

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 58 of 73

sufficient evidence to support the proposed amount of the inadvertent gain charge, so its request to increase the amount of the charge should be denied.

356. Oncor's credit card portal system is new and Oncor needs flexibility as it develops this portion of its business.
357. Oncor's credit card portal system is a customer convenience and customers are still able to pay using Oncor's standard payment procedures.
358. Oncor's proposal to add Section 6.2.4.3 to its Tariff for Retail Delivery Service to allow Oncor to receive payments from customers via a credit card should be approved.
359. Oncor proposes to amend Section 6.2.3, Additional Delivery Service Information of its Tariff for Retail Delivery Service to add Section 6.2.3.4, Proration to codify its current long-standing business practice of using a 30-day billing cycle for purposes of proration.
360. Oncor's proposed Section 6.2.3.4, Proration to its Tariff for Retail Delivery Service should be adopted.
361. Oncor's revised language it proposed to include in Section 6.1.2.2.1.4, Space Requirements and Section 6.3 in Article III of its facilities extension agreement should be adopted. Accordingly, the following language should be included in those sections:

Once any rights-of-way or easements have been procured, regardless of the passage of time and the level of activity, the Company never intends to abandon any rights-of-way or easements unless the Company specifically states, in writing, the intention to do so, and the Company then takes additional specific affirmative action to effectuate the abandonment.
362. Oncor must retain its ability to enter customers' facilities in order to perform its obligations under its tariffs.
363. Section 5.2 of Oncor's Tariff for Retail Delivery Service and Section 4.4.2 of its Tariff for Transmission Service provide that Oncor shall have liability only to the extent damages are caused by wanton, willful, or intentional acts.
364. Under 16 TAC § 25.202, Oncor has liability and must indemnify for losses resulting from negligence or fault in the design, construction, or operation of its facilities but has no liabilities for damages beyond its control.

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 59 of 73

365. Oncor's proposed Interconnection Agreement for Distribution Generation Services in Section 4.9.5 of its proposed Tariff for Transmission Service should be adopted and should include Hunt Energy's proposed amendment to Section 26, Construction Timeline.
366. Oncor should be required to confer with its customers when developing language to be added to the Special Conditions sections of the facilities extension agreement.

Baselines for Cost-Recovery Factors

367. Interim transmission cost of service and distribution cost recovery factor proceedings are both interim updates that reserve reasonableness and prudence determinations for plant investments until the next base-rate proceeding.
368. The final revenue requirement relative to interim transmission cost of service and the distribution cost recovery factor will need to be addressed in a compliance phase.
369. Distribution-cost-recovery-factor baseline values should be calculated by using the detailed line-item-by-line-item class information in the Commission-approved class cost of service model used to determine the approved rates to clearly establish that the distribution-cost-recovery-factor baselines only include the elements of the distribution revenue requirement that are eligible for recovery under the distribution-cost-recovery factor rule.
370. The portion of plant-related ADFIT that has become an excess ADFIT regulatory liability based on the effects of the Tax Cuts and Jobs Act should be included in the DCRF baseline.

EVgo's Proposed Rider for Commercial Electric Vehicle Charging Stations

371. Evgo proposed that the Commission approve an optional rider to Oncor's commercial rates that would limit the transmission and distribution demand charges on direct current fast charging station customers' load.
372. The rider would include a demand limiter that would cap the demand (in kW) for which a direct current fast charging customer would be billed in each billing period, if the direct current fast charging customer's load factor is below a certain pre-set level:

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 60 of 73

Step	Years	Applicable Time Period	Load Factor Limit (%)
1	4	January 1, 2023 – December 31, 2026	25%
2	3	January 1, 2027 – December 31, 2029	20%
3	3	January 1, 2030 – December 31, 2032	15%

373. Oncor and Commission Staff argued that Evgo's recommendation for commercial EV charging is a pure subsidy to direct current fast charging customers that violates cost causation principles.
374. Additionally, under the rider, an electric vehicle charging station could intentionally increase its demand to a high level for a short time or reduce the amount of energy it consumes, to achieve a targeted load factor and become eligible for the discounted billing demand, thereby able to impose higher demands on the system while receiving a lower delivery charge.
375. Evgo's proposed rider conflicts with well-established ratemaking practice and long-standing Commission precedent.
376. Evgo's proposed rider should be rejected.

Uncontested Issues

377. The uncontested balances for the following Oncor regulatory assets and liabilities as of December 31, 2021, are reasonable and should be approved:
- employee retirement costs; debt reacquisition; wholesale distribution substation service; power line safety act; intangible amortization over-recovery; acquisition regulatory asset; and other non-tax regulatory assets/liabilities.
378. No party raised an issue regarding Oncor's competitive affiliates.
379. Oncor paid or contributed a total of \$114,845,687 to affiliates during the test year, of which \$93,920,113 was charged to O&M expenses.
380. No parties proposed any adjustment to Oncor's affiliate expenses.

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 61 of 73

381. Oncor's affiliate expenses are reasonable and necessary for each item or class of items, are allowable, meet the affiliate transaction standards of PURA § 36.058, and are charged to Oncor at a price no higher than was charged by the supplying affiliate to other affiliates, and the rate charged was a reasonable approximation of the cost of providing the service.
382. Oncor's proposed municipal franchise fees in the amount of \$283,082,877 are reasonable and necessary expenses and should be approved.
383. Oncor's vegetation management practices are prudent.
384. Oncor's proposed upward adjustment of \$4.692 million to its transmission and distribution O&M expenses related to vegetation management reflect increased labor rates in multiple contracts for vegetation management service and is a known and measurable adjustment.
385. No party opposed Oncor's adjustment to O&M expenses related to vegetation management and it should be approved.
386. It is appropriate for Oncor to defer for future recovery its incremental costs and expenses for wholesale distribution substation service incurred since the end of the test year through the date on which rates approved in this case take effect.
387. It is appropriate for Oncor to continue to defer for future recovery its incremental costs and expenses for COVID-19 consistent with the Commission's prior order in Project No. 50664.
388. DELETED.
389. Oncor's transmission O&M expenses were \$1,780,604,618. These expenses were not contested by any party are reasonable and necessary.
390. Oncor's distribution O&M expenses were \$365,781,381. These expenses were not contested by any party and are reasonable and necessary.
391. Oncor's O&M expenses associated with the operation and direct-current ties under its FERC-approved tariff were \$400,490. These expenses were not contested by any party and are reasonable and necessary.

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 62 of 73

392. Oncor realized approximately \$1.4 million in revenues associated with its operation of direct-current ties. This amount was not contested by any party and is reasonable.
393. Oncor's O&M expenses for other metering and transmission and distribution utility customer service were \$22,241,777. These expenses were not contested by any party and are reasonable and necessary.
394. Oncor's expenditures for advertising, contributions, memberships, and donations included in its cost of service were uncontested. The recovery of these costs is reasonable and necessary and should be approved.
395. Oncor proposes to delete the following riders from its tariff for transmission service: rider WRS (wholesale remand surcharge), rider WTRF-N (wholesale tax refund factor), rider WTRF (wholesale tax refund factor), rider WTI (wholesale true up credit rider), rider WCSR (wholesale capital structure refund), and rider WMSC (wholesale merger savings credit). Oncor demonstrated that these riders are no longer applicable.
396. No party contested Oncor's proposed deletion of the riders identified in finding of fact 395 from its tariff for transmission service. Deletion of these riders is reasonable and should be approved.
397. Oncor proposes to delete the following riders from its tariff for retail delivery service: rider RS (remand surcharge), rider CSR (capital structure refund), rider TRF (tax refund factor), and rider ERP (COVID-19 electricity relief program). Oncor demonstrated that all of the applicable expenses or credits have been recovered (or credited) and are no longer applicable.
398. No party contested Oncor's proposed deletion of the riders identified in finding of fact 397 from its tariff for retail delivery service. Deletion of these riders is reasonable and should be approved.
399. Oncor proposes to delete rider TC (transmission costs) from the Oncor NTU tariff for transmission service. No party contested Oncor's proposed deletion of this rider.
400. The deletion of rider TC (transmission costs) from Oncor NTU's tariff for transmission service is reasonable and should be approved.

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 63 of 73

401. Oncor has appropriately combined Oncor NTU's rate WTS with Oncor's rate NTS, as ordered by ordering paragraph 16 in Docket No. 48929.
402. Because Oncor and Oncor NTU remain separate legal entities with separate tariffs, Oncor NTU must retain a separate rate wholesale distribution substation service, as it must charge Oncor that rate.
403. No party challenged Oncor NTU's rate wholesale distribution substation service and it should be approved.
404. Oncor proposed that the nuclear decommissioning charge be applied to all end-use retail customers in Oncor's service territory.
405. No party challenged the application of the nuclear decommissioning charge to all end-use retail customers in Oncor's service territory. Application of the nuclear decommissioning charge to all end-use retail customers in Oncor's service territory is reasonable and should be approved.
406. Oncor proposed that sections 6.1.2.1 and 6.1.4.1 of its Tariff for Retail Delivery Service be revised to state that the options provided in those sections are subject to availability at reasonable commercial terms. No party contested those proposed revisions, and they should be approved.
407. Oncor proposed that its street lighting rate schedules be available to home owners' associations. No party contested that change, and it should be approved.
408. Oncor proposed an addition to section 6.2.3.1.4 of Oncor's Tariff for Retail Delivery Service that states the following: *For purposes of Delivery Service, 'tiny homes' will be considered mobile comes. However, if a 'tiny home' itself is a vehicle, it shall be considered a recreational vehicle.* No party contested that language, and it should be approved.
409. Oncor proposed additional language for section 6.3.1 of its Tariff for Retail Delivery Service, which requires customers to disclose to Oncor all underground facilities owned by the customer on the customer's property. No party contested that revision and it should be approved.

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 64 of 73

410. Oncor proposed additional language for section 6.1.1 of its Tariff for Retail Delivery Service to address making unmetered service for cellular pole attachments available until a viable pole-top meter is developed. No party contested that revision, and it should be approved.
411. Oncor proposed additional language for sections 6.1.2.2.6.2, 6.1.3.2.6.2, 6.1.4.2.6.2, and 6.2 of its Tariff for Retail Delivery Service concerning extensions to multi-family dwellings and when the standard allowance for those facilities applies. No party contested those revisions, and they should be approved.
412. Oncor proposed to revise the definition of *facility connection requirements* in section 4.2 of its Tariff for Transmission Service to remove redundant language and clarify the requirements for connecting with the Company's transmission system. No party contested those revisions, and they should be approved.
413. DELETED.

III. Conclusions of Law

The Commission adopts the following conclusions of law.

1. Oncor is a public utility as that term is defined in PURA § 11.004(1), an electric utility as that term is defined in PURA § 31.002(6), and a transmission and distribution utility as that term is defined in PURA § 31.002(19).
2. The Commission exercises regulatory authority over Oncor and jurisdiction over the subject matter of this application under PURA §§ 14.001, 32.001, 32.101, 33.001, 33.002, 33.051, 35.004, and 36.001 through 36.112.
3. Under PURA § 33.051, each municipality in Oncor's service area that has not ceded jurisdiction to the Commission has jurisdiction over Oncor's application, which seeks to change rates for service within each municipality.
- 3A. Under PURA § 33.051, the Commission has jurisdiction over an appeal from a municipality's rate proceeding.
- 3B. The Commission's jurisdiction to establish rates under PURA §§ 36.003, 36.004, 36.051, 36.052, 36.108(c), and 36.111 extends beyond the date a proposed rate is suspended.

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 65 of 73

- 3C. Oncor must comply with the Commission's directions relating to its books, accounts, records, and memoranda under PURA § 14.151(d)(2).
4. This docket was processed in accordance with the requirements of PURA, the Administrative Procedure Act,⁴³ and Commission rules.
5. SOAH exercised jurisdiction over this proceeding under PURA § 14.053 and Texas Government Code § 2003.049.
6. Oncor provided notice of the application in compliance with PURA § 36.103 and 16 TAC § 22.51(a) and filed affidavits attesting to the completion of notice in compliance with 16 TAC § 22.51(d).
7. Notice of the hearing on the merits was given in compliance with Texas Government Code §§ 2001.051 and 2001.052.
8. DELETED.
9. Under 16 TAC § 25.247(b), Oncor must file for a comprehensive rate review within 48 months of the date of this Order unless the Commission extends the filing deadline.
10. Oncor has the burden of proof that the rate changes it requests are just and reasonable under PURA § 36.006.
11. In compliance with PURA § 36.051 and 36.052, Oncor's overall revenues approved in this proceeding permit Oncor a reasonable opportunity to earn a reasonable return on its invested capital used and useful in providing service to the public in excess of its reasonable and necessary operating expenses.
12. Consistent with PURA § 36.053, the rates approved in this proceeding are based on original cost, less depreciation, of property used and useful to Oncor in providing service.
13. The rates approved in this proceeding are consistent with 16 TAC § 25.231(b)(1)(B), which states that depreciation expense based on original cost and computed on a straight-line basis as approved by the Commission must be used; it also provides that other methods

⁴³ Tex. Gov't Code §§ 2001.001–.903.

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 66 of 73

may be used when the Commission determines such depreciation methodology is a more equitable means of recovering the costs of plant.

14. The rates approved in this proceeding are consistent with 16 TAC § 25.231(c)(2)(A)(ii), which states that the reserve for depreciation is the accumulation of recognized allocations of original cost, representing the recovery of initial investment over the estimated useful life of the asset.
- 14A. In accordance with PURA § 36.003(b), the rates approved by this Order are not unreasonably preferential, prejudicial, or discriminatory and are sufficient, equitable, and consistent in application to each class of customers.
- 14B. Oncor may not directly or indirectly offer any service, collect any rate or charge, give any compensation or discount to a customer, or impose any classification, practice, or regulation different from that which is prescribed in its effective tariff filed with the Commission in accordance with PURA § 36.004(a) and 16 TAC § 25.241(b).
15. Prudence is the exercise of that judgment and that choosing of one of that select range of options which a reasonable utility manager would exercise or choose in the same or similar circumstances given the information or alternatives available at the same point in time such judgment is exercised or option is chosen. *Gulf States Utilities Company v. Public Utility Commission of Texas*, 841 S.W.2d 459, 475 (Tex. App.—Austin 1992, writ denied).
16. There may be more than one prudent option within the range available to a utility in a given context. Any choice within the select range of reasonable options is prudent, and the Commission should not substitute its judgment for that of the utility. The reasonableness of an action or decision must be judged in the light of the circumstances, information, and available options existing at the time, without benefit of hindsight. *Nucor Steel v. Public Utility Commission of Texas*, 26 S.W.3d 742, 752 (Tex. App.—Austin 2000, pet. denied).
17. The prudence standard explicitly incorporates a utility's reasonableness and, by speaking in terms of available alternatives, implicitly recognizes that an expense must be necessary. What is prudent, reasonable, and necessary depends on circumstances. The prudence standard does not require perfection. *Nucor*, 26 S.W.3d at 748–49.

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 67 of 73

18. Oncor bears the burden to prove each dollar of cost was reasonably and prudently invested and enjoys no presumption that the costs reflected therein were prudently incurred by simply opening its books to inspection. *Entergy Gulf States, Inc. v. Pub. Util. Comm'n*, 112 S.W.3d 208, 214 (Tex. App.—Austin 2003, pet. denied).
19. A utility may demonstrate the prudence of its decision-making through contemporaneous evidence. Alternatively, a utility may obtain an independent, retrospective analysis that demonstrates that a reasonable utility manager, having investigated all relevant factors and alternatives, as they existed at the time the decision was made, would have found the utility's actual decision to be reasonably prudent. *Gulf States*, 841 S.W.2d at 476.
20. Oncor's requested capital investments not previously reviewed for prudence were properly included in rate base as they are prudent investments, used and useful, and reasonable and necessary.
21. Oncor is ineligible to recover the Sharyland acquisition adjustment through rates. Oncor did not meet its burden to demonstrate it is eligible to recover the acquisition adjustment associated with the Sharyland asset acquisition through rates, in accordance with the Commission's two-prong test in *Application of Electra Telephone Company, Inc. for the Transfer of a Certificate of Public Convenience and Necessity from Electra Telephone Company*.⁴⁴
22. Oncor acquired its leased temporary emergency electric energy facilities in compliance with PURA § 39.918(f).
- 22A. Given Oncor's experience in Winter Storm Uri and its obligation to provide continuous and adequate service under PURA § 37.151, Oncor acted reasonably at that time in proactively seeking to lease and operate temporary emergency electric energy facilities under PURA § 39.918 in the form of mobile-generation units for reliability and resiliency.
23. Oncor's use of temporary emergency electric energy facilities at the Faith Community Hospital in Jacksboro, Texas was in compliance with PURA § 39.918(b).

⁴⁴ *Application of Electra Telephone Company, Inc. for Transfer of a Certificate of Public Convenience and Necessity from Electra Telephone Company*, Docket No. 8374, Order at 1 (Aug. 6, 1998); *id.*, Examiner's Report on Remand at 6 (Aug. 1, 1990).

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 68 of 73

- 23A. Oncor demonstrated compliance with PURA § 39.918(c).
- 23B. Oncor demonstrated compliance with PURA § 39.918(d)(1).
- 23C. Oncor demonstrated compliance with PURA § 39.918(d)(2).
- 23D. Oncor demonstrated compliance with PURA § 39.918(e).
- 23E. Oncor demonstrated compliance with PURA § 39.918(g).
- 24. The recovery of reasonable and necessary costs under PURA § 39.918(h)(1) is not dependent on compliance with the requirement in subsection (g) to include a detailed plan regarding the utility's use of mobile-generation facilities in the utility's emergency operations plan filed with the Commission.
- 24A. It is consistent with PURA § 39.918(j) and (h)(1) to allow Oncor to utilize a regulatory asset to account for temporary emergency electric energy facility lease costs and to include the applicable return element.
- 24B. Oncor's costs of leasing and operating temporary emergency electric energy facilities in the amount of \$3,146,148 million are reasonable and necessary costs under PURA § 39.918(h)(1).
- 25. Investor-owned utilities may include in rate base a reasonable allowance for cash-working capital as determined by a lead-lag study conducted in accordance with 16 TAC § 25.231(c)(2)(B)(iii).
- 26. Oncor's proposed cash-working capital allowance, corrected to reflect a \$0.062 million reduction in the transmission revenue requirement and a \$0.657 million reduction in the distribution revenue requirement, is in compliance with 16 TAC § 25.231(c)(2)(B)(iii).
- 27. PURA § 36.065(a) provides that electric utility rates must include expenses for pensions and other postemployment benefits, as determined by actuarial or other similar studies in accordance with generally accepted accounting principles, in an amount the regulatory authority finds reasonable.
- 28. DELETED.

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 69 of 73

29. Oncor's ADFIT adjustments are consistent with PURA § 36.059 and 16 TAC § 25.231(c)(2)(C)(i).
30. Oncor's requested ADFIT assets for its pension plan, other postemployment benefits, and FAS 112 ADFIT liabilities were properly included in rate base in accordance with PURA § 36.065.
31. Invested capital may include reasonable prepayments for operating expenses under 16 TAC § 25.231(c)(2)(B)(ii).
32. Oncor's requested \$115.1 million of prepayments are reasonable and properly included in rate base.
33. Including the cash-working capital approved in this proceeding in Oncor's rate base is consistent with 16 TAC § 25.231(c)(2)(B)(iii)(IV).
34. DELETED.
35. Expenditures for electric plant held for future use may be included in a utility's rate base before the plant went into service if the utility has a specific plan to use each electric plant held for future use property within 10 years. *See Cities for Fair Util. Rates v. Pub. Util. Comm'n of Tex.*, 924 S.W.2d 933, 936–37 (Tex. 1996).
36. Oncor's requested \$23.2 million of electric plant held for future use was properly included in rate based under 16 TAC § 25.231.
37. Oncor properly transferred \$139.2 million of allowance for funds used during construction to plant in service from 2017 through 2021 under 16 TAC § 25.231.
38. The 2019 allowance for funds used during construction accruals applied to construction-work-in-progress projects are appropriately calculated and consistent with the methods, procedures, and calculations followed in capitalizing allowance for funds used during construction.
39. The Tax Cuts and Jobs Act of 2017 reduced the federal income tax rate from 35% to 21%, Tax Cuts and Jobs Act, Pub. L. No. 155–97 (2017).

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 70 of 73

40. The Excess ADFIT approved in this proceeding in Oncor's rate base is consistent with the Tax Cuts and Jobs Act and 16 TAC § 25.231(c)(2)(D)(II).
41. PURA § 36.064 requires Oncor to prove that: (1) its proposed self-insurance reserve coverage is in the public interest; (2) the plan, considering all costs, would be a lower cost alternative to purchasing commercial insurance; and (3) customers would receive the benefits of the savings.
42. For Oncor to establish under 16 TAC § 25.231(b)(1)(G) that its self-insurance plan is in the public interest, Oncor must present a cost-benefit analysis performed by a qualified independent insurance consultant who demonstrates that, with consideration of all costs, self-insurance is a lower-cost alternative than commercial insurance and that ratepayers will receive the benefits of the self-insurance plan. Oncor's cost-benefit analysis must present a detailed analysis of the appropriate annual accruals to build a reserve account for self-insurance, and the level at which further accruals should be decreased or terminated.
43. Oncor met its burden of proof under PURA § 36.064(b) and 16 TAC § 25.231(b)(1)(G) to show its proposed self-insurance reserve is in the public interest.
44. Under 16 TAC § 25.107(f)(3)(B), a transmission and distribution utility may create a regulatory asset for bad debt expenses resulting from a retail electric provider's default on its obligation to pay delivery charges to the transmission and distribution utility.
45. DELETED.
46. DELETED.
47. DELETED.
48. The tariff sheets and rate schedules approved in this Order are just and reasonable.
49. Under 16 TAC § 25.234, distribution-cost-recovery-factor baselines should only include the cost of distribution plant that has been placed into service (not held for future use) and should not include non-invested capital costs such as cash working capital and prepayments.

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 71 of 73

50. Utilities seeking recovery or municipalities seeking reimbursement of rate-case expenses have the burden to prove the reasonableness of such expenses by a preponderance of the evidence to include those amounts in customers' rates.
51. The rate-case expenses that Oncor seeks to recover for itself and Cities and Alliance of Oncor Cities in this proceeding are recoverable pursuant to PURA § 36.061(b).
52. The affiliate expenses included in Oncor's rates approved herein comply with the requirements of PURA § 36.058.
53. Oncor's rates, as shown in the attached schedule and approved in this proceeding, are just and reasonable in accordance with PURA § 36.003.

