Exhibit No.: UCAN-01
Docket No.: A.25-03-010 et. al.
Date: July 30, 2025
Sponsor/Witness.: Matthew Bandyk

DIRECT TESTIMONY OF MATTHEW BANDYK ON BEHALF OF UTILITY CONSUMERS' ACTION NETWORK CONCERNING SAN DIEGO GAS AND ELECTRIC COMPANY 2026 COST OF CAPITAL

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1. INTRODUCTION AND PURPOSE OF TESTIMONY

Q1 Please state your name and occupation.

A1 My name is Matthew Bandyk. I am a Principal Associate at Synapse Energy Economics Inc., located at 485 Massachusetts Ave, Suite 3, Cambridge, Mass., 02139.

Q2 Please describe Synapse Energy Economics.

A2 Synapse is a research and consulting firm specializing in energy and environmental issues, including electric generation, transmission and distribution system reliability, ratemaking and rate design, electric industry restructuring and market power, electricity market prices, stranded costs, efficiency, renewable energy, environmental quality, and nuclear power.

Synapse's clients include state consumer advocates, public utilities commission staff, attorneys general, environmental organizations, federal government agencies, and utilities.

Q3 Please summarize your work experience and educational background.

A3 At Synapse, I focus on cost of capital testimony. I was previously a consultant at 5 Lakes Energy, a Michigan-based energy policy consulting firm. My experience is summarized in my resume, attached as Exhibit-MJB-1.

In 2025 I successfully completed a comprehensive written exam to be awarded the Certified Rate of Return Analyst (CRRA) designation from the Society of Utility and Regulatory Financial Analysts (SURFA).

Q4 Have you previously testified before state regulatory commissions?

A4 Yes. I have previously testified before the Michigan Public Service Commission in the following cases:

Case No. U-21806 (Consumers Energy gas rate case);

Case No. U-21585 (Consumers Energy electric rate case);

Case No. U-21534 (DTE Electric rate case);

Case No. U-21555 (UPPCO rate case);

Case No. U-21540 (Michigan Gas Utilities rate case);

Case No. U-21490 (Consumers Energy gas rate case);

Case No. U-21389 (Consumers Energy electric rate case);

Case No. U-21048 (Consumers Energy 2022 PSCR Plan case); and

Case No. U-21291 (DTE Energy gas rate case).

Q5 On whose behalf are you testifying in this case?

A5 I am testifying on behalf of Utility Consumers' Action Network.

Q6 What is the purpose of your testimony in this proceeding?

A6 In this proceeding I will give my expert opinion as to an appropriate return on equity, capital structure and overall rate of return for San Diego Gas & Electric (SDG&E, or the Company).

Q7 How is your testimony structured?

A7 In Section 2, I summarize my recommendations. In Section 3, I discuss the overarching principles of a fair cost of capital that guide my testimony. In Section 4, I discuss the methodology and results of the financial models that I use to estimate SDG&E's return on equity. In Section 5, I discuss my recommendations for a fair capital structure for the utility. Finally, in Section 6, I discuss the resulting recommendation for an overall rate of return.

Q8 Are you sponsoring any exhibits?

A8 Yes, I am sponsoring the following exhibits, found at the end of my testimony:

MJB-1: Resume of Matthew Bandyk

MJB-2: Equity Risk Premium and Corresponding Risk-Free Rates

MJB-3: Beta

MJB-4: CAPM Analysis

MJB-5: Long-Term Growth Rate Sources

MJB-6: DCF (with Earnings Growth Rates)

MJB-7: DCF (with Dividend Growth Rate)

MJB-8: UCAN-SDG&E Data Request 003

2. FINDINGS AND RECOMMENDATIONS

Q9 Please summarize your findings.

A9 My primary findings are:

1. SDG&E's 11.25% proposed return on equity is significantly inflated from the estimated return on equity derived from commonly-used financial models.
2. SDG&E's application fails to demonstrate the utility faces larger business and financial risk than comparable utility companies.
3. SDG&E's application fails to justify the proposed increase in its authorized equity ratio to 53%.

Q10 Please summarize your recommendations.

A10 Based on my findings, I offer the following recommendations:

1. The Commission should approve a return on equity for SDG&E of 8.87%.

2. The Commission should approve a capital structure of 48% long-term debt and 52% equity.

3. The Commission should approve an overall rate of return of 6.83%.

3. COST OF CAPITAL - PRINCIPLES

Q11 Please explain the concept of cost of capital and its significance.

A11 The cost of capital is the return demanded by investors on the capital they supply to the Company.[1] It is the weighted average of the costs of the various classes of capital supplied by investors — in this case, debt and equity. The cost of debt and cost of equity are each weighted by the respective amounts of debt and equity in the Company's total capital structure, so the ratio of equity to debt is another important component of the cost of capital. The cost of debt can be relatively easily observed through the interest rates lenders demand on debt issued by the Company. The cost of equity, however, is the product of market expectations that can only be estimated by looking at a number of factors.

Estimating the cost of equity for a regulated utility must be done carefully so as to arrive at a return that ensures rates that are "just and reasonable," a principle elaborated on in the landmark U.S. Supreme Court cases that set the legal standards governing public utility regulation, *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia* and *Federal Power Commission v. Hope Natural Gas Co*.

For example, in *Hope*, the Court said that the "just and reasonable" standard implies that "the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital."[2]

But the Court was also clear that the determination of what return is "sufficient" in that regard must also involve a consideration of the interests of the company's

[1] Roger A, Morin, PhD. Modern Regulatory Finance. PUR Books, 2021, p. 27.
[2] *Fed Power Com v Hope Natural Gas Co*, 320 US 591, 603 (1944).

customers. Indeed, just as a return for a utility that is set below the amount "commensurate with returns on investments in other enterprises having corresponding risks" causes the utility to lose wealth relative to what it should earn with a more appropriate return, a return that is set above this amount will cause the utility's customers to be overcharged and lose wealth relative to what they would be charged with a lower and more appropriate return. In this latter case, that wealth is instead transferred from customers to the utility holding company's shareholders.

Q12 What methods may be employed to determine the cost of capital?

A12 In *Hope*, the Supreme Court held that it is the result reached, not the method employed, which is controlling, and that result should be a rate that people would reasonably consider to be commensurate with the risk of the investment. In practice, reaching that result involves using methods that are widely accepted in the financial community to estimate investor perceptions of risk. I rely on these methods in my testimony to estimate the Company's cost of equity, which informs my recommendation for the authorized return on equity (ROE).

