for Avista to calculate benefits from the WEIM and include them in  
3 the NPE forecast, because Avista's modeling is designed to capture all market power  
4 transaction opportunities as part of its production cost forecast. Aurora does not  
5 differentiate between WEIM and other market platforms because it is unnecessary and  
6 likely impossible to determine precisely on which market platform a given power  
7 transaction might occur.

8

9 **Q. Do you have a position on whether Avista or Public Counsel have more accurately**  
10 **estimated WEIM benefits?**

11 A. No. While it is interesting to speculate on the magnitude of the benefits of participation in  
12 the WEIM to Avista, the actual benefits estimate is immaterial to an NPE forecast and it  
13 is unnecessary for such a calculation to be performed in the future.

14 As I understand Avista witness Kalich's testimony, he presented an estimate of  
15 the benefits of WEIM participation in order to reassure the Commission and parties that  
16 the updated Aurora modeling method adequately forecasts the impact of WEIM  
17 participation on Avista's energy transactions.<sup>3</sup> While I agree that the most reasonable  
18 method for incorporating WEIM participation into the forecast is to use 5-minute  
19 modeling, I did not investigate the benefits calculation presented by witness Kalich  
20 because it would have been an unproductive use resources.

21

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<sup>3</sup> Kalich, Exh. CGK-1T at 4:10-6:7.

1 **Q. Please summarize AWEC witness Bradley G. Mullins’ response testimony on the**  
2 **WEIM.**

3 A. Witness Mullins’ testimony does not contest that Avista’s use of sub-hourly dispatch  
4 captures the benefits of the WEIM – or at least that it captures those benefits described by  
5 Avista witness Kalich. Witness Mullins does, however, testify that Avista has failed to  
6 capture all WEIM benefits in its modelling. Witness Mullins determined that Avista’s  
7 modeling method excludes certain annual settlement charges from net power costs,  
8 including revenue from California’s greenhouse gas cap and trade program.<sup>4</sup>  
9

10 **Q. Do you agree that revenue from California’s greenhouse gas cap and trade program**  
11 **should be included in forecast NPE?**

12 A. No. Based on information consultations with witness Kalich, I understand that Avista  
13 does not currently participate in California’s greenhouse gas cap and trade program.  
14

15 **Q. Do you agree with witness Mullins that some other WEIM settlement charges are**  
16 **inappropriately omitted from Avista’s forecast NPE?**

17 A. Yes. In my response testimony, I also found that Avista neglected to consider congestion  
18 and other WEIM charges and revenues in its NPE forecast, which I estimated to total  
19 about \$1.4 million per year in non-energy benefits. After excluding the greenhouse gas  
20 revenue that should not be included in an adjustment, witness Mullins’ corresponding  
21 estimate is \$0.9 million per year.<sup>5</sup>

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<sup>4</sup> Mullins, Exh. BGM-1T at 53:15-54:10.

<sup>5</sup> Mullins, Exh. BGM-1T at 54, Table 8.

1           While witness Mullins and I agree that Avista should include non-energy charges  
2           that are not captured in Aurora’s modeling of production costs, our interpretation of the  
3           accounting codes that should or should not be included differs. As for my interpretation,  
4           the information provided by Avista prior to filing my response testimony provided less  
5           explanation and interpretation than the more detailed review of WEIM settlement charges  
6           provided by Avista in a more recent discovery response.<sup>6</sup>

7  
8   **Q.    What adjustment to Avista’s NPE forecast should be made to account for WEIM**  
9   **settlement charges that are not captured in Aurora?**

10  A.    In a data request response, Avista provided a more detailed review of WEIM settlement  
11       charges. The resulting adjustment is an increase in forecast NPE of \$0.5 million.<sup>7</sup> I have  
12       reviewed the charge code assignments by Avista, and they appear reasonable.

