Docket No. 22-057-03

Utah Office of Consumer Services Witness

Daniel J. Lawton

Direct Testimony

and

Exhibits OCS 3.1 through 3.13

August 26, 2022

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

IN THE MATTER OF THE APPLICATION OF DOMINION ENERGY UTAH TO INCREASE DISTRIBUTION RATES AND CHARGES AND MAKE TARIFF MODIFICATIONS	**§** **§** **§** **§** **§** **§** **§** **§** **§** **§** **§**	**Docket No. 22-057-03** **Direct Rate of Return Testimony of Daniel J. Lawton** **For the Utah Office of Consumer Services**

August 26, 2022

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DIRECT TESTIMONY OF

DANIEL J. LAWTON

SECTION I: INTRODUCTION/BACKGROUND/SUMMARY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Daniel J. Lawton. My business address is 12600 Hill Country Boulevard, Suite R-275, Austin, Texas 78738.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. I have been working in the utility consulting business as an economist since 1983. Consulting engagements have included electric utility load and revenue forecasting, cost of capital analyses, financial analyses, revenue requirements/cost of service reviews, and rate design analyses in litigated rate proceedings before federal, state and local regulatory authorities, and in court proceedings. I have worked with numerous municipal utilities developing electric rate cost of service studies for reviewing and setting rates. In addition, I have a law practice based in Austin, Texas. My main areas of legal practice include administrative law representing municipalities in electric and gas utility rate proceedings and other litigation including appellate, and contract matters. I have included a brief description of my relevant educational background and professional work experience in Exhibit OCS 3.1.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN RATE PROCEEDINGS?

A. Yes. A list of cases where I have previously filed testimony is included in Exhibit OCS 3.1.

Q. ON WHOSE BEHALF ARE YOU FILING TESTIMONY IN THIS PROCEEDING?

A. I have been retained to review the Dominion Energy Utah ("Company" or "DEU") cost of capital request, and related financial issues, on behalf of the Utah Office of Consumer Services ("OCS").

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony in this proceeding is to address the Company's requested overall cost of capital for regulated gas operations. I will address the Company's requested overall rate of return to be earned on rate base investment, proposed capital structure, financial risk, business risk, the cost rates for equity capital and long-term debt, which is presented in the direct testimony of DEU cost of capital witness, Ms. Jennifer Nelson and DEU witness Jordan Stephenson. In addition, I address several issues related to the Company's financial integrity, investment requirements, and cash flow issues related to return on invested capital.

Q. WHAT MATERIALS DID YOU REVIEW AND RELY ON FOR THIS TESTIMONY?

A. I have reviewed prior orders of the Public Service Commission of Utah

("Commission"), the Company's direct testimony presented in this proceeding, Company responses to discovery requests, Value Line Investment Survey ("Value Line"), financial reports of the Company and other utility companies of comparable risk, and other relevant financial information available in the public domain. When relying on various sources, I have referenced such sources in my testimony and/or attached Exhibits and included copies or summaries in those Exhibits and/or work papers.

Q. PLEASE SUMMARIZE YOUR FINDINGS AND CONCLUSIONS RELATED TO EQUITY RETURN IN THIS CASE.

A. My analysis of the Company's requested cost of equity capital in this proceeding, is shown in the following table:

Table 1

Cost of Equity Estimates[1]

MODEL	RANGE	MIDPOINT
DCF Model	**8.73% - 9.24%**	**8.99%**
Two-stage DCF	**9.40% - 9.51%**	**9.46%**
CAPM	**8.18% - 8.39%**	**8.29%**
ECAPM	**8.50% - 8.65%**	**8.58%**
Equity Bond Yield Risk Premium	**9.70% - 9.73%**	**9.72%**
Average All Models	**8.90% - 9.10%**	**9.01%**

[1] Each cost of equity capital estimate is discussed in the testimony and is presented in Exhibits (OCS-3.8), (OCS-3.9), (OCS-3.10), and (OCS-3.11).

Based on the model results, I am recommending a 9.20% return on equity in this case. When the low end CAPM results are excluded the four remaining models (two DCF and risk premium and ECAPM) average 9.2%. The 9.20% recommendation is also consistent with the two DCF results which average 9.20%. As discussed later, my analysis includes considerations of business and financial risks. All these model results and risks considerations are discussed in the following pages. I have included in Exhibit OCS 3.2 a Technical Appendix addressing the topics of i) Comparable Group, ii) Sample Selection, iii) Discounted Cash Flow ("DCF") Models, iv) Risk Premium Models, and v) Capital Asset Pricing Models.

When the recommended 9.20% equity return is combined with my recommended capital structure (discussed in Section IX below) results in a recommended overall weighted average return on rate base investment of 6.652% for this DEU case (see Table 2 below).

Table 2
Recommended Capital Structure and Cost Rates for Dominion Energy Utah[2]

DESCRIPTION	RATIO	COST	WEIGHTED COST
LONG-TERM DEBT	49.00%	4.00%	1.960%
COMMON EQUITY	51.00%	9.20%	4.692%
TOTAL CAPITAL	100.00%		6.652%

[2] Capital structure and Long-Term Debt cost per DEU Redacted Exhibit 3.0 Direct Testimony of Jordan K. Stephenson at pages 33 - 34.

As discussed below, in my opinion, these recommended return levels (9.20% equity return and 6.652% overall cost of capital) are consistent with current market capital costs in the utility industry and consistent with just and reasonable rates for consumers. My analyses of the Company's requested and Ms. Nelson's recommended 10.30% equity return and overall weighted return request of 7.35% (see DEU Redacted Exhibit 3.0 Direct Testimony of Jordan Stephenson at page 34) indicates that the Company's request is overstated and is not consistent with just and reasonable rates for consumers given current market capital costs.

Q. PLEASE SUMMARIZE YOUR FINDINGS AND CONCLUSIONS IN THIS CASE.

A. Based on my analyses (which are fully explained in the following pages), I make the following conclusions and recommendations:

(i) A return of 9.20% on shareholder equity is consistent with current market capital cost requirements and is more than adequate for the Company to maintain its financial integrity and creditworthiness;

(ii) The Company's cash flows and liquidity at an overall rate of return on rate base investment of 6.652% is more than adequate to meet cash operating and construction requirements;

(iii) The Company's overall cost of capital, employing a 49% long-term debt and 51% common equity capital structure and DEU's requested cost rates for debt and my recommended equity return of 9.20%, to be earned on rate base investment should be set at 6.65% for setting just and reasonable rates for ratepayers in this proceeding;

(iv) The Company's proposed 10.30% return for equity shareholders is an overstatement of the required return on equity to hold and attract equity capital; and

(v) The Company's proposed capital structure of 46.8% long-term debt and 53.2% common equity and 7.35% overall return on investment is overstated and should not be adopted as representative of the Company's cost of capital requirements.

SECTION II: OVERVIEW OF THE COMPANY RATE REQUEST AND SUMMARY OF COST OF CAPITAL ISSUES

Q. PLEASE DESCRIBE THE REQUESTED RATE INCREASE.

A. The Company is projecting an annual rate deficiency of $79.3 million.[3] The Company's case is based on a test period (projected) for the 12 months ending December 31, 2023 and includes an equity return or shareholder profit level of 10.30%.[4] The requested increase is in addition to interim rate revenue that is expected to be recovered in future years for infrastructure investment through a surcharge/tracker mechanism. Based on discovery in this proceeding the expected infrastructure capital investment through 2027 is expected to be **$**405 million.[5] Thus, in addition to any rate change in this proceeding there will be annual infrastructure

[3] DEU Redacted Exhibit 3.0, Direct Testimony of Jordan Stephenson, at page 35, Table at line 806. It should be noted that Mr. Stephenson also shows a rate increase of $70.5 million. The difference is the starting revenue base (Volumetric Revenue or CET Allowed Revenue) the overall requested revenue requirement of $503.9 million is the same in both cases.
[4] DEU Exhibit 2.0, Direct Testimony of witness Jennifer Nelson at page 3, line 46.
[5] See DEU response to OCS 7.01 at Attachment 1.

additions to be recovered through the infrastructure tracker mechanism increasing the future rates of customers.

The total amount of projected capital investment for the period 2022 – 2026 is projected to be $1,529,870,000.[6] As noted above, about $405 million of this investment is recovered as an interim rate through the infrastructure rate mechanism in addition to the $539 million of depreciation and amortization recovery projected by DEU.[7] I discuss the impact of capital investment on the Company's risks later in this testimony.

Q. HOW DOES THE COMPANY REQUEST COMPARE TO THE CURRENT AUTHORIZED COST OF CAPITAL?

A. In the last case, Docket No. 19-057-02, DEU made the following request for capital costs (Table 3 below).

TABLE 3[8]

DEU DOCKET NO. 19-057-02 ROR REQUEST

DESCRIPTION	RATIO	COST RATE	WEIGHTED COST
LONG-TERM DEBT	45.00%	4.34%	1.953%
COMMON EQUITY	55.00%	10.50%	5.775%
TOTAL CAPITAL	100.00 %		7.728%

[6] See DEU Response to Data Request No. OCS 4.01.
[7] See DEU Response to Data Request No. OCS 4.07 for $405 mm Infrastructure tracker recovery (2022-2026) and DEU Exhibit 3.02 line 22, column H ($107,784, 166 annual depreciation * 5 years = $538.9 mm)
[8] See Docket No. 19-057-02 Final Order pages 6 – 10.

In the last rate case, the Commission accepted the proposed DEU capital structure and cost of debt, but rejected DEU's 10.50% requested equity return and instead authorized a 9.5% equity return and a 7.18% overall cost of capital.[9]

However, in this proceeding DEU has reduced its equity return request, debt cost, and equity ratio from the levels requested in the last rate case resulting in the following cost rates, and overall cost of capital (Table 4 below).

TABLE 4[10]

DEU DOCKET NO. 22-057-03 ROR REQUEST

DESCRIPTION	RATIO	COST RATE	WEIGHTED COST
LONG-TERM DEBT	46.79%	4.00%	1.87%
COMMON EQUITY	53.21%	10.30%	5.48%
TOTAL CAPITAL	100.00 %		7.35%

A comparison of Table 3 and Table 4 shows the Company has lowered the capital structure equity percentage from 55% to 53.21%. The DEU's long-term debt cost also decreased from 4.34% to 4.0% request in this case. Lastly, DEU requested an equity return in the last case of 10.5%, but is now requesting a 10.3% shareholder profit level.

In terms of capital structure and equity ratio, it is important to note that the last case was preceded by a capital structure settlement in Docket No. 18-057-23.[11] The purpose

[9] See Docket No. 19-057-02 Final Order pages 5.
[10] See Docket No. 19-057-02 Final Order pages 6 – 10.
[11] See Direct testimony Kelly Mendenhall Docket No. 19-057-02 at page 10, lines 216-217.

of the Docket No. 18-057-23 capital structure settlement was to address cash flow pressures resulting from the Tax Cut and Jobs Act of 2017.[12] The Tax Cut and Jobs Act of 2017 lowered the corporate tax rate to 21% which lowered the amount of deferred taxes and cash flows to DEU. The increased equity ratio was designed to avoid a credit downgrade.[13]

Since the change in taxes in 2017 from 35% to 21% (a 40% reduction), DEU's deferred taxes have been substantially lower and given that deferred taxes are a rate base offset, rate base is now larger and earnings from rate base and cash flows are now higher. Thus, the need for an artificially higher equity ratio to address the impact of the Tax Cut and Jobs Act of 2017 is no longer necessary. I address this issue in more detail in Section IX Capital Structure.

In this case, the Company's requested shareholder profit and return on investment is overstated in light of excessive equity in the capital structure, current market capital costs and unsupported assumptions in Ms. Nelson's analyses. The Company's failure to recognize these lower market indicators of capital costs substantially overstates the size of the requested increase in base rates in this case.

SECTION III: REGULATORY ISSUES AND COST OF CAPITAL

Q. PLEASE EXPLAIN THE COST OF CAPITAL CONCEPT AS IT RELATES TO THE REGULATORY PROCESS.

[12] See Direct testimony Kelly Mendenhall Docket No. 19-057-02 at page 10, lines 207-212.
[13] See Direct testimony Kelly Mendenhall Docket No. 19-057-02 at page 10, lines 207-210.

