Specifically, S&P states the following:

> **Rationale**
>
> Business Risk: Excellent
>
> - Stable operating cash flow from the regulated utility supports the credit profile
> - Credit supportive Iowa regulatory environment
> - Revenue is roughly equally divided among residential, commercial, and industrial customers, which provides diversity and at least a base level of usage
> - Some industrial sales exposure
> - Prudent management of coal-fired generating units to meet growing environmental compliance requirements
> - Long power position used in a credit supportive manner
> - Parent MidAmerican Energy Holdings Co. (MEHC) does not expand nonregulated operations to a level that would result in a change to the business risk profile
>
> Financial Risk: Significant
>
> - Net cash flow to capital spending to exceed 100%
> - Discretionary cash flow to remain positive
> - Over next several years, capital spending trends lower as construction of solar and wind projects recede.
> - EBITDA growth consisting of revenue increases and customer growth expected to be about the same as in recent years
> - Wholesale power prices remain lower for next few years, resulting in lower sales margins
> - Berkshire Hathaway could acquire businesses riskier than the current businesses of MEHC, which has been used as the holding company for energy assets
> - Sizable parent level debt remains a rating consideration[5]

Q PLEASE DESCRIBE REGULATORY MECHANISMS IN IOWA WHICH LIKELY HAVE CONTRIBUTED TO MIDAMERICAN'S SUPPORTIVE REGULATORY ENVIRONMENT.

A A significant amount of MidAmerican's rate base investments, approximately 50%, are supported by regulatory plans with fixed returns on equity. The approved fixed

[5] *Standard & Poor's RatingsDirect Summary*: "MidAmerican Energy Co.," March 22, 2013 at 2, emphasis added.

returns on equity range from 11.7% up to 12.23%. These authorized returns on equity are significantly in excess of the current capital market costs for utility investments.

These significantly above market rates of return provide strong earnings and cash flow coverages of financial obligations supporting MidAmerican's invested capital in the generation resource.

These regulatory plans and high fixed returns on equity reduce MidAmerican's operating risk and financial risk. Operating risks are reduced because there is no uncertainty about the sustainability of the approved above-market returns on equity. They are fixed and will not be changed during the life of the investment. This reduces the regulatory risk for MidAmerican. Importantly, this reduced risk results in significantly higher costs to retail customers because they are obligated to pay rates that provide the fixed return on equity. MidAmerican's financial risk is also decreased because the higher returns on equity increase MidAmerican's earnings and cash flow coverage of its financial obligations. These improved earnings and cash flow coverages of fixed financial obligations again are produced because customers are paying rates which support the above-market rates of return on nearly one-half of MidAmerican's rate base investments.

These Iowa regulatory mechanisms have been used in the past and are available to use in the future, and they reduce MidAmerican's capital investment risk by providing greater certainty of the regulatory treatment of capital investment costs. This risk reduction is produced via obligations of customers to pay rates that support the Board's approved regulatory treatment of these investment costs. These risk reduction aspects should be recognized in setting a fair forward-looking risk-adjusted

return on equity for MidAmerican's rate base investments that are not subject to a regulatory plan and fixed return on equity.

Q CAN YOU SUMMARIZE THE REGULATORY RISK ASSESSMENT FOR MIDAMERICAN PUBLISHED BY INDEPENDENT SOURCES?

A Yes. SNL Financial and S&P both provide ratings of the regulatory environment for regulated utility companies. SNL's ratings have a calibrated range of 1 to 3 for "Average," "Below Average" and "Above Average" regulatory assessments. An "Above Average" risk rating suggests the regulatory commission leans more toward supporting investors' interests in the regulatory process and lower regulatory risk. Conversely, a "Below Average" risk suggests regulatory decisions lean more toward supporting customers' interests than investors' interests. Iowa has an "Above Average" rating which indicates low risk for MidAmerican.

RRA Evaluation

> Iowa regulation is relatively constructive from an investor perspective. Statutes provide for an advance determination of the ratemaking parameters that would be accorded certain new generation-related projects once complete. The IUB has approved such ratemaking principles on several occasions and the authorized returns on equity (ROEs) specified in these proceedings have generally been well-above prevailing nationwide averages at the time established. (ROEs authorized in the context of base rate cases have tended to approximate prevailing industry averages at the time established.) Policies are in place that allow the utilities to timely recover certain costs (i.e., fuel and purchased power costs and gas commodity costs, renewable resources, energy efficiency, and transmission costs) outside of base rate proceedings, thereby mitigating the effects of regulatory lag. Iowa law permits interim rate increases to be implemented, subject to refund, in the context of base rate cases, and such treatment has typically been utilized. We note that none of the electric and gas utilities currently have decoupling mechanisms in place. We continue to accord Iowa regulation an Above Average/3 rating. (Section updated 4/26/13).[6]

[6]SNL Financial report on the Iowa Utilities Board, downloaded on September 5, 2013, emphasis added.

S&P as part of its credit rating review also includes credit rating assessments of the regulatory risk of the utility. S&P's rating includes an average rating of "Credit-Supportive" and designations of "Most Credit-Supportive," "More Credit-Supportive," "Less Credit-Supportive" and "Least Credit-Supportive" in gauging the regulatory treatment of rate-setting.[7] "More Credit-Supportive" indicates lower regulatory risk to investors. "Less Credit-Supportive" suggests the regulatory decisions have been more supportive of ratepayers. Iowa is rated "More Credit-Supportive" which indicates below average operating risk for MidAmerican.

MidAmerican's Proposed Capital Structure

Q WHAT IS MIDAMERICAN'S PROPOSED CAPITAL STRUCTURE?

A MidAmerican's proposed capital structure is supported by MidAmerican witness Mr. Rick R. Tunning and is shown in Table 1 below.

TABLE 1

MidAmerican's Proposed Capital Structure (December 31, 2012)

Description	Weight
Common Equity	51.537%
Preferred Stock	0.372%
Long-Term Debt	48.091%
Total Regulatory Capital Structure	100.000%

Source: Exhibit___(RRT-1).

[7]Standard & Poor's RatingsDirect: "Standard & Poor's Revises Its U.S. Utility Regulatory Assessments," December 28, 2012. Note: no regulatory jurisdiction is rated as "Most Credit-Supportive."

Q DO YOU HAVE ANY ISSUES WITH MIDAMERICAN'S PROPOSED CAPITAL STRUCTURE?

A Yes. MidAmerican's historical capital structure is shown on my attached Exhibit MPG-2. As shown on that exhibit, MidAmerican's common equity ratio ranged from approximately 50.3% to 50.8% during the period 2009 through 2011. During this time period, MidAmerican's bond rating was "A-" and "Stable." The Company's proposal in this case to increase its common equity ratio from approximately 50.5% up to over 51.5% is not reasonable. This increase in common equity ratio is simply not necessary in order to support its investment grade "Stable" bond rating.

Q ARE ANY CREDIT RATING AGENCIES EXPECTING MIDAMERICAN TO MODIFY ITS CAPITAL STRUCTURE TO REDUCE ITS COMMON EQUITY RATIO DURING THE PERIOD RATES DETERMINED IN THIS PROCEEDING WILL BE IN EFFECT RELATIVE TO THAT REFLECTED IN MIDAMERICAN'S FILING?

A Yes. In S&P's credit report of MidAmerican dated March 22, 2013, it again rated MidAmerican's bond rating as "A-" with a "Stable" outlook, which was in part based on a projected increase in the adjusted debt ratio from 49% in 2012 up to 51% to 55% by the 2014 time frame. This projected increase in the adjusted debt ratio during the 2014 time frame is generally in line with MidAmerican's actual adjusted debt ratio as reported by S&P for calendar years 2010 and 2009.[8]

As such, I believe MidAmerican's proposed capital structure includes more common equity than needed to support its credit rating. For all these reasons, I believe the Company's proposed capital structure in this proceeding, which

[8]Standard & Poor's RatingsDirect: "MidAmerican Energy Company," September 28, 2011; and Standard & Poor's RatingsDirect: "MidAmerican Energy Company," March 22, 2013.

represents an increase in common equity ratio from that actually achieved by MidAmerican historically, is unreasonable.

Q DOES INCREASING THE COMMON EQUITY RATIO UNNECESSARILY INCREASE MIDAMERICAN'S COST OF SERVICE IN THIS PROCEEDING?

A Yes. Increasing the common equity ratio unnecessarily increases MidAmerican's revenue requirement in this proceeding because common equity is the most expensive capital source, and subject to income tax expense. For example, a return on equity of 9% would be subject to a gross-up in income taxes. Assuming a 40% composite tax rate, the revenue requirement cost of the 9% return on equity would be approximately 15%. In comparison, the marginal cost of debt for MidAmerican is approximately 4.5%.

The revenue requirement cost for common equity is three times more expensive than the revenue requirement cost of debt. Therefore, a capital structure too heavily weighted with common equity will unnecessarily increase a utility's revenue requirement. Debt interest is tax deductible and thus is not grossed up in the revenue requirement calculus.