Q13 How have public regulatory commissions historically fared at estimating returns on equity for utilities that are commensurate with risk?

A13 There is strong evidence from multiple observers and peer-reviewed academic research that public regulatory commissions on average have tended to set electric utility ROEs above what economists would arrive at using the widely-accepted methods for estimating cost of equity.[3] I will describe this ROE level that regulatory commissions tend to exceed as a "market-based ROE" since it is estimated using methods that gauge how the market rates the risk of a utility investment. Commissions approving ROEs that exceed a market-based ROE has resulted in a transfer of wealth from ratepayers to shareholders.

Arriving at an ROE recommendation is a process of estimation, and that process will invariably include some degree of subjectivity. Subjective factors can influence any human decision-making process, including the decisions of public regulatory

[3] See footnotes 4, 5 and 6, for examples.

commissions, and lead to unintended results. These factors include the influence of utilities in the regulatory process. Utilities often have more resources to make their case heard for why ROE should be higher than opposing groups do to make the opposite case, even if the utilities' arguments are not necessarily stronger.

Academics have also noted the phenomenon of a growing premium of regulatory commission-awarded ROEs over the rate of return on long-term U.S. Treasury bonds (the risk-free rate), and research has found that this premium cannot statistically be explained by financial fundamentals, such as a change in the equity or debt risk of the utilities in question.[4] In other words, the return is set above the actual cost of equity. This premium costs consumers because it ensures that utilities collect a greater return from consumers than would be justified by a market-based ROE. A 2023 paper published by the Energy Institute at the University of California Berkeley's Haas School of Business found that the cost to consumers from rates of return for electric and gas utilities that are set above a market-based return costs U.S. consumers around $7 billion per year.[5]

Experts including utility attorney Steve Huntoon have also examined the record of authorized ROEs and found that regulators tend to set ROEs above returns of investments that are riskier than utilities, indicating that regulatory decisions are not in line with the economic reality that lower risk means lower return.[6]

A higher return implies higher risk, so approving ROEs that are higher than market returns would imply that regulated utilities are riskier investments than the market as a whole. But they are not. Regulated utility returns tend to be less risky than the market as a whole, as demonstrated by the betas of regulated utility holding companies. Beta is a measurement of the sensitivity of a stock's returns relative to those of the market as a

[4] "This growing premium does not appear to be explained by traditional asset-pricing models, often in direct contrast to regulators' stated intent… However, absent some normative justification for this premium, it would appear that regulators are authorizing excessive returns on equity to utility investors and that these excess returns translate into tangible profits for utility firms." David Rode and Paul Fischbeck. "Regulated equity returns: A puzzle." Energy Policy, Oct. 2019. Available at https://www.sciencedirect.com/science/article/abs/pii/S0301421519304690?via%3Dihub

[5] Karl Dunkle Werner and Stephen Jarvis. "Rate of Return Regulation Revisited." Energy Institute at Haas Working Paper 329R. Revised September 2024. Available at https://haas.berkeley.edu/wp-content/uploads/WP329.pdf

[6] Steve Huntoon. "Nice Work If You Can Get It." Fortnightly Magazine, August 2016. Available at https://www.fortnightly.com/fortnightly/2016/08/nice-work-if-you-can-get-it.

whole. Utility holding company betas tend to be less than one, meaning that those stocks are less sensitive to changes in overall market returns.

Q14 If regulated utilities are less risky than the market, then why have regulated utilities historically been awarded ROEs above market returns?

A14 The remaining explanation is that public regulatory commissions have tended to accept estimates for ROE that are above fair, market-based ROE estimates.

Q15 What ROE is SDG&E proposing in this case?

A15 SDG&E is proposing an 11.25%[7] ROE, a significant increase from its current ROE of 10.23%[8].

Q16 How do these current and proposed ROEs compare to the average ROE authorized by regulators around the country?

A16 Both the 10.23% current ROE and the 11.25% proposed ROE are significantly higher than the 9.74% average ROE authorized by state regulatory commissions in 2024, as cited in SDG&E's application.[9]

Q17 How do you view the utility's proposed ROE in light of the aforementioned evidence about ROEs generally being set too high?

A17 The fact that a) there is evidence that nationally utility ROEs are set too high and b) SDG&E's proposed ROE is higher than the national average provides a reason for the burden of proof to be placed on SDG&E to justify its high ROE request. In my opinion, the utility's application and testimony fails to meet this burden of proof. As I will explain, Mr. Nowak's application of financial models to determine his recommended ROE makes several errors that inflate the ultimate ROE range.

[7] Application, p. 2.
[8] Application, p. 3.
[9] Application, pp. 8-9.

Q18 Mr. Nowak states that "an authorized ROE for SDG&E that is below ROEs authorized for other utilities could inhibit its ability to attract capital on reasonable terms for investments to be made on behalf of customers in California."[10] Do you agree that the Commission should consider the ROEs authorized in other jurisdictions in setting the ROE for SDG&E?

A18 No. While he is correct that "a company's cost of equity is defined by, and equal to, the opportunity cost of investing in that company,"[11] Mr. Nowak conflates this cost of equity with the authorized ROE. On the one hand, cost of equity is a theoretical concept for the opportunity cost faced by investors when considering a specific investment. ROE, on the other hand, is an accounting concept for the return generated by an equity investment. The cost of equity is what we are trying to estimate through financial models that gauge the opportunity cost. As explained above, regulatory commissions routinely set ROEs well above the cost of equity for utilities. So we cannot look to other jurisdictions to determine the opportunity cost for investors. An ROE can be set below the national average for authorized ROEs and still be above the cost of equity – meaning that ROE still provides a return to investors that more than satisfies what they demand to make it worth it to them to invest in the utility's equity.

4. COST OF CAPITAL – METHODS

- ***ROE Summary***

Q19 What methods did you use to calculate your recommended ROE?

A19 I summarize my ROE results and methods employed in the table (Fig. 1) below.

[10] Nowak Direct, p. 10, lines 12-14.
[11] Nowak Direct, p. 10, lines 8-9.