A. The overall rate of return to be earned on rate base investment is an essential element in the regulatory and rate setting process and is typically a major part of overall revenue requirements. For example, in this case the Company's requested overall return is 7.35%. As is discussed below, a 50-basis point change in the requested 10.3% rate of return on equity can have a large impact on overall revenue requirements, in this case a 50-basis point adjustment in ROE equates to about $8.634 million per year in revenue requirement including federal income tax gross-up factors.

Q. WHAT IS THE BREAKDOWN OF RETURN ON CAPITAL AND SHAREHOLDER PROFIT BEING REQUESTED IN THIS CASE?

A. The overall return on rate base investment being requested in this case is shown in the following table.

Table 5[14]
Company Rate Base and Return

LINE NO.	DESCRIPTION	RATIO	COST RATE	WEIGHTED COST	WEIGHTED W/ FIT*
1	Long-Term Debt	46.79%	4.00%	1.87%	1.87%
2	Common Equity	53.21%	10.30%	5.48%	6.94%
3	Total Capital	100.00%		7.35%	8.81%

LINE NO.	DESCRIPTION	CLAIMED RATE BASE	RETURN REQUIREMENT	RETURN & FIT* REQUIREMENT
1	Long-Term Debt		$47,982,303	$47,982,303
2	Common Equity		$140,506,362	$177,856,154
3	Total Rate Base	$2,563,697,020	$188,488,665	$225,838,458

*FIT = Federal Income Taxes

[14] Capital structure and cost rates per DEU Exhibit 3.0 Jordan Stephenson Direct Testimony at 34, Rate Base per DEU Exhibit 3.02, line 51, column H Utah Jurisdiction.

As can be seen from the Table 5, the Company is requesting that rates be set to allow the Company to earn a 7.35% overall return on a claimed test year investment level of $2.564 billion, which translates into about $188.489 million of total return dollars. The total return dollars can be broken down to $47.982 million of interest return to cover claimed debt costs, and a Company request of $140.506 million of profit for shareholders.

It is important to note that the shareholder profit being requested is an after-tax request. In other words, customers also must pay through rates a return on equity investment and income (state/federal/revenue related) taxes such that the $140.506 million profit request is available after all taxes are paid. Federal income taxes alone, at a 21% rate, adds about $37.4 million to gas customer rates.[15]

Q. PLEASE EXPLAIN HOW THE VARIOUS COMPONENTS OF COST OF CAPITAL ARE DETERMINED.

A. The overall rate of return in the regulatory process is best explained in two parts. First, return to senior securities, such as debt and preferred stock, both of which are included in the capital structure, are contractually set at issuance. The reasonableness of the cost of this contractual obligation between the utility and its investors is examined by regulatory agencies as part of the utility's overall revenue requirement.

The second part of a company's overall return requirement is the appropriate cost rate to assign the equity portion of capital costs. The return to equity should be established

[15] Tax Factor equal 1/(1-tax rate), which is (1/(1-.21)) equals 1.26582. This tax factor of 1.26582 times the requested shareholder profit level requested equals taxes and profits.

at a level that will permit the firm an opportunity to earn a fair rate of return. By fair rate of return, I mean a return to equity holders, which is sufficient to hold and attract capital, sufficient to maintain financial integrity, and a return on equity comparable to other investments of similar risks.

Two U.S. Supreme Court decisions are often cited as the legal standards for rate of return determination. The first is *Bluefield Water Works and Improvement Company v. Public Service Commission of West Virginia*, 262. U.S. 679 (1923). The *Bluefield* case established the following general standards for a rate of return: The return should be sufficient for maintaining financial integrity and capital attraction and a public utility is entitled to a return equal to that of investments of comparable risks.

The second U.S. Supreme Court decision is the *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591 (1942). In the *Hope* decision, the Court affirmed its earlier *Bluefield* standards and found that methods for determining return are not the test of reasonableness rather it is the results reached and the impact of those results that are controlling.

The cost of capital is defined as the annual percentage that a utility must receive to maintain its financial integrity, to pay a return to security owners and to ensure the continued attraction of capital at a reasonable cost and in an amount adequate to meet future needs. Mathematically, the cost of capital is the composite of the cost of several classes of capital used by the utility such as debt, preferred stock, and common stock, weighted on the basis of an appropriate capital structure.

The ratemaking process requires the regulator to determine the utility's cost of capital for debt, preferred stock and equity costs. These calculations of costs, when combined with the proportions of each type of capital in the capital structure, result in a percentage figure that is then multiplied by the value of assets (investment) used and useful in the production of the utility service to ultimately arrive at a rate charged to customers. Rates should not be excessive (exceed actual costs) or burdensome to the customer and at the same time should be just and reasonable to the utility.

Q. PLEASE EXPLAIN THE COST OF EQUITY CONCEPT.

A. The cost of equity, or return on equity capital, is the return expected by investors over some prospective period. The cost of equity one seeks to estimate in this proceeding is the return investors expect prospectively when the rates from this case will be in effect.

The cost of common equity is not set by contract, and there are no hard and fast mathematical formulae with which to measure investor expectations regarding equity requirements and perceptions of risk. As a result, any valid cost of equity recommendation must reflect investors' expectations of the risks facing a utility.

Q. WHAT PRINCIPAL METHODOLOGY DO YOU EMPLOY IN YOUR COST OF EQUITY CAPITAL ANALYSES?

A. I employ the Discounted Cash Flow ("DCF") methodology for estimating the cost of equity, keeping in mind the generally accepted premise that any utility's cost of equity capital is the risk-free return plus the premium required by investors for accepting the

risk of investing in an equity instrument. It is my opinion that the best analytical technique for measuring a utility's cost of common equity is the DCF methodology. I also employ the two-stage DCF to reflect different growth rate assumptions. Other return on equity modeling techniques such as the Capital Asset Pricing Model ("CAPM"), Empirical Capital Asset Pricing Model ("ECAPM"), and bond yield equity risk premium model are often used to check the reasonableness of the DCF results. I have employed all these modeling methods to arrive at my recommendations in this case. I provide in Exhibit (OCS 3.2) a Technical Appendix describing each of the models.

Q. PLEASE DESCRIBE THE RISKS YOU REFER TO ABOVE.

A. As I stated earlier in this testimony, equity investors require compensation above and beyond the risk-free return because of the increased risk factors investors face in the equity markets. Thus, investors require the risk-free return plus some risk premium above the risk-free return. The basic risks faced by investors that make up the equity risk premium include business risks, financial risks, regulatory risks, and liquidity risks.

SECTION IV: CURRENT CAPITAL MARKET CONDITIONS

Q. PLEASE DESCRIBE CURRENT AND EXPECTED ECONOMIC CONDITIONS.

A. Current economic conditions reflect high inflation, tightening monetary policy,

increasing short-term interest rates, and continued supply chain disruptions. Since the COVID-19 economic impacts of early 2020 the U.S. economy and the global economy have faced unprecedented challenges. Such challenges included an economic shutdown causing enormous contractions in GDP and substantial increases in unemployment. The pandemic and shutdown led to substantial economic structural changes with work and where possible, business being conducted from home and/or conducted at a distance through electronic platforms such as Zoom and WebEx among others.

There were a number of U.S. government fiscal and monetary policy responses to the pandemic related financial crisis. Also, countries around the world faced these unprecedented events, as well. The U.S. government specific response consisted of extensive and expanded monetary and numerous fiscal policy measures. Over the course of the pandemic Congress approved several major bills appropriating substantial funds to provide direct assistance to households and businesses.[16] In terms of fiscal policy programs there were three rounds of stimulus checks, unemployment payment enhancements and extensions, paycheck protection payments ("PPP" loans) to businesses to name a few.[17]

In terms of monetary policy, the Federal Reserve through the Federal Open Market Committee ("FOMC") lowered the federal funds rate to zero.[18] Additional monetary policy efforts included the FOMC's revived and expanded Quantitative Easing ("QE")

[16] COVID-19 and the U.S. Economy, Congressional Research Service, (Updated May 11, 2021) at1 see also https://crsreports.congress,gov.
[17] COVID-19 and the U.S. Economy, Congressional Research Service, (Updated May 11, 2021) at1 see also https://crsreports.congress,gov.
[18] FOMC Press Release July 15, 2020, *also see* federalreserve.gov/newsevents/pressreleases/monetary20200715

through massive asset purchases of securities, providing increased liquidity to the economy.[19] By way of background, the FOMC is the Federal Reserve monetary policymaking committee whose policy mandate is price stability and full employment. The FOMC publishes projections of inflation, employment, and Gross Domestic Product ("GDP") four times per year – March, June, September, and December.

The fiscal and monetary policy efforts put the shutdown economy and idled labor force back on track and avoided further declines in economic growth and limited the recession impacts. These monetary and fiscal policy efforts did not address the concern of rapid growth in demand, substantial stimulus payments creating additional demand, and continued global and national supply chain disruptions causing shortages, and all these factors together causing increased price and inflationary pressures.

During the prolonged period of low-price pressures in the economy from 2012 through 2019 the Consumer Price Index ("CPI") has remained at 2.5% or lower.[20] Throughout the first year of the pandemic from March 2020 through February 2021, the CPI was below 2.0%.[21] Starting in March 2021 CPI began to climb above 2.5% and the CPI increase has been steady as reflected in the most recent reports of 8.6% for May and 9.1% for June 2022.[22] CPI declined to 8.5% in July 2022.[23] The June 2022 9.1% CPI is

[19] COVID-19 and the U.S. Economy, Congressional Research Service, (Updated May 11, 2021) at1 see also https://crsreports.congress,gov.
[20] U.S. Department of Labor Bureau of Labor Statistics, News Release at page 19 (June 10, 2022).
[21] U.S. Department of Labor Bureau of Labor Statistics, News Release at page 19 (June 10, 2022).
[22] U.S. Department of Labor Bureau of Labor Statistics, News Release at page 1 (June 10, 2022) and U.S. Department of Labor Bureau of Labor Statistics, News Release at page 1 (July 13, 2022).
[23] U.S. Department of Labor Bureau of Labor Statistics, News Release at page 1 (August 10, 2022).

the largest 12-month increase since the 12-month period ending November 1981.[24]

As discussed below the Federal Reserve employs the Personal Consumption Expenditure ("PCE") metric for measuring long-run inflation. During 2022 the annual measure of the PCE price index is as follows (Table 6 below):

Table 6[25]

PERSONAL CONSUMPTION EXPENDITURES PRICE INDEX

FEBRUARY THROUGH JUNE 2022

FEBRUARY 2022	**6.3%**
MARCH 2022	**6.6%**
APRIL 2022	**6.3%**
MAY 2022	**6.3%**
JUNE 2022	**6.6%**

Q. WHAT HAS BEEN THE FEDERAL RESERVE RESPONSE TO INCREASING INFLATION?

A. When addressing inflation policy, the Federal Reserve and FOMC look to the percent change in inflation as measured by the metric PCE as the primary measure of price

[24] U.S. Department of Labor Bureau of Labor Statistics, News Release at page 1 (July 13, 2022).
[25] Personal Consumption Expenditures Expenditure Price Index, Bureau of Economic Analysis ("BEA") Release Date (June 30, 2022) and (July 29, 2022) also see www.bea.gov/data/personal-consumption-expenditures-price-index

changes when determining and implementing long-term monetary policy goals.[26] The FOMC, in its recent June 15, 2022 meeting noted that the "invasion of Ukraine… and related events are creating additional upward pressure on inflation."[27] The FOMC also pointed to COVID-related lockdowns in China that are causing continued supply chain disruptions.[28] The FOMC concluded that the "Committee is attentive to inflation risks."[29] The FOMC increased the federal funds rate an additional 75 basis points and pointed out that additional increases will be appropriate at future FOMC meetings.[30] Additionally, the FOMC continues reducing its balance sheet by reversing the Quantitative Easing programs.[31] The June 15, 2022 FOMC action increased the current federal funds rate to 1.5% - 1.75%.[32] In the June 15, 2022 "Summary of Economic Projections" the FOMC members provided forecasts for the for the federal funds rate as follows (Table 7 below):

[26] *President's Message: CPI vs. PCE Inflation: Choosing a Standard Measure,* Federal Reserve Bank of St. Louis (July 1, 2013) at page 2, The Federal Reserve has employed the PCE inflation metric rather than the CPI measure since about 2000 in setting long-term monetary policy. After extensive analysis the Federal Reserve selected the PCE metric because: i) the expenditure weights in the market basket measure change as consumers substitute goods and services, ii) the PCE market basket includes more comprehensive coverage of goods and services, and iii) historical PCE is subject to revision and correction beyond seasonality adjustments.
[27] Federal Reserve FOMC Statement June 15, 2022.
[28] Federal Reserve FOMC Statement June 15, 2022.
[29] Federal Reserve FOMC Statement June 15, 2022.
[30] Federal Reserve FOMC Statement June 15, 2022.
[31] Federal Reserve FOMC Statement June 15, 2022.
[32] Federal Reserve FOMC Statement June 15, 2022.