13  
14  **Q.    Did witness Mullins raise any other material issues regarding forecast NPE that are**  
15  **not addressed in your response testimony?**

16  A.    Yes. Witness Mullins testified that Avista should include an adjustment to reflect power  
17       market margins at the California-Oregon Border (COB) market that have historically  
18       been reflected in Avista’s costs. Witness Mullins estimates that this would reduce the  
19       revenue requirement by \$0.1 million.<sup>8</sup>

20  

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<sup>6</sup> Wilson, Exh. JDW-25 (Avista’s Response to Staff DR No. 227 Supp. 2, Supplemental Response to (h)).

<sup>7</sup> Wilson, Exh. JDW-26 (Avista’s Response to Staff DR No. 227 Supp. 2, Supplemental Attachment A).

<sup>8</sup> Mullins, Exh. BGM-1T at 44:15-46:12.



1 **Q. Do you have a position on the COB market adjustment?**

2 A. No. I would like to review Avista’s rebuttal testimony on this point before forming an  
3 opinion.

4

5 **III. STAFF POSITION ON POWER COST FORECAST**

6

7 **Q. Please summarize the development of Staff’s position on the power cost forecast.**

8 A. The position described below is primarily based on issues raised in my response  
9 testimony, Exhibit JDW-1CT. Because many of the positions in that testimony required  
10 updated modeling by Avista, and Staff also wanted to consider the positions developed  
11 by other witnesses before requesting that modeling, Staff filed Data Requests 227 and  
12 230 to request Avista conduct further modeling after reviewing all parties’ response  
13 testimony.

14 Subsequent to filing Data Request 227, I consulted informally with Avista witness  
15 Kalich regarding accounting data for WEIM costs. This consultation resulted in further  
16 refinement of Staff’s position.

17

18 **Q. Please summarize Staff’s position.**

19 A. Based on Avista’s modeling in response to Staff DR-227 and DR-230, Staff recommends  
20 that Avista’s system NPE forecast be increased from \$175.1 million to \$175.5 million.  
21 This \$0.4 million net adjustment is comprised of three large adjustments and several  
22 small adjustments that happen to nearly balance out.

1           The recommended NPE includes the \$43.1 million cost of CCA allowances  
2           associated with forecast wholesale sales. If the Commission determines that those costs  
3           should not be included in NPE, then the system NPE forecast should be reduced to  
4           \$132.4 million.

5                           **Table 1: Staff-Recommended Adjustments to Avista’s System  
Power Cost Forecast for 2025**

	<b>Adjustment</b>	<b>Testimony Source Exh. JDW-1TC</b>	<b>Exh. JDW-28C<sup>9</sup> Source</b>
<b>Exclude portfolio error adjustment</b>	(65,756,061)	14:15-15:3	B-12
<b>BPA tariff update</b>	215,064	37:18-19	B-13
<b>Natural gas transportation rate update</b>	935,267	37:21-22	B-14
<b>Omitted financial contract</b>	(450,000)	38:6-7	B-15
<b>WEIM costs not in Aurora</b>	302,855	38:16-24 JDW-25 at 2	B-16
<b>Lancaster PPA</b>	Not relevant in 2025	40:16-41:5	
<b>Rattlesnake Flats Wind Project</b>	Included below	41:8-15	
<b>Correction to start fuel error in Aurora</b>	Included below	38:1-4	
<b>Dispatch Colstrip to marginal fuel cost</b>	393,293	39:2-3:7	B-20
<b>Include CCA allowance price in dispatch and market purchases</b>	21,591,885	31:19-22	B-21
<b>CCA allowance cost for market sales</b>	43,128,017	31:19-22	B-22
<b>Total System Adjustments</b>	<b>\$ 360,320</b>		

6           As shown in Table 2, Avista’s Washington NPE revenue requirement should be  
7           increased from \$112.8 million to \$113.0 million.

<sup>9</sup> Tab Comparison.

