VERIFIED REBUTTAL TESTIMONY OF VINCENT V. REA

TABLE OF CONTENTS

I. INTRODUCTION AND SUMMARY OF CONCLUSIONS

Q1. Please state your name, business address and title.

A1. My name is Vincent V. Rea. My business address is 801 E. 86th Avenue, Merrillville, Indiana 46410. I am employed by NiSource Corporate Services Company, a subsidiary of NiSource Inc. ("NiSource"), as its Director, Regulatory Finance and Economics.

Q2. On whose behalf are you submitting this rebuttal testimony?

A2. I am submitting this testimony on behalf of Northern Indiana Public Service Company LLC ("NIPSCO").

Q3. Are you the same Vincent V. Rea who submitted direct testimony in this proceeding?

A3. Yes.

Q4. What is the purpose of your rebuttal testimony in this proceeding?

A4. The purpose of my testimony is to rebut and otherwise respond to the direct testimony of Leja D. Courter, who is Director of the Natural Gas Division of the Indiana Office of Utility Consumer Counselor ("OUCC"), and Michael P. Gorman, a witness appearing on behalf of the NIPSCO Industrial Group ("Industrial Group") (together, the "Opposing Witnesses"), in connection with the appropriate

pretax return applicable to NIPSCO's TDSIC investments for the Company's gas operations under Ind. Code ch. 8-1-39 (the "TDSIC Statute").

Q5. Please provide an overview of the principal conclusions you have arrived at within your rebuttal testimony.

A5. Within my rebuttal testimony, I present arguments and direct evidence which demonstrates that the respective recommendations of the Opposing Witnesses are flawed, and should therefore be rejected by the Commission. In forming their recommendations, the Opposing Witnesses have relied upon assumptions, analyses and conclusions which suffer from a number of infirmities. I have summarized these infirmities as well as my overall conclusions below.

First, as I will demonstrate herein, the ROE recommendations of the Opposing Witnesses would not allow NIPSCO the opportunity to earn a fair pretax return on the Company's gas TDSIC tracker, as compared to other recent ROE determinations for gas distribution companies. As I will demonstrate in Table 1-R and Table 2-R below, the Opposing Witnesses' proposed ROE of 9.00 percent falls at the extreme lower end of recent ROE determinations for gas utilities nationwide.

Therefore, if the ROE recommendations of the Opposing Witnesses were adopted, it would send a clear message to the financial community that the regulatory climate in Indiana was not fully supportive of maintaining financially sound utilities in the State, which could potentially have negative implications from a capital attraction standpoint. This is particularly the case because the TDSIC Statute was designed to incentivize utility investments with the goal of modernizing the State's gas utility infrastructure, which serves the public interest.

In view of the fact that the proposed ROE of the Opposing Witnesses is approximately 90-100 basis points lower than recent authorized ROEs granted by the Commission for several base rate proceedings in Indiana,[1] as well as the TDSIC ROE recently granted to Indianapolis Power & Light Company ("IPL"),[2] adopting the recommendations of the Opposing Witnesses would almost certainly be received as an unwelcome surprise by the investment community, while at the

[1] These include an authorized ROE of 9.70 percent for Duke Energy Indiana in Cause No. 45253 (June 29, 2020); authorized ROE of 9.70 percent for Indiana Michigan Power in Cause No. 45235 (March 11, 2020); and authorized ROE of 9.75 for NIPSCO's electric operations in Cause No. 45159 (December 4, 2019).

[2] In the IPL Order, the Commission declined to adjust IPL's ROE, which was proposed by the IPL Industrial Group, thereby maintaining the 9.99 percent ROE previously authorized in Cause No. 45029.

same time creating a disincentive for NIPSCO to make additional TDSIC investments in the future.

Second, while the Opposing Witnesses maintain that recently declining U.S. Treasury and utility bond yields are, by definition, an indication of a declining cost of equity, they have failed to recognize that market volatility and investment risk continues to remain elevated in the COVID-19 environment. This strongly suggests that the market equity risk premium has increased significantly since prior to the COVID-19 crisis. As I discussed in my direct testimony (pp. 16-21), and will discuss further herein, the elevated level of market volatility and investment risk currently seen in the ongoing COVID-19 environment is demonstrated by multiple risk measures, including an elevated VIX index (CBOE[3] implied volatility index), higher utility beta coefficients, lower gas utility stock valuations, and higher utility bond spreads. Each of these measures suggest that the market equity risk premium continues to remain significantly elevated in the COVID-19 environment. Meanwhile, the Opposing Witnesses have also failed to adequately recognize that the recent monetary policy interventions of the Federal Reserve Board have been designed to exert downward pressure on long-term

[3] "CBOE" is the acronym for the Chicago Board Options Exchange.

interest rates in order to stimulate economy activity, the result of which does not reflect normal supply and demand dynamics in the U.S. capital markets. For these reasons, it is not appropriate to assume that the cost of equity has recently declined purely on the basis of the recent downward trend in long-term interest rates.

Third, the manner in which the Opposing Witnesses have applied the DCF, CAPM and Risk Premium Method ("RPM") models suffer from a number of infirmities. As I will discuss further herein, these infirmities have caused the DCF-determined cost of equity estimates of the Opposing Witnesses, which range from 8.60 percent to 9.20 percent, to be understated by as much as 160 to 220 basis points. At the same time, the CAPM-determined cost of equity estimates of the Opposing Witnesses, which range from 6.42 percent to 9.20 percent, are understated by as much as 140 to 420 basis points. And finally, Mr. Gorman's cost of equity estimates under the RPM, which ranges from 9.00 percent to 9.40 percent, is understated by as much as 80 to 120 basis points, while Mr. Courter did not prepare an evaluation under the RPM.

Fourth, Mr. Gorman's proposal to reduce NIPSCO's TDSIC ROE by 20 basis points due to the alleged risk reducing effects of the TDSIC mechanism should be rejected for a number of reasons, as I will discuss further herein. Chief among these

reasons is the fact that Mr. Gorman has not recognized that many of the proxy group companies that are referenced in estimating NIPSCO's cost of equity already benefit from similar infrastructure tracking mechanisms, strongly suggesting that the capital markets have already reflected the purported risk reducing benefit of the TDSIC program into the market data of the proxy group companies. Nor has Mr. Gorman recognized the fact that the sheer size and scale of NIPSCO's capital expenditure plan increases the Company's risk profile, which has long been recognized by the rating agencies. Moreover, as I will discuss later, the Commission previously recognized in NIPSCO's 2013 TDSIC proceeding (Cause No. 44371) the *offsetting effects* of increased investment versus the security and timeliness of the TDSIC mechanism, and for this reason, rejected Mr. Gorman's proposal to reduce NIPSCO's TDSIC ROE in the 2013 proceeding (Cause No. 44371).

Fifth, as I will discuss further herein, Mr. Gorman's proposal to reference NIPSCO's marginal cost of debt (rather than the Company's embedded cost of debt) for purposes of determining the pretax return for NIPSCO's gas TDSIC tracker, should also be rejected for a number of reasons. Chief among these reasons is that Mr. Gorman's proposal is clearly inconsistent with the plain

language of the TDSIC Statute (Section IC-8-1-39-13, Sec. 13. (a)), which states that when determining the pretax return for purposes of the TDSIC revenue requirement, the Commission may consider the public utility's capital structure and the *actual cost rates* for the public utility's long term debt and preferred stock. In no place does the Statute indicate that the incremental or marginal cost of debt should be referenced, and in the instant proceeding, NIPSCO has calculated its cost of long-term debt using actual cost rates, which is in accordance with the plain language of the Statute. Furthermore, in IPL's recent TDSIC proceeding (Cause No. 45264-TDSIC-1), the Commission rejected a very similar proposal made by Mr. Gorman, where he recommended that IPL reference its incremental cost of debt in determining the pretax return for purposes of the TDSIC revenue requirement.

And finally, for the reasons I will discuss later, Mr. Gorman's proposal to deny a "return on" NiSource's stock issuance flotation costs should be also be rejected.

After reviewing the testimony and analyses of the Opposing Witnesses and revisiting my direct testimony and corresponding cost of equity evaluation, I found no new evidence that would cause me to modify the recommendations made in my direct testimony. In this regard, I continue to conclude that NIPSCO's cost of equity remains in the range of 10.45 to 10.95 percent, and that a point

estimate of 10.70 percent provides a reasonable estimate of NIPSCO's cost of equity for purposes of determining the pretax return for the Company's gas TDSIC tracker.

Therefore, to the extent that the Commission elects to refer to the "other information" clause of the Statute ((Section IC-8-1-39-13, Sec. 13. (a)(5)), in addition to the ROE authorized by the Commission in NIPSCO's 2017 gas rate case proceeding, I recommend that the Commission adopt a cost of equity of 10.70 percent for purposes of NIPSCO's pretax return for the Company's gas TDSIC tracker. Notably, the comprehensive cost of capital evaluation I completed in the instant proceeding revealed that NIPSCO's cost of equity for its gas utility operations remains in the same range that it did at the time of the Company's 2017 gas rate proceeding, where I also recommended a cost of equity of 10.70 percent.

Q6. Please summarize the cost of equity recommendations that the Opposing Witnesses have proposed for purposes of determining the pretax return for NIPSCO's gas TDSIC tracker investments.

A6. OUCC Witness Courter has recommended an ROE of 9.00 percent for purposes of determining the pretax return for NIPSCO's gas TDSIC tracker. NIPSCO Industrials Group Witness Gorman has also recommended an ROE of 9.00 percent,

which incorporates two separate downward adjustments to NIPSCO's gas TDSIC ROE. The first adjustment is a 20 basis point downward adjustment that Mr. Gorman has applied due to the alleged "double recovery" of return between NIPSCO's retired rate base assets and TDSIC replacement assets. The second adjustment that Mr. Gorman applies is an additional 20 basis point downward adjustment for the "shifted risk" that Mr. Gorman alleges has occurred between the Company and its customers due to the implementation of the Company's gas TDSIC program.

II. THE ROE RECOMMENDATIONS OF THE OPPOSING WITNESSES WOULD NOT ALLOW NIPSCO THE OPPORTUNITY TO EARN A FAIR RATE OF RETURN ON THE COMPANY'S GAS TDSIC INVESTMENTS AS COMPARED TO THE AUTHORIZED ROES OF OTHER GAS DISTRIBUTION COMPANIES

Q7. Would the ROE recommendations of the Opposing Witnesses allow NIPSCO the opportunity to earn a fair return as compared to other gas distribution companies?

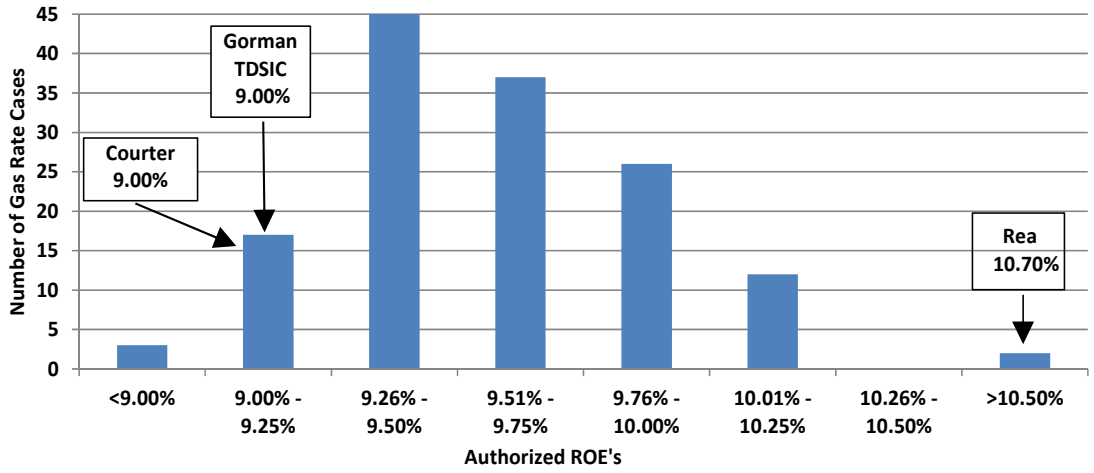
A7. No. To thoroughly investigate this matter, I evaluated the ROE recommendations of the Opposing Witnesses against: (1) recent ROE determinations for other gas distribution companies nationwide; and (2) recent ROE determinations for gas distribution companies in the 18 regulatory jurisdictions, including Indiana, that

are rated in the top one-third of regulatory jurisdictions by Regulatory Research Associates ("RRA"). RRA ranks the 53 regulatory jurisdictions in the U.S. on the basis of whether the jurisdiction maintains a constructive regulatory environment from the perspective of investors. Employing the above comparative approaches, I will demonstrate that the 9.00 percent ROE recommendations of the Opposing Witnesses would not allow NIPSCO the opportunity to earn a fair return on the Company's gas TDSIC investments as compared to the authorized ROEs of other gas distribution companies.

