

PNM EXHIBIT TRH-4

Consisting of 13 pages

CREDIT FOCUS

Rate This Research



PNM Resources and UNS Energy:

San Juan Plant Generating Some Closure

RATINGS

Public Service Company of New Mexico

Issuer Rating	Baa3
Outlook	Positive

Tucson Electric Power Company

Issuer Rating	Baa2
Outlook	Stable

KEY INDICATORS

Public Service Company of New Mexico

	FY 2011	FY 2012	LTMQ1 2013
Interest Coverage	5.0x	4.6x	4.4x
CFO pre-wc / Debt	21.5%	21.2%	19.5%
(CFO pre-wc – Div'd) / Debt	18.7%	19.0%	17.4%
Debt / Book Capitalization	48.3%	45.4%	46.1%

Source: Moody's Financial Metrics

Analyst Contacts:

NEW YORK +1.212.553.1653

Jeffrey F. Cassella +1.212.553.1665

Analyst

jeffrey.cassella@moody's.com

James Hempstead +1.212.553.4318

Associate Managing Director

james.hempstead@moody's.com

Summary

- » Public Service Company of New Mexico (PNM: Baa3, positive) and Tucson Electric Power Company (TEP: Baa2, stable) are well positioned to recover any costs and investments associated with retiring Units 2 and 3 of the San Juan Generating Station (SJGS) and to replace the lost capacity associated with the revised State Implementation Plan (SIP) ruling. We think the total cost related to the SJGS environmental compliance, which includes replacing the retired capacity, could reach close to \$600 million.
- » The current proposed SIP related to the SJGS environmental compliance agreed upon by the State of New Mexico, the US Environmental Protection Agency (EPA) and PNM, although less costly than the original plan, is credit neutral to PNM and TEP, as we believe the utilities will be able to recover their incurred costs related to the plan in a timely manner.
- » An ability to recover and earn a return on these investments in a timely manner is important for both utilities to maintain their financial metrics at current levels as the regulatory environments in New Mexico and Arizona have been exhibiting increased supportiveness.
- » That said, if recovery is less timely, leading to liquidity issues or an increased risk of stranded investment, their credit profiles may suffer. Moreover, should additional liquidity or time constraints arise from material changes to the proposed SIP, there could be an impact on safety and reliability as well as operating performance, which would be credit negative. As operator and largest owner, PNM is more exposed because PNM has the most generation capacity at risk.
- » In 1999, the EPA implemented the Regional Haze Rule in an effort to improve visibility impairment (regional haze) in national parks and wilderness areas. As a result, coal power plants, such as the San Juan Generating Station, were targeted as contributing to impairment of visibility. As such, utilities have to comply with the new laws and work with states and federal agencies to devise plans to reduce visibility impacts.

San Juan Generating Station is an important source of power

The San Juan Generating Station (SJGS) is a coal-fired power plant near Farmington, NM. PNM is the operator of the plant and owns approximately 46% of the aggregate power capacity from the plant. However, an additional eight electric utilities, co-operatives, municipalities and power agencies also have an ownership stake in the plant (see Figure 1). SJGS is an important source of power generation for PNM as well as the other eight owners. In operation since 1973, SJGS contains 4 boilers (Units 1 – 4) and generates about 1,700 MW of low cost electricity serving New Mexico, Arizona, Utah and California. The plant burns thermal coal from the BHP Billiton San Juan underground mine.

FIGURE 1

San Juan Generating Station Current Ownership

Unit	Owner	Ownership %	Capacity Share (MW)
1	PNM Resources	50.0%	170
	Tucson Electric Power	50.0%	170
	Unit 1 Total	100.0%	340
2	PNM Resources	50.0%	170
	Tucson Electric Power	50.0%	170
	Unit 2 Total	100.0%	340
3	PNM Resources	50.0%	248
	Southern California Public Power Authority	41.7%	207
	Tri-State Generation and Transmission Association	8.3%	41
	Unit 3 Total	100.0%	496
4	PNM Resources	38.5%	195
	M-S-R Public Power Agency, CA	28.8%	146
	City of Anaheim, CA	10.0%	51
	City of Farmington, NM	8.5%	43
	Los Alamos County, NM	7.2%	37
	Utah Associated Municipal Power Systems	7.0%	35
	Unit 4 Total	100.0%	507
Total Units 1 - 4			1,683