1

**Table 2: Staff-Recommended Washington NPE Revenue Requirement for 2025<sup>10</sup>**

<b>Account</b>	<b>System NPE</b>
555 PURCHASED POWER	187,848
557 OTHER EXPENSES	43,728
501 THERMAL FUEL EXPENSE	32,051
547 OTHER FUEL EXPENSE	122,244
565 TRANSMISSION OF ELECTRICITY BY OTHERS	28,547
<b>Total Expense</b>	<b>\$ 414,419</b>
447 SALES FOR RESALE	224,560
456 OTHER ELECTRIC REVENUE	14,375
<b>Total Revenue</b>	<b>\$ 238,934</b>
<b>Total Net Expense</b>	<b>\$ 175,484</b>
<b>Total Washington NPE Revenue Requirement</b>	<b>\$ 113,012</b>

2

In addition to including CCA allowance costs for market sales in forecast power costs, the other two largest changes are removing Avista’s portfolio forecast error and including the CCA allowance price in dispatch and market purchases. Removal of Avista’s portfolio forecast of \$65,756,061 from the net power cost forecast is the largest single adjustment and the adjustment amount is unchanged from my response testimony.<sup>11</sup>

8

9

**Q. Please summarize your review of Avista’s modeling that includes the CCA allowance price in dispatch and market purchases.**

10

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<sup>10</sup> Wilson, Exh. JDW-28C (Tab DR230 PC Accounts).

<sup>11</sup> Wilson, Exh. JDW-1TC at 14:15-15:3.

1 A. Avista’s modeling found that including a CCA allowance price of \$71.15 per ton  
2 resulted in a net increase of \$73,333,559 in power costs.<sup>12</sup> While I did not identify  
3 any results that cause me to question whether Avista modeled the CCA allowance  
4 price as described, I identified some small problems with how Aurora committed  
5 units.

6

7 **Q. Please explain why you believe there may be some problems with how Aurora**  
8 **commits units when a CCA allowance price is included in dispatch decisions.**

9 A. Avista’s modeling (using \$71.15 per ton) includes [REDACTED] hours with negative net  
10 wholesale sales revenue. It is problematic to see a so-called “perfect foresight”  
11 production cost model include hours with negative revenue hours.

12 Wholesale sales revenue includes sales revenue (wholesale sales times Mid-C  
13 price) and the cost of emissions allowances. For purposes of understanding model  
14 performance, I used Avista’s allowance price of \$71.15 per ton. While the number of  
15 hours with negative net wholesale sales revenue is significant, the total amount of  
16 negative net revenue is relatively small, just [REDACTED] which is less than 1 percent  
17 of the total net revenue of [REDACTED]. While it would be ideal to correct this  
18 issue, from the perspective of whether or not the overall NPE forecast is reasonable,  
19 I do not consider this to be such a material problem that it requires immediate action.

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<sup>12</sup> Wilson, Exh. JDW-28C (Tab DR227CompRev Cell F103); Exh. JDW-25 (Avista’s Response to Staff DR No. 227 Supp. 2, Supp. Response 2 to (h)). I note that Avista may have done similar modeling in response to Staff DR No. 230, but the data provided appear to have been mislabeled, and I was unable to get clarification from Avista.

1 Aurora appears to have *committed* units even when revenues from those units  
2 were negative. For example, during a 36-hour period from July 5 at 11 pm to July 8  
3 at 11 am, Avista’s model shows net wholesale sales revenue losses of [REDACTED],  
4 most of which were incurred during a 16-hour period in which [REDACTED]  
5 [REDACTED]. It seems irregular that the model would commit units at a loss  
6 for such an extended period of time.

7 I considered whether Aurora may have committed units based on fuel prices,  
8 but dispatched units based on both fuel and CCA allowance prices. However, I  
9 learned from Avista staff that the model settings were set to include CCA allowance  
10 prices in unit commitment decisions. Unless there is a software bug, Avista should  
11 investigate to identify whether there is another explanation for the problematic  
12 dispatch results and correct the problem in future filings.