Q DO YOU THINK MIDAMERICAN HAS AN ECONOMIC INCENTIVE TO INCREASE ITS COMMON EQUITY RATIO IN SETTING ITS RATES IN THIS PROCEEDING?

A Yes. Approximately 50% of MidAmerican's rate base is based on fixed return on equity generation resource investments. These authorized returns on equity are significantly above current capital market costs. By increasing its common equity ratio of total capital, it is increasing the amount of common equity to which its rates will be designed to produce a return. Since it is receiving above market return on

over half of its equity investments, MidAmerican has an economic incentive to try to maximize its use of common equity capital in supporting its rate base investments. For these reasons, the Board should carefully examine the reasonableness of MidAmerican's capital structure in this proceeding so as not to unnecessarily inflate MidAmerican's revenue requirement in this proceeding.

Q WHAT CAPITAL STRUCTURE DO YOU RECOMMEND BE USED TO SET MIDAMERICAN'S OVERALL RATE OF RETURN IN THIS PROCEEDING?

A I recommend a capital structure generally consistent with MidAmerican's historical capital structure. As shown below in Table 2, I recommend a capital structure composed of 50.5% common equity.

TABLE 2

IICAP Recommended Capital Structure (December 31, 2012)

Description	Weight
Common Equity	50.50%
Preferred Stock	0.40%
Long-Term Debt	49.10%
Total Regulatory Capital Structure	100.00%

Source: Exhibit MPG-1.

This capital structure generally reflects MidAmerican's historical capital structure, and strictly limits the increase in common equity to no more than necessary to support its current bond rating.

RETURN ON EQUITY

Q PLEASE DESCRIBE WHAT IS MEANT BY A "UTILITY'S COST OF COMMON EQUITY."

A A utility's cost of common equity is the return investors require on an investment in the utility. Investors expect to achieve their return requirement from receiving dividends and stock price appreciation.

Q PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A REGULATED UTILITY'S COST OF COMMON EQUITY.

A In general, determining a fair cost of common equity for a regulated utility has been framed by two hallmark decisions of the U.S. Supreme Court: Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n of W. Va., 262 U.S. 679 (1923) and Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591 (1944).

These decisions identify the general standards to be considered in establishing the cost of common equity for a public utility. Those general standards provide that the authorized return should: (1) be sufficient to maintain financial integrity; (2) attract capital under reasonable terms; and (3) be commensurate with returns investors could earn by investing in other enterprises of comparable risk.

Q PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE MIDAMERICAN'S COST OF COMMON EQUITY.

A I have used several models based on financial theory to estimate MidAmerican's cost of common equity. These models are: (1) a constant growth Discounted Cash Flow ("DCF") model using consensus analysts' growth rate projections; (2) a constant growth DCF using sustainable growth rate estimates; (3) a multi-stage growth DCF

model; (4) a Risk Premium model; and (5) a Capital Asset Pricing Model ("CAPM"). I have applied these models to a group of publicly traded utilities that I have determined share investment risk similar to MidAmerican's.

Risk Proxy Group

Q HOW DID YOU SELECT A UTILITY PROXY GROUP SIMILAR IN INVESTMENT RISK TO MIDAMERICAN TO ESTIMATE ITS CURRENT MARKET COST OF EQUITY?

A I relied on an electric utility proxy group that I determined to be comparable in investment risk to MidAmerican. My recommended proxy group is the same proxy group used by MidAmerican's witness Dr. Vander Weide to estimate MidAmerican's return on equity. However, I removed Entergy Corp. and TECO Energy because they are involved in merger or acquisition activities. Entergy Corp. has requested regulatory authorization to spin off its transmission assets to ITC Holdings in exchange for stock in ITC Holdings. TECO Energy announced a proposed acquisition of New Mexico Gas on May 28, 2013. Fitch has noted this acquisition to be significant and has placed TECO Energy on Credit Watch.

Q PLEASE DESCRIBE WHY YOU BELIEVE YOUR PROXY GROUP IS REASONABLY COMPARABLE IN INVESTMENT RISK TO MIDAMERICAN.

A The proxy group is shown in Exhibit MPG-3. This proxy group has an average corporate credit rating from S&P of "BBB+," which is one notch below S&P's corporate credit rating for MidAmerican of "A-". The proxy group's corporate credit rating from Moody's of "Baa2" is three notches below MidAmerican's corporate credit

rating from Moody's of "A2." The bond rating indicates that the proxy group has greater investment risk than MidAmerican.

The proxy group has an average common equity ratio of 45.1% (including short-term debt) from SNL Financial ("SNL") and 49.1% (excluding short-term debt) from *The Value Line Investment Survey* ("*Value Line*") in 2012. The proxy group's common equity ratio is comparable to my recommended common equity ratio of 50.5% for MidAmerican.

I also compared MidAmerican's business risk to the business risk of the proxy group based on S&P's ranking methodology. MidAmerican has an S&P business risk profile of "Excellent," which is identical to the S&P business risk profile of the proxy group. The S&P business risk profile score indicates that MidAmerican's business risk is comparable to that of the proxy group.[9]

Based on total bond rating, financial risk and operating risk, MidAmerican has slightly lower risk than the proxy group. Nevertheless, the parameters are reasonably comparable to the investment risk of MidAmerican, and this proxy group can be used to estimate a fair return on equity for MidAmerican. However, because of MidAmerican's slightly lower investment risk, a return on equity slightly below that which would be appropriate for the proxy group would be a reasonable risk-adjusted return for MidAmerican.

[9]S&P ranks the business risk of a utility company as part of its corporate credit rating review. S&P considers total investment risk in assigning bond ratings to issuers, including utility companies. In analyzing total investment risk, S&P considers both the business risk and the financial risk of a corporate entity, including a utility company. S&P's business risk profile score is based on a six-notch credit rating starting with "Vulnerable" (highest risk) to "Excellent" (lowest risk). The business risk of most utility companies falls within the lowest risk category, "Excellent," or the category one notch lower (more risk), "Strong." *Standard & Poor's RatingsDirect:* "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

Discounted Cash Flow Model

Q PLEASE DESCRIBE THE DCF MODEL.

A The DCF model posits that a stock price is valued by summing the present value of expected future cash flows discounted at the investor's required rate of return or cost of capital. This model is expressed mathematically as follows:

$$P_0 = \frac{D_1}{(1+K)^1} + \frac{D_2}{(1+K)^2} \ldots \frac{D_\infty}{(1+K)^\infty} \quad \text{where} \quad \text{(Equation 1)}$$

P_0 = Current stock price

D = Dividends in periods 1 - ∞

K = Investor's required return

This model can be rearranged in order to estimate the discount rate or investor-required return, "K." If it is reasonable to assume that earnings and dividends will grow at a constant rate, then Equation 1 can be rearranged as follows:

$$K = D_1/P_0 + G \quad \text{(Equation 2)}$$

K = Investor's required return

D_1 = Dividend in first year

P_0 = Current stock price

G = Expected constant dividend growth rate

Equation 2 is referred to as the annual "constant growth" DCF model.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF MODEL.

A As shown in Equation 2 above, the DCF model requires a current stock price, expected dividend, and expected growth rate in dividends.

Q WHAT STOCK PRICE HAVE YOU RELIED ON IN YOUR CONSTANT GROWTH DCF MODEL?

A I relied on the average of the weekly high and low stock prices of the utilities in the proxy group over a 13-week period ending on August 9, 2013. An average stock price is less susceptible to market price variations than a spot price. Therefore, an average stock price is less susceptible to aberrant market price movements, which may not be reflective of the stock's long-term value.

A 13-week average stock price reflects a period that is still short enough to contain data that reasonably reflect current market expectations, but the period is not so short as to be susceptible to market price variations that may not reflect the stock's long-term value. In my judgment, a 13-week average stock price is a reasonable balance between the need to reflect current market expectations and the need to capture sufficient data to smooth out aberrant market movements.

Q WHAT DIVIDEND DID YOU USE IN YOUR CONSTANT GROWTH DCF MODEL?

A I used the most recently paid quarterly dividend, as reported in *Value Line*.[10] This dividend was annualized (multiplied by 4) and adjusted for next year's growth to produce the D_1 factor for use in Equation 2 above.

Q WHAT DIVIDEND GROWTH RATES HAVE YOU USED IN YOUR CONSTANT GROWTH DCF MODEL?

A There are several methods that can be used to estimate the expected growth in dividends. However, regardless of the method, for purposes of determining the market-required return on common equity, one must attempt to estimate investors'

[10] *The Value Line Investment Survey*, May 24, June 21, and August 2, 2013.

consensus about what the dividend or earnings growth rate will be, and not what an individual investor or analyst may use to make individual investment decisions.

As predictors of future returns, security analysts' growth estimates have been shown to be more accurate than growth rates derived from historical data.[11] That is, assuming the market generally makes rational investment decisions, analysts' growth projections are more likely to influence observable stock prices than growth rates derived only from historical data.

