

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

IN THE MATTER OF THE APPLICATION)
OF PUBLIC SERVICE COMPANY OF)
NEW MEXICO FOR APPROVAL TO)
ABANDON SAN JUAN GENERATING)
STATION UNITS 2 AND 3, ISSUANCE OF)
CERTIFICATES OF PUBLIC)
CONVENIENCE AND NECESSITY FOR)
REPLACEMENT POWER RESOURCES,)
ISSUANCE OF ACCOUNTING ORDERS)
AND DETERMINATION OF RELATED)
RATEMAKING PRINCIPLES AND)
TREATMENT,)
)
PUBLIC SERVICE COMPANY OF NEW)
MEXICO,)
)
Applicant)

CASE 13-00390-UT

**Surrebuttal Testimony and Exhibit
in Opposition to the Stipulation
of
Jeremy I. Fisher, PhD**

**On Behalf of
New Energy Economy**

December 29, 2014

Table of Contents

1. Introduction and Purpose of Testimony	1
2. The Most Cost Effective Resource Portfolio Does Not Include San Juan Plant.....	4
3. The Valuation of San Juan is Independent of the Cost of Palo Verde	11
4. The Valuation of San Juan is Independent of Other Stipulation Terms.....	14
5. Revised Results from NMIEC Demonstrate San Juan Liability	19
6. PNM Provides Insufficient Evidence to Reject Additional Wind.....	21
7. Carbon Price, End Effects, and Long-Term Assessment	23
8. PNM Failed to Perform Reasonable Least Cost Planning.....	30
9. Conclusions and Recommendations	34

Table of Figures

Figure 1. Implied value of San Juan 1 & 4 in O’Connell testimony over time, with O’Connell Stipulation elements, and removed.	5
Figure 2. Value of Revised SIP and Four Unit Shutdown, and O’Connell <i>post-hoc</i> changes. Million 2013\$.....	7
Figure 3. Benefit of 63 MW of incremental capacity at San Juan 4 according to NMIEC runs BAI-1 and BAI-2 in Direct Testimony (Aug 29) and Rebuttal Testimony (Dec 19) of NMIEC witness James Dauphinas.	20
Figure 4. Value of San Juan Plant from (erroneous) October 31 st Strategist runs, and Synapse modified case with corrected coal price.	26

1 **1. INTRODUCTION AND PURPOSE OF TESTIMONY**

2 **Q Please state your name, business address, and position.**

3 **A** My name is Jeremy Fisher. I am a Principal Associate with Synapse Energy
4 Economics, Inc. (“Synapse”).

5 **Q Are you the same Jeremy Fisher who submitted direct testimony in this**
6 **docket on August 29, 2014, and direct testimony in opposition to the**
7 **stipulation on November 25, 2014?**

8 **A** Yes, I am.

9 **Q Please describe the purpose of your testimony.**

10 **A** My surrebuttal testimony addresses the rebuttal testimony of Mr. Patrick
11 O’Connell, PNM’s (“the Company’s”) Director of Planning and Resources, and
12 draws conclusions from evidence provided by Mr. James Dauphinas, witness for
13 New Mexico Industrial Energy Consumers (NMIEC). In particular, I address Mr.
14 O’Connell’s characterization of costs and benefits for maintaining versus retiring
15 San Juan plant, evaluate NMIEC’s findings on the incremental capacity addition
16 at San Juan, address several PNM critiques of my testimony, and compare PNM’s
17 findings against the IRP standard relied upon by the Company in this case.

18 Because this testimony is provided only one week (and four work days) after I
19 received the Company’s rebuttal testimony, it necessarily focuses only on key
20 elements of the Company’s re-analysis. My silence on various issues raised by the

1 Company in rebuttal does not necessarily indicate my agreement with the
2 Company's critique.

3 **Q Please state your conclusions in this case.**

4 **A** This Commission should reject the Company's application to acquire additional
5 capacity at San Juan 4, should reject the Company's petition to install emissions
6 controls at San Juan 1 and 4, and require the Company to construct a plan to
7 divest from and/or retire the remaining assets at San Juan generating station.

8 **Q Were you provided all of the information that you would require to evaluate
9 the Company's rebuttal in support of their stipulation?**

10 **A** No. The Company ran Strategist with substantively new inputs, and I have not
11 been provided the Company's new model runs in the interim period. Therefore,
12 my surrebuttal here is responsive to Mr. O'Connell's written testimony and
13 exhibits only, and does not have the benefit of review of Mr. O'Connell's
14 formulae, equations, and other methodology used to derive his exhibits, as would
15 have been proper,¹ particularly given the extremely short response period
16 provided in this fact-finding case.

17 **Q What was the substantive change made by the Company?**

18 **A** In Mr. O'Connell's rebuttal testimony, he states that I had "correctly identified
19 [an] error in the base fuel calculation used in Strategist, [where] the source of the

¹ 1.2.2.35 NMAC §J. "Exhibits: (1) Use of data in exhibits (a)When supporting exhibits consist of tables of data or graphs, all formulae, equations, or other methodology used to derive the data shall be included as part of the supporting exhibit. (b) If data used in supporting exhibits are derived from or supported by complex computerized analyses, working copies of the computer models may be included on a diskette compatible with the commission's current computer capabilities, in lieu of printed material."

1 error is an incorrect cell reference in a spreadsheet that PNM used to calculate
2 base fuel for the cases where SJGS Units 2 and 3 are retired. The result of the
3 error is an under-estimation of the base fuel cost for these cases.”² Mr. O’Connell
4 does not state it directly, but this change in his modeling reduces PNM’s
5 estimated benefit of maintaining San Juan plant (vs. retiring all four units) by 74%
6 - from \$334 million³ to \$88 million.⁴ This change does not only impact the
7 relative difference between the portfolios, but also increases the absolute cost of
8 the portfolios by a sizable fraction.

9 **Q Were you provided the corrected base fuel costs after PNM discovered the**
10 **error?**

11 **A** No.

12 **Q Were other parties provided the corrected base fuel costs after PNM**
13 **discovered their error?**

14 **A** Yes. New Mexico Industrial Energy Consumers (NMIEC) witness Mr. James
15 Dauphinais submitted rebuttal testimony in parallel with PNM, and discusses that
16 prior to December 19, 2014, “the Company informally provided an updated base
17 coal cost estimate to [NMIEC].”

² Rebuttal Testimony of Patrick O’Connell, page 11, line 20 to page 12 line 3.

³ See Direct Testimony of Patrick O’Connell in Support of Stipulation, Table PJO-2, Portfolio 3 minus Portfolio 1.

⁴ See Rebuttal Testimony of Patrick O’Connell in Support of Stipulation, Table PJO-1, Portfolio 3 minus Portfolio 1.

