

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**IN THE MATTER OF PUBLIC SERVICE)
COMPANY OF NEW MEXICO'S APPLICATION)
FOR APPROVAL OF PURCHASED POWER)
AGREEMENTS, ENERGY STORAGE)
AGREEMENTS, AND CERTIFICATES OF PUBLIC)
CONVENIENCE AND NECESSITY FOR SYSTEM) Case No. 23-00xxx-UT
RESOURCES IN 2026,)
)
)
PUBLIC SERVICE COMPANY OF NEW MEXICO,)
)
Applicant)
_____)**

DIRECT TESTIMONY

OF

THOMAS M. FELDMAN

ON BEHALF OF

PUBLIC SERVICE COMPANY OF NEW MEXICO

October 25, 2023

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I. INTRODUCTION

1
2 **Q. PLEASE STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS.**

3 **A.** My name is Thomas M. Feldman, and I am a Director at Atrium Economics, LLC
4 (“Atrium”). Atrium provides financial and regulatory advisory services to clients in the
5 North American energy industry. My business address is 10 Hospital Center Commons,
6 Suite 400, Hilton Head Island, South Carolina.

7
8 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND AND**
9 **EDUCATION.**

10 **A.** A copy of my resume is provided as PNM Exhibit TMF-1[Resume of Thomas M.
11 Feldman]. In my current role with Atrium, I advise a broad range of energy industry clients
12 across North America on issues pertaining to economics, finance, and regulation. Earlier
13 in my career I worked as an equity analyst for State Street Global Advisors, covering US
14 utility stocks. In this role, I evaluated and provided investment recommendations on US
15 utility stocks based on financial, operational, and regulatory aspects of US electric and
16 natural gas utilities. I then spent approximately ten years as an energy consultant with
17 Concentric Energy Advisors, advising clients in the energy industry on issues related to
18 economics, finance, and regulation. Subsequently I spent two years leading regulatory and
19 development activities for the largest pipeline of new hydropower plants in the US for Free
20 Flow Power, Inc. From 2015-2020 I was the founder and CEO of Power Development
21 International, Inc, (“PDI”) a company commercializing a proprietary hydrokinetic turbine.

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1 In this role I led PDI’s technology and project development, engineering, finance,
2 regulatory, and operations groups and raised multiple rounds of equity and debt capital to
3 fund the company’s operations. I earned a B.A. in economics from Union College in
4 Schenectady, NY, and an M.B.A from Babson College in Wellesley, MA.

5

6 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

7 **A. My direct testimony:**

- 8 1. Provides an overview of imputed debt and its impacts on financial integrity.
- 9 2. Reviews PNM’s approach to imputed debt considerations in evaluating proposals
10 received in response to its most recent request for proposals (“RFP”).
- 11 3. Describes the benefits of balancing power purchase agreements (“PPAs”) and
12 energy storage agreements (“ESAs”) with utility ownership.
- 13 4. Makes policy recommendations for addressing issues associated with imputed debt
14 based on PNM’s specific situation and in the context of how other jurisdictions are
15 addressing the issue.

16

17 **Q. PLEASE SUMMARIZE YOUR PRINCIPAL CONCLUSIONS.**

18 **A. My principal conclusions are:**

- 19 1. Imputed debt has tangible financial implications and will only increase in impact
20 as utilities grow their carbon-free supply portfolios which will involve outside
21 developers/owners “leaning” on utility balance sheets to finance projects.

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1 2. Utilities and commissions around the country are already evaluating the impacts of
2 imputed debt and are considering a variety of remedies to shore up utility balance
3 sheets and cash flow metrics used by credit rating agencies. PNM’s consideration
4 of imputed debt is consistent with approaches Atrium has seen in other
5 jurisdictions.

6 3. PNM’s evaluation of RFP responses was comprehensive, prudent, and in the best
7 interest of customers.

8 4. PNM’s carbon reduction goals will require the acquisition of a large amount of
9 energy storage capacity. This is likely to be best accomplished in future RFP
10 solicitations through a combination of utility-owned and third-party-developed
11 projects that produce the lowest cost, most reliable solutions for PNM’s customers.

12 5. Looking forward, as PNM utilizes more financial leverage to enter into ESAs for
13 standalone storage projects with outside developers, PNM and the New Mexico
14 Public Regulation Commission (“Commission”) should solidify the approach to
15 calculating imputed debt and remedying its impact on PNM’s financial integrity
16 and customers. This will be critical to maintaining PNM’s credit ratings and
17 preventing PNM’s customers from bearing the burden of an increase in PNM’s cost
18 of capital.

19
20 **Q. ARE YOU SPONSORING ANY EXHIBITS?**

21 **A. Yes. I am also sponsoring the following exhibits:**

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- 1 • PNM Exhibit TMF-1 [Resume of Thomas M. Feldman]
- 2 • PNM Exhibit TMF-2 [Summary of Imputed Debt Treatment in Other Jurisdictions]
- 3

4 **II. IMPUTED DEBT AND ITS IMPACTS ON FINANCIAL INTEGRITY**

5 **Q. WHAT IS IMPUTED DEBT?**

6 **A.** When a utility enters into a long-term fixed-payment agreement for storage capacity or
7 power purchases, the rating agencies view the fixed commitment obligation as “debt-like”
8 and impute some portion of the fixed obligation as debt to the utility balance sheet for
9 purposes of determining credit metrics for the subject utility, and ultimately the utility’s
10 credit rating. The rationale for debt imputation by the rating agencies is that the fixed
11 payment obligations transfer financial risk from the third-party developer/owner to the
12 purchasing utility. Also, debt imputation for long-term agreements for storage capacity or
13 power purchases allows for more meaningful comparisons with utilities that build these
14 resources. The amount of debt imputation by credit rating agencies will vary depending
15 on the size and term of the agreement, how the rating agency views the risks associated
16 with recovery of fixed payment obligations through the regulatory framework, and each
17 rating agency’s differing perspective on the issue.

18

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1 **Q. HOW DO LONG-TERM FIXED PRICE AGREEMENTS FACTOR INTO**
2 **RESOURCE PLANNING?**

3 **A.** When a utility is determining the resource requirements that are necessary to satisfy its
4 customer load projections and policy objectives, it must determine what resources it needs
5 and whether to build or buy those resources. Utilities that build such resources typically
6 finance them with a mix of debt and equity. A utility that enters into a long-term agreement
7 for storage capacity or power purchases shifts the construction and operating risks to the
8 suppliers. Further, many states require a utility to demonstrate that building a plant is in
9 customers' best interest by comparing future revenue requirements to the comparable
10 payments for leasing such capacity.¹

11

12 **Q. WHY ARE LONG-TERM FIXED PAYMENT AGREEMENTS SUBJECT TO**
13 **DEBT IMPUTATION BY THE RATING AGENCIES?**

14 **A.** Typically, a utility acquires resources by 1) building, or 2) making fixed payment
15 commitments for resources which are classified as a lease. In either scenario, the utility
16 would reflect both the asset and the associated financial obligation (imputed debt) on its
17 balance sheet. The rating agencies view these long-term fixed payment agreements as
18 increasing the financial risk of the utility and must be considered in evaluating the utility's

¹ For example, 17.9.551.8(D) NMAC requires a utility filing an application for a long-term PPA to include. "(7) evidence of the LTPPA's impact on the electric utility's financial condition and financial metrics;" and "(8) evidence that the LTPPA is consistent with the electric utility's most recent commission-accepted integrated resource plan unless, as described in Section 17.7.3.10 NMAC, material changes that would warrant a different course of action by the electric utility have occurred; in which case, the testimony shall include justification for deviation from the integrated resource plan."