13  
14 **Q. Is the \$71.15 per ton allowance price representative of recent market prices?**

15 **A.** No. In response to a data request, Avista acknowledges that recent market prices are  
16 lower, but argues that its modeled price level reasonable reflects future costs  
17 considering the following factors:

- 18 • “Ecology has substantially exhausted its APCR allowances by releasing them  
19 ahead of schedule,”<sup>13</sup>
- 20 • “[L]inkage to California is unlikely through 2025 or longer,”<sup>14</sup>

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<sup>13</sup> Wilson, Exh. JDW-25 (Avista’s Response to Staff DR No. 227 Supp. 2, Supp. Response 2 to (h)).

<sup>14</sup> *Id.*

- 1 • “Recent market prices are lower but based on limited volumes,”<sup>15</sup> and
- 2 • “Recent auctions have lower prices, as well, but are biased lower in the
- 3 Company’s view due to the pending citizen’s initiative to repeal the law.”<sup>16</sup>

4 For the most part, these arguments are not reasonable because this  
5 information is available to the market and is “priced in” to the market and auction  
6 prices.<sup>17</sup> The only exception is the consideration of the pending citizen’s initiative to  
7 repeal the CCA. That adds an element of risk that Avista might reasonably consider  
8 differently than the market in its evaluation of an appropriate CCA allowance price  
9 forecast.

10 However, it is clearly not the case that Avista has considered any of this  
11 information in deciding to use a CCA allowance price forecast generated in 2022,  
12 when none of this information was available. This *post hoc* justification should be  
13 disregarded by the Commission.

14 In the absence of a better proposal, it is reasonable to rely on published  
15 market forward pricing for CCA allowance prices, a practice that is consistent with  
16 other practices in Avista’s power cost forecast.

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<sup>15</sup> *Id.*

<sup>16</sup> *Id.*

<sup>17</sup> The weighted-average CCA allowance price for auctions 4 (December 2023), 5 (March 2024), and 6 (June 2024) is \$35.85 per ton. This value is reasonably close to the ICE forward of \$38.09, which likely includes a small premium for risk mitigation. I consider the use of market forwards preferable to historical actual costs where available, but both are reasonable and one or the other may be preferred due to the circumstances in which the price forecast is being used. Wilson, Exhs. JDW-29, JDW-30, and JDW 31.

1 **Q. How did you forecast CCA allowance costs?**

2 A. Using the three scenarios in Table 3, I forecast the cost of allowances to be \$4.0  
3 million for Avista’s proposal,<sup>18</sup> \$43.1 million for the CCA allowance market price,  
4 and \$44.3 million for the Ecology CCA allowance forecast price. The prices I used  
5 are \$25.33, \$38.09, and \$71.15 per ton, respectively, as shown in Table 3.

6 In reviewing, the Commission should note that (a) the price difference  
7 between the Avista Proposal and the other two cases also includes significant  
8 adjustments, including removing Avista’s “portfolio forecast error” cost proposal,  
9 and (b) the Avista Proposal only applied the emissions price to two gas combustion  
10 turbine units in Idaho. Notwithstanding those important differences, the three model  
11 runs give an idea of the sensitivity of emissions to dispatch prices.

12

13 **Table 3: 2025 System NPE Forecast Using Varying Emissions Dispatch Prices<sup>19</sup>**

Case	Emissions Price per Ton	Forecast System NPE	Forecast Emissions (tons)	Emissions Relative to Proposal
<b>Avista Proposal</b>	\$25.33	\$175.1 million	3.8 million	n/a
<b>CCA Allowance Market</b>	\$38.09	\$175.5 million	3.1 million	-18%
<b>Ecology CCA Allowance Forecast</b>	\$71.15	\$228.8 million	2.3 million	-39%

<sup>18</sup> Avista did not include this cost in proposed NPE. I calculated it based on Avista’s emissions price and the resulting emissions from the two Idaho combustion turbine units.

<sup>19</sup> Wilson, Exhs. JDW-28C (Tab Comparison); JDW-32C; JDW-33; JDW-34; and JDW-35C.