1 **2. THE MOST COST EFFECTIVE RESOURCE PORTFOLIO DOES NOT INCLUDE SAN**
2 **JUAN PLANT**

3 **Q What is the value that Mr. O’Connell assigns to retaining San Juan plant**
4 **over retiring units 1 & 4?**

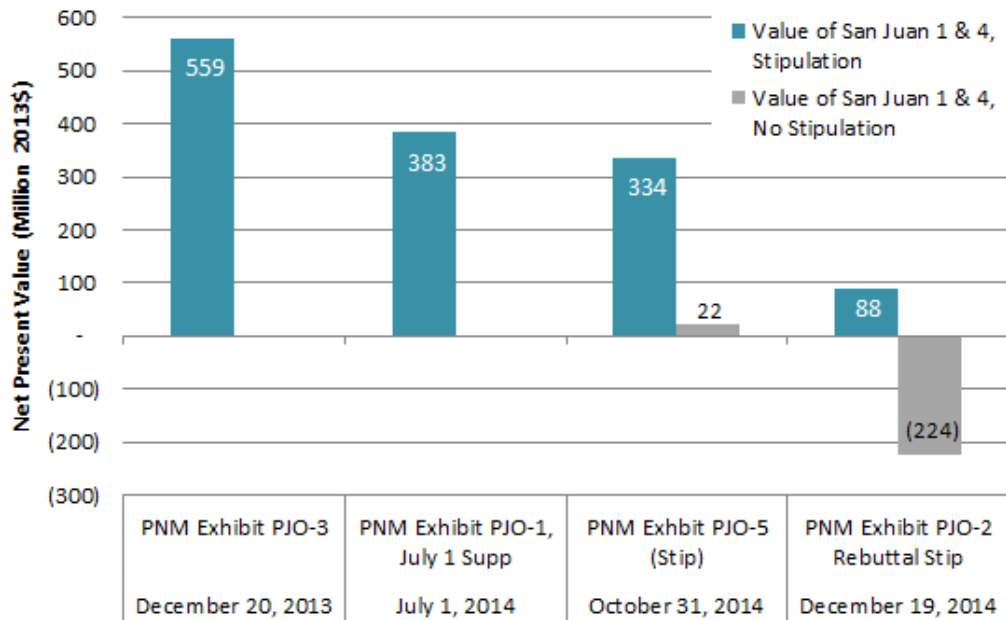
5 **A** In this latest round of testimony, Mr. O’Connell assigns a value of \$88 million to
6 retaining San Juan Generating Station (SGJS) 1 & 4 and acquiring an additional
7 132 MW share of SJGS 4. This is shown in Table PJO-3, where he compares the
8 cost of the stipulation portfolio (at \$7,589 million) against the 4-unit shutdown
9 scenario (at \$7,676 million). Before delving into the problems with this
10 assessment, it is worth noting that this value has dropped markedly in each of the
11 Company’s subsequent rounds of testimony, supplemental testimony, stipulation
12 and rebuttal. The initial application a year ago implied a value of \$559 million.⁵
13 This rebuttal testimony now shows a value of \$88 million, although as I will
14 discuss in a moment, Mr. O’Connell has performed significant manipulations to
15 arrive at a value above zero.

16 Figure 1 below shows the evolution of the value of San Juan 1 & 4 through each
17 subsequent round of testimony; the last two columns show both Mr. O’Connell’s
18 implied value with the stipulation, and with the stipulation elements removed.

⁵ PNM Exhibit PJO-3, 1st and 4th column.

1
2

Figure 1. Implied value of San Juan 1 & 4 in O’Connell testimony over time, with O’Connell Stipulation elements, and removed.



3
4

5 I believe that the Company knows that San Juan is a liability today, and has
6 adequately demonstrated this in Mr. O’Connell’s most recent testimony.

7 **Q Doesn’t Mr. O’Connell demonstrate an \$88 million value for maintaining
8 and investing in SJGS 1 & 4 in rebuttal testimony?**

9 **A** No. Mr. O’Connell confounds intrinsic value and stipulated costs. His testimony
10 shows that if we are willing to accept a series of constructed manipulations then
11 San Juan has bare minimum value. If we remove Mr. O’Connell’s *post-hoc*
12 adjustments, we see that the intrinsic value of San Juan is a customer liability of -
13 \$224 million, not a benefit. And the concessions offered by PNM in stipulation do
14 not negate, or even significantly mitigate, this liability.

1 **Q** Please explain why Mr. O’Connell’s testimony shows that San Juan is a
2 **significant customer liability.**

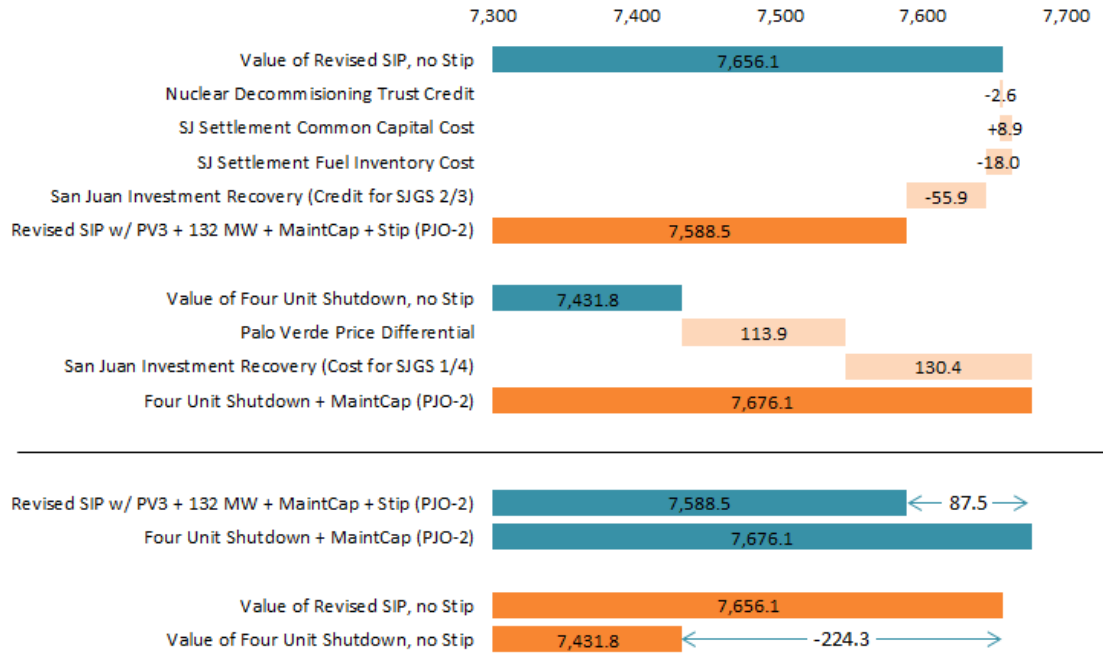
3 **A** Let us assume, for a moment, that PNM could command full recovery of the net
4 book value of San Juan regardless of if the plant is maintained or retired. The
5 intrinsic value of San Juan to ratepayers is the value at which, all else held equal,
6 ratepayers would be indifferent to retaining or replacing the power plant. At the
7 moment, the Company’s analysis actually shows that, all else held equal, San
8 Juan is far less cost effective than replacement resources, by approximately \$224
9 million.

10 Mr. O’Connell has attempted to contort this intrinsic value by claiming that other
11 negotiated positions within the settlement, such as the Company’s offer price for
12 Palo Verde or the pressure to split, rather than recover in full, stranded costs at
13 San Juan 2 and 3, offer a value to maintaining San Juan 1 and 4. He not only
14 credits San Juan 1 and 4 with established settlement positions, he goes further and
15 double counts a penalty against ratepayers should San Juan 1 and 4 be retired.

16 Mr. O’Connell’s results, his *post-hoc* changes, and the actual results of an apples-
17 to-apples comparison is shown in Figure 2, below.

1
2

Figure 2. Value of Revised SIP and Four Unit Shutdown, and O’Connell *post-hoc* changes. Million 2013\$.



3

4

5

6

7

8

9

10

11

12

Mr. O’Connell presents the value of the revised SIP plan at \$7,588.5 million, and the value of the four unit retirement at \$7,676.1 million, the difference being the \$87.5 million previously discussed. However, tied into these values are settlement positions, and an explicit double-counting of ratepayer penalties which Mr. O’Connell credits to the value of San Juan 1 and 4. Removing the stipulation credits from the revised SIP (for reasons I’ll explain below) brings the cost of the revised SIP plan up to \$7,656.1 million. Conversely, settlement-based removing penalties ascribed to the four unit shutdown case reduces the cost of this option to \$7,431.8 million, indicating a value for San Juan 1 and 4 of -\$224.3 million.

