**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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|---|---|
| **Application of Dominion Energy Utah for Authority to Change its Depreciation Rates** | **Docket No. 19-057-03**<br><br>**DPU Exhibit 2.0 DIR** |

# DEPRECIATION

# DIRECT TESTIMONY AND EXHIBITS

**OF**

**ROXIE MCCULLAR**

**ON BEHALF OF**

**THE UTAH DIVISION OF PUBLIC UTILITIES**

**May 22, 2019**

## Table of Contents

## Introduction

**Q. Please state your name and business address.**

A. My name is Roxie McCullar. My business address is 8625 Farmington Cemetery Road, Pleasant Plains, Illinois 62677.

**Q. What is your present occupation?**

A. Since 1997, I have been employed as a consultant with the firm of William Dunkel and Associates and have regularly provided consulting services in regulatory proceedings throughout the country.

**Q. Please describe your educational and professional background.**

A. I have 20 years of experience consulting in regulatory rate cases and have addressed depreciation rate issues in over 20 proceedings in numerous jurisdictions nationwide. I am a Certified Public Accountant licensed in the state of Illinois. I am a Certified Depreciation Professional through the Society of Depreciation Professionals. I received my Master of Arts degree in Accounting from the University of Illinois in Springfield. I received my Bachelor of Science degree in Mathematics from Illinois State University in Normal.

**Q. Have you prepared an appendix that describes your previous experience?**

A. Yes. My previous experiences are shown on the attached DPU Exhibit 2.1 DIR.

**Q. On whose behalf are you testifying?**

A. I am testifying on behalf of the Utah Division of Public Utilities ("Division" or "DPU").

**Q. What is the purpose of your testimony?**

A. The purpose of my testimony is to address depreciation issues related to Dominion Energy Utah ("DEU" or "Company") in Utah.

**Q. Did you participate in a field visit of DEU's facilities?**

A. Yes. On May 13, 2019, I participated in field visits of several different DEU locations.[1] At each location, Company personnel discussed the facilities and ongoing projects with me.

## Summary

**Q. Can you summarize your recommendations regarding depreciation rates for DEU?**

A. Yes. I recommend that the DPU proposed depreciation rates shown on Exhibit DPU 2.2 DIR be approved for DEU in Utah.

The DPU proposed depreciation rates compared to the DEU proposed depreciation rates are summarized below:

**Table 1: Comparison of Composite Annual Depreciation Rates**

| Function | 12/31/17 Investment | Current | DEU Proposed Annual Depreciation Rate | DEU Proposed Difference from Current | DPU Proposed Annual Depreciation Rate | DPU Difference from Current | DPU Difference from DEU Proposed |
|---|---|---|---|---|---|---|---|
| | A | B | C | D=C-B | E | F=E-B | G=E-C |
| Distribution | 2,515,045,584 | 2.64% | 2.73% | 0.09% | 2.37% | -0.27% | -0.36% |
| General Plant | 261,739,301 | 5.51% | 5.81% | 0.30% | 5.81% | 0.30% | 0.00% |
| **Total** | **2,776,784,886** | 2.69% | 3.02% | 0.33% | 2.69% | 0.00% | -0.33% |

[1] I visited the Lakeside and Hunter Stations, Salt Lake Operations Center, and two locations where DEU was replacing mains and services.

The annualized accrual based on December 31, 2017, investments using the DPU proposed depreciation rates compared to DEU's proposed depreciation rates are summarized below:[2]

**Table 2: Comparison of Annual Accrual Based on December 31, 2017 Investments**

| Function | 12/31/17 Investment | Current Approved Depreciation Rates | DEU Proposed Annual Depreciation Accrual | DEU Proposed Difference from Current | DPU Proposed Annual Depreciation Accrual | DPU Difference from Current | DPU Difference from DEU Proposed |
|---|---|---|---|---|---|---|---|
| | A | B | C | D=C-B | E | F=E-B | G=E-C |
| Distribution | 2,515,045,584 | 60,418,299 | 68,710,044 | 8,291,745 | 59,602,906 | (815,393) | (9,107,138) |
| General Plant | 261,739,301 | 14,410,326 | 15,198,482 | 788,156 | 15,198,482 | 788,156 | 0 |
| **Total** | **2,776,784,886** | **74,828,625** | **83,908,526** | **9,079,901** | **74,801,388** | **(27,237)** | **(9,107,138)** |