Q8. How do the ROE recommendations of the Opposing Witnesses compare to the ROEs authorized by state commissions across the U.S. during the past five years?

A8. To facilitate such a comparison, I present Table 1-R below, which summarizes the distribution of ROE determinations (in 0.25 percent increments) from 142 gas utility rate proceedings over the past five years (2016-2020).

Table 1-R
Distribution of Authorized ROEs for U.S. Gas Utilities
January 1, 2016 - September 30, 2020



As Table 1-R above illustrates, out of a total of 142 gas utility ROE determinations during the January 2016 - December 2020 period, only ten decisions were equal to or below the Opposing Witness' recommended ROE of 9.00 percent, and *all ten* of those decisions were in a single regulatory jurisdiction, that is, New York State. Stated alternatively, approximately 93 percent of the ROE determinations during this period were higher than the Opposing Witnesses' recommended level of 9.00 percent. However, when the authorized ROE decisions from New York State are eliminated from the data set, 100 percent of the ROE determinations for gas utilities during the 2016-2020 period were higher than the recommendations of the Opposing Witnesses.

Q9. How do the ROE recommendations of the Opposing Witnesses compare to the ROEs authorized by state commissions in the 18 regulatory jurisdictions,[4] including Indiana, that are rated in the top one-third of regulatory jurisdictions by RRA?

A9. While the Opposing Witnesses have focused their attention on the national average of authorized ROE determinations in recent years, it should be noted that Indiana is perceived by the investment community to be a more constructive regulatory environment than the nation as a whole. For this reason, evaluating the recently authorized ROE determinations in RRA's top-rated regulatory jurisdictions provide another useful basis of comparison, relative to Indiana's gas and electric utilities. In Table 2-R below, I present the distribution of authorized ROEs for gas distribution companies (for the 2016-2020 period) for those utilities that operate in the top one-third of regulatory jurisdictions as per the state regulatory evaluations of RRA.[5]

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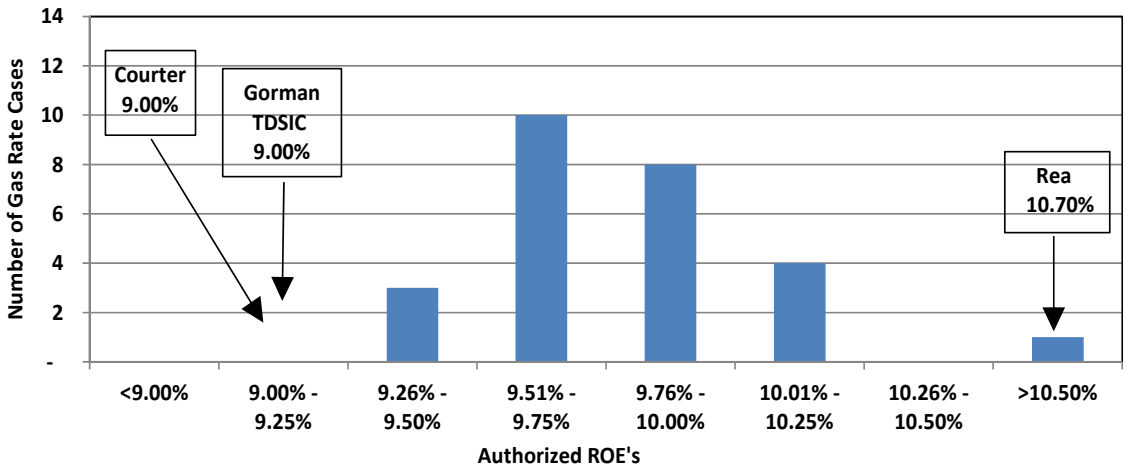
[4] The 18 top regulatory jurisdictions per RRA's *State Regulatory Evaluations* (August 19, 2020) are: Alabama, Arkansas, Florida, Georgia, Indiana, Iowa, Kentucky, Louisiana (PSC), Michigan, Mississippi, Nebraska, New York, North Carolina, North Dakota, Pennsylvania, Tennessee, Virginia and Wisconsin. The ROE determinations from New York State for the 2016-2020 period were removed from the analysis, since on a comparative basis, they represent extreme outliers that are inconsistent with the rest of the top 18 regulatory jurisdictions.

[5] *RRA Regulatory Focus, State Regulatory Evaluations*, S&P Global Market Intelligence (August 19, 2020). RRA ranks each of the 53 regulatory jurisdictions in the U.S. on the basis of whether those jurisdictions are constructive from the perspective of investors.

Table 2-R
Distribution of Authorized ROEs for RRA's
18 Top-Rated Regulatory Jurisdictions (excl. New York)
January 1, 2016 - September 30, 2020



As Table 2-R above illustrates, out of a total of 26 gas utility ROE determinations during 2016-2020 in the top one-third of jurisdictions (excluding New York), there were no decisions that were equal to or below the Opposing Witness' recommended ROE of 9.00 percent. Stated alternatively, 100 percent of the ROE determinations in the top-rated jurisdictions during the 2016-2020 period were higher than the recommended ROE of 9.00 percent that has been proposed by both of the Opposing Witnesses. Moreover, as can be seen in Table 2-R above, 22 of the 26 total gas utility ROE determinations made during the 2016-2020 period (or approximately 85 percent) were between the range of 9.51 percent and 10.25

percent. This is a particularly important observation, since Indiana's regulatory environment is among the top-rated regulatory jurisdictions per RRA, and is widely-perceived by the investment community to be largely constructive from the perspective of investors, while still appropriately balancing the interests of all stakeholders in the State.

Q10. How do the ROE recommendations of the Opposing Witnesses compare to the ROEs authorized by the Commission in recent years for purposes of the pretax return in utility TDSIC plans and also for general rate case purposes?

A10. The cost of equity proposed by the Opposing Witnesses of 9.00 percent is as much as 70 to 99 basis points lower than the ROE determinations made by the Commission for gas and electric utilities during the 2016-2020 period. Most recently, the Commission's IPL Order upheld the use of IPL's most recently granted authorized ROE from IPL's 2018 general rate case (Cause No. 45029), where the Commission approved a 9.99 percent ROE as per the terms of the settlement agreement in that proceeding. In addition, during 2019 and 2020, the Commission granted the following authorized ROEs in general rate proceedings for other utilities in the State: Duke Energy Indiana, LLC (9.70 percent, order date: June 29, 2020); Indiana Michigan Power Co. (9.70 percent, order date: March 11,

2020); and Northern Indiana Public Service Company (9.75 percent, order date: December 4, 2020).

Q11. How would the financial community respond if the Commission were to adopt the Opposing Witnesses' proposed ROE of 9.00 percent for purposes of the pretax return in the Company's gas TDSIC plan?

A11. If the Commission were to authorize an ROE at this level, the decision would not be well received in the financial community for several reasons. First, to a large degree, equity investors derive their return expectations for utility stocks on the basis of the authorized ROEs of similarly situated utilities in the same jurisdiction, and to a lesser extent, other jurisdictions. Because the TDSIC Statute generally prescribes, with some exceptions,[6] that the cost of equity referenced in a utility's TDSIC filing may reference the same ROE authorized by the Commission in the utility's last general rate proceeding, it is highly likely that the investment community has already incorporated the authorized ROE from the company's last rate case into the financial results they anticipate for the Company, which includes NIPSCO's TDSIC filings. For example, as I discussed at length in my direct

[6] Section IC-8-1-39-13, Sec. 13. (a)(5) of the TDSIC Statutes permits the Commission to also evaluate "other information that the Commission determines is necessary" in making a determination as to the appropriate pretax return for purposes of a utility's TDSIC tracker investments.

testimony (pp. 24-26), the rating agencies have made it quite clear that NIPSCO's credit ratings and ratings outlook are to a large degree dependent upon the Company's ongoing ability to make use of the cost recovery mechanisms currently available to regulated utilities in the State of Indiana. Therefore, to the extent that NIPSCO would no longer be able to reference the same cost of equity in its TDSIC filing that the Commission authorized in the Company's last general rate proceeding, this would constitute an unexpected development from the perspective of the rating agencies and the investment community in general. This, in turn, could put pressure on the Company's credit metrics and potentially its credit ratings, which could raise NIPSCO's borrowing costs. At the same time, equity analysts and stock investors would view the resulting lower levels of earnings and free cash flows in the context of inadequate returns, which could very well jeopardize their ongoing commitment to investing in NiSource's equity securities. Therefore, for all of the above reasons, the ROE recommendations of the Opposing Witnesses should be unequivocally rejected.

III. FAILURE TO RECOGNIZE THAT INVESTMENT RISK REMAINS ELEVATED IN THE COVID-19 ENVIRONMENT AND THAT INTEREST RATES CONTINUE TO BE INFLUENCED BY THE RECENT INVESTOR FLIGHT TO QUALITY AND THE EXTRAORDINARY INTERVENTIONS OF THE FEDERAL RESERVE BOARD

Q12. In forming their recommendations as to the appropriate cost of equity to reference for purposes of NIPSCO's gas TDSIC filing, have the Opposing Witnesses adequately recognized the elevated levels of volatility and investment risk that continues to persist in the COVID-19 environment?

A12. No. The Opposing Witnesses have not adequately recognized how the currently heightened levels of volatility and investment risk in the U.S. financial markets impact the market equity risk premium, and therefore the cost of equity. Instead, the Opposing Witnesses have based their recommendations primarily on the recent downward trend in U.S. Treasury security yields and corporate/utility bond yields. However, as I discussed at length in my direct testimony (pp. 10-15), these bond yields have been heavily influenced by the recent investor "flight to quality" resulting from the COVID-19 crisis. Moreover, U.S. bond yields have also been heavily influenced by the Federal Reserve Board's recent unprecedented market interventions, which have been intentionally designed to keep both U.S. Treasury security yields and corporate/utility bond yields at the lowest level possible to help foster economic growth. Meanwhile, the Opposing Witnesses have largely

ignored other important investment risk metrics which are less susceptible to the artificial interventions of the Federal Reserve Board, and which indicate that the market equity risk premium and the cost of equity have very likely risen significantly in the COVID-19 pandemic environment.

Q13. Can you please elaborate further on the investment risk metrics that currently suggest that the market equity risk premium and cost of equity have risen in the COVID-19 environment?

A13. Yes. I discussed these investment risk metrics at length in my direct testimony, and have provided updates to this data below:

- The "VIX" index, which is often referred to as the "fear index", continues to remain markedly elevated, most recently registering an average value of 29.44 during October 2020, and then closing the month of October 2020 at the level of 38.02. In contrast, the VIX's pre-COVID-19 levels (as recorded during January 2020) averaged just 13.94; while the average VIX level recorded during September 2017 (the month NIPSCO filed its 2017 gas rate case) was just 10.44. In other words, the VIX index remains markedly higher now as compared to both its pre-COVID-19 levels, and the levels recorded at the time of NIPSCO's 2017 gas rate case filing. As I discussed

in my direct testimony (pp. 17-18), options-implied cost of equity models such as the MCPM[7] have indicated that higher levels of implied volatility (as reflected in the currently elevated VIX index) is consistent with a higher equity risk premium and a higher cost of equity.

While Mr. Gorman maintains that the VIX index *"may indicate greater risk in the overall market but that does not indicate a similar change in investment risk for lower-risk regulated utility companies*[8]*"*, this statement is inaccurate for several reasons. First, it should be noted that the VIX index measures implied volatility for the S&P 500 stock index. Contrary to Mr. Gorman's assertion, it is noteworthy that the following eight regulated utility holding companies that are included in my utility proxy groups are in fact constituents of the S&P 500 stock index: Atmos Energy, Alliant Energy, Centerpoint Energy, CMS Energy, Consolidated Edison, Eversource Energy, Sempra Energy and WEC Energy Group. In other words, regulated utilities are in fact a material subset of the S&P 500 stock index.

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[7] "MCPM" is the acronym for The Market-Derived Capital Pricing Model. See, James J. McNulty, Tony D. Yeh, William S Schulze, and Michael H Lubatkin, *What's Your Real Cost of Capital?*, Harvard Business Review, October 2002, at 114-131

[8] Direct Testimony of Michael P. Gorman, Cause No. 45330-TDSIC-1, at 21.

Second, while Mr. Gorman maintains that "lower-risk" utilities would be expected to have a lower level of volatility and investment risk as compared to the overall market, Figure 3 (p. 14) in Mr. Gorman's testimony would appear to indicate otherwise. Mr. Gorman maintains that "utility investments have been less volatile during extreme market downturns,[9]" but as demonstrated by Figure 3 in Mr. Gorman's testimony, this certainly has not been the case for gas utilities during 2020 amid the COVID-19 environment. In fact, the S&P Global Market Intelligence ("MI") data that Mr. Gorman references in Figure 3 indicates that the stock price performance of the MI Gas Utility Index has actually been more volatile than the S&P 500 Index by a significant margin during the COVID-19 crisis, registering a 21.49 percent price *decline* year-to-date through September 30, 2020, while the S&P 500 index registered *positive* stock price performance through September 30, 2020. This clearly indicates that gas utilities have experienced a higher level of realized stock price volatility during the first nine months of 2020 as compared to the overall U.S. stock market. This fact pattern is consistent with a higher equity risk premium and higher cost of

[9] Direct Testimony of Michael P. Gorman, Cause No. 45330-TDSIC-1, at 14.

equity for gas utilities, and not just the overall market, as Mr. Gorman has implied.