1 **Q Have you manipulated the cost of the revised SIP and the four-unit shutdown**
2 **scenario?**

3 **A** No. While I haven't had access to the Company's model as of yet, I believe that I
4 am actually showing the model-based revised SIP values and the model-based
5 four-unit shutdown scenario with an apples-to-apples cost of Palo Verde, having
6 subtracted out Mr. O'Connell's *post-hoc* changes. I believe that the manipulations
7 are Mr. O'Connell's.

8 Overall, Mr. O'Connell changes the results by \$312 million – or well in excess of
9 the \$88 million apparent benefit of San Juan plant. In reality, Mr. O'Connell
10 should have testified that an honest valuation of San Juan 1 and 4 finds that
11 retiring these units saves ratepayers about \$224 million relative to the Company's
12 preferred portfolio.

13 **Q Please explain the post-hoc additions that you believe have been added into**
14 **the Strategist model results by PNM.**

15 **A** The fact that Mr. O'Connell's changes are *post-hoc* additions to the Strategist
16 outcomes is never discussed by Mr. O'Connell, but is recognized by NMIEC
17 witness Mr. Dauphinais.⁶ These additions include an investment recovery credit,⁷
18 a fuel inventory cost credit,⁸ a common capital cost penalty,⁹ and a nuclear

⁶ See notes in NMIEC Exhibit JRD-1 Rebuttal. "The NPV results below do not include San Juan Investment Recovery (SJ 2 and 3 sunk cost recovery), SJ Settlement Fuel Inventory Cost and SJ Settlement Common Capital Cost."

⁷ PNM Exhibit PJO-2 Rebuttal Stip, Column A, line 11.

⁸ PNM Exhibit PJO-2 Rebuttal Stip, Column A, line 12.

⁹ PNM Exhibit PJO-2 Rebuttal Stip, Column A, line 13.

1 decommissioning trust credit.¹⁰ Adding these credits back into Mr. O’Connell’s
2 results indicates that the value of the Revised SIP without the stipulation elements
3 is \$7,656 million – or \$68 million higher than Mr. O’Connell shows in testimony.
4 Without having yet seen the model results, I would hypothesize that Strategist
5 roughly estimates the cost of the Revised SIP at this cost.

6 Mr. O’Connell also adds costs back to the cost of retiring all four San Juan costs
7 above and beyond those which would have been estimated by Strategist. First, he
8 adds a \$130 million stranded asset cost to the run.¹¹ Later, I will explain why this
9 cost is not only inappropriate, but blatant double counting. Mr. O’Connell also
10 uses the higher price for the unrelated Palo Verde 3 purchase at \$2,500/kW in the
11 retirement scenario, a serious manipulation of the value of San Juan plant. This
12 price differential is worth another \$114 million artificially added into this
13 scenario.¹² Without Mr. O’Connell’s *post-hoc changes*, the four unit shutdown
14 scenario should have amounted to a cost of about \$7,431 million – or \$244
15 million less than Mr. O’Connell shows in testimony.

16 **Q Can you explain in straightforward terms the game the Company is playing**
17 **by confounding the stipulation terms and absolute value?**

18 **A** Yes. I’ll beg the Commission’s patience in simplifying a fairly complicated deal
19 to a simplified storyline. Based on the fairly astounding story Mr. O’Connell has
20 attempted to weave, I think that it merits a straightforward distillation.

¹⁰ PNM Exhibit PJO-2 Rebuttal Stip, Column A, line 14.

¹¹ PNM Exhibit PJO-2 Rebuttal Stip, Column D, line 11.

¹² PNM Exhibit PJO-2 Rebuttal Stip, Columns A and D, line 8. $(\$2,500/\text{kW} - 1,650/\text{kW}) * 134,000 \text{ kW} = \113.9 million

1 Putting aside for a moment the fact that the power stations under consideration
2 produce energy and consume commodities and capital, we can think of them in
3 purely financial terms for a moment.

4 San Juan plant produces power and services that have a quantifiable market value,
5 but it also consumes fuel and O&M expenses, and requires retrofits and upgrades
6 on a regular basis for operational and regulatory purposes. The Company's model
7 shows that, relative to all of the other options available, ratepayers can procure the
8 same power and services as San Juan from other sources at a lower cost. We
9 typically interpret this as meaning that San Juan is not part of a least cost
10 portfolio. Every year that San Juan operates, ratepayers lose the opportunity to
11 acquire lower cost (and lower environmental impact) energy.

12 In this application for CCN, the Company's ratepayers have asked this
13 Commission to allow them to acquire even more of this burdensome plant (for
14 reasons that have ceased to be clear). Regardless, PNM's shareholders still have a
15 lot at stake in maintaining San Juan 1 & 4, primarily because they still have
16 outstanding net book value at these units, and the potential not to recover stranded
17 assets is a substantial risk for PNM's shareholders.

18 Ignoring for a moment any other elements of the stipulation, PNM's ratepayers
19 would be better off by about \$224 million if they didn't have to carry San Juan 1
20 & 4, and instead opted for a lower cost portfolio. Because it does not consider
21 sunk costs, this value implicitly assumes that PNM is granted full recovery of the
22 remaining book value at San Juan. In other words, PNM could shutter their

1 obligation at San Juan, continue to recover sunk costs, and PNM’s ratepayers
2 would still be on better ground.

3 Now, from a financial perspective, PNM’s ratepayers would be indifferent to the
4 continuation of San Juan 1 & 4 if PNM’s shareholders were willing to pick up the
5 losses – i.e. transfer \$224 million to PNM’s ratepayers. PNM’s shareholders have
6 offered no such deal. Instead, Mr. O’Connell has argued that the other elements of
7 the stipulation should be treated as a cash transfer, more than outweighing the
8 losses of retaining San Juan 1 & 4.

9 In this light, I think it is worth examining each of the elements that Mr. O’Connell
10 adds back into the equation to see if they should be treated as a cash transfer. The
11 specific elements that I discuss are shown in Figure 2.

12 **3. THE VALUATION OF SAN JUAN IS INDEPENDENT OF THE COST OF PALO VERDE**

13 **Q Should the price difference at Palo Verde from the Company’s requested**
14 **\$2,500/kW to the stipulated value of \$1,650/kW be regarded as a cash**
15 **transfer favorable towards the continuation of San Juan?**

16 **A** No, not at all. First, the value or price of Palo Verde has little to nothing to do
17 with the value of San Juan; San Juan should be evaluated with the price of Palo
18 Verde held constant at either \$1,650/kW or \$2,500/kW, or frankly any other value
19 – as long as it is consistent between runs. Secondly, the Company’s aspirational
20 cost of \$2,500/kW is a red herring and should not be seen as the “default value”
21 for San Juan.

1 **Q Why is the value of \$2,500/kW at Palo Verde a “red herring?”**

2 **A** At \$2,500/kW, ratepayers would not have opted to take Palo Verde 3. This value
3 was, and remains, a non-starter, as demonstrated fairly decisively by NMIEC in
4 direct testimony in August.¹³ But just because PNM’s shareholders are willing to
5 shed Palo Verde 3 at a lower cost than \$2,500/kW doesn’t actually mean that
6 ratepayers are netting that benefit. Ratepayers don’t need to buy Palo Verde 3. As
7 NMIEC showed in August, there are alternatives available to ratepayers below the
8 cost of Palo Verde 3 at \$2,500/kW.