Fig. 1

DCF	
EPS growth rates	9.41%
DPS growth rates	8.18%
Average	8.80%
CAPM	
with Damodaran ERP and Value Line Beta	9.26%
with Damodaran ERP and Bloomberg Beta	8.04%
with Kroll ERP and Value Line Beta	9.85%
with Kroll ERP and Bloomberg Beta	8.61%
Average	8.94%
Average of Averages	8.87%

- ***Proxy Group Selection***

Q20 How does your proxy group compare to the proxy group employed by Mr. Nowak?

A20 I begin with Mr. Nowak's proxy group and apply two additional screens to arrive at my proxy group.

First, I screen out companies that do not provide electric *and* gas distribution utility service. The purpose of this screen is to limit the proxy group to companies that match the operational profile of SDG&E, which serves electric and gas customers, as much as possible. This screen removes the following companies from the proxy group because they only own electric utilities and not gas utilities, as shown in Mr. Nowak's Exhibit JCN-9:

American Electric Power

Black Hills Corp.

Edison International

Evergy, Inc.

Eversource Energy

FirstEnergy Corp.

IDACORP

OGE Energy

Pinnacle West Capital

Portland General Electric

Southern Company

TXNM Energy

Next, I screen out any companies that are rated greater than A by S&P. This screen ensures the proxy group are of comparable risk to SDG&E, which is rated BBB+ by S&P. Mr. Nowak applies a floor screen that proxy companies must be rated no lower than BBB-, two notches lower than SDG&E. I apply a screen that proxy companies must also not be rated two notches higher. This screen does not result in any additional companies being removed from my proxy group compared to Mr. Nowak's, as the only company with a greater than A rating, MGE Energy, is screened out by Mr. Nowak for other reasons.

- ***Capital Asset Pricing Model (CAPM)***

Q21 Please describe your application of the CAPM to estimate the ROE.

A21 I provide my CAPM estimate in Exhibit MJB-4.

My CAPM analysis follows the same basic formula as Mr. Nowak's. The numbers we use for several important inputs to the formula – the equity risk premium (ERP), beta and the risk-free rate – differ, for reasons I explain below.

Q22 Please explain how you arrived at the ERP used in your CAPM formula.

A22 The ERP is an essential component of the CAPM formula. It represents the excess return an investor would receive over the risk-free rate by investing in the broader equity market. The ERP is calculated as the estimated return on the market an investor can expect from investing in the broad stock market minus the risk-free rate.

It is important when estimating the ERP to not be overly reliant on historical data. While historical estimates of ERP are commonly used by the financial community, that popularity does not make them less flawed. As New York University Stern School of Business Professor Aswath Damodaran, one of the most highly respected and widely cited experts in finance and valuation, has written:

> *Given how widely the historical risk premium approach is used, it is surprising how flawed it is and how little attention these flaws have received.*[12]

There are two main reasons for the flaw with this methodology. First, the historical estimate for ERP is extremely sensitive to the historical time period selected, meaning that the subjective judgment by the person deciding which time period to collect market data for has an outsized impact on the result.[13]

[12] Aswath Damodaran, "Estimating Equity Risk Premiums," Stern School of Business, accessed June 2025, available at https://pages.stern.nyu.edu/~adamodar/pdfiles/papers/riskprem.pdf.

[13] *Id.* "…the risk premium estimated in the US markets by different investment banks, consultants and corporations range from 4% at the lower end to 12% at the upper end… In summary, the risk premium estimates vary across users because of differences in time periods used, the choice of treasury bills or bonds as the risk-free rate and the use of arithmetic as opposed to geometric averages."

Second, regardless of the time period selected, historical estimates of ERP are subject to the problem of survivorship bias, where returns that are counted in historical ERPs tend to be those from stocks that remain in the market, rather than those that drop out. This survivorship bias effect tends to inflate historical ERPs.[14]

Q23 Are there any methods of estimating ERP not subject to these problems?

A23 Yes. Dr. Damodaran suggests using an "implied equity risk premium" method:

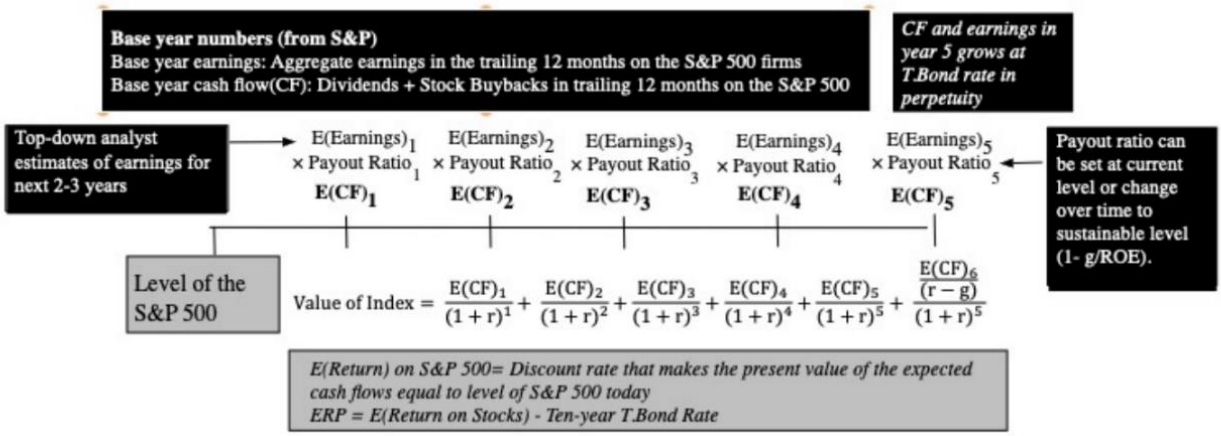
> *The advantage of this approach is that it is market-driven and current, and does not require any historical data. Thus, it can be used to estimate implied equity premiums in any market.*[15]

This approach values stocks in a market at the present value of dividends from each stock growing at a constant rate. Essentially, Dr. Damodaran takes the same discounted cash flow model Mr. Nowak and I use to estimate the cost of equity for a single company and applies it to value the expected return of a broad market index, the S&P 500. Dr. Damodaran's formula, summarized in the figure below, begins with the base level of aggregate earnings of the S&P 500 index, and then applies the basic assumption of the discounted cash flow model that the present value of an asset is the stream of cash flows it is expected to generate, with each cash flow discounted at a rate that reflects the time value of money.