- The Dow Jones Utility Average remains lower than the levels recorded immediately prior to the COVID-19 crisis. For example, during February 2020, the month before the COVID-19 crisis began to negatively impact the U.S. equity market, the Dow Jones Utility Average ("DJUA") registered an average closing price of $929.65. However, during October 2020, the DJUA registered an average closing price of $870.52, closing the month of October 2020 with a reading of $857.77, which continues to reflect a 7.7% valuation decline for utility stocks since February 2020. Moreover, as noted earlier, the MI Gas Utility Index tracked by S&P Global Intelligence has reported that the stock price performance for this gas utility index has declined by 21.49 percent year-to-date during 2020. Again, this is an important observation, since a widely-accepted financial precept is that lower equity valuations are generally consistent with a higher discount rate (i.e., a higher cost of equity).

- The most recently updated beta coefficients reported by *Value Line* (October 30, 2020) for the Combination Utility Group continue to reflect an average

value of 0.87, which is markedly higher than the average value reported by *Value Line* immediately prior to the COVID-19 crisis, which was 0.57 at the time[10]. The same relationship holds true with regard to NIPSCO's 2017 gas rate case proceeding, since at the time I completed my cost of capital evaluation in that proceeding, the average beta value reported by *Value Line* for the Combination Utility Group was 0.67. This is an important observation, since, when considered in isolation, a higher beta coefficient is consistent with both a higher company-specific equity risk premium and a higher overall cost of equity.

Q14. Do you agree with the Opposing Witnesses that the recent decline in U.S. Treasury security yields and corporate/utility bond yields is consistent with a declining cost of equity?

A14. No, as discussed above, the recent downward trending interest rate environment must be considered in the context of the currently elevated levels of risk and volatility, which are largely a consequence of the COVID-19 crisis, and which are consistent with a higher equity risk premium. The Opposing Witnesses have only

[10] The recent increase in *Value Line*'s beta coefficients has also been seen with regard to the Gas LDC Group and the Non-Regulated Group. For example, *Value Line* is now reporting an average beta coefficient of 0.86 for the Gas LDC Group, while the average value reported by *Value Line* immediately prior to the COVID-19 crisis was 0.63.

focused on the recent downward trend in interest rates, which is tantamount to cherry-picking the input variables that are referenced in a proper cost of capital evaluation, rather than analyzing all of the input variables. The comprehensive cost of equity evaluation I completed in conjunction with my direct testimony determined that NIPSCO's cost of equity for its gas utility operations remains in the same range that it did at the time of the Company's 2017 gas rate proceeding.

Q15. Do you agree with Mr. Gorman's contention that the Federal Reserve Board's recent monetary policy interventions are not intended to influence the direction of interest rates?

A15. No. Mr. Gorman makes the following inaccurate statements in his direct testimony:

> While the Federal Reserve's previous actions on Quantitative Easing and more recent reentry into both the Treasury, mortgage-backed security, and now to limited extent corporate bond market, the Federal Reserve's actions were done in order to preserve stability and liquidity in the market and to calm the marketplace. These Federal Reserve actions are not intended to drive down interest rates or manipulate the market in any way.[11]

[11] Direct Testimony of Michael P. Gorman, Cause No. 45330-TDSIC-1, at 17.

These statements are simply incorrect. Mr. Gorman is likely well aware that the Federal Reserve Board's actions to "preserve stability" and "calm the marketplace" are just alternative ways of stating that the Fed's actions were intended to reduce the level of *risk aversion* for investors in the U.S. debt capital markets. A fundamental investment principle is that a *reduced level of risk aversion* is consistent with *lower return expectations*, so to say that the Fed's actions were not intended to put downward pressure on interest rates is simply inaccurate. Moreover, as I noted in my direct testimony, former Federal Reserve Board Chairperson Janet Yellen would appear to disagree with Mr. Gorman in this regard, as Ms. Yellen has in fact characterized the purpose of the Federal Reserve Board's quantitative easing programs as follows:

> In response to the recent financial crisis, economic recession, and the weak economy that followed, the Federal Reserve has given the economy unprecedented support through large scale asset purchases (LSAPs) *in an effort to put downward pressure on longer-term interest rates* and ease financial conditions more broadly (emphasis added).[12]

[12] Federal Reserve Chairperson Janet Yellen's Response Letter to Jeff Sessions (Senate Budget Committee), *Fed Vice Chair Off the Mark,* The Daily Signal, July 11, 2014.

Furthermore, a study released by Federal Reserve Board economists also directly contradicts Mr. Gorman's statements in this regard, where the authors of the study concluded the following:

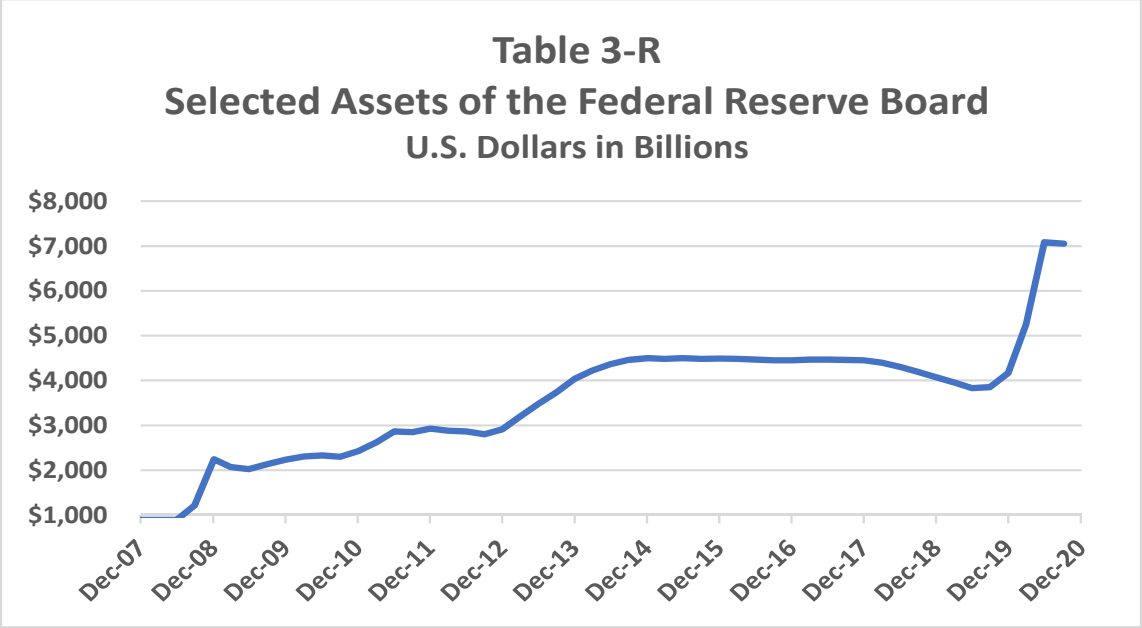
> In an effort to promote more accommodative financial conditions following the financial crisis of 2008 and the ensuing recession, and at a time when the conventional monetary policy tool –- the federal funds rate – was at its effective lower bound, the Federal Reserve conducted large-scale asset purchases (LSAPs) and a maturity extension program (MEP). By *increasing* the amount of longer-term Treasury securities and agency MBS on the Federal Reserve's balance sheet, and thereby *reducing* the amount of longer-term Treasury securities and agency MBS that the public would have held otherwise, *these purchase programs put downward pressure on longer-term interest rates.* This note outlines a way to estimate by how much Federal Reserve securities holdings resulting from these purchase programs *reduce longer-term interest rates*. In particular, we estimate the term premium effect (TPE) on the 10-year Treasury yield. Currently, our model suggests that the cumulative effect of the Federal Reserve's LSAPs and MEP results in a *reduction in the 10-year Treasury yield term premium of about 100 basis points.*
>
> Roughly speaking, this implies the yield on a 10-year Treasury security would be 100 basis points higher absent the Federal Reserve's LSAPs and MEP programs.[13]

Therefore, Mr. Gorman's statements to the contrary are simply misplaced.

[13] Bonis, Brian, Jane Ihrig, and Min Wei (2017). "The Effect of the Federal Reserve's Securities Holdings on Longer-term Interest Rates," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, April 20, 2017, https://doi.org/10.17016/2380-7172.1977.

Q16. Can you provide any additional evidence that the Federal Reserve Board's most recent monetary policy interventions have likely had a significant impact on long-term interest rates in the U.S.?

A16. Yes, as reflected in Table 3-R below, the sheer magnitude of the securities purchases that the Federal Reserve Board has made since the COVID-19 pandemic began further illustrates the significant impact that the Federal Reserve Board's market interventions have had on long-term interest rates.



As can be seen in Table 3-R above, the Federal Reserve Board's balance sheet holdings first began to increase significantly when the quantitative easing programs were first introduced during the 2008-09 financial crisis and Great

Recession. In recent years, the Federal Reserve Board's balance sheet holdings, which includes U.S. Treasury and mortgage-backed securities, has generally fluctuated in the range of between $4.0 - $5.0 trillion dollars. For a brief period during this time, the Federal Reserve Board endeavored to reduce its balance sheet holdings through is monetary policy normalization efforts, which did cause its balance sheet holding to decline to some extent. As further illustrated in Table 3-R above, at the end of 2019, several months prior to the start of the COVID-19 pandemic in the U.S., the Federal Reserve Board's balance sheet holdings amounted to approximately $4.0 trillion. In response to the unfolding COVID-19 crisis, the Federal Reserve Board re-started its quantitative easing program during March 2020, and since that time, the Fed's holdings have skyrocketed to about $7.1 trillion, which is an increase of approximately 78 percent over the Fed's pre-pandemic level holdings. In view of the fact that the Federal Reserve Board has now injected in excess of $7.0 trillion of liquidity in the U.S. debt capitals markets (much of which is focused on the long-end of the yield curve), there is no question that these actions will exert substantial downward pressure on long-term interest rates.

Q17. Mr. Gorman maintains (p. 21) that the "yield spread between utility bond yields and Treasury bond yields currently relative [sic] to long-term historical periods, does not support Mr. Rea's [your] contention that NIPSCO's cost of equity capital has increased." How do you respond?

A17. In the instant proceeding, which addresses the matter of the appropriate cost of equity to reference in the pretax return for the Company's gas TDSIC revenue requirement, the critical question is whether this yield spread differential, also referred to as the utility bond spread, has increased since the time of NIPSCO's 2017 gas rate proceeding. As such, while Mr. Gorman attempts to make a comparison of current yield differentials "relative to long-term historical periods," this is a misleading comparison. To be clear, Table 4 (p.22) in Mr. Gorman's testimony clearly illustrates that the yield differential between Baa rated utility bonds and U.S. Treasury bonds has actually *increased* by approximately 50 basis points (from 1.48 percent to 1.98 percent) since the time of NIPSCO's 2017 gas rate proceeding, which is consistent with a higher equity risk premium in today's market environment. Mr. Gorman has acknowledged this relationship between bond yield differentials and the market equity risk premium, where he presents the following question and answer in his direct testimony:

Is there a way to observe changes in market capital costs to assess the risk premium demanded by market participants? Yes. This can largely be observed by gauging the risk premiums that can be observed from changes in utility bond yields to Treasury yields.[14]

Q18. Recognizing that yield spread differentials, also known as "utility bond spreads", have historically been a reasonable proxy for estimating the market equity risk premium expectations of investors, do you believe that today's yield spread differentials reflect a pure market-based functioning of the U.S. capital markets?