IV. Ordering Paragraphs

In accordance with these findings of fact and conclusions of law, the Commission issues the following orders:

1. The Commission adopts the proposal for decision, including findings of facts and conclusions of law, to the extent provided in this Order.
2. The Commission approves Oncor's proposed rates to the extent provided in this Order.
3. Oncor must adhere to the financial protections included in its existing ring-fence.
4. The Commission approves Oncor's proposed temporary emergency electric energy facility lease costs, to the extent provided in this Order.
5. Oncor must book the temporary emergency electric energy facility lease costs as a regulatory asset. Oncor is authorized to apply the rate of return on investment, established in this Order, to the regulatory asset.
6. Oncor must recover its regulatory asset for temporary emergency electric energy facility lease costs as a separate surcharge through a mobile-generation rider over a five-year period.
7. Within 20 days of the date of this Order, Oncor must file the following items, consistent with this Order: tariffs; DCRF baseline values; transmission cost of service (TCOS) baseline values; and a temporary emergency electric energy facility lease costs rider. The

documents must be filed in *Compliance Tariff for Final Order in Docket No. 53601 (Application of Oncor Electric Delivery Company LLC for Authority to Change Rates)*, Docket No. 54817. No later than 10 days after the date of the filings, Commission Staff must file its comments recommending approval, modification, or rejection of the individual sheets of the tariff proposals, DCRF baseline values, TCOS baseline values, and the temporary emergency electric energy facility lease costs rider. Responses to Commission Staff's recommendation must be filed no later than 15 days after the filings are made. The presiding officer in Docket No. 54817 must approve, modify, or reject each tariff sheet, DCRF baseline values, TCOS baseline values, and the temporary emergency electric energy facility lease costs rider.

8. Copies of all tariff-related filings must be served on all parties of record.
9. Oncor's Rider RCE – Rate Case Expense Surcharge and Rider WRCE – Wholesale Rate Case Expenses, attached to the agreement regarding rate-case expenses filed on December 2, 2022, are approved.
10. Oncor may recover the total reasonable expenses associated with Docket Nos. 53601, 51996, 49721, 49427, 48231, 48235, and 46957 in the amount of \$10,009,643 over a 24-month period as a separate surcharge through Rider RCE – Rate Case Expense Surcharge and Rider WRCE-- Wholesale Rate Case Expenses. This surcharge will become effective when the final rates approved by the Commission in this case become effective.
11. Oncor must reimburse Cities and Alliance of Oncor Cities \$469,735.28 and \$482,338.40, respectively, for their rate-case expenses associated with this proceeding through October 31, 2022, as well as their deferred rate-case expenses from Docket Nos. 46957, 48325, 49427, and 51996 totaling \$262,796.55 and \$179,662.00, respectively.
12. Any over- or under-collection must be netted against rate-case expenses incurred for this case that are invoiced to Oncor after the cutoff date of October 25, 2022, and the net remaining costs or credit will be captured in a regulatory asset or regulatory liability to be reviewed in a subsequent Oncor rate proceeding.
13. Oncor must not earn a return on the unrecovered balance of rate-case expenses not recovered within the first year after the rates approved in this proceeding go into effect.

PUC Docket No. 53601
SOAH Docket No. 473-22-2695

Order on Rehearing

Page 73 of 73

14. In its next base rate case, Oncor must include the ADFIT asset related to EECRF unbilled revenue in rate base.
15. Oncor's depreciation rates are approved to the extent provided in this Order.
16. The Commission denies all other motions and any other requests for general or specific relief, if not expressly granted.

Signed at Austin, Texas the 30th day of June, 2023.

PUBLIC UTILITY COMMISSION OF TEXAS


KATHLEEN JACKSON, INTERIM CHAIR


WILL MCADAMS, COMMISSIONER


LORI COBOS, COMMISSIONER


JIMMY GLOTFELTY, COMMISSIONER



Control Number: 53601



Item Number: 628



Filing Receipt

Received - 2022-09-16 03:08:32 PM

Control Number - 53601

ItemNumber - 628

REDACTED VERSION

**SOAH DOCKET NO. 473-22-2695
PUC DOCKET NO. 53601**

**REBUTTAL TESTIMONY
OF DYLAN W. D'ASCENDIS, WITNESS FOR
ONCOR ELECTRIC DELIVERY COMPANY LLC**

I.	BACKGROUND AND PURPOSE	4
II.	SUMMARY AND OVERVIEW	5
III.	UPDATED ANALYSES	7
IV.	CAPITAL MARKET OBSERVATIONS	8
V.	RESPONSE TO POSITIONS COMMON TO THE OPPOSING ROE WITNESSES	21
	A. Applicability of Authorized ROEs as a Benchmark	21
	B. Regulatory Mechanisms and Risk	24
VI.	RESPONSE TO STAFF WITNESS ORDONEZ	28
	A. Discounted Cash Flow Model	29
	B. Application of the Risk Premium Model	34
	C. Application of the Capital Asset Pricing Model	38
	D. Ordonez Corrected Results	42
VII.	RESPONSE TO TIEC WITNESS GORMAN	43
	A. Discounted Cash Flow Model	43
	B. The Risk Premium Model	46
	C. The Capital Asset Pricing Model	58
	D. Financial Integrity	65
	E. Response to Mr. Gorman's Criticisms of Company Testimony	67
VIII.	RESPONSE TO DOD WITNESS RENO	78
	A. Exclusive Reliance on DCF Model Results	79
	B. Application of the Discounted Cash Flow Model	87

**SOAH Docket No. 473-22-2695
PUC Docket No. 53601**

**D'Ascendis -- Rebuttal
Oncor Electric Delivery
2022 Rate Case**

REDACTED VERSION

C.	Application of the Capital Asset Pricing Model	96
D.	Comparable Earnings Model	97
E.	Critiques of Company Testimony.....	99
IX.	RESPONSE TO AOC WITNESS WOOLRIDGE	99
A.	Capital Structure	100
B.	Sole Reliance on and Application of the Discounted Cash Flow Model	103
C.	Application of the Constant Growth DCF Model	103
D.	Capital Asset Pricing Model.....	110
E.	Critiques on Company Testimony.....	111
X.	RESPONSE TO WALMART WITNESS KRONAUER.....	118
XI.	CONCLUSION AND RECOMMENDATION	118

AFFIDAVIT	120
-----------------	-----

EXHIBITS

Exhibit DWD-R-1	Updated Cost of Capital Analysis
Exhibit DWD-R-2	Annualized Volatility and Returns for the Combined Proxy Group and Various Market Indices
Exhibit DWD-R-3	Regulatory Mechanisms of the Operating Utilities of the Combined Proxy Group and Associated Capital Structures
Exhibit DWD-R-4	Corrected Staff Risk Premium Model
Exhibit DWD-R-5	Corrected Staff Capital Asset Pricing Model
Exhibit DWD-R-6	Corrected TIEC Discounted Cash Flow Model
Exhibit DWD-R-7	Market-to-Book Schedule
Exhibit DWD-R-8	Corrected TIEC Risk Premium Model
Exhibit DWD-R-9	Corrected TIEC Capital Asset Pricing Model
Exhibit DWD-R-10	Evaluation of S&P Credit Metric Analysis (HIGHLY SENSITIVE CONFIDENTIAL)

**SOAH Docket No. 473-22-2695
PUC Docket No. 53601**

**D'Ascendis – Rebuttal
Oncor Electric Delivery
2022 Rate Case**

REDACTED VERSION

Exhibit DWD-R-11	GDP by Industry – 1947 to 2021
Exhibit DWD-R-12	Histogram of Market Returns and Market Risk Premiums 1926 to 2021
Exhibit DWD-R-13	Comparable Earnings: New Life for an Old Precept
Exhibit DWD-R-14	Safety Rankings for the Utility Proxy Group and the Non-Price Regulated Proxy Group
Exhibit DWD-R-15	Inadequacy of the DCF Model when Market-to- Book Ratios are not at Unity
Exhibit DWD-R-16	Calculation of Indicated DCF Applied to a Book Value Capital Structure
Exhibit DWD-R-17	Retention Rate Regression
Exhibit DWD-R-18	Corrected DoD Capital Asset Pricing Model
Exhibit DWD-R-19	Capital Structures Maintained by Dr. Woolridge's Proxy Group and their Operating Subsidiaries
Exhibit DWD-R-20	Corrected AOC Discounted Cash Flow Model

REDACTED VERSION

**REBUTTAL TESTIMONY OF
DYLAN W. D'ASCENDIS**

I. BACKGROUND AND PURPOSE

- 1
2
- 3
- 4 Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND CURRENT
5 EMPLOYMENT POSITION.
- 6 A. My name is Dylan W. D'Ascendis. My business address is 3000 Atrium
7 Way, Suite 240, Mount Laurel, NJ 08054. I am employed by ScottMadden,
8 Inc. as a Partner.
- 9 Q. ARE YOU THE SAME DYLAN W. D'ASCENDIS WHO PREVIOUSLY
10 SUBMITTED DIRECT TESTIMONY IN THIS DOCKET?
- 11 A. Yes I am. My direct testimony is included in Oncor's rate filing package at
12 Bates pages 1629-1756.
- 13 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?
- 14 A. The purpose of my rebuttal testimony is three-fold. First, I update the
15 analyses in my direct testimony. Second, I discuss capital market
16 conditions and their effect on a utility investor's required return on common
17 equity ("ROE"). Third, I respond to the direct testimonies of Mr. Jorge
18 Ordonez, who testifies on behalf of the Public Utility Commission of Texas
19 ("PUC" or the "Commission") Staff ("Staff"), Mr. Michael P. Gorman, who
20 testifies on behalf of Texas Industrial Energy Consumers ("TIEC"), Ms.
21 Maureen L. Reno, who testifies on behalf of the United States Department
22 of Defense and All Other Federal Executive Agencies ("DOD"), Dr. J.
23 Randall Woolridge, who testifies on behalf of the Alliance of Oncor Cities
24 ("AOC"), and Mr. Alex J. Kronauer, who testifies on behalf of Walmart Inc.
25 ("Walmart") (collectively, "the Opposing ROE Witnesses") as they relate to
26 Oncor Electric Delivery Company LLC's ("Oncor") requested ROE.

REDACTED VERSION

II. SUMMARY AND OVERVIEW

1
2 Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.

3 A. I have updated my ROE analyses as of August 12, 2022. Based on these
4 updated analyses, my range of reasonable ROEs attributable to Oncor is
5 between 9.54% and 11.54%, which is a small decrease of six basis points
6 on either end of my range as compared to the range in my direct testimony.
7 Despite the increase in three of four analytical model results since I filed my
8 direct testimony, I maintain my specific ROE recommendation of 10.30%,
9 which is still below the midpoint of my range. In view of current markets
10 and the updated results of my ROE models, the recommended ROEs of
11 9.30% (Staff), 9.30% (TIEC), 9.10% (DoD), and 8.90% (AOC) are
12 inappropriate and insufficient.

13 Q. PLEASE SUMMARIZE THE KEY ISSUES THAT YOU ADDRESS IN YOUR
14 REBUTTAL TESTIMONY.

15 A. My rebuttal testimony responds to substantive recommendations offered by
16 the Opposing ROE Witnesses in their direct testimonies. First, I will address
17 the following issues common to the Opposing ROE Witnesses' direct
18 testimonies:

- 19 • the applicability of using authorized ROEs as a benchmark for an
20 authorized ROE in this proceeding; and
- 21 • their contentions that Oncor's regulatory mechanisms lowers the
22 Company's relative risk as compared to their proxy groups.

23 Specific to Mr. Ordonez's direct testimony, I will address the following:

- 24 • the applicability of a multi-stage discounted cash flow ("DCF") model
25 for utility companies;
- 26 • his application of the risk premium model ("RPM"); and
- 27 • his application of the capital asset pricing model ("CAPM").

28 Specific to Mr. Gorman's direct testimony, I will address the following:

REDACTED VERSION

- 1 • his contention that utilities have a supportive credit environment;
2 • his applications of the DCF model, RPM, and CAPM; and
3 • his use of credit metrics to justify his recommended ROE and capital
4 structure.

5 Specific to Ms. Reno's direct testimony, I will address the following:

- 6 • her sole reliance on the DCF model for her recommended ROE; and
7 • her applications of the DCF model, CAPM, and comparable earnings
8 analysis.

9 Specific to Dr. Woolridge's direct testimony, I will address the following:

- 10 • his contention that a hypothetical capital structure is appropriate for
11 the Company; and
12 • his sole reliance on his DCF model results for his ROE
13 recommendation and his application of the DCF model in general.

14 The response to Mr. Kronauer's direct testimony will be included in the
15 testimony common to all Opposing ROE Witnesses, as he reviews
16 observed authorized ROEs and does not offer a specific ROE
17 recommendation. In addition to the above, I will respond to the Opposing
18 ROE Witnesses' unfounded critiques on my direct testimony.

19 Q. HAVE YOU PREPARED EXHIBITS IN SUPPORT OF YOUR
20 RECOMMENDATION?

21 A. Yes. I have prepared Exhibits DWD-R-1 through DWD-R-20, which were
22 prepared by me or under my direction.

23 Q. HOW IS THE REMAINDER OF YOUR REBUTTAL TESTIMONY
24 ORGANIZED?

25 A. The remainder of my rebuttal testimony is organized as follows:

- 26 • Section III – Provides my updated analysis;
27 • Section IV – Discusses current capital market conditions;

REDACTED VERSION

- 1 • Section V – Responds to positions common to the Opposing ROE
- 2 Witnesses;
- 3 • Section VI – Provides my response to Staff Witness Ordonez;
- 4 • Section VII – Provides my response to TIEC Witness Gorman;
- 5 • Section VIII – Provides my response to DoD Witness Reno;
- 6 • Section IX – Provides my response to AOC Witness Woolridge;
- 7 • Section X – Provides my response to Walmart Witness Kronauer;
- 8 and
- 9 • Section XI – Summarizes my conclusions and recommendations.

III. UPDATED ANALYSES

- 11 Q. HAVE YOU UPDATED YOUR COST OF COMMON EQUITY ANALYSES
- 12 FOR YOUR REBUTTAL TESTIMONY?
- 13 A. Yes, I have. Due to the passage of time since my direct testimony analysis
- 14 (data as of March 18, 2022), I have updated my analysis using data as of
- 15 August 12, 2022.
- 16 Q. HAVE YOU APPLIED YOUR ROE MODELS IN THE SAME MANNER IN
- 17 YOUR UPDATED ANALYSES?
- 18 A. Yes, I have.
- 19 Q. WHAT ARE THE RESULTS OF YOUR UPDATED ANALYSES?
- 20 A. Using data available as of August 12, 2022, my updated results are
- 21 presented in page 1 of Exhibit DWD-R-1 and in Table 1, below:

REDACTED VERSION

Table 1: Summary of Common Equity Cost Rates

Discounted Cash Flow Model	9.17%
Risk Premium Model	11.79%
Capital Asset Pricing Model	11.91%
Cost of Equity Models Applied to Comparable Risk, Non-Price Regulated Companies	12.74%
Indicated Range of Common Equity Cost Rates	9.54% - 11.54%
Recommended Cost of Common Equity	10.30%

In view of my updated model results, I maintain my original ROE recommendation of 10.30%. Upon reviewing my updated results, two items became apparent: (1) the indicated results of three of four of my ROE models increased from my analyses presented in my direct testimony¹, which is a directional indicator that the investor-required return has increased since my direct testimony, and (2) my recommended ROE of 10.30% is below the midpoint of my adjusted range of ROEs, making it a conservative measure of the Company's ROE at this time.

IV. CAPITAL MARKET OBSERVATIONS

Q. PLEASE UPDATE YOUR OBSERVATIONS OF CURRENT CAPITAL MARKET CONDITIONS.

A. The economy remains in an "inflationary environment," as evidenced by increased levels of the Consumer Price Index ("CPI") as compared to the Federal Reserve's ("Fed") traditional inflation target of 2.00%. Inflation can be characterized as an imbalance of supply and demand in the economy, specifically, when demand is in excess of supply. When demand is in excess of supply, the cost of goods and services increase.

¹ The DCF, RPM, and market models applied to my non-regulated proxy group have higher indicated ROEs using data as of August 12, 2022.

REDACTED VERSION

1 Part of the Fed's Congressional mandate is to mitigate inflation and
2 they have two main tools to achieve their mandate: raising the Fed Funds
3 Rate;² and decreasing the size of their balance sheet. Fed Chairman
4 Jerome H. Powell has indicated that the Fed has the resolve to use both
5 tools to restore price stability on behalf of American families and
6 businesses.³

7 Since my Direct Testimony (spot date of March 18, 2022), the Fed
8 raised the Fed Funds Rate 2.00%; from 0.25% – 0.50% to 2.25% – 2.50%.⁴
9 The Fed has also signaled the possibility of additional increases in the Fed
10 Funds Rate.⁵ A further increase is highly likely during the last half of
11 September 2022.

12 Regarding the Fed's balance sheet, on June 1, 2022, the Fed no
13 longer reinvested proceeds of up to \$30 billion in maturing Treasury
14 securities and up to \$17.5 billion in maturing mortgage-backed securities
15 per month. Starting on September 1, 2022, the caps for Treasury and
16 mortgage-backed securities rose to \$60 billion and \$35 billion, respectively.
17 Not reinvesting these proceeds and allowing the assets to "run off" the
18 balance sheet, allowed the Fed to reduce their assets without actively
19 selling Treasury securities and mortgage-backed securities.

20 Overall, the current market environment can continue to be
21 summarized as one with high inflation, and expectations with a high degree
22 of certainty that the Fed will implement additional increases in the Fed

² The Fed Funds Rate is the rate in which the Fed suggests commercial banks borrow and
lend their excess reserves to each other overnight.

³ Transcript of Chair Powell's Press Conference, June 15, 2022.

⁴ The Fed raised the Fed Funds Rate 50 basis points on May 5, 2022, and 75 basis points
on June 16, 2022 and July 27, 2022.

⁵ Jerome H. Powell, Monetary Policy and Price Stability, Speech at "Reassessing
Constraints on the Economy and Policy", Jackson Hole, WY, August 26, 2022.

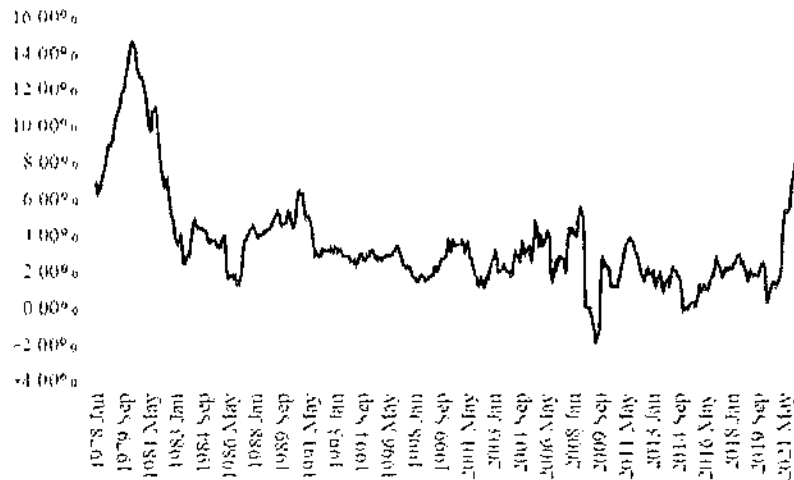
REDACTED VERSION

1 Funds Rate and continue to runoff assets from its balance sheet in an
2 attempt to limit inflation.

3 Q. IS THE CPI STILL AT 40-YEAR HIGH LEVELS?

4 A. Yes, it is. As shown on Chart 1, CPI has increased exponentially since the
5 beginning of the pandemic and more recently has experienced year-over-
6 year increases not seen since the early 1980s.⁶

7 **Chart 1: Consumer Price Index Change, 1978-Current⁷**



8
9 Given the rise in CPI as shown in Chart 1, even if inflation were to
10 moderate to a degree, it would remain significantly elevated compared to
11 the last several years. Further, looking to another measure of inflation, the
12 Personal Consumption Expenditures Index, both with and without food and

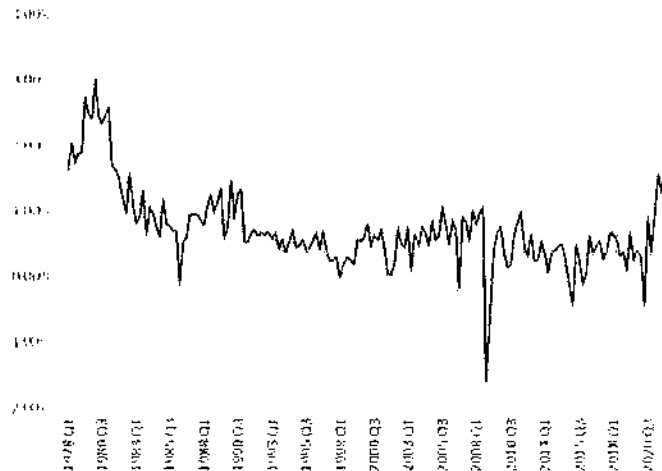
⁶ Source: Bureau of Labor Statistics, Series Title: All items in U.S. city average, all urban consumers, seasonally adjusted, Series ID: CUSR0000SA0
(https://data.bls.gov/timeseries/CUSR0000SA0?output_view=pct_1mth)

⁷ Source: Bureau of Labor Statistics, Series Title: All items in U.S. city average, all urban consumers, seasonally adjusted, Series ID: CUSR0000SA0
(https://data.bls.gov/timeseries/CUSR0000SA0?output_view=pct_1mth)

REDACTED VERSION

energy costs, recent quarterly increases also are the highest they have been since the 1980s.⁸

Chart 2: Personal Consumption Expenditures Index Change, 1978-Current



Q. IS INFLATION SUPPOSED TO BE ELEVATED FROM HISTORICAL LEVELS MOVING FORWARD?

A. Yes, it is. The ten- and 30-year breakeven inflation rates⁹ have steadily increased since August 27, 2020, when Fed Chairman Jerome H. Powell released a statement noting that the Federal Open Market Committee ("FOMC") will adopt an approach towards inflation that, "could be viewed as a flexible form of average inflation targeting," meaning that following periods in which inflation has run below 2.00%, "appropriate monetary policy will

⁸ Bureau of Economic Analysis, Table 2.3.4, Price Indexes for Personal Consumption Expenditures by Major Type of Product (<https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=2&isuri=1&1921=survey>)

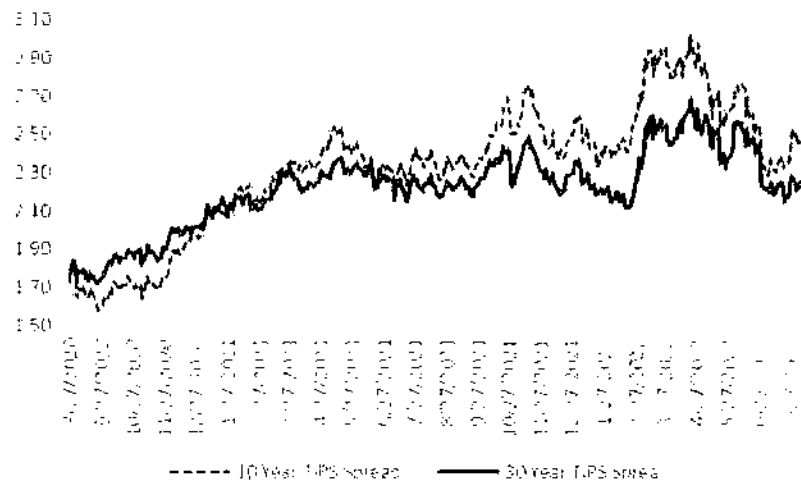
⁹ The breakeven inflation rate is the market's determination of the level of inflation during the period it measures. For example, the ten-year breakeven inflation rate is the market's expectation of inflation over the next ten years.