**Q. Could you please provide the definition of depreciation?**

A. Yes. The Federal Energy Regulatory Commission ("FERC") definition contained in the FERC Uniform System of Accounts ("FERC USOA") for Natural Gas plant states:

> "12.B. *Depreciation*, as applied to depreciable gas plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of gas plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities, and, in the case of natural gas companies, the exhaustion of natural resources."[3]

[2] Exhibit 2.2 DIR shows the annual accruals based on the 12/31/17 investment levels used in the calculation of the proposed depreciation rates in the depreciation study. However, in the future as the investments change, the depreciation rates will be applied to those investments, which will produce a different annual accrual amount.
[3] FERC Uniform System of Accounts Prescribed for Natural Gas Companies Subject to the Provisions of the Natural Gas Act. (18 CFR part 201).

The FERC USOA definition of "depreciation" specifically states depreciation is a "loss in service value".

## Depreciation Rates using Remaining Life Technique

**Q. Please start with a brief discussion about the remaining life technique for calculating depreciation rates.**

A. The remaining life technique depreciation rate formula is:

$$\text{Depreciation Rate} = \frac{(100\% - \text{Book Reserve \%} - \text{Future Net Salvage \%})}{\text{Average Remaining Life}}$$

In the formula above, the book reserve percent is the actual reserve on the Company's books divided by the actual plant in service investment on the Company's books at the time of the Depreciation Study.

The Depreciation Study estimates the projected average service life of the assets, the retirement pattern of those assets, and the cost of removing or retiring those assets, less any expected salvage from the sale, scrap, insurance, reimbursements, etc. of those assets. These estimates are referred to as depreciation parameters.

The projected average service life and retirement pattern (survivor curve) are the two parameters from the Depreciation Study that calculate the average remaining life.

The estimated future net salvage percent parameter from the Depreciation Study estimates the future cost of removing or retiring, less any estimated future salvage from the sale, scrap, insurance, reimbursements, etc.

**Q. What is one advantage to using the remaining life technique?**

A. The remaining life technique formula includes an adjustment in the calculation of depreciation rates to offset any reserve imbalance.

A reserve imbalance calculated in a depreciation study is the difference between the actual book accumulated reserve at the time of the study and an estimate of what the depreciation reserve should be based on the depreciation estimates in the current depreciation study.

A reserve imbalance can be due to the prior depreciation estimates being different than the current depreciation estimates, or another cause could be an unanticipated event which occurred in the past that impacted the book reserve balance.

**Q. Does an authoritative depreciation text discuss this advantage to using the remaining life technique?**

A. Yes. The National Association of Regulatory Utility Commissioners' ("NARUC") text *Public Utilities Depreciation Practices* states:

> "The desirability of using the remaining life technique is that any necessary adjustments of depreciation reserves, because of changes to the estimates of life or net salvage, are accrued automatically over the remaining life of the property."[4]

[4] Page 65, *Public Utilities Depreciation Practices*, published by National Association of Regulatory Commissioners (NARUC), 1996.

**Q. Does the DEU filing show a depreciation reserve imbalance?**

A. Yes. DEU Exhibit 1.4 attached to the Direct Testimony of Jordan Stephenson calculates a $7.4 million reserve excess.

**Q. What impact does a calculated reserve deficiency or reserve excess have on the calculation of depreciation rates?**

A. All other things being equal, in the remaining life formula, a reserve deficiency would increase the depreciation rate and a reserve excess would result in a lower depreciation rate.

In the remaining life formula, the reserve deficiency is collected over the remaining life of the investment which results in higher depreciation expense, all other things being equal.

On the other hand, in the remaining life formula, a reserve excess decreases the depreciation expense that needs to be collected from ratepayers over the remaining life of the investment, all other things being equal.

**Q. How do you propose to address any reserve imbalances?**

A. I recommend using remaining life depreciation rates for all accounts since the remaining life technique formula includes an adjustment to the depreciation rates to offset any reserve imbalance.

**Average Service Life for Account 381.21, Meters-Transponders**

**Q. What are transponders?**

A. A transponder is a device attached to the meter that can transmit the meter reading to a company vehicle as it drives down the street.

**Q. What average service life do you recommend for the transponders?**

A. I recommend a 15-year average service life for transponders. DEU is proposing to reduce the average service life to 13-year for the transponders.