TABLE 7

CURRENT AND PROJECTED FEDERAL FUNDS RATE

Year	Federal Funds Rate[33]
Current 2022 level	**1.75%**
2022	**3.4%**
2023	**3.8%**
2024	**3.4%**
Longer-run	**2.5%**

The most recent FOMC projections in Table 7 indicate increases in the federal funds rate through the remainder of 2022 from the current 1.75% level to about 3.4% by year-end. These FOMC projections indicate that the federal funds rate will increase to 3.8% by yearend 2023. Finally, the federal funds rate is expected to be lowered in 2024 turning around to lower levels with a longer-term goal of about 2.5% for this interest rate. Obviously, these are the current projections all subject to change as the Federal Reserve delicately balances reducing inflation while maintaining employment and economic growth in the general economy.

Also, **i**n the June 15, 2022 *Summary of Economic Projections* the FOMC members provided forecasts for the Personal Consumption Expenditures ("PCE") inflation rate in the United States to average 5.2% over the entire year 2022, decline to 2.6% for the year 2023, and further decline to 2.2% in the year 2024.[34] When addressing inflation,

[33] *Summary of Economic Projections*, Federal Open Market Committee, page 2 Table 1, Federal Funds Rate Median Projections (June 15, 2022).
[34] *Summary of Economic Projections*, Federal Open Market Committee, page 1 Table 1, PCE Inflation Median Projections (June 15, 2022). Also see DEU Exhibit 3.3.

the Federal Reserve and FOMC look to the percent change in inflation PCE as well core PCE (which excludes fuel and food changes from the metric calculation) as the primary measure of price changes when determining and implementing long-term monetary policy goals.[35]

In its July 27, 2022 FOMC meeting the federal funds rate was again increased by 75-basis points to 2.25% - 2.50%.[36] The FOMC stated again that "the Committee is strongly committed to returning inflation to its 2 percent objective."[37]

While the financial markets, and the economy in general, have experienced periods of uncertainty and turmoil since early 2020, government intervention has had a positive impact on financial markets and on the general economy. However, recent 2022 trends in inflation, whether measured by the CPI or PCE have caused a more rapid change in Federal Reserve monetary policy signaling a move toward less accommodative monetary policy and higher short-term interest rates.[38] Current FOMC inflation estimates for 2023, 2024, and long-term support a low 2.0% range of inflation which suggests lower long-term interest and capital costs. The end result is that cost of capital today has increased temporarily to address inflation, but these rates are expected to decline in the rate effective period 2023-2024 and beyond.

[35] *President's Message: CPI vs. PCE Inflation: Choosing a Standard Measure,* Federal Reserve Bank of St. Louis (July 1, 2013) at page 2, The Federal Reserve has employed the PCE inflation metric rather than the CPI measure since about 2000 in setting long-term monetary policy. After extensive analysis the Federal Reserve selected the PCE metric because: i) the expenditure weights in the market basket measure change as consumers substitute goods and services, ii) the PCE market basket includes more comprehensive coverage of goods and services, and iii) historical PCE is subject to revision and correction beyond seasonality adjustments.
[36] Federal Reserve FOMC Press Release and Statement July 27, 2022.
[37] Federal Reserve FOMC Press Release and Statement July 27, 2022.
[38] Federal Reserve FOMC Statement June 15, 2022.

Over the long-term view, the cost of capital continues at lower historical levels as evidenced by a review of recent monthly bond yield trends shown in Exhibit (OCS-3.4) and the longer-term trend in historical annual bond yields shown in Exhibit (OCS-3.11). But the more recent monthly yields show an uptick in debt costs over the recent months as demonstrated in Exhibit (OCS-3.4). In terms of equity costs, the trend in authorized gas utility equity returns set by regulatory authorities around the country, have continued the long-term declining trend as also shown in Exhibit (OCS-3.11). Taken together this information shows capital costs have trended lower for over a decade, will potentially increase in the short-term to address inflation, but short-term rates are forecast to return to lower levels in the near future. Certainly, there is no market evidence suggesting long-term capital costs are substantially increasing.

Q. ARE ECONOMIC CONDITIONS EXPECTED TO SHOW CONTINUED GROWTH IN THE 2022 – 2023 AND BEYOND PERIOD?

A. Yes, but FOMC forecasts of GDP growth is lower than recent prior FOMC GDP estimates. Forecasts are for continued, but significantly slowed, economic growth. Economic conditions in the first half of 2022, when compared to the first half of 2020, are much improved. But as noted in the FOMC June 15, 2022 and July 27, 2022 Press Releases: "The Committee is strongly committed to returning inflation to its 2 percent objective."[39] The recent increases in Federal Funds rates reflect continuing concerns related to inflation. But there is substantial concern that increasing interest rates too fast or too high can result in impacting the overall economic growth. If economic

[39] Federal Reserve FOMC Press Release Statement June 15, 2022 and July 27, 2022. Also see copies of each press release in Exhibit (OCS-3.3).

growth declines and recession factors such as unemployment increase, coupled with a slowed and stagnant economy and housing market, the FOMC will be pressured to back down the federal funds rate.

I have included in Exhibit (OCS-3.3) these recent FOMC June 15, 2022 Press Release and economic projections and the July 27, 2022 FOMC press release. The FOMC's range of projections of GDP growth is 1.7 - 1.9% for the period 2022 – 2024, which is a decrease from earlier March 2022 estimates of 2.8% to 2.0% for the period 2022 – 2024. The 2022 to 2024 projections of unemployment levels are slightly higher than the earlier FOMC March 2022 estimates.

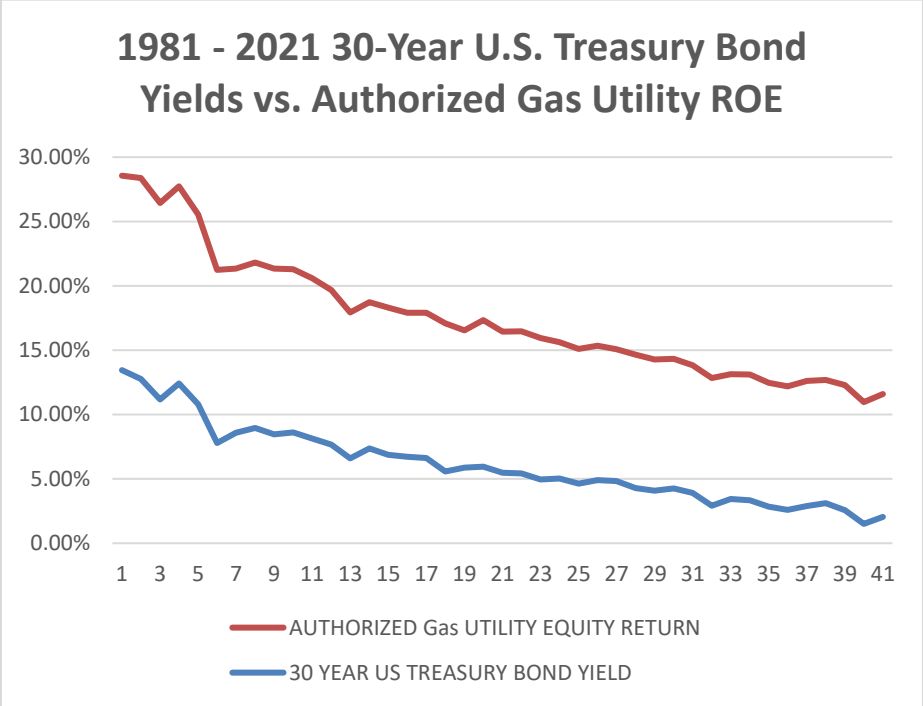
Thus, while GDP growth continues in the U.S. economy, the growth in economic activity is slower than previously projected. In addition, the recent increase in the federal funds rate and the accelerated end of the quantitative easing policy is a signal that the FOMC sees high inflation as a priority policy concern. The impact will be higher short-term rates of interest and increased longer-term borrowing costs to consumers and businesses. As discussed above, the FOMC projects PCE inflation to be much lower in the 2023 to 2024 period.

Q. DOES THE FACT THAT INTEREST RATES ARE INCREASING MEAN OTHER CAPITAL COSTS SUCH AS EQUITY ARE ALSO INCREASING?

A. Capital costs do move together – so if interest rates are rising, the cost of other capital such as equity will increase as well. The key difference is that equity and debt costs do not move in lockstep. In other words, debt costs may increase by 1.0%, but equity costs will change a fraction of 1.0%. This relationship can be seen in the actual debt and

equity cost relationships over time shown in Table 8 below:

TABLE 8



Since 1981 capital costs have been declining as evidenced by the long-term decline in gas utility authorized equity returns (the top or red line) and the decline in 30-year U.S. Treasury yields (the bottom or blue line). The decline in equity costs is much slower or flatter sloped line, while debt costs have declined by larger margins. In between the two lines is the measure of the risk premium (equity return – debt return) – which grows as capital costs decline. For the period 1981 through 2021 the average of the absolute value change in 30-year U.S. Treasury bond yields is about 58 basis points.[40] For authorized gas utility equity returns over the same time period, the average absolute

[40] See Exhibit (OCS-3.11)

value rate of change is about 26 basis points or less than half the rate of change in U.S. Treasury yields.[41] Thus, while it may be correct to conclude debt costs will increase over the short-term – equity cost increases should be of smaller magnitude.

The result of this comparative analysis is that while debt cost may be increasing in the short-term any expected equity cost change is less than half the level debt rate changes. At least that has been the historical experience when debt cost was declining for the past 40 years.

Q. DO THE RECENT FEDERAL RESERVE POLICY ACTIONS PROVIDE YOU ANY INSIGHT AS TO THE DIRECTION AND LEVEL OF LONGER-TERM INTEREST RATES?

A. Monetary policy objectives of the Federal Reserve are designed to stimulate economic growth and employment while targeting inflation at levels of about 2.0%. As discussed above the FOMC July 27, 2022 and June 15, 2022 press releases addressed the FOMC's concerns with increased inflation and price pressures. As stated earlier, following the July 27, 2022 FOMC meetings, there is an expectation for several Federal Funds rate increases before year end 2022.

The market evidence provided in Exhibit (OCS-3.4) shows recent increasing trends (since January 2022) in monthly interest yields. Thus, the Federal Reserve stated policy of continued tightening of monetary policy impacts interest rates and is reflected in market results. The Federal Reserve has taken actions and efforts to increase federal

[41] See Exhibit (OCS-3.11)

funds rates to promote a lower level of price pressures and inflation.

Q. WHAT LEVEL OF INTEREST RATES DO YOU EMPLOY FOR YOUR COST OF CAPITAL ANALYSIS?

A. I employ the most current three-month average as the best approximation of interest rate levels. In my opinion, the most recent three months of activity adequately captures the market expectations and trends of interest rates while avoiding any limited influences those monthly or shorter durations may have on interest rates. Given the recent increases and expectations for more increases to come in the Federal Funds rate by year end, I also considered more recent spot yields for the 30-year treasury bond to capture the impacts from the most recent change in Federal Reserve policy.

Q. WHAT DO THE FEDERAL RESERVE'S MOST RECENT ECONOMIC ASSESSMENTS INDICATE REGARDING ECONOMIC GROWTH?

A. I discussed earlier the current estimates of the FOMC that reflect moderate GDP growth expected in 2022, 2023, 2024, and the long-run. Generally, economic growth is lower than previously estimated in the FOMC March 2022 projections. For example, the March 2022 FOMC GDP growth forecast was 2.8% growth for 2022 and the June 15, 2022 FOMC estimate is 1.7% for GDP growth in 2022.[42] This represents over a 39% reduction in expected GDP or economic growth for 2022. The June 15, 2022 GDP growth forecast for 2023 and 2024 are also projected lower than the earlier March 2022 FOMC forecasts.[43] The Federal Reserve response to current inflation is to maintain the

[42] See Federal Reserve FOMC June 15, 2022 Economic Projections in Exhibit (OCS-3.3)
[43] See Federal Reserve FOMC June 15, 2022 Economic Projections in Exhibit (OCS-3.3)

federal funds rate at higher levels than expected to prevail in the long run. The FOMC will be pressured to not push interest rates too hard so as to put the economy in negative growth or recession environment.