[14] *Id.* "…the survivor bias will result in historical premiums that are larger than expected premiums for markets like the United States, even assuming that investors are rational and factor risk into prices."

[15] *Id.*

Fig. 2[16]



In Dr. Damodaran's approach, the cash flows are the earnings from dividends and stock buybacks that stocks in the S&P 500 generate, assumed to grow for five years at a rate derived from analyst growth forecasts, and then slowing to a perpetual growth rate that is equal to the risk-free rate. He then algebraically calculates the discount rate that allows these future cash flows to equal the current level of the index, resulting in a rate that reflects the return that investors require to invest in the market. Subtracting the risk-free rate from that required return results in the ERP.

Dr. Damodaran regularly publishes five estimates of the U.S. ERP based on this implied equity premium approach. The estimates are based on different assumptions, such as normalizing earnings by replacing the base year earnings with the average earnings yield over the last decade. For my ERP,[17] I use the highest of five different estimates for ERP from Dr. Damodaran calculated in June 2025. I use the highest estimate to be more conservative.

[16] Reproduced from Damodaran, "Equity Risk Premiums (ERP): Determinants, Estimation, and Implications – The 2025 Edition," March 2025, p. 96. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5168609
[17] See Exhibit MJB-2.

So as not to be reliant on one source, I also used the recommended U.S. ERP from financial research firm Kroll for 2025.[18] Kroll's recommended U.S. ERP is based on risk perceptions in the market and other qualitative and quantitative inputs, such as an implied equity risk premium model.

Q24 Is the ERP you calculate forward-looking to account for the fact that the test year for this proceeding is in the future?

A24 Yes. Dr. Damodaran's ERP is purposely calculated to be forward-looking in order to avoid the aforementioned pitfalls with historical approaches for ERP.[19] More specifically, Dr. Damodaran calculates the ERP using an expected growth rate for payouts to investors (i.e., dividends and stock buybacks) that is the average of two-year growth forecasts of the aggregate earnings of the S&P 500 Index from analysts from Thomson Reuters, Factset, Yardeni and S&P Capital IQ.

Q25 Does Mr. Nowak calculate the ERP he uses for his CAPM analysis using the same method as Dr. Damodaran?

A25 No. Mr. Nowak uses a very different methodology. His expected return on the market is the addition of a) a Value Line forecast of the five-year growth rate for earnings per share of companies in the S&P 500 Index and b) a Bloomberg estimate of the dividend yield of companies in the S&P 500 Index.[20] This formula, where (cost of equity) = expected dividend yield plus g [growth rate], is essentially a simplified version of the discounted cash flow formula used by Dr. Damodaran and many others.

Q26 Why is Mr. Nowak's ERP estimate so much higher than yours?

A26 Mr. Nowak has used an inflated estimate for g, and the consequence of that choice is amplified by his use of a more simplified discounted cash flow, which makes his result much more sensitive to the level at which g is set because g is only one of two inputs to

[18] Kroll, "Kroll Recommended U.S. Equity Risk Premium and Corresponding Risk-Free Rates to be Used in Computing Cost of Capital: January 2008 - Present, "April 25, 2025. https://www.kroll.com/en/reports/cost-of-capital/recommended-us-equity-risk-premium-and-corresponding-risk-free-rates

[19] "The implied ERP is computed by using expected cash flows in the future, and what investors are paying for those cash flows today, making them forward looking." Damodaran, "Equity Risk Premiums, "p. 93.

[20] Exhibit JCN-5.

his formula (the other input being the dividend yield). As I described above, Dr. Damodaran's approach assumes cash flows will grow for five years at an analyst-forecasted rate, then assumes that growth will settle at a more sustainable long-term rate based on the risk-free rate. But Mr. Nowak's approach assumes that cash flows will grow in the long term at a constant rate based on analyst expectations of the next five years. It is unrealistic to assume that earnings can grow in perpetuity at such a high rate, and Dr. Damodaran's assumption that growth will settle to a more sustainable rate is much more appropriate for a realistic application of the discounted cash flow model. This problem with Mr. Nowak's approach will surface again when I discuss his DCF analysis for ROE.

Q27 What risk-free rate did you use in your CAPM formula?

A27 To be consistent with my two ERPs, I used two corresponding risk-free rates. First, I used the same risk-free rate of 4.41%, representing the current yield on long-term Treasury bonds, that Dr. Damodaran used to calculate his ERP for June 2025. Second, I followed Kroll's recommended method for the risk-free rate and used the spot 20-year Treasury yield of 4.94%. Specifically, I calculated the average of the high and low 20-year Treasury yields from June 25, 2025. My equity risk premiums and corresponding risk-free rates are shown in Exhibit MJB-2.

Q28 Explain how you arrived at the beta used in your CAPM formula.

A28 The beta coefficient is a measure of the sensitivity of a company's returns to the returns of the market as a whole – how much the historical returns mathematically vary compared to the variance of the historical returns of the market. Its relevance for the CAPM formula is that it measures the risk associated with investing in the company's equity that cannot be eliminated through portfolio diversification. In theory, an investor can buy other stocks in the market to compensate for the risk of any one stock, but if that stock's returns are heavily correlated with the returns of the market, the investor is essentially not diversifying away the stock's risk because it is merely adding more of the same kind of risk. Thus, beta is often described as a measure of "systematic risk" – the financial risk of a company that is not the result of risks from the company itself, but from its performance relative to the market as a whole (the "system").

While calculating beta for publicly-traded stocks is fairly straightforward due to the availability of plentiful data on a stock's performance relative to the market, even a company that is not publicly traded, such as SDG&E, carries systematic risk vis-à-vis the market that can be calculated as a beta coefficient.

I use as beta in my CAPM formulas two different averages: First, the average of the Value Line beta estimates for the companies in my proxy group, and second, the average of the Bloomberg beta estimates for the companies in my proxy group. But for each of these two betas, I make an important adjustment that makes the beta coefficient more accurate.

Q29 Please explain the adjustment you made to beta.