For my constant growth DCF analysis, I have relied on a consensus, or mean, of professional security analysts' earnings growth estimates as a proxy for investor consensus dividend growth rate expectations. I used the average of analysts' growth rate estimates from three sources: Zacks, SNL, and Reuters. All such projections were available on August 14, 2013, and all were reported online.

Each consensus growth rate projection is based on a survey of security analysts. There is no clear evidence whether a particular analyst is most influential on general market investors. Therefore, a single analyst's projection does not as reliably predict consensus investor outlooks as does a consensus of market analysts' projections. The consensus estimate is a simple arithmetic average, or mean, of surveyed analysts' earnings growth forecasts. A simple average of the growth forecasts gives equal weight to all surveyed analysts' projections. Therefore, a simple average, or arithmetic mean, of analyst forecasts is a good proxy for market consensus expectations.

[11] *See, e.g.,* David Gordon, Myron Gordon, and Lawrence Gould, "Choice Among Methods of Estimating Share Yield," *The Journal of Portfolio Management*, Spring 1989.

Q WHAT ARE THE GROWTH RATES YOU USED IN YOUR CONSTANT GROWTH DCF MODEL?

A The growth rates I used in my DCF analysis are shown in Exhibit MPG-4. The average and median growth rates for my proxy group are 5.16% and 5.01%, respectively.

Q WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?

A As shown in Exhibit MPG-5, the average and median constant growth DCF returns for my proxy group are 9.16% and 9.00%, respectively.

Q DO YOU HAVE ANY COMMENTS ON THE RESULTS OF YOUR CONSTANT GROWTH DCF ANALYSIS?

A Yes. The constant growth DCF analysis for my proxy group was based on average and median long-term sustainable growth rates of 5.16% and 5.01%, respectively. These growth rates exceed my estimate of a maximum long-term sustainable growth rate which I discuss later in this testimony. Hence, I believe the constant growth DCF analysis produces slightly higher return estimates. To enhance the accuracy of my recommended return on equity I have also incorporated two alternative DCF models as discussed below.

Q WHAT IS YOUR ESTIMATE OF A MAXIMUM LONG-TERM SUSTAINABLE GROWTH RATE?

A A long-term sustainable growth rate for the utility stock, or any Company investment, cannot exceed the growth rate of the economy in which it sells its goods and services. Hence, a reasonable proxy for the long-term maximum sustainable growth

rate for a utility investment is best proxied by the projected long-term Gross Domestic Product ("GDP"). *The Blue Chip Financial Forecasts* projects that over the next 5 and 10 years, the U.S. nominal GDP will grow in the range of 4.8% to 5.0%. As such, the average growth rate over the next 10 years is around 4.9%, which I believe is a reasonable proxy of long-term sustainable growth.

In my multi-stage growth DCF analysis, I discuss academic and investment practitioner evidence that accepts the projected long-term GDP growth outlook as a maximum sustainable growth rate projection. Hence, recognizing the long-term GDP growth rate as a maximum sustainable growth is logical, and generally consistent with academic and economic practitioner accepted practices.

Sustainable Growth DCF

Q PLEASE DESCRIBE HOW YOU ESTIMATED A SUSTAINABLE LONG-TERM GROWTH RATE FOR YOUR SUSTAINABLE GROWTH DCF MODEL.

A A sustainable growth rate is based on the percentage of the utility's earnings that is retained and reinvested in utility plant and equipment. These reinvested earnings increase the earnings base (rate base). Earnings grow when plant funded by reinvested earnings is put into service, and the utility is allowed to earn its authorized return on such additional rate base investment.

The internal growth methodology is tied to the percentage of earnings retained in the company and not paid out as dividends. The earnings retention ratio is 1 minus the dividend payout ratio. As the payout ratio declines, the earnings retention ratio increases. An increased earnings retention ratio will fuel stronger growth because the business funds more investments with retained earnings.

The payout ratios of the proxy group are shown in my Exhibit MPG-6. These dividend payout ratios and earnings retention ratios then can be used to develop a sustainable long-term earnings retention growth rate. A sustainable long-term earnings retention ratio will help gauge whether analysts' current three- to five-year growth rate projections can be sustained over an indefinite period of time.

The data used to estimate the long-term sustainable growth rate is based on the Company's current market to book ratio and on *Value Line's* three- to five-year projections of earnings, dividends, earned returns on book equity, and stock issuances.

As shown in Exhibit MPG-7, page 1, the average sustainable growth rate for the proxy group using this internal growth rate model is 4.96%.

Q WHAT IS THE DCF ESTIMATE USING THESE SUSTAINABLE LONG-TERM GROWTH RATES?

A A DCF estimate based on these sustainable growth rates is developed in Exhibit MPG-8. As shown there, a sustainable growth DCF analysis produces proxy group average and median DCF results of 8.94% and 8.73%, respectively.

Multi-Stage Growth DCF Model

Q HAVE YOU CONDUCTED ANY OTHER DCF STUDIES?

A Yes. My first constant growth DCF is based on consensus analysts' growth rate projections, so it is a reasonable reflection of rational investment expectations over the next three to five years. The limitation on the constant growth DCF model is that it cannot reflect a rational expectation that a period of high/low short-term growth can be followed by a change in growth to a rate that is more reflective of long-term

sustainable growth. Hence, I performed a multi-stage growth DCF analysis to reflect this outlook of changing growth expectations.

Q WHY DO YOU BELIEVE GROWTH RATES CAN CHANGE OVER TIME?

A Analyst projected growth rates over the next three to five years will change as utility earnings growth outlooks change. Utility companies go through cycles in making investments in their systems. When utility companies are making large investments, their rate base grows rapidly, which accelerates their earnings growth. Once a major construction cycle is completed or levels off, growth in the utility rate base slows, and its earnings growth slows from an abnormally high three- to five-year rate to a lower sustainable growth rate.

As major construction cycles extend over longer periods of time, even with an accelerated construction program, the growth rate of the utility will slow simply because rate base will slow, and the utility has limited human and capital resources available to expand its construction program. Hence, the three- to five-year growth rate projection should be used as a long-term sustainable growth rate but not without making a reasonable informed judgment to determine whether it considers the current market environment, the industry, and whether the three- to five-year growth outlook is sustainable.

Q IS THE USE OF A MULTI-STAGE DCF MODEL SUPPORTED IN ACADEMIC AND INDUSTRY LITERATURE?

A Yes. In his book *New Regulatory Finance*, Dr. Roger Morin states the following:

> Dividends need not be, and probably are not, constant from period to period. Moreover, there are circumstances where the standard DCF model cannot be used to assess investor return requirements. For example, if a utility company is in the process of altering its dividend

payout policy and dividends are not expected to grow at the same rate as earnings during the transition period, the standard DCF model is inapplicable. This is because the expected growth in stock price has to be different from that of dividends, earnings, and book value if the market price is to converge toward book value.

* * *

A Non-Constant Growth DCF model is appropriate whenever the growth rate is expected to change, and the only way to produce a change in the forecast payout ratio is by introducing an intermediate growth rate that is different from the long-term growth rate, as in the previous example.[12]

Q PLEASE DESCRIBE YOUR MULTI-STAGE GROWTH DCF MODEL.

A The multi-stage growth DCF model reflects the possibility of non-constant growth for a company over time. The multi-stage growth DCF model reflects three growth periods: (1) a short-term growth period, which consists of the first five years; (2) a transition period, which consists of the next five years (6 through 10); and (3) a long-term growth period, starting in year 11 through perpetuity.

For the short-term growth period, I relied on the consensus analysts' growth projections described above in relationship to my constant growth DCF model. For the transition period, the growth rates were reduced or increased by an equal factor, which reflects the difference between the analysts' growth rates and the long-term sustainable growth rate. For the long-term growth period, I assumed each company's growth would converge to the maximum sustainable long-term growth rate.

[12] *New Regulatory Finance*, Roger A. Morin, PhD, 2006 Public Utilities Reports, Inc., Vienna, Virginia, pp. 264 and 267.

Q WHY IS THE GDP GROWTH PROJECTION A REASONABLE PROXY FOR THE MAXIMUM SUSTAINABLE LONG-TERM GROWTH RATE?

A Utilities cannot indefinitely sustain a growth rate that exceeds the growth rate of the economy in which they sell services. Utilities' earnings/dividend growth is created by increased utility investment or rate base. Such investment, in turn, is driven by service area economic growth and demand for utility service. In other words, utilities invest in plant to meet sales demand growth, and sales growth, in turn, is tied to economic growth in their service areas.

The Energy Information Administration ("EIA") has observed that utility sales growth tracks, albeit is lower than, the U.S. GDP growth, as shown in Exhibit MPG-9. Utility sales growth has lagged behind GDP growth for more than a decade. As a result, nominal GDP growth is a very conservative proxy for electric utility sales growth, rate base growth, and earnings growth. Therefore, the U.S. GDP nominal growth rate is a conservative proxy for the highest sustainable long-term growth rate of a utility.

Q IS THERE RESEARCH THAT SUPPORTS YOUR POSITION THAT, OVER THE LONG TERM, A COMPANY'S EARNINGS AND DIVIDENDS CANNOT GROW AT A RATE GREATER THAN THE GROWTH OF THE U.S. GDP?