Source: Company Filings

Environmental compliance is a long and winding legal road

In 1999, the EPA implemented the Regional Haze Rule, under the Clean Air Act, in an effort to improve visibility impairment or regional haze in 156 federal areas including national parks and wilderness areas. As a result, coal power plants, such as SJGS, were identified as contributing to impairment of visibility. As such, utilities have to comply with the new laws and work with states and federal agencies to devise implementation plans to limit air pollutant emissions known to cause visibility degradation.

Implementation plans developed by states must include enforceable measures and strategies for reducing visibility-impairing pollution and identify facilities that will require the installation of best available retrofit technology (BART) controls.

In 2005, the EPA issued a second rulemaking and published guidelines for states to determine BART requirements for facilities built between 1962 and 1977 that have the potential to emit more than 250 tons per year of visibility impairing pollution. If it was determined that these emissions could reasonably be anticipated to cause or contribute to visibility impairment in any of the 156 protected federal areas, then BART must be installed by 2018. SJGS fell under these requirements.

Furthermore, as part of a lawsuit settlement in 2005, PNM agreed to several major environmental improvements at SJGS which were implemented over a four year period completed in 2009 for a total cost of approximately \$320 million. PNM has been recovering these costs and earning a return on the investments through its current rates. The plant upgrades reduced emissions of four main air pollutants including nitrogen oxide, sulfur dioxide, particulate matter and mercury. As a result, the mercury removal rate at the plant is about 99.9%.

In June 2011, the state of New Mexico submitted its implementation plan to install selective non-catalytic reduction technology (SNCR) at SJGS to reduce nitrogen oxide emissions. However, in August 2011, the EPA filed its Federal Implementation Plan (FIP), which required the installation of selective catalytic reduction technology (SCR) on all four units at SJGS by September 21, 2016.

After several months of litigation and numerous discussions amongst PNM, the New Mexico Environmental Department (NMED), the EPA and other parties, a revised draft SIP emerged.

Revised State Implementation Plan Provides a Collaborative Approach to Compliance

On February 15, 2013, PNM, NMED and the EPA outlined terms of a new non-binding agreement on a revised plan that would allow SJGS to meet the BART standards and comply with federal visibility rules. In general, we view the revised settlement as credit positive, as it removes a potentially large uncertainty and is evidence of a more collaborative settlement framework in NM.

The agreement would result in the retirement of the San Juan Units 2 and 3 by the end of 2017 and the installation of SNCRs technology on Units 1 and 4 by the later of January 31, 2016 or 15 months after EPA approval of the New Mexico revised SIP, which is expected by the end of 2014. In addition, PNM would also build a natural gas-fired peaking generating plant at the San Juan site to partially replace the capacity lost from the retired coal units.

Additionally, due to the expected retirement of Units 2 and 3, a re-balancing in the ownership of the remaining Units 1 and 4 could result if agreed upon by the existing owners, which would include PNM obtaining additional ownership and generating capacity in Unit 4. PNM has stated that they are interested in adding 78MW of existing capacity from Unit 4 to its ownership, which would increase PNM's ownership of Unit 4 to 53.8%. PNM's combined ownership of the remaining Units 1 and 4 would increase to an aggregate of 52%.

Revised SIP reduces compliance cost by more than \$700 million

Under the revised plan, the estimated costs to install SNCR technology and the additional equipment to comply with air quality standards on San Juan's Units 1 and 4 is approximately \$120 million, which is considerably less costly than the approximately \$900 million estimated total cost associated with the EPA's original FIP issued in August 2011. Thus, the local, collaborative settlement reduces the total expected cost of a Federally mandated FIP by more than \$700 million.

As a result of the expected re-balancing in ownership of the remaining Units 1 and 4, PNM's share of the estimated costs would be approximately \$63 million based on its projected combined ownership of 52%. TEP's estimated allocated cost to install the SNCR technology associated with TEP's 50% ownership of Unit 1 is approximately \$25 million.