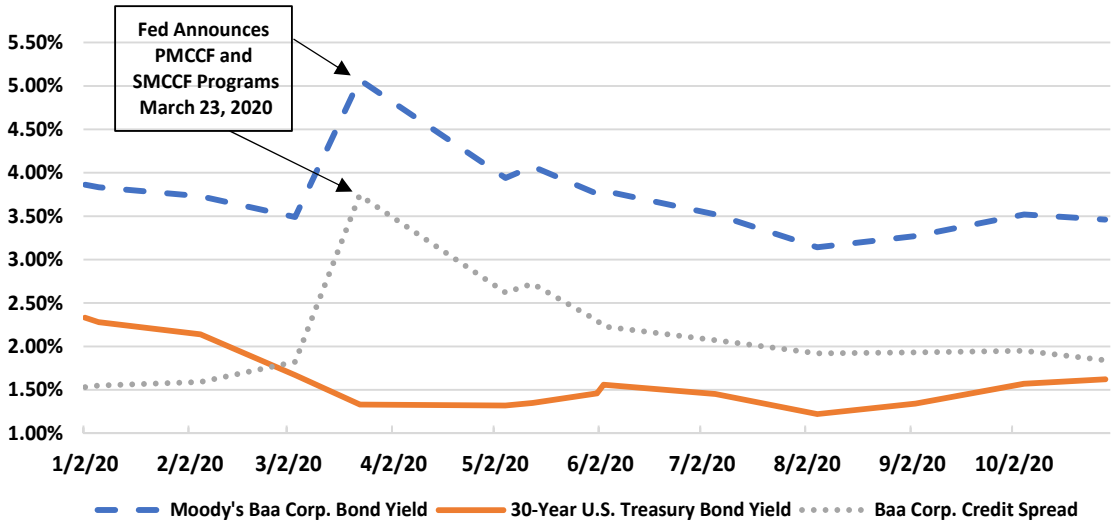
A18. No, I do not. As I discussed in my direct testimony (pp. 11-14), in response to the COVID-19 crisis, and for the first time ever, the Federal Reserve Board has provided unprecedented support to the U.S. *corporate bond market* through the establishment of both a primary market borrowing facility (the Primary Market Corporate Credit Facility ("PMCCF")) and a secondary market facility (the Secondary Market Corporate Credit Facility ("SMCCF")), both of which have facilitated the' Federal Reserve Board's purchases of U.S. corporate bonds in the primary and secondary markets. These facilities were intended to maintain unfettered borrowing capacity and liquidity for U.S. corporations during the COVID-19 crisis, with the Federal Reserve Board essentially serving in the capacity

[14] Direct Testimony of Michael P. Gorman, Cause No. 45330-TDSIC-1, at 21.

of "buyer of last resort" for corporate debt securities. Considering that this is the first time in U.S. history that the Federal Reserve Board has provided this type of support to the corporate bond market, there is no question that the Federal Reserve Board's interventions in this regard have distorted what would otherwise be the true market-determined borrowing costs for U.S. corporate fixed-income securities.

In fact, the effects that the Federal Reserve Board's recent interventions have had on the corporate bond market, which was a direct result of the creation of the PMCCF and SMCCF programs, can be seen in the impact that the announcement and subsequent implementation of these program have had on corporate bond yields and corporate credit spreads during the course of 2020. To better illustrate these effects, I present Table 4-R below.

Table 4-R
Baa Corporate Bond Yields and Credit Spreads During 2020



As reflected in Table 4-R above, during January 2020, prior to the COVID-19 pandemic crisis in the U.S., Baa-rated corporate yield differentials (or bond spreads) were trading in the range of 1.50 percent. However, during February and March 2020, as the COVID-19 pandemic began to negatively impact the U.S. capital markets, corporate bond yields and yield differentials begin to increase dramatically, which reflected rapidly increasing levels of investor risk aversion. By March 23, 2020, Baa-rated corporate bond yield differentials reached 3.74 percent, a very wide yield differential by all historical measures. On the very same day (March 23, 2020), in response to the rapidly deteriorating corporate bond market, the Federal Reserve Board announced the creation of the PMCCF and

SMCCF programs to provide critically needed liquidity support to the U.S. corporate bond market. As can be seen in Table 4-R above, it was only *after* the Federal Reserve Board announced the creation of these bond facility programs that stability was restored to the corporate bond market, at which point corporate bond yields and bond yield differentials gradually began to decline.

It is therefore important to note that while Table 4 (p. 22) in Mr. Gorman's testimony indicates that Baa-rated corporate and utility bond yield differentials have been approximately 50-70 basis points higher in 2020 than they were at the time of NIPSCO's 2017 gas rate proceeding, the current yield differential would have been significantly higher if the Federal Reserve Board had not intervened with the creation of the PMCCF and SMCCF programs. In view of the widely accepted relationship between bond yield differentials and the market equity risk premium, which Mr. Gorman acknowledges in his testimony, it is only logical to conclude that today's market equity risk premium is significantly above the levels experienced during the time of NIPSCO's 2017 gas rate proceeding. This is further demonstrated by the currently depressed trading valuations of gas utility stocks, which provides additional perspective as to the currently prevailing equity risk premium for gas distribution companies.

A critical takeaway from an evaluation of the above risk metrics is that the market equity risk premium very likely remains elevated in the COVID-19 environment, and also in comparison to the time of the Company's 2017 gas rate proceeding. For this reason, it is simply unreasonable to assume that the cost of equity has declined entirely on the basis of the recent downward trend in long-term interest rates. Indeed, the downward trending interest rate environment must be considered in the context of currently elevated levels of risk and volatility, which are a consequence of the COVID-19 crisis, and which are consistent with a higher equity risk premium.

Q19. Why is it important to consider the changes in market conditions since the Company's gas ROE was established by the Commission's Order dated September 19, 2018?

A19. The TDSIC statute explicitly references consideration of the Company's rate case ROE, which for NIPSCO was set just 26 months ago. To the extent the Commission decides to consider other information as prescribed by the Statute, it will do this to determine whether or not it should make some reasonable adjustment to the authorized ROE granted in NIPSCO's most recent gas rate proceeding. As demonstrated by my direct testimony, reference to post-rate case market

conditions can only support an *increase* to the ROE authorized in NIPSCO's 2017 gas rate proceeding, which is largely attributable to the increased risk environment since that proceeding.

IV. FAILURE TO CONSIDER A BROADER GROUP OF COMPARABLE-RISK NON-REGULATED COMPANIES TO PROVIDE PERSPECTIVE ON THE COMPETITIVE MARKET RESULT

Q20. Mr. Courter has referenced your Non-Regulated Group in his cost of equity evaluation, while Mr. Gorman has rejected the use of your Non-Regulated Group, stating that this proxy group is "subject to risks that are different from those affecting NIPSCO's regulated utility operations" and is "much riskier" than the utility industry. How do you respond?

A20. The regulatory precedent established in *Hope* and *Bluefield* does not require that comparable companies be similar with respect to a firm's business operations, or extent to which they are regulated. Comparable companies need only be similar with respect to their "corresponding risks", and contrary to Mr. Gorman's suggestion that the Non-Regulated Group is "much riskier" than the utility industry, he has provided no evidence in support of his assertion. In making this statement, Mr. Gorman fails to acknowledge that the Non-Regulated Group is fundamentally compromised of stable, lower-risk consumer staple, food

processing and telecommunication services companies, which much like regulated utilities, are less susceptible to the ebbs and flows of the business cycle. This includes companies such as Church & Dwight, McCormick & Co., McDonald's Corp., AT&T and Verizon. Moreover, I have demonstrated through a number of objective risk measures that the Non-Regulated Group is entirely risk-comparable to the utility proxy groups that I referenced in my evaluation. The summarized findings of my comparative risk assessment can be found within Table 1 (p. 7) of my direct testimony. Therefore, despite the fact that my comparative risk assessment demonstrated that the Non-Regulated Group is in fact attended by corresponding risks as per the *Hope and Bluefield* standards, Mr. Gorman has nonetheless rejected it out of hand. Moreover, while utility regulation is widely purported to be a substitute for market competition, Mr. Gorman has nonetheless chosen to ignore the market-based information which actually defines the "competitive result" for companies of comparable risk.

Q21. Mr. Gorman maintains that credit ratings are not necessarily an accurate representation of the risk of an entity, particularly when comparing companies across industries, and for this reason, Mr. Gorman recommends that the DCF

results for your Non-Regulated Group should be rejected. How do you respond?

A21. I disagree. The fact that two companies that operate in different industries, yet nevertheless have the same long-term credit ratings, do in fact have a very similar investment risk profile, is clearly borne out by Attachment MPG-1 to Mr. Gorman's testimony. As can be seen in Attachment MPG-1 (line 42), during the 1980-2020 period, the average Baa rated *corporate bond yield* was 8.24 percent, which is *identical* to the average Baa rated *utility bond yield* of 8.24 percent during the same period. Thus, over this 40-year horizon, the U.S. debt capital markets have priced the trading yields of both Baa rated corporate bonds and utility bonds in a manner which indicates an equivalent risk profile, despite their differing industry categories.

V. DCF METHODOLOGIES ARE FLAWED AND RESULTS ARE UNDERSTATED

Discussion of Mr. Courter's Testimony

Q22. What infirmities did you identify in Mr. Courter's DCF analysis?

A22. The significant infirmities that I identified in Mr. Courter's DCF analyses include: (1) excessive reliance on dividend and book value growth rate measures, neither of which are widely-referenced by investors, and which also do not reflect the

complete picture of investor growth expectations; (2) failure to evaluate the consensus EPS estimates of sell-side equity analysts, which have been shown to have a significant influence on stock prices; (3) failure to properly eliminate DCF outlier estimates which do not pass fundamental tests of reasonableness and economic logic, and which are simply blended into the DCF estimates calculated by Mr. Courter; (4) failure to adopt a financial leverage adjustment to recognize the higher level of financial risk associated with the book value based capital structure used for rate-setting purposes; and (5) failure to adopt a proper flotation cost adjustment. Collectively, these infirmities caused Mr. Courter's cost of equity range estimate under the DCF method, of 8.60 percent to 9.00 percent, to be woefully understated.

Q23. Mr. Courter has placed a great deal of emphasis on dividend per share (DPS) and book value per share (BVPS) growth measures in his DCF analyses. Do you agree that this is the correct approach in estimating the growth expectations of investors?

A23. No. The most relevant measure of growth for purposes of the DCF model is the growth rate that investors actually expect, and therefore factor into their investment decisions. Contrary to the implicit assumption made by Mr. Courter,

which is that investors place substantial emphasis on DPS and BVPS growth estimates, a substantial body of empirical evidence indicates otherwise. In fact, substantial academic research[15] has demonstrated that it is actually the *earnings estimates* of "sell-side" equity analysts that exert a significant influence over stock prices, and therefore on the return expectations of investors. This was further demonstrated in a widely-referenced article published in the *Financial Analysts Journal* which surveyed professional investment analysts, and which determined that *neither* dividend growth estimates nor book value growth estimates are heavily referenced by investment analysts, strongly suggesting that investors place very little emphasis upon them as well. Indeed, the article concluded: "Earnings and cash flow are considered far more important than book value and dividends."[16]

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[15] *See,* Robert S. Harris, "Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return," Financial Management, (Spring 1986), at 59, 66; James H. Vander Weide and William T. Carleton, *"Investor Growth Expectations: Analysts vs. History,"* The Journal of Portfolio Management (Spring 1988), at 4; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity,* Financial Management (Spring 1985), at 36; E.J. Elton, M.J. Gruber and J. Gultekin, "*Expectations and Share Prices*", Management Science (September 1981) at 975-981; K.L. Stanley, W.G. Lewellen, and G.G. Schlarbaum, *"Further Evidence on the Value of Professional Investment Research",* Journal of Financial Research (Spring 1981), at 1-9; Roger A. Morin, *New Regulatory Finance* (Public Utility Reports, Inc., 2006), at 298.

[16] Stanley B. Block, "A Study of Financial Analysts; Practice and Theory", Financial Analysts Journal, (July-August, 1999), at 88.

The conclusion drawn from this survey of professional analysts is only logical, as a company's earnings are the very source of both its dividend payments and retained earnings, and for this reason, EPS growth estimates provide a more complete picture of the future growth expectations of investors. The lack of investor demand for DPS and BVPS growth projections is further evidenced by the fact that none of these growth measures are generally reported by the major investment information consolidators, such as Thomson-Reuters, Yahoo Finance, and Zacks.

Q24. In deriving his cost of equity recommendations under his DCF analyses, Mr. Courter derives composite growth rate assumptions that range from 5.30 percent to 5.80 percent for the three proxy groups he evaluated. Do you agree with these growth rate assumptions?

A24. No. As reflected in Attachment LDC-4 (p. 4), Attachment LDC-5 (p. 4), and Attachment LDC-6 (p. 4), Mr. Courter's growth rate assumptions are significantly skewed by low-end outlier and *negative* growth rate values as reported by Value Line. No reasonable investor would knowingly commit their capital to an investment that promises a *negative* earnings growth rate, and for this reason, Mr. Courter should have removed these values from his DCF analyses.

Q25. Does Mr. Courter's DCF analysis make any attempt to identify and eliminate DCF results which do not pass fundamental tests of reasonableness and economic logic through the application of informed judgment?

A25. No. Mr. Courter has essentially ignored the individual cost of equity estimates for each of the respective DCF growth rates he evaluated, and simply blends together these individual estimates into his average values. Mr. Courter then referenced these average values in deriving his overall growth rate estimates. As such, Mr. Courter has not applied any degree of informed judgment to determine whether his *individual* DCF estimates were reasonable or not. Yet, in *The Cost of Capital-A Practitioner's Guide,* an authoritative source for utility cost of capital matters, a critical observation is made in this regard, as follows:

> …it is essential that estimates of investors' required rate of return produced by one method be compared with those produced by other methods, and that *all cost of equity estimates be required to pass fundamental tests of reasonableness and economic logic* (emphasis added).[17]

As demonstrated within Table 5-R, Table 6-R and Table 7-R below, Mr. Courter's DCF estimates include a number of low-end outlier results which are demonstrably illogical, and even incorporate a total of eight *negative* growth rate

[17] *The Cost of Capital - A Practitioner's Guide,* D. Parcell, Society of Utility and Regulatory Financial Analysts, (2010), at 84.

assumptions.[18] Based upon the 5.91 percent low-end outlier threshold established in my direct testimony for the Gas LDC Group, Combination Utility Group and Non-Regulated Group, which is well-supported by FERC precedent, I have identified numerous low-end outlier DCF estimates of the cost of equity, which Mr. Courter has erroneously incorporated into his cost of equity evaluation.