A Yes. This concept is supported in both published analyst literature and academic work. Specifically, in a textbook entitled "Fundamentals of Financial Management," published by Eugene Brigham and Joel F. Houston, the authors state as follows:

> The constant growth model is most appropriate for mature companies with a stable history of growth and stable future expectations. Expected growth rates vary somewhat among companies, but dividends for mature firms are often expected to grow in the future at

about the same rate as nominal gross domestic product (real GDP plus inflation).[13]

Q IS THERE ANY ACTUAL INVESTMENT HISTORY THAT SUPPORTS THE NOTION THAT THE CAPITAL APPRECIATION FOR STOCK INVESTMENTS WILL NOT EXCEED THE NOMINAL GROWTH OF THE U.S. GDP?

A Yes. This is evident by a comparison of the compound annual growth of the U.S. GDP compared to the geometric growth of the U.S. stock market. Morningstar measures the historical geometric growth of the U.S. stock market over the period 1929-2012 to be approximately 5.6% and an inflation rate of 3.0%.[14] During this same time period, the U.S. nominal compound annual growth of the U.S. GDP was approximately 6.3%.[15]

As such, the compound geometric growth of the U.S. nominal GDP has been less than the nominal growth of the U.S. stock market capital appreciation. This relationship shows the U.S. GDP is a conservative estimate of long-term sustainable growth.

Q HOW DID YOU DETERMINE A SUSTAINABLE LONG-TERM GROWTH RATE THAT REFLECTS THE CONSENSUS OF THE MARKET?

A I relied on the consensus analysts' projections of long-term GDP growth. *The Blue Chip Financial Forecasts* publishes consensus economists' GDP growth projections twice a year. These consensus analysts' GDP growth outlooks are the best available measure of the market's assessment of long-term GDP growth. These analyst projections reflect all current outlooks for GDP, as reflected in analyst projections, and

[13] *Fundamentals of Financial Management*, Eugene F. Brigham and Joel F. Houston, Eleventh Edition 2007, Thomson South-Western, a Division of Thomson Corporation at 298.
[14] *Morningstar 2013 Valuation Yearbook* at 23.
[15] U.S. Bureau of Economic Analysis, December 2012.

are likely the most influential on investors' expectations of future growth outlooks. The consensus economists' published GDP growth rate outlook is 5.0% to 4.8% over the next 10 years.[16]

Therefore, I propose to use the consensus economists' projected 5- and 10-year average GDP consensus growth rates of 5.0% and 4.8%, respectively, as published by *Blue Chip Financial Forecasts,* as an estimate of long-term sustainable growth. *Blue Chip Financial Forecasts'* projections provide real GDP growth projections of 2.8% and 2.5%, and GDP inflation of 2.1% and 2.2%[17] over the 5-year and 10-year projection periods, respectively. This consensus GDP growth forecast represents the most likely views of market participants because it is based on published consensus economist projections.

Q DO YOU CONSIDER OTHER SOURCES OF PROJECTED LONG-TERM GDP GROWTH?

A Yes, and these sources corroborate my consensus analysts' projections. The U.S. EIA in its *Annual Energy Outlook* projects real GDP out until 2040. In its *2013 Annual Report*, the EIA projects real GDP through 2040 to be in the range of 2.0% to 2.9%, with a midpoint or reference case of 2.5%.[18]

Also, the Congressional Budget Office ("CBO") makes long-term economic projections. The CBO is projecting real GDP growth of 2.6% to 2.2% during the next 5 and 10 years, respectively, with GDP price inflation of 2.0%.[19] The CBO's real GDP projections are higher than the consensus, but its GDP inflation is lower than the consensus economists.

[16] *Blue Chip Financial Forecasts*, June 1, 2013 at 14.
[17] GDP growth is the product of real and inflation GDP growth.
[18] *DOE/EIA Annual Energy Outlook 2013 With Projections to 2040*, April 2013 at 56.
[19] *CBO: The Budget and Economic Outlook: Fiscal Years 2013 to 2023*, February 2013 at 64.

The real GDP and nominal GDP growth projections made by the U.S. EIA and those made by the CBO support the use of the consensus analyst 5-year and 10-year projected GDP growth outlooks as a reasonable market assessment of long-term prospective GDP growth.

Q WHAT STOCK PRICE, DIVIDEND, AND GROWTH RATES DID YOU USE IN YOUR MULTI-STAGE GROWTH DCF ANALYSIS?

A I relied on the same 13-week stock price and the most recent quarterly dividend payment data discussed above. For stage one growth, I used the consensus analysts' growth rate projections discussed above in my constant growth DCF model. The transition period begins in year 6 and ends in year 10. For the long-term sustainable growth rate starting in year 11, I used 4.9%, the average of the consensus economists' 5-year and 10-year projected nominal GDP growth rates.

Q WHAT ARE THE RESULTS OF YOUR MULTI-STAGE GROWTH DCF MODEL?

A As shown in Exhibit MPG-10, the average and median multi-stage growth DCF returns on equity for my proxy group are 8.94% and 8.97%, respectively.

Q PLEASE SUMMARIZE THE RESULTS FROM YOUR DCF ANALYSES.

A The results from my DCF analyses are summarized in Table 3 below:

TABLE 3

Summary of DCF Results

Description	Average	Median
Constant Growth DCF Model (Analysts' Growth)	9.16%	9.00%
Constant Growth DCF Model (Sustainable Growth)	8.94%	8.73%
Multi-Stage Growth DCF Model	8.94%	8.97%

I conclude that a reasonable DCF return for MidAmerican in this case is 8.95%. This is the midpoint of the range of 9.16% to 8.73%.

An 8.95% return on equity is generally supported by each of my three DCF return estimates. My constant growth DCF model average results reflect a growth rate of 5.16%, which is approximately 26 basis points higher than my assessment of a reasonably logical sustainable long-term growth rate of around 4.9%. However, the group median growth rate of 5.01% is very close to my long-term sustainable growth rate outlook. Hence, the DCF return for this model is around 8.95%.

My constant growth DCF using a sustainable growth rate reflected a growth rate of around 4.97% which is reasonably consistent with a rational outlook for long-term sustainable growth. This model again produces a result of 8.94%, which generally supports my 8.95% return estimate.

Finally, my multi-stage growth model reflects a period of accelerated growth, followed by a return to more normal sustainable growth over the long term. Again, this model produces a result of 8.94% which generally supports my point estimate of 8.95%.

Risk Premium Model

Q PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.

A This model is based on the principle that investors require a higher return to assume greater risk. Common equity investments have greater risk than bonds because bonds have more security of payment in bankruptcy proceedings than common equity and the coupon payments on bonds represent contractual obligations. In contrast, companies are not required to pay dividends or guarantee returns on common equity investments. Therefore, common equity securities are considered to be more risky than bond securities.

This risk premium model is based on two estimates of an equity risk premium. First, I estimated the difference between the required return on utility common equity investments and U.S. Treasury bonds. The difference between the required return on common equity and the Treasury bond yield is the risk premium. I estimated the risk premium on an annual basis for each year over the period 1986 through June 2013. The common equity required returns were based on regulatory commission-authorized returns for electric utility companies. Authorized returns are typically based on expert witnesses' estimates of the contemporary investor-required return. I selected the period 1986 through June 2013 because public utility stocks consistently traded at a premium to book value during that period. This is illustrated in Exhibit MPG-11, which shows that market to book ratio since 1986 was consistently above 1.0. This is an indication that the commission-authorized returns on equity were positively received by the market.

The second equity risk premium estimate is based on the difference between regulatory commission-authorized returns on common equity and contemporary "A" rated utility bond yields. Over this period, regulatory authorized returns were

sufficient to support market prices that at least exceeded book value. This is an indication that regulatory authorized returns on common equity supported a utility's ability to issue additional common stock without diluting existing shares. It further demonstrates that utilities were able to access equity markets without a detrimental impact on current shareholders.

Based on this analysis, as shown in Exhibit MPG-12, the average indicated equity risk premium over U.S. Treasury bond yields has been 5.35%. Of the 28 observations, 22 indicated risk premiums fall in the range of 4.41% to 6.31%. Since the risk premium can vary depending upon market conditions and changing investor risk perceptions, I believe using an estimated range of risk premiums provides the best method to measure the current return on common equity using this methodology.

As shown in Exhibit MPG-13, the average indicated equity risk premium over contemporary Moody's utility bond yields was 3.95% over the period 1986 through June 2013. The indicated equity risk premium estimates based on this analysis primarily fall in the range of 3.03% to 4.89% over this time period.[20]

Q DO YOU BELIEVE THAT THESE EQUITY RISK PREMIUM ESTIMATES ARE BASED ON A TIME PERIOD THAT IS TOO LONG OR TOO SHORT TO DRAW ACCURATE CONCLUSIONS CONCERNING CONTEMPORARY MARKET CONDITIONS?