REDACTED VERSION

likely aim to achieve inflation moderately above 2 percent for some time."¹⁰
More recently, Mr. Powell has noted that, "the risk is rising that an extended
period of high inflation could push longer-term expectations uncomfortably
higher, which underscores the need for the Committee to move
expeditiously as I have described."¹¹

In response to market conditions and Fed action, the breakeven
inflation rate, represented as the ten-year and 30-year Treasury Inflation-
Protected Securities spreads, has increased from 1.73% and 1.76% on
August 27, 2020, respectively, to 2.47% and 2.23% respectively, as of
August 12, 2022. Further, as shown in Chart 3 below, breakeven inflation
has trended upward since the Fed's policy change at a relatively consistent
pace.

Chart 3: Breakeven Inflation Since August 27, 2020¹²



¹⁰ New Economic Challenges and the Fed's Monetary Policy Review, Remarks by Jerome H. Powell, Chair Board of Governors of the Federal Reserve System, August 27, 2020.
¹¹ Restoring Price Stability, Chair Pro Tempore Jerome H. Powell, At "Policy Options for Sustainable and Inclusive Growth" 38th Annual Economic Policy Conference National Association for Business Economics, Washington, D.C., March 21, 2022.
¹² Source: Federal Reserve (<https://www.federalreserve.gov/data/download/>)

[illegible]

REDACTED VERSION

1 Market-based inflation expectations like the breakeven inflation rate
2 are important benchmarks for the Fed. Michelle W. Bowman, Member of
3 the Board of Governors of the Federal Reserve System noted that:

4 One important factor that we often point to in driving today's
5 spending decisions and inflation outlook are expectations of
6 future inflation. Near-term expectations tend to rise as current
7 inflation increases, but when inflation expectations over the
8 longer term – the next 5 to 10 years – begin to rise, it may
9 indicate that consumers and businesses have less confidence
10 in the Fed's ability to address higher inflation and return it to
11 the Federal Open Market Committee's (FOMC) goal of 2
12 percent. If expectations move significantly above our 2
13 percent goal, it would make it more difficult to change people's
14 perceptions about the duration of high inflation and potentially
15 more difficult to get inflation under control.¹³

16 Q. DID CHAIRMAN POWELL HAVE ANY ADDITIONAL COMMENTS
17 CONCERNING INFLATION?

18 A. Yes, he has. In a statement before the U.S. Senate Committee on Banking,
19 Housing and Urban Affairs, Mr. Powell stated:

20 The Fed's monetary policy actions are guided by our mandate
21 to promote maximum employment and stable prices for the
22 American people. My colleagues and I are acutely aware that
23 high inflation imposes significant hardship, especially on
24 those least able to meet the higher costs of essentials like
25 food, housing, and transportation. We are highly attentive to
26 the risks high inflation poses to both sides of our mandate,
27 and we are strongly committed to returning inflation to our 2
28 percent objective.

29 Against the backdrop of the rapidly evolving economic
30 environment, our policy has been adapting, and it will continue
31 to do so. With inflation well above our longer-run goal of 2
32 percent and an extremely tight labor market, we raised the
33 target range for the federal funds rate at each of our last three

¹³ Michelle W. Bowman, "The Outlook for Inflation and Monetary Policy", At "Executive Officers Conference Massachusetts Bankers Association", Harwich, Massachusetts, June 23, 2022.

REDACTED VERSION

1 meetings, resulting in a 1-1/2 percentage point increase in the
2 target range so far this year. The Committee reiterated that it
3 anticipates that ongoing increases in the target range will be
4 appropriate. In May, we announced plans for reducing the
5 size of our balance sheet and, shortly thereafter, began the
6 process of significantly reducing our securities holdings.
7 Financial conditions have been tightening since last fall and
8 have now tightened significantly, reflecting both policy actions
9 that we have already taken and anticipated actions.

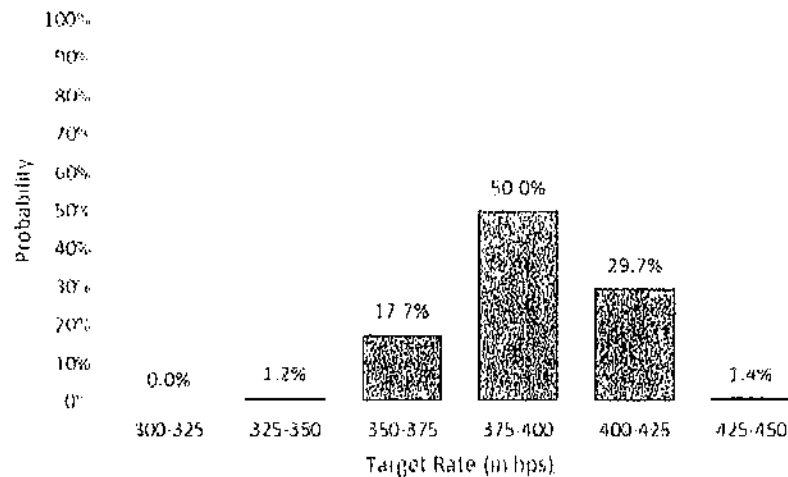
10 Over coming months, we will be looking for compelling
11 evidence that inflation is moving down, consistent with
12 inflation returning to 2 percent. We anticipate that ongoing
13 rate increases will be appropriate; the pace of those changes
14 will continue to depend on the incoming data and the evolving
15 outlook for the economy. We will make our decisions meeting
16 by meeting, and we will continue to communicate our thinking
17 as clearly as possible. Our overarching focus is using our
18 tools to bring inflation back down to our 2 percent goal and to
19 keep longer-term inflation expectations well anchored.¹⁴

20 As can be gleaned from statements by members of the Fed, they
21 expect inflation to continue well into next year and that the Fed will continue
22 to use the tools at their disposal to support the economy and the labor
23 market, including accelerating the pace of rate increases of the Fed Funds
24 Rate and reducing the size of its balance sheet.

25 Q. IS THE MARKET PRICING IN EXPECTATIONS OF ADDITIONAL
26 SIGNIFICANT FUTURE FED FUNDS RATE INCREASES?

27 A. Yes. The CME FedWatch Tool, as presented in Chart 4 below, indicates
28 that a majority of investors are pricing in a Fed Fund Rate of at least 3.75%
29 – 4.00% by its February 2023 meeting, which is an increase of 125 basis
30 points from the market expected Fed Funds Rate for the February 1, 2023
31 meeting used in my direct testimony.

¹⁴ Jerome H. Powell, Statement Before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, Washington, D.C., June 22, 2022.

REDACTED VERSION**Chart 4: CME FedWatch Tool – February 1, 2023 FOMC Meeting¹⁵**

Q. DOES THE CURRENT INFLATIONARY ENVIRONMENT AFFECT AUTHORIZED ROES AND INTEREST RATES?

A. Yes, it does. I performed two analyses to determine whether the CPI was correlated to authorized ROEs for electric utility companies and interest rates. The first analysis observes the yearly growth in inflation as measured by the year-over-year change in the CPI and the corresponding authorized ROEs for electric utilities. The resulting correlation of 0.59 indicates a strong positive relationship, which is statistically significant.¹⁶

The second analysis observes the relationship between the CPI and interest rates for the period 1947-2021. That relationship had a 0.62 correlation coefficient and is also statistically significant. This is consistent with the statements and actions of the Fed, as detailed above.

¹⁵ Source: <https://www.cmegroup.com/trading/interest-rates/countdown-to-fomc.html>, accessed September 1, 2022.

¹⁶ Correlations range from negative one to positive one. The closer the correlation is to zero the weaker the relationship. Positive values indicate a positive correlation, where the values of both variables tend to increase together.

REDACTED VERSION

1 Q. DOES INCREASING INFLATION INCREASE RISK AS IT PERTAINS TO
2 THE COMPANY'S CAPITAL EXPENDITURE PLAN?

3 A. Yes. As discussed in my direct testimony, increasing inflation increases risk
4 for the Company in two ways: (1) the costs to make capital expenditures
5 (e.g., raw materials, labor) will increase, leading the Company to go to the
6 market to raise larger amounts of capital as it would otherwise do in a non-
7 inflationary environment; and (2) as inflation is positively correlated to
8 capital costs, the financing of the increased costs will be more expensive
9 than it would be in a non-inflationary environment. Inflation also directly
10 affects operating costs as discussed in the direct testimonies of Oncor
11 witnesses Messrs. E. Allen Nye, James A. Greer, Kevin R. Fease, and
12 Wesley R. Speed, which also introduces additional risk.

13 Q. PLEASE SUMMARIZE THE OPPOSING ROE WITNESSES' VIEWS ON
14 CURRENT MARKET CONDITIONS.

15 A. Messrs. Ordonez and Kronauer do not discuss capital market conditions in
16 their direct testimonies, but Mr. Gorman, Ms. Reno, and Dr. Woolridge do.
17 There is consensus between the three that the economy is in an inflationary
18 period, and that the Fed is using the tools at its disposal in an attempt to
19 bring inflation in line with its long-term target of 2.00%.¹⁷

20 Regarding current and expected levels of inflation, Ms. Reno and Dr.
21 Woolridge calculate expected inflation rates using TIPS breakeven rates
22 and show that while inflation is currently at or near 40-year highs, expected
23 inflation will moderate to approximately 2.50%.¹⁸ Ms. Reno states that this
24 expected inflation rate may be an indication of an economic slowdown as it
25 is above the Fed's target.¹⁹

¹⁷ Gorman Direct Testimony, at 14-15; Reno Direct Testimony, at 7-8; Woolridge Direct Testimony, at 8-9.

¹⁸ Woolridge Direct Testimony, at 9.

¹⁹ Reno Direct Testimony, at 11.

REDACTED VERSION

1 Mr. Gorman, Ms. Reno, and Dr. Woolridge also discuss utility stock
2 performance relative to the S&P 500 in 2022 and make the conclusion that
3 since utility stocks have fared better than the market over this period that
4 they are indeed defensive investments.

5 Regarding interest rates, Mr. Gorman and Dr. Woolridge maintain
6 that while current interest rates have risen since the onset of the COVID-19
7 pandemic, they are still at historically low levels, and because of that, the
8 ROE allowed for the Company should be in line with recent returns
9 authorized for electric utilities.²⁰

10 Ms. Reno's testimony discusses possible red flags that the economy
11 is headed toward a slowdown in activity. These observations include a
12 flattening yield curve, expected inflation higher than the Fed's target
13 inflation, and slowing growth in Gross Domestic Product ("GDP") in the first
14 two quarters of 2022. Ms. Reno also reviews the state economy of Texas
15 and draws the same conclusions, and notes that investors would likely
16 compare Texas' economy to other states' economies when making
17 investment decisions.²¹ Ms. Reno concludes that a slowing economy
18 creates uncertainty, and that uncertainty leads to expectations of lower
19 opportunity costs (i.e., required ROE).²²

20 Q. PLEASE COMMENT ON THE OPPOSING ROE WITNESSES'
21 OBSERVATIONS AND CONCLUSIONS.

22 A. I generally agree with Mr. Gorman, Ms. Reno, and Dr. Woolridge's
23 observations that the economy is in an inflationary period, and that the Fed
24 is using the tools at its disposal to try to reduce inflation to its target of
25 2.00%, as discussed above. I do not agree with: (1) Mr. Gorman's and Dr.
26 Woolridge's contention that interest rates are at historical low levels and that

²⁰ Gorman Direct Testimony, at 16-17; Woolridge Direct Testimony, at 7, 11..

²¹ Reno Direct Testimony, at 13.

²² Reno Direct Testimony, at 11.

REDACTED VERSION

1 investors will accept ROEs consistent with the low interest rate period which
2 accompanied the COVID-19 pandemic; (2) that an expected inflation rate
3 of 2.50% is comparable to the Fed's target inflation rate of 2.00%; (3) that
4 the eight months of return data ended August 2022 signify as proof that
5 utility investments are "defensive"; and (4) that uncertainty in financial
6 markets lowers required returns.

7 Q. ARE INTEREST RATES AT HISTORIC LOWS?

8 A. No, they are not. While the period coinciding with the COVID-19 pandemic
9 is associated with historically low interest rates, present interest rates are
10 at levels not seen in approximately ten years. As shown on page 1 of Dr.
11 Woolridge's Exhibit JRW-2, current A-rated public utility bond yields are at
12 levels last seen in 2011. The closing 30-year Treasury bond yield of 3.40%
13 on September 7, 2022, is similar to interest rates last seen in 2014.

14 Q. WHAT IS THE TREND IN INTEREST RATES?

15 A. Interest rates are on an upward trend since the end of the COVID-19
16 pandemic. For the eight months ending August 31, 2022, A-rated public
17 utility bond yields increased from 3.10% to 4.93%, or 59% and 30-year
18 Treasury bonds increased from 1.90% to 3.27%, or 72%. Relative to the
19 historic lows during the pandemic, A-rated utility bond yields and 30-year
20 Treasury bond yields increased 93% and 230%, respectively. Mr. Gorman's
21 and Dr. Woolridge's opinion that interest rates are at historically low levels
22 is not accurate.

23 Q. GIVEN CURRENT A-RATED UTILITY BOND YIELDS AND 30-YEAR
24 TREASURY BOND YIELDS ARE COMPARABLE TO INTEREST RATE
25 LEVELS TO 2011 AND 2014, RESPECTIVELY, WHAT WERE THE

REDACTED VERSION

- 1 ASSOCIATED LEVELS OF AUTHORIZED ROES ALLOWED FOR
2 ELECTRIC UTILITIES DURING THOSE YEARS?
- 3 A. On page 13 of his direct testimony, Dr. Woolridge presents Table 3, which
4 shows authorized ROEs for electric and gas utilities since 2010. As shown
5 on Dr. Woolridge's Table 3, authorized ROEs for electric utilities in 2011
6 and 2014 were 10.29% and 9.91%, respectively. While I do not recommend
7 that the Commission use this data directly in its determination of the ROE
8 for Oncor in this proceeding, it is another directional indicator that the ROE
9 should be set at a higher level than what has recently been approved and
10 that the recommendations of the Opposing ROE Witnesses are severely
11 understated.
- 12 Q. DOES AN INFLATION RATE OF 2.50% PRESENT INCREASED RISK TO
13 INVESTORS AS COMPARED TO THE FED'S TARGET INFLATION RATE
14 OF 2.00%
- 15 A. Yes, it does. Please consider the following example. A dollar today would
16 be worth approximately \$0.55 in 2052 (30 years from now) in an
17 environment with a 2.00% inflation rate and approximately \$0.48 in an
18 environment with a 2.50% inflation rate. The difference between the two
19 values (approximately \$0.08) represents a loss in value of approximately
20 14.00%. Therefore, an investor experiencing an environment with 2.50%
21 inflation would require a higher return than an investor experiencing a
22 2.00% inflation rate as they need to compensate for the effects of inflation
23 in their portfolios.
- 24 Q. ARE THE RETURN DATA FOR UTILITY STOCKS AND MARKET
25 INDICES FOR THE EIGHT MONTHS ENDING AUGUST 2022 AN

REDACTED VERSION

1 ADEQUATE TIMEFRAME TO DETERMINE WHETHER UTILITY STOCKS
2 ARE DEFENSIVE INVESTMENTS?

3 A. No, it does not. As shown on Exhibit DWD-R-2, for the timeframe
4 encompassing the COVID-19 pandemic to August 2022, utility stocks, as
5 measured by the Combined Proxy Group,²³ are more volatile as measured
6 by annualized volatility²⁴ and perform worse than market indices such as
7 the S&P 500. This combination (high volatility and low returns) is not
8 indicative of a "defensive" investment.

9 Q. DO YOU AGREE WITH MS. RENO THAT MARKET UNCERTAINTY
10 REDUCES INVESTORS' RETURN REQUIREMENTS?

11 A. No, I do not. Uncertainty is another word for risk, and it is a basic financial
12 precept that investors require a return on their investment commensurate
13 with the risk of that investment. If uncertainty rises, the investor's required
14 return would rise as well.

15 Q. PLEASE SUMMARIZE YOUR OBSERVATIONS OF THE CURRENT
16 MARKET ENVIRONMENT.

17 A. In light of the current inflationary environment, the Fed recently raised the
18 Fed Funds Rate and anticipates additional increases over the next year.
19 Market participants have already priced in several rate increases as well.
20 Regardless of current and future actions of the Fed, however, they have
21 acknowledged that inflation is far higher than its target average level of
22 2.00% and will continue to run higher than that target into 2023 and possibly
23 beyond. Increasing inflation drives all costs higher (e.g., prices for
24 materials, labor, capital). This is an economic reality that affects companies
25 across the board and as discussed by the Company in the direct testimonies

²³ The Combined Proxy Group comprises all of the regulated proxy group companies used by the Opposing ROE Witnesses and myself in our analyses.

²⁴ Annualized Volatility equals the standard deviations of returns over the period multiplied by the square root of 252.

REDACTED VERSION

1 of Messrs. Nye, Greer, Fease, and Speed, Oncor is not immune to such
2 increases. As a result, higher inflation will increase risk, and the investor-
3 required return, for utility investors.

4 **V. RESPONSE TO POSITIONS COMMON TO THE OPPOSING ROE**

5 **WITNESSES**

6 Q. WHAT ARE THE POSITIONS COMMON TO THE OPPOSING ROE
7 WITNESSES?

8 A. Common positions held by the Opposing ROE Witnesses are (1) that
9 recently authorized ROEs and the trend of authorized ROEs support their
10 ROE recommendations²⁵; and (2) the Company's regulatory mechanisms
11 reduce its risk and therefore needs to be reflected in either its ROE or capital
12 structure.²⁶

13 Q. DO YOU AGREE WITH THESE POSITIONS PRESENTED BY THE
14 OPPOSING ROE WITNESSES?

15 A. No, I do not. I will address these positions in turn.

16 **A. Applicability of Authorized ROEs as a Benchmark**

17 Q. THE OPPOSING ROE WITNESSES POINT TO AN APPARENT
18 DOWNWARD TREND IN AUTHORIZED ROES TO JUSTIFY THEIR
19 RECOMMENDED ROES. PLEASE COMMENT.

20 A. The Opposing ROE Witnesses' reference to the trend in annual averages
21 inaccurately suggests that authorized returns have trended downward when
22 they have not. As shown in Chart 5, below, if all individual ROEs are
23 charted, rather than annual averages, there is no meaningful trend since
24 onset of the COVID-19 pandemic. Rather, time explains less than one

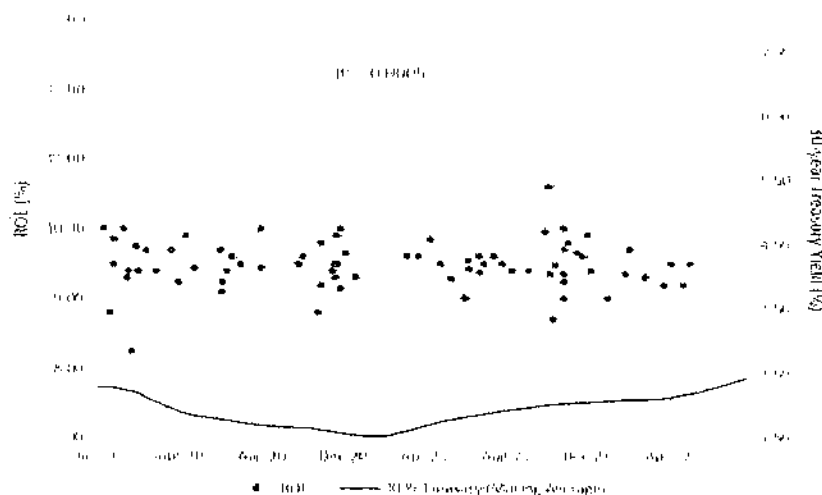
²⁵ Ordonez Direct Testimony, at 28-29; Gorman Direct Testimony, at 7; Reno Direct Testimony, at 24, 46-47; Woolridge Direct Testimony, at 11-16; and Kronauer Direct Testimony, at 6-9.

²⁶ Ordonez Direct Testimony, at 30-32; Gorman Direct Testimony, at 26,34; Reno Direct Testimony, at 22-23; Woolridge Direct Testimony, at 53; and Kronauer Direct Testimony, at 9-11.

REDACTED VERSION

percent of the change in ROEs, and the trend variable is statistically insignificant. Further, authorized returns have remained stable, even as Treasuries have fluctuated.

Chart 5: Authorized Returns for Electric Utilities (2020-2022)²⁷



Q. ARE THERE OTHER DISTINCTIONS THAT ARE IMPORTANT TO CONSIDER WHEN REVIEWING AUTHORIZED RETURNS?

A. Yes, there are. Another issue with the Opposing ROE Witnesses' observation is that while authorized ROEs may be reasonable benchmarks of acceptable ROEs in static economic conditions, they can be misleading when analyzing the investor-required return in a changing economic environment. The reason why historical authorized returns can be misleading for the investor-required return in changing markets is because authorized ROEs are a lagging indicator of investor-required returns; i.e., authorized ROEs are based on market data presented in an evidentiary

²⁷ Source: Regulatory Research Associates. Excludes limited issue rate riders, and Illinois and Vermont Formula Rate Plans. Based on data through August 12, 2022. Note that the 30-year Treasury yield is based on a backwards-looking moving average that incorporates the previous 252 trading days (approximately one calendar year).

REDACTED VERSION

record, which spans a period before the decision, lasting over a year in some cases. Because markets are constantly changing, historical authorized returns do not completely reflect the investor required return because the economic conditions in the past are not representative of economic conditions now. That is, what investors require in the future may not correlate to what they required and/or received in the past. We must remember that projecting the investor required ROE is a forward-looking concept.