The revised plan is a departure from the more expensive previously issued FIP by the EPA in August 2011, which required the installation of SCR technology on all four units of the San Juan station by September 2016. See figure 2 for the differences in estimated total capital expenditures under each proposed plan.

FIGURE 2
CapEx Requirement Under Proposed Plans

\$ in millions	FIP		Revised SIP	
	SCR Installation	SNCR Installation	Add'l Capacity	Total
PNM	\$379 - \$419 ¹	\$63	\$281	\$344
TEP	\$180 - \$200	\$25	\$200 ²	\$225

1 - PNM 46% share of estimated cost range of \$824 - \$910 million

2 - Moody's estimate

Source: Company Filings

Need For Replacement Capacity

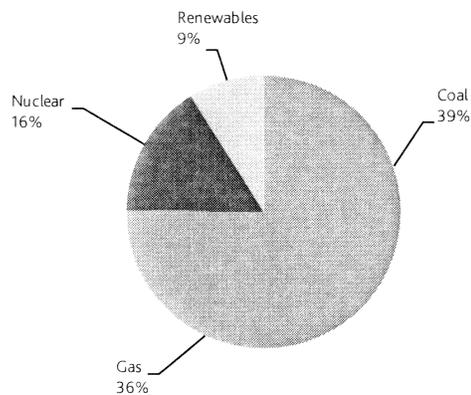
The revised SIP calls for the retirement of Units 2 and 3, which accounts for a combined 836 MW of generating capacity that needs to be replaced. As 50% owner of Units 2 and 3, PNM needs to replace 418 MW, while TEP needs to replace the 170MW associated with its 50% ownership of Unit 2. Southern California Public Power Authority (Aa3, stable) needs to replace the 207 MW of generating capacity related to its 41.7% ownership of Unit 3, while Tri-State Generation and Transmission Association (Baa1, stable) will need to find a substitute source for the 41 MW of power associated with its 8.2% ownership stake of Unit 3.

PNM indicated it intends to replace 340 MW of its total 418 MW generating capacity being retired through the acquisition and/or construction of gas-fired capacity as well as the potential for nuclear capacity from PNM's ownership of the Palo Verde Nuclear Generating Station (PVNGS). With respect to the remaining 78 MW of capacity needed to be replenished, PNM expects to obtain the additional megawatts from another partial owner of San Juan's Unit 4 through an anticipated agreed upon re-allocation of ownership. The majority of the replacement power (150-200 MW) will come from a natural gas-fired peaking generation plant located at the San Juan station as well as a 40 MW gas-fired peaking plant. PNM estimates the cost of building and acquiring the gas generated power would approximate \$281 million. PNM is also looking at the possibility of adding its 10.2% ownership share of the Palo Verde Unit 3 nuclear generating capacity (134 MW) into rate base to supplement the loss of the retired coal capacity. The ability to bring PVNGS into rate base would be a

credit positive as it enhances their ability to recover costs and earn a return on the nuclear plant particularly considering the current low wholesale power prices.

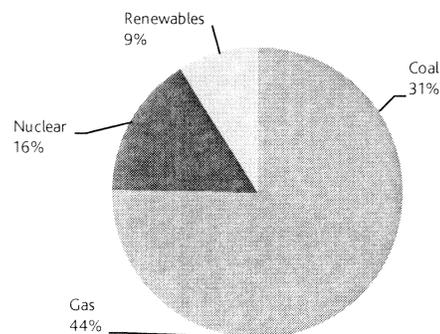
Although PNM's current fuel mix capacity is reasonably diversified (see Figure 3), the utility's generation of electricity in 2012 was more heavily weighted towards its coal fired generation considering 56% of its 10,947 GWh was sourced from coal (see figure 5.). We believe the additional gas-fired capacity provides PNM a larger opportunity to further diversify its fuel generation mix as well as reduce its carbon footprint. Assuming the additional natural gas-fired generation replacement power is installed, PNM's generation capacity would be further diversified (see Figure 4). However, increased proportion of natural gas capacity would increase the utility's exposure to natural gas commodity prices.