It is important to note that the recent FOMC estimates and projections are supported by recent forecasts in the Livingston Survey.[44] The June 2022 Livingston Survey estimates GDP growth for the first half of 2022 at 0.5%, substantially below the December 2021 estimate of 3.9%.[45] The Livingston Survey estimates for GDP for the remainder of 2022 and 2023 are lower but in line with the FOMC recent GDP estimates.[46] Like the FOMC inflation estimates, the Livingston Survey forecasters also hiked projections for inflation for 2022 and 2023 from prior estimates.[47] These Livingston Survey forecasters also increased the forecast estimates for 3-month Treasury Bill (short-term interest rates) and long-term interest rates as measured by the 10-year U.S. Treasury Bond.[48] The Livingston Survey forecasts for long-term inflation and long-term GDP growth have remained unchanged.[49] Thus, the immediate short-term forecasts for inflation and interest rates have increased and estimates of economic growth are declining. Thus, private forecasting groups (that participate in the Livingston Survey) are estimating the same short-term levels of interest costs and inflation coupled with lower economic growth as projected by the Federal Reserve FOMC.

[44] The Livingston Survey is the oldest continuous survey of economist's economic expectations, published twice per year (June and December) Included in the work papers of Mr. Lawton. Also see www.philadelphiafed.org
[45] The Livingston Survey June 17, 2022, at 1. www.philadelphiafed.org
[46] The Livingston Survey June 17, 2022, at 1. www.philadelphiafed.org
[47] The Livingston Survey June 17, 2022, at 1. www.philadelphiafed.org
[48] The Livingston Survey June 17, 2022, at 2. www.philadelphiafed.org
[49] The Livingston Survey June 17, 2022, at 2. www.philadelphiafed.org

Q. WHAT CONCLUSIONS DO YOU DRAW FROM CURRENT ECONOMIC CONDITIONS THAT CAN PROVIDE GUIDANCE IN SETTING EQUITY CAPITAL COSTS IN THIS PROCEEDING?

As a general matter capital costs remain low in comparison to historical levels. Current August 19, 2022, 30-year U.S. Treasury Bond spot yields are at 3.2%. The June and July 2022 75-basis point increases in the federal funds rate have not pushed longer-term U.S. Government bond yields substantially higher. Through 2021 the average annual authorized equity returns for gas utilities have trended downward with other declining capital costs as shown in Exhibit (OCS-3.11). The downward trend for authorized equity returns for gas utility operations has continued for the first half of 2022.[50] The current forecast for modest economic growth (GDP growth) will cause general investor expectations of growth to continue to be moderate. The bottom line is that the general economic data does not support substantially increasing capital costs. As discussed earlier, DEU's current authorized ROE is 9.5% - now DEU seeks to substantially boost the profit level to 10.3%. Most significant is the last rate case when the Company's authorized equity return was established at 9.5%, average gas utility authorized equity costs in the US were 9.47% in 2020 and 9.56% in 2021 – before considering the equity ratios.[51] The Commission's ROE decision was in line with the average of gas utility ROE decisions around the country.[52]

[50] RRA Regulatory Focus, Major Rate Case Decisions, July 27, 2022.
[51] See Docket No. 19-057-02 Final Order.
[52] In the last rate case, however, the Utah PSC did authorize a 55% equity ratio for DEU, higher than the authorized average in the US. See Table 16 on page 56 of this testimony.

Q. HAVE REGULATORY AUTHORITIES AROUND THE COUNTRY RECOGNIZED THE HISTORICAL DECLINE IN COST OF EQUITY AND DEBT CAPITAL IN SETTING RATES?

A. Absolutely. Many regulatory authorities have established equity returns below 10%. The average authorized equity return for gas utility companies has been below 10% since 2011.[53] As noted above, regulatory authority cost of equity decisions for gas utility rate cases for calendar years 2020 - 2021 averaged about 9.47 – 9.56%.[54] During the first six-months of 2022, the average authorized gas utility equity return declined to 9.33%.[55] In addition, the average allowed equity ratio for gas utility operations in 2020 and 2021 was 51.87% and 50.92% respectively.[56] The authorized equity ratio during the first six-months of 2022 also declined to 50.21%.[57] These recent approved equity ratios are substantially below the current authorized DEU 55% equity ratio and DEU requested 53.21% equity ratio in this case. Moreover, the authorized gas utility equity returns have remained at the low end of a long-term declining trend resulting largely from declining interest rates. Current capital market levels and trends have changed with higher inflation and tightening monetary policy, but given market evidence, monetary policy, and current forecasts by the FOMC and the Livingston Survey results, there is no evidence at this time that would support substantially increasing DEU's cost of capital to the requested 10.3%.

[53] See Exhibit (OCS 3.11)
[54] See Exhibit (OCS- 3.11).
[55] RRA Regulatory Focus, Major Rate Case Decisions (July 27, 2022) at page 5.
[56] See Exhibit (OCS- 3.11) also S&P Capital IQ
[57] RRA Regulatory Focus, Major Rate Case Decisions (July 27, 2022) at page 7.

SECTION V: DEU AND THE UTAH REGULATORY PROCESS

Q. DOES THE REGULATORY PROCESS IN UTAH AFFORD DEU RISK-REDUCING OPPORTUNITIES?

A. Yes. Utah provides a supportive regulatory framework. The Company is able to employ a forecasted test year in setting rates that minimizes the impact of regulatory lag. By employing a forecasted test period future expected cost changes are included in the rate calculus without the need of future filings to recover cost changes. This future test year allows for enhanced cost recovery for the utility.

Also, the Company has the advantage of a revenue decoupling mechanism and weather normalization adjustment, which help stabilize cash flow regardless of changes in customer usage.

Another mechanism is the Company's Infrastructure Tracker mechanism ("Tracker"), which currently authorizes recovery of distribution system investments once completed and outside of a general rate case. This mechanism through interim rate case cash flow recovery helps to maintain stronger financial or cash flow metrics than would otherwise be possible. These rate mechanisms reduce the Company's risks through enhancing cash flow and improving the timing of cost expenditure recovery.

In a March 2022 Fitch Ratings, Inc., Credit Outlook Report for Dominion Energy Inc. and its subsidiaries, Fitch describes how DEU (Questar) has a low risk profile and enjoys significant customer growth.[58] On the issue of a "Supportive Regulatory

[58] Fitch Ratings, Inc. Ratings Outlook, at 5 (March 2022).

Environment" Fitch states: "Utah implemented numerous rider mechanisms, including weather normalization, revenue decoupling, infrastructure replacement and purchased gas adjustment that serve to reduce regulatory lag and stabilize credit metrics.[59] Fitch further states: that the "ROE's granted in Utah are generally in line with the industry averages."[60]

S&P Global Ratings report on Questar Gas Co. risk assessment stated: "low-risk regulated natural gas distribution business, above average size, and its effective management of regulatory risks."[61] In terms of regulatory risk S&P states the Company "effectively manages regulatory risk through a credit supportive rate design, the use of multiple cost recovery mechanisms including a fuel adjustment, a weather normalization adjustment, decoupling, and infrastructure cost tracking adjustment."[62] Finally, in terms of cash flows S&P concludes that the Company's cash flows are; "generally stable and largely insulated from fluctuations in gas prices, weather, and usage."[63]

Moody's Investor Services views the Company's credit profile supported by its "low-risk gas distribution operations and supportive regulation …"[64] Moody's points out that the "key regulatory provisions include the company's revenue decoupling mechanism

[59] Fitch Ratings, Inc. Ratings Outlook, at 5 (March 2022).
[60] Fitch Ratings, Inc. Ratings Outlook, at 5 (March 2022).
[61] S&P Ratings Global, Questar Gas Co. at 3. April 13, 2022; also see DEU Response to OCS 7.02 Attachment 1, page 3.
[62] S&P Ratings Global, Questar Gas Co. at 3. April 13, 2022; also see DEU Response to OCS 7.02 Attachment 1, page 3.
[63] S&P Ratings Global, Questar Gas Co. at 3. April 13, 2022; also see DEU Response to OCS 7.02 Attachment 1, page 3.
[64] Moody's Investor Services, Credit Opinion, at 4 (November 30, 2021). Also see DEU response to OCS 7.02 Attachment 2 page 4.

and weather normalization adjustment, which help provide revenue and cash flow certainty."[65] In terms of the infrastructure mechanism Moody's points out the rider "allows the company to recover up to $70 million (adjusted for inflation) of annual capital spending on certain infrastructure replacement projects between general rate cases."[66] With regard to the suite of recovery mechanisms and supportive regulatory environment Moody's states: "cost recovery provisions and financial support offered by regulators helps Questar Gas to generate stable and predictable cash flows and financial metrics."[67]

All three ratings companies Fitch, S&P, and Moody's view the Company business as low and regulatory environment as supportive. Moreover, all three of the credit rating companies view the various cost recovery mechanisms as quite credit supportive in that they provide stability and certainty for cash flows.

Many gas companies and some electric utilities have similar mechanisms; thus, the Company's business risks relative to the proxy gas companies are similar in terms of regulatory mechanisms that enhance cash flow, provide cash flow stability, and reduce regulatory lag.

[65] Moody's Investor Services, Credit Opinion, at 4 (November 30, 2021). Also see DEU response to OCS 7.02 Attachment 2 page 4.
[66] Moody's Investor Services, Credit Opinion, at 4 (November 30, 2021). Also see DEU response to OCS 7.02 Attachment 2 page 4.
[67] Moody's Investor Services, Credit Opinion, at 4 (November 30, 2021). Also see DEU response to OCS 7.02 Attachment 2 page 4.

Q. PLEASE EXPLAIN REGULATORY LAG AND HOW IT IMPACTS RATE SETTING AND REGULATORY RISK.

A. Regulatory lag is the period of time it takes to adjust tariffs in a rate case proceeding. Generally, it is the time between the utility rate request or the realization of a needed rate adjustment and the ultimate authorization of a rate change. For example, a utility requesting a rate increase of $1 million based on an historical test year may claim earnings erosion due to the regulatory lag during the pendency of the rate process until the authorized increase is implemented. Also, a utility that receives a rate adjustment may assert regulatory lag if it finds its unit costs are higher than the cost levels upon which the rate adjustment was based.

The counter argument to these claims of regulatory lag and risks is that the utility controls the timing of its rate requests. Also, regulatory lag is built into the regulatory process to encourage the utility to control and monitor costs as a means of managing costs and bolstering profits. Regulatory lag can work both ways – sometimes there is earnings erosion while other times there can be excess earnings.

Other contributions to regulatory lag are increasing costs, inflation, increasing capital investments, and lower growth and sales. I have discussed three mechanisms in Utah that address regulatory lag issues: (i) forecasted test year, (ii) decoupling and weather normalization, and (iii) Infrastructure Replacement Tracker. For example, the test year (in this case the 12 months ended December 31, 2023) affords DEU the opportunity to capture future expected changes in this rate proceeding. Second, revenue decoupling assures revenue recovery and prevents earnings erosions resulting from economic and

atypical weather influences on utility sales. Third, the aforementioned Infrastructure Tracker limits the Company's gas operations exposure to cash flow risk and earnings erosion due to regulatory lag due to capital investment for certain plant additions. The regulatory process in Utah provides the Company ample opportunity to earn its authorized return by reducing regulatory lag in the rate process. Moreover, rating agencies such as Fitch Ratings refer to the regulatory process in Utah as a "supportive regulatory environment" with "numerous rider mechanisms."[68]

Q. DOES THE COMPANY FACE ANY UNUSUAL BUSINESS OR FINANCIAL RISK?

A. As to business risks, the credit opinions from Fitch, S&P, and Moody's all discussed above, all report low business risk with a suite of recovery mechanisms that stabilize and assure recovery of cash flows. In terms of expected capital expansion and investment the Company asserts capital spending of $1.530 billion is required over the 2022 to 2026 period.[69] Ms. Nelson's testimony attempts to paint a picture that the Commission's decision in this case will directly affect the Company's credit profile and access to capital and presumably the $1.530 billion of system investment.[70]

Ms. Nelson's assessment of DEU's credit profile is quite wrong. The DEU credit profile is quite strong – not because of overstated equity returns, but because of cost recovery mechanisms that assure consistent and stable revenue recovery. Moody's

[68] Fitch Ratings, Inc. Ratings Outlook, at 5 (March 2022).
[69] See Direct testimony Jennifer Nelson at page 43, lines746-747, also see DEU Response to OCS 4.01.
[70] See Direct testimony Jennifer Nelson at page 46, lines 800 – 801.