Q. MS. RENO SUMMARIZES ONCOR'S CURRENT AUTHORIZED RETURN ON PAGES 5 AND 6 OF HER DIRECT TESTIMONY. ARE MARKET CONDITIONS RISKIER NOW THAN DURING THE COMPANY'S LAST RATE CASE?

A. Yes, they are. I compiled measures of risk during Oncor's last rate proceeding (March 17, 2017 – September 28, 2017) and compared it with market data during this proceeding (May 13, 2022 – August 31, 2022) to determine whether utility investors face more risk. As shown on Table 2, all of the measures selected indicate higher risk for investors now than in Docket No. 46957 (higher values for each measure represents higher risk).

Table 2: Comparison of Risk Measures from Docket No. 46957 and the Current Proceeding

Risk Measure	Docket No. 46957	Current Proceeding
A-Rated Public Utility Bond	4.00%	4.79%
CoV ²⁸ of A-Rated Public Utility Bond	1.52%	2.84%
30-Yr Treasury Bond	2.86%	3.14%
CoV of 30-Year Treasury Bond	2.15%	3.68%
CPI	2.01%	8.66%
30-Yr Breakeven Inflation	1.93%	2.34%
Beta (<i>Value Line</i>)	0.67	0.87

²⁸ Coefficient of Variation is a common measure of volatility.

REDACTED VERSION

1 Again, while this should not be a direct measure of the Company's
2 ROE in this proceeding, it should be considered as another directional
3 indicator of the ROE since the Company's last rate case and demonstrate
4 the unreasonable nature of the Opposing ROE Witnesses'
5 recommendations in this proceeding.

6 **B. Regulatory Mechanisms and Risk**

7 Q. DO THE OPPOSING ROE WITNESSES REVIEW THE REGULATORY
8 MECHANISMS AND THEIR EFFECT ON RISK?

9 A. Yes, they do.²⁹ Mr. Ordonez, Mr. Gorman, and Ms. Reno discuss Oncor's
10 mechanisms specifically, and Dr. Woodridge discusses regulatory
11 mechanisms more generally while citing an article from Moody's Investor
12 Services. The Opposing ROE witnesses all conclude that regulatory
13 mechanisms reduce risk. Mr. Ordonez and Mr. Gorman reflect that risk
14 reduction in their recommended capital structures.³⁰ Ms. Reno, Dr.
15 Woolridge, and Mr. Kronauer do not make any adjustments to their
16 recommendations based on the Company's regulatory mechanisms.

17 Q. WHAT IS YOUR POSITION ON REGULATORY MECHANISMS AND THE
18 COST OF COMMON EQUITY?

19 A. It is important to remember that determining the cost of capital is a
20 comparative exercise, so if similar mechanisms are common throughout the
21 companies on which one bases their analyses, the comparative risk is zero,
22 because any impact of the perceived reduced risk of the mechanism(s) by
23 investors would be reflected in the market data of the proxy group. This is
24 a critical and necessary aspect of assessing whether an annual rate
25 mechanism affects a utility's overall risk.

²⁹ Ordonez Direct Testimony, at 30-32; Gorman Direct Testimony, at 34; Reno Direct
 Testimony, at 22-23; Woolridge Direct Testimony, at 53; and Kronauer Direct Testimony,
 at 9-11.

³⁰ Ordonez Direct Testimony, at 31-32; Gorman Direct Testimony, at 34.

REDACTED VERSION

1 Q. DO ANY OF THE OPPOSING ROE WITNESSES ATTEMPT TO SURVEY
2 THE ELECTRIC UTILITY INDUSTRY FOR SIMILAR REGULATORY
3 MECHANISMS?

4 A. Yes. Ms. Reno states on page 23 of her direct testimony that two-thirds of
5 all electric utilities have riders in place to recover costs related to energy
6 efficiency and approximately half of all electric utilities have adjustment
7 mechanisms to recover transmission and delivery infrastructure costs.

8 Q. HAVE YOU COMPILED THE REGULATORY MECHANISMS OF THE
9 COMBINED PROXY GROUP?

10 A. Yes, I have. Exhibit DWD-R-3 provides a summary of regulatory
11 mechanisms such as infrastructure riders and energy efficiency riders in
12 effect at each utility subsidiary of the Combined Proxy Group. As Exhibit
13 DWD-R-3 demonstrates, cost recovery and alternative regulation
14 mechanisms are present in every proxy company and any risk reduction to
15 those riders would be reflected in their market data. As such, the presence
16 of the Company's regulatory mechanisms is not unique as compared to the
17 Combined Proxy Group and, therefore does not indicate a lower level of
18 relative risk.

19 Company witnesses Mr. Kevin R. Fease and Ms. Ellen Lapson also
20 discuss regulatory mechanisms in their respective rebuttal testimonies.

21 Q. DID YOU SURVEY THE CAPITAL STRUCTURES OF OPERATING
22 SUBSIDIARIES THAT HAVE BOTH INFRASTRUCTURE REPLACEMENT
23 RIDERS AND ENERGY EFFICIENCY RIDERS?

24 A. Yes, I have. As shown on page 3 of Exhibit DWD-R-3, the operating
25 subsidiaries in the Combined Proxy Group that have similar regulatory
26 mechanisms to Oncor have capital structures that contain equity ratios that
27 range from 40.96% and 58.26%. Oncor's requested equity ratio of 45.00%

REDACTED VERSION

1 falls within the operating subsidiary range and therefore should be
2 considered reasonable by the Commission.

3 Q. ARE YOU AWARE OF ANY STUDIES THAT HAVE ADDRESSED THE
4 RELATIONSHIP BETWEEN RATE STABILIZATION MECHANISMS,
5 GENERALLY, AND ROE?

6 A. Yes. I, along with Richard A. Michelfelder of Rutgers University, and my
7 colleague at ScottMadden, Pauline M. Ahern, examined the relationship
8 between infrastructure replacement mechanisms and ROE among electric,
9 gas, and water utilities. Using the generalized consumption asset pricing
10 model, also known as the "PRPM," we found infrastructure replacement
11 mechanisms to have no statistically significant effect on investor perceived
12 risk, and hence, ROE.³¹

13 Also, in March 2014, The Brattle Group ("Brattle") published a study
14 addressing the effect of revenue decoupling structures on the cost of capital
15 for electric utilities.³² In its report, which extended a prior analysis focused
16 on natural gas distribution utilities, Brattle pointed out that although
17 decoupling structures may affect revenues, net income still can vary. Brattle
18 further noted that the distinction between diversifiable and non-diversifiable
19 risk is important to equity investors, and the relationship between
20 decoupling and ROE should be examined in that context. Further to that
21 point, Brattle noted that although reductions in total risk may be important
22 to bondholders, only reductions in non-diversifiable business risk would

³¹ Richard A. Michelfelder, Pauline M. Ahern, Dylan W. D'Ascendis, *The Impact of Decoupling on The Cost of Capital of Public Utilities*, Energy Policy 130 (2019), at 311-319.

³² The Brattle Group, *The Impact of Revenue Decoupling on the Cost of Capital for Electric Utilities: An Empirical Investigation*, Prepared for the Energy Foundation, March 20, 2014.

REDACTED VERSION

1 justify a reduction to the ROE. In November 2016, the Brattle study was
2 updated based on data through the fourth quarter of 2015.³³

3 Brattle's empirical analysis examined the relationship between
4 decoupling and the After-Tax WACC for a group of electric utilities that had
5 implemented decoupling structures in various jurisdictions throughout the
6 United States. As with Brattle's 2014 study, the updated study found no
7 statistically significant link between the cost of capital and revenue
8 decoupling structures.³⁴

9 Q. WHAT ARE YOUR CONCLUSIONS REGARDING THE EFFECT OF THE
10 COMPANY'S REGULATORY MECHANISMS ON RISK?

11 A. The presence of Oncor's regulatory mechanisms does not affect the
12 Company's risk because it is similar to riders present in the operating
13 companies of the Combined Proxy Group used to derive the ROE. Since
14 this is the case, the lower risk of having a regulatory mechanism (if any)
15 would already be subsumed in the market data for those companies.

16 Furthermore, several studies show that rate stabilization
17 mechanisms do not materially affect the investor-required return for those
18 companies. Given that, the Company's regulatory mechanisms do not
19 lower the comparative risk of the Company relative to the companies used
20 to derive the ROE and therefore, the ROE or the Company's capital
21 structure should not be adjusted due to the Company's regulatory
22 mechanisms.

³³ Michael J. Vilbert, Joseph B. Wharton, Shirley Zhang and James Hall, *Effect on the Cost of Capital of Innovative Ratemaking that Relaxes the Linkage between Revenue and kWh Sales – An Updated Empirical Investigation*, November 2016.

³⁴ Michael J. Vilbert, Joseph B. Wharton, Shirley Zhang and James Hall, *Effect on the Cost of Capital of Innovative Ratemaking that Relaxes the Linkage between Revenue and kWh Sales – An Updated Empirical Investigation*, November 2016.

REDACTED VERSION

VI. RESPONSE TO STAFF WITNESS ORDONEZ

Q. PLEASE SUMMARIZE MR. ORDONEZ'S RECOMMENDATION REGARDING ONCOR'S ROE.

A. Mr. Ordóñez applies single stage and multi-stage DCF models, an RPM, and a CAPM to a proxy group of 23 electric utilities. The results of these models are summarized in Table 3, below. From these results, Mr. Ordóñez recommends an ROE range of 8.75% to 9.87%, with a point estimate of 9.30%.³⁵

Table 3: Summary of Mr. Ordóñez's ROE Results³⁶

Model	ROE Range	Point Estimate
Constant Growth DCF	6.17% - 12.91%	8.94%
Multi-Stage DCF	7.51% - 10.01%	8.56%
Risk Premium	N/A	9.87%
CAPM	8.83%	Excluded

As can be seen in Table 3, his recommended range of ROEs is derived from his DCF model and RPM results. The CAPM analysis was excluded from Mr. Ordóñez's ROE estimates.³⁷

Q. DO YOU HAVE A GENERAL COMMENT ON MR. ORDONEZ'S ROE RECOMMENDATION?

A. Yes, I do. On page 6 of his direct testimony, Mr. Ordóñez states that he applies a number of standards in presenting his conclusions in this proceeding. The standard I want to draw attention to is PURA § 36.032 (establishing reasonable return), which states the regulatory authority shall consider applicable factors in establishing a reasonable return, including: (1) the efforts and achievements of the utility in conserving resources; (2)

³⁵ Ordóñez Direct Testimony, at 28.

³⁶ Ordóñez Direct Testimony, at 28 and Attachment JO-9.

³⁷ Ordóñez Direct Testimony, at 28.

REDACTED VERSION

1 the availability of the utility's services; (3) the efficiency of the utility's
2 operations; and (4) the quality of the utility's management.

3 While Mr. Ordonez states he applied this standard, it does not appear
4 that he evaluated the Company's performance relative to the four factors
5 cited above, nor does it appear that he has rebutted the Company's
6 witnesses who have testified to the Company's performance relative to
7 these four factors. Given the Company's testimony regarding its
8 performance, and the fact that it was not rebutted, it should have led Mr.
9 Ordonez to recommend a ROE at the higher end of his range.

10 Q. DO YOU HAVE ANY CONCERNS WITH MR. ORDONEZ'S ANALYSES
11 AND CONCLUSIONS?

12 A. Yes, I do. I am concerned with the following: (1) the applicability of the use
13 of a multi-stage DCF model for utility companies; (2) his application of the
14 multi-stage DCF model; (3) his application the RPM; and (4) his application
15 of the CAPM.

16 **A. Discounted Cash Flow Model**

17 Q. PLEASE SUMMARIZE MR. ORDONEZ'S METHODOLOGY TO
18 CALCULATE HIS COMBINED DCF RESULTS.

19 A. Mr. Ordonez uses two DCF models in his analysis: a constant growth and
20 a multi-stage DCF model. He averages the point estimate results from
21 these models to calculate his combined DCF point estimate. This is the
22 value that he uses for his ROE range. These results are summarized in
23 Table 4.

REDACTED VERSION

Table 4: Summary of Mr. Ordonez's ROE Results³⁸

Model	ROE Range	Point Estimate
Single Stage DCF (Constant Growth)	6.17%-12.91%	8.94%
Multi-Stage DCF	<u>7.51%-10.01%</u>	<u>8.56%</u>
Combined DCF	6.17%-12.91%	8.75%

Q. PLEASE SUMMARIZE MR. ORDONEZ'S CONSTANT GROWTH DCF MODEL.

A. Mr. Ordonez's Constant Growth DCF model applies an average of weekly prices over the twelve weeks ending July 11, 2022 and projected long-term earnings growth rates from *Value Line* and Zacks.³⁹ In calculating the expected dividend yield, Mr. Ordonez projects the next four quarterly dividends, growing the dividend by his projected long-term earnings growth rate in the quarter in which each company has generally increased its dividend.⁴⁰

Q. DO YOU GENERALLY AGREE WITH MR. ORDONEZ'S APPLICATION OF THE CONSTANT GROWTH DCF MODEL?

A. Yes, I do.

Q. PLEASE SUMMARIZE MR. ORDONEZ'S MULTI-STAGE DCF MODEL.

A. Mr. Ordonez's multi-stage DCF model calculates the internal rate of return that sets the current stock price equal to the present value of projected dividends.⁴¹ The fundamental difference between Mr. Ordonez's constant growth and multi-stage DCF models is that the former assumes a constant growth rate in perpetuity, whereas the latter allows for a change from the first stage growth (years one through five) to a long-term growth rate (years

³⁸ Ordonez Direct Testimony, Attachment JO-9.

³⁹ Ordonez Direct Testimony, Attachments JO-2 and JO-3.

⁴⁰ Ordonez Direct Testimony, Attachment JO-4.

⁴¹ The Internal Rate of Return is the resulting ROE estimate.

REDACTED VERSION

1 six through perpetuity).⁴² As with his constant growth DCF model, the first
2 stage of Mr. Ordonez's multi-stage DCF model relies on analyst earnings
3 projections from Zacks and *Value Line* as the relevant measures of growth.
4 The second stage represents a transition period. The third, or terminal,
5 stage assumes long-term growth measured by expected growth in nominal
6 GDP.⁴³ Mr. Ordonez's terminal growth rate of 5.13% is lower than his
7 average projected earnings per share ("EPS") growth rate used in his
8 constant growth DCF model of 5.63%.⁴⁴

9 Q. IS MR. ORDONEZ'S MULTI-STAGE DCF MODEL A REASONABLE
10 APPROACH TO ESTIMATING THE COMPANY'S ROE?

11 A. No, it is not. The multi-stage DCF model and its growth rates reflect the
12 company/industry lifecycle, which is typically described in three stages: (1)
13 the growth stage, which is characterized by rapidly expanding sales, profits,
14 and earnings - in the growth stage, dividend payout ratios are low in order
15 to grow the firm; (2) the transition stage, which is characterized by slower
16 growth in sales, profits, and earnings - in the transition stage, dividend
17 payout ratios increase, as their need for exponential growth diminishes; and
18 (3) the maturity (steady-state) stage, which is characterized by limited,
19 slightly attractive investment opportunities, and steady earnings growth,
20 dividend payout ratios, and returns on equity. The economics of the public
21 utility business indicate that the industry is in the steady-state, or constant-
22 growth stage of a multi-stage DCF, which would mean that the three- to five-
23 year projected growth rates for each company would be the "steady-state"
24 or terminal growth rate appropriate for the DCF model for utility companies,
25 not the GDP growth rate, which is not a company-specific growth rate, nor

⁴² Mr. Ordonez's DCF analyses project dividends for a 150-year period, which is generally consistent with a perpetual dividend assumption; Ordonez Direct Testimony, at 19.

⁴³ Ordonez Direct Testimony, at 19.

⁴⁴ Ordonez Direct Testimony, at Attachments JO-2 and JO-6, respectively.

REDACTED VERSION

1 is it an upward bound for growth. Dr. Woolridge also notes this in his direct
2 testimony.⁴⁵

3 Q. ARE THERE EXAMPLES IN BASIC FINANCE TEXTS THAT SUPPORT
4 YOUR POSITION?

5 A. Yes. For example, in *Investments*, life cycles and multi-stage growth
6 models are discussed:

7 As useful as the constant-growth DDM (dividend discount
8 model) formula is, you need to remember that it is based on a
9 simplifying assumption, namely, that the dividend growth rate
10 will be constant forever. In fact, firms typically pass through
11 life cycles with very different dividend profiles in different
12 phases. In early years, there are ample opportunities for
13 profitable reinvestment in the company. Payout ratios are low,
14 and growth is correspondingly rapid. In later years, the firm
15 matures, production capacity is sufficient to meet market
16 demand, competitors enter the market, and attractive
17 opportunities for reinvestment may become harder to find. In
18 this mature phase, the firm may choose to increase the
19 dividend payout ratio, rather than retain earnings. The
20 dividend level increases, but thereafter it grows at a slower
21 pace because the company has fewer growth opportunities.

22 Table 18.2 illustrates this pattern. It gives Value Line's
23 forecasts of return on assets, dividend payout ratio, and 3-
24 year growth in earnings per share for a sample of the firms in
25 the computer software industry versus those of east coast
26 electric utilities...

27 By in large, the software firms have attractive investment
28 opportunities. The median return on assets of these firms is
29 forecast to be 19.5%, and the firms have responded with high
30 plowback ratios. Most of these firms pay no dividends at all.
31 The high return on assets and high plowback result in rapid
32 growth. The median growth rate of earnings per share in this
33 group is projected at 17.6%.

34 In contrast, the electric utilities are *more representative of*
35 *mature firms*. Their median return on assets is lower, 6.5%;

⁴⁵ Woolridge Direct Testimony, at 31.

REDACTED VERSION

1 dividend payout is higher, 68%; and median growth is lower,
2 4.6%.

3 ***

4 To value companies with temporarily high growth, analysts
5 use a multistage version of the dividend discount model.
6 Dividends in the early high-growth period are forecast and
7 their combined present value is calculated. Then, once the
8 firm is projected to settle down to a *steady-growth phase*, the
9 *constant-growth DDM* is applied to value the remaining
10 *stream of dividends*.⁴⁶ (Clarification and emphasis added)

11 Q. NOT WITHSTANDING THE APPLICABILITY OF MR. ORDONEZ'S
12 MULTI-STAGE DCF, DO YOU HAVE ANY OTHER CONCERNS WITH HIS
13 ANALYSIS?

14 A. Yes, I do. My concerns include: (1) his use of historical GDP growth for the
15 period 1951 to 2021; and (2) his projected measure of inflation.

16 Q. PLEASE COMMENT ON THE HISTORICAL GDP DATASET USED BY
17 MR. ORDONEZ IN HIS MULTI-STAGE DCF.

18 A. While I do not dispute the source of the data used by Mr. Ordóñez to
19 calculate his historical GDP growth, the dataset starts in 1947, not in 1950.

20 Q. WHY IS THIS IMPORTANT?

21 A. Kroll's 2022 S&P® Yearbook ("S&P – 2022") makes it clear that the
22 arbitrary selection of historical periods is highly suspect and unlikely to be
23 representative of long-term trends in market data. For example, S&P -
24 2022 states:

25 The estimate of the equity risk premium depends on the length
26 of the data series studied. A proper estimate of the equity risk
27 premium requires a data series long enough to give a reliable
28 average without being unduly influenced by very good and
29 very poor short-term returns. When calculated using a long
30 data series, the historical equity risk premium is relatively
31 stable. Furthermore, because an average of the realized

46 Z. Bodie, A. Kane, and A. J. Marcus, *Investments*, 7th Edition, McGraw-Hill Irwin, 2008, at 616-617.

REDACTED VERSION

1 equity risk premium, is quite volatile when calculated using a
2 short history, using a long series makes it less likely that the
3 analyst can justify any number he or she wants.⁴⁷

4 Including the yearly GDP growth in the years 1948, 1949, and 1950, the
5 historical GDP growth calculation increases from 3.13% to 3.22%.

6 Q. DO YOU HAVE ANY CONCERNS WITH THE INFLATION FORECAST
7 USED BY MR. ORDONEZ?

8 A. Yes, I do. While the 2.00% inflation rate is the target inflation rate for the
9 Fed, as discussed above, I do not agree that it should be used as a market-
10 based input for a multi-stage DCF model.

11 Q. ARE THERE MORE OBJECTIVE ESTIMATES THAT MR. ORDONEZ CAN
12 APPLY?

13 A. Yes, there are. Two such estimates are: (1) the implied 30-year TIPS
14 spread (2.45%); and the average of projected CPI for the years 2024-2028
15 and 2029-2033 (2.30%) from *Blue Chip Financial Forecasts* ("Blue Chip").

16 Given that using the entire time period for the historical GDP
17 calculation and market-based projected inflation rates are higher than Mr.
18 Ordonez's inputs, his multi-stage DCF result is understated.

19 **B. Application of the Risk Premium Model**

20 Q. PLEASE SUMMARIZE MR. ORDONEZ'S RPM.

21 A. Mr. Ordonez's RPM estimates the relationship between average allowed
22 equity returns for electric utility companies published by Regulatory
23 Research Associates, Inc. and annual average Moody's Investor's Service
24 ("Moody's") Baa-rated corporate bond yields. Using annual data from the
25 years 1980 through 2022, Mr. Ordonez conducts a regression analysis,
26 which he then combines with recent monthly yields on Moody's Baa-rated

⁴⁷ SBBI – 2022 at 201-202.

REDACTED VERSION

1 corporate bonds to develop his equity risk premium ("ERP") estimate of
2 4.85% and a corresponding ROE of 9.87%.⁴⁸

3 Q. PLEASE COMMENT ON MR. ORDONEZ'S APPLICATION OF THE RPM.

4 A. As a preliminary matter, I agree with Mr. Ordonez's reliance on empirical
5 studies that demonstrate that ERPs vary over time and that there is an
6 inverse relationship between the level of interest rates and the ERP.⁴⁹

7 However, I have concerns with Mr. Ordonez's application of the
8 RPM, including: (1) his use of current interest rates, as opposed to projected
9 interest rates; (2) his use of annual authorized returns in favor of individual
10 authorized returns; and (3) his use of Baa corporate bond yields in favor of
11 Baa public utility bond yields.