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1 credit worthiness. In the ratings agencies' view these long-term fixed-payment agreements
2 mirror debt—and like debt, the fixed obligation must be supported by adequate revenues
3 before any earnings can be made available to common shareholders. The greater the risk
4 to the utility for non-recovery of these fixed obligations, the more debt-like they become
5 in the eyes of the ratings agencies.
6

7 **Q. HOW IS DEBT IMPUTATION RELEVANT IN THE CONTEXT OF THIS**
8 **PROCEEDING?**

9 **A.** The presence of imputed debt will impact a utility's credit metrics and will factor into a
10 utility's credit rating. This can raise the cost of borrowing and will also impact the cost of
11 equity, as equity holders must recognize that the increased leverage associated with
12 imputed debt will take priority over any residual payments to equity holders. It is important
13 that regulators consider the presence of imputed debt in making its capital structure and
14 cost of equity determinations. The initial responses to PNM's RFP included several bids
15 with fixed or partially fixed pricing structures, which would likely cause debt imputation
16 by the rating agencies.
17

18 **Q. HOW DO EACH OF THE RATINGS AGENCIES CALCULATE IMPUTED**
19 **DEBT?**

20 **A.** S&P, Moody's, and Fitch each has its own methodology for the treatment of long-term
21 fixed payment agreements. S&P's methodology is published and relatively transparent.

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1 S&P determines the imputed debt amount by taking the present value of the future stream
2 of fixed payments under the contract at a discount rate of 7%. This present value is reduced
3 to reflect regulatory or legislative cost recovery mechanisms and/or overall recovery risk
4 by applying a risk factor to the imputed debt amount. A 100% risk factor assumes the utility
5 bears all the risk related to the contractual obligations, whereas a 0% risk factor implies
6 that 100% of the risk is borne by utility customers. (Generally, a 50% risk factor is applied
7 when the utility recovers fixed costs through base rates; and 25% when a special adjustment
8 mechanism is employed. Special legislative provisions for cost recovery may lead to risk
9 factors of between 0% and 5%). S&P does not impute debt on short-term fixed payment
10 agreements. The adjustment creates debt and an offsetting asset equal to the imputed debt
11 amount. S&P recognizes imputed interest and imputed Depreciation/Amortization. The
12 adjustments are factored into the financial ratios S&P uses to determine the utility's credit
13 rating.²

14
15 Moody's generally adopts the financial statement treatment of the long-term fixed payment
16 agreement. It considers the scale of the payment, regulatory treatment and cost recovery
17 mechanisms, or other factors that create financial or operational risk for the utility greater
18 than the benefits received. Depending on the weighting and importance of the contract,
19 Moody's might impute a debt equivalent for what would otherwise be determined an

² S&P Global Ratings, Criteria | Corporates | Utilities: Key Credit Factors For The Regulated Utilities Industry (Nov. 19, 2013 (updated Nov. 22, 2022)), <https://disclosure.spglobal.com/ratings/en/regulatory/article/-/view/sourceId/8339577>.

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1 operating cost. Moody's looks holistically at the contract's credit impact on the utility.
2 Generally, for fixed payment agreements where there is reasonable assurance that costs
3 will be allowed recovery in rates, the contract will likely be viewed as an operating lease,
4 with no debt imputation. If Moody's determines that debt imputation is appropriate it may
5 approximate a debt obligation equivalent for PPAs using one of the following methods:

- 6 1) Net Present Value - Calculate the imputed debt at the net present value of future cash
7 flows, using a discount rate equal to Moody's estimate of the cost of capital for the
8 utility.
- 9 2) Annual Obligation x 6 - If there is not sufficient information to better quantify,
10 Moody's may calculate the imputed debt a multiple of 6 x the annual PPA payment
11 obligation.
- 12 3) Debt Look-Through - In situations where the debt raised by the third party is directly
13 related to the utility's creditworthiness as a PPA counterparty, Moody's may allocate
14 all (or a portion) of the IPP debt to the utility,
- 15 4) Mark-to-Market - If Moody's believes that the PPA prices exceed the market price,
16 thus creating an ongoing liability for the utility, it may use a net mark-to-market
17 method, in which the NPV of the utility's payments for the portion of the PPA that
18 exceeds market prices will be added to its total debt obligations.³

19
20 Fitch generally does not impute a debt equivalent for an operating lease in the utility sector.
21 For the utilities industry in the U.S., lease debt is generally excluded from total leverage

³ Moody's Investors Service, Rating Methodology: Regulated Electric and Gas Utilities at 44 (June 23, 2017), <https://ratings.moody.com/api/rmc-documents/68547>.

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1 and is treated as an operating expense. If Fitch were to impute lease debt, it would likely
2 be done using a multiple applied to the annual obligation.

3
4 **Q. IN ADDITION TO S&P'S POLICY ON IMPUTED DEBT, IS THERE**
5 **ADDITIONAL EVIDENCE THAT PPAS CAN INCREASE FINANCIAL RISK**
6 **FOR THE UTILITY?**

7 **A.** Yes. When a creditworthy utility signs a PPA, it reduces the risk, and therefore cost of
8 capital, for the seller (developer of the asset). Long term PPAs are often required for a
9 developer to obtain financing on reasonable terms. This is a direct transfer of risk from a
10 developer (or the entity financing the developer's project) to the utility and its customers.

11 As noted by Fitch Ratings:

12 "The traditional method for independent generators was to rely on the
13 strength of a PPA with a creditworthy off-takers (usually a utility) to help
14 finance the construction cost of a new power plant. Take or pay contracts or
15 firm capacity payments under the PPA would allow the developer to raise
16 debt financing for the project, either using single asset project financing or
17 under a portfolio financing approach. In general, power developers of this
18 type have lower credit rating than those of the power purchaser. These
19 developers can raise financing on more favorable terms if they can take
20 advantage of the credit enhancement that comes from contractual cash flows
21 from credit worthy counterparties." ⁴

22 It is also important to note that the certainty of the regulatory recovery mechanism for the
23 PPA costs determines the allocation of the risk transferred from the developer between the
24 utility and its customers.

25

⁴ Fitch Rating, Stimulating Generation Additions in Deregulated States, *Corporate Finance* at 2 (Nov. 4, 2005).

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1 **Q. WHY IS IMPUTED DEBT A SIGNIFICANT ISSUE FOR UTILITIES?**

2 **A.** The calculation of imputed debt and imputed interest results in the creation of adjusted
3 financial statements that are used to calculate the utility’s financial ratios and can
4 significantly impact the utility’s credit rating. This information may also influence buy vs.
5 build decisions and contracting decisions in resource procurement. The additional leverage
6 may lead to lower utility credit ratings or debt rating downgrades that may cause borrowing
7 capacity to be restricted or may lead to increased costs of capital. Due to reduced costs for
8 battery energy storage systems (“BESS”) and ambitious carbon reduction goals, utilities
9 are entering into more and more long-term fixed price contracts. This is and will continue
10 to lead to increasing levels of imputed debt on utilities’ adjusted financials, for which
11 investors will adjust terms and require additional compensation for the increased imputed
12 leverage. It is extremely important in this era of proliferating long-term fixed price
13 agreements for storage capacity and renewable power purchases that regulators provide
14 regulatory relief to mitigate the impact of debt imputation by the rating agencies on utility
15 capital structure and cost of capital.

16 style="text-align:center">**III. IMPUTED DEBT AND PNM’S RFP**

17 **Q. WHAT RESOURCES DID PNM SEEK IN ITS 2026 TO 2028 GENERATION**
18 **RESOURCES RFP?**

19 **A.** PNM’s 2026 to 2028 Generation Resources RFP sought to acquire bulk transmission level
20 and distribution level capacity and demand side management resources to serve PNM’s
21 forecasted system needs consistent with the plan outlined in its 2020 Integrated Resource

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1 Plan filed on January 29, 2021 (“2020 IRP”). PNM witness Henry Monroy provides a
2 summary of the RFP and PNM’s RFP evaluation process in his direct testimony.