9 To make the case *ad absurdum*, PNM could have valued its own share of Palo
10 Verde 3 at \$10,000/kW, but this doesn’t mean that it’s a reasonable alternative or
11 PNM could actually command that price. But if PNM had written that they
12 desired a cost of \$5,036/kW (Mr. Reed’s upper value)¹⁴ and that all cases aside
13 from the stipulation should be viewed through the lens of a \$5,036/kW Palo
14 Verde purchase, then all of PNM’s other cases, aside from the stipulation, would
15 be devalued by \$454 million,¹⁵ despite the fact that no reasonable party would
16 consider obtaining Palo Verde at this extraordinary price. In the case advocated
17 by Mr. O’Connell, PNM is doing exactly that, but at an only slightly less absurd
18 scale, devaluing alternatives to the stipulation by \$114 million.

¹³ Direct Testimony of James Dauphinas (NMIEC, August 31, 2014), page 7 lines 12-17. “The analysis also shows that **134 MW of Palo Verde 3 capacity valued at \$2,500 per kW is not part of the most cost effective replacement power portfolio** for San Juan 2 and San Juan 3 as it would be outperformed by 100 MW of photovoltaic solar capacity as demonstrated by our Strategist® analysis of PNM’s Recommended Replacement Power Portfolio versus Portfolio BAI-2.” (emphasis added)

¹⁴ Rebuttal Testimony of John Reed, page 3 line 11.

¹⁵ $(\$5,036/\text{kW} - \$1,650/\text{kW}) * 134,000 \text{ kW} = \$ 453,724,000.$

1 Again, to me it does not matter if the cases used to value San Juan use a Palo
2 Verde price of \$2,500/kW or \$1,650/kW or even \$5,035/kW– as long as this
3 value is held constant between cases. I’ll note, however, that the best customer
4 PNM’s shareholders have been able to find are PNM’s customers – and at the
5 moment they’re only willing to pay \$1,650/kW, which would appear to re-define
6 the market price. I suspect that PNM would be hard pressed to find a buyer
7 willing to acquire Palo Verde for more than has now been offered to PNM’s
8 ratepayers.

9 **Q In his rebuttal testimony on page 24, Mr. O’Connell states that Mr. David**
10 **Van Winkle’s “opposition to [the] inclusion of Palo Verde 3 undermines Dr.**
11 **Fisher’s conclusion that SJGS is uneconomic because Dr. Fisher’s conclusion**
12 **relies upon inclusion of Palo Verde Unit 3 in rate base at the Stipulation**
13 **valuation.” Is he correct?**

14 **A** No. Again, Mr. O’Connell has confused the absolute value of San Juan with the
15 Company’s stipulated value. Mr. O’Connell would have this Commission believe
16 that somehow, the value of San Juan is, or should be, tied to the value of Palo
17 Verde. My rebuttal testimony clearly focuses on the valuation of San Juan 4 and
18 San Juan plant, not Palo Verde. My only contention is that when evaluating if San
19 Juan has value to PNM’s customers, the cost of acquiring Palo Verde should be
20 held constant.

21 The price of Palo Verde stands alone from the economic value of San Juan and
22 should therefore be held constant in the valuation of San Juan. Without the

1 manipulation applied to the cost of Palo Verde alone, San Juan 1 & 4's apparent
2 benefit shrinks past zero to a liability of -\$26 million.¹⁶

3 **4. THE VALUATION OF SAN JUAN IS INDEPENDENT OF OTHER STIPULATION**

4 **TERMS**

5 **Q Should the San Juan Investment Recovery “benefit” in the stipulation case**
6 **be regarded as a cash transfer favorable towards the continuation of San**
7 **Juan?**

8 **A** No. Mr. O’Connell’s calculation of the benefit of San Juan includes an alleged
9 benefit to ratepayers in the form of the San Juan Investment Recovery, for \$55.9
10 million.¹⁷ Mr. O’Connell casts the \$55.9 million as a cash transfer to ratepayers
11 that they would otherwise not be entitled should the stipulation not be accepted.
12 This, again, is absurd.

13 The \$55.9 million “San Juan Investment Recovery” line item represents the 50%
14 split in stranded asset costs with customers, a cost that PNM previously asked
15 customers to bear in full. The reason that this split is “credited” to ratepayers is
16 because the Strategist model has not been configured to track remaining book
17 value or stranded investments. The model, by default, assumes that PNM recovers
18 all stranded investments. Mr. O’Connell presumably adds this credit into the
19 calculation because the stipulation varies from this default assumption: ratepayers
20 only pay 50% of stranded investments at San Juan 2 and 3 in the stipulation.

¹⁶ \$88million minus \$114 million = \$26 million. Rounded.

¹⁷ See PNM Exhibit PJO-2 Rebuttal Stip, column A line 11.

1 The problem with using this 50% split as a credit towards PNM is that the
2 Company does not have the ability to command full recovery of stranded costs.
3 This is left to the discretion of the New Mexico commission. As PNM and this
4 Commission are assuredly aware, the Company bears no presumption of the
5 recovery of stranded investments for assets that are neither used nor useful (i.e.
6 San Juan 2 & 3 after retirement). Stranded costs are an issue for ratemaking, not
7 forward modeling and ratepayer valuation. While the Company's going-in
8 position is that ratepayers should bear 100% of all stranded costs, ratepayers
9 going-in position should be that the Company bears 100% of all stranded costs.
10 The negotiated position, at a 50-50 split, represents the settled equilibrium
11 amongst stipulating parties, with shareholders and ratepayers both putting cash on
12 the table.

13 There is no particular reason to believe that this Commission would grant 100%
14 recovery of stranded investments to PNM, *a priori*. It is therefore unreasonable to
15 assess the Company's negotiated position as a cash transfer to ratepayers. It could
16 equally be portrayed as a 50% loss by ratepayers because the Company is not
17 accepting 100% of the responsibility for sunk costs.

18 The \$55.9 million benefit postulated by Mr. O'Connell should be rejected as part
19 of the assessment of the value of San Juan 1 and 4. Just as the value of San Juan
20 stands alone from the price of Palo Verde, the value (or lack thereof) from any
21 stipulation elements should be disconnected from the decision to retrofit or
22 replace San Juan 1 and 4.

1 **Q** **Should the San Juan Investment Recovery “penalty” in the retirement case**
2 **be considered in the valuation of San Juan 1 and 4?**

3 **A** No. Of all of the costs added in by Mr. O’Connell, the *post hoc* penalty he applies
4 to the four unit shutdown scenario is by far the most egregious.

5 Mr. O’Connell includes as a benefit to retaining San Juan plant the avoided
6 ratepayer cost of paying PNM’s stranded investment in SJGS 1 & 4, assessed at
7 \$130.4 million.¹⁸

8 **Q** **What is the basis of the \$130.4 million cost included by PNM as a cost for**
9 **retiring San Juan 1 & 4?**

10 **A** This cost appears to be the manifestation of Mr. O’Connell’s view that, should
11 San Juan 1 and 4 be shut down, “PNM would be allowed recovery of the \$361
12 million undepreciated investment in the plant.”¹⁹ Assuming that this cost is not
13 included in error, it represents the view that the New Mexico Commission would
14 assuredly grant full recovery of costs, and that any deviation represents a cash
15 transfer by PNM shareholders to ratepayers.

16 **A** However, this cost is included in error – or blatant double counting. Regardless of
17 the Commission’s disposition on stranded investments, including this cost
18 actually has PNM collecting their stranded investment twice.

¹⁸ See PNM Exhibit PJO-2 Rebuttal Stip, column D line 11.