12 Q. WHY IS USING CURRENT INTEREST RATES INAPPROPRIATE FOR
13 COST OF CAPITAL PURPOSES?

14 A. Using current measures, like interest rates, is inappropriate for cost of
15 capital and ratemaking purposes because both cost of capital and
16 ratemaking are prospective in nature. The cost of capital, including the cost
17 rate of common equity, is expectational in that it reflects investors'
18 expectations of future capital markets, including an expectation of interest
19 rate levels, as well as future risks. As Morningstar observes:

20 It is important to note that the expected equity risk premium,
21 as it is used in discount rates and cost of capital analysis, is a
22 forward-looking concept. That is, the equity risk premium that
23 is used in the discount rate should be reflective of what
24 investors think the risk premium will be going forward.⁵⁰

48 Ordonez Direct Testimony, at 24-25, Attachment JO-7

49 Ordonez Direct Testimony, at 23-24.

50 Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook, at 53.

REDACTED VERSION

1 Ratemaking is also prospective in that the rates set in this proceeding
2 will be in effect for a period in the future. Mr. Ordonez agrees with using
3 projected measures in a cost of capital analysis, specifically the use of
4 projected analyst growth rates in EPS in the DCF model, as he explains on
5 page 21 of his direct testimony: "I use professional security analysts'
6 forecasts instead of historical data for three reasons. First, the cost of equity
7 is a forward-looking concept, and security analysts use extensive and
8 sophisticated financial models to forecast growth rates."

9 As mentioned above, even though Mr. Ordonez relies on projected
10 growth rates in his DCF analyses, noting that growth in the DCF is
11 expected,⁵¹ he fails to apply that logic to selecting an appropriate interest
12 rate in his RPM analysis. Using projected interest rates in his RPM analysis
13 would be consistent with his above statement and his application of the DCF
14 model.

15 Q. WHY SHOULD AN ANALYST REVIEW AUTHORIZED ROES ON AN
16 INDIVIDUAL BASIS AS OPPOSED TO AN ANNUAL BASIS?

17 A. As discussed above, an analyst should use individual cases instead of an
18 annual average is that some years have more rate case decisions than
19 others, and years with less rate case decisions will garner unnecessary
20 weight. Another reason to use individual cases over an annual average is
21 that interest rates and market conditions change during the year (e.g., the
22 beginning and end of 2021), if one uses annual average authorized returns
23 and annual average interest rates, the fluctuation between the interest rates
24 and ERPs during the year are lost.

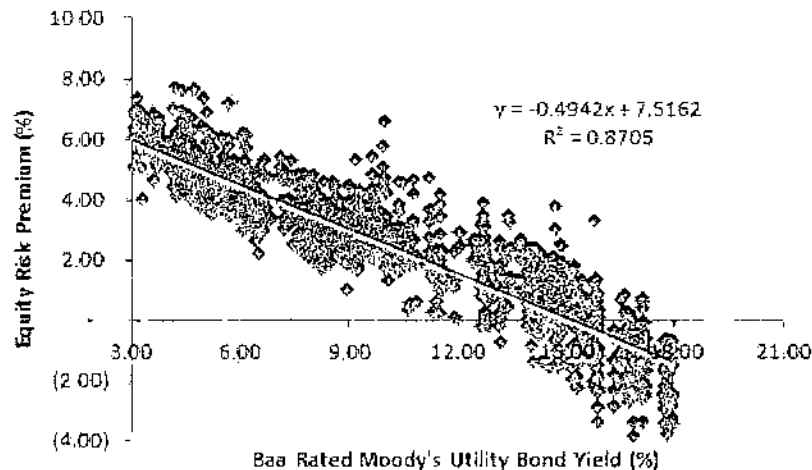
25 Q. WHY SHOULD MR. ORDONEZ USE UTILITY-SPECIFIC BOND YIELDS
26 INSTEAD OF CORPORATE BOND YIELDS IN HIS RPM?

⁵¹ Ordonez Direct Testimony, at 20.

REDACTED VERSION

- 1 A. It is more appropriate to use Moody's Baa-rated public utility bond yields
2 rather than Moody's Baa corporate bond yields for both the regression and
3 the return on equity computation, simply because the yields on utility bonds
4 are applicable to utilities and the yields on general corporate bonds are not.
- 5 Q. WHAT IS THE CORRECTED RESULT OF THE RPM AFTER
6 REFLECTING A PROSPECTIVE MOODY'S BAA-RATED PUBLIC
7 UTILITY BOND YIELD AND USING INDIVIDUAL RATE CASE DATA IN
8 PLACE OF AVERAGE ANNUAL RATE CASE DATA?
- 9 A. Yes, as shown on Exhibit DWD-R-4 and Chart 6, below, a scatter plot of the
10 individual rate case data underlying Attachment JO-7 shows the inverse
11 relationship of the ERP relative to the yields on Moody's Baa-rated public
12 utility bonds immediately prior to the issuance of each regulatory decision.⁵²

Chart 6: Individual Rate Case Data: Electric Utilities 1980-2022



- 14
- 15 I determined the appropriate prospective Moody's Baa-rated public
16 utility yield by relying on a consensus forecast of about 50 economists of

52 If the Order was in the first half of the month, the Moody's Baa-rated utility bond from two months prior would be used. If the Order was in the second half of the month, the Moody's Baa-rated public utility bond from the prior month was used.

REDACTED VERSION

1 the expected yield on Moody's Baa-rated corporate bonds for the six
2 calendar quarters ending with the fourth calendar quarter of 2023, and *Blue*
3 *Chip's* long-term projections for 2024 to 2028, and 2029 to 2033.⁵³ The
4 average expected yield on Moody's Baa-rated corporate bonds is 6.03%. I
5 then derived an expected yield on Moody's Baa-rated public utility bonds by
6 making a downward adjustment of 0.05%, which represents a recent spread
7 between Moody's Baa-rated corporate bonds and Moody's Baa-rated public
8 utility bonds. Subtracting the recent 0.05% spread from the expected
9 Moody's Baa2-rated corporate bond yield of 6.03% results in an expected
10 Moody's Baa2-rated public utility bond yield of 5.98%.

11 The projected Baa2-rated utility bond yield of 5.98% produces a
12 projected ERP of 4.56%. Correcting the inputs to Mr. Ordonez's RPM
13 analysis results in an indicated ROE of 10.54%.

14 **C. Application of the Capital Asset Pricing Model**

15 Q. DO YOU HAVE ANY COMMENTS ON MR. ORDONEZ'S CAPM
16 RESULTS?

17 A. Yes. Mr. Ordonez indicated average return on common equity using the
18 CAPM of 8.83% is unreasonable on its face. Mr. Ordonez also recognizes
19 this fact and does not directly consider his CAPM results in the
20 determination of his final cost of common equity range.⁵⁴ The inputs used
21 in his application of the CAPM are the driving factors for the
22 unreasonableness of his CAPM results.

23 Q. WHICH INPUTS OF MR. ORDONEZ'S CAPM ANALYSIS ARE FLAWED?

24 A. Mr. Ordonez's CAPM analysis is flawed in at least three respects. First, he
25 has incorrectly relied on a historical, *i.e.*, recent, 20-year Treasury bond
26 yield as his risk-free rate.⁵⁵ Second, he incorrectly calculated the market

53 *Blue Chip Financial Forecasts*, June 1, 2022 and July 1, 2022.

54 Ordonez Direct Testimony, at 25.

55 Ordonez Direct Testimony, Attachment JO-8.

REDACTED VERSION

1 risk premium ("MRP") by using the total return on long-term government
2 bonds in his calculation. Third, Mr. Ordonez did not incorporate an empirical
3 CAPM ("ECAPM") analysis even though empirical evidence indicates that
4 low-beta securities, such as utilities, earn returns higher than the CAPM
5 predicts, and high-beta securities earn less. As I discussed earlier in this
6 section, it is reasonable and appropriate to rely on projected interest rates
7 in a cost of capital analysis. That discussion is equally applicable here.

8 Q. WHY IS MR. ORDONEZ'S USE OF 20-YEAR U.S. TREASURY BONDS
9 INAPPROPRIATE FOR COST OF CAPITAL PURPOSES?

10 A. Mr. Ordonez's use of 20-year U.S. Treasury bonds is inappropriate for cost
11 of capital purposes because, as discussed below, the tenor of the risk-free
12 rate used in the CAPM should match the life (or duration) of the underlying
13 investment. As discussed in my direct testimony, both financial and
14 academic literature find that the term of the risk-free rate used for cost of
15 capital purposes should match the life of the underlying investment. Equity
16 securities represent a perpetual claim on cash flows; 30-year Treasury
17 bonds are the longest-maturity securities available to approximate that
18 perpetual claim.⁵⁶ The average life of Oncor's utility plant is 34 years based
19 on the composite depreciation rate of the components of its utility plant.
20 Thus, Mr. Ordonez's use of a 20-year Treasury bond yield does not match
21 the life of the assets being valued. The use of a 30-year Treasury bond
22 yield is a more appropriate risk-free rate.

23 In view of the above, the appropriate risk-free rate available at the
24 time of the preparation of Mr. Ordonez's direct testimony is the average of
25 the consensus forecasts of approximately 50 economists from *Blue Chip* for
26 30-year Treasury bonds for the six quarters ending with the fourth quarter
27 2023, from the July 1, 2022 edition, and the long-range consensus forecasts

⁵⁶ D'Ascendis Direct Testimony, at 47-48.

REDACTED VERSION

1 from the June 1, 2022 edition for 2024-2028 and 2029-2033, or 3.74%, as
2 derived in note 1 on page 2 of Exhibit DWD-R-5.⁵⁷

3 Q. PLEASE COMMENT ON MR. ORDONEZ'S USE OF THE HISTORICAL
4 MEAN TOTAL RETURN AND U.S. LONG-TERM GOVERNMENT BONDS.

5 A. Although correctly relying on Kroll's historical returns in his CAPM analysis,
6 Mr. Ordóñez ignored their recommendation to rely on the income return and
7 not the total return on U.S. Treasury securities in deriving an MRP. As
8 indicated in SBBI-2022:

9 Another point to keep in mind when calculating the equity risk
10 premium is that the income return on the appropriate-horizon
11 Treasury security, rather than the total return, is used in the
12 calculation.

13 The total return comprises three return components: the
14 income return, the capital appreciation return, and the
15 reinvestment return. The income return is defined as the
16 portion of the total return that results from a periodic cash flow
17 or, in this case, the bond coupon payment. The capital
18 appreciation return results from the price change of a bond
19 over a specific period. Bond prices generally change in
20 reaction to unexpected fluctuations in yields. Reinvestment
21 return is the return on a given month's investment income
22 when reinvested into the same asset class in the subsequent
23 months of the year. The income return is thus used in the
24 estimation of the equity risk premium because it represents
25 the truly riskless portion of the return.⁵⁸

26 Also, as shown in SBBI-2022 on page 145, the standard deviation
27 for the income return on long-term government bonds is 2.6%, which is the
28 lowest (i.e., least risky) measure of all bond returns followed by SBBI. Mr.
29 Ordóñez's recommended measure of the risk-free rate, the total return on

57 Both documents would have been available when Mr. Ordóñez conducted his rate of
return analysis.

58 SBBI-2022, at 200-201.

REDACTED VERSION

1 long-term government bonds, has a standard deviation of 9.8%, which is
2 the highest (*i.e.*, most risky) measure of all bond returns followed by SBBI.
3 These measures alone warrant the use of the income return on long-term
4 government bonds as the appropriate proxy of the risk-free rate for use in
5 the calculation of the MRP in a CAPM analysis.

6 In view of the above, the correct derivation of the historical MRP is
7 the difference between the arithmetic mean total return on large company
8 common stocks of 12.30% and the arithmetic mean 1926-2021 income
9 return on long-term government bonds of 4.90%, which results in an MRP
10 of 7.40%.⁵⁹

11 Q. IS THERE A FORWARD-LOOKING RISK PREMIUM THAT WOULD BE
12 SUPPORTED BY MR. ORDONEZ'S DIRECT TESTIMONY?

13 A. Yes, there is. In addition to the corrected historical MRP of 7.40% based
14 on Kroll's data, Mr. Ordonez supports the empirical studies that suggest
15 there is an inverse relationship between interest rates and ERPs.⁶⁰ Using
16 Kroll's return data, I performed a regression analysis similar to the one Mr.
17 Ordonez performed for his RPM analysis. Using a projected risk-free rate
18 of 3.74%, an MRP of 8.89% is implied from the regression analysis. The
19 average of the historical and expected MRP results in an average MRP of
20 8.15% as shown on page 2 of Exhibit DWD-R-5.

21 Q. DOES MR. ORDONEZ PERFORM AN ECAPM IN HIS ANALYSIS?

22 A. No. Mr. Ordonez failed to consider the ECAPM, despite the fact that
23 numerous tests of the CAPM have confirmed the ECAPM's validity by
24 showing that the empirical Security Market Line ("SML") described by the
25 traditional CAPM is not as steeply sloped as the predicted SML. While the
26 results of these tests support the notion that betas are related to security

59 SBBI-2022, at 145.

60 Ordonez Direct Testimony, at 25.

REDACTED VERSION

1 returns, the empirical SML described by the CAPM formula is not as steeply
2 sloped as the predicted SML,⁶¹ as discussed on pages 45 to 47 of my direct
3 testimony.

4 Q. WHAT WOULD THE RESULTS OF MR. ORDONEZ'S CAPM ANALYSIS
5 BE IF CORRECTED TO USE A PROJECTED 30-YEAR TREASURY
6 BOND, AN APPROPRIATE MRP, AND EMPLOY THE ECAPM AS
7 DISCUSSED ABOVE?

8 A. Exhibit DWD-R-5, page 1 presents the results of the correct applications of
9 both the traditional CAPM and the ECAPM for Mr. Ordóñez's proxy group.
10 The average and median traditional CAPM results range from 10.66% to
11 10.77%, and the average and median ECAPM results range from 10.97%
12 to 11.05%. Averaging the CAPM and ECAPM results in a range of indicated
13 ROEs between 10.82% to 10.91%. In view of those results, Mr. Ordóñez's
14 indicated CAPM result of 8.83% is grossly understated.

D. Ordóñez Corrected Results

16 Q. WHAT IS MR. ORDONEZ'S RANGE OF RESULTS GIVEN YOUR
17 CORRECTIONS ABOVE?

18 A. Mr. Ordóñez's updated ROE range incorporating the corrections to the RPM
19 and CAPM analyses can be seen in Table 5, below.

Table 5: Summary of Mr. Ordóñez's ROE Results

Model	ROE Range	Midpoint
Constant Growth DCF	6.17%-12.91%	9.54%
Corrected Risk Premium	—	10.54%
Corrected CAPM	10.82%-10.91%	10.86%

21 As shown above, the corrected indicated range of results for Mr. Ordóñez's
22 ROE models is from 9.54% to 10.86%. Given this corrected range, Mr.

61 Roger A. Morin, Modern Regulatory Finance, Public Utility Reports, Inc., 2021, at 223.
("Morin")

REDACTED VERSION

1 Ordonez's recommended ROE of 9.30% is understated and should be given
2 little weight by the Commission.

3 **VII. RESPONSE TO TIEC WITNESS GORMAN**

4 Q. PLEASE SUMMARIZE MR. GORMAN'S RECOMMENDATION
5 REGARDING ONCOR'S ROE.

6 A. Mr. Gorman recommends an ROE of 9.30%, within a range of 8.90% to
7 9.70%.⁶² Mr. Gorman's 9.30% recommendation is the midpoint of his
8 range; the low end is set by reference to his DCF constant growth model
9 results (8.90%), as well as his Risk Premium estimate (9.20%), and the high
10 end set by reference to his CAPM result (9.70%). His RPM result (9.20%)
11 is within his range.⁶³

12 Q. DO YOU HAVE ANY CONCERNS WITH MR. GORMAN'S ANALYSES
13 AND CONCLUSIONS?

14 A. Yes, I do. I am concerned with (1) his application of the DCF model; (2) his
15 application of the RPM; (3) his application of the CAPM; and (4) his financial
16 integrity analysis and the conclusions he draws from it.

17 **A. Discounted Cash Flow Model**

18 Q. PLEASE SUMMARIZE MR. GORMAN'S DCF ANALYSES.

19 A. Mr. Gorman uses three DCF models; a constant growth DCF model using
20 analysts' growth rates, a constant growth DCF model using sustainable
21 growth rates, and a multi-stage DCF, all using price data for the 13-weeks
22 ending July 29, 2022, and the annualized quarterly dividend most recently
23 paid as reported in *Value Line*.⁶⁴ For his projected three- to five-year EPS
24 growth rates, Mr. Gorman uses Zacks, S&P Global Market Intelligence, and
25 Yahoo! Finance; he uses *Blue Chip* for the terminal growth rate in his multi-

62 Gorman Direct Testimony, at 5.

63 Gorman Direct Testimony, at 73-74.

64 Gorman Direct Testimony, at 46-59; Exhibits MPG-4 through MPG-8.

REDACTED VERSION

1 stage DCF.⁶⁵ As shown in Table 6, below, using these inputs, he derives
2 average indicated ROEs between 7.86% and 9.12% for his constant growth
3 DCF models, and between 8.18% and 8.27% for his multi-stage DCF
4 model. From these results, Mr. Gorman concludes that the indicated DCF
5 model result is between 8.70% and 9.10% with a point estimate of 8.90%.⁶⁶

6 **Table 6: Mr. Gorman's DCF Results (Exhibit MPG-5)⁶⁷**

Description	Average	Median
CGDCF Model (Analysts' Growth)	8.68%	9.12%
CGDCF Model (Sustainable Growth)	8.24%	7.86%
Multi-Stage DCF Model	8.18%	8.27%

7 In view of Mr. Gorman's recommended indicated range of ROEs using the
8 DCF model, it appears that he does not place any weight on his sustainable
9 growth DCF or his multi-stage DCF. Since it appears that Mr. Gorman does
10 not rely on his sustainable growth or multi-stage DCF, I will not address his
11 application of these models at this time. If Mr. Gorman states he does rely
12 on either of those models in his determination of his ROE, I discussed the
13 applicability of the multi-stage DCF for utility companies when critiquing Mr.
14 Ordonez's direct testimony and will address the faults of the sustainable
15 growth DCF model when addressing Ms. Reno's direct testimony.

16 Q. DO YOU HAVE A CONCERN WITH MR. GORMAN'S APPLICATION OF
17 THE DCF MODEL?

18 A. I only have one concern with Mr. Gorman's application of the DCF model. I
19 do not agree with his exclusion of *Value Line* projected EPS growth rates in
20 his constant growth DCF model.

65 Gorman Direct Testimony, at 55-57.
66 Gorman Direct Testimony, at 59.
67 Gorman Direct Testimony, at 59; Table 14.

REDACTED VERSION

1 Q. DID MR. GORMAN USE PROJECTED EPS GROWTH RATES FROM
2 VALUE LINE IN HIS DCF ANALYSIS?

3 A. No. Even though Mr. Gorman uses *Value Line* data in a plethora of
4 analyses, including the use of *Value Line* betas in his CAPM analysis and
5 annualized dividends in his DCF model analysis, Mr. Gorman does not use
6 the projected EPS growth rates for his DCF model analysis, which violates
7 the Efficient Market Hypothesis ("EMH").

8 Q. WHAT IS THE EMH?

9 A. According to Eugene F. Fama,⁶⁸ a market in which prices always "fully
10 reflect" available information is called "efficient." There are three forms of
11 the EMH, namely:

- 12 1. The "weak" form asserts that all past market prices and data are
13 fully reflected in securities prices. In other words, technical
14 analysis cannot enable an investor to "outperform the market."
- 15 2. The "semi-strong" form asserts that all publicly available
16 information is fully reflected in securities prices. In other words,
17 fundamental analysis cannot enable an investor to "outperform
18 the market."
- 19 3. The "strong" form asserts that all information, both public and
20 private, is fully reflected in securities prices. In other words, even
21 insider information cannot enable an investor to "outperform the
22 market."

23 The "semi-strong" form is generally considered the most realistic because
24 the illegal use of insider information can enable an investor to "beat the
25 market" and earn excessive returns, thereby disproving the "strong" form.
26 The semi-strong form of the EMH assumes that all relevant information are

68 Eugene F. Fama, "Efficient Capital Markets: A Review of Theory and Empirical Work",
The Journal of Finance, Vol. 25, No. 2, (May 1970), at 383-417.

REDACTED VERSION

1 available to the investor, which means the *Value Line* projected EPS growth
2 rate would be considered by investors when making investment decisions
3 and should be included in Mr. Gorman's DCF model analysis.

4 Q. WHAT WOULD MR. GORMAN'S DCF MODEL RESULTS BE IF HE
5 INCLUDED THE *VALUE LINE* PROJECTED EPS GROWTH RATES IN
6 HIS ANALYSIS?

7 A. As shown on Exhibit DWD-R-6, his results would range from 8.78% to
8 9.30%, raising the bottom of his indicated range of results.

9 **B. The Risk Premium Model**

10 Q. PLEASE BRIEFLY DESCRIBE MR. GORMAN'S RPM.

11 A. Mr. Gorman defines the risk premium as the difference between average
12 annual authorized equity returns for electric utilities and a measure of long-
13 term interest rates each year from 1986 through June 2022.⁶⁹ Mr. Gorman's
14 first approach to estimating the RPM looks to the 30-year Treasury yield,
15 and his second considers the average A-rated utility bond yield.⁷⁰ In each
16 case, Mr. Gorman establishes his equity risk premium estimate by reference
17 to five-year and ten-year rolling averages.

18 Mr. Gorman looks to 37 years of returns, arguing, "it is reasonable to
19 assume that averages of annual achieved returns over long time periods
20 will generally converge on the investors' expected returns."⁷¹ He argues his
21 risk premium study is based on "investor expectations, not actual
22 investment returns, and, thus, need not encompass a very long historical
23 time period."⁷² Mr. Gorman states that his analysis of historical Treasury

69 Gorman Direct Testimony, at 59-60.

70 Gorman Direct Testimony, at 59-60.

71 Gorman Direct Testimony, at 62.

72 Gorman Direct Testimony, at 62.

REDACTED VERSION

1 bond yields produces an average risk premium of 5.68%, and his analysis
2 of utility bond yields produces an average risk premium of 4.33%.⁷³

3 Combined with a 3.50% projected 30-Year Treasury yield and
4 current A-rated utility bond yield estimate of 4.79%, Mr. Gorman's RPM
5 produces results ranging from 9.12% to 9.18% (see Table 7 below).⁷⁴

6 **Table 7: Mr. Gorman's Risk Premium ROE Results**

Mr. Gorman's Risk Premium Estimates	Projected 30- Year Treasury Yield: 3.50%	13-Week Avg A-Rated Utility Bond Yield: 4.33%
Treasury: 5.68%	9.18%	
Utility Bond: 4.79%		9.12%

7
8 Q. DO YOU HAVE ANY CONCERNS WITH MR. GORMAN'S APPLICATION
9 OF THE RPM?