Investor Services made this very point in a Special Comment on the topic of cost recovery provisions and credit quality where they stated:

> One of the most referenced, but potentially misleading, indicators used to judge whether a particular utility is recovering its costs and earning an adequate return is its regulatory allowed return on equity. Although a high allowed return on equity can be associated with a higher earned return, this measure cannot be looked at in isolation but must be viewed in relation to a utility's cost recovery provisions that impact actual earned rate of return, like automatic adjustment clauses, the length of rate cases, and the degree of regulatory lag that may occur. Some regulators believe that mechanisms like automatic adjustment clauses materially reduce the business and operating risk of the utility, providing justification for a relatively low allowed rate of return. We believe this is one of several reasons why both allowed and requested ROE's have trended downward over the last two decades.[71]

Moody's goes on to state: "the ability to recover prudently incurred costs in a timely manner is perhaps the single most important credit consideration for regulated electric and gas utilities …"[72] Bottomline – as Moody's concludes rate recovery mechanisms such as those currently in place in Utah are more important to cash flow and credit worthiness than overstated equity returns. Commissions around the country like Utah have authorized numerous types of rate recovery mechanisms that provide stable and consistent earnings. This low business risk and stable and/or consistent revenue recovery for DEU assures a solid credit profile.

[71] *Cost recovery Provisions Key to Investor Owned Utility Ratings and Credit Quality*, Moody's Investor Services (Special Comment) at 1, (June 18, 2010).
[72] *Cost recovery Provisions Key to Investor Owned Utility Ratings and Credit Quality*, Moody's Investor Services (Special Comment) at 3, (June 18, 2010).

Q. DOES THE COMPANY FACE ANY UNUSUAL RISK BECAUSE OF THE $1.530 BILLION PLANNED CAPITAL EXPANSION?

A. The short answer is no. First, I described above how the suite of rate recovery mechanisms provide consistent and stable revenue recovery. Second, much of the cash flow DEU requires to fund the $1.53 billion capital expansion plan is already accounted for.

Ms. Nelson discusses the proposed $1.53 billion capital expansion plan, importance of a strong credit profile, and other risks associated with large capital expenditures at pages 41 – 46 of her testimony. Below I have constructed Table 10 to show how a major portion of the proposed $1.53 billion is initially paid or recovered through the infrastructure mechanism and depreciation recovery. Ms. Nelson fails to consider or at least discuss these factors that contribute to the recovery of these planned capital expenditures. About 26% of the investment qualifies to be recovered through the infrastructure mechanism and will be recovered as interim rate recovery through the infrastructure tracker mechanism.[73] Next, Ms. Nelson fails to note that DEU's annual depreciation recoveries cover another 35% of forecasted capital expenditures. I have included below a calculation of the effective DEU planned capital expenditures (Table 9 below).

[73] See DEU response to OCS Data Request 7.01 Attachment 1.

Table 9

DEU Projected Capital Expenditures and Recovery

Year	Total CAPEX[74]	Infrastructure Mechanism[75]	Annual Depreciation[76]	Net CAPEX
2022	$359,560,000	$77,362,525	$107,784,166	$174, 413,309
2023	$295,364,000	$79,056,309	$107,784,166	$108,562,525
2024	$278,950,000	$80,949,870	$107,784,166	$90,216,964
2025	$297,400,000	$82,938,118	$107,784,166	$106,677,716
2026	$300,510,000	$84,933,965	$107,784,166	$107,791,869
Total	$1,529,870,000	$405,240,787	$538,920,832	$585,708,281

As demonstrated in Table 9, approximately 26%, or $405 million of expected system investment will be recovered through the infrastructure tracker. Next, depreciation a non-cash expense provides capital recovery amounts of about $107.8 million annually or $538.9 million over the five-year 2022-2026 investment period. This leaves about $117.1 million per year of investment requirements that exceed the tracker and depreciation. An investment requirement of $117 million per year given an asset base of $2,563,697,020 represents about 4.6% per year and is not a large or risky investment requirement.

[74] See DEU response to OCS Data Request 4.01.
[75] See DEU response to OCS Data Request 7.01 Attachment 1.
[76] See DEU Exhibit 3.34, (Forecasted Revenue Requirement) page 1, line 22, column (H).

Q. IN YOUR OPINION, CAN A HIGH EQUITY RETURN WHEN COMBINED WITH COST RECOVERY TRACKER MECHANISMS LEAD TO EXCESS PROFITS AND EXCESSIVE OR UNREASONABLE RATES?

A. Yes. I have described how DEU's cost recovery mechanisms assure stable and consistent recovery no matter; i) the weather, ii) consumer usage preferences, conservation levels and demand, iii) fuel cost increases, and iv) infrastructure capital additions. Through such mechanisms revenue recovery is stable and consistent assuring cash flow for corporate needs and profit levels. Risk as measured by volatility of return is addressed by these cost recovery mechanisms. Equity return levels are a function of risk levels, so if risk is addressed in the mechanisms – a higher equity return authorization would over-compensate for risk.

Currently, the Company projects paying $400 million in dividends upstream to the parent over the period 2022 – 2026 as shown in the following Table 10. No equity infusions from the parent to DEU are projected (see Table 10 below).

Table 10[77]
Forecasted DEU Dividend Payments to the Parent

Year	Dividends to Parent	Equity Infusion to DEU
2022	$50,000,000	$0
2023	$50,000,000	$0
2024	$50,000,000	$0
2025	$150,000,000	$0
2026	$100,000,000	$0

[77] See DEU response to OCS Data Request 7.04.

This $400 million in dividend payments represent about a 56.9% dividend payout of forecasted revenue requirement earnings over this period.[78] The alternative cost of capital that I recommend for DEU in this case reduces DEU's earnings about $18 million per year, and in my opinion such an adjustment will not harm DEU's financials or dividend payment plans.[79] Actually, if the dividend payout is lowered by the $18 million in equity return the resulting payout ratio would be approximately 50.6% which is in line (within the range) of payout ratios of the comparable group companies.[80]

SECTION VI: COMPARABLE GROUP ANALYSIS

Q. PLEASE EXPLAIN AND DESCRIBE THE STARTING POINT OF YOUR COST OF CAPITAL ANALYSIS FOR THIS CASE.

A. The first step for any cost of equity capital analysis is the selection of a comparable group of companies for which market data is available to conduct a market-based cost of capital analysis. I have included in Exhibit (OCS 3.2) a description of comparable group analysis and sample selection. In this proceeding, I reviewed Ms. Nelson's risk screening criteria for her comparable group analysis and selection. I agree with Ms. Nelson's selection or screening criteria for the comparable group analysis in this case.

[78] DEU projects equity earnings on rate base at 10.3% to be about $140,506,362 per year. Over the 5-year forecast period that amounts to $702,531,810 (5 * $140,506,362). If $400,000,000 is paid out as dividends the payout ratio is 56.93%.
[79] The $18 million annual adjust is shown in Exhibit (OCS 3.12).
[80] Reducing 5-year return in footnote 73 by $90 mm and reducing payout by $90 mm results in a 50.6% payout ratio. Payout ratios can be estimated by the ratio of DPS/EPS and the data can be found in Exhibit OCS 3.7, page 3, columns 11 and 12.

I will employ the same six gas utilities in my comparable group and modeling analyses as Ms. Nelson has identified.[81] The six- company group of risk comparable gas utility companies is shown in the following Table 11.

Table 11

COMPARABLE COMPANY GROUP

Company	Stock Ticker
Atmos Energy Corporation	ATO
New Jersey Resources Corporation	NJR
NiSource, Inc.	NI
Northwest Natural Holding Company	NWN
One Gas, Inc.	OGS
Spire, Inc.	SR

All of these companies are dividend-paying utilities with investment grade bond ratings. I have included a listing in Exhibit (OCS 3.5) of the gas utilities in the comparable group along with basic data for beta, historical and forecasted equity ratios.

SECTION VII: COST OF CAPITAL MODELS DCF ANALYSIS

Q. PLEASE EXPLAIN THE CONSTANT GROWTH DCF METHODOLOGY YOU HAVE EMPLOYED IN YOUR ANALYSIS.

A. I have included in Exhibit (OCS 3.2) a Technical Appendix outlining the foundation

[81] Direct Testimony Jennifer Nelson at page 16 Figure 3.

and technical outline of the DCF model. The price that an investor is willing to pay for a share of common stock today is determined by the income stream the investor expects to receive from the investment. The return the investor expects to receive over the investment time horizon is composed of: (i) dividend payments and (ii) the appreciated sale value of the investment. A proper analysis adds dividends to the gain on the final sale value, and discounts these expected future earnings to a present value.

To determine or estimate investor requirements using the DCF model, one computes a cost of capital requirement, or discount rate from the current market data and the expected dividend stream. As shown in Exhibit (OCS 3.2) the DCF model stated as a formula is as follows:

$$K = D/P + G$$

where:
K = required return on equity,
D = dividend rate,
P = stock price,
D/P = dividend yield, and
G = growth in dividends.

Q. PLEASE EXPLAIN HOW YOU CALCULATED THE DIVIDEND YIELD FOR THE COMPARABLE COMPANIES.

A. The dividend yield is the ratio of the dividend rate to the stock price. When calculating the dividend yield, one must be cautious and not rely on spot stock prices. One must be equally cautious not to rely on long periods of time as the data becomes unrepresentative of market conditions. The objective is to use a period of time such that the resulting dividend yield is representative of the prospective period when rates

will be in effect.

While there is no fixed period for selecting the denominator of the dividend yield (i.e., stock price), the key guideline is that the yield not be distorted due to fluctuations in stock market prices. On the other hand, dividends, the numerator of the yield calculation, are relatively stable, as opposed to the stock prices, which are subject to daily and cyclical market fluctuations. The selection of a representative time period will dampen the effect of stock market changes.

The price and dividend data used for each of the proxy companies in the comparable group is contained in my Exhibit OCS 3.6.

I have examined monthly closing stock prices for the six-month period February 2022 through July 2022, also for a 12-week period ending July 2022, along with 52 week high and low averages, to calculate a representative price for the dividend yield calculation. For this analysis, I have employed the recent 3-month average price in calculating the dividend yield. It should be noted that Ms. Nelson employed three price periods in her DCF analyses – 30-Day Average, 60-Day Average, and a 180-Day Average.[82] My 3-month price analysis falls in the middle of the time periods examined by Ms. Nelson.

To calculate dividends, I employed the current quarterly dividend - annualized and then increased for ½ the expected growth rate. Because utility companies tend to increase quarterly dividends at different times throughout the year, the assumption is that

[82] See Direct testimony Jennifer Nelson at page 23, Figure 5: Constant Growth DCF Results.

dividend increases will be evenly distributed over the calendar quarters for the comparable group companies. Given the above, it is appropriate to calculate the expected dividend yield by applying one-half of the long-term estimates of growth to the current dividend yield. I have calculated the yield employing the current dividends for each comparable company as reported by Value Line and the recent three-month average price and the resulting dividend yields are shown in my Exhibit OCS 3.6.

Q. EXPLAIN HOW YOU HAVE CALCULATED THE EXPECTED GROWTH RATE IN YOUR CONSTANT GROWTH DCF ANALYSIS FOR THE COMPANIES IN THE COMPARABLE GROUP.

A. Like the dividend yield, there exists no single or simple method to calculate growth rates. The calculation of investor growth expectations is the most difficult part of the DCF analysis. To estimate investor expectations of growth, I have examined historical growth and forecasted growth rates, and other financial data for each of the companies in the comparable group.