A29 To be more precise, as shown in Exhibit MJB-3, I remove an adjustment that has been made to the Bloomberg and Value Line betas by those data sources. Bloomberg and Value Line report "adjusted" betas rather than "raw" betas. Raw betas are converted into adjusted betas through the commonly used "Blume adjustment" equation that is meant to remove the bias that stems from the long-run tendency of betas to regress to 1. For stocks in most industries, this tendency of betas is thought to be a result of efforts by management to keep the systematic risk of a given firm close to that of the market.[21]

But this assumption that betas revert to the mean does not hold when it comes to the betas of rate-regulated utilities. The ability to recover costs inoculates rate-regulated utilities from systematic risk. Rate regulation protects investor-owned utilities like SDG&E from the risks of rising expenses, commodity price risk and competitive risks, and they enjoy natural monopolies that mitigate market risks associated with the customer base. As a result, the Blume adjustment is not appropriate to apply to the betas of companies like those in the Company's proxy group.

There is extensive academic literature supporting the inapplicability of the Blume adjustment when it comes to utilities. The theoretical argument that the unique

[21] Michelfelder, "Public Utility Beta Adjustment and Biased Costs of Capital in Public Utility Rate Proceedings" The Electricity Journal, 2013. https://www.sciencedirect.com/science/article/abs/pii/S1040619013002340

characteristics of rate regulation reduce systematic risk for utility stocks is well-supported. Utility stock performance tends to be countercyclical, so betas tend to be less than 1.[22]

There is a strong empirical record in the academic literature showing that rate-regulated utility stock betas in practice do not revert to 1. An empirical analysis of the monthly returns of stocks of 57 publicly-traded electric and gas utilities from 1962 to 2007 found that the mean and median betas decline over time, rather than rise to 1, as the Blume adjustment to beta assumes.[23]

Q30 Please explain how you arrived at the ROE using the CAPM.

A30 I calculated the cost of equity using four different CAPM formulas to account for two different ERPs (Damodaran and Kroll) and two different average betas (Value Line and Bloomberg). I provide the average of the four resulting ROEs in Exhibit MJB-4.

- ***Discounted Cash Flow (DCF) Model***

Q31 Please explain your application of the Discounted Cash Flow (DCF) model to estimate the Company's cost of equity.

A31 I add the Company's growth rate, or (g), to the dividend yields of each company in my proxy group to arrive at an estimated cost of equity. My DCF result is lower than Mr. Nowak's primarily due to the lower estimate I use for the growth rate. Selecting the growth rate may be the most important element of the DCF analysis.

[22] "We note that it has been pointed out in the finance literature that applying the Blume adjustment can cause (rather than remedy) bias, particularly when being applied to industries where a beta of below or above unity is expected." Allen Consulting Group, "Empirical evidence on proxy beta values for regulated gas distribution activities," June 2007. https://www.aemc.gov.au/sites/default/files/content/3016ea51-04c4-4b64-890c-845d23d2c47d/Annexure-C-Empirical-Evidence-on-Proxy-Betas.pdf

[23] These results "strongly refute the validity of the Blume equation for public utility stocks." Michelfelder 2013.

Q32 Why is the growth rate you have selected superior to that selected by Mr. Nowak?

A32 The EPS projections used by Mr. Nowak are all in the short term: five-year consensus analyst earnings per share growth estimates. But a short-term growth rate cannot be the only growth rate used in the DCF model.

The use of only short-term rates for perpetual growth leads to a wildly unrealistic outcome. A DCF growth rate input higher than the growth rate of the economy as a whole implies that, in the long run, the Company will grow larger than the entire U.S. economy. Such an outcome is impossible.[24]

Q33 Explain how you selected the *g* you use in your DCF model.

A33 My DCF analysis is presented in Exhibits MJB-6 and MJB-7. I use two versions of the DCF model.

First, I use a two-stage DCF model that includes a weighted average of a short-term growth rate based on investor expectations of utility earnings growth and a long-term growth rate that matches investor expectations of the growth of the domestic economy as a whole. The formula for this model is essentially the same as that in the model used by Mr. Nowak: ke = (D1/P0) + g.

But whereas in Mr. Nowak's model, (*g*) is merely the short-term earnings projection, in the two-stage model (*g*) is a composite of the short-term projection and the long-term growth rate that represents the proper bound for SDG&E's long-term growth, reflecting that in the long term SDG&E cannot grow larger than the domestic economy of which it is a part. The reason for this two-step process is that short-term and long-term growth often differ and failing to account for those differences leads to an incorrect application of the DCF model.[25]

[24] Aswath Damodaran. *Investment Valuation: Tools and Techniques for Determining the Value of Any Asset*, 3rd ed. John Wiley & Sons, Inc, 2012 ("If a firm is a purely domestic company, either because of internal constraints . . . or external constraints (such as those imposed by a government), the growth rate in the domestic economy will be the limiting value.")

[25] "The standard DCF model would be incorrectly specified when the investors' expected intermediate term EPS growth rate differs from the long-term sustainable EPS growth rate." Morin, p. 385.

My method follows FERC's approved methodology used to analyze the base ROE of a public utility's rates under the Federal Power Act using the DCF model. FERC has endorsed a two-step model in which the short-term growth rate is weighed at 80% and the long-term growth rate is weighed at 20%.[26] I use those same weightings in my model. Specifically, I weighed the short-term growth rates for each proxy group company from Exhibit JCN-4 at 80%, and the long-term growth rate at 20%.

Candidates for long-term growth rates are listed in Exhibit MJB-5, and they each represent conservative estimates of long-term economic growth. I select the highest of these candidates, the nominal GDP growth rate from 2028 to 2035, as the value for the long-term (g) used in the DCF formula.

Second, I use another version of the DCF model that is identical to the first except the short-term growth rate is the average of the Value Line forecasts for dividend per share growth of the proxy group companies, rather than an average of forecasts for earnings growth. Regulatory jurisdictions such as the Massachusetts Department of Public Utilities have recognized that DPS growth rates carry the advantage that firms tend to keep their dividend growth stable over time, as opposed to EPS growth rates, which may vary based on firm-specific events and economic conditions.[27] With that advantage in mind, I include a version of the DCF model using dividend growth rates rather than earnings growth rates in order to reduce the bias that comes from relying on a single version.

Q34 How else does your DCF model differ from Mr. Nowak's?