A No. Contemporary market conditions can change dramatically during the period that rates determined in this proceeding will be in effect. A relatively long period of time where stock valuations reflect premiums to book value is an indication that the

[20]Note that this result is reasonably similar to the Board's traditional, streamlined risk premium analysis of applying 250-450 basis points. The slightly lower range used by the Board is appropriate because Iowa's regulatory environment provides a lower risk than average.

authorized returns on equity and the corresponding equity risk premiums were supportive of investors' return expectations and provided utilities access to the equity markets under reasonable terms and conditions. Further, this time period is long enough to smooth abnormal market movement that might distort equity risk premiums. While market conditions and risk premiums do vary over time, this historical time period is a reasonable period to estimate contemporary risk premiums.

The time period I use in this risk premium study is a generally accepted period to develop a risk premium study using "expectational" data. Conversely, studies have recommended that use of "actual achieved return data" should be based on very long historical time periods. The studies find that achieved returns over short time periods may not reflect investors' expected returns due to unexpected and abnormal stock price performance. However, these short-term abnormal actual returns would be smoothed over time and the achieved actual returns over long time periods would approximate investors' expected returns. Therefore, it is reasonable to assume that averages of annual achieved returns over long time periods will generally converge on the investors' expected returns.

My risk premium study is based on expectational data, not actual returns, and, thus, need not encompass very long time periods.

Q BASED ON HISTORICAL DATA, WHAT RISK PREMIUM HAVE YOU USED TO ESTIMATE MIDAMERICAN'S COST OF COMMON EQUITY IN THIS PROCEEDING?

A The equity risk premium should reflect the relative market perception of risk in the utility industry today. I have gauged investor perceptions in utility risk today in Exhibit MPG-14. On that exhibit, I show the yield spread between utility bonds and Treasury

bonds over the last 34 years. As shown on this exhibit, the average utility bond yield spreads over Treasury bonds for "A" and "Baa" rated utility bonds for this historical period are 1.55% and 1.96%, respectively. The utility bond yield spreads over Treasury bonds for "A" and "Baa" rated utilities during June 2013 are 1.06% and 1.58%, respectively.

A current 13-week average "A" rated utility bond yield of 4.55%, when compared to the current Treasury bond yield of 3.47% as shown in Exhibit MPG-15, page 1 implies a yield spread of around 1.08%. This current utility bond yield spread is lower than the 34-year average spread for "A" utility bonds of 1.55%. Similarly, the current spread for the "Baa" utility yields of 1.60% is lower than the 34-year average spread of 1.96%.

These utility bond yield spreads are clear evidence that the market considers the utility industry to be a relatively low-risk investment and demonstrates that utilities continue to have strong access to capital.

Q HOW DID YOU ESTIMATE MIDAMERICAN'S COST OF COMMON EQUITY WITH THIS RISK PREMIUM MODEL?

A I made two risk premium estimates: 1) above Treasury bond yields and 2) above utility bond yields. First, I added a projected long-term Treasury bond yield to my estimated equity risk premium over Treasury yields. The 13-week average 30-year Treasury bond yield, ending August 9, 2013 was 3.47%, as shown in Exhibit MPG-15, page 1. *Blue Chip Financial Forecasts* projects the 30-year Treasury bond yield to be 4.10%, and a 10-year Treasury bond yield to be 3.10%.[21] Using the projected 30-year bond yield of 4.10%, and a Treasury bond risk premium of 4.41% to 6.31%,

[21] *Blue Chip Financial Forecasts*, August 1, 2013 at 2.

as developed above, produces an estimated common equity return in the range of 8.51% (4.10% + 4.41%) to 10.41% (4.10% + 6.31%). Using a projected Treasury bond yield of 4.10% is significantly higher than the current observable Treasury bond yield of 3.47%. This projected increase in bond yield reflects in whole or in part the suspension of the government intervention in long-term interest markets via long-term purchases of Treasury and collateralized mortgage agreements that have been ongoing for several years now. The projected Treasury bond yield is returning to a more normal level, and given the current below average spreads of Treasury to utility bond yields, I believe the midpoint of this estimated range produces a reasonable estimate of a fair return for MidAmerican in this proceeding. This midpoint return then is 9.46%.

In my second risk premium estimate, I next added my equity risk premium over utility bond yields to a current 13-week average yield on "Baa" rated utility bonds for the period ending August 9, 2013 of 5.07%. Adding the utility equity risk premium of 3.03% to 4.89%, as developed above, to a "Baa" rated bond yield of 5.07%, produces a cost of equity in the range of 8.10% (5.07% + 3.03%) to 9.96% (5.07% + 4.89%). The midpoint of this approach is 9.03%. To conservatively address any concerns about current market conditions, I will use the higher of my calculations (9.46%) in establishing my second risk premium point estimate.

I also considered the Board's standard practice of a utility equity risk premium in the range of 2.5% to 4.5%. This would indicate a return on equity in the range of 7.57% to 9.57%. Looking only at risks unique to MidAmerican, particularly as compared to other utilities, would likely suggest a risk premium in the lower portion of the Board's range. Again, however, because of government intervention in Treasury and long-term bond markets, I conservatively use a return on equity at the high-end

of this estimated range. Therefore, based on the Board's approach, I use a return on equity for MidAmerican of 9.57%.

My risk premium analyses produce a return estimate of 9.46% to 9.57%, with a midpoint of 9.52%.

Capital Asset Pricing Model ("CAPM")

Q PLEASE DESCRIBE THE CAPM.

A The CAPM method of analysis is based upon the theory that the market-required rate of return for a security is equal to the risk-free rate, plus a risk premium associated with the specific security. This relationship between risk and return can be expressed mathematically as follows:

$R_i = R_f + B_i \times (R_m - R_f)$ where:

R_i = Required return for stock i

R_f = Risk-free rate

R_m = Expected return for the market portfolio

B_i = Beta - Measure of the risk for stock

The stock-specific risk term in the above equation is beta. Beta represents the investment risk that cannot be diversified away when the security is held in a diversified portfolio. When stocks are held in a diversified portfolio, firm-specific risks can be eliminated by balancing the portfolio with securities that react in the opposite direction to firm-specific risk factors (e.g., business cycle, competition, product mix, and production limitations).

The risks that cannot be eliminated when held in a diversified portfolio are non-diversifiable risks. Non-diversifiable risks are related to the market in general and are referred to as systematic risks. Risks that can be eliminated by diversification

are regarded as non-systematic risks. In a broad sense, systematic risks are market risks, and non-systematic risks are business risks. The CAPM theory suggests that the market will not compensate investors for assuming risks that can be diversified away. Therefore, the only risk that investors will be compensated for are systematic or non-diversifiable risks. The beta is a measure of the systematic or non-diversifiable risks.

Q PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.

A The CAPM requires an estimate of the market risk-free rate, the company's beta, and the market risk premium.

Q WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE RATE?

A As previously noted, *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield is 4.10%.[22] The current 30-year Treasury bond yield is 3.47%, as shown in Exhibit MPG-15, page 1. To produce a conservative estimate, I used *Blue Chip Financial Forecasts*' projected 30-year Treasury bond yield of 4.10% for my CAPM analysis.

Q WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN ESTIMATE OF THE RISK-FREE RATE?

A Treasury securities are backed by the full faith and credit of the United States government, so long-term Treasury bonds are considered to have negligible credit risk. Also, long-term Treasury bonds have an investment horizon similar to that of common stock. As a result, investor-anticipated long-run inflation expectations are

[22] *Blue Chip Financial Forecasts*, August 1, 2013 at 2.

reflected in both common-stock required returns and long-term bond yields. Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate) included in a long-term bond yield is a reasonable estimate of the nominal risk-free rate included in common stock returns.

Treasury bond yields, however, do include risk premiums related to unanticipated future inflation and interest rates. A Treasury bond yield is not a risk-free rate. Risk premiums related to unanticipated inflation and interest rates are systematic or market risks. Consequently, for companies with betas less than 1.0, using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis can produce an overstated estimate of the CAPM return.

Q WHAT BETA DID YOU USE IN YOUR ANALYSIS?

A As shown in Exhibit MPG-16, the proxy group average *Value Line* beta estimate is 0.73.

Q HOW DID YOU DERIVE YOUR MARKET RISK PREMIUM ESTIMATE?

A I derived two market risk premium estimates, a forward-looking estimate and one based on a long-term historical average.

The forward-looking estimate was derived by estimating the expected return on the market (as represented by the S&P 500) and subtracting the risk-free rate from this estimate. I estimated the expected return on the S&P 500 by adding an expected inflation rate to the long-term historical arithmetic average real return on the market. The real return on the market represents the achieved return above the rate of inflation.

Morningstar's *Stocks, Bonds, Bills and Inflation 2013 Classic Yearbook* estimates the historical arithmetic average real market return over the period 1926 to 2012 as 8.7%.[23] A current consensus analysts' inflation projection, as measured by the Consumer Price Index, is 2.2%.[24] Using these estimates, the expected market return is 11.10%.[25] The market risk premium then is the difference between the 11.10% expected market return, and my 4.10% risk-free rate estimate, or approximately 7.00%.