3
4 **Q. DID THE PROPOSALS PNM RECEIVED TRIGGER ANY CONCERNS ABOUT**
5 **IMPUTED DEBT?**

6 **A.** Yes. PNM received several bids for standalone ESAs with fixed pricing structures and for
7 BESS plus solar with partially fixed pricing structures. The fixed price component of the
8 ESAs and BESS plus solar bids are likely to cause S&P to impute a percentage of the fixed
9 portion of those contracts as debt when calculating the ratios that guide its credit rating
10 decisions. As explained in its corporate credit ratings guidance document “Corporate
11 Methodology: Ratios And Adjustments”, S&P states:

12 “We may view long-term purchased power agreements (PPA) as creating
13 fixed, debt-like financial obligations that represent substitutes for debt-
14 financed capital investments in generation capacity. If the lease liabilities
15 include PPAs, we may reduce the lease liabilities to reflect the burden of
16 the contractual payments that ultimately rests with ratepayers, as when the
17 utility merely acts as a conduit for the delivery of a third party's electricity,
18 or where the regulator has established a separate adjustment mechanism for
19 recovery of all prudent PPA costs.”⁵

20 The practical implication of S&P’s approach is that the larger the fixed cost obligation
21 associated with a PPA, the more debt it is likely to impute when determining a utility’s
22 credit rating (adjusted for the risk associated with regulatory cost recovery). Any decrease
23 in financial integrity (as measured by S&P’s credit rating, or the ratios it uses to determine
24 its credit ratings) associated with the imputed debt could result in an increase in the utility’s

⁵ S&P Global Ratings, Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments at 35 (April 1, 2019), <https://disclosure.spglobal.com/ratings/en/regulatory/article/-/view/sourceId/10906146>.

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1 cost of debt, which directly impacts customer rates. Increasing leverage (whether through
2 debt securities, or contracts that result in imputed debt) also increases financial risk which
3 can increase its cost of equity as well. The utility has an obligation to provide safe, reliable,
4 and cost-effective service to its customers, which includes maintaining an efficient capital
5 structure to minimize the return investors in its debt and equity securities will require when
6 it accesses the capital markets.

7
8 **Q. HOW DID PNM CALCULATE THE AMOUNT OF IMPUTED DEBT THAT**
9 **WOULD RESULT FROM THE FIXED PRICE ESA BIDS IT RECEIVED FOR**
10 **STANDALONE STORAGE SOLUTIONS?**

11 **A.** PNM calculated the additional costs associated with balancing PNM's capital structure to
12 mitigate the impact of imputed debt (the "Cap Structure Method"). To accomplish this,
13 PNM calculated the amount of equity it would need to add to its capital structure to offset
14 the debt S&P would impute based on its stated methodology. PNM witness Nichols
15 discusses this calculation in more detail. PNM then calculated NPV of the annual rate of
16 return associated with the modified capital structure. Figure 1 compares the cost of the
17 volumetric price ESAs to the cost of the fixed price ESAs with different levels of debt
18 imputation using the Cap Structure Method.

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1

Figure 1

	2023 NPV (\$millions)	Delta (\$millions)	Delta (%)
Fixed Price ESAs	\$7,288	\$-	\$-
Volumetric Price ESAs	\$7,307	\$19	0.26%
Fixed Price ESAs with Imputed Debt Adder (30%/75%)⁶	\$7,305	\$16	0.22%
Fixed Price ESAs with Imputed Debt Adder (30%/50%)⁷	\$7,321	\$32	0.44%

2

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4

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10

Assuming S&P has maximum confidence that PNM will be able to fully recover the imputed debt costs of the ESAs through the regulatory process (discounting calculated imputed debt by 75%), the NPV of the volumetric price ESAs is \$3 million higher than the fixed price ESAs (\$7,307 - \$7,305).⁸ If we assume S&P has minimum confidence in the certainty of cost recovery of the ESAs (discounting calculated imputed debt by 50%), the NPV of the volumetric price ESAs is \$14 million lower than the fixed price ESAs (\$7,321 - \$7,307).

⁶ The 30% is based on the lease liability calculation and the 75% are based on the risk/recovery factors discussed above.

⁷ The 30% is based on the lease liability calculation and the 50% is based on the risk/recovery factors discussed above.

⁸ The \$3 million delta accounts for the rounding of the values in the “2023 NPV (\$millions)” column of Figure 1.

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1 **Q. IS THIS AN APPROPRIATE METHODOLOGY?**

2 **A.** Yes. It is worth noting that there are other approaches that have been considered. For
3 instance, PNM calculated the additional costs associated with offsetting any negative
4 impacts on the metrics the rating agencies use to determine PNM’s credit rating (the
5 “Credit Ratio Method”) to mitigate the impacts of imputed debt. PNM relied on recent
6 statements in PNM credit reports from Moody’s and S&P about scenarios that could cause
7 a downgrade in PNM’s credit ratings. In its September 2022 credit opinion on PNM,
8 Moody’s stated that factors that could lead to a downgrade include:

9 “PNM could be downgraded if the New Mexico regulatory environment
10 becomes more contentious such that the company’s ability to earn its
11 allowed return becomes more challenging or its business risk profile
12 becomes elevated because of material cost recovery disallowance.
13 Moreover, if financial metrics decline such that PNM’s ratio of CFO pre-
14 W/C [cash flow from operations before changes in working capital] to debt
15 is sustained below 16%, the rating could be downgraded.”⁹

16 In its July 2022 Ratings Score Snapshot on PNM, S&P stated that factors that could lead
17 to a downgrade include:

18 “We could lower the ratings on PNMR and PSNM if PNMR’s consolidated
19 financial measures continue to weaken, including FFO to debt consistently
20 less than 14%, or PNMR’s ability to manage regulatory risk weakens,
21 raising business risk.”¹⁰

22 As shown in Figure 2, the cost of the volumetric price ESAs is \$20 million lower (\$7,327
23 - \$7,307) and \$59 million lower (\$7,366 - \$7,307) than the original fixed priced bids

⁹ Moody’s Investor Services, Public Service Company of New Mexico, Update to Credit Analysis at 3 (Sept. 20, 2022).

¹⁰ S&P Global Ratings, Public Service Company of New Mexico, Ratings Score Snapshot at 2 (July 19, 2022).

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1 (assuming S&P uses a 75% and 50% risk/recovery factor respectively) when utilizing the
2 Credit Ratio Method.

3 **Figure 2**

	2023 NPV (\$millions)	Delta (\$millions)	Delta (%)
Fixed Price ESAs	\$7,288	\$-	\$-
Volumetric Price ESAs	\$7,307	\$19	0.26%
Fixed Price ESAs with Imputed Debt Adder (30%/75%)	\$7,327	\$39	0.54%
Fixed Price ESAs with Imputed Debt Adder (30%/50%)	\$7,366	\$78	1.07%

4
5 Therefore, when utilizing the credit ratio method, regardless of S&P's confidence in the
6 cost recovery of the ESAs (i.e., whether it discounts the regulatory cost recovery risk by
7 75% or 50%), the volumetric price ESAs are a lower cost solution than the fixed price
8 ESAs when accounting for the impact of imputed debt. While S&P is the only credit rating
9 agency that has published specific guidance on how it measures and accounts for imputed
10 debt, all three major rating agencies (S&P, Moody's, and Fitch) agree that long-term fixed
11 obligations associated with PPAs create debt equivalencies.

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1 **Q. WHAT DID PNM DO TO MITIGATE THE IMPACT OF IMPUTED DEBT IN**
2 **ORDER TO CREATE AN “APPLES TO APPLES” COMPARISON OF THE RFP**
3 **PROPOSALS?**

4 **A.** As discussed by PNM witness Nagel, PNM reached back out to the nine (9) bidders that
5 remained viable in Phase 2 of the bid evaluation process to request submission of ESA
6 proposals comparable to their initial submittals but with volumetric pricing as opposed to
7 fixed pricing. The subsequent submittals were then compared to the original fixed price
8 proposals, with and without an adjustment for imputed debt costs.

9

10 **Q. WHAT PROPOSALS DID PNM RECEIVE FROM BIDDERS IN RESPONSE TO**
11 **ITS REQUEST FOR VOLUMETRIC PRICING?**

12 **A.** Of the nine (9) bidders of whom PNM requested volumetric price ESA proposals, two (2)
13 offered proposals with a minimum offtake commitment requirement, six (6) hybrid solar
14 and storage project bidders submitted proposals with varying degrees of cost
15 competitiveness with one (1) offering prohibitively expensive economics, and one (1)
16 bidder submitted volumetric price proposals for two independent projects that leveraged
17 the pricing structure of existing solar facilities for which it had a PPA with PNM.