10 A. Yes. I have three concerns with Mr. Gorman's analysis, namely: (1) the use
11 of the 1986–June 2022 time period; (2) Mr. Gorman's method and
12 recommendation ignore an important relationship revealed by his own data,
13 *i.e.*, that there is an inverse relationship between ERPs and interest rates
14 (whether measured by U.S. Treasury Bonds or public utility bond yields);
15 and (3) his mismatched application of projected Treasury bond yields and
16 current utility bond yields.

17 Q. WHAT ARE YOUR CONCERNS WITH MR. GORMAN'S USE OF THE
18 1986 –JUNE 2022 PERIOD TO DETERMINE AN ERP?

19 A. Mr. Gorman selected the period 1986–June 2022, "because public utility
20 stocks consistently traded at a premium to book value during that period."⁷⁵
21 He concludes that "[o]ver this period, an analyst can infer that authorized

73 Gorman Direct Testimony, at 64-65.

74 Gorman Direct Testimony, at 64-65.

75 Gorman Direct Testimony, at 60.

REDACTED VERSION

1 returns on equity were sufficient to support market prices that at least
2 exceeded book value."⁷⁶ Mr. Gorman is mistaken. Market values can
3 diverge from book values for a myriad of reasons. As noted by Phillips:

4 Many question the assumption that market price should equal
5 book value, believing that 'the earnings of utilities should be
6 sufficiently high to achieve market-to-book ratios which are
7 consistent with those prevailing for stocks of unregulated
8 companies."⁷⁷

9 In addition, Bonbright states:

10 In the first place, commissions cannot forecast, except within
11 wide limits, the effect their rate orders will have on the market
12 prices of the stocks of the companies they regulate. In the
13 second place, *whatever the initial market prices may be, they*
14 *are sure to change not only with the changing prospects for*
15 *earnings, but with the changing outlook of an inherently*
16 *volatile stock market.* In short, market prices are beyond the
17 control, though not beyond the influence of rate regulation.
18 Moreover, even if a commission did possess the power of
19 control, any attempt to exercise it ... would result in harmful,
20 uneconomic shifts in public utility rate levels. (italics added)⁷⁸

21 In addition, relative to the 1986–June 2022 time period, SBBI – 2022
22 makes it clear that the arbitrary selection of short historical periods is highly
23 suspect and unlikely to be representative of long-term trends in market data,
24 as discussed previously.

25 The academic literature demonstrates and confirms that while
26 regulation is a substitute for marketplace competition, it has an effect on,
27 but no direct control over market prices, and hence market-to-book ("M/B")
28 ratios of regulated utilities. Further, the academic literature also shows that

76 Gorman Direct Testimony, at 60.

77 Charles F. Phillips, The Regulation of Public Utilities, Public Utilities Reports, Inc., 1993,
at 395.

78 James C. Bonbright, Albert L. Danielsen and David R. Kamerschen, Principles of Public
Utility Rates (Public Utilities Reports, Inc., 1988), at 334.

REDACTED VERSION

1 a subset of data could be subject to data manipulation. Because of this, no
2 valid conclusion of ERPs can be drawn for the 1986-June 2022 period.

3 Q. HAVE YOU PERFORMED AN ANALYSIS TO DETERMINE THE
4 EXISTENCE OF A DIRECT RELATIONSHIP BETWEEN THE M/B RATIOS
5 OF UNREGULATED COMPANIES AND THEIR EARNED RATES OF
6 RETURN ON BOOK COMMON EQUITY?

7 A. Yes, I have. Since regulation acts as a surrogate for competition, it is
8 reasonable to look to the competitive environment for evidence of a direct
9 relationship between M/B ratios and earned ROEs. To determine if Mr.
10 Gorman's implicit assumption of such a direct relationship has any merit, I
11 observed the M/B ratios and the earned ROEs of the S&P Industrial Index
12 and the S&P 500 Composite Index over a long period of time. On Exhibit
13 DWD-R-7, I have shown the M/B ratios, rates of return on book common
14 equity (earnings/book ratios, i.e., ROEs), annual inflation rates, and the
15 earnings/book ratios net of inflation (real rate of earnings) annually for the
16 years 1947 through 2021. In each and every year, the M/B ratios of the
17 S&P Industrial Index equaled or exceeded a multiple of 1.00. In 1949, the
18 only year in which the M/B ratio was 1.00 (or 100%), the real rate of earnings
19 on book equity, adjusted for deflation, was 18.1% (16.3% minus (-1.8%)).
20 In contrast, in 1961, when the S&P Industrial Index (the "Index")
21 experienced a M/B ratio of 2.01 times, the real rate of earnings on book
22 equity for the Index was only 9.1% (9.8% - 0.7%). In 1997, the M/B ratio for
23 the Index was 5.88 times, while the average real rate of earnings on book
24 equity was 22.9% (24.6% - 1.7%). Clearly, there is not a relationship
25 between earned returns on book common equity for either the market as a
26 whole or for regulated public utilities.

27 Because this lack of a relationship between earnings/book ratios and
28 M/B ratios covers a 74-year period, 1947 through 2021, it cannot be validly

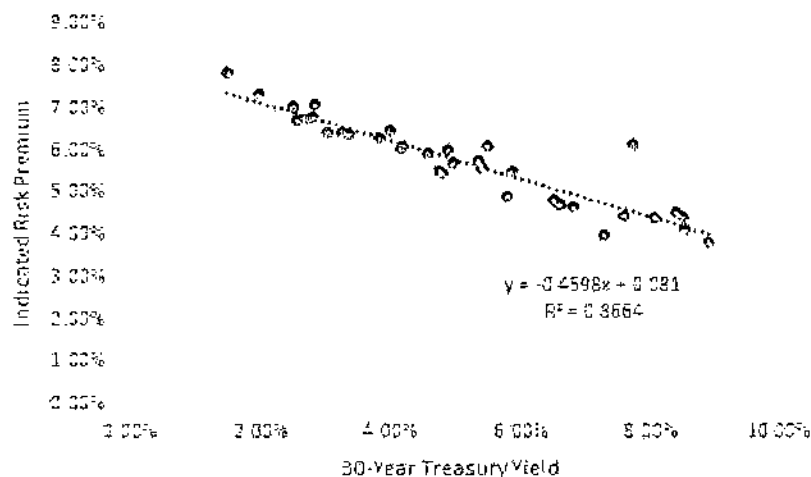
REDACTED VERSION

argued that, going forward, such a relationship should be expected. The analysis shown on Exhibit DWD-R-7, coupled with the supportive academic literature, demonstrates that while regulation is a substitute for marketplace competition, it can influence, but not directly control, market prices, and hence, M/B ratios. Thus, both theoretically and empirically, and contrary to Mr. Gorman's assumption, the rates of return investors expect to achieve, and which influence their willingness to pay market prices well in excess of book values, have no direct and exclusive relationship to rates of earnings on book equity.

Q. DOES MR. GORMAN'S RPM ANALYSIS IGNORE THE INVERSE RELATIONSHIP BETWEEN ERPS AND INTEREST RATES?

A. Yes. As shown on Charts 7 and 8 below, empirical analyses of the data presented in Exhibits MPG-12 and MPG-13, ERPs have moved inversely with changes in U.S. Treasury Bond yields for 1986–June 2022.

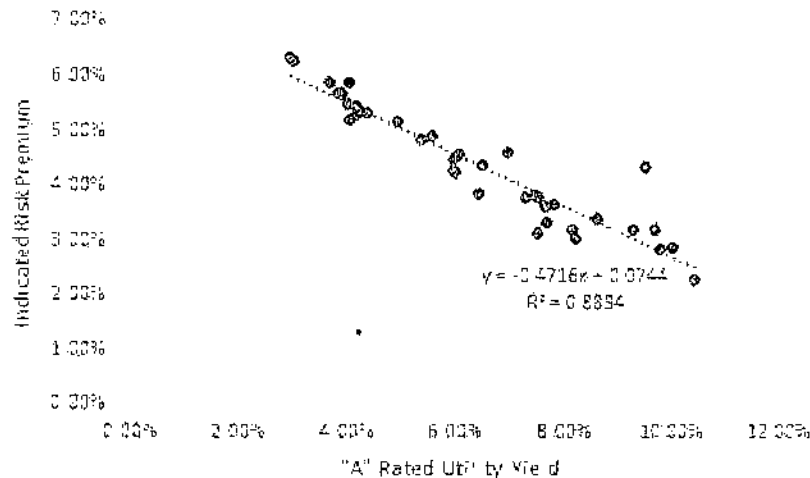
Chart 7: Empirical Analysis of Exhibit MPG-12⁷⁹



⁷⁹ Exhibit DWD-R-8, page 1.

REDACTED VERSION

Chart 8: Empirical Analysis of Exhibit MPG-13⁸⁰



When looking at the inverse relationship between ERP and interest rates, as shown on Charts 7 and 8, which use Mr. Gorman's data, the R-squares are each nearly 90%. This means that the movement in interest rates explains approximately 90% of the movement in ERP, which I would consider to be a strong relationship.⁸¹

Q. MR. GORMAN DOES NOT AGREE WITH YOUR USE OF A "SIMPLISTIC INVERSE RELATIONSHIP" BETWEEN THE ERP AND INTEREST RATES, WHICH HE SUGGESTS IS NOT SUPPORTED BY ACADEMIC RESEARCH.⁸² DO YOU HAVE A RESPONSE.

A. Yes. As discussed in my direct testimony,⁸³ and as observable in Mr. Gorman's analysis, there is a readily discernible inverse relationship between interest rates and equity risk premiums. This relationship is also

⁸⁰ Exhibit DWD-R-8, page 2.

⁸¹ I also note the t-statistics from these analyses indicate the relationship is highly statistically significant.

⁸² Gorman Direct Testimony, at 86.

⁸³ D'Ascendis Direct Testimony, at 42.

REDACTED VERSION

1 consistent with financial literature on the subject. Specifically, in Brigham,
2 Shome, and Vinson's article, *The Risk Premium Approach to Measuring a*
3 *Utility's Cost of Equity*, the authors explain that "with 'proper' regulation,
4 utility stocks would provide a better hedge against unanticipated inflation
5 than would bonds."⁸⁴ In that case, if concerns regarding future inflation
6 increase, the perceived risk of bonds would increase more than the
7 perceived risk of equity. That is, the return required on equity would
8 increase less than the return required on bonds, thereby decreasing the
9 ERP.

10 The relationship between interest rates, inflation, and expected
11 returns also was explained in a 1985 Financial Analysts Journal article:

12 For securities such as bonds, whose cash flows (coupon
13 payments) are fixed, an unanticipated increase in inflation
14 results in a decline in price. The decline in price, combined
15 with a fixed coupon, raises the expected return and
16 compensates for the higher rate of inflation.
17 ***

18 For securities such as common stocks, whose cash flows
19 (dividends) are flexible, the price of the security does not
20 necessarily change in response to unanticipated inflation.
21 Stock dividends may rise to offset an increase in the rate of
22 inflation, precluding any need for price adjustment.⁸⁵

23 Other published research has shown the ERP is not constant, but
24 varies inversely with interest rates. Harris and Marston found the ERP to
25 change inversely to changes in interest rates, concluding that "...the notion
26 of a constant risk premium over time is not an adequate explanation of

84 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 43.

85 James L. Farrell Jr., *The Dividend Discount Model: A Primer*, Financial Analysts Journal, November-December 1985, at 23.

REDACTED VERSION

- 1 pricing in equity versus debt markets."⁸⁶ Similarly, a study by Maddox,
2 Pippert, and Sullivan, found their results "indicate a statistically significant
3 inverse relationship between interest rates and utility equity risk
4 premiums."⁸⁷ In view of my rate case data, and the academic literature cited
5 above, the ERP is not static, and as such, Mr. Gorman's use of an average
6 ERP in his RPM is inappropriate and should be dismissed by the
7 Commission.
- 8 Q. IN CRITIQUING YOUR ERP CALCULATION, MR. GORMAN STATES
9 THAT "[I]N TODAY'S MARKETPLACE, INTEREST RATE VOLATILITY IS
10 NOT AS EXTREME AS IT WAS DURING THE 1980S".⁸⁸ DO YOU AGREE
11 WITH HIS STATEMENT?
- 12 A. No, I do not.
- 13 Q. HAVE YOU PERFORMED AN ANALYSIS OF THE VOLATILITY OF
14 INTEREST RATES FROM 1980 TO 2022?
- 15 A. Yes, I have. As shown on Chart 9 below, I calculated the 30-day average
16 CoV⁸⁹ of the 30-year Treasury bond from January 1, 1980 to August 12,
17 2022.

86 Robert S. Harris and Felicia C. Marston, *The Market Risk Premium: Expectational Estimates Using Analysts' Forecasts*, *Journal of Applied Finance*, Vol. 11, No. 1, 2001, at 11-12, 14. The authors also found credit spreads are positively related to the ERP.

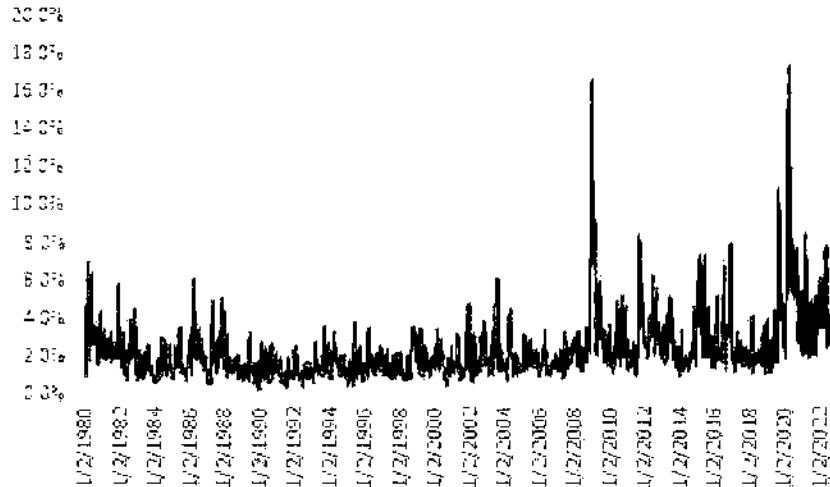
87 Farris M. Maddox, Donna T. Pippert, and Rodney N. Sullivan, *An Empirical Study of Ex Ante Risk Premiums for the Electric Utility Industry*, *Financial Management*, Vol. 24, No. 3, Autumn 1995 at 95.

88 Gorman Direct Testimony, at 86.

89 The coefficient of variation is used by investors and economists to determine volatility.

REDACTED VERSION

Chart 9: 30-Day Average Coefficient of Variation of 30-Year Treasury Bonds, January 1, 1980 – August 12, 2022



Q. DOES MR. GORMAN EXPECT AN INVERSE RELATIONSHIP BETWEEN ERPS AND INTEREST RATES WHEN INTEREST RATES ARE VOLATILE?

A. Yes, he does. On page 85 of his direct testimony, Mr. Gorman states:

In the 1980s, equity risk premiums were inversely related to interest rates, but that was likely attributable to the interest rate volatility at the time. As such, when interest rates were more volatile, perceptions of bond investment risk increased relative to the investment risk of equities. This changing investment risk perception caused changes in equity risk premiums.⁹⁰

In view of Chart 9 and Mr. Gorman's statement regarding the presence of an inverse relationship between ERPs and interest rates when interest rates are volatile, Mr. Gorman's concern should be dismissed.

⁹⁰ Gorman Direct Testimony, at 70-71.

REDACTED VERSION

- 1 Q. IN VIEW OF THIS EVIDENCE, IS IT APPROPRIATE THAT MR. GORMAN
2 USED A LONG-TERM HISTORICAL AVERAGE EQUITY RISK PREMIUM
3 IN HIS RPM?
- 4 A. No, it is not. While Mr. Gorman states that observable market data indicate
5 that equity risk premiums are aligned with historical averages, he does not
6 consider the level of bond yields in his analysis. As shown on Exhibits MPG-
7 12 and MPG-13, the average yields for 30-year Treasury bonds and A-rated
8 utility bonds for the 1986-2022 period are 5.18% and 6.54%, respectively.
9 Also shown on Exhibits MPG-12 and MPG-13, the yields in 2022 for 30-
10 year Treasury bonds and A-rated utility bonds are 2.65% and 4.14%,
11 respectively. The current level of bond yields would indicate a somewhat
12 higher equity risk premium than what Mr. Gorman recommends.
- 13 Q. MR. GORMAN USED A CURRENT A-RATED PUBLIC UTILITY BOND
14 YIELD IN HIS RPM ANALYSIS. PLEASE COMMENT.
- 15 A. Mr. Gorman's use of current A-rated public utility bond yield is inconsistent
16 with his entire return on common equity analysis. For example, Mr. Gorman
17 used an expected risk-free rate in both his CAPM analysis and his U.S.
18 Treasury Bond-based ERP analysis, analyst projections of EPS and
19 sustainable growth in his constant growth DCF model applications, and
20 projected inflation in the derivation of his projected market ERP. For internal
21 consistency in his analyses, and to be theoretically correct and consistent
22 with the prospective nature of both ratemaking and the cost of capital, a
23 projected A-rated public utility bond yield should be used in Mr. Gorman's
24 RPM analyses.
- 25 Q. MR. GORMAN'S PROJECTED 30-YEAR TREASURY BOND IN HIS RPM
26 IS THE FORECAST FROM THE FOURTH QUARTER OF 2023 FROM

REDACTED VERSION

1 THE AUGUST 2, 2022 *BLUE CHIP*.⁹¹ DOES *BLUE CHIP* PUBLISH LONG-
2 TERM PROJECTIONS FOR THE 30-YEAR TREASURY BOND?

3 A. Yes, it does. In June and December of each year, *Blue Chip* publishes five-
4 and ten-year projections of various measures, including the 30-year
5 Treasury Bond. Mr. Gorman presents the most recent five- and 10- year
6 projections of the 30-year Treasury Bond on page 19 of his direct testimony.

7 Q. DOES MR. GORMAN USE FIVE- AND TEN-YEAR PROJECTIONS FROM
8 *BLUE CHIP* IN OTHER ASPECTS OF HIS ANALYSIS?

9 A. Yes, he does. Mr. Gorman uses five- and ten-year projections of real GDP
10 and inflation from *Blue Chip* to calculate his long-term growth rate in his
11 multi-stage DCF model.⁹²

12 Q. DOES MR. GORMAN RELY ON OTHER LONG-TERM GROWTH
13 FORECASTS IN HIS ANALYSIS?

14 A. Yes, he does. Table 13 on page 57 of his direct testimony presents several
15 growth forecasts in excess of the five- and ten-year projections published
16 by *Blue Chip*.

17 Q. GIVEN THAT MR. GORMAN RELIES ON *BLUE CHIP*'S LONG-TERM
18 FORECASTS FOR OTHER MEASURES AND RELIES ON OTHER
19 SOURCES OF LONG-TERM (OVER TEN-YEAR) PROJECTIONS IN HIS
20 ANALYSIS, SHOULD HE ALSO CONSIDER FIVE- AND TEN -YEAR
21 PROJECTIONS OF INTEREST RATES FROM *BLUE CHIP*?

22 A. Yes, he should. Not incorporating the longest projection available is
23 inconsistent with Mr. Gorman's application of the DCF model in which there
24 is an assumption that the projected "g" is constant into perpetuity, creating
25 a mismatch between the application of his models. It is also inconsistent
26 with the EMH, as discussed above.

91 Gorman Direct Testimony, at 64.

92 Gorman Direct Testimony, at 56-57.

REDACTED VERSION

1 Q. HOW CAN A PROJECTED A-RATED PUBLIC UTILITY BOND YIELD BE
2 CALCULATED?

3 A. One source is *Blue Chip*'s forecasts of Aaa-rated corporate bond yields
4 adjusted to reflect a recent spread between A-rated public utility bond yields
5 and Aaa-rated corporate bond yields. *Blue Chip* forecasts Aaa-rated
6 corporate bonds to yield an average 4.83%, based upon an average of the
7 six quarters ending with the fourth quarter 2023 and 2024–2028 and 2029–
8 2033. However, the 4.83% projected Aaa-rated corporate bond yield needs
9 to be adjusted to estimate an equivalent A-rated public utility bond yield.
10 Using a three-month average bond yield spread (approximately 13 weeks,
11 consistent with Mr. Gorman's analysis), an upward adjustment of 66 basis
12 points is necessary, resulting in a prospective A-rated public utility bond
13 yield of 5.49%.

14 Q. PLEASE SUMMARIZE THE RANGE OF RPM-INDICATED COMMON
15 EQUITY COST RATES AFTER CORRECTING MR. GORMAN'S RPM
16 ANALYSIS?

17 A. As shown on Exhibit DWD-R-8, pages 1 and 2, applying a projected risk-
18 free rate of 3.54%⁹³ and prospective A2-rated public utility bond yield of
19 5.49%,⁹⁴ respectively, to the regression equations in Charts 7 and 8
20 produces results of 10.01% and 10.35%, respectively. As discussed
21 previously, while I do not agree with Mr. Gorman's basic RPM, the corrected
22 RPM results, based upon regression analyses of his data, are far more
23 appropriate indicators of common equity cost rates than his conclusion of
24 9.20%, relative to U.S. Treasury and A-rated public utility bonds.

⁹³ See, *Blue Chip Financial Forecasts*, June 1, 2022, at 14 and August 2, 2022, at 2.

⁹⁴ Exhibit DWD-R-8, page 3.

REDACTED VERSION

1 **C. The Capital Asset Pricing Model**

2 Q. PLEASE BRIEFLY SUMMARIZE MR. GORMAN'S APPLICATION OF THE
3 CAPM.

4 A. Mr. Gorman uses a projected 30-year Treasury bond for the fourth quarter
5 of 2023 from the August 2, 2022 *Blue Chip*, historical "normalized" betas,
6 and expected market return of 11.82% to calculate an indicated CAPM cost
7 rate of 9.70%.⁹⁵ Mr. Gorman calculates another CAPM cost rate of 10.75%
8 using current interest rates and betas, but does not rely on it for his
9 recommendation.⁹⁶ I would note that Mr. Gorman's average CAPM result
10 is 10.23%, which is within the range of my updated results.

11 Q. DO YOU HAVE ANY CONCERNS WITH MR. GORMAN'S APPLICATION
12 OF THE CAPM?

13 A. Yes, I do. I am concerned with (1) his failure to use fully projected interest
14 rates; (2) his use of historical betas; and (3) his failure to employ the
15 ECAPM. As I discussed concern (1) while addressing Mr. Gorman's
16 application of the RPM, and the appropriate use of the CAPM in my critique
17 of Mr. Ordonez's direct testimony, I will not repeat those discussions here.