Table 5-R
Low-End DCF Estimates in Mr. Courter's Analyses Not Passing Fundamental Tests of Reasonableness and Economic Logic
Value Line Data for Gas LDC Proxy Group

Company	Growth Method	Exhibit	Cost of Equity Estimate*
New Jersey Resources	EPS Forecast Projected	LDC-6 (p. 4)	5.70%
Northwest Natural Gas	EPS Historical (10-yr.)	LDC-6 (p. 4)	(-7.30%)
Northwest Natural Gas	DPS Historical (10-yr.)	LDC-6 (p. 4)	5.70%
Northwest Natural Gas	BVPS Historical (10-yr.)	LDC-6 (p. 4)	5.20%
Northwest Natural Gas	EPS Historical (5-year)	LDC-6 (p. 4)	(-13.30%)
Northwest Natural Gas	DPS Historical (5-yr.)	LDC-6 (p. 4)	4.20%
Northwest Natural Gas	BVPS Historical (5-yr.)	LDC-6 (p. 4)	4.20%
Northwest Natural Gas	DPS Forecast Projected	LDC-6 (p. 4)	4.70%
Northwest Natural Gas	BVPS Forecast Projected	LDC-6 (p. 4)	5.70%
South Jersey Industries	EPS Historical (10-yr.)	LDC-6 (p. 4)	5.20%
South Jersey Industries	EPS Historical (5-year)	LDC-6 (p. 4)	1.20%

* Reflects the average dividend yield identified for each company, as shown in Exhibit LDC-6 (p. 2).

[18] It is highly unlikely that a rational investor would commit investment capital to an equity investment which is expected to offer a negative EPS and/or DPS growth rate.

Table 6-R
Low-End DCF Estimates in Mr. Courter's Analyses Not Passing Fundamental Tests of Reasonableness and Economic Logic
Value Line Data for Combination Utility Group

Company	Growth Method	Exhibit	Cost of Equity Estimate*
Centerpoint Energy	EPS Historical (10 year)	LDC-4 (p. 4)	4.30%
Centerpoint Energy	EPS Historical (5 year)	LDC-4 (p. 4)	2.30%
Centerpoint Energy	DPS Projected	LDC-4 (p. 4)	(-2.20%)
Consolidated Edison	EPS Historical (10 year)	LDC-4 (p. 4)	5.80%
Consolidated Edison	DPS Historical (10 year)	LDC-4 (p. 4)	5.30%
Consolidated Edison	EPS Historical (5 year)	LDC-4 (p. 4)	5.30%
MGE Energy Inc.	EPS Historical (5 year)	LDC-4 (p. 4)	5.80%
Northwestern Corp.	EPS Projected	LDC-4 (p. 4)	4.80%
Sempra Energy	EPS Historical (10 year)	LDC-4 (p. 4)	5.30%

* Reflects the average dividend yield identified for each company, as shown in Exhibit LDC-4 (p. 2).

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Table 7-R
Low-End DCF Estimates in Mr. Courter's Analyses Not Passing Fundamental Tests of Reasonableness and Economic Logic
Value Line Data for Non-Regulated Group

Company	Growth Method	Exhibit	Cost of Equity Estimate*
AT&T	DPS Historical (10 year)	LDC-5 (p. 4)	5.50%
AT&T	DPS Historical (5 year)	LDC-5 (p. 4)	5.00%
Coca-Cola	BVPS Historical (10 year)	LDC-5 (p. 4)	1.50%
Coca-Cola	BVPS Historical (5 year)	LDC-5 (p. 4)	(-7.50%)
Colgate-Palmolive	EPS Historical (5 year)	LDC-5 (p. 4)	5.00%
PepsiCo., Inc.	BVPS Historical (10 year)	LDC-5 (p. 4)	2.50%
Pepsi Co., Inc.	BVPS Historical (5 year)	LDC-5 (p. 4)	(-4.50%)
Proctor & Gamble	EPS Historical (10 year)	LDC-5 (p. 4)	5.50%
Proctor & Gamble	BVPS Historical (10 year)	LDC-5 (p. 4)	2.00%
Proctor & Gamble	EPS Historical (5 year)	LDC-5 (p. 4)	5.50%
Proctor & Gamble	BVPS Historical (5 year)	LDC-5 (p. 4)	(-1.50%)
Sysco Corp	BVPS Historical (10 year)	LDC-5 (p. 4)	(-1.00%)
Sysco Corp	BVPS Historical (5 year.)	LDC-5 (p. 4)	(-12.00%)
Verizon Communications	BVPS Historical (10 year)	LDC-5 (p. 4)	1.00%
Verizon Communications	DPS Historical (5 year)	LDC-5 (p. 4)	5.50%
Verizon Communications	DPS Projected	LDC-5 (p. 4)	5.00%
Verizon Communications	BVPS Projected	LDC-5 (p. 4)	4.00%
Wal-Mart	EPS Historical (5 year)	LDC-5 (p. 4)	1.50%
Wal-Mart	BVPS Historical (5 year)	LDC-5 (p. 4)	4.50%

* Reflects the average dividend yield identified for each company, as shown in Exhibit LDC-5 (p. 2).

2

3 Therefore, Mr. Courter essentially "blends-in" the above illogical DCF results into

4 his DCF estimates. This is not proper, as the exercise of informed judgment is

critical under such circumstances, and consistent with FERC precedent,[19] investors cannot reasonably be expected to invest in common stocks if the expected return on a given stock is lower, or only marginally higher, than the returns available on corporate fixed-income securities. Likewise, DCF estimates on the extreme high-side of the spectrum should also be evaluated for reasonableness through the exercise of informed judgment. Therefore, as a result of Mr. Courter's failure to properly evaluate the reasonableness and economic logic of his DCF results through the exercise of informed judgment, his results are not supportable, and should therefore be rejected. Taken in the aggregate, all of the above infirmities have caused Mr. Courter's ROE range estimate under the DCF method (8.60 to 9.00 percent), to be woefully understated.

Discussion of Mr. Gorman's Testimony

Q26. What infirmities did you identify in Mr. Gorman's DCF analysis?

A26. Mr. Gorman's DCF analyses were essentially derived by correcting for alleged shortcomings in my DCF analyses. After applying these purported corrections, Mr. Gorman suggests that the DCF-determined cost of equity for purposes of

[19] See, *Association of Businesses Advocating Tariff Equity, et al., v. Midcontinent Independent System Operator, Inc., et al.*, 169 FERC ¶ 61,129, Opinion No. 569, at P 387 and P 388 (November 21, 2019); Southern California Edison Co., 131 FERC ¶ 61020 at P 55 (April 15, 2010); ISO New England, Inc. et al., 109 FERC ¶ 61,147 at P 205 (November 3, 2004).

NIPSCO's gas TDSIC investments is in the range of 8.90 percent to 9.20 percent. The significant infirmities that I have identified in Mr. Gorman's analyses include: (1) failure to incorporate both the historical and projected EPS growth rates reported by Value Line into his DCF analyses; (2) failure to eliminate DCF estimates that did not meet threshold tests of reasonableness and economic logic; (3) failure to incorporate DCF estimates which reference the market and financial data of the Non-Regulated Group, which I have already discussed earlier; (4) failure to adopt a financial leverage adjustment to recognize the difference in financial risk between the market value based capital structure and book value based capital structure used for ratemaking purposes; and (5) failure to adopt a proper flotation cost adjustment within his DCF analyses. Taken in the aggregate, these infirmities cause Mr. Gorman's DCF-determined range estimate for the cost of equity of 8.90 percent to 9.20 percent to be significantly understated.

Q27. In your opinion, should Mr. Gorman have included the historical and projected EPS growth estimates reported by Value Line in his DCF analyses?

A27. Yes. While I generally agree with Mr. Gorman that the forward-looking consensus EPS growth rate estimates of equity analysts should be afforded a heavier weighting than historical EPS growth measures, this does not suggest that the

historical growth rates should be totally ignored, which is what Mr. Gorman has elected to do in the instant proceeding. This is particularly true in those cases where a significant disparity exists between the historical and projected EPS growth measures, which is currently the case. Likewise, Mr. Gorman should not have excluded the EPS growth rate estimates of Value Line, which are widely-referenced by investors. These estimates provide a broader perspective of the growth expectations of investors when compared to the approach taken by Mr. Gorman. This can be seen in Table 8-R below, which illustrates the extent to which Mr. Gorman's approach has understated the appropriate growth estimate and therefore the cost of equity.

Table 8-R **EPS Growth Rate Measures for DCF Analyses**	
Source of EPS Growth Rate Measure	**Growth Rate**
Gas LDC Group	
Yahoo Finance – Projected	5.60%
Zacks – Projected	6.10%
Gorman Average	5.85%
Add:	
Value Line – Projected	8.90%
Value Line – Historical (1)	6.83%
Actual Average	6.86%
Combination Utility Group	
Yahoo Finance – Projected	5.50%
Zacks – Projected	5.20%
Gorman Average	5.35%
Add:	
Value Line – Projected	5.90%
Value Line – Historical	5.20%
Actual Average	5.45%
(1) Excludes negative growth rate values.	

Q28. In his DCF analyses, Mr. Gorman failed to evaluate whether his cost of equity estimates passed basic tests of reasonableness and economic logic, and then states that you subjectively eliminated certain proxy group companies, which prevented you from determining the central tendency of your proxy group results. How do you respond?

A28. I disagree. Mr. Gorman has essentially ignored the individual cost of equity estimates produced by his analysis, and simply blends together these individual estimates into an average value. As a result, Mr. Gorman has not applied any degree of informed judgment to determine whether his individual DCF estimates were reasonable or not. I have already addressed this matter at length in my response to Mr. Courter's direct testimony.

With regard to Mr. Gorman's statement that the tests of reasonableness and economic logic that I have applied to my DCF results prevented me from determining the central tendency of the results, this is simply incorrect since my outlier analysis did result in the elimination of both low-end and high-end outlier results, consistent with recent FERC precedent.[20] I have discussed the FERC's recently updated methodology for evaluating outlier DCF estimates at length in my direct testimony (Attachment 4-A, Schedule 7).

[20] See, *Association of Businesses Advocating Tariff Equity, et al., v. Midcontinent Independent System Operator, Inc., et al.*, 169 FERC ¶ 61,129, Opinion No. 569, at P 387 and P 388 (November 21, 2019); Southern California Edison Co., 131 FERC ¶ 61020 at P 55 (April 15, 2010); ISO New England, Inc. et al., 109 FERC ¶ 61,147 at P 205 (November 3, 2004).

Q29. Mr. Gorman maintains that the financial risk adjustments you applied to your DCF results are flawed, and refers to this adjustment as a "market-to-book ratio adjustment." How do you respond?

A29. Once again, I disagree. The financial risk adjustments I have applied within my cost of equity evaluation are based on the classic financial theorems[21] of Modigliani and Miller ("M&M"), are in fact not flawed, and do not constitute a market-to-book ratio adjustment. As discussed in Attachment 4-A, Schedule 8 to my direct testimony, the leverage adjustments I have proposed are necessary to recognize the increase in financial risk which results when a market-based cost of equity estimate, which corresponds to a market-value based capital structure, is applied to a utility's book value based regulatory capital structure, which almost invariably incorporates a higher level of financial risk.

Q30. Mr. Gorman maintains that your flotation cost adjustment is not justified because you have not demonstrated that it is based on actual and verifiable flotation costs incurred by NIPSCO. How do you respond?

[21] *See,* Franco Modigliani and Merton H. Miller, "Taxes and the Cost of Capital: A Correction," *American Economic Review,* 53 (June 1963), 433-443; Franco Modigliani and Merton H. Miller, *The Cost of Capital, Corporation Finance and the Theory of Investments, American Economic Review* 48 (June 1958) at 261-297.

A30. I disagree. As an operating subsidiary of NiSource Inc., NIPSCO does not directly issue common equity in the public markets, and like the rest of NiSource's utility subsidiaries, the Company receives its equity financing from NiSource Inc. Considering that the amount and timing of the equity offerings completed by NiSource in the public markets are based on the enterprise-wide financing needs across the entire NiSource footprint, the timing of these equity offerings will not directly correspond to the amount and timing of downstream equity contributions received by NiSource's utility subsidiaries. Therefore, it is not possible to trace on a specific identification basis, the equity contributions that NIPSCO has historically received, back to the public equity offerings completed by NiSource. Nevertheless, this does not justify Mr. Gorman's position, which is essentially that NIPSCO should be deprived of recovering a "return on" the flotation costs incurred by NiSource on its behalf. To do so would deprive investors, who provided the capital to NiSource to support its utility subsidiary operations, an opportunity to earn a fair return on their *entire* investment. As I discussed in Attachment 4-A, Schedule 9 to my direct testimony, NiSource has incurred significant flotation costs on behalf of its utility subsidiaries in recent years, and it is clear that NiSource will continue doing so to a significant extent over the foreseeable future.