A34 To calculate the stock prices used to arrive at dividend yields, Mr. Nowak uses prices averaged over 30-, 90- and 180-trading-day periods.[28] To reflect current investor expectations, the stock price should be as close to the current spot price as possible. Averaging prices over a short time period to remove the risk of picking an outlier price is

[26] Stephen M. Spina, J. Daniel Skees and Patrick R. Pennella. "FERC Revises Methodology to Evaluate Return on Equity (Again)." Morgan Lewis, June 2, 2020, available at https://www.lexology.com/library/detail.aspx?g=02bfb50d-f170-49ea-a65b-396594b7544c
[27] Massachusetts Department of Public Utilities, Order in DPU 23-80 and 23-81, June 28, 2024.
[28] Exhibit JCN-4.

appropriate, but the 90- and 180-day periods selected by Mr. Nowak run the risk of relying on stale information.[29]

My stock prices represent the average of the high and low prices over the 30-day period ending July 18, 2025, with prices obtained from Yahoo! Finance.

- ***BYRP***

Q35 Should the Commission consider Mr. Nowak's Bond Yield Plus Risk Premium (BYRP) analysis for estimating ROE?

A35 No, it should not. It should be disregarded because it introduces into the calculation of ROE, a process that should be based on objective data as much as possible, the reliance on ROEs set by other regulatory commissions. That regulatory process of setting ROE is, as the research about excessive utility ROEs I discussed above supports, not one that has empirically resulted in returns that would be set by objective financial methodology.

Mr. Nowak's risk premium used in his BYRP analysis is the spread between those ROEs historically set by other commissions in rate cases and long-term Treasury bond yields.[30] Therefore, the resulting risk premium he calculates is as large as it is only in relation to the degree that regulatory commissions set ROEs at a premium to what the ROEs would be using only objective financial methods.

This problem with similar Risk Premium models has been cited by FERC as one of the reasons to reject the use of the model. In Opinion No. 569 in a 2019 order, FERC found that "while all models, including the DCF, feature some circularity, such circularity is particularly direct and acute with the Risk Premium model because it directly relies on

[29] Morin recommends no more than one month for an averaging period. Morin, p. 356: "To guard against the possibility that current stock price reflects abnormal conditions or constitutes a temporary aberration, while at the same time retaining the spirit of market efficiency, averaging stock prices over several recent trading days is a reasonable compromise… The average closing stock price calculated over the most recent 10 trading days period at the time of estimating the cost of equity is a reasonable procedure… A similar average computed over a one-moth period rather than a 10-day period would not be unreasonable."

[30] Exhibit JCN-7.

past Commission ROE decisions."[31] In that decision, FERC also rejected the use of the Risk Premium model because it is "largely redundant with the CAPM."

- ***Expected Earnings Analysis***

Q36 Should the Commission consider Mr. Nowak's Expected Earnings analysis as a benchmark for ROE?

A36 No. Mr. Nowak uses the projected returns on common equity for the utility companies that make up his proxy group.[32] But the expected earnings approach requires one to look at the book profitability of unregulated companies with comparable risk to the company whose ROE is being estimated. Mr. Nowak's proxy group is made up of holding companies that primarily or solely generate revenue from the regulated utilities they own. The problem with using regulated utilities is that the expected earnings approach is meant to be a measure of fair return in the economic sense of the term.[33]

But if the book profitability of regulated utilities is used instead of that of unregulated companies, we are no longer estimating what the market views as the fair return for a company of comparable risk. Instead, we are considering the political decisions of other regulators who may diverge from what the market would consider. That is because the returns generated by the proxy group companies are heavily dependent on their authorized returns set by commissions.[34] Using the returns of regulated utilities divorces, Mr.

[31] FERC Opinion 569, 169 FERC 61129 (2019), par. 343. Available at: https://www.ferc.gov/sites/default/files/2020-04/E-11_1.pdf.
[32] Exhibit JCN-8.
[33] Morin, pp. 423-24: "The rationale of the method is that regulation is a surrogate for competition. The profitability of unregulated firms is set by the free forces of competition. In the long run, the free entry of competitors would limit the profits earned by these unregulated companies, and, conversely, unprofitable ventures and product lines would be abandoned by the unregulated companies. In other words, the free entry and exit of competitors should ensure that the profits earned by nonregulated firms are normal in the economic sense of the term. Aggregating book rates of return over a large number of comparable risk unregulated companies would even out any abnormal short run profit aberrations, while averaging over time would dampen any cyclical aberrations. Thus, by averaging the book profitability of a large number of unregulated companies over time, an appropriate measure of the fair return on equity for a public utility is obtained."
[34] Morin, p. 426: "In defining a population of comparable-risk companies, care must be taken not to include other utilities in the sample, since the rate of return on other utilities depends on the allowed rate of return… It would be circular to set a fair return based on the past actions of other regulators, much like observing a series of duplicate images in multiple mirrors. The rates of return earned by other regulated utilities may well have been reasonable under historical conditions, but they are still subject to tests of reasonableness under current and prospective conditions."

Nowak's benchmark ROE derived from his expected earnings analysis from economic reality.

5. CAPITAL STRUCTURE

Q37 What is SDG&E's current authorized capital structure, and does the utility propose any changes to this structure?

A37 The utility's current authorized capital structure is 52.00% common equity, 45.25% debt, and 2.75% preferred stock. Ms. Mekitarian's testimony proposes a structure of 54.00% common equity, 46.00% debt, and 0% preferred stock in order to be "in alignment" with SDG&E's actual five-year average capital structure of 54.9% common equity and 45.1% debt.[35]

Q38 Has the CPUC supported the principle that a utility's authorized capital structure should match its actual capital structure?

A38 No, quite the opposite. In 2019, the Commission ruled that rather than it "being the policy of the Commission to match the capital structure authorization to the actual recorded capital structure of the IOU," that instead it is "the policy of the Commission for the authorization of an IOU's capital structure to be in the public interest of the ratepayers of California."[36]

Q39 Does Ms. Mekitarian consider the public interest of ratepayers to justify her proposed capital structure?

A39 No. Rather, she emphasizes how SDG&E shareholders are "not earning a return on the difference" between the authorized and the actual capital structure.[37] The Commission is under no obligation to improve the return for SDG&E shareholders without a justification that doing so would be in the public interest of ratepayers. In my opinion, Ms. Mekitarian fails to provide such a justification.

[35] Mekitarian Direct, p. 5, lines 2-5.
[36] Decision (D.)19-12-056, p. 11.
[37] Mekitarian Direct, p. 9, line 21.