18

19 **Q. ARE YOU SURPRISED BY THE PROPOSALS BIDDERS PROVIDED IN**
20 **RESPONSE TO PNM’S REQUEST FOR VOLUMETRIC PRICE ESAS?**

21 **A.** No. In fact, it reinforces the fact that the fixed pricing of ESAs creates a very real debt
22 equivalency issue that has concrete financial implications. One of the parties in this

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1 equation must bear the costs associated with backstopping the financing of a standalone
2 storage project. If the ESA has fixed pricing, PNM is bearing the cost by leveraging its
3 balance sheet to guarantee a fixed payment stream to the project developer over the life of
4 the ESA. This results in imputed debt on PNM's balance sheet which leads to increased
5 borrowing costs, and therefore increased customer rates.

6
7 If the ESA has volumetric pricing, the developer, or more specifically, the entity financing
8 the developer's project, must bear the costs. The developer then passes those higher costs
9 on to PNM (its ESA counterparty) in the form of higher contract pricing (or in the case of
10 some bidders, refusal to submit a volumetric price ESA proposal altogether).

11
12 **Q. WHAT RESOURCES COMPRISE THE PACKAGE OF SOLUTIONS FOR**
13 **WHICH PNM IS SEEKING APPROVAL IN THIS PROCEEDING?**

14 **A.** In addition to one utility-owned BESS, PNM's initial evaluation identified an optimal
15 portfolio of resources comprised of two ESAs, and one PPA for a BESS plus solar. A
16 summary of the preferred portfolio is provided in Figure 3. PNM witness Phillips provides
17 a more detailed description of the preferred portfolio in his direct testimony.

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1

Figure 3

Bidder	Project Name	Structure	Tech	Storage (MW)	Solar (MW)
NextEra	Sky Ranch	ESA	BESS	100	-
NextEra	Route 66	ESA	BESS	50	-
Clenera	Quail Ranch	PPA	Solar & BESS	100	100
DEPCOM	Sandia Substation BESS	EPC	BESS	60	-
Total				310	100

2

3 **Q. BASED ON YOUR REVIEW, DID PNM EMPLOY A SOUND RFP EVALUATION**
4 **PROCESS THAT APPROPRIATELY CONSIDERED THE CONSEQUENCES OF**
5 **IMPUTED DEBT TO ARRIVE AT A PREFERRED PORTFOLIO OF**
6 **RESOURCES THAT BEST ADVANCES THE OBJECTIVES OF THE RFP?**

7 **A.** Yes. PNM accomplished this by comparing the costs of the fixed price bids it received,
8 engaging in price discovery by soliciting volumetric price alternatives from bidders, and
9 calculating the cost of the debt likely to be imputed by credit rating agencies by using the
10 criteria S&P has published. The process it went through validated the very real costs of
11 imputed debt and made an informed analysis to arrive at the portfolio of solutions that best
12 advances its objectives as defined in the RFP.

13

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1 **IV. BENEFITS OF BALANCING PPAS/ESAS WITH UTILITY OWNERSHIP**

2 **Q. WHAT ROLE SHOULD UTILITY-OWNED STORAGE PROJECTS PLAY IN**
3 **PNM'S RESOURCE PLANNING MOVING FORWARD?**

4 **A.** As I discuss below, it is not prudent for PNM to expect volumetric price ESAs for
5 standalone storage projects to play a meaningful role in meeting its resource planning needs
6 moving forward. Yet, adding increasing amounts of storage capacity is essential for PNM
7 to achieve its carbon reduction objectives. Therefore, to maximize the universe of viable
8 storage options available to PNM and to minimize PNM's and its customers' exposure to
9 large, imputed debt costs associated with fixed priced storage contracts, PNM should
10 continue to pursue both third-party ESAs and utility-owned storage projects.

11
12 **Q. WHY DO YOU EXPECT VOLUMETRIC PRICED ESAS FOR STANDALONE**
13 **STORAGE PROJECTS TO NOT BE A VIABLE OPTION IN FUTURE**
14 **SOLICITATIONS?**

15 **A.** When requested by PNM, the only bidder willing to provide volumetric pricing for its
16 standalone ESA proposals was NextEra for its Sky Ranch and Route 66 projects. All the
17 other respondents declined to offer a bid with volumetric pricing without a minimum take
18 requirement. NextEra was able to offer volumetric pricing for Sky Ranch and Route 66
19 because those two projects are proposed to be co-located with solar projects owned by
20 NextEra that are already online or in development, and the output of which is already being
21 sold to PNM under a long-term PPA. NextEra was willing to leverage its existing solar
22 PPA to offer volumetric pricing on the new storage capacity. An existing interconnection

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1 at Sky Ranch and Route 66 also reduced the risk to NextEra of bringing storage capacity
2 online. Similarly, Clenera was able to offer volumetric pricing for the BESS portion of its
3 proposal by leveraging the co-located solar facility included in the bid.

4
5 To expect future availability of volumetric price ESAs, there would need to be a universe
6 of operating solar projects with appropriate locational characteristics, and unused
7 interconnection capacity, operated by an owner interested in adding storage and entering
8 into a volumetric-priced ESA with PNM. Based on submissions to the latest RFP, and
9 feedback from the bidding parties, such a universe of projects does not exist.

10
11 **Q. WHICH OPTION, OR COMBINATION OF OPTIONS, IS THE MOST PRUDENT**
12 **WAY FOR PNM TO PROCURE THE STORAGE CAPACITY NECESSARY TO**
13 **FACILITATE ITS CARBON REDUCTION TARGETS?**

14 **A.** The options that remain generally fall into two categories: 1) fixed priced standalone
15 storage ESAs, and 2) utility-owned storage assets. A combination of ESAs and utility-
16 owned storage projects is likely to be the most effective way to advance PNM's objectives
17 of meeting its carbon reduction targets while providing safe, reliable, and economic service
18 to its customers. Paramount to achieving these objectives is maintaining strong financial
19 footing which includes managing the impact of imputed debt on PNM's financial integrity.

20

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1 **Q. HAVE STAKEHOLDERS IN OTHER JURISDICTIONS ACKNOWLEDGED THE**
2 **BENEFITS OF THIS BALANCE?**

3 **A.** Yes. Following are a few examples:

4 Colorado

5 In 2019, Colorado’s state legislature enacted SB19-236. Noting the benefit of a balance of
6 utility ownership and third-party PPAs in achieving Colorado’s clean energy targets, the
7 bill requires the Colorado Public Utilities Commission to:

8 “allow the qualifying retail utility, inclusive of any ownership by its
9 affiliates, to own a target of fifty percent of the energy and capacity
10 associated with the clean energy resources and any other energy resources
11 developed or acquired to meet the resource need, as well as all associated
12 infrastructure, if the commission finds the cost of utility or affiliate
13 ownership of the generation assets comes at a reasonable cost and rate
14 impact.”¹¹

15 Edison Electric Institute

16 The Edison Electric Institute issued a white paper titled “Understanding Debt Imputation
17 Issues.” Regarding the implications of “buy vs. build,” the white paper states:

18 “A buy-versus-build situation occurs when a competitive procurement
19 proceeding is held and the decision on which is the lowest cost alternative
20 (i.e., lowest present value of future revenue requirements) includes making
21 a choice between the lowest cost power purchase option in comparison with
22 the utility’s best self-build option. The utility’s self-build option will
23 include its proposed capital structure, which will help determine its final
24 cost. The new generation addition would normally mirror that of the utility
25 as a whole and leave the utility’s financial risk profile unchanged. If, purely
26 hypothetically, the utility were to use 100 percent debt financing with no
27 additional equity and equity return, the utility’s financial risk would go up,
28 as measured by the S&P financial ratios. As a general proposition (before
29 looking at the specifics of a given situation), the signing of the long-term
30 PPA has the effect of increasing debt equivalence without increasing return
31 (mediated through the imputed debt calculus discussed above). Therefore,

¹¹ S.B. 19-236, 72nd Gen. Assemb., First Reg. Sess. at 12 (Co. 2019).