1           The \$38.09 per ton CCA allowance market price is a recent forward market  
2 price for CCA allowances, which traded at about \$38 per ton according to the ICE  
3 forward for December 2025 from August 1, 2024.<sup>20</sup>

4           If Avista dispatches its system using a market price for CCA allowances, its  
5 2025 emissions are forecast to be reduced by 18% relative to its proposal.

6           Since Avista’s responses to Staff DR 227 and DR 230 did not include  
7 calculations of allowance costs, as requested, my forecast calculates allowance costs  
8 on an hourly basis using the following method.

- 9           1. Calculate load net of zero-emissions generation (hydro, wind, and solar). In  
10           other words, all zero-emissions generation is allocated to load first.
- 11           2. If there is additional load, then load is served using the most carbon-intensive  
12           generation dispatched during the hour, in the following order: Colstrip,  
13           market purchases, gas units.
- 14           3. Remaining generation is allocated to wholesale market sales.<sup>21</sup>
- 15           4. Emissions are calculated using Ecology-approved emissions factors  
16           (tons/MWh).
- 17           5. Emissions costs are calculated as emissions times the allowance price (\$/ton).

18           This method is suggested because it maximizes the benefits of no-cost CCA  
19 allowances to retail customers.

20

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<sup>20</sup> Wilson, Exh. JDW-27.

<sup>21</sup> In the case of Avista’s proposal, if gas generation was allocated to wholesale market sales, allowances were calculated based on the minimum (a) gas generation allocated to wholesale market sales and (b) generation of the two Idaho gas combustion turbine units. This simplified method should be approved on if the Commission approves Avista’s proposal.



1 **Q. Is the use of a CCA allowance market price economically sound?**

2 A. Yes, considering the basic economics, it is cost-efficient for Avista and other  
3 Washington utilities to include the cost of CCA allowances in their dispatch  
4 decisions. If Avista can sell a carbon allowance for \$40 per ton, and it costs Avista  
5 \$39 per ton to reduce its emissions, then the net benefit to Avista's customers is \$1  
6 per ton. For this basic reason, economic principles argue in favor of using the market  
7 price for CCA allowances in operational dispatch decisions.

8 In contrast, if Avista dispatches as if it can sell a carbon allowance for \$96  
9 per ton, but it can only sell a carbon allowance for \$40 per ton, the \$56 per ton  
10 difference represents a loss of revenue that will increase Avista's NPE. The  
11 Commission may find this difference justified, but it should consider the  
12 implications of this market inefficiency in its decision.

13 I will also note that from a strict economics point of view, the quantity of no-  
14 cost carbon allowances provided by Ecology to Avista should be irrelevant to  
15 Avista's dispatch decisions. As illustrated in the example above, decisions to  
16 dispatch can create costs or value in the form of carbon allowance revenue just as  
17 surely as they can also create costs or value in the form of market power  
18 transactions. However, this "strict economics" point of view does not consider risks  
19 associated with the lack of foresight of carbon allowance supply, demand, and prices.

1 **Q. If Staff determines that AWEC witness Mullins' adjustment for the California-**  
2 **Oregon Border (COB) market should be adopted, what effect would that have?**

3 A. The following adjustments would be made to Staff's position:<sup>22</sup>

- 4 • Revise System Account 447 from \$224,560 to \$224,820;
- 5 • Revise System Total Revenue from \$238,934 to \$239,195;
- 6 • Revise System Total Net Expense from \$175,484 to \$175, 224; and
- 7 • Revise Washington NPE Revenue Requirement from \$113,012 to \$112,844.

8  
9 **Q. What net power cost forecast are you supporting?**

10 A. I am supporting 2025 NPE of \$175,484, as summarized in Table 2 and a Washington  
11 NPE Revenue Requirement from \$113,012, as summarized in Table 2.

12  
13 **Q. Does this conclude your cross-answer testimony?**

14 A. Yes.

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<sup>22</sup> Wilson, JDW-28C (Tab DR 230 PC Accounts).