**Q. What issues did you consider in your recommended 15-year average service life?**

A. I considered the impact of the retiring Elster transponders and the expected average service life of the new Itron transponders being installed.

DEU is in the process of changing out the transponders manufactured by Elster with transponders manufactured by Itron. As of the date of the depreciation study, there were still "approximately 600,000 Elster transponders in service."[5] DEU estimates that the Elster transponder will have a service life of 10-11 years.[6]

DEU states that the manufacturer of the new Itron transponders estimates a "17 to 20-year battery life."[7] In discovery asking for support of the Itron transponder manufacturer's expected average service life the response stated:

> "The 100G DL, 100G DLN, and 100G DLS ERT modules use Li-SOCl2 technology for their power source/battery. These modules will operate for 20 years on a single 'A' cell (3.65Ah), while the 100G ERT module

[5] Page III-6, DEU Exhibit 1.2.
[6] Page III-6, DEU Exhibit 1.2.
[7] Page III-6, DEU Exhibit 1.2.

> required two cells for a 20-year battery life. Many efficiency gains were made to accomplish this, most notably changing the RFIC. The technology inherent to the 100G DLN and 100G DLS ERT modules bring with them added messaging for fixed network support. When these messages are used, the endpoint will maintain a 20-year battery life.
>
> There are configurations involving higher output power for additional range that would reduce the expected life of the battery but provide additional benefits of consistent reading and this may be used in some circumstances. It reduces battery life expectancy to 13 years."[8]

The response indicates that the battery life is expected to be 20 years, except for the new Itron transponders that are configured for additional range which have a battery life expectancy of 13 years.

When asked in discovery about the transponders that need configured for additional range, DEU stated that "[l]ess than 1% will need to be configured for additional range."[9] Which means that less than 1% of new Itron transponders will be configured as described that reduces the battery life expectancy to 13 years.

The majority, over 99%, of the new Itron transponders are expected to have a battery life of 20 years.

**Q. Please summarize your life recommendation for transponders.**

A. My recommended 15-year average service life is based on DEU's stated 10-11 year expected life of the remaining Elster transponders and the manufacturer's expected battery life of 20 years for the majority (over 99%) of Itron transponders being installed.

[8] DEU response to DPU 1.13, attached as DPU Exhibit 2.3 DIR.
[9] DEU response to DPU 5.03, attached as DPU Exhibit 2.3 DIR.

A 15-year average service life is more reasonable based on the range than DEU's proposed 13-year average service life.

**Q. What is DPU Exhibit 2.4 DIR?**

A. DPU Exhibit 2.4 DIR shows the calculations of the remaining life used in the remaining life formula for Account 381.21, Meters-Transponders based on my proposed 15-S4 survivor curve.

**Average Service Life for Account 376, Distribution-Mains**

**Q. Do you have a recommendation regarding the average service life for Account 376, Distribution-Mains?**

A. Yes. DEU recommends increasing the current average service life of 65 years by 2 years to 67 years. I recommend increasing the life to 70 years.

**Q. What does the depreciation study state about the support for DEU's average service life of 67 years for Account 376, Distribution-Mains?**

A. Regarding the average service life estimates for Account 376, Distribution-Mains, the depreciation study states:

> "For many of the plant accounts and subaccounts for which survivor curves were estimated, the statistical analyses using the retirement rate method resulted in reasonable indications of the survivor patterns experienced. These accounts represent approximately 68 percent of depreciable plant investment. Generally, the information external to the statistics led to no significant departure from the indicated survivor curves for the accounts listed below. The statistical support for the service life estimates is presented in the section beginning on page VII-2.

| Account No. | Account Description |
|---|---|
| GAS PLANT | |
| DISTRIBUTION PLANT | |
| 376 | Mains |
| 378 | Measuring and Regulating Station Equipment |
| 382 | Meter Installations |
| 384 | House Regulator Installations |
| 387 | Other Equipment |
| GENERAL PLANT | |
| 390.41 | Structures and Improvements – CNG Fuel Stations |
| 392.01 | Transportation Equipment – General |
| 392.02 | Transportation Equipment – CNG Tanks"[10] |

**Q. The DEU depreciation study states that the statistical support for Account 376, Distribution-Mains service life is found in Part VII of the depreciation study. Did the Company make any changes to Part VII of the filed depreciation study?**

A. Yes. During the discovery process, DEU provided a revised Part VII of the depreciation study.[11] I used the corrected original life tables provided in the revised Part VII for my review of the DEU proposed average service lives.