¹⁹ Rebuttal Testimony of Mr. Patrick O’Connell, page 15 lines 16-17.

1 **Q How is including \$130.4 million for stranded investments with the retirement**
2 **of San Juan 1 and 4 double counting?**

3 **A** Strategist, the model used by PNM in this case, is a forward-looking model. A
4 basic precept of forward modeling is that the treatment of stranded investments is
5 a ratemaking issue, and not a forward cost.²⁰ In excluding sunk costs from the
6 forward-looking model, we actually implicitly assume (for the purposes of
7 modeling) that utilities recover all stranded investments. Models typically assume
8 that ratepayers are not impacted at all by retiring investments, which implies that
9 ratepayers continue to pay depreciation and the return on investments as in the
10 base year. To model otherwise would require explicit line-item ratepayer
11 compensation or adjustment, crediting ratepayers with avoided depreciation and
12 investment costs. PNM's Strategist model includes no such crediting
13 mechanism.²¹

14 Mr. O'Connell testifies that I "assume zero recovery of the undepreciated
15 investment in the plant," and that I "unreasonably assume total denial of recovery
16 of undepreciated investment in [my] testimony."²² He is incorrect in this
17 statement, and his contention is in direct conflict with the addition of a ratepayer
18 benefit when the Company splits stranded investments with ratepayers.

19 When Mr. O'Connell adds a penalty to ratepayers to compensate PNM
20 shareholders for stranded investments at San Juan, he is not only assuming that

²⁰ Existing book values represent sunk costs, which are, by definition, sunk. Since the recovery, or non-recovery, of sunk costs is a ratemaking decision at the discretion of the Commission, forward-looking models typically exclude these costs.

²¹ In fact, because Strategist includes no such crediting mechanism, PNM adds in an external credit in the stipulation case when costs at SJGS 2 & 3 are split with shareholders, to the tune of \$55.9 million.

²² Rebuttal Testimony of Patrick O'Connell, page 15 lines 9-18.

1 ratepayers are on the hook for sunk costs, but also double-charging them for sunk
2 costs. This is an error and/or misrepresentation. Therefore, the \$130 million
3 penalty should be eliminated from consideration.

4 **Q If the negotiated price of Palo Verde 3, the sharing of stranded costs at SJGS**
5 **2 & 3, and the double-counted penalty of retiring SJGS 1 & 4 are not valid**
6 **“cash transfers” to make ratepayers whole for retaining San Juan, which**
7 **costs, if any, are?**

8 **A** I’m not sure that there are any real “cash transfers” offered by PNM in this case
9 that make the retention of San Juan any more attractive. Of the stipulation
10 elements that represent relative benefits for ratepayers, I believe that the price of
11 Palo Verde 3 (§17) and the sharing of stranded costs (§18), are fully unrelated to
12 the economic value of San Juan plant. The elements that remain (§25, 29, 30) all
13 represent ratepayer credits that, if contested before this Commission, could
14 reasonably be attributed to ratepayers. The stipulation simply removes these
15 elements from a contested proceeding, but does not actually represent a net
16 savings to ratepayers over a status quo.²³

²³ As an analog, if I hit a pedestrian with my car and offer to pay medical expenses in lieu of a lawsuit, that doesn’t represent a gift on my part – it’s simply avoiding a litigious outcome

1 **5. REVISED RESULTS FROM NMIEC DEMONSTRATE SAN JUAN LIABILITY**

2 **Q What did NMIEC find in rebuttal testimony supporting the stipulation with**
3 **regards to San Juan?**

4 **A** Mr. James Dauphinas submitted testimony amending Strategist runs based on the
5 coal price error that I identified and Mr. O’Connell subsequently corrected. Mr.
6 Dauphinas’ original direct testimony (from August 29, 2014) re-optimized the
7 PNM portfolio, and found that the incremental addition of San Juan 4 was, at the
8 time, an optimal choice. The most recent testimony offered by NMIEC does not
9 re-optimize PNM’s portfolio in light of the higher coal costs, but re-prices the
10 portfolios. Importantly, in both the August direct testimony and in this rebuttal
11 testimony, NMIEC tests two different portfolios with incremental amounts of San
12 Juan 4 taken (134 MW in BAI-2, and 197 MW in BAI-1). While the Company is
13 not proposing to take 197 MW any longer, the difference between these runs are
14 illustrative of the costs of San Juan plant to ratepayers.

15 In the August 29th testimony, Mr. Dauphinas found that with no wholesale
16 market transactions, taking 63 incremental MW at San Juan 4 was beneficial by
17 about \$9.4 million,²⁴ (or a value of \$150/kW). With market transactions, however,
18 incremental capacity at San Juan was a liability of \$35.7 million,²⁵ (or \$567/kW).

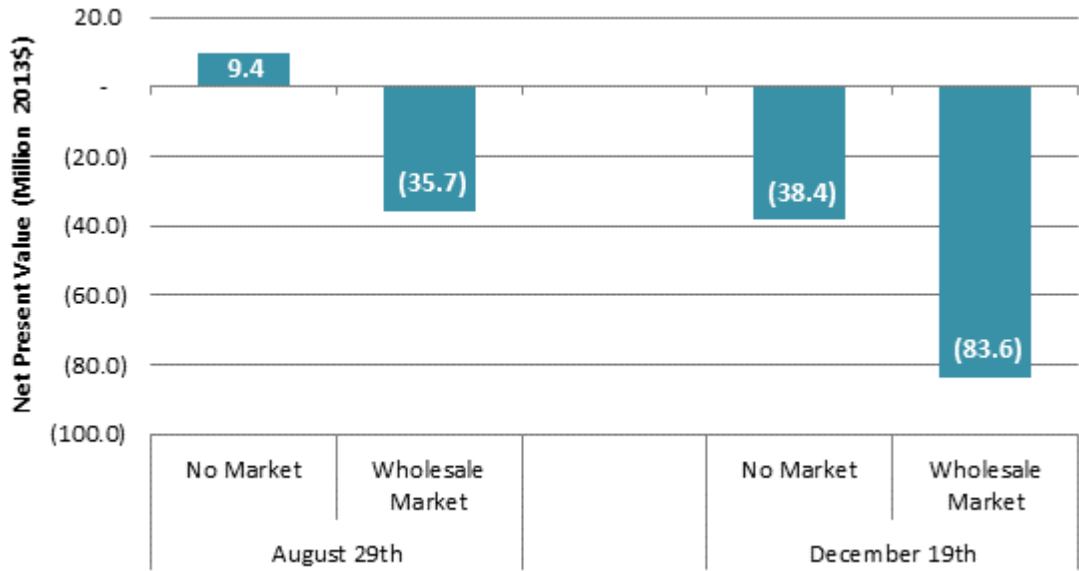
19 Now that Mr. Dauphinas has implemented PNM’s corrected coal costs, he again
20 published the cost of these two runs. Now, runs with both the market and without

²⁴ See NMIEC Exhibit JRD-1, also NMIEC response to Data Request NEE 2-6, attached as Exhibit JIF-1S. Please note that response to DR NEE 2-6 indicates benefits in billions, rather than millions. I assume this is a scrivener’s error.

²⁵ *ibid*

1 the market indicate that taking an incremental 63 MW at San Juan 4 is a liability,
 2 and the magnitude of the liability has increased substantially, as shown in Figure
 3 3, below to \$38.4 million (without the market) and \$83.6 million (with the
 4 market), or \$1,327/kW.