18 Q. DO YOU AGREE WITH MR. GORMAN'S USE OF HISTORICAL BETAS IN
19 HIS CAPM ANALYSIS?

20 A. No, I do not. The determination of the ROE is a measure of the investor
21 expected return at any given point of time using current and expected
22 measures. The use of historical betas is neither current nor expected. The
23 analytical models that form the basis of the recommended ROE represent
24 a snapshot of Oncor's investor-required return at the time of the analysis
25 and should not be normalized based on speculation that current market

95 Gorman Direct Testimony, at 73.

96 Gorman Direct Testimony, at 73.

REDACTED VERSION

1 conditions may change in the future. As such, I do not agree with the use
2 of betas over multiple periods.

3 Q. DO YOU AGREE WITH MR. GORMAN THAT CURRENT BETAS ARE
4 "ABNORMALLY HIGH,"⁹⁷

5 A. No, I do not. As defined, betas are determined using volatility and
6 correlation to the market. Both of these measures have increased, leading
7 to higher measurements of beta for utility companies. As discussed
8 previously, annualized volatility, as shown on Exhibit DWD-2 and in Table
9 8, below, from February 3, 2020 to August 12, 2022, utilities were generally
10 more volatile (i.e., risky) than the Dow Jones Industrial Average ("DJIA")
11 and the S&P 500.

12 **Table 8: Annualized Volatility and Returns of Utility Groups and**
13 **Market Indices February 1, 2020-August 12, 2022⁹⁸**

	Electric Utility Proxy Group	Dow Jones Utility Average (DJU)	Utilities Select SPDR (XLU)	Dow Jones Industrial Average	S&P 500
Annualized Volatility	32.58%	27.53%	27.68%	26.04%	25.94%
Return	1.26%	10.97%	11.22%	19.48%	32.70%

14
15 In addition, the extent to which the overall market and utilities trade similarly
16 can be calculated using the correlation coefficient. Therefore, I have
17 calculated the correlation coefficients of the price changes of several groups
18 of utilities relative to the S&P 500 and the DJIA from January 31, 2020 to
19 August 12, 2022. Table 9, below, shows correlation coefficients for the
20 following relationships:

97 Gorman Direct Testimony, at 67.

98 Source: S&P Global Market Intelligence.

REDACTED VERSION

- 1 • The price changes of the S&P 500 relative to the price changes
- 2 of the Utility Proxy Group;
- 3 • The price changes of the S&P 500 relative to the price changes
- 4 of the Dow Jones Utility Average ("DJU");
- 5 • The price changes of the S&P 500 relative to the price changes
- 6 of the Utilities Select SPDR ("XLU");
- 7 • The price changes of the DJIA relative to the price changes of the
- 8 Utility Proxy Group;
- 9 • The price changes of the DJIA relative to the price changes of the
- 10 DJU; and
- 11 • The price changes of the DJIA relative to the price changes of the
- 12 XLU.

**Table 9: Calculation of Correlation Coefficients for Utility Groups
Relative to Market Indices from February 2020 through August 12,
2022⁹⁹**

Group	S&P 500	DJIA
Combined Proxy Group	70.58%	72.83%
DJU	72.28%	74.94%
XLU	72.47%	74.67%

16
17 As shown on Table 9, utility stocks have been trading in similarly to
18 market indices since the onset of the COVID-19 pandemic, which, in
19 combination with their increased volatility, leads to higher betas. Given that
20 the components that comprise betas have increased and remain elevated,
21 Mr. Gorman's position that current betas are abnormal should be dismissed.

⁹⁹ Source: S&P Global Market Intelligence.

REDACTED VERSION

1 Q. DID MR. GORMAN CONDUCT AN ECAPM ANALYSIS?

2 A. No, he did not. Mr. Gorman does not conduct an ECAPM analysis because
3 he does not agree with the use of adjusted betas in the ECAPM.¹⁰⁰

4 Q. WHAT IS YOUR RESPONSE TO MR. GORMAN'S CONCERN WITH THE
5 USE OF ADJUSTED BETAS IN THE ECAPM STRUCTURE?

6 A. Mr. Gorman seems to believe that using adjusted betas in a CAPM analysis
7 addresses the empirical issues (discussed above) with the CAPM. By
8 increasing the expected returns for low beta stocks and decreasing the
9 expected returns for high beta stocks, he concludes there is no need to use
10 the ECAPM. To the contrary, using adjusted betas in a CAPM analysis is
11 not equivalent to using the ECAPM, nor is it an unnecessary redundancy.

12 Betas are adjusted because of their general regression tendency to
13 converge toward 1.0 over time, i.e., over successive calculations of beta.
14 As also noted above, numerous studies have determined that the SML
15 described by the CAPM formula at any given moment in time is not as
16 steeply sloped as the predicted SML. Morin states:

17 Some critics of the ECAPM argue that the use of the Value
18 Line adjusted betas in the traditional CAPM amounts to using
19 an ECAPM. This is incorrect. The use of adjusted betas in a
20 CAPM analysis is not equivalent to the ECAPM. Betas are
21 adjusted because of the regression tendency of betas to
22 converge toward 1.0 over time.

23 The ECAPM corrects for the fact that the CAPM under-
24 predicts observed returns when beta is less than one and
25 over-predicts observed returns when beta is greater than
26 one...The two adjustments are not the same and there is no
27 double-counting

28 * * *

29 [t]he Empirical CAPM and the use of adjusted betas comprise
30 two separate features of asset pricing. Assuming *arguendo* a

¹⁰⁰ Gorman Direct Testimony, at 92-94.

REDACTED VERSION

1 company's beta is estimated accurately, the CAPM will still
2 understate the return for low beta stocks. Furthermore, if a
3 company's beta is understated, the Empirical CAPM will also
4 understate the return for low-beta stocks. Both adjustments
5 are necessary. As shown on the graph of Figure 7-2, the
6 Empirical CAPM is a return (vertical axis) adjustment and not
7 a beta (horizontal axis) adjustment. The adjustment to beta
8 corrects the estimate of the relative risk of the company, which
9 is measured along the horizontal axis of the SML. The
10 ECAPM adjusts the risk-return tradeoff (i. e., the slope) in the
11 SML, which is on the vertical axis. In other words, the
12 expected return (measured on the vertical axis) for a given
13 level of risk (measured on the horizontal axis) is different from
14 the predictions of the theoretical CAPM.¹⁰¹

15 Moreover, the slope of the SML should not be confused with beta.

16 As Brigham and Gapenski state:

17 The slope of the SML reflects the degree of risk aversion in
18 the economy – the greater the average investor's aversion to
19 risk, then (1) the steeper is the slope of the line, (2) the greater
20 is the risk premium for any risky asset, and (3) the higher is
21 the required rate of return on risky assets.¹²

22 ¹²Students sometimes confuse beta with the slope of the SML.
23 This is a mistake. As we saw earlier in connection with Figure
24 6-8, and as is developed further in Appendix 6A, beta does
25 represent the slope of a line, but not the Security Market Line.
26 This confusion arises partly because the SML equation is
27 generally written, in this book and throughout the finance
28 literature, as $k_i = RF + b_i(k_M - RF)$, and in this form b_i looks
29 like the slope coefficient and $(k_M - RF)$ the variable. It would
30 perhaps be less confusing if the second term were written $(k_M$
31 $- RF)b_i$, but this is not generally done.¹⁰²

32 As noted in Appendix 6A of Brigham and Gapenski's textbook, beta,
33 which accounts for regression bias, is not a return adjustment but rather is
34 based on the slope of a different line.

101 Morin, at 223-224.

102 Eugene F. Brigham and Louis C. Gapenski, Financial Management: Theory and Practice, The Dryden Press, 1985, at 201-204.

REDACTED VERSION

1 Additionally, a 1980 study by Litzenberger, *et al.* found the CAPM
2 underestimates the ROE for companies, such as public utilities, with betas
3 less than 1.00.¹⁰³ In that study, the authors applied adjusted betas and still
4 found the CAPM to underestimate the ROE for low-beta companies.
5 Similarly, Brattle Group's Risk and Return for Regulated Industries supports
6 the use of adjusted betas in the ECAPM:

7 Note that the ECAPM and the Blume adjustment are
8 attempting to correct for different empirical phenomena and
9 therefore both may be applicable. It is not inconsistent to use
10 both, as illustrated by the fact that the Litzenberger *et al.*
11 (1980) study relied on Blume adjusted betas and estimated
12 an alpha of 2% points in a short-term version of the ECAPM.
13 This issue sometimes arises in regulatory proceedings.¹⁰⁴

14 Hence, using adjusted betas does not address the previously
15 discussed empirical issues with the CAPM. In view of the foregoing, my
16 use of adjusted betas in both the traditional and empirical applications of
17 the CAPM is neither incorrect or inconsistent with the financial literature, nor
18 is it an unnecessary redundancy.

19 Q. PLEASE RESPOND TO MR. GORMAN'S ASSERTION THAT THE
20 ECAPM IS NOT WIDELY ACCEPTED.

21 A. Mr. Gorman's assertion is simply not true. The ECAPM has been accepted
22 in Alaska, Minnesota, Mississippi, New York, North Carolina, and South

103 Robert Litzenberger, Krishna Ramaswamy and Howard Sossin, *On the CAPM Approach to the Estimation of A Public Utility's Cost of Equity Capital*, The Journal of Finance, Vol. XXXV, No. 2, May 1980.

104 Bente Villadsen, *et. al*, Risk and Return for Regulated Industries (2017) at 95, endnote 147 of Chapter 4.

REDACTED VERSION

- 1 Carolina.¹⁰⁵ In addition, the ECAPM has been presented by the staff of the
2 Maryland Public Service Commission,¹⁰⁶ as well as staff for the Public
3 Utilities Commission of Nevada as recently as 2022.¹⁰⁷ Ms. Reno also
4 applies the ECAPM in this proceeding.¹⁰⁸ Regulatory support as noted
5 above, in addition to the empirical and academic support cited in my direct
6 testimony,¹⁰⁹ justify the appropriateness of including the ECAPM in an ROE
7 analysis.
- 8 Q. WHAT WOULD MR. GORMAN'S INDICATED ROE USING THE CAPM BE
9 IF CORRECTED TO USE A LONG-TERM PROJECTED RISK-FREE
10 RATE, CURRENT BETAS, AND THE ECAPM?
- 11 A. As shown on Exhibit DWD-9-R, the indicated CAPM result would be
12 10.93%. In view of this indicated result, Mr. Gorman's CPM result of 9.70%
13 is grossly understated.

105 The Regulatory Commission of Alaska, P-97-4, *In the Matter of the Correct Calculation and Use of Acceptable Input Data To Calculate the 1997, 1998, 1999, 2000, 2001, and 2002 Tariff Rates for the Intrastate Transportation of Petroleum over the Trans Alaska Pipeline System*, Order No. 151, November 27, 2002, at 146; Minnesota Public Utilities Commission, MPUC Docket No. G011/GR-15-736, *In the Matter of the Application of Minnesota Energy Resources Corporation for Authority to Increase Rates for Natural Gas Service in Minnesota, Findings of Fact, Conclusions of Law, and Recommendation*, August 19, 2016, at 29; Mississippi Public Service Commission, Docket No. 01-UN-0548, *Notice of Intent of Mississippi Power Company to Change Rates for Electric Service in its Certificated Areas in the Twenty-Three Counties of Southeast Mississippi*, Final Order, December 3, 2001, at 19; New York Public Service Commission, Case 16-G-0058, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of KeySpan Gas East Corporation d/b/a National Grid for Gas Service*, Order Adopting Terms of Joint Proposal and Establishing Gas Rate Plans, December 16, 2016, at 32; *In the Matter of Application of Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina*, Docket No. E-22, Sub 562 Order Accepting Public Staff Stipulation in Part, Accepting CIGFUR Stipulation, Deciding Contested Issues, and Granting Partial Rate Increase, February 24, 2020, at 40.

106 Order No. 89072, *In the Matter of the Application of The Potomac Edison Company for Adjustments to its Retail Rates for the Distribution of Electric Energy*, March 22, 2019, at 72.

107 Public Utilities Commission of Nevada, Docket No. 21-09001, Prepared Direct Testimony of Swetha Venkat (January 14, 2022).

108 Reno Direct Testimony, at 40-41.

109 D'Ascendis Direct Testimony, at 45-47.

REDACTED VERSION

D. Financial Integrity

1
2 Q. PLEASE BRIEFLY SUMMARIZE MR. GORMAN'S ASSESSMENT OF HIS
3 RECOMMENDATION AS IT AFFECTS MEASURES OF THE COMPANY'S
4 FINANCIAL INTEGRITY.

5 A. Mr. Gorman evaluates the reasonableness of his ROE recommendation by
6 calculating two *pro forma* ratios: Debt to EBITDA¹¹⁰ and Funds From
7 Operations to Total Debt to determine whether they would fall within S&P's
8 guidance ranges for an investment grade rating. In Exhibit MPG-18, Mr.
9 Gorman develops those ratios based on his proposed capital structure.
10 Based on his *pro forma* analysis, Mr. Gorman argues his recommended
11 ROE and capital structure support Oncor's investment grade bond rating.¹¹¹
12 An important consideration is that Mr. Gorman's analysis fundamentally
13 assumes the Company will earn the entirety of its authorized ROE on a
14 going-forward basis. The ROE set in this proceeding is not a guaranteed
15 return, but an opportunity to earn that return.

16 Oncor witness Ms. Lapson also addresses Mr. Gorman evaluation of
17 credit metrics in her rebuttal testimony.

18 Q. ARE CREDIT RATINGS DETERMINED PRINCIPALLY BY THE TYPES
19 OF *PRO FORMA* METRICS MR. GORMAN CALCULATES IN EXHIBIT
20 MPG-18?

21 A. No. S&P's ratings process considers a range of both quantitative and
22 qualitative data. Cash Flow / Leverage considerations are one element of
23 a broad set of criteria.¹¹² Unlike Mr. Gorman's *pro forma* analysis, S&P's
24 assessment does not look to a single period of time or assume static
25 relationships among variables. Rather, S&P reviews credit ratios "on a time

110 Earnings Before Interest, Taxes, Depreciation, and Amortization.

111 Gorman Direct Testimony, at 75-78.

112 Standard & Poor's Ratings Services, *Corporate Methodology*, November 19, 2013 at 5.

REDACTED VERSION

1 series basis with a clear forward-looking bias.”¹¹³ S&P explains that the
2 time series length depends on a number of qualitative factors, but generally
3 includes two years of historical data, and three years of projections.
4 Further, the ratios depend on “base case” projections considering “current
5 and near-term” economic conditions, industry assumptions, and financial
6 policies. Consequently, even if we assume credit determinations are driven
7 by three *pro forma* metrics, the actual assessment of those metrics is far
8 more complex than Mr. Gorman’s analysis suggests.

9 Q. DO YOU AGREE WITH THE PREMISE OF MR. GORMAN’S ANALYSIS
10 AND CONCLUSIONS?

11 A. No, I do not. Simply maintaining an “investment grade” rating is an
12 inappropriate standard. According to S&P, only two of the 245 utilities have
13 below investment grade long-term issuer credit ratings. Because the
14 Company must compete for capital with both affiliated companies, other
15 utilities, and non-utilities, the Company must have a strong financial profile.
16 Such a profile enables the Company to acquire capital even during
17 constrained and uncertain markets.

18 Additionally, a wide range of assumed ROEs and equity ratios
19 produce *pro forma* metrics within the benchmark ranges for a given credit
20 rating. As shown on Exhibit DWD-R-10, Mr. Gorman’s *pro forma* analysis
21 suggests an ROE in the range of [REDACTED]

22 [REDACTED]
23 [REDACTED]
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED]

¹¹³ Standard & Poor’s Ratings Services, *Corporate Methodology*, November 19, 2013 at 33.

REDACTED VERSION

1 [REDACTED]
2 [REDACTED]
3 **Table 10: Mr. Gorman's Financial Integrity Test Using Alternate**
4 **Assumptions**

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

- 5
6 **E. Response to Mr. Gorman's Criticisms of Company Testimony**
7 Q. DOES MR. GORMAN HAVE ANY CRITIQUES OF YOUR ANALYSES
8 PRESENTED IN YOUR DIRECT TESTIMONY?
9 A. Yes, he does. Mr. Gorman's critiques of my direct testimony are
10 summarized below: (1) my exclusion of a sustainable growth and multi-
11 stage DCF models because the long-term growth in GDP is an upper limit
12 on growth in a DCF analysis; (2) the predictive risk premium model
13 ("PRPM") is based on a mismatch of total returns on stocks and income
14 returns on bonds; (3) that the PRPM was not accepted by the Kentucky
15 Public Service Commission ("KY PSC"); (4) relying on a "simplistic" inverse
16 relationship between ERPs and interest rates to calculate various risk
17 premiums; (5) my calculation of MRP in the CAPM model; (6) my use of
18 adjusted betas in the ECAPM model; and (7) my use of a non-price
19 regulated risk proxy group.

REDACTED VERSION

1 I have addressed critiques 2, 4 and 6 during the course of this
2 rebuttal testimony. I will discuss Mr. Gorman's remaining critiques in turn.

3 Q. WHY IS LONG-TERM GROWTH IN GDP NOT AN UPPER LIMIT FOR
4 GROWTH, AS MR. GORMAN CONTENDS?

5 A. First, GDP is not a market measure – rather it is a measure of the value of
6 the total output of goods and services, excluding inflation, in an economy.
7 While I understand that EPS growth is also not a market measure, it is well
8 established in the financial literature that projected growth in EPS is the
9 superior measure of dividend growth in a DCF model.¹¹⁴ Furthermore, GDP
10 is simply the sum of all private industry and government output in the United
11 States, and its growth rate is simply an average of the value of those
12 industries. To illustrate, Exhibit DWD-R-11 presents the compound growth
13 rate of the industries that comprise GDP from 1947 to 2021. Of the 15
14 industries represented, seven industries, including utilities, grew faster than
15 the overall GDP, and eight industries grew slower than the overall GDP.¹¹⁵

16 Q. DID YOU CONDUCT ANOTHER ANALYSIS THAT CALCULATES THE
17 AMOUNT OF TIME IT WOULD TAKE AN INDUSTRY TO OVERTAKE THE
18 ENTIRE ECONOMY?

19 A. Yes. I examined the value added by industry from 1947 to 2021 in Exhibit
20 DWD-R-11 and used the compound annual growth rates for the highest
21 growth rate industry (Educational Services, Healthcare, and Social
22 Assistance, 8.51% / year) to see when that industry would comprise the
23 entire economy. In the year 2313, or 366 years from the 1947 starting point,

114 Harris, Using Analysts' Growth Forecasts to Estimate Shareholder Required Rate of Return, Financial Management, Spring 1986; Christofi, Christofi, Lori and Moliver, Evaluating Common Stocks Using Value Line's Projected Cash Flows and Implied Growth Rate, Journal of Investing, Spring 1999; Harris and Marston, Estimating Shareholder Risk Premia Using Analysts' Growth Forecasts, Financial Management, Summer 1992; and Vander Weide and Carleton, Investor Growth Expectations: Analysts vs. History, The Journal of Portfolio Management, Spring 1988.

115 Source of Information: Bureau of Economic Analysis.

REDACTED VERSION

1 the industry would comprise over 50% of GDP, and in the year 7521, 5,574
2 years after the 1947 starting point, the industry would comprise 100% of
3 GDP.¹¹⁶ Not only have individual companies or industries consistently
4 grown at rates beyond GDP growth, but they have done so without
5 overtaking the entire economy. While Mr. Gorman's argument is technically
6 correct, it is unrealistic at best.

7 Q. PLEASE SUMMARIZE MR. GORMAN'S ARGUMENTS AGAINST YOUR
8 USE OF THE PRPM.

9 A. Mr. Gorman claims that my application of the PRPM is based on a mismatch
10 between total returns on stocks and income-only returns on bonds. In his
11 opinion, doing so ignores the "significant investment return component for
12 bond yields."¹¹⁷ Mr. Gorman's other concern regarding the PRPM is that
13 the PRPM was rejected in a recent KY PSC proceeding, and noted that the
14 KY PSC was not aware of other commissions that have accepted the
15 model.¹¹⁸

16 Before addressing Mr. Gorman's analytical concerns, I note that in
17 my direct testimony, I state that the PRPM was published in the *Journal of*
18 *Regulatory Economics*,¹¹⁹ which was based off the work of Robert F. Engle,
19 whose Nobel Prize-winning work was published in *Econometrica*,¹²⁰ Also,
20 the PRPM is not trademarked.

116 To put the amount of time that will take these two milestones to happen in perspective, approximately 300 years ago, in the year 1719, France and Spain were at war in New France (now Louisiana), and approximately 3,476 years ago, in the year 1457 BC, the first recorded battle in military history, the Battle of Megiddo, was waged between the Egyptians, led by Pharaoh Thutmose III against Kadesh, Canaanite, Mitanni, and Amurru forces. See also Zager and Evans, *In the Year 2525, on 2525* (Exordium & Terminus) (RCA 1968).

117 Gorman Direct Testimony, at 84.

118 Gorman Direct Testimony, at 84.

119 D'Ascendis Direct Testimony, at 32.

120 Robert F. Engle, David M. Lillen, and Russell P. Robins, "Estimating Time Varying Risk Premia in the Term Structure, The ARCH-M Model", *Econometrica*, Volume 55, No. 2 (March 1987), at 391 -407.

REDACTED VERSION

1 Q. DOES THE "MISMATCH" IN YOUR PRPM LEAD TO AN INACCURATE
2 MEASURE OF THE RISK PREMIUM?

3 A. No, it does not. As discussed previously, Kroll, a source relied on by Mr.
4 Gorman, recommends the use of the income return and not the total return
5 on U.S. Treasury securities in deriving an ERP.