**Q. Do the statistics provided in the revised Part VII of the depreciation study support DEU's proposed extension of the average service life for Account 376, Distribution-Mains?**

A. Yes, however, the statistics support an even longer average service life than DEU is proposing.

[10] Pages III-2 to III-3, DEU Exhibit 1.2.
[11] DEU response to DPU 4.03, attached as DPU Exhibit 2.5 DIR. (DPU Exhibit 2.5 DIR does not include the revised Part VII).

In discovery, DEU provided the curve fitting results on the revised Part VII data. Table 3 below shows DEU's top five best fits to the data for Account 376, Distribution-Mains.

**Table 3: Account 376, Mains DEU Curve Fitting Results**[12]

| Rank | Life | Curve | Residual Measure |
|---|---|---|---|
| 1. | 73.9 | R2 | 0.45 |
| 2. | 94.4 | L1 | 0.45 |
| 3. | 83.2 | S0.5 | 0.47 |
| 4. | 83.6 | L1.5 | 0.79 |
| 5. | 67.2 | R2.5 | 0.95 |

Based on DEU's curve fitting results the top five best fits result in an average service life range of 67-94 years. DEU is proposing a 67-year average service life, which is at the low end of the range.

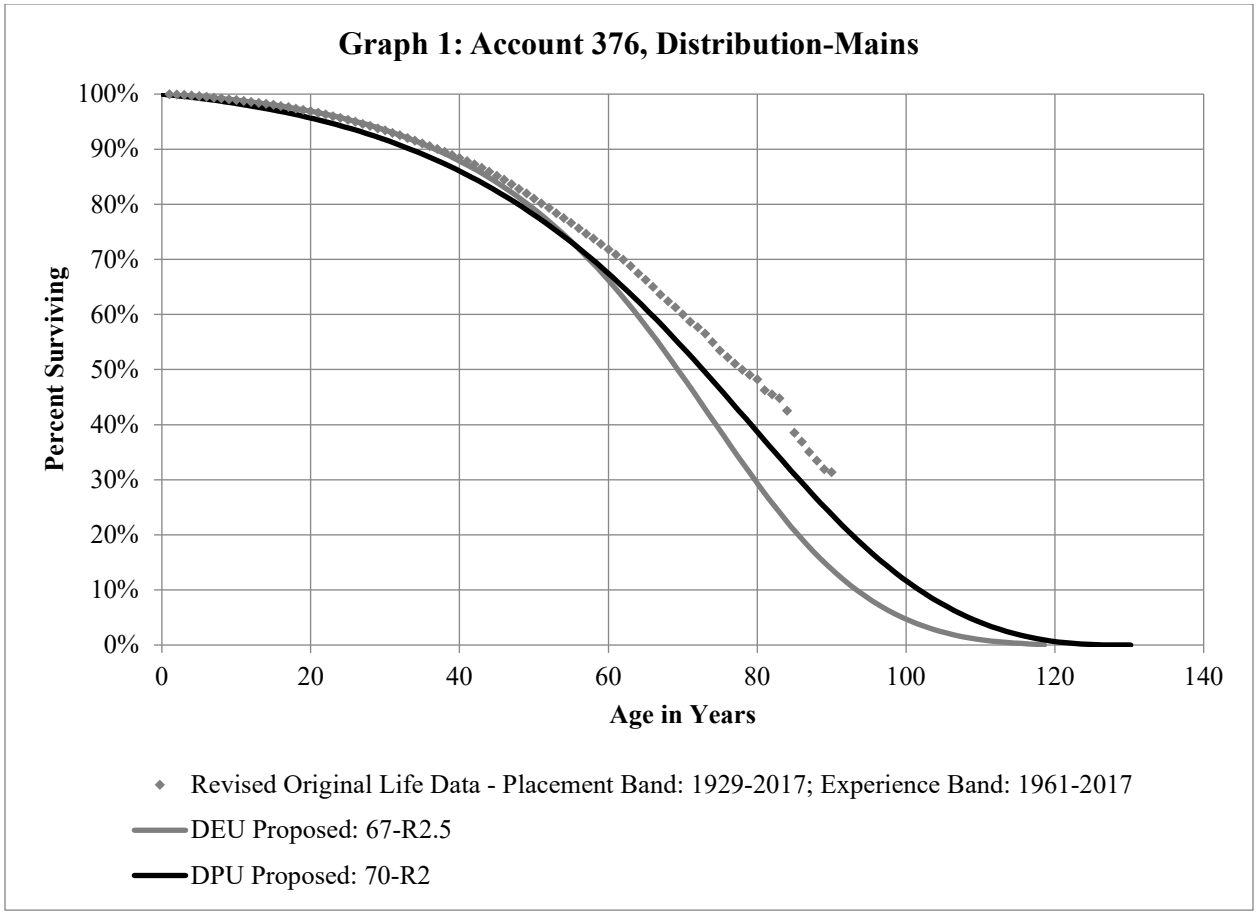
DEU is correct in extending the current approved 65-year average service life, but the data indicates a longer life is appropriate.