The historical estimate of the market risk premium was also estimated by Morningstar in *Stocks, Bonds, Bills and Inflation 2013 Classic Yearbook*. Over the period 1926 through 2012, Morningstar's study estimated that the arithmetic average of the achieved total return on the S&P 500 was 11.8%,[26] and the total return on long-term Treasury bonds was 6.1%.[27] The indicated market risk premium is 5.7% (11.8% - 6.1% = 5.7%). The average of my market risk premium estimates is 6.4% (7.0% to 5.7%).

Q HOW DOES YOUR ESTIMATED MARKET RISK PREMIUM RANGE COMPARE TO THAT ESTIMATED BY MORNINGSTAR?

A Morningstar's analysis indicates that a market risk premium falls somewhere in the range of 6.0% to 6.7%. My market risk premium falls in the range of 5.7% to 7.0%. My average market risk premium of 6.4% is in the middle of Morningstar's range.

Morningstar estimates a forward-looking market risk premium based on actual achieved data from the historical period of 1926 through 2012. Using this data, Morningstar estimates a market risk premium derived from the total return on large

[23] *Morningstar, Inc., Ibbotson SBBI 2013 Classic Yearbook* at 88.
[24] *Blue Chip Financial Forecasts*, August 1, 2013 at 2.
[25] { [(1 + 0.087) * (1 + 0.022)] – 1 } * 100.
[26] *Morningstar, Inc. Ibbotson SBBI 2013 Classic Yearbook* at 87.
[27] *Id.*

company stocks (S&P 500), less the income return on Treasury bonds. The total return includes capital appreciation, dividend or coupon reinvestment returns, and annual yields received from coupons and/or dividend payments. The income return, in contrast, only reflects the income return received from dividend payments or coupon yields. Morningstar argues that the income return is the only true risk-free rate associated with Treasury bonds and is the best approximation of a truly risk-free rate.[28] I disagree with this assessment from Morningstar, because it does not reflect a true investment option available to the marketplace and therefore does not produce a legitimate estimate of the expected premium of investing in the stock market versus that of Treasury bonds. Nevertheless, I will use Morningstar's conclusion to show the reasonableness of my market risk premium estimates.

Morningstar's range is based on several methodologies. First, Morningstar estimates a market risk premium of 6.7% based on the difference between the total market return on common stocks (S&P 500) less the income return on Treasury bond investments. Second, Morningstar found that if the New York Stock Exchange (the "NYSE") was used as the market index rather than the S&P 500, that the market risk premium would be 6.5%, not 6.7%. Third, if only the two deciles of the largest companies included in the NYSE were considered, the market risk premium would be 6.0%.[29]

Finally, Morningstar found that the 6.7% market risk premium based on the S&P 500 was influenced by an abnormal expansion of price-to-earnings ("P/E") ratios relative to earnings and dividend growth during the period 1980 through 2001. Morningstar believes this abnormal P/E expansion is not sustainable.[30] Therefore,

[28] *Morningstar, Inc., Ibbotson SBBI 2013 Valuation Yearbook* at 55.
[29] Morningstar observes that the S&P 500 and the NYSE Decile 1-2 are both large capitalization benchmarks. *Id.* at 54.
[30] *Morningstar, Inc., Ibbotson SBBI 2013 Valuation Yearbook* at 54.

Morningstar adjusted this market risk premium estimate to normalize the growth in the P/E ratio to be more in line with the growth in dividends and earnings. Based on this alternative methodology, Morningstar published a long-horizon supply-side market risk premium of 6.0%.[31]

To again be conservative in the CAPM estimate, I will use the higher 6.7% market risk premium in my CAPM study as opposed to the 6.4% that I calculated independently.

Q WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A As shown in Exhibit MPG-17, based on Morningstar's market risk premium of 6.7%, a risk-free rate of 4.10%, and a beta of 0.73, my CAPM analysis produces a return of 8.97%.

Return on Equity Summary

Q BASED ON THE RESULTS OF YOUR RETURN ON COMMON EQUITY ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY DO YOU RECOMMEND FOR MIDAMERICAN?

A Based on my analyses, I estimate MidAmerican's current market cost of equity to be 9.25%.

[31] *Id.*

TABLE 4

Return on Common Equity Summary

Description	Results
DCF	8.95%
Risk Premium	9.52%
CAPM	8.97%

My recommended return on common equity is 9.25%. My recommended return on equity is in the range of approximately 9.00% to 9.50%. The low-end recommended return of 9.00% is based on my DCF and CAPM return estimates. The high-end is supported by my risk premium result, 9.52%. My recommendation of 9.25% is very conservative: in the table above, I round values in MidAmerican's favor; and as I explain above, in several instances where there were multiple options for input values I have chosen values favorable to MidAmerican.

Financial Integrity

Q WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT AN INVESTMENT GRADE BOND RATING FOR MIDAMERICAN?

A Yes. I have reached this conclusion by comparing the key credit rating financial ratios for MidAmerican, at my proposed return on equity and capital structure, to S&P's benchmark financial ratios using S&P's new credit metric ranges.

Q PLEASE DESCRIBE THE MOST RECENT S&P FINANCIAL RATIO CREDIT METRIC METHODOLOGY.

A S&P publishes a matrix of financial ratios that correspond to its assessment of the business risk of the utility company and related bond rating. On May 27, 2009, S&P expanded its matrix criteria[32] by including additional business and financial risk categories. Based on S&P's most recent credit matrix, the business risk profile categories are "Excellent," "Strong," "Satisfactory," "Fair," "Weak," and "Vulnerable." Most electric utilities have a business risk profile of "Excellent" or "Strong." The financial risk profile categories are "Minimal," "Modest," "Intermediate," "Significant," "Aggressive," and "Highly Leveraged." Most of the electric utilities have a financial risk profile of "Aggressive." MidAmerican has an "Excellent" business risk profile and a "Significant" financial risk profile.

Q PLEASE DESCRIBE S&P'S USE OF THE FINANCIAL BENCHMARK RATIOS IN ITS CREDIT RATING REVIEW.

A S&P evaluates a utility's credit rating based on an assessment of its financial and business risks. A combination of financial and business risks equates to the overall assessment of MidAmerican's total credit risk exposure. S&P publishes a matrix of financial ratios that defines the level of financial risk as a function of the level of business risk.

S&P publishes ranges for three primary financial ratios that it uses as guidance in its credit review for utility companies. The three primary financial ratio benchmarks it relies on in its credit rating process include: (1) Total Debt to Total

[32]S&P updated its 2008 credit metric guidelines in 2009, and incorporated utility metric benchmarks with the general corporate rating metrics. *Standard & Poor's RatingsDirect*: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

Capital; (2) Debt to Earnings Before Interest, Taxes, Depreciation and Amortization ("EBITDA"); and (3) Funds From Operations ("FFO") to Total Debt.[33]

Q HOW DID YOU APPLY S&P'S FINANCIAL RATIOS TO TEST THE REASONABLENESS OF YOUR RATE OF RETURN RECOMMENDATIONS?

A I calculated each of S&P's financial ratios based on MidAmerican's cost of service for its retail jurisdictional electric operations. While S&P would normally look at total consolidated MidAmerican financial ratios in its credit review process, my investigation in this proceeding is not the same as S&P's. I am attempting to judge the reasonableness of my proposed cost of capital for rate-setting in MidAmerican's retail regulated utility operations. Hence, I am attempting to determine whether my proposed rate of return will in turn support cash flow metrics, balance sheet strength, and earnings that will support an investment grade bond rating and MidAmerican's financial integrity for those operations.

Q DID YOU INCLUDE ANY OFF-BALANCE SHEET DEBT EQUIVALENTS?

A Yes. As shown on page 3 of my Exhibit MPG-18, I included $291.1 million of off-balance sheet debt equivalents including purchased power agreements and operating leases and their associated interest and depreciation expenses. I included these debt equivalents in my credit metric calculations.

[33] *Standard & Poor's RatingsDirect*: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

Q PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS FOR MIDAMERICAN.

A The S&P financial metric calculations for MidAmerican at a 9.25% return are developed on Exhibit MPG-18, page 1. Please note that this return on equity reflects the return applicable to the non-regulatory plan rate base. The weighted average return on equity for MidAmerican is 10.63%. However, I am performing these metrics at this lower return on equity to gauge the ability of my return on equity and outlook to reflect fair compensation in this market, but also support credit metrics that will maintain MidAmerican's current investment grade bond rating.

MidAmerican's adjusted total debt ratio is approximately 50%. This is at the low end of the "Aggressive" utility guideline range of 50% to 60%. This total debt ratio will support an investment grade bond rating.

As shown in Exhibit MPG-18, page 1, column 1, based on an equity return of 9.25%, MidAmerican will be provided an opportunity to produce a debt to EBITDA ratio of 3.2x. This is at the low end of "Significant" guideline range of 3.0x to 4.0x.[34] This ratio also supports an investment grade credit rating.

Finally, MidAmerican's retail operations FFO to total debt coverage at a 9.25% equity return would be 25%, which is also within S&P's "Significant" metric guideline range of 20% to 30%. The FFO/total debt ratio will support an investment grade bond rating.