Furthermore, the finance literature provides useful guidance on the matter of flotation costs in those circumstances where a utility subsidiary's equity capital is obtained from the parent holding company, as follows:

> Some controversies have surfaced regarding the flotation cost allowance. The first is the contention that a flotation allowance is inappropriate if the utility is a subsidiary whose equity capital is obtained from its parent. This objection is unfounded since the parent-subsidiary relationship does not eliminate the costs of a new issue, but merely transfers them to the parent. It would be unfair and discriminatory to subject parent shareholders to dilution while individual shareholders are absolved from such dilution. Fair treatment must consider that if a utility subsidiary had gone to the capital marketplace directly, flotation costs would have been incurred.[22]

Therefore, consistent with the foregoing arguments, the Company should be entitled to earn a "return-on" the flotation costs which NiSource has already incurred on behalf of its subsidiary companies, as well as those flotation costs that it expects to incur in the foreseeable future. Despite Mr. Gorman's arguments to the contrary, the Company's proposed adjustment of between 5.0 to 6.0 basis points, which is based on NIPSCO's contributed capital equity layer, constitutes

[22] Morin, Roger A., "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006), at 333.

an appropriate "return-on" the flotation costs incurred by NiSource on NIPSCO's behalf, and should therefore be adopted by the Commission.

VI. CAPM METHODOLOGIES ARE FLAWED AND RESULTS ARE UNDERSTATED.

Discussion of Mr. Courter's Testimony

Q31. What infirmities did you identify in Mr. Courter's CAPM analysis?

A31. The major infirmities that I identified include: (1) neglecting to evaluate a prospectively focused market return and market risk premium, thereby not properly recognizing that the CAPM is a forward-looking ex-ante model that requires expectational inputs; (2) improperly relying on corporate bond total returns rather than government bond income returns in calculating the historical market risk premium for purposes of the CAPM; (3) improper reliance on the geometric average of large stock total returns in calculating the historical market risk premium; (4) incorrectly assuming that the market risk premium is static or "fixed", despite compelling evidence demonstrating that it is actually dynamic and bears an inverse relationship with U.S. Treasury yields; and (5) failure to recognize substantial empirical evidence supporting the use of both the ECAPM and the CAPM with size adjustment. Collectively, these infirmities cause Mr.

Courter's CAPM estimates to be woefully understated,[23] which is made clear by the fact that Mr. Courter's CAPM estimates are approximately 270-300 basis points below the recent national averages of authorized ROEs for gas utilities. As such, Mr. Courter's results do not pass the most basic tests of reasonableness and economic logic, and should therefore be rejected.

Q32. Is it widely-accepted that forward-looking, ex ante models such as the CAPM require expectational inputs?

A32. Yes. Proper application of the CAPM requires expectational inputs rather than backward-looking model inputs, which is particularly critical in view of the recent volatile capital markets environment.

Q33. In his CAPM analyses, Mr. Courter derives an estimated market equity risk premium of 4.90 percent, which is based on an average of the historic geometric average and arithmetic average risk premiums. In your opinion, is the 4.90 percent value an accurate reflection of the market equity risk premium in the current market environment?

[23] Mr. Courter's CAPM analyses produced a 6.70 percent cost of equity estimate for the Gas LDC Group, 6.79 percent cost of equity estimate for the Combination Utility Group, and a 6.42 percent cost of equity estimate for the Non-Regulated Group.

A33. Absolutely not. Again, it must be emphasized that the CAPM is a forward-looking ex ante model that requires expectational inputs, and despite this fact, Mr. Courter has chosen not to evaluate the prospectively determined market return or market equity risk premium in his CAPM analyses. A balanced, best practices approach to estimating the market equity risk premium for purposes of the CAPM requires that both historical and prospective data be evaluated, which is why I took this approach in my CAPM analyses.

Q34. Setting aside momentarily the need to also evaluate the *prospective* market return and market risk premium, did Mr. Courter correctly estimate the *historical* market equity risk premium?

A34. No. For purposes of the CAPM, calculating the historic market risk premium requires that the historic *risk-free rate of return* be subtracted from the historic overall market return to determine the historic market risk premium. In other words, the widely-accepted textbook definition of the market risk premium requires that the *risk-free rate of return*, for which U.S. Treasury security yields are the best known proxy, should invariably be a critical component of the market risk premium calculation. Nevertheless, in deriving his market risk premium estimate, Mr. Courter has incorrectly relied upon historical *corporate bond returns* rather than

U.S. Treasury or government bond returns, which constitutes a misspecification of the CAPM model, and also has the effect of significantly reducing Mr. Courter's estimated market risk premium.

Furthermore, Mr. Courter also referenced *total* bond returns rather than bond *income* returns, which is not the proper approach, since income returns reflect the only truly risk-free component of total bond returns. As a result of these misspecifications of the CAPM model, Mr. Courter's estimate of the historic market risk premium of 4.90 percent is grossly understated. Notably, the *2020 SBBI Yearbook*, which Mr. Courter references in his direct testimony, reports a 12.10 percent arithmetic average annual market return for U.S. large-cap stocks during the 94-year period between 1926-2019, while the *SBBI Yearbook* reports a 4.90 percent arithmetic average income return for long-term government bonds[24] during the same period.[25] This is the properly specified returns data to reference for purposes of determining the historic market risk premium. Based on this corrected data, it can be readily determined that the proper historic market risk premium to reference for purposes of the CAPM is 7.20 percent (12.10 percent -

[24] Again, long-term government bond yields are the appropriate proxy to reference for purposes of identifying the risk-free rate of return in the CAPM model.
[25] 2020 SBBI Yearbook, Duff & Phelps, LLC, at 6-17.

4.90 percent = 7.20 percent). It is therefore clear that Mr. Courter's historic market risk premium assumption is understated by approximately 2.30 percent (or 230 basis points), and this is without even considering the fact that Mr. Courter has not conducted an evaluation of the *prospective* market risk premium, which is a critically important input variable that needs to be considered in ex ante models such as the CAPM.

Q35. Can you provide any additional evidence that Mr. Courter's estimate of the market risk premium is significantly understated?

A35. Numerous academic studies[26] have demonstrated an inverse relationship between the market risk premium and government interest rates. Specifically, these studies have demonstrated that when government interest rates change by 100 basis points in either direction, the market risk premium will change by between 37 - 75 basis points in the opposite direction, and therefore that a 50-basis point "inverse relationship" assumption provides a reasonable basis for estimating the prevailing market risk premium based on current interest rates. Accordingly, in estimating

[26] *See,* Robert S. Harris, "Using Analysts' Growth Forecasts to Estimate Shareholder Required Rates of Return", *Financial Management* (Spring 1986), at 58-67; Robert S. Harris and F. Marston, "Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts," *Financial Management*, 21 (Summer 1992), at 63-70; Farris M. Maddox, Donna T. Pippert and Rodney N. Sullivan, "An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry," Financial Management, 24 (Autumn 1995), at 89-95.

the prevailing market risk premium, consideration must be given to this well-documented inverse relationship. As noted earlier, according to the *2020 SBBI Yearbook*, the historical average market risk premium over the past 94 years (1926-2019) has been 7.20 percent, which is calculated on the basis of the arithmetic average of large-capitalization stock returns (12.10 percent), and the arithmetic average of income returns on long-term U.S. government bonds (4.90 percent). Considering that the historical average market risk premium of 7.20 percent is calculated on the basis of the historical average income return on government bonds of 4.90 percent, it is simply not reasonable for Mr. Courter to conclude, particularly in view of the recent interest rate environment, that the market risk premium is currently 230 basis points *lower* than the 94-year historical average of 7.20 percent. To the contrary, when the current low interest rate environment is considered in the context of the historically documented inverse relationship between government interest rates and the market risk premium, it is entirely reasonable to conclude that the market risk premium is currently *above* the 94-year historical average of 7.20 percent. For this reason, it is simply unreasonable for Mr. Courter to conclude that the prevailing market risk premium is currently as low as 4.90 percent.

Q36. In developing his estimate of the market risk premium, Mr. Courter references the geometric average of historic total returns for large-capitalization stocks, and criticizes you for not adopting the same approach. Is this a reasonable approach?

A36. No. As reflected on page 12 of Mr. Courter's testimony, he has incorrectly relied upon the geometric mean in evaluating historic return data for purposes of estimating the expected market risk premium, and as a result, his analysis yields a market risk premium assumption of just 4.10 percent, as based upon the geometric mean.[27] Multiple academic studies and financial publications have made clear that the *arithmetic mean* is the appropriate basis to employ when estimating the market return and risk premium expectations of investors. This is attributable to the fact that the arithmetic mean is the unbiased estimate of a security's expected future return, since it incorporates the variability of historical returns into future return expectations. In contrast, the geometric mean does not incorporate the expected future variability of equity returns into the market risk premium calculation. In fact, the historical variability of investment returns has been removed from the geometric mean, which provides a "smoothed" growth

[27] *See* Attachment LDC-8 (p. 1) to Mr. Courter's direct testimony.

calculation, and which is further illustrated by the fact that the geometric mean invariably has a standard deviation of *zero.* For these reasons, a number of finance academics have concluded that the geometric mean return is *not* an appropriate measurement basis for estimating the expected cost of equity or market risk premium. It is therefore clear that Mr. Courter has ignored multiple studies by well-regarded academics which indicate that the proper measurement basis to use in forecasting future market risk premium expectations is the arithmetic mean. The *SBBI Yearbook* has explained the rationale for using the arithmetic mean as follows:

> The argument for using the arithmetic average is quite straightforward. In looking at projected cash flows, the equity risk premium that should be employed is the equity risk premium that is expected to actually be incurred over the future time periods….
>
> The best estimate of the expected value of a variable that has behaved randomly in the past is the average (or arithmetic mean) of its past values.[28]

Similarly, in their MBA-level finance textbook, Brealey, Myers and Allen state:

> *Moral:* If the cost of capital is estimated from historical returns or risk premiums, use arithmetic averages, not compound annual rates of return.[29]

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[28] Ibbotson Associates, *Stocks, Bonds, Bills, and Inflation, 2005 Yearbook, Valuation Edition*, at 75.

[29] Brealey, R., Myers, S., and Allen, P. *Principles of Corporate Finance*, International Edition, New York: McGraw-Hill, 2011, at 159.

Further arguments supporting of the use of the arithmetic mean when estimating the cost of capital can be found in the publications of other well-regarded finance academics.[30] Therefore, for the above stated reasons, Mr. Courter's equity risk premium assumptions understate investor expectations by a significant margin, thereby causing his CAPM estimates to incorporate a significant downward bias.

Q37. Mr. Courter failed to recognize substantial empirical evidence supporting the use of the ECAPM, and has rejected this approach, stating that the ECAPM "is designed to address a theoretical downward bias in risk by increasing the risk factor, called 'beta'."[31] How do you respond?

A37. I disagree. Dr. Roger Morin, who serves as Emeritus Professor of Finance at Georgia State University, developed the ECAPM based upon the large body of empirical research which demonstrated that the CAPM risk-return relationship, as illustrated by the Security Market Line, is actually flatter than what is predicted by the traditional CAPM. Dr. Morin's development of the ECAPM was heavily

[30] *See*, Bodie, Z., Kane, A., and Marcus, A.J. *Investments*, New York: McGraw-Hill Irwin, 8th ed., 2009, at 126-127; Brigham, E.F. and Ehrhardt, M. *Financial Management: Theory and Practice,* 8th ed., Hinsdale, IL, Dryden Press, 2005; Bruner, R.F., Eades, K.M., Harris, R.S., and Higgins R.C. "Best Practices in Estimating the Cost of Capital: Survey and Synthesis," *Financial Practice and Education*, Spring/Summer 1998, at 13-28.