**Q. What average service life do you recommend for Account 376, Distribution-Mains?**

A. Based on DEU's experience and no indication that the company's future plans vary greatly from the past experience in this account, I recommend extending the current average service life by 5 years to a 70-year average service life.

Graph 1 below compares DEU's and DPU's proposed survivor curves with the historical data for Account 376, Distribution-Mains.

[12] DEU Response to DPU 4.03 Attachment 2, attached as DPU Exhibit 2.5 DIR




**Q. What is DPU Exhibit 2.6 DIR?**

A. DPU Exhibit 2.6 DIR shows the calculations of the remaining life used in the remaining life formula for Account 376, Distribution-Mains based on my proposed 70-R2 survivor curve.

## Future Net Salvage

**Q. Do you have a recommendation regarding DEU's proposed future net salvage percents?**

A. Yes. For Account 376, Distribution-Mains, Account 380, Distribution-Services, Account 382, Distribution-Meter Installations, and Account 383, Distribution-House Regulators, I

recommend future net salvage ("FNS") percents that differ from DEU's proposal as shown in Table 4 below:

**Table 4: Comparison of Distribution Plant Future Net Salvage ("FNS") Percent Proposals**

| Account | Current Approved FNS% | DEU Proposed FNS% | DPU Proposed FNS% |
|---|---|---|---|
| 376, Distribution-Mains | -39% | -47% | -30% |
| 380, Distribution-Services | -85% | -100% | -85% |
| 382, Distribution-Meter Installations | -5% | -5% | -3% |
| 383, Distribution-House Regulators | -5% | -5% | -1% |

**Q. Please explain what is meant by net salvage.**

A. NARUC's *Public Utilities Depreciation Practices* defines net salvage as "the gross salvage for the property retired less its cost of removal."[13] Gross salvage is defined as "the amount recorded for the property retired due to the sale, reimbursement, or reuse of the property."[14] Cost of removal is defined as "the costs incurred in connection with the retirement from service and the disposition of depreciable plant. Cost of removal may be incurred for plant that is retired in place."[15]

**Q. Why is the estimated future net salvage shown as a percent in the table above?**

A. The depreciation rates are calculated in the depreciation study based on the per book amounts and experience as of December 31, 2017. The depreciation rates resulting from

[13] Page 322, *Public Utilities Depreciation Practices*, published by National Association of Regulatory Commissioners (NARUC), 1996.
[14] Page 320, *Public Utilities Depreciation Practices*, published by National Association of Regulatory Commissioners (NARUC), 1996.
[15] Page 317, *Public Utilities Depreciation Practices*, published by National Association of Regulatory Commissioners (NARUC), 1996.

the depreciation study are then applied to the investment amounts as of the date of the test year in the rate proceeding. Since the depreciation study produces a depreciation rate, the future net salvage is included in the depreciation rate formula as a percent of the investment as of December 31, 2017.

**Q. What impact does net salvage have on depreciation rates?**

A. Positive net salvage results in a lower depreciation rate, all other things being equal. Negative net salvage results in a higher depreciation rate, all other things being equal.

As stated in NARUC's *Public Utilities Depreciation Practices*:

> "Positive net salvage occurs when gross salvage exceeds cost of retirement, and negative net salvage occurs when cost of retirement exceeds gross salvage."[16]

The estimated future net salvage is part of the annual depreciation accrual, which is credited to the depreciation reserve to cover the estimated future net salvage costs the company may incur in the future associated with plant asset retirements.