5 **Figure 3. Benefit of 63 MW of incremental capacity at San Juan 4 according to**
 6 **NMIEC runs BAI-1 and BAI-2 in Direct Testimony (Aug 29) and Rebuttal**
 7 **Testimony (Dec 19) of NMIEC witness James Dauphinas.**



8
 9 Unfortunately, NMIEC did not choose to again optimize the PNM portfolio with
 10 these new coal costs, but I assume that to the extent the large fixed coal costs
 11 would have been avoidable, the NMIEC scenarios would have avoided any
 12 incremental capacity at San Juan, or avoided the plant entirely.

1 **6. PNM PROVIDES INSUFFICIENT EVIDENCE TO REJECT ADDITIONAL WIND**

2 **Q On pages 18-21, Mr. O’Connell critiques your model runs that assess the cost**
3 **of the PNM portfolio with a loosened wind constraint. Please respond.**

4 **A** Mr. O’Connell admits that “PNM chose in its Strategist modeling to limit the
5 wind resource to 100 MW and not to update the energy price associated with
6 recent bids.”²⁶ He critiques my loosened constraint by stating that “an in-depth
7 analysis would be required to assess PNM’s existing integration capabilities and
8 additional system requirements,” and that “integration costs could be
9 substantial.”²⁷

10 **Q What is Mr. O’Connell’s justification for limiting wind procurement in the**
11 **Strategist model?**

12 **A** Mr. O’Connell states that PNM “did so based on the results of the detailed wind
13 resource sensitivity that PNM completed in its 2014-2033 IRP and the bid
14 analysis PNM completed prior to filing the 2015 Renewable Energy Procurement
15 Plan (“REPP”).”

16 **Q Do you have any comment on the “detailed wind resource sensitivity” in the**
17 **2014 IRP?**

18 **A** Yes. The “detailed wind resource sensitivity” was an exercise conducted by PNM
19 in preparing the current draft IRP, wherein the Company tested how quickly wind
20 would be procured in Strategist with different prices, capacity factors, and facility

²⁶ Rebuttal Testimony of Patrick O’Connell, page 18 lines 15-17.

²⁷ Rebuttal Testimony of Patrick O’Connell, page 19 lines 11-15.

1 sizes (100 to 350 MW). The entire process essentially concluded that the model
2 would take fairly inexpensive wind quickly, and more expensive wind at later
3 dates (“development of a wind sensitivity analysis demonstrating that the cost of
4 wind energy is the primary factor affect the amount of wind that can cost
5 effectively be added to PNM’s portfolio.”)²⁸. The sensitivity said nothing about
6 PNM’s ability to integrate further wind resources.

7 I’ll note that nowhere in PNM’s 2014 IRP nor public stakeholder materials did
8 PNM explicitly state that it planned to limit wind acquisition to 100 MW during
9 the whole portfolio period. Indeed, the IRP implies that 100 MW is actually the
10 cost effective amount chosen by Strategist, rather than a constraint imposed by the
11 Company.

12 The 2014 IRP and Mr. O’Connell’s testimony indicate that (a) additional wind at
13 the Company’s modeled cost is cost effective, and (b) when the model chose
14 wind, it reduced net power costs for the PNM system.²⁹ Therefore, I would have
15 expected that a prudent utility, seeking to reduce and stabilize ratepayer costs
16 would have sought to incorporate as much of this resource as feasible.

17 Mr. O’Connell’s critique that I did not conduct an “in-depth analysis ...to assess
18 PNM’s existing integration capabilities and additional system integration costs” is
19 a false pretense – that responsibility falls to the utility seeking prove that the
20 preferred portfolio is cost effective.

²⁸ PNM Draft 2014 IRP, page 4.

²⁹ Rebuttal Testimony of Patrick O’Connell, page 20 lines 15-19.

1 **7. CARBON PRICE, END EFFECTS, AND LONG-TERM ASSESSMENT**

2 **Q On page 22 of his rebuttal testimony, Mr. O’Connell identifies that you**
3 **“advocated for the use of a higher carbon price in the portfolio analysis and**
4 **changing the treatment of end effects” and that your failure to do so is**
5 **“inconsistent.” Please explain your position on carbon pricing and end**
6 **effects.**

7 **A** In my direct testimony on August 29, 2014, I explained that, with regards to
8 carbon pricing, “runs executed by the Company should explore a wide range of
9 prices, and the reference case should characterize a reasonable risk.”³⁰ Further, I
10 noted that the “prices [used in this docket] are markedly lower than the prices
11 explored in the 2011 IRP, as shown in Figure 7, below. With regards to end
12 effects, my concern also centered around the impact of carbon pricing on the
13 Company’s long-term decisions. Specifically, I stated that “excluding end effects
14 calculations causes a bias towards the selection of carbon-intensive resources
15 (such as the additional coal at SJGS 4) when long-run carbon prices are
16 excluded.”³¹

17 **Q Have your views on carbon pricing or end effects changed substantively since**
18 **your August 29th direct filing?**

19 **A** No.

³⁰ Direct Testimony of Jeremy Fisher, page 44, lines 3-4

³¹ Direct Testimony of Jeremy Fisher, page 35 lines 7-10

1 **Q Are these problems still present in the Company's modeling, four months**
2 **after you filed direct testimony?**

3 **A** Yes.

4 **Q Please explain why you didn't include an additional carbon price in your**
5 **analysis of the Company's October 31st stipulation filing.**

6 **A** After the Company filed direct testimony in support of the stipulation on October
7 31, I had less than one month to provide responsive testimony. New Energy
8 Economy determined that obtaining the Company's model was critical to a proper
9 assessment within a week of the October 31st filing, and filed prompt discovery.
10 Synapse obtained a copy of Strategist the same week, but was not provided the
11 Company's Strategist runs until Monday, November 17, 2014. We had exactly 10
12 business days to evaluate the Company's model runs, identify any issues present,
13 replicate Company runs, correct mistakes committed by the Company, and write
14 up the results in testimony. While it is not unreasonable to think that we could
15 evaluate the impact of a higher carbon price and end effects on the Company's
16 analysis given time, and the opportunity to carefully vet our own work, the idea
17 that New Energy Economy is responsible for implementing and continuously
18 correcting problems in the Company's analysis runs counter to prudent utility
19 practice, particularly when the Company has refused to implement these changes
20 itself. I would respectfully point out that the Company filed this docket a year
21 ago, and has ample opportunity to correct and vet their own modeling.

1 **Q** **Would the higher carbon price sensitivity you suggested in direct testimony**
2 **favor the Company’s decision to continue the operation of San Juan and add**
3 **additional capacity at San Juan 4?**

4 **A** No. A higher carbon price would make the operation of a coal-fired power plant
5 more expensive to operate, relative to market energy, renewable energy options,
6 or gas-fired power. I expect that incrementally higher carbon price assumptions
7 would render San Juan incrementally more of a liability.