[31] Direct Testimony of Leja D. Courter, Cause No. 45330-TDSIC-1, at 13.

influenced by the research of other well-respected finance academics[32] that similarly developed enhanced CAPM models based on many of the same principles and empirical findings which Morin applied in developing the ECAPM. Contrary to Mr. Courter's statements, the ECAPM does not represent a risk adjustment to beta (or a horizontal axis adjustment to the SML), but instead represents a return adjustment (or vertical axis adjustment to the SML) for empirically observed differences in actual stock returns versus what is actually predicted by the traditional CAPM. Therefore, in view of the empirically observed shortcomings of the traditional CAPM as discussed above, it is both reasonable and prudent to consider the ECAPM as a useful adjunct in a comprehensive CAPM analysis. Meanwhile, although Mr. Courter maintains that the ECAPM has been rejected by the Commission in two previous rate proceedings, it should also be noted that in at least one recent rate proceeding in Indiana, the Commission's

[32] *See,* Fama, E.F. and French, K.R. "The Cross-Section of Expected Stock Returns," *Journal of Finance,* June 1992, 427-465; Fama, E.F. and MacBeth, J.D. "Risk, Returns and Equilibrium; Empirical Tests," *Journal of Political Economy,* September 1972, pp. 607-636; Litzenberger, R.H. and Ramaswamy, K., "The Effect of Personal Taxes and Dividends on Capital Asset Prices: Theory and Empirical Evidence," *Journal of Financial Economics,* June 1979, 163-196; Litzzenberger, R.H., Ramaswamy, K., and Sosin, H. "On the CAPM Approach to the Estimation of a Public Utility's Cost of Equity Capital." *Journal of Finance,* May 1980, 369-383; Pettengill, G.N., Sundaram, S. and Mathur, I. "The Conditional Relation Between Beta and Returns," *Journal of Financial and Quantitative Analysis, Vol.* 30, No. 1, March 1995, at 101-116.

Final Order[33] did not expressly reject the ECAPM method. I will also address Mr. Gorman's criticisms of the ECAPM in my response to his testimony below.

Discussion of Mr. Gorman's Testimony

Q38. What infirmities did you identify in Mr. Gorman's CAPM analysis?

A38. Mr. Gorman's CAPM analysis in the instant proceeding was limited to adjustments he made to my CAPM analyses. Based on these adjustments, which I will discuss below, Mr. Gorman recommends a CAPM-determined cost of equity of 9.10 percent to 9.20 percent. I have identified the following infirmities in the adjustments that Mr. Gorman has applied to my CAPM analyses: (1) failure to reference a proper expectational risk-free rate of return in his analysis; (2) failure to recognize the degree to which the market risk premium is elevated in the current market environment; (3) failure to recognize substantial empirical evidence supporting the use of both the CAPM with size adjustment and the ECAPM; and (4) failure to also apply his CAPM analysis to a broader group of comparable risk companies, such as the Non-Regulated Group, which I discussed earlier in my rebuttal testimony. Taken in the aggregate, these infirmities cause

[33] Order of the Commission, *Petition of Indianapolis Power & Light Company ("IPL") for Authority to Increase Rates and Charges for Electric Utility Services;* Cause No. 44576, March 16, 2016.

Mr. Gorman's CAPM estimates of the cost of equity[34] to be significantly understated, and for this reason, they should be rejected.

Q39. Is Mr. Gorman's risk-free rate of return assumption of 1.90 percent reasonable in your opinion?

A39. No. Mr. Gorman has arbitrarily referenced a risk-free rate of return assumption of 1.90 percent, which is based upon a forecast of the 30-year U.S. Treasury bond yield for the first quarter of 2022, which he claims reflects a reasonable near-term risk-free rate of return expectation. However, a risk-free return assumption that only reflects a period of one-year out into the forecast horizon does not likely reflect the risk-free rate of return that will be in effect during the rate-effective period. Based on NIPSCO's past rate case history, the rate-effective period could ultimately prove to be in effect for a period much longer than one year [perhaps adjust this statement after discussing with the legal-regulatory team]. Moreover, the one-year time horizon that Mr. Gorman referenced for his risk-free rate of return assumption does not match the time horizon he referenced in his market risk premium assumption of 8.39 percent, which incorporates the 3-5 year EPS

[34] Mr. Gorman's CAPM analyses produced a cost of equity estimate of 9.10 percent for the Gas LDC Group and an estimate of 9.20 percent for the Combination Utility Group.

consensus growth estimates of equity analysts for the S&P 500 Index.[35] For this reason, Mr. Gorman's risk-free rate of return assumption does not properly reflect expectational inputs, which is a requirement of the ex ante models such as the CAPM.

Q40. Do you believe Mr. Gorman's market risk premium assumption of 8.39 percent reflects the current environment in the U.S. capital markets?

A40. No. I have already addressed this matter in my response to Mr. Courter's direct testimony, where I discussed the reasons why I believe the market risk premium remains significantly elevated in the current market environment. Mr. Gorman derived his 8.39 percent market risk premium assumption by selectively editing my market risk premium analysis, which essentially amounted to eliminating the Value Line component of my evaluation. In my opinion, the Value Line information I referenced provides another entirely reasonable data point for estimating the prevailing market risk premium, and for this reason, I believe Mr. Gorman erred in removing this information from his estimate.

[35] *See*, Attachment 4-A, Schedule 5 (p.1, line 10) to Mr. Rea's direct testimony.

Responses to Mr. Gorman's Criticisms of the Company's CAPM Analysis

Q41. Mr. Gorman maintains that your ECAPM analysis is flawed[36] because you referenced the adjusted utility betas reported by Value Line rather than unadjusted betas. How do you respond?

A41. I disagree. It is important to note that the ECAPM does not represent a risk adjustment to beta (or a horizontal axis adjustment to the SML), but instead represents a return adjustment (or vertical axis adjustment to the SML) for empirically observed differences in actual stock returns versus what is actually predicted by the traditional CAPM. In contrast, the adjustments that are made to raw betas by investment advisory services such as Value Line are designed to correct for the tendency of betas to regress towards the mean value of 1.0 over time. For this reason, the use of adjusted betas within the ECAPM does not result in any inconsistencies or redundancies as suggested by Mr. Gorman, since the ECAPM incorporates a return adjustment for empirically observed differences in actual returns, rather than a risk adjustment to beta. Notably, Dr. Roger Morin, who originally developed the ECAPM, has indicated that there are no inconsistencies or redundancies associated with using adjusted betas in an

[36] Direct Testimony of Michael P. Gorman (Cause No. 45330-TDSIC- 1), Appendix B, at 17.

ECAPM analysis. Specifically, in *New Regulatory Finance*, Dr. Morin makes the following observation:

> Some have argued that the use of the ECAPM is inconsistent with the use of adjusted betas, such as those supplied by Value Line and Bloomberg. This is because the reason for using the ECAPM is to allow for the tendency of betas to regress toward the mean value of 1.00 over time, and, since Value Line betas are already adjusted for such trend, an ECAPM analysis results in double-counting. This argument is erroneous. Fundamentally, the ECAPM is not an adjustment, increase or decrease, in beta. This is obvious from the fact that the expected return on high beta securities is actually lower than that produced by the CAPM estimate. The ECAPM is a formal recognition that the observed risk-return tradeoff is flatter than predicted by the CAPM based on myriad empirical evidence. The ECAPM and the use of adjusted betas comprised two separate features of asset pricing….Both adjustments are necessary[37].

Therefore, in making his criticisms of the ECAPM, Mr. Gorman has chosen to simply ignore the perspective of the highly-distinguished academic who actually developed the ECAPM. For all of the above stated reasons, Mr. Gorman's criticisms of the ECAPM should be rejected.

Q42. Mr. Gorman has failed to recognize substantial empirical evidence supporting the use of the CAPM with size adjustment, and rejects this element of your CAPM analysis. How do you respond?

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[37] Roger A. Morin, *New Regulatory Finance,* Public Utilities Reports, Inc., 2006, at 191.

A42. I disagree. The finance literature has clearly demonstrated that the size premium is a necessary adjunct to the traditional CAPM in order to properly correct for the inability of the CAPM (and beta coefficients) to adequately explain the level of *excess returns* that have historically been earned by small capitalization stocks. These arguments have been well-summarized by the *Ibbotson SBBI Valuation Yearbook,* which states:

> ….the greater risk of small stocks does not, in the context of the capital asset pricing model (CAPM), fully account for their higher returns over the long term. In the CAPM only systematic, or beta risk, is rewarded; small company stocks have had returns in excess of those implied by their betas[38].

Thus, while Mr. Gorman attempts to argue that the size adjustments I have applied are based on companies that have "significantly more" systematic risks and are not reflective of the utility industry or NIPSCO, this argument ignores the true rationale for applying a size premium in the first place. As noted above in the *SBBI Valuation Yearbook,* the size premium adjustments I have applied are meant to recognize the fact that small company stocks have historically generated overall returns that are *in excess* of the returns implied by their betas.

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[38] 2012 Ibbotson SBBI Valuation Yearbook, (Morningstar, Inc.) at 85, 88, and 89.

Q43. Can you provide any additional information which demonstrates that the size premium is in fact applicable to the utility industry, despite Mr. Gorman's suggestions to the contrary?

A43. Yes. At least two studies have concluded that the size premium does in fact apply to utility companies. For example, in *Equity and the Small-Stock Effect*, Annin concluded:

> For the traditional CAPM, the large-company composite shows a cost of equity of 12.05 percent; the small company composite, 13.93 percent. However, once the respective small capitalization premium is added in, the spread increases dramatically, to 12.07 and 17.95 percent, respectively. Clearly, the smaller the utility (in terms of equity capitalization), the larger the impact that size exerts on the expected return of that security[39].

Similarly, in Utility Stocks and the Size Effect–Revisited, Zepp concluded:

> New studies based on different size water utilities are presented that do support a small firm effect in the utility industry[40].

Furthermore, in an opinion issued in 2015, the FERC characterized the small size premium as a "generally accepted approach" to CAPM analyses. In this opinion, the FERC stated:

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[39] Annin, M., *Equity and the Small-Stock Effect,* Public Utilities Fortnightly, October 15, 1995, 133, at 42.

[40] Zepp, T., *Utility Stocks and the Size Effect–Revisited,* The Quarterly Review of Economics and Finance, 43 (2003), at 578-582.

> We disagree with Petitioners' argument that the NETOs CAPM analysis is flawed due to the fact that the NETOs applied a size adjustment to account for the difference in size between the NETOs and the dividend-paying companies in the S&P 500. This type of size adjustment is a generally accepted approach to CAPM analyses, and we are not persuaded that it was inappropriate to use a size adjustment in this case. The purpose of the NETOs size adjustment is to render the CAPM analysis useful in estimating the cost of equity for companies that are smaller than the companies that were used to determine the market risk premium in the CAPM analysis[41].

It is clear that the size premium is in fact applicable to the utility industry, and is therefore warranted in the instant proceeding.

Q44. Mr. Gorman criticizes the size adjustment you applied to your CAPM analysis because you did not compare the average capitalization of the proxy groups to the average capitalization of NiSource. How do you respond?

A44. I disagree. Mr. Gorman has misinterpreted the purpose of the size adjustment that I have applied in my CAPM analyses, which is to recognize the size premium differential that exists between the overall market portfolio (S&P 500 Index) and the respective proxy groups. This adjustment is required in the first step of establishing the cost of equity for the respective proxy groups, *prior to* determining the cost of equity for the subject utility, such as NIPSCO in the instant proceeding. While Mr. Gorman argues that I should have instead evaluated the average

[41] Federal Energy Regulatory Commission, Opinion 531-B, 61,165 at P117 (2015).

capitalization of NiSource, this is incorrect, since it is the proxy group companies that provide the underlying basis for my cost of equity evaluations, not NiSource.

VII. RISK PREMIUM METHODOLOGY IS FLAWED AND RESULTS ARE UNDERSTATED

Q45. Did you identify any significant infirmities in Mr. Gorman's Risk Premium Model (RPM) Analysis?

A45. Yes. Mr. Gorman's RPM analysis in the instant proceeding was limited to adjustments he made to my RPM analyses from my direct testimony. Based upon these adjustments, Mr. Gorman recommends a RPM-determined cost of equity in the range of 9.00 percent (for the Gas LDC Group) to 9.40 percent (for the Combination Utility Group). I have identified the following infirmities in the adjustments that Mr. Gorman has applied to my RPM analyses: (1) referencing recent historical utility bond yields rather than referencing the forward-looking expectational bond yield that is anticipated over the rate-effective period; and (2) referencing an A rated utility bond yield for the Gas LDC group, while the average long-term credit rating of the Gas LDC group is A- (S&P) / A3 (Moody's), which would actually reflect a higher borrowing cost.

Q46. To what extent are Mr. Gorman's RPM-based cost of equity recommendations understated as a result of him referencing historic corporate bond yields instead

of expectational bond yields, and also misspecifying the average credit rating of the Gas LDC Group?

A46. Mr. Gorman's RPM-based cost of equity estimate for the Gas LDC Group is understated by at least 107 basis points, which represents the difference between my forward-looking corporate bond yield assumption of 4.14 percent and Mr. Gorman's historically focused corporate bond yield assumption of 3.07 percent. At the same time, Mr. Gorman's cost of equity estimate for the Combination Utility Group is understated by 77 basis points, which represents the difference between my forward-looking corporate bond yield assumption of 4.21 percent and Mr. Gorman's historically focused corporate bond yield assumption of 3.44 percent. Taken together, these infirmities cause Mr. Gorman's Risk Premium estimates to be understated by as much as 107 basis points, and for this reason they should be rejected.

VIII. A DOWNWARD ADJUSTMENT TO NIPSCO'S TDSIC ROE DUE TO AN ALLEGED ELIMINATION OF UTILITY RISK IS UNWARRANTED AND WOULD CONSTITUTE A PENALTY.