**Q. Have you reviewed the recovery of future net salvage costs included in DEU's proposed depreciation rates and the actual net salvage costs DEU has incurred in the recent past?**

A. Yes. Table 5 below is a comparison of the Distribution Plant actual net salvage costs incurred by DEU on average over the recent five-year period to future net salvage costs included in DEU's and DPU's proposed depreciation accrual rates.

[16] Page 18, *Public Utilities Depreciation Practices*, published by National Association of Regulatory Commissioners (NARUC), 1996.

**Table 5: Comparison of Actually Incurred Net Salvage and Net Salvage in Proposed Depreciation Rates as of December 31, 2017 Investments**[17]

| Account | Description | Average Annual Net Salvage Actually Incurred | Net Salvage Recovery Included in DEU's Proposed Depr Rates | DEU Proposed / Actually Incurred | Net Salvage Recovery Included in DPU's Proposed Depr Rates | DPU Proposed / Actually Incurred |
|---|---|---|---|---|---|---|
| | | A | B | C=B/A | D | E=D/A |
| Distribution Plant | | | | | | |
| 374.21 | Land Rights | 0 | 0 | 0.0 | 0 | 0.0 |
| 375.00 | Structures and Improvements | 0 | 53,759 | 0.0 | 53,759 | 0.0 |
| 376.00 | Mains | 1,641,427 | 11,277,780 | **6.9** | 6,722,124 | **4.1** |
| 377.00 | Compressor Station Equip | 188,401 | 102,694 | 0.5 | 102,694 | 0.5 |
| 378.00 | Measuring & Reg. Station Equip | 343,786 | 940,900 | 2.7 | 940,900 | 2.7 |
| 380.00 | Services | 1,547,597 | 7,158,470 | **4.6** | 5,878,075 | **3.**8 |
| 381.01 | Meters | 86,118 | 181,267 | 2.1 | 181,267 | 2.1 |
| 381.11 | Meters - Telemetry Equip | 0 | 0 | 0.0 | 0 | 0.0 |
| 381.21 | Meters - Transponders | 117,075 | 0 | 0.0 | 0 | 0.0 |
| 382.00 | Meter Installations | 16,740 | 135,590 | **8.1** | 80,560 | **4.8** |
| 383.00 | House Regulators | 273 | 16,095 | **58.9** | 2,896 | **10.6** |
| 384.00 | House Regulators Installations | 2,362 | 2,838 | 1.2 | 2,838 | 1.2 |
| 387.00 | Other Equipment | 2,409 | 0 | 0.0 | 0 | 0.0 |
| | Total Distribution Plant | 3,946,189 | 19,869,393 | 5.0 | 13,965,113 | 3.5 |

**Q. Please use Account 376, Distribution-Mains to discuss the differences between DEU's and DPU's future net salvage percent proposals.**

A. Using Account 376, Distribution-Mains as an example, as shown on Table 5 above, DEU actually incurred $1,641,427 on average per year, however, DEU proposes to collect an $11,277,780 net salvage annual accrual.[18] The annual accrual amount is an expense to be recovered from ratepayers in customer charges.[19]

[17] This table is based on 12/31/2017 investment levels used in the Depreciation Study.
[18] Annual accrual amount based on investments as of 12/31/17.
[19] The exact amount to be recovered from ratepayers will vary when calculated on investments other than the investment as of 12/31/17.

For Account 376, Distribution-Mains, the annual accrual DEU is proposing for net salvage is almost seven times the average annual amount DEU has actually incurred for net salvage.

By lowering DEU's proposed FNS percent in Account 376 from -47% to -30%, my proposed net salvage percentage results in an annual accrual for cost of removal that is a good balance between the depreciation expense charged to current customers and the building of the book reserve to cover any of DEU's future net removal costs associated with the retirements in Account 376, Distribution-Mains.[20]

Under my recommendation, the annual accrual for Account 376, Distribution-Mains net salvage would still be $6,722,124, which is over four times the average annual amount DEU actually incurred.[21] My recommendation, which is four times the current average annual amount, provides recovery of the expected cost of removal in the near future and builds the reserve for future cost of removal associated with future retirements.