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1 in comparing that PPA alternative with self-build options at allowed capital
2 structure, the mitigation of cost of imputed debt to the utility needs to be
3 added to the contract the utility signs to make the comparison “apples to
4 apples.”¹²

5 North Carolina

6 In 2021, the North Carolina state legislature passed House Bill 951, part of which
7 authorizes the utilities commission to take all reasonable steps to achieve a seventy percent
8 reduction in emissions of carbon dioxide from electric public utilities by 2030, and carbon
9 neutrality by 2050. To advance the adoption of solar resources, the act states:

10 “To the extent that new solar generation is selected by the Commission, in
11 adherence with least cost requirements, the solar generation selected shall
12 be subject to the following: (i) forty-five percent (45%) of the total
13 megawatts alternating current (MW AC) of any solar energy facilities
14 established pursuant to this section shall be supplied through the execution
15 of power purchase agreements with third parties pursuant to which the
16 electric public utility purchases solar energy, capacity, and environmental
17 and renewable attributes from solar energy facilities owned and operated by
18 third parties that are 80 MW AC or less that commit to allow the procuring
19 electric public utility rights to dispatch, operate, and control the solicited
20 solar energy facilities in the same manner as the utility's own generating
21 resources and (ii) fifty-five percent (55%) of the total MW AC of any solar
22 energy facilities established pursuant to this section shall be supplied from
23 solar energy facilities that are utility-built or purchased by the utility from
24 third parties and owned and operated and recovered on a cost of service
25 basis by the soliciting electric public utility. These ownership requirements
26 shall be applicable to solar energy facilities (i) paired with energy storage
27 and (ii) procured in connection with any voluntary customer program.”¹³

28 District of Columbia

29 In 2020, the Public Service Commission of the District of Columbia issued Order No.
30 20327 adopting a model of acquiring 5% of Potomac Electric Power Company’s (“Pepco”)

¹² Edison Electric Institute, White Paper Understanding Debt Imputation Issues at 39 (June 2008).

¹³ H.B. 951, Gen. Assemb., Sess. 2021 at Part 1, Sec. 1(2)(b) (N.C. 2021).

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1 standard offer service through long-term PPAs with solar and wind facilities. The order
2 specifically acknowledged the impact PPAs can have on the utility’s financial condition,
3 stating:

4 “The Commission does, however, take seriously the potential impact of
5 imputed debt and the complications that could arise if more PPAs are added
6 to Pepco’s balance sheet. The Commission understands that a strong
7 balance sheet positions the Company to borrow money at lower rates which
8 also minimizes costs to Pepco customers. To ensure that the Commission is
9 well informed about the impact, if any, that the PPA could have on Pepco’s
10 credit metrics, the Commission directs Pepco to file an update within 15
11 days in the event that it receives information from S&P or any other credit
12 rating agency regarding the impact of the PPA on Pepco’s financial
13 condition. In addition, the Commission notes that the prospective PPA
14 represents a 15-year to 20-year commitment. As such, we view the PPA as
15 a non-bypassable component for billing purposes.”¹⁴

16
17 **V. FORWARD-LOOKING POLICY CONSIDERATIONS**

18 **Q. HOW ARE IMPUTED DEBT CONSIDERATIONS IMPACTING RESOURCE**
19 **PLANNING PROCESSES FOR UTILITIES AROUND THE COUNTRY?**

20 **A.** Jurisdictions around the country are acknowledging and dealing with issues associated with
21 imputed debt in order to preserve the benefits utility customers receive from a utility on
22 sound financial footing. PNM Exhibit TMF-2 contains a summary of how various
23 jurisdictions are acknowledging and addressing/mitigating the impacts of imputed debt.
24 The issue of imputed debt has been considered by utilities for a long time, and as shown in
25 PNM Exhibit TMF-2 its relevance and impact are only increasing as the energy transition

¹⁴ Pub. Serv. Comm’n of D.C., Order No. 20327 at 14.

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1 continues, especially as standalone energy storage economics become increasingly
2 competitive.

3
4 **Q. CAN YOU PROVIDE AN EXAMPLE OF A UTILITY IDENTIFYING AND**
5 **REQUESTING RELIEF FOR THE IMPACTS OF IMPUTED DEBT ON ITS**
6 **FINANCIAL INTEGRITY?**

7 **A.** Yes. In its 2020 Cost of Capital Filing before the California Public Utilities Commission
8 (“CPUC”), Southern California Edison (“SCE”), citing its assessment of debt equivalence
9 and its credit ratios, requested an adjusted capital structure that increased its common
10 equity ratio at the expense of preferred equity.¹⁵ In supporting its request, SCE specifically
11 noted:

12 “Moreover, as SCE’s own credit history bears out, reversing a downgrade
13 is typically not an instantaneous process, and SCE’s customers would incur
14 higher borrowing costs until the ratings agencies moved to restore SCE’s
15 ratings to prior levels. In 1992, S&P downgraded SCE from Double-A
16 ratings to Single-A ratings as a result of the Commission’s failure to adjust
17 SCE’s equity ratio to counter the adverse effects of debt equivalence. SCE
18 has never regained Double-A ratings with these credit rating agencies.”¹⁶

19
20 “Once a downgrade has been issued it can take years to reverse, with both
21 investors and customers bearing the negative consequences.”¹⁷

22

¹⁵ Cal. Pub. Util. Comm’n, Application 19-04-014, Testimony Supporting Southern California Edison’s Application for Authority to Establish Its Authorized Cost of Capital for Utility Operations for 2020 and to Reset the Annual Cost of Capital Adjustment Mechanism at 48.

¹⁶ *Id.* at 57.

¹⁷ *Id.*

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1 **Q. DID THE CPUC RECOGNIZE THESE IMPACTS AND APPROVE A REMEDY?**

2 **A.** Yes. In its order in SCE’s cost of capital proceeding, the CPUC stated:

3 “Debt equivalence, raised as a financial risk by the applicants, does have an
4 impact on the financial risk of SCE, PG&E, SDG&E, and SoCalGas. As
5 recognized in D.04-12-047, debt equivalence has been reflected in the
6 utilities’ credit ratings since at least 1990. In D.05-12-043, we affirmed that
7 debt equivalence would be assessed on a case-by-case basis along with other
8 financial, regulatory and operational risks in setting a balanced capital
9 structure and fair ROE. Our goal in so doing was, and continues to be, to
10 provide reasonable confidence in the utilities’ financial soundness, to
11 maintain and support investment-grade credit ratings, and provide utilities
12 the ability to raise money necessary for the proper discharge of their public
13 duty. We have no reason to change that goal. Debt equivalence is considered
14 in arriving at an overall ROE.¹⁸

15
16 Debt equivalence should be considered along with other risks in arriving at
17 a fair and reasonable ROE.¹⁹

18 The CPUC approved a capital structure and return on equity that remedied the impacts of
19 imputed debt on the California utility’s financial integrity. This is consistent with prior
20 acknowledgements by the CPUC of the impacts of imputed debt. In 2017, the CPUC Policy
21 and Planning Division issued a report on debt equivalency that recognized that debt
22 equivalence can have a significant effect on a utility’s credit rating and cost of debt, stating:

23 “The financial risk resulting from a large portfolio of PPAs could lead to a
24 credit rating downgrade. The weakened credit ratings, in turn, affect
25 utilities’ cost of debt and equity assessed by financial markets. Therefore
26 PPAs or other types of debt equivalent obligations might affect a utility’s
27 overall cost of capital.”²⁰

¹⁸ Cal. Pub. Util. Comm’n, Decision 19-12-056 at 26 (Dec. 19, 2019).

¹⁹ *Id.* at 53.