Implementation of the DCF model requires the exercise of considerable judgment with regard to estimating investor expectations of growth and it is a difficult task, but such difficulties are not insurmountable. Many economic factors affect capital markets in general and individual stocks specifically. Such economic variables which were discussed earlier, entail the current state of the economy, the trade deficit, federal budget uncertainty, fiscal policy, inflation, and Federal Reserve Board policies on interest rates.

Investors generally have good information on the economic and financial variables

outlined above. All of this information is available quickly, especially in recent decades with easy access to the internet.

Like the information available on the general economy, investors also have access to a wealth of information about particular types of securities, industries and specific company investments. This information is also factored into investor expectations and therefore the stock price individuals are willing to pay.

Common stock earnings growth rate forecasts and historical growth rate data may be found in the Value Line publication. These Value Line earnings estimates are five-year projections in annual earnings. Again, Value Line is widely available to the public, and is a good source of earnings projections. Other earnings estimates are forecasted by Zacks as well as First Call projections from Yahoo finance, which are widely available on the internet at Zacks.com and Yahoo Finance respectively. Those earnings projections along with other stock specific financial data provide a range of estimates of earnings and are readily available at no cost.

Another growth estimate is referred to as the sustainable growth or retention ratio growth estimate. To project future growth in earnings under the sustainable growth method, one multiplies the fraction of a firm's earnings expected to be retained (not paid out as dividends) by the expected return on book equity. As a formula:

Growth = ("b" x "r")

Where:
"b" =1- (dividends per share/earnings per share), and
"r" =earnings per share / net book value share.

All the data necessary to calculate the elements of the sustainable growth method are available on a forecasted basis in Value Line.

I have extended this sustainable growth formula to include the impact of external equity financing. The growth formula including external financing is:

$$g = br + sv$$

The terms "b" and "r" have been described above, "s" is the expected growth in shares to finance investment, and "v" is the profitability of those expected investments.

Q. PLEASE EXPLAIN YOUR GROWTH RATE ANALYSIS.

A. I have included in my Exhibit OCS 3.7, a three-page schedule showing the growth rates I have reviewed in my analysis. The first set of growth rates examined is the five-year and ten-year historical growth rates in earnings per share, dividends per share, and book value per share as reported by Value Line. The second set of growth rates is the Value Line 5-year forecasted growth rates in dividends, book value and earnings per share for each company in the comparable group. The third set of growth rates examined is the Zacks 5-year forecasted growth rates in earnings. The fourth growth estimate considered, the First Call 5-year earnings growth estimate, is readily available to investors at Yahoo Finance.

In addition, I have examined the growth rates based on the forecasted internal growth, the so-called sustainable growth estimate discussed above.

The growth rates described above provide a range of estimates for each of the comparable companies. The resulting range of average and median forecasted growth rates for the gas utility comparable group is shown in Exhibit (OCS 3.7).

Q. DID YOU RELY ON THE HISTORICAL GROWTH RATES?

A. No. Historical growth rates are a starting place for the analysis, but investors consider additional information when formulating expectations. Moreover, whether the trends of the past ten or five years continue to hold for the future is often a suspect assumption. Instead, I rely on all earnings per share forecasted growth rates (from Value Line, Zacks, and Yahoo Finance) combined with the sustainable growth estimate as a better predictor of investor expectations

Q. PLEASE SUMMARIZE YOUR CONSTANT GROWTH DCF ANALYSIS.

A. The comparable group mean and median results fall in a range of 8.73% to 9.24% with about a 8.99% midpoint. These analyses can be found in my Exhibit OCS 3.8, columns F and G. I found no extreme outliers in my DCF analysis, but I note on my Exhibit OCS 3.8, all results below 7.75% or above 12.75% have been excluded from the calculations. There are no regulatory authorities considering or authorizing equity returns below 7.75% and investment alternative returns would likely keep investors from seeking returns below 7.75% for utility companies under current market conditions. Thus, I treated all results below 7.75% as unreasonable and excluded them from the analysis. Likewise, in the low-cost capital markets no regulatory authority is considering equity returns at or above 12.75% for local gas distribution operations. Therefore, I have treated such results as outliers and excluded them.

Q. HAVE YOU CALCULATED ADDITIONAL DCF ANALYSES FOR THE COMPARABLE GROUP COMPANIES?

A. Yes. I have calculated a two-stage non-constant growth DCF analysis for the companies in the comparable groups.

Q. PLEASE DESCRIBE YOUR TWO-STAGE NON-CONSTANT GROWTH DCF.

A. This analysis calculates equity cost using a non-constant growth two stage DCF Model. This model is also presented and discussed in the Technical Appendix at Exhibit (OCS 3.2). The constant growth DCF model can be adjusted to reflect multiple growth assumptions because the constant growth rate assumption is often not consistent with investor expectations. As an example, it is often the case where short-term growth estimates are not consistent with long-term sustainable growth projections. In those instances, where more than one growth rate estimate is appropriate, a multi-stage non-constant growth model can be employed to derive a cost of capital estimate. In other words, the constant growth model is adjusted to incorporate multiple growth rate periods, assuring a constant growth (long-term) rate is estimated for a longer period.

For the comparable group, the first growth stage (years 1-5) of the model, the Value Line growth in dividends is employed and an annual dividend is calculated. The second stage (years 6 and beyond) employs an earnings growth estimate based on the average of the earnings per share forecasts by Zacks, Yahoo Finance and Value Line. The estimated cash flows are modeled over an extended period and return is calculated employing the Internal Rate of Return formula ("IRR").

Q. WHAT ARE THE RESULTS OF THE TWO STAGE NON-CONSTANT GROWTH DCF ANALYSIS?

A. The results of the two-stage non-constant growth DCF analysis are shown in Exhibit OCS 3.9, columns K and L. The gas company comparable group mean and median results indicate a cost of equity range of 9.40% to 9.51% with a 9.46% midpoint.

SECTION VIII: BOND YIELD EQUITY RISK PREMIUM, CAPM AND ECAPM COST OF EQUITY ESTIMATE

Q. PLEASE DESCRIBE THE RISK PREMIUM ANALYSIS.

A. Debt instruments such as bonds (long-term debt) are less risky than common equity when both classes of capital are issued by the same entity. Bondholders have a prior contractual claim to the earnings of the corporation and contractual returns on bonds are less variable and more predictable than stocks. The bottom line is that debt is less risky than equity. There are numerous return studies of capital market investments, all of which show lower returns with lower risks and higher returns with higher risk investments. These financial truisms provide a sound theoretical basis and foundation for the risk premium method for estimating equity costs. The risk premium approach is useful in that the analysis is based on current market interest rates.

The risk premium approach is not without its problems and drawbacks. In practice and application, there is considerable debate as to the historical time period to analyze and added debate concerning the calculation of the bond/equity return risk spread.

Historical debt/equity risk spreads measured over many decades may not be relevant to current capital market requirements. Others argue that a long-term analysis is necessary, since the goal is to measure investors' long-term expectations. Included in Exhibit (OCS 3.2) is a brief outline of the risk premium method.

Another version of the risk premium method is the capital asset pricing model ("CAPM"). A more detailed overview of the CAPM is provided in the Technical Appendix in Exhibit (OCS 3.2).

Finally, I examine Empirical Capital Asset Pricing Model (ECAPM") estimates. The ECAPM is quite similar to the CAPM described above with the difference being an adjustment for the beta estimate in the model. Firms with beta estimates below unity tend to have actual beta values that are higher. The ECAPM includes an adjustment to correct for any systematic measurement errors in beta. Like the other models I have included a brief overview of the ECAPM in the Technical Appendix in Exhibit (OCS 3.2).

Q. **DESCRIBE YOUR BOND YIELD EQUITY RISK PREMIUM ANALYSIS.**

A. The bond yield equity risk premium analysis is presented in Exhibit (OCS-11) and evaluates the risk/return differential between the authorized gas utility return on equity relative to 30-year U.S. Treasury bond yields for the period 1981 - 2021. The resulting risk premium is combined with the 30-year U.S. Treasury Bond recent 3-month average yield and the current spot yield to determine the range of risk premium estimates of equity costs.

The resulting risk premium range of results for gas utilities is 9.70% to 9.73% with a midpoint of 9.72%.

CAPITAL ASSET PRICING MODEL ANALYSIS

Q. PLEASE EXPLAIN HOW YOU CALCULATED THE EQUITY RETURN ESTIMATE EMPLOYING THE CAPM.

A. I employed the basic CAPM formula denoted as follows:

$$R_f + \beta(R_m - R_f)$$

Where:

R_f = risk free rate;
β =beta;
R_m = market return; and
$R_m - R_f$ = market risk premium or MRP

This is the typical model structure employed by most financial analysts in estimating equity returns using the CAPM method.[83]

Q. WHAT RISK FREE (R_f) VALUE DID YOU EMPLOY IN YOUR CAPM ESTIMATE?

A. I employed the most recent three-month average of the 30 Year U.S. Treasury Bond rates. This three-month average is shown below in Table 12:

[83] I provide additional model details for the CAPM in the Technical Appendix in Exhibit (OCS 3.2).

Table 12

30-Year U.S. Government Bond Yields

May 2022	3.07%
June 2022	3.25%
July 2022	3.10%
3-Month Average	3.14%

Q. WHAT VALUE DID YOU EMPLOY FOR BETA IN YOUR CAPM ANALYSIS?

A. I employed a Value Line beta estimate for each company in the comparable group as shown in my Exhibit OCS 3.5, column A and Exhibit (OCS 3.10) columns A and E. The mean and median beta values used were .83 and .80, respectively.

Q. WHAT VALUE HAVE YOU EMPLOYED FOR THE MARKET RISK PREMIUM ("MRP")?

A. To calculate the MRP, I first looked at the long-term historical risk premiums for the period 1926-2021. The following summarizes the historical MRP for the historical 1926-2021 period:

Table 13
Market Risk Premium

Investment[84]	Arithmetic Mean Return
Large Company Stocks	12.30%
Long Term Government Bonds	6.00%
Historical MRP	6.30%

[84] Kroll, *U.S. Capital Market Performance by Asset Class 1926-1921*, at page 58, Table 2.3 (2022 SBBI Yearbook).

Thus, the long-term historical MRP is 6.30% above the risk-free rate for long-term U.S. Treasury Bonds.

I also estimated a more current MRP by measuring the difference between the forecasted equity return for the comparable group as reported by Value Line for the period 2025-2027 of 9.44% and the current 30-year U.S. Treasury yields of 3.14%.[85] This alternative also produces an MRP of 6.30% (9.44% - 3.14%). Given the higher rates of inflation and tightening monetary policy increasing interest rates the expectation is that MRP's (difference in equity and bond returns) will be shrinking. Given the declining MRP expectation I have employed both the historical MRP of 6.30% and the forward MRP, which is also 6.30%. This 6.30% MRP estimate is consistent with the expected ranges of MRP's of 5% - 8% found in a number of studies in the financial literature and is consistent with current financial markets expectations for MRP's.[86]

Q. WHAT ARE THE RESULTS OF YOUR CAPM ANALYSES FOR THE GAS COMPANY COMPARABLE GROUP?

The results of the CAPM analyses can be found in my Exhibit OCS 3.10 at column D for the gas comparable group. The range of results indicate an equity return range of 8.18% to 8.39% with an 8.29% midpoint.

[85] The 9.44% forecasted equity return by Value Line can be found in Exhibit (OCS 3.5) column "K" by averaging the mean and median result, also see Lawton work paper 1.
[86]Morin, Roger; New Regulatory Finance, Public Utility Reports, Inc. (2006) at page 163. See Chapter 5.

Q. IN YOUR ANALYSES, HAVE YOU INCLUDED A CALCULATION OF THE EMPIRICAL CAPM OR ECAPM RETURN ESTIMATE FOR THIS CASE?

A. Yes. Like the CAPM analysis discussed above, the ECAPM estimate of equity return relies on basic financial portfolio theory. As explained in the Technical Appendix Exhibit (OCS 3.2) to correct for biased beta estimates, an adjustment is made so as not to understate the cost of equity. The basic formula for the ECAPM for beta conversion is as follows:

$$K = R_f + 0.25(R_m - R_f) + 0.75\beta(R_m - R_f)$$

Q. WHAT ARE THE RESULTS OF YOUR ECAPM ANALYSES FOR THE GAS COMPANY COMPARABLE GROUP?

A. The results of the ECAPM analyses can be found in my Exhibit (OCS 3.10) at column H. The range of ECAPM results are 8.50% to 8.65% with a midpoint of 8.58%.