**Q. Did DEU also consider the historical net salvage in the depreciation study net salvage analysis?**

A. Yes. The DEU depreciation study included the analysis of the historic ratio of incurred net salvage and related retirements. Regarding historic net salvage, DEU's depreciation study states:

[20] I am not recommending or implying a change from the "accrual" basis to the "cash" basis for the recovery of future net salvage costs. In other words, I am not recommending or implying that the depreciation accrual no longer be credited to the Accumulated Provision for Depreciation or that the net salvage costs be "expensed".
[21] Annual accrual amount based on investments as of 12/31/17.

> "The estimates of net salvage by account were based in part on historical data compiled through 2017. For most plant accounts, the historical net salvage data were available for the years 1990 through 2017. Cost of removal and salvage were expressed as percents of the original cost of plant retired, both on annual and three-year moving average bases. The most recent five-year average also was calculated for consideration. The net salvage estimates by account are expressed as a percent of the original cost of plant retired."[22]

**Q. What is a concern regarding the historic net salvage ratios calculated in the depreciation study?**

A. As pointed out in Wolf and Fitch's *Depreciation Systems*:

> "Salvage ratios are a function of inflation."[23]

Additionally, Wolf and Fitch's *Depreciation Systems*, points out that a historic net salvage ratio that includes inflated dollars in the numerator and historic dollars in the denominator is a ratio using different units, stating:

> "One inherent characteristic of the salvage ratio is that the numerator and denominator are measured in different units; the numerator is measured in dollars at the time of retirement, while the denominator is measured in dollars at the time of installation. Inflation is an economic fact of life and although both numerator and denominator are measured in dollars, the timing of the cash flows reflects different price levels."[24]

The calculation of the historic net salvage ratio includes the impact of high historic inflation rates, since the net salvage amount in the numerator is in current dollars and the cost of the plant (which may have been installed decades before) in the denominator is in

[22] Page IV-2, DEU Exhibit 1.2.
[23] Page 267, Wolf, Frank K. and W. Chester Fitch, *Depreciation Systems* Iowa State University Press, 1994.
[24] Page 53, Wolf, Frank K. and W. Chester Fitch, *Depreciation Systems* Iowa State University Press, 1994.

historic dollars. In other words, due to inflation the amounts in numerator and denominator of the net salvage ratio are at different price levels.

**Q. Is the fact that historic inflation is included in the net salvage ratio recognized in another authoritative depreciation text?**

A. Yes. NARUC's *Public Utilities Depreciation Practices*, regarding inflation states:

> "The sensitivity of salvage and cost of retirement to the age of the property retired is also troublesome. Due to inflation and other factors, there is a tendency for costs of retirement, typically labor, to increase more rapidly than material prices."[25]

NARUC concludes that careful consideration should be given to the net salvage estimate stating:

> "Cost of retirement, however, must be given careful thought and attention, since for certain types of plant, it can be the most critical component of the depreciation rate."[26]

**Q. Have other jurisdictions considered the impact of inflation in the setting of the future net salvage percent?**

A. Yes. I am aware of several jurisdictions that have adopted future net salvage percents that recognize the inflated dollars included in the historic net salvage ratio. The Commissions

[25] Page 19, *Public Utilities Depreciation Practices*, published by National Association of Regulatory Commissioners (NARUC), 1996.
[26] Page 19, *Public Utilities Depreciation Practices*, published by National Association of Regulatory Commissioners (NARUC), 1996.

306 in Connecticut,[27] District of Columbia,[28] Maryland,[29] New Jersey,[30] and Pennsylvania[31]
307 have adopted methods of setting the future net salvage percent that recognizes the time
308 value of cost of removal due to inflation.