At my recommended return on equity of 9.25% and proposed capital structure, MidAmerican's financial credit metrics are supportive of its current investment grade utility bond rating.

[34] *Standard & Poor's RatingsDirect*: "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009 at 4.

Response to MidAmerican Witness Dr. James Vander Weide

Q WHAT IS DR. VANDER WEIDE'S RETURN ON EQUITY RECOMMENDATION?

A MidAmerican's rate of return witness, Dr. Vander Weide, recommends a return on equity of 10.80%.

Q HOW DID DR. VANDER WEIDE DEVELOP HIS RETURN ON EQUITY RANGE?

A Dr. Vander Weide developed his return on equity recommendation by applying the DCF, Risk Premium and CAPM models to a utility proxy group. Dr. Vander Weide arrived at his recommendations by reviewing MidAmerican's business operations, market conditions, and utility industry trends at the time of his filing.

Q PLEASE SUMMARIZE DR. VANDER WEIDE'S PROPOSED RETURN ON EQUITY FOR MIDAMERICAN.

A As shown below in Table 5, his analyses produce an average return on equity of 10.8% without his CAPM return estimates, and 10.7% including all of his results. However, as I demonstrate below, Dr. Vander Weide's DCF and RP studies, run properly, produce a return on equity for MidAmerican of approximately 9.0%.

TABLE 5

MidAmerican's ROE Analysis

Model	Vander Weide Proposed	Adjusted
Constant Growth DCF	10.4%	9.0%
Ex Ante Risk Premium	11.2%	9.2%
Ex Post Risk Premium	10.8%	8.6%
CAPM Historical	10.4%	9.0%
CAPM DCF	10.7%	9.0%
CAPM DCF (Adj. Beta)		Reject
Recommendation	10.8%	9.0%

Sources: Vander Weide Direct at 44 and Exhibit___ (JHV-1), Schedule 2.

Q PLEASE DESCRIBE DR. VANDER WEIDE'S DCF ANALYSIS.

A Dr. Vander Weide applied the traditional DCF model to a utility proxy group. Based on his utility group, his DCF study produces a return on equity of 10.4%. (Vander Weide Direct at 21 and Exhibit___ (JHV-1), Schedule 1).

Q DO YOU TAKE ISSUE WITH DR. VANDER WEIDE'S DCF ANALYSES?

A Yes. I have several major issues concerning his DCF analyses. First, Dr. Vander Weide's constant growth DCF study is overstated because the analysts' three- to five-year growth rates he uses are not reasonable estimates of long-term sustainable growth. The constant growth DCF model used by Dr. Vander Weide requires an estimated long-term sustainable growth. In contrast, the analysts' growth rates he relies on reflect only the outlooks over the next three to five years. To the extent the analysts' growth rate estimates are not reasonable estimates of long-term sustainable

growth, then the DCF return estimate he produces from this study is not reliable. Because the analysts' growth rates exceed a reasonable estimate of long-term sustainable growth, Dr. Vander Weide's DCF return estimate is inflated and should be rejected.

Second, I believe his DCF return estimate is unreasonable because he relies on a quarterly compounding version of the DCF model. For the reasons set forth below, the quarterly compounding of the DCF model overestimates a utility's cost of capital because it provides utilities with an opportunity to earn the dividend reinvestment return twice: first, through authorized returns on equity and earnings to the utility, and a second time after dividends are actually paid to investors and reinvested in alternative investments to the utility stock the dividend was earned upon.

Third, Dr. Vander Weide includes a flotation cost adjustment, which increases the DCF return by approximately 30 basis points. Finally, Dr. Vander Weide's data included in his study reflected three months of data ending February 2013 (Vander Weide Exhibit___ (JHV-1), Schedule 1, page 2. This data is stale and does not reflect current market costs. Excluding the three adjustments I made to Dr. Vander Weide's proxy group and eliminating the companies currently involved in merger and acquisition activity, my updated DCF return estimates for this proxy group are approximately 9.0% to 9.2%.[35] This result excludes reliance on excessive growth rates, and on the overstatement of MidAmerican's cost of capital by including the quarterly compounding component and excluding the flotation cost adjustment which has not been shown to truly reflect MidAmerican's actual cost of issued stock to the public.

[35]Exhibit MPG-5.

Q PLEASE DESCRIBE WHY YOU BELIEVE DR. VANDER WEIDE'S THREE- TO FIVE-YEAR ANALYSTS' GROWTH RATE PROJECTIONS ARE NOT REASONABLE ESTIMATES OF LONG-TERM SUSTAINABLE GROWTH.

A As shown on his Exhibit___ (JHV-1), Schedule 1, the growth rates from his proxy group in every instance but a few exceed the projected nominal growth of the U.S. GDP. As stated above, consensus economists' projections of long-term growth for the U.S. GDP are around 4.9%. In contrast, Dr. Vander Weide's 30 utility company proxy group has an average growth rate of 5.6%, as shown on my Exhibit MPG-19.

I explained above that both practitioners and academics support the notion that long-term sustainable growth cannot be greater than the economy in which the company sells its goods and services. Growth can exceed the service area economic growth over short periods of time, but over the long-term the expectation that the growth will exceed the economy in which it sells its services is not rational nor reasonable. Because Dr. Vander Weide's growth rates exceed a maximum sustainable long-term growth, his DCF results are inflated and unreliable. The analysts' growth rates Dr. Vander Weide relies on reflect only the growth outlooks over the next three to five years. The constant growth DCF model requires a growth rate that can be sustained indefinitely. To the extent the analysts' 3-5 year projected growth rate estimates are not reasonable estimates of long-term sustainable growth, then the DCF return estimates Dr. Vander Weide produces are inflated and not reliable.

Q WHY IS A QUARTERLY COMPOUNDING ADJUSTMENT TO A DCF RETURN ESTIMATE NOT REASONABLE?

A Including the quarterly compounding adjustment to MidAmerican's authorized return on equity is inappropriate. If a quarterly compounding adjustment is added to a DCF return estimate, shareholders will be permitted to earn the dividend reinvestment return twice: (1) through the higher authorized return on equity, and (2) through actual receipt of dividends and the reinvestment of those dividends throughout the year. This double counting of the dividend reinvestment return is not reasonable and will unjustly inflate MidAmerican's rates.

Q PLEASE EXPLAIN WHY THE QUARTERLY COMPOUNDING RETURN SHOULD NOT BE INCLUDED IN MIDAMERICAN'S AUTHORIZED RETURN ON EQUITY.

A Simply put, the quarterly compounding component of the return is not a cost to the utility. Only the utility's cost of common equity capital should be included in the authorized return on equity.

This issue surrounds whether or not the DCF return estimate should include the expectations by investors that they will receive cash flows within the year, that can be reinvested in other investments of comparable risk, and thus the cash flows will produce compounded returns throughout the year. The relevant issue for setting rates is whether or not that reinvestment return is a cost to the utility. It is not!

The reinvestment return is not a cost to the utility and therefore should not be included in the authorized return on equity. While it is reasonable for investors to expect to have the opportunity to earn the compounded return produced by cash flows received within the year, the compound return is not paid to investors by the utility.

Q CAN YOU PROVIDE AN EXAMPLE OF WHY THE COMPOUNDING RETURN ESTIMATE IS NOT A COST TO THE UTILITY?

A Yes. I will provide two examples to help illustrate this point. First, consider the cost to the utility of an outstanding utility bond. Most utility bonds pay a coupon every six months. The utility annual cost paid to the bond investor is the sum of the two semi-annual coupon payments. A bond investor expects to receive the semi-annual coupon payments from the utility, but also has an opportunity to reinvest the first coupon payment for the remaining six months of the year to enhance his end-of-year return. This compound return component is, however, not a cost to the utility because the utility does not pay the extra return.

For example, assume MidAmerican has an outstanding bond with a face value of $1,000, at an interest rate of 6% which is paid in two semi-annual $30 coupon payments. MidAmerican's cost of this bond is 6%. This 6% cost to MidAmerican is based on a $30 coupon payment paid in month 6 and month 12 for an annual payment of $60 relative to the $1,000 face value of the bond. However, the bond investor would have an annual expected return on this bond of 6.1%. This annual expected return would be realized by receiving the first $30 semi-annual coupon payment from MidAmerican and reinvesting it for the remaining six months of the year. This would produce $0.89 of semi-annual compounding return ($30 x [$(1.06)^{½}$ - 1]). Hence, the bond investor would receive $60 from MidAmerican, and $0.89 from investing the first coupon for a total annual return of 6.09%, or 6.1%.

Importantly, if MidAmerican were to recover a 6.1% cost of this bond in its cost of service, and paid that return out to the bond investor, then the bond investor would receive $60.89 from MidAmerican, rather than the $60.00 actual cost, but the bond investor could still reinvest the semi-annual coupon, now $30.89 for the remaining

six months of the year. This would provide the investor with the reinvestment return twice, once from utility ratepayers, and a second time after the semi-annual coupon payment was paid and reinvested.