FIGURE 3

PNM's 2012 Generation Capacity

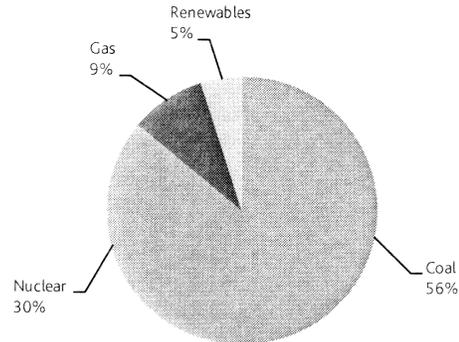
Source: Company Filings

FIGURE 4

PNM's Estimated Generation Capacity

Source: Company Filings, Moody's estimate

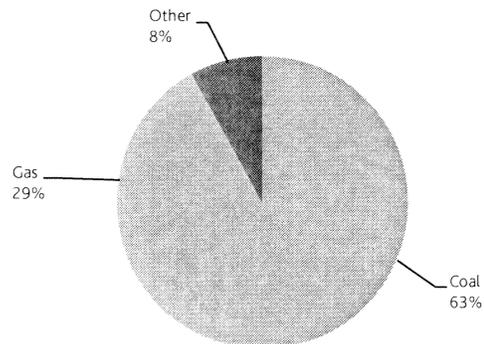
FIGURE 5

PNM's 2012 Energy Generation - 10,947 GWh

Source: Company Filings

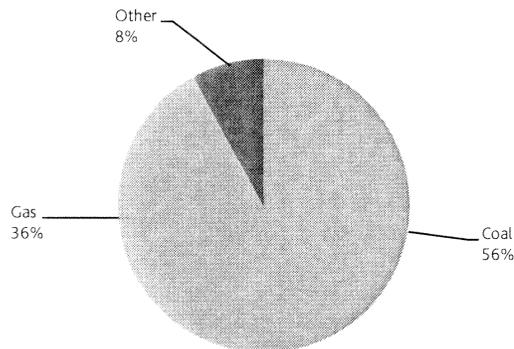
UNS Energy Corporation (UNS: Baa3, stable), parent of TEP, continues to evaluate its opportunities to replace the 170 MW of generation associated with TEP's 50% ownership share of Unit 2, which will be retired as part of the revised SIP. UNS Energy issued a request for proposal to better understand the price points around acquiring or building gas-fired generation plants and will compare those costs with long-term potential power purchase agreements. For 2012, TEP's generation capacity was 63% coal-fired and 29% gas-fired with the remaining 8% a combination of sources including solar power (see Figure 6). Assuming the 170 MW of coal capacity that is being retired through the Unit 2 shut-down is replaced by gas-fired generation, we view a reduction of TEP's high reliance on coal, despite it being a low cost fuel would increase the utility's fuel diversification and be viewed as a credit positive (see Figure 7).

FIGURE 6

TEP's 2012 Generation Capacity

Source: Company Filings

FIGURE 7

TEP's Estimated Generation Capacity

Source: Company Filings, Moody's estimate

Capital Expenditure Plans and Cost Recovery

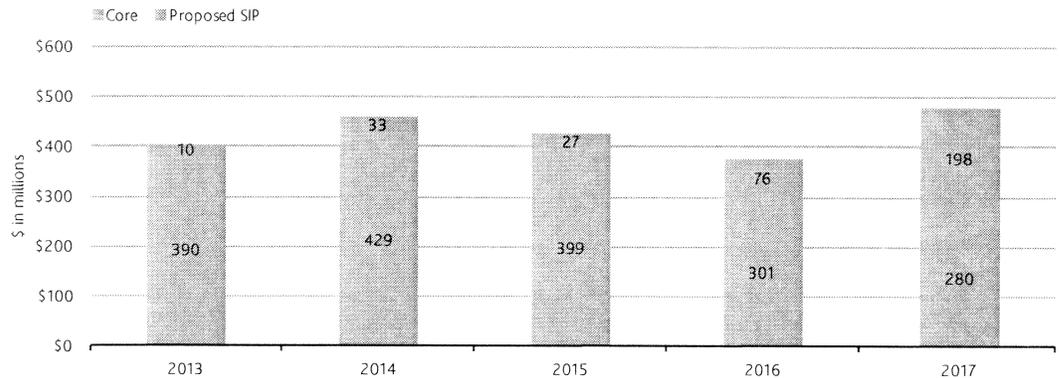
We think PNM and TEP are well positioned to recover the costs of environmental compliance associated with the revised SIP through regulated rates. However, in the event that recovery is less timely, leading to a stress on liquidity or an increased risk of stranded investment, credit profiles may suffer, absent some form of mitigating action.