²⁰ Cal. Pub. Util. Comm’n, An Introduction to Debt Equivalency at 5 (Aug. 4, 2017).

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1 **Q. LOOKING FORWARD, HOW SHOULD PNM, THE COMMISSION, AND**
2 **OTHER STAKEHOLDERS BE ADDRESSING IMPUTED DEBT IN ORDER TO**
3 **MAXIMIZE THE BENEFIT OF IMPROVED STANDALONE STORAGE**
4 **ECONOMICS WHILE PRESERVING THE PNM'S FINANCIAL INTEGRITY?**

5 **A.** A proactive collaboration between relevant stakeholders is critical for the establishment of
6 transparent guidelines for determining how imputed debt considerations should factor into
7 resource evaluation and planning moving forward. To accomplish this, the
8 collaboration/discussion needs to include the establishment of a predictable and
9 dependable approach to cost recovery for the calculated imputed debt costs. As discussed
10 earlier, the credit rating agencies factor in the certainty of regulatory cost recovery into its
11 imputed debt calculation. Therefore, memorializing a reliable cost recovery mechanism is
12 absolutely critical to mitigate the cost consequences of imputed debt.

13
14 **Q. WHAT ADDITIONAL FACTORS SHOULD BE CONSIDERED TO GUIDE THIS**
15 **COLLABORATION?**

16 **A.** There are several factors that should be considered, including:
17 1. PNM recently brought 170 MW of fixed price BESS ESAs online in the third
18 quarter of 2023. It is likely that S&P will provide further guidance on how it will
19 treat imputed debt specific to PNM once those assets reach commercial operation.
20 2. Policies for the treatment of imputed debt costs for purposes of resource planning
21 evaluation should be established in lock step with cost recovery treatment. An

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1 agreed-upon evaluation process alone will not mitigate the risk of debt imputation
2 by the credit rating agencies. This is particularly important for ensuring that
3 imputed debt is treated in a competitively neutral way.

- 4 3. The improving economics of standalone storage projects will magnify the impact
5 of imputed debt on utility balance sheets. While the industry is reacting to these
6 developments in real time, PNM and the Commission should advance the
7 discussion now to minimize any negative impacts of imputed debt on PNM
8 achieving its carbon reduction goals.

VI. CONCLUSIONS

10 **Q. WHAT ARE YOUR PRINCIPAL CONCLUSIONS?**

11 **A. My conclusions are, as follows:**

- 12 1. Imputed Debt has tangible financial implications and will only increase in impact
13 as utilities grow their carbon-free supply portfolios which will involve outside
14 developers/owners “leaning” on utility balance sheets to finance projects.
15 2. Utilities and commissions around the country are already evaluating the impacts of
16 imputed debt and considering a variety of remedies that shore up utility balance
17 sheets and cash flow metrics used by credit rating agencies. PNM’s consideration
18 of imputed debt is consistent with evolving approaches we’ve seen in other
19 jurisdictions.
20

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1 3. PNM’s consideration of imputed debt in its evaluation of RFP responses was
2 comprehensive, prudent, and in the best interest of customers.

3 4. PNM’s carbon reduction goals will require the acquisition of a large amount of
4 energy storage capacity. This is likely to be best accomplished in future RFP
5 solicitations through a combination of utility-owned and outside-developed
6 projects that produce the lowest cost, most reliable solutions for PNM’s customers.

7 5. Looking forward, as PNM utilizes more financial leverage to enter into ESAs for
8 standalone storage projects with outside developers, PNM and the Commission
9 should solidify the approach to calculating imputed debt and remedying its impact
10 on PNM’s financial integrity. This will be critical to maintaining PNM’s credit
11 ratings and preventing PNM’s customers from bearing the burden of an increase in
12 PNM’s cost of capital.

13
14 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

15 **A. Yes.**

16
GCG#531698

Résumé of Thomas Feldman

PNM Exhibit TMF-1

Is contained in the following 4 pages.



Thomas M. Feldman

Director

Mr. Feldman is an accomplished executive and consultant with 25+ years of experience in the energy and financial services industries. As a Director with Atrium Economics, he advises clients in the North American energy industry on issues related to finance, regulation and Operations. On behalf of electric and natural gas utilities throughout North America, Mr. Feldman has advised clients on financial, policy and ratemaking issues. Specifically, he has testified as an expert witness on financial and policy issues and performed rate of return and cost of service analyses for investor-owned and municipal gas and electric utilities. Mr. Feldman has also conducted studies analyzing the impacts of implementing alternative financing and rate design mechanisms.

As Founder and CEO of PDI, Inc. he led its efforts to commercialize a highly efficient, low-cost hydrokinetic technology. Prior to co-founding PDI, he was Vice President of Project Development at Free Flow Power, where he advanced the largest pipeline of new hydropower projects in the U.S from concept to commercial viability. At PDI and Free Flow Power he led multidisciplinary teams of engineering, finance, regulatory, and commercial experts who work together to develop energy projects with industry-leading reliability, economics, and efficiency.

Mr. Feldman founded Power Development International (PDI) Inc., where he invented and developed a proprietary, low-cost hydrokinetic turbine from concept through commercialization. At PDI, personally led:

- Three successful rounds of capital raises to support PDI's growth
- Development of commercial pipeline of end-use customers interested in deploying PDI's solution
- A full-scale demonstration project to showcase efficacy of PDI's technology (Cape Cod Canal 2017)
- Establishment and growth of PDI's portfolio of intellectual property
- Successful procurement of government grant funds to advance PDI's technology commercialization
- Development of partnerships with academic institutions to design learning opportunities related to PDI's technology

EDUCATION

M.B.A., F.W. Olin, Graduate School of Business, Babson College

B.A., Economics and German, Union College

YEARS EXPERIENCE

25+

RELEVANT EXPERTISE

Regulatory Support and Strategy;
Financial Advisory; Financial
Analysis; Litigation; Mergers &
Acquisitions; Renewables
Development



- Design and implementation of academic programming and curriculum related to PDI's technology for students from university (Massachusetts Maritime Academy) to high school and middle school students (The Belmont Hill School, City of Holyoke Public Schools)

In leading PDI, assembled multidisciplinary partnerships with top tier research institutions (Stanford, Brown, U-Wisconsin, Massachusetts Maritime), large energy industry companies (New York Power Authority and other Utilities and IPPs) non-academic research labs (National Renewable Energy Labs, Alden Labs) to advance the R&D and deployment of PDI's technology.

As VP of Project Development at Free Flow Power, sited, developed and licensed the largest pipeline of new hydropower projects in the U.S. (21 advanced projects totaling 208 MW of capacity combined with 31 early stage projects totaling 342 MW of capacity).

REPRESENTATIVE PROJECT EXPERIENCE

Strategic and Financial Advisory Services

Mr. Feldman has advised numerous leading energy companies on the development and execution of comprehensive strategic and financial assessments of both regulated and non-regulated enterprises. Specific services provided include resource planning/procurement, the identification and evaluation of corporate, financial, regulatory, workforce, market, and asset/enterprise-specific considerations. These considerations often are then reflected in a specific financial assessment and valuation of the subject enterprise. In many assignments, the assessment and recommendations are presented to the client's executive management and/or Board of Directors.

- A large multi-utility, provided advisory services related to the development and execution of an investment strategy focused on acquiring business units within natural gas energy companies and utilities in North America.
- An international private equity firm, provided advisory services pertaining to potential acquisitions of U.S. energy companies.
- A multinational infrastructure investor, provided financial advisory services pertaining to the acquisition of a major energy infrastructure company, including natural gas pipelines. This effort included detailed due diligence to develop twenty-year financial projections for all regulated operating subsidiaries of the client's identified target, including key revenue drivers impacting the valuation. to the client's executive management and/or Board of Directors.
- A private equity firm, provided a market assessment focused on the Illinois, Maryland and New York markets to support a proposed investment in a Midwest-focused retail energy marketing company. Much of the assessment focused on how the unfolding regulatory environment would affect the target company's ability to be profitable going forward.
- A consortium of Vermont Electric Utilities, assessed the feasibility of siting various types of generation technologies in Vermont. The study compared the all-in cost of 11 different generation technologies, along with the associated environmental, safety, and infrastructure considerations. The study also analyzed the feasibility of financing each



technology under various ownership structures, including public, investor-owned utility, and cooperative ownership structures.