6 Q. HAS THE PRPM BEEN IMPLICITLY ACCEPTED BY OTHER
7 REGULATORY COMMISSIONS?

8 A. Yes. In Docket No. 2017-292-WS, the Public Service Commission of South
9 Carolina ("PSC SC") accepted Blue Granite Water Company's entire
10 requested ROE, which included the PRPM. The relevant portion states:

11 The Commission finds Mr. D'Ascendis' arguments
12 persuasive. He provided more indicia of market returns, by
13 using more analytical methods and proxy group calculations.
14 Mr. D'Ascendis' use of analysts' estimates for his DCF
15 analysis is supported by consensus, as is his use of the
16 arithmetic mean. The Commission also finds that Mr.
17 D'Ascendis' non-price regulated proxy group more accurately
18 reflects the total risk faced [by] price regulated utilities and
19 CWS. Furthermore, there is no dispute that CWS is
20 significantly smaller than its proxy group counterparts, and,
21 therefore, it may present a higher risk. An appropriate ROE
22 for CWS is 10.45% to 10.95%. The Company used an ROE
23 of 10.5% in computing its Application, a return on the low end
24 of Mr. D'Ascendis' range, and the Commission finds that ROE
25 is supported by the evidence.¹²¹

26 In addition, in Docket No. W-354, Subs 363, 364 and 365, the State
27 of North Carolina Utilities Commission ("NCUC") approved my RPM and
28 CAPM analyses, which used PRPM analyses as presented in this
29 proceeding. The relevant portion of the order states:

30 In doing so the Commission finds that the DCF (8.81%), Risk
31 Premium (10.00%) and CAPM (9.29%) model results
32 provided by witness D'Ascendis, as updated to use current

¹²¹ PSC SC Docket No. 2017-292-WS - Order No. 2018-345, at 14. (May 17, 2018)

REDACTED VERSION

1 rates in D'Ascendis Late-Filed Exhibit No. 1, as well as the
2 risk premium (9.57%) analysis of witness Hinton, are credible,
3 probative, and are entitled to substantial weight as set forth
4 below.¹²²
5

6 Q. IS THE PRPM IN LIMITED USE?

7 A. No, it is not. As discussed in my direct testimony, the PRPM is based on
8 the research of Dr. Robert F. Engle, dating back to the early 1980s.¹²³ Dr.
9 Engle discovered that the volatility of market prices, returns, and risk
10 premiums clusters over time, making prices, returns, and risk premiums
11 highly predictable. In 2003, he shared the Nobel Prize in Economics for this
12 work, characterized as "methods of analyzing economic time series with
13 time-varying volatility (ARCH)."¹²⁴ Dr. Engle¹²⁵ noted that relative to
14 volatility, "the standard tools have become the ARCH/GARCH¹²⁶ models."
15 Hence, the methodology is not exclusively used by me.

16 In addition, the GARCH methodology has been well tested by
17 academia since Engle et al.'s research was originally published in 1982, 40
18 years ago. I use the well-established GARCH methodology to estimate the
19 PRPM model using a standard commercial and relatively inexpensive
20 statistical package, Eviews,[®] to develop a means by which to estimate a
21 predicted ERP which, when added to a bond yield, results in a cost of
22 common equity.

122 NCUC Docket No. W-354, Sub 363, 364, 365, *Order Granting Partial Rate Increase and Requiring Customer Notice*, at PDF 72 (March 31, 2020).

123 D'Ascendis Direct Testimony, at 32-33.

124 www.nobelprize.org.

125 Robert Engle, *GARCH 101: The Use of ARCH/GARCH Models in Applied Econometrics*, *Journal of Economic Perspectives*, Volume 15, No. 4, Fall 2001, at 157-168.

126 Autoregressive Conditional Heteroskedasticity/Generalized Autoregressive Conditional Heteroskedasticity.

127 In addition to Eviews,[®] the GARCH methodology can be applied and the PRPM derived using other standard statistical software packages such as SAS, RATS, S-Plus and JMulti, which are not cost-prohibitive. The software that I used in this proceeding, Eviews,[®] currently costs \$600 - \$700 for a single user commercial license. In addition, JMulti is a free downloadable software with GARCH estimation applications.

REDACTED VERSION

1 The PRPM as applied to utilities is also in the public domain, having
2 been published six times in academically peer-reviewed journals: Journal
3 of Economics and Business (June 2011 and April 2015),¹²⁸ The Journal of
4 Regulatory Economics (December 2011),¹²⁹ The Electricity Journal (May
5 2013 and March 2020),¹³⁰ and Energy Policy (April 2019).¹³¹ Notably, none
6 of these articles have been rebutted in the academic literature.

7 Finally, the PRPM was presented to a number of utility
8 industry/regulatory/academic groups including the following: the Edison
9 Electric Institute Cost of Capital Working Group; the NARUC Staff
10 Subcommittee on Accounting and Finance; the National Association of
11 Electric Companies Finance/Accounting/Taxation and Rates and
12 Regulations Committees; the NARUC Electric Committee; the Wall Street
13 Utility Group; the Indiana Utility Regulatory Commission Cost of Capital
14 Task Force; the Financial Research Institute of the University of Missouri
15 Hot Topic Hotline Webinar; and the Center for Research and Regulated
16 Industries Annual Eastern Conference on two occasions.
17 Q. IS THE PRPM CITED IN ACADEMIC LITERATURE BESIDES THE
18 ARTICLES CITED ABOVE?

¹²⁸ Eugene A. Pilotte and Richard A. Michelfelder, *Treasury Bond Risk and Return, the Implications for the Hedging of Consumption and Lessons for Asset Pricing*, Journal of Economics and Business, June 2011, 582-604. and Richard A. Michelfelder, *Empirical Analysis of the Generalized Consumption Asset Pricing Model: Estimating the Cost of Capital*, Journal of Economics and Business, April 2015, 37-50.

¹²⁹ Pauline M. Ahern, Frank J. Hanley, and Richard A. Michelfelder, *New Approach to Estimating the Cost of Common Equity Capital for Public Utilities*, The Journal of Regulatory Economics, December 2011, at 40:261-278.

¹³⁰ Richard A. Michelfelder, Pauline M. Ahern, Dylan W. D'Ascendis, and Frank J. Hanley, *Comparative Evaluation of the Predictive Risk Premium Model, the Discounted Cash Flow Model and the Capital Asset Pricing Model for Estimating the Cost of Common Equity*, The Electricity Journal, April 2013, at 84-89; and Richard A. Michelfelder, Pauline M. Ahern, and Dylan W. D'Ascendis, *Decoupling, Risk Impacts and the Cost of Capital*, The Electricity Journal, January 2020.

¹³¹ Richard A. Michelfelder, Pauline M. Ahern, and Dylan W. D'Ascendis, *Decoupling Impact and Public Utility Conservation Investment*, Energy Policy, April 2019, 311-319.

REDACTED VERSION

1 A. Yes, it is. The PRPM is cited in the following textbooks on cost of capital by
2 authors unaffiliated the authors of the academic articles cited above:

- 3 • Shannon Pratt and Roger Grabowski, Cost of Capital:
4 Applications and Examples, (Fifth Edition), Wiley & Sons, 2015;
5 • Shannon Pratt and Roger Grabowski, The Lawyer's Guide to
6 Cost of Capital: Understanding Risk and Return for Valuing
7 Businesses and Other Investments, ABA Publishing, 2015; and
8 • Roger A. Morin, Modern Regulatory Finance, PUR Books, 2021.

9 On the subject of the PRPM, Pratt and Grabowski state:

10 Empirical testing of this new model has yielded data allowing
11 a comparison of results with other techniques including the
12 DCF and CAPM. The results- combined with the stability of
13 PRPM estimates- suggests that the model is robust when
14 applied to electric, natural gas, combination electric and gas,
15 and water utility companies.¹³²

16 In addition, Morin states:

17 PRPM cost of capital estimates then began to proliferate
18 based on extensive work published in the Journal of
19 Regulatory Economics, The Electricity Journal, and Energy
20 Policy Journal. It is only a matter of time before the technique
21 becomes more mainstream in regulatory proceedings.

22 ***

23 It is well known that security markets exhibit periods of relative
24 calm and periodic high volatility for a variety of reasons. The
25 GARCH technique does not explain the volatility but *models*
26 its clustering. Investment analysts and financial institutions
27 typically use models such as GARCH to estimate the volatility
28 of returns for stocks, bonds, and market indices. They use
29 the resulting information to help determine pricing decisions
30 and judge which assets will potentially provide higher returns,
31 as well as to forecast the returns. At its core, GARCH is a

¹³² Shannon Pratt, Roger Grabowski, The Lawyer's Guide to The Cost of Capital: Understanding Risk and Return for Valuing Businesses and Other Investments, American Bar Association, 2015, at 42'.

REDACTED VERSION

1 statistical modelling technique used in analyzing time-series
2 data where the variance error is believed to be serially
3 uncorrelated, and is used to help predict the volatility of
4 returns on financial assets.¹³³

5 Q. DID THE KY PSC REJECT THE PRPM IN CASE NO. 2021-00214
6 CONCERNING ATMOS ENERGY?

7 A. Yes, it did. The KY PSC stated:

8 Even though the Commission supports the use and
9 presentation of multiple modelling approaches, the
10 Commission finds that Atmos Kentucky's use of the Predictive
11 Risk Premium Model (PRPM) should be rejected. Though the
12 PRPM model has been published and presented in multiple
13 forums, it has been rejected by this Commission and only
14 been addressed by three other regulatory jurisdictions thus far
15 and is not universally accepted.

16 Q. DO YOU HAVE A RESPONSE TO THE KY PSC STATEMENT?

17 A. Yes, I do. I appreciate the KY PSC's openness to considering multiple
18 models in its determination of ROEs for the utilities they regulate, but I
19 respectfully disagree with their exclusion of the PRPM in Case No. 2021-
20 00214. As noted above, the theory supporting the model is based on the
21 Nobel Prize winning work of Engle, and the model itself has been published
22 six times in four separate peer-reviewed academic journals, which indicates
23 that it has been thoroughly vetted by the academic community. This, in
24 addition to the fact that the model has not been rebutted in the academic
25 literature in the over ten years since it has been presented should speak to
26 the model's soundness.

27 In view of the above, the soundness of the model, as evidenced in
28 the underlying theory and the academic vetting of the PRPM, and the wide
29 dissemination of the model in the U.S. regulatory landscape and academic

¹³³ Morin, at 139-141.

REDACTED VERSION

1 textbooks, should lead the Commission to consider the PRPM in its
2 determination regarding the ROE for the Company in this proceeding.

3 Q. MR. GORMAN STATES THAT YOUR MRP ESTIMATES DERIVED FROM
4 BLOOMBERG AND *VALUE LINE* DATA "ARE SIGNIFICANTLY
5 OVERSTATED AND NOT REASONABLE."¹³⁴ PLEASE RESPOND.

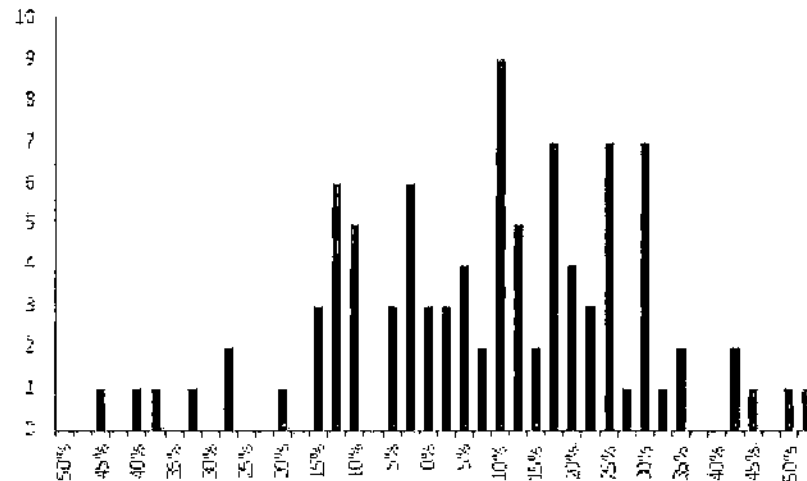
6 A. I disagree with Mr. Gorman's statement. The implied expected market
7 returns using Bloomberg and *Value Line* data are only two out of six
8 measures, Mr. Gorman fails to consider the other four measures I have
9 considered. The average implied market returns for my Direct and Rebuttal
10 Testimonies (12.73% and 14.06%, respectively) represent the
11 approximately the 48th and 49th percentile of actual returns, respectively,
12 observed from 1926 to 2021 as shown on Exhibit DWD-12. As discussed
13 above, multiple measures give greater insight into the investor-required
14 return than a limited number of measures. The average implied market
15 return for my direct and rebuttal testimonies are 12.73% and 14.06%,
16 respectively, which are comparable to both the average historical market
17 return of 12.33% and Mr. Gorman's implied market return of 11.82%.
18 Moreover, because market returns historically have been volatile, my
19 market return estimates are statistically indistinguishable from the historical
20 average market return or Mr. Gorman's implied market return.

21 Recalling that Mr. Gorman looks to historical data in supporting his
22 MRP, I therefore produced a histogram of the annual MRPs reported by
23 Kroll. The results of that analysis, which are presented in Chart 10 below,
24 demonstrate average MRPs of 9.84% (direct testimony) to 10.52% (rebuttal
25 testimony) occur approximately 46% to 47% of the time. Mr. Gorman's
26 concern that my MRPs are not sustainable is misplaced.

134 Gorman Direct Testimony, at 89.

REDACTED VERSION

Chart 10: Frequency Distribution of Observed Market Risk Premia,
1926-2021¹³⁵



Q. WHAT IS YOUR RESPONSE TO MR. GORMAN'S CONCERN WITH THE
USE OF A NON-REGULATED PROXY GROUP?

A. First, as indicated in my direct testimony on page 6, I did not directly
consider the results of my Non-Price Regulated Proxy Group in my
recommendation for an ROE in this proceeding. My indicated range of
ROEs is 100 basis points above and below the midpoint of the range of
results set by my DCF model, RPM, and CAPM, which excludes the Non-
Price Regulated Proxy Group results entirely. As such, Mr. Gorman's
concerns about my use of the Non-Price Regulated Proxy Group in this
proceeding is moot.

Also as discussed in my direct testimony, the selection criteria for my
non-regulated proxy group were based on a range of unadjusted betas (a
measure of systematic risk) and a range of standard errors of the regression

¹³⁵ Exhibit DWD-R-12.

REDACTED VERSION

1 (a measure of unsystematic risk), which gave rise to those betas, and
2 together measure total risk,¹³⁶ not solely betas, as Mr. Gorman implies.¹³⁷

3 As to the comparability of my Non-Price Regulated and Utility Proxy
4 Groups, the selection criteria for my Non-Price Regulated Proxy Group was
5 based on ranges of two measures of risk, the unadjusted beta of the Utility
6 Proxy Group, which measures systematic, or market risk, and the standard
7 error of the regression, which gave rise to those betas, measuring non-
8 systematic or diversifiable risk. Systematic plus non-systematic risk is one
9 definition of total risk.¹³⁸ This is agreed to by Mr. Gorman¹³⁹ in his direct
10 testimony.

11 Business and financial risks may vary between companies and proxy
12 groups, but if the collective average betas and standard errors of the
13 regression of the groups are similar, then the total, or aggregate, non-
14 diversifiable market risks and diversifiable risks are similar, as noted in
15 "Comparable Earnings: New Life for an Old Precept" provided in Exhibit
16 DWD-R-13. Thus, because the non-price regulated companies are
17 selected based on analyses of market data, they are comparable in total
18 risk (even though individual risks may vary) to the Utility Proxy Group.

19 Q. IS THERE A SPECIFIC ADVANTAGE TO USING YOUR SELECTION
20 CRITERIA, WHICH USES MEASURES OF SYSTEMATIC AND

136 D'Ascendis Direct Testimony, at 50-51.

137 Gorman Direct Testimony, at 96.

138 Business risk plus financial risk is a second definition of total risk.

139 Gorman Direct Testimony, at 65-66.

REDACTED VERSION

1 UNSYSTEMATIC RISK, INSTEAD OF USING THE COMBINATION OF
2 BUSINESS AND FINANCIAL RISK?

3 A.. Yes. *Value Line* unadjusted betas and the standard error of the regressions
4 giving rise to those betas are measurable objective values, whereas total
5 business risk¹⁴⁰ and financial risk measures are more subjective.

6 Q. HAVE YOU USED OTHER MEASURES OF TOTAL RISK TO COMPARE
7 YOUR UTILITY PROXY GROUP AND YOUR NON-PRICE REGULATED
8 PROXY GROUP?

9 A.. Yes, I have. As noted in my direct testimony,¹⁴¹ *Value Line's* Safety
10 Ranking is also a proxy for investment risk. As shown in Exhibit DWD-R-
11 14, and in Table 11, below, my Non-Price Regulated Group is similar in total
12 risk to my Utility Proxy Group:

13 **Table 11: Risk Assessment of Non-Price Regulated Proxy Group and**
14 **Utility Proxy Groups Using *Value Line* Metric¹⁴²**

Group	Safety Rank
Utility Proxy Group	1.86
Non-Price Reg. Proxy Group	1.87

15 In view of all of the above, Mr. Gorman's concerns regarding my Non-Price
16 Regulated Proxy Group should be dismissed by the Commission.

17 **VIII. RESPONSE TO DOD WITNESS RENO**

18 Q. PLEASE SUMMARIZE MS. RENO'S TESTIMONY AS IT RELATES TO
19 THE COMPANY'S COST OF CAPITAL.

20 A. Ms. Reno accepts the Company's proposed capital structure and the
21 Company's embedded cost of debt of 4.39%. Ms. Reno recommends an
22 ROE of 9.10%, within a range of 8.69% to 9.43%, based on her DCF model

140 Business risk in excess of size risk, which is measurable, as discussed previously.

141 D'Ascendis Direct Testimony, at 52.

142 Exhibit DWD-R-14. Average of mean and median values.

REDACTED VERSION

1 results.¹⁴³ Although Ms. Reno notes her recommendation is based on her
2 DCF model results, she states that her CAPM result supports her ROE
3 recommendation.¹⁴⁴

4 Q. PLEASE SUMMARIZE YOUR CONCERNS WITH MS. RENO'S DIRECT
5 TESTIMONY AND HER RECOMMENDATIONS.

6 A. My concerns with Ms. Reno's direct testimony and analysis include the
7 following: (1) her sole reliance on the DCF model; (2) her application of the
8 DCF model; (3) her application of the CAPM; and (4) her use of the
9 comparable earnings analysis.

10 **A. Exclusive Reliance on DCF Model Results**

11 Q. DO YOU HAVE A GENERAL COMMENT ON MS. RENO'S INDICATED
12 ROE?

13 A. Yes, I do. Mr. Reno's indicated ROE of 9.10% for Oncor is inadequate
14 because she places exclusive weight on her DCF model results.

15 Q. WHY DOES MS. RENO RELY SOLELY ON HER DCF MODEL RESULTS
16 FOR HER ROE RECOMMENDATION?

17 A. Ms. Reno relies solely on her DCF model results and her reasons are: (1)
18 that the DCF model is widely used within the finance community and by
19 public utility commissions; (2) it is a forward-looking model; and (3) the
20 CAPM, by contrast, is reliant on financial markets which are impacted by
21 monetary policy and historically low interest rates.

22 Q. DO YOU AGREE WITH HER REASONING?

23 A. No, I do not.

24 Q. IS THE DCF MODEL WIDELY USED IN THE FINANCIAL COMMUNITY?

25 A. Not as widely when compared to the CAPM. Brigham and Daves state:

143 Reno Direct Testimony, at 47-48.

144 Reno Direct Testimony, at 45.

REDACTED VERSION

1 Recent surveys found that the CAPM approach is by far the
2 most widely used method. Although most firms use more than
3 one method, almost 74 percent of respondents in one survey,
4 and 85 percent in the other, used the CAPM.^{footnote omitted} This
5 is in sharp contrast to a 1982 survey which found that only 30
6 percent of respondents used the CAPM.^{footnote omitted}
7 Approximately 16 percent now use the DCF, down from 31
8 percent in 1982. The bond yield plus risk premium is used
9 primarily by companies that aren't publicly traded.

10 People experienced in estimating the cost of equity recognize
11 that both careful analysis and sound judgment are required.
12 It would be nice to pretend that judgment is unnecessary and
13 to specify an easy, precise way of determining the exact cost
14 of equity capital. Unfortunately, this is not possible – finance
15 is in large part a matter of judgment, and we simply must face
16 that fact.¹⁴⁵

17 This excerpt establishes four points: (1) most firms use multiple
18 models; (2) the use of the CAPM is prevalent by firms in internal decision-
19 making; (3) the importance of the DCF model in the decision-making
20 process for firms has waned over time; and (4) regardless of which models
21 one uses, judgment is the key ingredient in determining the cost of equity
22 capital.

23 Q. ARE THERE ADDITIONAL EXAMPLES FROM FINANCIAL LITERATURE
24 WHICH SUPPORT THE USE OF MULTIPLE COST OF COMMON EQUITY
25 MODELS IN DETERMINING THE INVESTOR-REQUIRED RETURN?

26 A. Yes. In one example, Morin states:

27 Each methodology requires the exercise of considerable
28 judgment on the reasonableness of the assumptions
29 underlying the methodology and on the reasonableness of the
30 proxies used to validate a theory. The inability of the DCF
31 model to account for changes in relative market valuation,
32 discussed below, is a vivid example of the potential
33 shortcomings of the DCF model when applied to a given

145 Eugene F. Brigham, Phillip R. Daves, Intermediate Financial Management, Ninth Edition,
Thomson Southwestern, 2007, at 332-333.

REDACTED VERSION

1 company. Similarly, the inability of the CAPM to account for
2 variables that affect security returns other than beta tarnishes
3 its use.

4 **No one individual method provides the necessary level of**
5 **precision for determining a fair return, but each method**
6 **provides useful evidence to facilitate the exercise of an**
7 **informed judgment.** Reliance on any single method or
8 preset formula is inappropriate when dealing with investor
9 expectations because of possible measurement difficulties
10 and vagaries in individual companies' market data.
11 (emphasis added)

12 * * *

13 There is ample academic support in the financial literature for
14 the need to rely upon several financial models in arriving at a
15 recommended common equity cost rate. Professor Eugene
16 Brigham, a widely respected scholar and finance
17 academician, asserts^(footnote omitted):

18 *Three methods typically are used: (1) the Capital Asset*
19 *Pricing Model (CAPM), (2) the discounted cash flow (DCF)*
20 *method, and (3) the bond-yield-plus-risk-premium approach.*
21 ***These methods are not mutually exclusive – no method***
22 ***dominates the others, and all are subject to error when used***
23 ***in practice. Therefore, when faced with the task of estimating***
24 ***a company's cost of equity, we generally use all three***
25 ***methods and then choose among them on the basis of our***
26 ***confidence in the data used for each in the specific case at***
27 ***hand. (italics in original) (emphasis added)***

28 Another prominent finance scholar, Professor Stewart Myers,
29 in an early pioneering article on regulatory finance,
30 stated^(footnote omitted):

31 *Use more than one model when you can. Because estimating*
32 *the opportunity cost of capital is difficult, **only a fool throws***
33 ***away useful information.*** That means you should not use
34 any one model or measure mechanically and exclusively.
35 Beta is helpful as one tool in a kit, to be used in parallel with
36 DCF models or other techniques for interpreting capital
37 market data. (italics in original) (emphasis added)