Q. PLEASE SUMMARIZE YOUR COST OF EQUITY CAPITAL RESULTS FOR DEU.

A. Table 14 below is a summary of the equity cost estimates for the comparable groups of companies employing the constant growth DCF, 2-Stage DCF, bond yield equity Risk Premium, CAPM, and ECAPM models (see Table 14 below).

Table 14

Cost of Equity Estimates[87]

MODEL	RANGE	MIDPOINT
DCF Model	**8.73% - 9.24%**	**8.99%**
Two-stage DCF	**9.40% - 9.51%**	**9.46%**
CAPM	**8.18% - 8.39%**	**8.29%**
ECAPM	**8.50% - 8.65%**	**8.58%**
Equity Bond Risk Premium	**9.70% - 9.73%**	**9.72%**
Average All Models	**8.90% - 9.10%**	**9.01%**

The average of all the models is 9.0%. The DCF model results average 9.2% and are consistent with the risk premium and ECAPM average result. As I explained earlier, it is my opinion that the DCF model is the best analytical technique for measuring a utility's cost of common equity.

SECTION IX: CAPITAL STRUCTURE

Q. WHAT CAPITAL STRUCTURE IS THE COMPANY PROPOSING IN THIS PROCEEDING?

A. Based on the direct testimony of Company witness Jordan Stephenson, and reflecting

[87] Each cost of equity capital estimate is discussed in the testimony and is presented in Exhibits (OCS-3.8), (OCS-3.9), (OCS-3.10), and (OCS-3.11).

capital cost estimates through the December 31, 2023 test year end the Company is proposing the following capital structure, cost rates and overall cost of capital to be earned on rate base investment:

TABLE 15
DOMINION ENERGY UTAH
OVERALL REQUESTED COST OF CAPITAL[88]

Description	Percent	Cost Rate	Weighted Cost
Long-Term Debt	46.79%	4.00%	1.872%
Common Equity	53.21%	10.30%	5.481%
Total	100.00%	---	7.35%

Thus, the Company requests an overall cost of capital to be earned on DEU's rate base investment of 7.35% in this case.

Q. WHAT IS THE SIGNIFICANCE OF CAPITAL STRUCTURE?

A. The overall cost of capital is the sum of the weighted average cost rates of various sources of capital. The quantity or portion of each type of capital, combined with the cost rate of capital determines the overall rate of return that the Company should be allowed to earn on rate base investment in this proceeding. The most significant relationship in any capital structure is the debt-to-equity ratio.

[88] Direct Testimony Jordan Stephenson at page 20.

Q. DOES THERE EXIST SOME SET RELATIONSHIP OR IDEAL MIX OF DEBT AND EQUITY CAPITAL?

A. There exists no set definitive debt/equity relationship for all firms or all industries in terms of leveraging. However, the ideal capital structure is one that minimizes the overall cost of capital to the firm, while still maintaining financial integrity so as to maintain the ability to attract capital at reasonable costs to meet future needs. Because the cost of debt is generally lower than the cost of equity, and also because the cost of debt represents a tax-deductible expense, any increase in the quantity of debt capital tends to decrease the overall cost of capital and revenue requirements relative to equity financing. One must keep in mind that increases in the quantity of debt financing can cause the financial risk of the Company to increase. In other words, there is a cost for the savings associated with increased debt leveraging. That cost is increased financial risk to the firm causing equity costs to increase.

In summary, it is not possible to determine with precision the exact proportion of debt and equity that minimizes the overall cost of capital without imposing undue financial risk upon the Company. There does exist some range of capital structure that generally meets the goal of minimizing the overall cost of capital while maintaining the firm's financial integrity. For example, the average authorized equity ratio for gas utility operations is as follows (see Table 16 below):

TABLE 16[89]
AVERAGE AUTHORIZED GAS UTILITY EQUITY RATIO

YEAR	AUTHORIZED EQUITY RATIO
2017	49.88%
2018	50.12%
2019	51.86%
2020	51.87%
2021	50.92%
2022 FIRST SIX-MONTHS	50.21%

Given the above data in Table 16, an equity ratio in the 51.0% range is consistent with the recent range of authorized returns by regulatory authorities for the gas utility industry.

Q. WHAT CRITERIA SHOULD REGULATORS EMPLOY IN DETERMINING THE APPROPRIATE CAPITAL STRUCTURE TO BE USED FOR RATEMAKING?

A. In my opinion, rate regulation should focus on two criteria to determine the appropriate capital structure. Those two factors as outlined below should be economy (minimize cost) and safety (maintain financial integrity).

[89] RRA Regulatory Focus, Major Rate Case Decisions July 27, 2022, at page 7.

The advantage of debt in the capital structure is that debt costs less than equity. Moreover, interest charges are deductible for income tax purposes and act to reduce taxes. Thus, the more debt in the capital structure the lower the overall cost of capital will be. The question of economy is addressed by examining whether increases in the debt ratio act to increase the cost rates of both debt and equity so as to over balance the benefits of the larger proportion of debt.

In addition, there is always the overriding question of safety. In other words, financial risk is increased if the proportion of debt is increased by such a magnitude that interest obligations cannot be covered during periods of depressed earnings.

Q. HAVE YOU MADE ANY CHANGES TO THE COMPANY'S PROPOSED CAPITAL STRUCTURE AND COST RATES?

A. In addition to reducing the cost of equity to 9.2%, I am proposing a 49% debt 51% equity capital structure for this case. A 51% equity ratio is consistent with the average authorized gas utility equity ratio in 2021. Further, a 51% equity ratio is slightly higher than the forecasted comparable group equity ratio presented in Exhibit (OCS 3.5).

The Commission's Final Order in the last DEU rate case directly addressed the linkage between DEU's authorized equity return and capital structure. In that Order, the Commission stated: "Capital structure is invariably tied to authorized ROE. It becomes more relevant as the size of the gap between the cost of long-term debt and the authorized ROE increases.[90] In that case the Commission set DEU's equity return at

[90] Final Order, Docket No. 19-057-02 at 9-10 (February 25, 2020). Note, as shown in Tables 3 & 4 above, DEU's cost of debt has decreased from 4.34% to 4.00% since the last rate case.

9.5% and maintained the 55% equity ratio that had been previously been agreed to in January 2019 by a number of parties to address credit metric weakness due to the Tax Cut and Jobs Act of 2017.[91]

The 55% equity ratio the Commission authorized in the prior case is somewhat high by historical standards. The higher authorized equity ratio was an adjustment to offset cash flow decreases created by the implementation of the TCJA specifically the reduced utility cash flows resulting from lower deferred taxes. Now, after nearly 5-years under the TCJA the DEU rate base investment level is larger because accumulated deferred taxes (a rate base offset) are lower than they would have been under the old 35% tax rate. With the higher rate base earnings level – cash flows and returns will continue to grow over time. The end result is that the higher equity ratios requested in this case is no longer required to enhance financial metrics.

Q. IF THE COMMISSION ACCEPTS THE COMPANY'S PROPOSED CAPITAL STRUCTURE WITH A 53.21% EQUITY RATIO, SHOULD THE EQUITY RETURN BE REDUCED TO ADDRESS THE LOWER FINANCIAL RISK OF THE COMPANY RELATIVE TO THE COMPARABLE RISK GROUP?

A. Yes. I demonstrate below that the equity return should be reduced by at least 20-basis points to a 9.0% equity return. It is a fundamental truism of finance that as a firm increases the relative amount of debt capital in the capital structure, total fixed charges (interest) increase the fixed obligations of the firm. The resulting residual earnings (earnings after contractual interest payments) available to equity become subject to

[91] Final Order, Docket No. 19-057-02 at 9 (February 25, 2020).

increased volatility and risk as leverage and fixed interest obligations increase. It is important to note that the forecasted average comparable risk company group has about a 48.00% equity ratio.[92] The average authorized equity ratio in 2021 was 50.92%.[93] As such the equity return estimates developed from the comparable group would reflect higher financial risk and would need to be reduced if applied to DEU with a 53.21% equity ratio for setting rates in this case.

Q. CAN YOU POINT TO STUDIES IN THE FINANCIAL LITERATURE THAT EVALUATE THE IMPACT OF INCREASED FINANCIAL LEVERAGE IN THE CAPITAL STRUCTURE AND EQUITY COST?

A. Yes. There are numerous studies in the financial literature, both empirical and theoretically based that attempt to quantify the effects of leverage on the common equity costs.[94] These studies suggest an increase in common equity costs in a range of 7.6 basis points on the low end to 13.8 basis points on the high end for every percentage point increase in the debt ratio within the 40% to 50% range of leverage. [95] Thus, on average, there is about a 10.7 basis point increase [(7.6% + 13.8%)/2] in equity cost for every percentage point increase in debt in capital structure.[96]

[92] See Exhibit (OCS 3.5) – Column E.
[93] S&P Capital IQ.
[94] See Morin, Roger: New Regulatory Finance, Public Utility Reports, 2006, at 468-469.
[95] *Id.*
[96] *Id.*

Q. DOES THE FACT THAT THE COMPARABLE RISK GROUP HAS A FORECASTED AVERAGE 48.00% EQUITY RATIO WHILE THE DEU APPLICATION EMPLOYED A 53.21% EQUITY RATIO IMPLY THAT DEU IS LESS RISKY IN TERMS OF FINANCIAL RISK THAN THE COMPARABLE GROUP?

A. Yes. The DEU 53.21% equity level exceeds the comparable group equity average, thus DEU's financial risks are less than the comparable group. Given the comparable group equity ratio data in Exhibit (OCS 3.5), and the most recent average authorized equity level in 2021 was 50.91% or roughly 51%, I conclude a reasonable comparable equity ratio is 51%. Assuming a 51% equity level the difference between DEU's requested 53.21% and 51% equity is about 2.21 percentage points. The 2.21 percentage point difference (53.21% - 51.0%) of equity in capital structure conservatively translates into a range of about 23.65 basis points (2.21 percentage points x 10.7 average adjustment).[97] Employing a 20-basis point adjustment reduces the 9.20% recommended return to 9.0% to account for financial risk differences if the DEU capital structure is approved.

Q. WHAT CAPITAL STRUCTURE AND COST RATES ARE YOU RECOMMENDING THAT THE COMMISSION ADOPT IN THIS CASE?

A. Based on the analyses and results discussed above, I am recommending a capital structure of 51% equity and 49% debt. If the Commission ultimately decides to approve

[97] This calculation conservatively employs the average of the 7.6 to 13.8 basis point adjustment range discussed above.

the DEU requested 53.21% equity capitalization ratio then I would recommend that the Commission consider reducing the final equity return by about 20 basis points to reflect the lower financial risk of DEU as previously discussed above. The capital structure and cost rates I recommend are as follows (see Table 17 below):

TABLE 17
DOMINION ENERGY UTAH
RECOMMENDED COST OF CAPITAL

Description	Ratio	Cost	Weighted Cost
Long-term Debt	49.00%	4.00%	1.960%
Common Equity	51.00%	9.20%	4.692%
Total	100.00%	---	6.652%

As can be seen from the above table when the long-term debt cost rates and common equity cost rates reflect current market conditions, the final recommended Company's overall cost of capital is 6.652%. I have included the capital structure in my Exhibit OCS 3.12 which shows its impact on DEU's financial metrics. The impact of this recommendation is to reduce is to reduce the Company's requested overall return of approximately $188 million by about $18 million.[98]

[98] See Exhibit (OCS 3.12).

SECTION X: FINANCIAL INTEGRITY

Q. HAVE YOU REVIEWED CREDIT RESEARCH REPORTS FOR THE COMPANY REGARDING CREDIT QUALITY AND CORPORATE FINANCIAL METRICS?

A. Yes. The Company's credit quality is not threatened or under pressure of downgrade. I have discussed these issues earlier with regard to a recent Moody's and the S&P Credit Reports.

Q. WILL YOUR RECOMMENDED RETURN PROVIDE THE COMPANY SUFFICIENT CASH FLOW AND FINANCIAL METRICS TO MAINTAIN ITS FINANCIAL INTEGRITY?