8 **Q** **Would the inclusion of end effects as you suggested in direct testimony favor**
9 **the Company’s decision to continue the operation of San Juan and add**
10 **additional capacity at San Juan 4?**

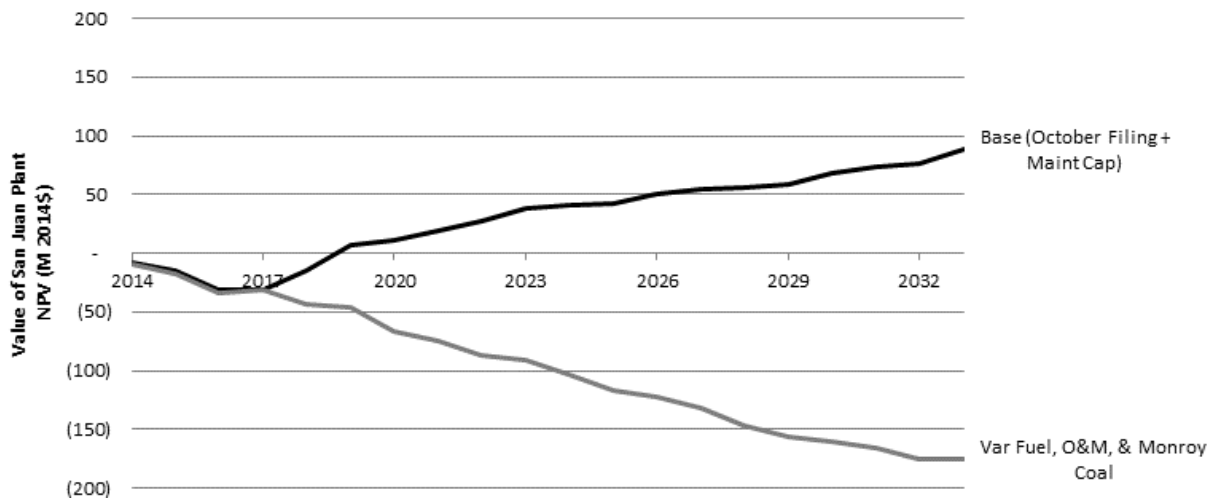
11 **A** No. It neither specifically favors nor hinders the decision directly. The
12 circumstance in which end effects particularly matter is when the benefit of a
13 particular decision changes fairly late in an analysis period. For example, if the
14 value of San Juan plant was a liability until 2030 and then became a net benefit
15 only after 2030, then the inclusion of end effects might tend to mask the riskiness
16 of the decision. In contrast, if long-term carbon price assumptions tended to drag
17 down the long-term benefit of the decision, then one might want to question if the
18 decision truly had long-term value in the presence of end effects.

19 Having reviewed the Company’s model runs, it becomes eminently clear that end
20 effects are unlikely to change the story one way or the other. Using the case
21 submitted by the Company in support of stipulation (now known to be erroneous
22 by Mr. O’Connell’s rebuttal testimony), end effects would have simply enhanced
23 the Company’s stipulated benefit. In contrast, with my modifications to the

1 Company's variable costs and corrected coal price, end effects would have
2 enhanced the significant liability of San Juan.

3 Figure 4, below, shows the cumulative present value of San Juan plant from the
4 Company's October 31st filing, and my modified version of those model runs.
5 Because the Company's (erroneous) model showed a steadily rising benefit, end
6 effects would have likely supported this conclusion. In my re-assessment, the
7 benefit of San Juan falls every year, continuously. Therefore, end effects would
8 have enhanced my finding of a net liability.

9 **Figure 4. Value of San Juan Plant from (erroneous) October 31st Strategist runs,³²**
10 **and Synapse modified case with corrected coal price.**



11

³² Accumulated present value of scenarios PNM Exhibit NEE 4-5C Base vs. PNM Exhibit NEE 4-5ZJ.

1 **Q Mr. O’Connell critiques your testimony stating that you “limited [your]**
2 **testimony to an assessment of the long-term economics,” and stating that**
3 **“the revenue requirement impact must also be given significant weight in the**
4 **decision-making process.” Does his critique have merit in this case?**

5 **A** No. To be clear, when I say “long-term economics” I mean that that I sought the
6 most cost effective resource portfolio over the Company’s twenty year analysis
7 period. Mr. O’Connell, having reviewed my testimony and analyses, is surely
8 aware of this. Thus, by stating that I “limited” my testimony, Mr. O’Connell
9 implies that least cost planning is not his primary consideration in this case, which
10 is inconsistent with the Company’s application for a certificate of convenience
11 and necessity (CCN). His critique here is ambiguously phrased, but I assume that
12 Mr. O’Connell means that short-term rate impacts are important to PNM’s
13 customers. While I share this sentiment generally, it (a) does not substitute for
14 reasonable least-cost decision making, and (b) is not demonstrated by the
15 Company’s preferred scenario.

16 **Q How is Mr. O’Connell’s critique inconsistent with the Company’s**
17 **application for CCN?**

18 **A** The application for CCN is equivalent to an IRP process, which by New Mexico
19 statute demands planning for the “most cost effective resource portfolio,” or the
20 minimum net present value of revenue requirements through an analysis period.
21 The Company’s analysis period is twenty years. Unless Mr. O’Connell is cleaving
22 this CCN from the IRP process, re-defining the analysis period as shorter than

1 twenty years, or rejecting NMAC definitions, the primary consideration here is
2 the identification of a least cost portfolio over a twenty year period.

3 **Q Why is the application for CCN equivalent to an IRP process?**

4 **A** The Company’s application for CCN draws numerous comparisons between the
5 process and conclusions from a CCN and an IRP. To justify the CCN process and
6 application, the Company states that:

- 7 1. “To identify replacement power resources, PNM performed the same resource
8 planning analysis that would be employed during the preparation of its
9 Integrated Resource Plan (“IRP”). (Application at §19)
- 10 2. “It is important to note that these resources were selected based on a twenty
11 year planning analysis, consistent with the requirements of the IRP process.”
12 (Application at §20)
- 13 3. “The twenty year recovery period is consistent with the twenty year planning
14 horizon required for the IRP process.” (Application at §37), and
- 15 4. “PNM has assessed the need and cost-effectiveness of San Juan Units 1 and 4
16 using a twenty year planning horizon, which is consistent with the IRP
17 process.” (Application at §42).

18 Just in case it was not clear that this CCN is meant to comport with the process
19 and conclusions of requirements of an IRP, the Company affirms that “Mr.
20 O’Connell explains how PNM’s approach comports with IRP requirements.”
21 (Application, p23)

1 I think that it is quite clear that the Company meant this CCN to be assessed on
2 the basis of IRP requirements and criteria, Mr. O’Connell’s last-minute
3 definitions notwithstanding.

4 **Q What is the primary assessment criterion of an IRP in New Mexico?**

5 **A** New Mexico statute appears to be quite clear.

6 The purpose of this rule is to set forth the commission’s
7 requirements for the preparation, filing, review and acceptance of
8 integrated resource plans by public utilities supplying electric
9 service in New Mexico **in order to identify the most cost**
10 **effective portfolio of resources** to supply the energy needs of
11 customers. For resources whose costs and service quality are
12 equivalent, the utility should prefer resources that minimize
13 environmental impacts.” [17.7.3.7 NMAC - N, 4-16-07] (emphasis
14 added)

15 The definition of “cost effective portfolio is also quite clear:

16 **Most cost effective resource portfolio** means those supply-side
17 resources and demand-side resources that minimize the net present
18 value of revenue requirements proposed by the utility to meet
19 electric system demand during the planning period consistent with
20 reliability and risk considerations; [17.7.3.7 NMAC - N, 4-16-07
21 Paragraph I] (emphasis in original)

1 So while I would not reject rate impacts by any means, the primary criteria for an
2 IRP, and this CCN, is the minimization of net present value of revenue
3 requirements – i.e. long-term economics.

4 **Q Does the Company’s plan minimize short-term rate impacts?**

5 **A** No. A review of Figure 4 (on page 26) shows that the plan to retain San Juan plant
6 actually costs ratepayers more through 2018, even under the Company’s
7 (erroneous) stipulation base case. With the correction to coal prices applied,
8 retaining San Juan costs ratepayers more year-on-year through the analysis
9 period.