[27] Connecticut Docket No. 16-06-04. In the December 14, 2016 Commission "Decision" the Commission accepted net salvage depreciation rates that produced "an annual accrual that is 1.2 times the annual incurred distribution plant net salvage costs" stating that the "distribution net salvage depreciation rates still comfortably cover the actual incurred net salvage costs." (p. 46 of the December 14, 2016 "Decision").
[28] Formal Case No. 1076, paragraph 252 of Order No. 15710. In Order No. 15710 the Public Service Commission of the District of Columbia stated: "Fairness and equity require that the Commission adopt a methodology that, to the extent possible, balances the interest of current and future ratepayers." And went on to state: "Pepco should not be allowed to charge current customers for future inflation, nor should Pepco be allowed to charge current customers in higher-value current dollars for a future cost of removal amount that is calculated in lower-value future dollars."
[29] Maryland Case No. 9092. In Order No. 81517 the Commission stated: "The Commission has carefully reviewed the record and finds that the Present Value Method should be adopted for the recovery of removal costs. The Straight Line Method recovers the same annual cost in nominal dollars from ratepayers today as it does at the time plant is removed from service. However, a dollar is worth substantially more today than it will be 20 to 40 years from now. Consequently, today's ratepayers would pay more in "real" dollars under the Straight Line Method for the recovery costs of the plant they consume than would future ratepayers when net salvage is negative, as everyone projects." (page 30 of Order No. 81517).
[30] New Jersey Docket No. ER02080506. In the May 17, 2004 Final Order the Board found: "As a result of this data and the underlying concept of FASB 143 as discussed in this matter, the Board FINDS it appropriate to revisit the concept of including estimated future net salvage in current depreciation rates. The Board HEREBY FINDS the recommendation of the Ratepayer Advocate and Staff to exclude estimated net salvage from depreciation rates to be appropriate. The Board FURTHER FINDS that the Ratepayer Advocate and Staff's proposed utilization of a five-year average of actual salvage expense in depreciation expense is reasonable as it more closely aligns the amount recovered in base rates with the historical level of expenses incurred. The Board concurs with Staff that the ten-year window of actual experience rather than the five-year rolling average proposed by the Ratepayer Advocate is appropriate." (page 129-130 of the May 14, 2004 Final Order)
[31] Pennsylvania, Superior Court of Pennsylvania in Penn Sheraton Hotel v. Pennsylvania Public Utility Commission, 184 A.2d 324, 329 (Pa. Super. Ct. 1962). The court found: "Negative salvage attributed to existing plant is purely prospective; it is a cost which has not yet been incurred; it is uncertain when and if it will be incurred; and it is not a part of the original cost of construction of the facilities when first devoted to public service. To permit the recovery of prospective negative salvage is to permit the recovery of a total amount in excess of the original cost of construction prior to the actual expenditure of those costs and, in our opinion, represents the recovery of something in the nature of a future reproduction cost. The established law in this Commonwealth does not permit the recovery by annual depreciation of any such prospective excess. It is therefore the prospective nature of future negative salvage that prevents it from being considered either in accrued depreciation or in the allowance for annual depreciation; they must have a consistent basis under our law. Although prospective negative salvage is not entitled to consideration, the negative salvage actually incurred by the utility either upon the actual retirement of a property without replacement or upon the replacement of an item of property is of course entitled to consideration in a rate proceeding. It is then no longer prospective but actual. If the utility retires and removes a property without replacing it or replaces it after removal and incurs actual negative salvage in doing so, the expenditure should be capitalized and amortized by some reasonable method and for and over a reasonable length of time."

**Q. Are your proposed future net salvage percents based only on the historical analysis discussed above?**

A. No, which is supported by the fact that my proposed future net salvage accrual amounts are not equal to the average annual historical amount as shown in Table 5 above. My proposed future net salvage accrual amounts are in current dollars that consider DEU's retirement practices,[32] the impact of inflation, and builds a reserve for reasonable estimated future net removal costs associated with future retirements, based on the type of investments in the account, and my previous experience.

## Conclusion

**Q. Can you please summarize your recommendations?**

A. Yes. Based on the above testimony, I recommend that DPU proposed depreciation rates shown in DPU Exhibit 2.2 DIR be adopted for DEU in Utah.

The DPU proposed depreciation rates shown in DPU Exhibit 2.2 DIR include the following changes to DEU's proposed depreciation rates discussed in this testimony:

(1) Use the more reasonable 15-year average service life for Account 381.21, Meters-Transponders based in DEU's service life expectation for the retiring Elster transponders and the manufacturer's service life expectation for the new Itron transponders.

[32] The retirement practices are discussed in the depreciation study, workpapers supporting the depreciations study, observed and discussed during the onsite visit on May 13, 2019, and DEU responses to DPU 1.05, 1.06, and 1.07, attached as DPU Exhibit 2.7 DIR.

(2) Use a 70-year average service life for Account 376, Distribution-Mains based on DEU's revised statistical analysis.

(3) Use less accelerated future net salvage percents for Account 376, Distribution-Mains, Account 380, Distribution-Services, Account 382, Distribution-Meter Installations, and Account 383, Distribution-House Regulators.

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

A. Yes.