Q40 How do you evaluate Ms. Mekitarian's argument that her proposed capital structure change would "help SDG&E manage its increased business and financial risks and improve its credit ratings"?[38]

A40 Ms. Mekitarian provides no evidence that SDG&E's credit rating would improve if the authorized capital structure is moved closer to the actual capital structure. As she herself points out, "credit rating agencies assess SDG&E's financial metrics based upon its actual, not authorized, capital structure."[39] From the standpoint of credit rating agencies, nothing would change if the CPUC approved Ms. Mekitarian's proposed capital structure.

Q41 What capital structure do you propose CPUC adopt in this case?

A41 I recommend CPUC maintain SDG&E's authorized capital structure of 52.00% common equity, but move the 2.75% for preferred stock to debt, increasing the debt share of the capital structure to 48%. Doing so ensures that the cost savings from no longer issuing preferred stock flow to customers because debt is the lowest-cost form of financing.

6. RISK PROFILE

Q42 Mr. Nowak concludes that SDG&E is "above average risk"[40] compared to the proxy group, and thus the Company's ROE should be set on the upper end of the range produced by financial models. Did you adjust your ROE recommendation to reflect business risks that are not captured by the financial models?

A42 No. As I will explain, Mr. Nowak fails to show that the alleged risks faced by SDG&E are greater than those faced by the proxy group companies.

- ***Capital Expenditure Program***

Q43 Mr. Nowak argues that the magnitude of SDG&E's capital expenditure program means it has more investments that "elevate the risk profile of SDG&E."[41] Does

[38] Mekitarian Direct, p. 5, line 17.
[39] Mekitarian Direct, p. 9, lines 18-19.
[40] Nowak Direct, p. 59, line 11.
[41] Nowak Direct, p. 52, line 8.

SDG&E have greater risk than the proxy group due to the size of its capital expenditure program?

A43 Mr. Nowak does not attempt to compare the capital expenditure program of SDG&E to those of the proxy group, so we can make no conclusions about the Company's risk relative to the proxy group on this point. I asked in discovery the following question:

How does the size of SDG&E's capital spending program compare to those of the proxy group companies?

In response, SDG&E said that "Mr. Nowak has not performed the requested analysis."[42]

- ***Environmental Mandates***

Q44 Mr. Nowak argues that the requirements imposed on SDG&E to procure electric energy from renewable energy are significantly more stringent relative to the proxy group companies. What evidence does he provide to justify this claim?

A44 Mr. Nowak describes California's climate change mitigation requirements and states that California is one of 17 states[43] that will require at least 50 percent carbon-free generation by 2050, siting a National Conference of State Legislatures report from 2021.[44] He does not provide a statistic pertaining to the states represented in the proxy group companies – only the United States as a whole. He does not explain why California being one of 17 states to have this type of climate change mitigation requirement puts it in a unique or unusual position, given this set of states is over 1/3 of the states in the United States.

[42] MJB-8: UCAN-SDGE Data Request 003
[43] Nowak Direct, p. 53, line 4.
[44] "Brief: State Renewable Portfolio Standards and Goals." National Conference of State Legislatures. Aug. 13, 2021. Available at: https://www.ncsl.org/energy/state-renewable-portfolio-standards-and-goals

Q45 Does Mr. Nowak provide sufficient data to compare the renewable energy electric procurement requirements imposed on SDG&E to those imposed on the proxy group companies?

A45 No. As I describe above, Mr. Nowak does not state the renewable energy electric procurement requirements for the states represented in the proxy group companies. He does not make an effort to compare the requirements imposed on SDG&E to those imposed on the proxy group companies.

Q46 Mr. Nowak goes on to argue that the more stringent climate change mitigation requirements imposed on SDG&E create risks for SDG&E relative to the proxy group companies related to demanding public policy goals.[45] Do you agree that these requirements are more stringent and demanding and create more risk for SDG&E?

A46 No. The degree to which a requirement is stringent and demanding depends on context. It is not sufficient to directly compare state renewable portfolio standards (RPS) without considering other factors, for example states' baseline levels of renewable energy electric procurement.

Even if Mr. Nowak had proven that California has a higher RPS requirement than the other states in the proxy group, that does not mean that the requirement is more stringent. RPS targets are set with a state's ability and current circumstances in mind. One indicator that supports this point is that most states with an RPS are hitting their targets.[46]

Q47 Putting aside the RPS level, then, how many of the proxy group companies' states have RPS requirements at all?

A47 As mentioned above, Mr. Nowak does not compare the environmental requirements placed on SDG&E to the proxy group companies. I decided to make this comparison. I used data on state renewable portfolio standards (percent of Applicable Retail Electricity

[45] Nowak Direct, p. 53, lines 9-14.
[46] Barbose, Galen. "U.S. State Renewables Portfolio & Clean Electricity Standards: 2024 Status Update." Lawrence Berkeley National Laboratory. August 2024. Slide 29. Available at: https://eta-publications.lbl.gov/sites/default/files/lbnl_rps_ces_status_report_2024_edition.pdf

Sales) from Lawrence Berkeley National Laboratory in tandem with Exhibit JCN-9 to calculate the percentage of jurisdictions within the proxy group companies that are subject to a non-zero RPS in 2025 and in 2050.[47]

I found that of the total operating jurisdictions in the proxy group (114 across the proxy group companies), 61 percent have an RPS in 2025 and 2050. Specifically, 70 operating jurisdictions are subject to an RPS in 2025 and 69 are subject to an RPS in 2050. This indicates that being subject to an RPS (as SDG&E is) is more typical in the proxy group companies than not being subject to an RPS.

I repeated this calculation after limiting the proxy group companies in Exhibit JCN-9 to the parent companies that own at least one gas utility to be more comparable to SDG&E, which spans gas and electricity. Of the total operating jurisdictions in the proxy group that operate under parent companies owning at least one gas utility (91 across the proxy group companies), 65 percent have an RPS in 2025 and 2050. Specifically, 60 operating jurisdictions are subject to an RPS in 2025 and 59 are subject to an RPS in 2050. This reinforces the finding that being subject to an RPS is more typical in the proxy group companies than not being subject to an RPS.

Q48 What is your conclusion regarding the risk of environmental mandates and SDG&E relative to the proxy group companies?

A48 I shared that the level of an RPS alone does not dictate stringency or demandingness – that this depends on state context. I conclude that alongside SDG&E, the majority of the proxy group companies are subject to an RPS in 2025 and 2050. Therefore, I conclude that SDG&E does not have elevated risk from environmental mandates relative to the proxy group.