10 Mr. O’Connell’s critique is both inconsistent with the Company’s application, and
11 without merit.

12 **8. PNM FAILED TO PERFORM REASONABLE LEAST COST PLANNING**

13 **Q Did the Company’s analysis supporting this case result in the most cost**
14 **effective resource portfolio?**

15 **A** No. As I showed in Section 2 at the start of my testimony, the Company’s own
16 analysis, corrected for Mr. O’Connell’s coal price error, now shows that San Juan
17 Plant is not part of the most cost effective resource portfolio. The plan does not
18 minimize the net present value of revenue requirements over the analysis period,
19 and the additional value the Company ascribes to ratepayers for the stipulation are
20 not reasonable reductions to the cost of their preferred plan. In addition, I
21 postulated, and Mr. O’Connell confirmed, that additional wind in PNM’s resource
22 portfolio would reduce ratepayer costs and avoid generation from expensive fossil

1 resources. Overall, on net, the maintenance of San Juan and the acquisition of new
2 capacity at San Juan 4 are not cost effective, and impudent.

3 **Q Did the Company's initial analysis comport with reasonable utility planning?**

4 **A** No. Over the course of this docket, PNM has corrected numerous flaws in the
5 initial analysis, committed additional analytical errors, and mischaracterized
6 model outcomes. To summarize just the most important problems in the selection
7 of San Juan.

- 8 1. PNM failed to include standard ongoing maintenance expenditures at existing
9 baseload facilities (biasing towards the selection of San Juan) an error worth
10 \$532 million.³³
- 11 2. PNM erroneously calculated base fuel prices at San Juan (biasing towards the
12 selection of San Juan) an error worth \$366 million.³⁴
- 13 3. PNM double-counts their expected stranded cost recovery on San Juan 1 & 4
14 in the retirement case, assigning a false penalty of \$130 million to the
15 retirement case (and biasing towards the selection of San Juan).³⁵
- 16 4. PNM tries to make San Juan appear less expensive by coupling the
17 continuation of the plant with a lower price at Palo Verde,³⁶ an inconsistency
18 worth \$114 million.

³³ See PNM Exhibit PJO-5 (Stip), Column A (\$7,222,507,449) and PNM Exhibit PJO-6 (Stip), Column A (\$6,690,762,159). Difference is \$531,745,290.

³⁴ See PNM Exhibit PJO-2 Rebuttal Stip, Column A (\$7,588,515,567) and PNM Exhibit PJO-5 (Stip), Column A (\$7,222,507,449). Difference is \$366,008,118.

³⁵ See PNM Exhibit PJO-2 Rebuttal Stip (page 1 of 2), Column D, line 11.

³⁶ See PNM Exhibit PJO-2 Rebuttal Stip (page 1 of 2), Column A and D, line 8. \$1,650/kW and \$2,500/kW, respectively.

- 1 5. PNM has attributed unrelated negotiated elements of the settlement to the
2 value of San Juan, inappropriately ascribing \$67.6 million of value to the
3 plant.³⁷
- 4 6. PNM modeled San Juan (and other baseload units) without any variable
5 operation and maintenance (O&M) expenses, making these units appear more
6 attractive than realistic both in PNM’s system, and on the open market.³⁸

7 It is disconcerting that PNM believes that even after \$1.2 billion in errors and
8 mischaracterizations, that their application still has merit. Even at the outset of
9 this case, the Company issued three different portfolio sets and justifications (on
10 December 20, 2013, July 1, 2014, and July 15, 2014) followed by a complete
11 revision in the Stipulation case (October 31, 2014) , and yet another complete
12 revision in this rebuttal case (December 19, 2014). The rapidly changing
13 landscape and justifications have made it quite difficult to assess what the
14 Company truly believes, and what might be considered a “final” application.

15 **Q Are you aware of recent precedent for other states’ utility regulators to deny**
16 **recovery on capital projects for existing resources based on poor utility**
17 **planning?**

18 **A Yes. The Oregon Public Utilities Commission recently found that PacifiCorp (dba**
19 **Pacific Power) acted imprudently by installing emissions controls without a**
20 **sufficiently rigorous analysis. The Commission disallowed a portion of the costs**
21 **associated with all of PacifiCorp’s installed emissions controls, finding that:**

³⁷ See PNM Exhibit PJO-2 Rebuttal Stip, Column A, lines 11-13.

³⁸ See Rebuttal Testimony of Patrick O’Connell, page 6, lines 7-8.

1 Pacific Power failed to perform appropriate analyses to determine
2 the cost-effectiveness of the investments. Pacific Power's
3 contemporaneous cost-effectiveness analyses were demonstrably
4 deficient, and did not demonstrate the rigorous review that a
5 prudent utility should have performed prior to making these
6 significant investments.³⁹

7 Similarly, in another MATS retrofit case, the Indiana Utility Regulatory
8 Commission levied a financial penalty on Indianapolis Power & Light (IP&L) for
9 poor management and for presenting a case lacking in appropriate rigor. The
10 Commission stated:

11 At the outset, we must note that IPL's initial presentation of its
12 cost/benefit study through an overly simplistic analysis was
13 disappointing. This choice represented a poor management
14 decision and demonstrated a lack of due regard for the regulatory
15 process. The proposed MATS Compliance Project is a substantial
16 capital investment, and this Commission expects a petitioning
17 utility to present the best evidence available at the outset of its
18 case, in order to provide the Commission and other parties a

³⁹ Oregon Public Utility Commission. December 20, 2012. In the Matter of PacifiCorp, dba Pacific Power Request for a General Rate Revision. Docket UE 246. Order 12-493, at p. 28. <http://apps.puc.state.or.us/orders/2012ords/12-493.pdf>.

1 reasonable opportunity to fully and fairly evaluate the company's
2 proposal.⁴⁰

3 **Q How does the case at hand compare against the PacifiCorp and Indiana cases**
4 **you've noted here?**

5 **A** The case here is both similar and different. It is different in that PNM's case in
6 chief is not based on an inappropriately simplistic model for a complex and multi-
7 faceted question. It is quite similar in that the Company's assumptions and inputs
8 are deeply flawed, and interveners have been provided insufficient material to
9 correct and assess the Company's application in a timely fashion.

10 While I do not believe that this case requires the Commission to be overly
11 prejudicial in enacting significant additional penalties on the Company, the
12 Commission should be aware that other states have not shied from ensuring that
13 regulated entities play fair, move to correct errors in a timely fashion, provide
14 evidence to all parties without bias, and do not misconstrue their systems to
15 regulators.

16 **9. CONCLUSIONS AND RECOMMENDATIONS**

17 **Q Please summarize your conclusions in this case.**

18 **A** As in my direct testimony and direct testimony in opposition to the stipulation, I
19 continue to believe that the addition of incremental capacity at San Juan

⁴⁰ Indiana Utility Regulatory Commission. August 14, 2013. Verified Petition of IPL for Approval of Clean Energy Projects...etc.. Cause 44242. Final Order. Page 31. http://www.in.gov/iurc/files/44242order_081413.pdf

1 generating station is not in the best interests of ratepayers, and that the Company's
2 analysis does not support this direction. As I then further discussed in my
3 opposition to the stipulation, the Company's analysis indicates that San Juan as a
4 whole poses a significant liability to the Company's ratepayers. This concern has
5 been firmed by the Company's new analysis in rebuttal correcting another critical
6 error by PNM's modelers.

7 In addition to my previous concerns, which were oriented around analytical errors
8 and inconsistencies in the Company's analysis, I now add my concern that the
9 Company does this Commission a great disservice by confounding a proper
10 resource evaluation with the Company's negotiated settlement position.

11 This Commission should reject the Company's application to acquire additional
12 capacity at San Juan 4, should reject the Company's petition to install emissions
13 controls at San Juan 1 and 4, and require the Company to construct a plan to
14 divest from and/or retire the remaining assets at San Juan generating station.