Although the revised plan calls for a reduced level of invested capital compared to the original August 2011 plan, PNM's capital expenditure budget (see Figure 8) would increase by approximately \$344 million through 2017. In addition, reduced spending levels associated with the revised SIP will likely coincide with a lower potential rate impact on rate payers.

We expect PNM to make filings with the New Mexico Public Regulation Commission (NMPRC) in December 2013 for recovery of investment related to the abandonment of Units 2 and 3 as well as investments associated with the identified replacement resources and other remaining costs related to the BART compliance. Although the filings are intended to identify the methods of cost recovery and return on investment, we do not expect the NMPRC to decide the actual rate impact on customers until PNM's next general rate case which we anticipate in the 2015 to 2016 timeframe.

At March 31, 2013, PNM's net book value of Units 2 and 3 was approximately \$290 million. PNM's ability to recover and earn a return on these stranded investments as well as the costs incurred to retire the two units, in a timely manner, is important in maintaining its financial metrics at current levels.

FIGURE 8
PNM's Projected CapEx

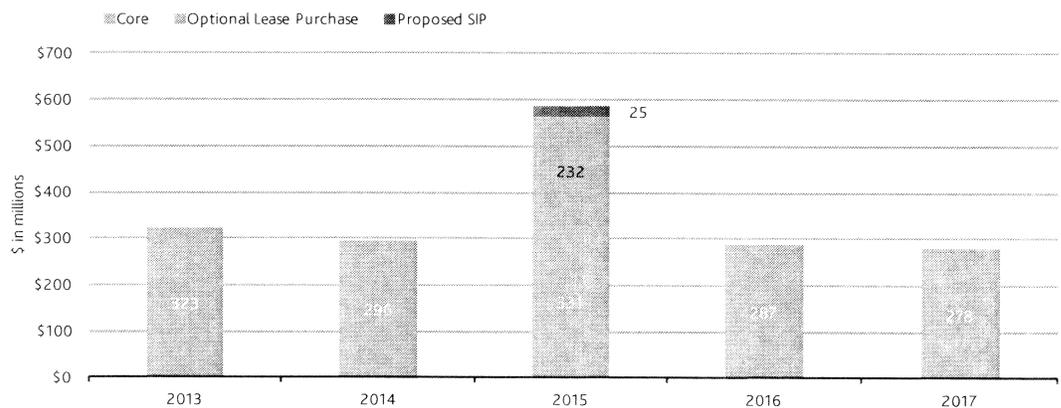


Source: Company Filings

The impact on TEP is less significant compared to that of PNM based on TEP's estimated cost of \$25 million. Not included in TEP's five-year capital expenditure forecast (see Figure 9) is the estimated cost to replace the 170 MW of generation TEP is losing upon the closure of Unit 2. As previously mentioned, UNS Energy is contemplating several alternatives to identify the replacement power needed. If TEP elected to build a gas-fired generation plant to replace the total 170 MW of generating capacity, we estimate the cost to be about \$200 million.

As of March 31, 2013, the book value of Unit 2 was approximately \$115 million and we expect TEP would request approval from the Arizona Corporation Commission (ACC) to recover from its rate payers all costs associated with the retirement of this unit including stranded costs as well as any additional costs associated with replacing the lost power generation. Furthermore, TEP's recently approved June 2013 rate case includes a rider for environmental compliance spending, which would allow TEP to recover a portion of its environmental spend up to a certain limit. Moody's views environmental riders as credit supportive since they reduce regulatory lag in recovering mandated capital expenditures.