A. Yes. Based on the capital structure above, my recommended overall cost of capital (which is based on a 9.2% equity return) provides sufficient financial metrics for the Company.

Q. WHAT FINANCIAL RATIOS OR FINANCIAL METRICS SHOULD THE COMMISSION CONSIDER WHEN EVALUATING COST OF EQUITY?

A. In my opinion, the Commission should consider the financial metrics that bond rating agencies consider in evaluating credit risk to a company. Key financial metrics involve cash flow coverage as a percentage of debt and debt leverage ratio.

Q. HOW ARE THESE FINANCIAL RATIOS CONSIDERED AND CALCULATED?

A. Ratings agencies such as Moody's Investor Services, Fitch Ratings, and Standard & Poor's develop rating guidelines that make explicit general ratings outcomes that are typical or expected given various financial and business risk combinations. A rating matrix or guideline is just that, a guideline, not a rule written in stone that guarantees a particular rating for a particular achieved financial metric level.

Funds or cash flow from a company's operations, in other words cash flow, are very critical to any rating/risk consideration. Interest and principal obligations of a company cannot be paid out of earnings if earnings are not cash. Thus, analyses of cash flow reveal debt-servicing ability.

Debt and capital structure considerations are indicative of leverage and flexibility to address financial changes. The 2008 liquidity crisis that hit all markets and industries is an example of the importance of financial flexibility. Stable and continuous cash flows provide financial flexibility. As discussed earlier the array of cost recovery mechanisms available to DEU assure stable cash flows.

DEU is not in danger of losing current credit ratings and my recommendations will not cause DEU's financial integrity to diminish.

SECTION XI: <u>RESPONSIVE TESTIMONY TO JENNIFER NELSON</u>

Q. DO YOU HAVE ANY COMMENTS REGARDING THE DIRECT TESTIMONY AND RECOMMENDATIONS OF COMPANY WITNESS JENNIFER NELSON?

A. Yes, I have a number of comments. First, as to Ms. Nelson's recommended return on equity of 10.30% for DEU, such a return level is overstated and not supported by market data. I discussed earlier in this testimony current market data and how such current market data supports an equity return in the 9.2% range. Further, Ms. Nelson's own results support an equity return closer to 9.2% than the proposed 10.3% equity return.

I address below each of Ms. Nelson's modeling efforts. First, Ms. Nelson's "High End" DCF model substantially overstate the cost of equity in this case. Given the small sample size of the comparable group (six companies) a couple of overstated results inflate Ms. Nelson's final results. Ms. Nelson's CAPM and ECAPM estimates are not a reliable estimate of utility equity return given that her market risk premium assumptions are substantially overstated. Also discussed below, Ms. Nelson's risk premium model is theoretically implausible and should not be relied on for establishing equity return in this case. When Ms. Nelson's models are evaluated in light of the above findings the equity cost estimate supports a 9.2% equity return, well below the claimed 10.3% cost of equity.

The bottom line is that Ms. Nelson's equity return models support the equity return I am recommending in this case. There is no support for the requested 10.3% equity return proposed by DEU in this proceeding.

Q. PLEASE ADDRESS THE ISSUES YOU FOUND WITH MS. NELSON'S DCF ANALYSIS.

A. Ms. Nelson employs a standard constant growth DCF analysis. I have no problem with

the basic model, assumptions, and data input sources and application of the constant growth DCF in this case. The problem occurs when you review Ms. Nelson's results at DEU Exhibit 2.02 pages 1 through 3. Keeping in mind that the comparable group is only six companies – a small sample size, Ms. Nelson's "High ROE" DCF analyses produce results ranging to as high as 14.19%.[99] Moreover, there are additional unreasonably high estimates between 13.43% and 13.97% that Ms. Nelson includes in her calculations.

The problem is Ms. Nelson's own Exhibit (DEU 2.06) shows that an equity return of 13% to 14% range has not been authorized by a regulatory authority in this country since early 1992. Why an analyst would consider estimated results that no Commission has considered in the past 30-years leads to questions concerning her overall analysis. This is an even larger problem with the small size comparable group because outliers have large impacts on overall result.

To cure this outlier issue, I simply removed DCF results that exceed 13.0 % from her high estimates. Also, for consistency I removed low results below 7.5%. This adjustment to remove outliers provides the following equity return range (see Table 18 below).

[99] Direct Testimony of Jennifer Nelson at DEU Exhibit 2.02, page 3 of 3, column 11.

TABLE 18[100]

JENNIFER NELSON CONSTANT GROWTH DCF ADJUSTED

	LOW	MEAN	HIGH
30-DAY AVG.	**8.97%**	**9.79%**	**9.89%**
90-DAY AVG.	**9.04%**	**9.89%**	**9.98%**
180-DAY AVG.	**8.93%**	**9.86%**	**9.95%**

The range of adjusted results is 8.93% to 9.98% with a 9.45% midpoint – well below the claimed 10.3%.

Ms. Nelson's quarterly DCF model results suffer from the same outlier infirmities I discussed above. When the outlier problem is repaired the quarterly results are as follows:

TABLE 18[101]

JENNIFER NELSON QUARTERLY DCF ADJUSTED

	LOW	MEAN	HIGH
30-DAY AVG.	**9.13%**	**9.93%**	**10.03 %**
90-DAY AVG.	**9.20%**	**10.05%**	**10.14%**
180-DAY AVG.	**9.08%**	**10.01%**	**10.13%**

The quarterly model results (after outliers are removed) indicates a range of 9.08% to

[100] Direct Testimony of Jennifer Nelson at DEU Exhibit 2.02, pages 1-3, removing outlier values under 7.5% and values over 13.0%.
[101] Direct Testimony of Jennifer Nelson at DEU Exhibit 2.03, pages 1 -3, removing outlier values under 7.5% and values over 13.0%.

10.13% or a midpoint of about 9.6%. Again, the removal of outliers substantially impacts Ms. Nelson's recommended 10.3%.

Q. PLEASE DESCRIBE THE ISSUES YOU HAVE FOUND IN MS. NELSON'S RISK PREMIUM, CAPM AND ECAPM ANALYSES.

A. The basic problem with Ms. Nelson's CAPM and ECAPM analyses is that Ms. Nelson's employs an overstated market risk premium ("MRP") that cannot be supported by historical evidence or the financial literature. Ms. Nelson's calculation of the forward MRP using the Constant Growth DCF model is described in her direct testimony at page 30, lines 545 – 564, and the results are presented in her DEU Exhibit 2.04 pages 1-12 and DEU Exhibit 2.05 pages 1-2. A fundamental problem with her MRP quantification is that in some cases, actually 93 cases, Ms. Nelson's DCF analysis of the S&P 500 employing Bloomberg data violates a basic DCF assumption – the discount rate (i.e. the ROE) should be greater than the growth rate. Ms. Nelson's direct testimony actually confirms that this is one of the DCF model underlying assumptions: "a discount rate **greater than** the expected growth rate."[102] (emphasis added) However, in these 93 cases, the growth rate (g) she uses is equal to the discount rate (K) – see formula below.[103] To see why having a discount rate greater than the growth rate is an important assumption, one need only look to the underlying DCF equation from Exhibit (OCS 3.2) as follows.[104]

$$\mathbf{P_0} = \frac{\mathbf{D_1}}{\mathbf{(K-g)}}$$ **(P_0 is the current market price of the stock and D_1 is the dividend)**

[102] Direct Testimony of Jennifer Nelson at page 19, line 355.
[103] Direct Testimony of Jennifer Nelson at, page 19, line 55, also see Morin, Roger: New Regulatory Finance, Public Utility Reports, 2006, at 255-256 where it states: The discount rate, K must exceed the growth rate, g.
[104] See Exhibit (OCS 3.2) page 7, equation No. 4.

As can be seen from the above equation, as (g) the growth rate approaches (K) the discount rate the denominator gets closer and closer to zero making the resulting stock price infinitely large.

This issue is also addressed in the financial literature - for example, Roger Morin's New Regulatory Finance, Public Utility Reports, 2006, at 255-256 where it states: "the discount rate, K must exceed the growth rate, g. In other words, the standard DCF model does not apply to growth stocks." A review of Ms. Nelson's Exhibit DEU 2.04 pages 1 through 6 shows in over 90 cases this basic assumption, that the discount rate exceeds the growth rate, was ignored. This has led her to some extreme results in calculating the MRP for the CAPM and ECAPM. For example, for Moderna, Inc. (MRNA), Ms. Nelson calculates a forward equity return of **-165.06%**.[105] Undeterred by such a negative and extreme cost of capital estimate Ms. Nelson plowed forward and used it in her analysis. Another extreme result is the **-188.41%** equity return Ms. Nelson calculates for Royal Caribbean Cruises, Ltd. (RCL).[106] At the other end of the spectrum Ms. Nelson calculates and employs the following equity return estimates: i) Boeing Co. (BA) **80.64%**, ii) Delta Airline (DAL) **86.0%**, Norwegian Cruise Line Holding, LTD., (NCLH) **153.32%**.[107] All of these cases and about 90 additional calculations ignored the basic assumption that the discount rate must exceed the assumed growth rate.

The end result is that the estimates of market risk premium are excessive. To remedy this issue, I replaced Ms. Nelson's MRP estimates with the high end of historical

[105] Direct Testimony of Jennifer Nelson at DEU Exhibit 2.04, page 4.
[106] Direct Testimony of Jennifer Nelson at DEU Exhibit 2.04, page 5.
[107] Direct Testimony of Jennifer Nelson at DEU Exhibit 2.04, pages 1, 2, 4.

expectations which is about an 8.0% MRP.[108] The resulting adjusted CAPM estimate assuming a 3.14% 30-year U.S. Treasury yield is 9.84% and the ECAPM estimate 10.15%. This compares to Ms. Nelson's range in her direct testimony of 10.24% to 13.12% for the CAPM and 10.76% to 13.60% for the ECAPM.

Q. PLEASE DESCRIBE THE ISSUES YOU HAVE FOUND IN MS. NELSON's BOND YIELD EQUITY RISK PREMIUM ANALYSIS.

A. The first problem with Ms. Nelson's bond yield equity risk premium model is that the results of the model application are not consistent with reasonable expectations and financial theory. For example, Ms. Nelson's model at Exhibit DEU 2.06, page 1, estimates the bond yield risk premium ROE results assuming the then current 2.20% 30-year U.S. Treasury yield and concludes a 9.75% equity return estimate.[109] Ms. Nelson then employs her model to estimate the results at a much higher 3.13% forecasted 30-year U.S. Treasury yield and concludes essentially the same 9.76% equity return.[110] Thus, her model results predict basically the same equity return 9.75% to 9.76% whether U.S. Treasury yields are 2.20% or 97 basis points higher at a forecasted 3.13% level. If one employs a lower 30-year Treasury yield say 2.0% Ms. Nelson's model would forecast a higher 9.80% ROE estimate. It should be expected that when debt capital costs (U.S. Treasury yields) are decreasing capital costs including equity costs are also declining, not moving at the same rate of change, but certainly moving in the same direction. But not in Ms. Nelson's model.

[108]Morin, Roger; New Regulatory Finance, Public Utility Reports, Inc. (2006) at page 163. See Chapter 5.
[109] Direct Testimony of Jennifer Nelson at DEU Exhibit 2.0, page 40, lines 713 – 714, also see DEU Exhibit 2.06 page 1 of 22.
[110] Direct Testimony of Jennifer Nelson at DEU Exhibit 2.06 page 1 of 22.

These results are counter-intuitive as one would expect a higher equity return, but not in lock step movements, when capital costs (Treasury yields) are increasing. Ms. Nelson's historical data shown graphically at DEU Exhibit 2.06, page 1 of 22 shows a negative relationship between 30-year U.S. Treasury yields and risk premiums. This means as interest rates decline risk premiums increase. But her model produces the same 10.0% equity return estimate when 30-year U.S. Treasury rates are at 1.5% or at 4.0%. This indicates that there is a problem with Ms. Nelson's model and it should not be relied on for estimating equity returns.

Q. PLEASE SUMMARIZE YOUR COMMENTS ON MS. NELSON'S TESTIMONY.

A. Ms. Nelson's equity return calculations and recommendations in this case are overstated and, contain questionable assumptions and estimates. When Ms. Nelson's model assumptions are modified to reflect reasonable assumptions, the net result supports a much lower cost of equity.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.