- A large, Northeast utility, assessed the implications of utilizing different corporate structures for new company-owned generation, including regulated and unregulated alternatives. The assessment addressed a wide range of issues including: regulatory and financial risks of each structure, public policy considerations, shareholder return versus ratepayer cost issues, market considerations and financial community views.
- A large, Midwest utility, developed a comprehensive strategic and financial assessment of the alternatives for the utility's lone Nuclear Plant. This assignment included identifying, assessing and valuing the asset across a variety of alternatives, including continued ownership, various third party operating structures, and a joint venture. This assignment also included the development of regulatory, marketing, and technical plans for each alternative. Following the strategic analysis, advised and managed the auction for the sale of the plant, and supported the utility throughout its regulatory approval process. The City of Oberlin, OH, studied alternatives to investing in a coal-fired power plant being sponsored by a collection of Ohio municipalities. The study involved assessing the economic and environmental risks associated with investing in various types of electric generation facilities, as well as how each of these alternatives would fit in to the City's resource mix.

Mergers, Acquisitions, and Divestitures

Mr. Feldman has been instrumental in the success of several mergers, acquisitions and divestitures with an aggregate valuation in the billions of dollars. Mr. Feldman has been directly involved in all aspects of transactions which include nuclear and fossil, generation assets (wholly and jointly-owned), and power purchase agreements. Specific services include: pre-marketing strategic evaluation including valuation and assessment of alternatives; assistance in the design of an appropriate transaction program (e.g., broad-based v. targeted, one-stage v. multiple-stage); marketing (the identification of and direct marketing to prospective buyers, the development of marketing and offering materials); development of transaction terms including support of the development of specific transaction agreements; technical/due diligence support including the development and administration of data dissemination tools (e.g., virtual and physical data rooms, Q&A) and support of site tours and management meetings; bid process management; bid evaluation, selection and negotiation; and regulatory and closing support, including support of expert testimony and addressing issues of opposing/intervening parties. As a NASD registered representative, Mr. Feldman has helped author several fairness opinions relating to the purchase and sale of electric and gas assets and companies.

- We Energies' sale of Point Beach Nuclear Plant and execution of an associated power purchase agreement.
- Consumers Energy's sale of Palisades Nuclear Plant and Big Rock Point ISFSI and an associated power purchase agreement.
- Interstate Power & Light's sale of Duane Arnold Energy Center and an associated power purchase agreement.



- Atlantic City Electric’s sale of its ownership stake in Keystone and Conemaugh Generating Stations.
- Buy-side due diligence of nuclear and fossil and hydro electric generation assets.
- Buy-side due diligence of various electric, natural gas and water utilities.

Regulatory Analysis and Ratemaking

On behalf of electric and natural gas utilities throughout North America, Mr. Feldman has supported the formulation of many aspects of utility regulatory policy and ratemaking. Specifically, he has testified as an expert witness on financial and policy issues, and has performed rate of return and cost of service analyses for investor-owned and municipal gas and electric utilities. Mr. Feldman has also conducted studies analyzing the impacts of implementing alternative rate design mechanisms.

- Testified on the impacts of securitization on the financial integrity of the issuing utility.
- Supported the development of testimony on behalf of an interstate natural gas pipeline before the FERC which included a comprehensive assessment of the market for and value of capacity on its pipeline.
- Supported the development of rate of return testimony on behalf of numerous electric and natural gas utilities in Wisconsin, Minnesota, Colorado and Vermont.
- Conducted detailed cost of service studies for several gas utilities.
- For a Western U.S. electric utility developed an analysis using a custom-designed model to evaluate the rate impacts of introducing utility-owned and third-party distributed generation.

Litigation Support and Expert Testimony

Mr. Feldman has supported the development of written expert testimony and expert reports in civil litigation and regulatory proceedings on energy and transactional issues. In addition to supporting expert testimony, specific services provided include collaborating with counsel as well as business and technical staff for clients to develop litigation strategies; and supporting the preparation of discovery and briefing materials.

SELECTED PUBLICATIONS / PRESENTATIONS

“Solution in Search of a Problem: Securitization Fails the Test for Financing Environmental Capex,” Public Utilities Fortnightly, December 2012.

PATENTS

Modular Hydrokinetic Turbine and Optimized Array (Patent No.: US 10,458,386 B2)

Drag Reduction Methodologies for Vertical Axis Hydrokinetic Turbine Blades and Structures (pending)



Imputed Debt Treatment - Other Jurisdictions

PNM Exhibit TMF-2

Is contained in the following 4 pages.

Jurisdiction	Imputed Debt Relief Sought by Utility	Commission Acknowledgement of Impact on Financial Integrity	Sources
California	<p>1) IOUs are allowed to use debt equivalency adders when evaluating PPAs against alternative bids, but not when comparing PPAs to self-build options.</p> <p>2) SoCal Edison requested the need for additional support to SCE's credit quality by increasing the amounts of common equity in SCE's capital structures, including Base ROE to support current PPAs as well as secure future PPAs at a reasonable cost. SCE has been downgraded in the past due to this Commission's failure to take debt equivalence into account when assessing the cost of capital.</p>	<p>1) IOUs could imputed 20% debt equivalency to a PPA as a bid evaluation tool, subject to the credit rating agencies view of debt equivalency as a risk.</p> <p>2) Debt equivalence should be considered along with other financial, regulatory and operational risks in setting a balanced capital structure and fair and reasonable ROE</p>	<p>1) CPUC Decision 07-12-052, December 20, 2007</p> <p>2) CPUC Decision 19-12-056, December 19, 2019</p>
Colorado	<p>1) Public Service Company of Colorado proposed regulatory capital structure in Rate Case proceedings percent due to the inclusion of short-term debt, capital leases, and imputed debt.</p> <p>2) Public Service proposed to for the inclusion of an imputed debt adder into the PPA bid evaluation processes</p> <p>3) There are potential adverse effects of securitization of assets PPA authorized in SB 19-236 could have implications on the Company's risk and financial profile in the future.</p>	<p>1) The Commission approved the requested regulatory capital structure of 56% in order to offset the debt equivalent value of existing purchased power agreements and to improve the Company's overall financial strength.</p> <p>2) Commission stated that placing an imputed debt adder would detract from other benefits of having a competitive supply market. The impact of imputed debt on the Company's financial health should be addressed in a revenue requirement/ ratemaking proceeding or an issue specific docket.</p> <p>3) State Legislature enacted SB 19-236 noting the benefit of a balance of utility ownership and third-party PPAs in achieving Colorado's clean energy targets. SB 19-236 stipulates that the Commission require a utility to own 50 percent of the energy and capacity associated with clean energy requirements with the remaining 50 percent owned by the IPPs.</p>	<p>1) Decision No. C05-0049 issued in Docket No. 04A-214</p> <p>2) Decision C08-0929, September 19, 2008</p> <p>3) SB 19-236 (Section 5 at 12), 2019</p>
Washington D.C.	<p>Pepco recommends the Commission implement an explicit cost recovery mechanism in its regulations where funds are collected from customers via surcharge to cover all costs, thereby minimizing the risk associated with the use of any utility funds in the PP A process</p>	<p>The Commission understands that PPAs could have an impact on Pepco's credit metrics. Additionally, the Commission views the PPA as a non-by passable component for billing purposes.</p> <p>To minimize the impact of the PPA on Pepco's balance sheet, the Commission adopted the 95/5 Model of cost recovery for the pilot program to procure renewable energy through a long-term power purchase agreement for a target quantity of five (5) percent of the Standard Offer Service load.</p>	<p>FC 1017- Order 20327, 2020</p>