Q47. Mr. Gorman maintains that NIPSCO's TDSIC tracker ROE should be adjusted downward by 20 basis points because the TDSIC mechanism "largely

eliminates the utility risk arising from base rate recovery of capital investments" (p. 3). How do you respond?

A47. I disagree. As a preliminary matter, I would first point out that Mr. Gorman has not provided any quantitative analyses or other record evidence in support of his proposed 20 basis point adjustment to NIPSCO's TDSIC ROE. With respect to Mr. Gorman's statement concerning the reduction of risk, as I discussed at length in my direct testimony, the market-based data of those companies comprising the utility proxy groups already captures any theoretical reduction in business risks that would result from the reduced regulatory lag associated with infrastructure cost recovery mechanisms. Attachment 4-A, Schedule 1 to my direct testimony clearly demonstrated that the majority of companies in both the Gas LDC Group and the Combination Utility Group already benefit from infrastructure cost recovery mechanisms which are very similar in form to the Company's TDSIC mechanism. In essence, Indiana's TDSIC program puts the State's utilities on an equal footing with other utilities nationwide which also benefit from similar infrastructure cost recovery mechanisms. Considering that equity investors do not evaluate potential investments in utility companies in isolation, but rather on a comparative basis versus other utility companies, the existence of the TDSIC program would not be expected to either increase or decrease the level of risk

perceived by investors when considered on a comparative basis. It is also important to note that infrastructure cost recovery mechanisms are intended to serve the public interest by ensuring the safety and reliability of a utility's pipeline infrastructure. For these reasons, applying an ROE adjustment as proposed by Mr. Gorman would be tantamount to an economic penalty assessed on NIPSCO for merely implementing a cost recovery program that has been established by Indiana statute, and which ultimately serves the public interest.

Q48. Do you agree with Mr. Gorman's premise that the TDSIC mechanism "largely eliminates" utility risk arising from base rate recovery of capital investments?

A48. No. As noted earlier, the salient matter in this regard is whether NIPSCO's TDSIC mechanism reduces the Company's risk profile *relative to* the other utility companies included in the proxy groups, since these proxy group companies form the underlying basis upon which the cost of equity is estimated. Considering that the vast majority of the utility proxy group companies already benefit from infrastructure tracking mechanisms that are similar in form to NIPSCO's gas TDSIC tracker, there should not be any significant differences in *relative risk.* Nonetheless, Mr. Gorman's proposal essentially ignores the matter of *relative risk,* which is the risk measure that actually matters, since any risk effects that are

associated with cost recovery mechanisms are already reflected in the market data of the proxy group companies. Instead, Mr. Gorman focuses only on *absolute risk,* seemingly as if proxy group analyses were not part of the cost of equity evaluation process in utility rate proceedings.

However, even from the vantage point of absolute risk, which I do **not** believe is the appropriate risk measure to evaluate in the instant proceeding, Mr. Gorman's position still overstates the level of risk reduction which results from the implementation of the TDSIC tracker. For example, as I discussed in my direct testimony (pp. 24-26), Moody's has recently noted that NIPSCO's capital expenditure plan will result in the Company generating *negative* free cash flows over the foreseeable future. Specifically, the Moody's publication stated:

> The size of NIPSCO's annual capital investment plan means that the company will generate *negative free cash flows* even before accounting for any dividends to its parent (emphasis added).[42]

Therefore, as noted by Moody's, it is clear that a large scale capital expenditure plan, and particularly a capital plan that is expected to result in negative free cash flows, would be expected to actually *increase* the Company's risk profile, despite

[42] *Moody's Investors Service*, Credit Opinion, Northern Indiana Public Service Company (July 29, 2020), at 5.

Mr. Gorman's assertions to the contrary. The Commission has previously acknowledged this very fact in NIPSCO's 2013 TDSIC proceeding (Cause No. 44371), where the Commission rejected Mr. Gorman's proposal to reduce NIPSCO's TDSIC ROE, stating the following in its Order:

> ….we acknowledge the *offsetting effects* of this tracker's cost recovery security and timeliness and the *increased investment* being made for the associated projects. Consistent with our finding above on the appropriate capital structure, we decline to lower NIPSCO's authorized return on equity from that approved in its most recent rate case (emphasis added)[43].

Therefore, despite Mr. Gorman's assertions to the contrary, it is clear that a large scale capital investment plan, by its very nature, can increase a company's risk profile.

Q49. Are you aware of any other recent TDSIC proceedings in Indiana where the Commission has rejected Mr. Gorman's proposal to apply a downward adjustment to a TDSIC ROE on the basis of the purported elimination of utility risk?

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[43] *Order of the Commission*, Indiana Utility Regulatory Commission (Cause No. 44371), February 17, 2014, at 17.

A49. Yes. The Commission rejected the same proposal made by Mr. Gorman in IPL's recent TDSIC proceeding, where the Commission stated the following in its Order:

> Consistent with our finding on this issue in Cause No. 44371 on the appropriate ROE, we decline to accept the IG's argument in this case to lower IPL's authorized ROE from that approved in its most recent rate case (and agreed to by the IG) based on a purported reduction in risk with the implementation of the TDSIC plan. Therefore, based on the evidence presented, the Commission finds that approval of IPL's TDSIC Plan and use of the statutory cost recovery mechanism *has not created a change in IPL's risk profile that is utilized to determine its ROE.* Thus, we decline to adjust IPL's ROE in this proceeding.[44]

IX. THE INDUSTRIAL GROUP'S PROPOSAL TO REFERENCE THE MARGINAL COST OF DEBT FOR PURPOSES OF THE COMPANY'S PRETAX RETURN IN THE TDSIC REVENUE REQUIREMENT, IS INCONSISTENT WITH THE PLAIN LANGUAGE OF THE TDSIC STATUE, AND SHOULD THEREFORE BE REJECTED.

Q50. Mr. Gorman has recommended that the pretax return developed for purposes of NIPSCO's TDSIC investment should reference the Company's marginal or incremental cost of long-term debt instead of NIPSCO's embedded cost of debt. How do you respond?

A50. I disagree. Mr. Gorman's proposal is clearly inconsistent with the plain language of the TDSIC Statute. Specifically, Section IC-8-1-39-13, Sec. 13. (a) of the TDSIC

[44] IPL Order, p. 11.

Statute states that for purposes of determining the appropriate pretax return for the public utility, and specifically as it relates to the cost of long-term debt, the Commission may consider: (a) the public utility's capital structure, and (b) the *actual cost rates* for a public utility's long term debt and preferred stock. Both of these sources of information referenced by the Statute represent historical financial data reported in the accounting records of the utility, and nowhere in the TDSIC Statute does it indicate that marginal or incremental cost information should be referenced. In the instant proceeding, NIPSCO has calculated its cost of long-term debt using actual cost rates, which is clearly in accordance with the plain language of the Statute.

Q51. Does NIPSCO conduct its long-term debt financing activities on a project-specific basis, or even track the Company's long-term financing activities on a project-specific basis?

A51. No, on both accounts. NIPSCO has not historically conducted its long-term debt financing activities on a project-specific identification basis, but has rather financed the Company's enterprise-wide financing needs on an aggregated basis. In this regard, the Company's periodic long-term debt financing requirements factor in a number of other considerations that extend well beyond the

requirements of NIPSCO's TDSIC investments. These other considerations include the level of the Company's operating cash flows; short-term and long-term debt refinancing activities; total capital expenditures, which extend beyond the requirements of the TDSIC program; and other financing activities, including the payment of dividends to NiSource. Simply stated, NIPSCO conducts its long-term debt financing activities on an aggregated basis, where its *entire* debt portfolio finances the *entire* rate base, as well as the Company's TDSIC investments, which are ultimately rolled into the rate base. Therefore, Mr. Gorman's proposal to reference the marginal cost of debt in the instant proceeding is clearly inconsistent with how NIPSCO's rate base additions and TDSIC investments have historically been financed and accounted for in past regulatory proceedings.

Q52. Do you have any other concerns with Mr. Gorman's proposal to reference the marginal cost of debt in determining NIPSCO's pretax return for purposes of its TDSIC revenue requirement?

A52. Yes. Taken to its logical conclusion, Mr. Gorman's proposal, if accepted by the Commission, would likely set the stage for endless future debates as to whether other components of a utility's regulatory capital structure, and the associated cost rates, should be linked, on a specific identification basis, to a utility's future TDSIC

investments. This approach would not only be inconsistent with the plain language of the TDSIC Statute, but would also make the determination of a utility's WACC (or pretax return) significantly more complicated. For example, for a given TDSIC investment, would the subject utility actually be able to determine what percentage of each TDSIC investment was financed with common equity, long-term debt, short-term debt, or zero-cost sources of capital, such as deferred income taxes, customer deposits, etc.? This is highly unlikely due the aggregated nature in which utilities generally finance their operations, which then would likely require *estimates* of these values, thus ultimately resulting in a confusing and cumbersome process.

Moreover, while Mr. Gorman has proposed that the marginal cost of long-term debt be referenced in the instant proceeding, he has not proposed an offsetting adjustment for other components of the regulatory capital structure which would **not** be utilized in the project financing type approach that he has recommended for the Company's TDSIC investments. Notably, Mr. Gorman has not proposed that the zero-cost sources of capital embedded in NIPSCO's regulatory capital structure be either removed or modified in the determination of NIPSCO's pretax return for the TDSIC revenue requirement.

Q53. Does a regulatory mechanism already exist that will capture a declining interest rate environment within the embedded cost of debt?

A53. Yes, the traditional rate case. Notably, Mr. Gorman states in his testimony: *"due to refinancings and issuances of new debt, NIPSCO's embedded cost of debt has been declining significantly*[45]*."* Therefore, NIPSCO's customers will in fact benefit from the Company's declining embedded cost of debt, once the Company files its next general rate case.

Q54. Has the Commission rejected Mr. Gorman's proposals in the past to make modifications to the methodology of determining the pretax return in other TDSIC filings?

A54. Yes. In NIPSCO's 2013 TDSIC proceeding (Cause No. 44371), the Commission rejected Mr. Gorman's proposal to modify NIPSCO's capital structure, which Mr. Gorman maintained should be more in line with that of a project-specific financing. In this Order, the Commission concluded:

> ….we are not persuaded that a capital structure more in line with project specific financing is appropriate. The regulatory capital structure for NIPSCO as an enterprise includes equity, debt and zero cost capital. We believe NIPSCO and other Indiana utilities are better viewed as on ongoing concern that utilizes all of their capital resources in a holistic manner to finance that ongoing concern,

[45] Direct Testimony of Michael P. Gorman (Cause No. 45330-TDSIC-1), at 42.

> including resources which have no cost attached. This view and methodology is consistent with other long-standing capital investment trackers such as the ECRs. Accordingly, the Commission finds that NIPSCO shall calculate WACC in a manner consistent with its last rate case and ECR proceedings, which includes zero cost capital in the capital structure.[46]

In addition, in IPL recent TDSIC proceeding (Cause No. 45264-TDSIC-1), the Commission rejected Mr. Gorman's proposal which would have required IPL to reference its incremental cost of long-term debt in determining IPL's WACC (or pretax return), which is essentially the same recommendation that Mr. Gorman has made in the instant proceeding. In its Order in the IPL proceeding, the Commission referenced its previous Order from NIPSCO's 2013 TDSIC proceeding (which I have also referenced above), and then stated:

> The evidence in this proceeding does not lead to a different conclusion. Such an approach is also supported by the language of Ind. Code § 8-1-39-13(a)(2), which refers to "the public utility's capital structure," and Ind. Code § 8-1-39-13 (a)(3), which refers to "actual cost rates for the public utility's long-term debt and preferred stock. Thus, for these reasons, we approve IPL's use of its actual capital structure as of the rider cutoff date, March 31, 2020, and the actual cost rate for the long-term debt component of IPL's capital structure in calculating its WACC, not the alternative proposals made by Mr. Gorman[47].

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[46] *Order of the Commission*, Indiana Utility Regulatory Commission (Cause No. 44371), February 17, 2014, at 17.

[47] *Order of the Commission*, Indiana Utility Regulatory Commission (Cause No. 45264 TDSIC 1), October 14, 2020, at 12-13.

To summarize, the Commission has previously rejected similar proposals that Mr. Gorman has made in at least two previous TSDIC proceedings. Despite this fact, Mr. Gorman's proposal in the instant proceeding is very similar to the proposals that he made in the aforementioned proceedings. For this reason, and all of the other reasons articulated above, the Commission should reject Mr. Gorman's proposal in the instant proceeding.

Q55. Does this conclude your rebuttal testimony?

A55. Yes.

VERIFICATION

I, Vincent V. Rea, Director, Regulatory Finance & Economics for NiSource Corporate Services Company, affirm under penalties of perjury that the foregoing representations are true and correct to the best of my knowledge, information and belief.

Vincent V. Rea

Dated November 13, 2020