[47] Barbose, Galen. "RPS and CES Nominal Percentage Targets." Excel spreadsheet. Lawrence Berkeley National Laboratory. August 2024. Available at: https://emp.lbl.gov/projects/renewables-portfolio/

- ***Wildfire Risk***

Q49 Mr. Nowak claims that "wildfire risk alone" is a reason for SDG&E's ROE to be set at the upper end of the range produced by the financial models.[48] Do you agree?

A49 No. I refer to testimony submitted on behalf of UCAN by Karl Pavlovic. Mr. Pavlovic explains how SDG&E's wildfire risk is already accounted for in its credit ratings.[49] Out of the 26 companies in Mr. Nowak's proxy group, 20 have an S&P credit rating of BBB+ or lower,[50] meaning 76.9% of the proxy group have ratings equal to or lower than SDG&E. Clearly, whatever wildfire risk SDG&E is exposed to has not pushed its risk above that of the average proxy group company.

- ***Regulatory Risk***

Q50 What does Mr. Nowak say about the relationship between the regulatory risk framework and revenue decoupling?

A50 Mr. Nowak names five factors that affect the regulatory risk of SDG&E and proxy group companies. One of these five factors is revenue decoupling.[51] Mr. Nowak shares that revenue decoupling protects against volumetric risk. [52]

Q51 What point does Mr. Nowak make, following his analysis, about how the regulatory framework reduces or doesn't reduce the risk of SDG&E relative to the proxy companies?

A51 Mr. Nowak argues that overall, from an investor perspective, the regulatory framework does not provide risk mitigation that meaningfully reduces the risk of the Company relative to the proxy companies.[53]

[48] Nowak Direct, p. 59, line 13.
[49] UCAN Exhibit – 02, Direct Testimony of Karl Pavlovich, pp. 5-9
[50] Exhibit JCN-3.
[51] Exhibit JCN-56.
[52] Nowak Direct, p. 57, lines 7-10.
[53] Nowak Direct, p. 57, lines 15-16.

Q52 Does Mr. Nowak specify how revenue decoupling, as one of the five factors, contributes to this overall argument that the regulatory framework does not provide risk mitigation that meaningfully reduces the risk of SDG&E relative to the proxy companies?

A52 No. Mr. Nowak states that SDG&E is able to apply a true-up mechanism to mitigate volumetric risk through decoupling, while approximately 54 percent of the operating companies held by the proxy group have either full or partial revenue decoupling measures that protect against volumetric risk.[54] Mr. Nowak does not explicitly draw a conclusion from this statement.

Q53 What additional information does Exhibit JCN-9 include about how SDG&E compares to the proxy group companies in terms of revenue decoupling?

A53 Exhibit JCN-9 specifies that SDG&E has full revenue decoupling. The exhibit also specifies that 14.9 percent of the proxy group companies have full revenue decoupling. Another 38.6 percent have partial revenue decoupling.[55] These groups add up to the 54 percent Mr. Nowak references in his direct testimony.

Q54 What conclusion do you draw from Exhibit JCN-9 about SDG&E's volumetric risk relative to the proxy group companies based on Mr. Nowak's statement that revenue decoupling protects against volumetric risk?

A54 By Nr. Nowak's logic, full revenue decoupling, which SDG&E has, protects against volumetric risk more than partial revenue decoupling does and more than no decoupling does. In the proxy group, 85.1 percent of companies have less revenue decoupling than SDG&E does. I conclude that relative to the proxy group companies, SDG&E has meaningfully lower volumetric risk.

[54] Nowak Direct, p. 57, lines 7-10.
[55] Exhibit JCN-9.

Q55 Has Mr. Nowak justified his statement that the regulatory framework does not provide risk mitigation that meaningfully reduces the risk of the Company relative to the proxy companies?

A55 No. The data from Mr. Nowak's own exhibit JCN-9 suggests that in terms of the revenue decoupling factor in the regulatory framework, SDG&E has lower risk relative to the proxy companies. Mr. Nowak has not addressed this nor has he stated that the revenue decoupling factor should be ignored within the regulatory risk framework.

7. OVERALL RATE OF RETURN

Q56 What is the cost of long-term debt you used to calculate the overall rate of return?

A56 I find that the Application's proposed cost of long-term debt of 4.62% to be reasonable.

Q57 How do you calculate the overall rate of return?

A57 I calculate the overall rate of return by multiplying the ratios for equity and long-term debt by their respective costs, and then summing the resulting weighted costs. The resulting ROR is shown in the following table:

Fig. 3

Component	Capital Ratio	Cost	Weighted Cost
Long-Term Debt	48%	4.62%	2.22%
Preferred Stock	0.00%	6.22%	0.00%
Common Equity	52%	8.87%	4.61%
Rate of Return	100%	N/A	6.83%

Q58 How does your recommended ROR compare to SDG&E's current authorized ROR?

A58 My recommended ROR of 6.83% is 0.62% lower than SDG&E's current authorized ROR of 7.45%, and, compared to the revenue requirement that results from that 7.45% ROR, my 6.83% ROR would result in revenue requirement savings for customers of $94.83 million on an annualized basis. I calculated those savings by substituting my ROR for SDG&E's in the Company's workpaper where it calculates the revenue requirement impact of its proposed cost of capital (UCAN-SDGE-002_ATTCH_Q1 Rev Req Impact). SDG&E's application states that its application will increase the revenue requirement by $96.45 million, so my recommendation would lead to $191.28 million in annual revenue savings for customers relative to SDG&E's proposal.

Q59 Does this conclude your testimony?

A59 Yes.

ATTACHMENTS TO DIRECT TESTIMONY OF MATTHEW BANDYK ON BEHALF OF UTILITY CONSUMERS' ACTION NETWORK CONCERNING SAN DIEGO GAS AND ELECTRIC COMPANY 2026 COST OF CAPITAL

MJB-1: Resume of Matthew Bandyk

MJB-2: Equity Risk Premium and Corresponding Risk-Free Rates

MJB-3: Beta

MJB-4: CAPM Analysis

MJB-5: Long-Term Growth Rate Sources

MJB-6: DCF (with Earnings Growth Rates)

MJB-7: DCF (with Dividend Growth Rate)

MJB-8: UCAN-SDG&E Data Request 003

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