Reflecting this compounding assumption in the authorized return on equity therefore will double count the reinvestment return opportunity.

Q DOES THIS EXAMPLE ALSO APPLY TO UTILITY STOCK INVESTMENTS?

A Yes. Assume now that an investor purchased MidAmerican stock for $100, and expects to receive four quarterly dividends of $1.50, or $6.00 per year. The expected cost to the utility of this dividend payment over the year would be $6.00, or 6.0%. However, the expected effective yield of the dividend to investors would be 6.13% because the quarterly dividends could be reinvested for the remaining term of the year. Hence, the expected end-of-year value of those four $1.50 quarterly dividend payments to the investor would be $6.13.[36] Again, the utility pays $6.00 of annual dividends. The $0.13 is not paid to investors from the utility, but is rather earned in the other investments that earn the same return, which the dividends were invested in throughout the year.

Importantly, the reinvestment return of the dividends is not paid by the utility, and therefore is not part of the utility's cost of capital. Again, if this dividend reinvestment return is included in the utility's authorized return on equity, then investors will receive the dividend reinvestment return twice, once through the authorized return on equity, and a second time when dividends are actually received by investors and reinvested.

[36] $1.5 \times (1.06)^{.75} + 1.5 \times (1.06)^{.5} + 1.5 \times (1.06)^{.25} + 1.5 = \$6.13$.

Q DO YOU HAVE ANY COMMENTS CONCERNING DR. VANDER WEIDE'S FLOTATION COSTS ADJUSTMENT?

A Yes. Dr. Vander Weide increased his DCF results by approximately 30 basis points to account for flotation costs.

Q DO YOU AGREE WITH DR. VANDER WEIDE'S FLOTATION COST ESTIMATE?

A No. Dr. Vander Weide's flotation cost estimate is flawed and it should not be taken into consideration when determining a fair return for MidAmerican.

Flotation costs are a legitimate cost of doing business. However, flotation costs should only be included in the development of cost of service under two conditions. First, the Company has to demonstrate what its actual flotation costs are, and prove they are reasonable. It is not appropriate to approximate flotation costs for utility companies and build those approximated costs into a utility's cost of service. Costs should be known and measurable and should be verifiable and most importantly should be shown to be reasonable before they are included in cost of service. This is not possible if a utility's flotation costs are approximated, as Dr. Vander Weide has done.

Second, and more important, MidAmerican is not a publicly traded company. Rather, it is a wholly-owned subsidiary of Berkshire Hathaway. Hence, MidAmerican does not incur costs related to selling common stock to the market. MidAmerican's common equity capital comes from two sources: (1) retained earnings, which incur no flotation costs, and (2) equity infusion from its parent company.

Therefore, Dr. Vander Weide's estimate of 30 basis points to account for flotation costs should be disregarded and not considered in determining MidAmerican's return on equity.

Q PLEASE DESCRIBE DR. VANDER WEIDE'S EX ANTE RISK PREMIUM METHODOLOGY.

A Dr. Vander Weide estimated a DCF return on a proxy group of electric companies relative to the utility bond yield with a rating of "A." He performed this analysis for a period from September 1999 through February 2013. Based on this study, Dr. Vander Weide asserts that his risk premium estimate was 4.64% for this historical period based on prospective DCF return estimates relative to bond yields.

To this estimated market risk premium of 4.64%, he added a projected "A" rated Moody's bond utility yield of 6.55%. He then concluded that this produced a return on common equity of 11.2%. (Vander Weide Direct at 29-30).

Q PLEASE DESCRIBE THE ISSUES YOU HAVE WITH DR. VANDER WEIDE'S EX ANTE RISK PREMIUM ANALYSIS.

A I believe Dr. Vander Weide's estimated market risk premium from his ex ante risk premium study represents a very high-end estimate of an appropriate risk premium for this proceeding. However, because bond yields are relatively low currently, it can be used to produce a reasonable return on equity estimate for MidAmerican. Also, Dr. Vander Weide's projected "A" rated utility yield is highly problematic.

Q WHY DO YOU BELIEVE THAT THE ACCURACY OF FORECASTED INTEREST RATES IS HIGHLY PROBLEMATIC?

A Over the last several years, observable current interest rates have been a more accurate predictor of future interest rates than economists' consensus projections. Exhibit MPG-20 illustrates this point. On this exhibit, under Columns 1 and 2, I show the actual market yield at the time a projection is made for Treasury bond yields two

years in the future. In Column 1, I show the actual Treasury yield and, in Column 2, I show the projected yield two years out.

As shown in Columns 1 and 2, over the last several years, Treasury yields were projected to increase relative to the actual Treasury yields at the time of the projection. In Column 4, I show what the Treasury yield actually turned out to be two years after the forecast. Under Column 5, I show the actual yield change at the time of the projections relative to the projected yield change.

As shown in this exhibit, over the last several years, economists consistently have been projecting that interest rates will increase. However, as demonstrated under Column 5, those yield projections have turned out to be overstated in virtually every case. Indeed, actual Treasury yields have decreased or remained flat over the last five years, rather than increase as the economists' projections indicated. As such, current observable interest rates are just as likely to predict future interest rates as are economists' projections.

Q CAN DR. VANDER WEIDE'S EX ANTE RISK PREMIUM STUDY BE REVISED TO PRODUCE A MORE REASONABLE RESULT?

A Yes. Applying his equity risk premium estimate of 4.64% to the current observable "A" rated utility bond yield of 4.55% produces a return on equity of 9.2% for MidAmerican.

Q PLEASE DESCRIBE DR. VANDER WEIDE'S EX POST RISK PREMIUM METHODOLOGY.

A In Dr. Vander Weide's ex post risk premium methodology, he compared the historical realized return on the S&P 500 relative to estimated changes in bond price for an "A"

rated utility bond. He performed a second ex post risk premium analysis comparing the historical achieved return on the S&P Utility Index, relative again to changes in "A" rated utility bond yields.

Based on this analysis, Dr. Vander Weide estimates an equity risk premium in the range of 4.4% (based on S&P 500) to 3.7% (based on utility yields). He then applies this estimated equity risk premium to his projected "A" rated utility bond yield of 6.55% to produce an estimated equity risk premium in the range of 10.3% to 10.9% with a midpoint of 10.6%. (Vander Weide Direct at 35).

Q DO YOU BELIEVE THAT DR. VANDER WEIDE'S EX POST RISK PREMIUM RECOMMENDATION IS REASONABLE?

A No, for several reasons. First, as discussed earlier, his projected "A" rated utility bond yield of 6.55% substantially exceeds current observable utility bond yields of 4.55%. While these bond yields are low, Dr. Vander Weide's projected yield is abnormally high. Reflecting just the high-end of his estimated equity risk premium using his ex post risk premium study of 4.4%, with current bond yields of 4.55%, would indicate a fair return on equity for MidAmerican in this case of 8.95%. Using his low-end estimate of 3.7%, would indicate a return on equity of 8.25%. This range of 8.25%-8.95% has a midpoint of 8.6%. Accordingly, Dr. Vander Weide's recommended return on equity with this methodology substantially overstates current observable market costs.

Q PLEASE DESCRIBE DR. VANDER WEIDE'S CAPM STUDIES.

A Dr. Vander Weide performed a historical DCF study based on a market risk premium of 6.7%, a risk-free rate of 5.25%, and beta estimate of 0.73. This study produced a

return on equity estimate of 10.1%. (Vander Weide Direct at 50). Then he added flotation costs, which increased his CAPM return from 10.1% to 10.4%.

Dr. Vander Weide also performed a DCF-based CAPM study, where he estimated the market risk premium using a DCF return on the S&P 500. Based on that study, Dr. Vander Weide estimated a market risk premium of 7.2%, and use of his risk-free rate of 5.25%, and beta estimate of 0.73, produced a CAPM return estimate of 10.5% increased to 10.7% to account for flotation costs. (Vander Weide Direct at 38).

Q DO YOU HAVE ANY CONCERNS ABOUT DR. VANDER WEIDE'S HISTORICAL AND DCF-BASED CAPM RETURN ESTIMATES?

A Yes. I have two issues. First, his risk-free rate of 5.25% is inflated and unreliable and should be disregarded. Second, his inclusion of flotation cost has not been shown to be cost justified for MidAmerican and should be disregarded.

Q HOW DID DR. VANDER WEIDE DERIVE HIS RISK-FREE RATE OF 5.25%?

A He derived a forecasted yield of a Treasury bond rate based on data he gathered from *Value Line*, EIA and other sources. Specifically, he relies on a *Value Line* forecast of 10-year Treasury note of 4.2% and adds a spread of 80 basis points to produce his estimated forecasted yield on a long-term Treasury bond of around 5%.

He uses an EIA forecasted 10-year Treasury bond yield of 4.7%, and adds the 80 basis point spread to produce a forecasted long-term Treasury bond yield of 5.5%. His point estimate of 5.25% is the midpoint of his forecast using these *Value Line* and EIA projected 10-year Treasury bond yields.