Jurisdiction	Imputed Debt Relief Sought by Utility	Commission Acknowledgement of Impact on Financial Integrity	Sources
Delaware	Delmarva proposed a cost adjustment be added to each long-term bid for long-term supply contracts	Commission allowed an imputed debt offset to be calculated and used for sensitivity purposes equal to 30% of the NPV of capacity payments and that a portion of the energy price may also be included if Delmarva concludes that a portion of the bid's energy component would be imputed as debt by rating agencies in their assessment of Delmarva's creditworthiness.	Delaware Public Service Commission issued Order No. 7081, 2006
Florida	Common Equity ratios should include imputed debt for PPAs	<p>1) FPUC authorized Duke Energy Florida to continue making a specific adjustment to its common equity balance and rate base working capital balance for the purposes of calculation of rate base and the capitalization ratios used for surveillance reporting. This filing accounted for imputed debt at a 25% risk factor.</p> <p>2) FPUC determines FPL's overall cost of capital, and therefore its revenue requirements, based on FPL's regulatory adjusted equity ratio. The Commission mitigates the financial impact of imputed debt by increasing the utility's equity range based directly on S&P's methodology for calculating imputed debt.</p>	<p>1) Florida Public Service Commission, 2017</p> <p>2) Docket No. 990067-EI, Order No. PSC-99-0519-AS-EI, March 1999; Docket No. 050045-EI, Docket No. 050188-EI, Order No. PSC-05-0902-S-EI, September 2005</p>
Hawaii	A surcharge should be allowed to mitigate associated imputed debt or debt equivalence.	"All power purchase costs...shall be distributed among the entire customer base of such electric utility company through an adjustable surcharge, which shall be established by the public utilities commission	Act S.B. No. 2752 Section 269 Effective July 1, 2012
Indiana	<p>1) CenterPoint Indiana proposed to offset the negative effects of imputed debt by collecting a return on the amount of imputed equity as an adder to the PPA bids</p> <p>2) NIPSCO Indiana noted the impact PPAs could have on credit ratings, however did not monetize in terms of calculating LCOE for PPA Projects.</p>	<p>1) The Commission recognizes the potential risk that rating agencies may assess a debt equivalency on a utility that enters into a PPA, however Commission found it was appropriate to approve the proposed adder for debt equivalency</p> <p>2) The Commission has not made any statements or policy on how debt impacts related to PPAs should be handled.</p>	<p>1) Order Cause No. 45501, October 2021</p> <p>2) NIPSCO IRP Direct Testimony of Patrick Augustine, 2018</p>

Jurisdiction	Imputed Debt Relief Sought by Utility	Commission Acknowledgement of Impact on Financial Integrity	Sources
Michigan	<p>1) Detroit Edison Company proposed that the Commission use the annual cost reconciliation process to determine if debt has been imputed on its balance sheet by credit rating agencies and to what extent that imputed debt has affected the utility's credit rating and cost of service.</p> <p>2) Consumers proposed a Financial Compensation Mechanism (FCM) for any new PPA to offset imputed debt.</p>	<p>1) The Commission determined that Act 295 requires the Commission to consider potential issues of imputed debt and ultimately ordered that "[i]mputed debt cost shall be considered at the time of PPA approval." It further ordered "[t]he Detroit Edison Company shall submit requests for imputed debt-related cost recovery in a future general rate case proceeding. The company shall bear the burden of proof that the infusion of equity resulting from imputed debt is necessary</p> <p>2) The Company shall receive and recover in general electric rates an FCM on all new PPAs approved by the Commission. The Commission has the authority to consider the existence of an FCM in determining the overall cost of capital, including the appropriate capital structure and cost of equity, as it relates to imputed debt. The Company will provide bidding parties with information necessary to calculate the price impact of the FCM on a submitted bid. Additionally, new capacity that Consumers intends to procure shall be through a competitive bidding process and 50% will be from PPAs and 50% will be owned by the Company. The Company, at its sole discretion, may choose to acquire more than 50% of its new capacity from PPAs.</p>	<p>1) Case No 15806-0150, June 2, 2009; Case No 15806-0265, Sept 14, 2010; 2008 Act 295, Section 37(a)</p> <p>2) Case U-20165; Settlement Agreement; 2019</p>
Nevada	<p>A utility provider may propose an amount to be added to the cost of the contract which is equal to a compensating component in the capital structure of the utility provider.</p>	<p>If the Commission approves a request submitted pursuant to subsection 1:</p> <p>(a) The Commission will set forth in its order approving the request the impact of imputed debt on the capital structure of the utility provider measured as a percentage of the net present value of the capacity payments over the life of the contract;</p> <p>(b) The costs, if any, determined by the Commission as necessary to mitigate imputed debt costs will be collected with other contract costs as a component of the base tariff energy rate; and</p> <p>(c) The utility provider shall segregate imputed debt revenues from deferred energy revenues and record such revenues as general rate revenues in general rate cases.</p> <p>To date, there are no known NV electric utilities that impute debt for PPAs.</p>	<p>NRS 704.7821(7) (b), issued pursuant to Assembly Bill No. 3, passed June 2005.; NAC 704.88875 (Added to NAC by Pub. Utilities Comm'n by R167-05, eff. 2-23-2006; A by R064-10, 10-15-2010)</p>

Jurisdiction	Imputed Debt Relief Sought by Utility	Commission Acknowledgement of Impact on Financial Integrity	Sources
Oregon	<p>1) Idaho Power proposed an adder on RFP price scores to account for imputed debt costs, noting that financial commitments such as PPAs could result in a downgrade in its credit rating, making its access to capital more difficult.</p> <p>2) During the RFP evaluation process, Portland General Electric proposed an Imputed debt adder based on rating agency methodology to allow for a fair risk assessment of bids. The imputed debt adder's inclusion is addressing the discrepancy and allows for a fairer comparison between both PPAs and utility-owed resources.</p>	<p>1) Order was established to exclude for Idaho Power's RFP any provision applying cost of imputed debt to the price scores of any bid, however Idaho Power may provide additional informational model runs.</p> <p>2) Final Order not yet established; however an adder for Imputed Debt has not been considered in past Oregon RFPs.</p> <p>3) Consideration of ratings agency debt imputation should be reserved for the selection of the final bids from the initial shortlist of bids. The Commission may require the utility to obtain an advisory opinion from a ratings agency to substantiate the utility's analysis and final decision.</p>	<p>1) Order No 23-260; Docket UM 2255</p> <p>2) UM 2274; June 28, 2023</p> <p>3) UM 1182, Competitive Bidding Guidelines, Order No 14-149 - Section 9 (C) , April 30, 2014</p>
Wisconsin	<p>Wisconsin Public Service Corp proposed to add new equity to offset imputed debt from PPAs and operating leases.</p>	<p>The Commission recognizes that off-balance-sheet obligations (OBO) affect the financial risks and credit ratings of the utility and includes imputed debt associated with OBO in calculating the financial capital structure. The Commission is not obligated to adopt the risk assessment of an outside rating agency and will independently examine off balance sheet obligations, based on its assessment of risk.</p>	<p>Docket 6690-UR-122, 2013; Docket 6690-UR-126 – Final Decision, 2019</p>

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF PUBLIC SERVICE)	
COMPANY OF NEW MEXICO’S APPLICATION)	
FOR APPROVAL OF PURCHASED POWER)	
AGREEMENTS, ENERGY STORAGE)	
AGREEMENTS, AND CERTIFICATES OF PUBLIC)	
CONVENIENCE AND NECESSITY FOR SYSTEM)	Case No. 23-00xxx-UT
RESOURCES IN 2026,)	
)	
PUBLIC SERVICE COMPANY OF NEW MEXICO,)	
)	
Applicant)	
_____)	

SELF AFFIRMATION

THOMAS M. FELDMAN, Director at Atrium Economics, LLC (“Atrium”) upon penalty of perjury under the laws of the State of New Mexico, affirm and state: I have read the foregoing **Direct Testimony of Thomas M. Feldman** and it is true and accurate based on my own personal knowledge and belief.

Dated this 25th day of October, 2023.

/s/Thomas M. Feldman _____
THOMAS M. FELDMAN