FIGURE 9
TEP Projected CapEx



Source: Company Filings

Time to Completion

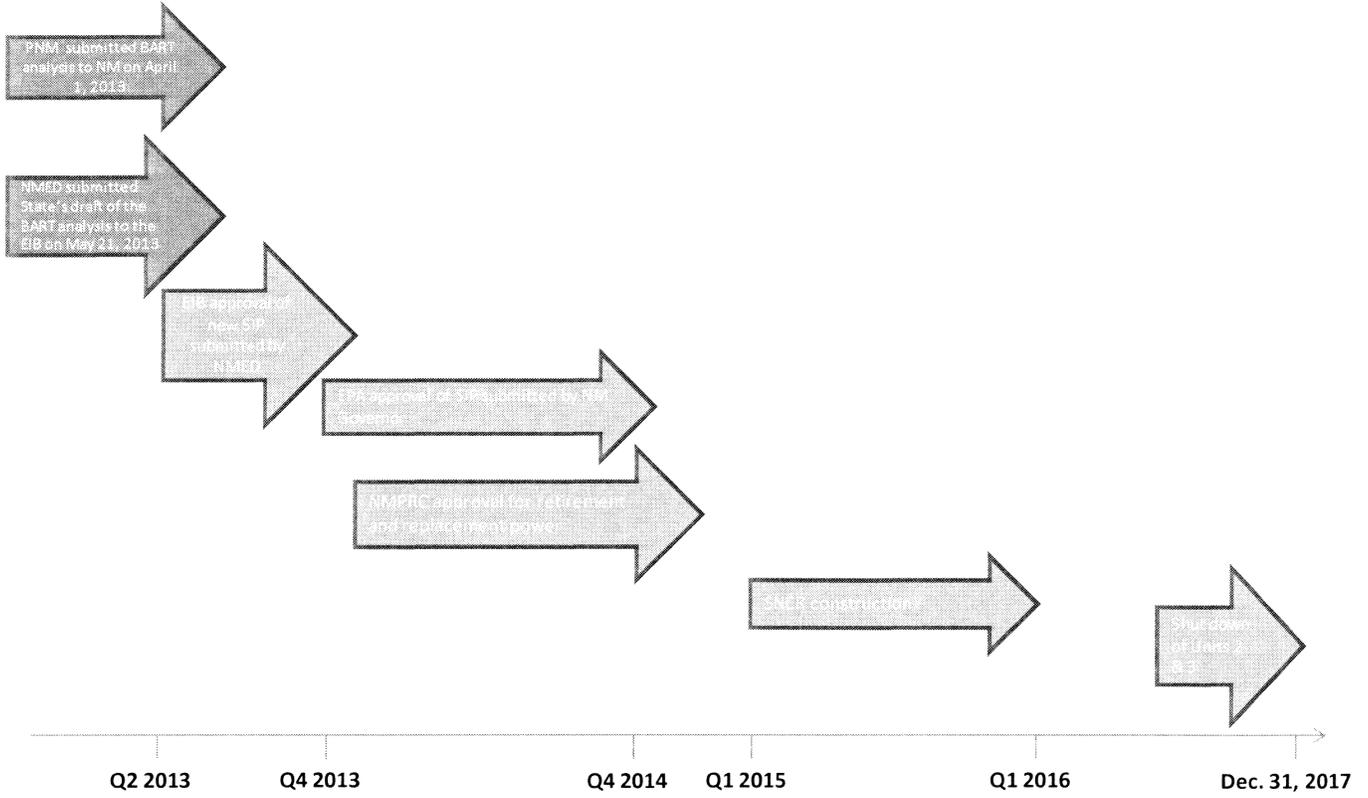
On April 1, 2013, PNM filed a BART analysis with the state of New Mexico, and the NMED submitted a draft revised implementation plan to the New Mexico Environmental Improvement Board (NMEIB) for approval, which is projected to be in Q4 2013. If the NMEIB approves the plan, the NM Governor, on behalf of the State of New Mexico, will submit the revised implementation plan to the EPA, which will likely take about a year to review. While the EPA is reviewing the implementation plan, PNM would apply for regulatory approval from the NMPRC to retire Units 2 and 3 and obtain certificates of convenience and necessity (CCNs) for a portion of the proposed replacement resources that are needed. The timing of the regulatory filing will likely be in late 2013 to early 2014, which will take about a year to resolve. As such, the installation of the SNCRs on Units 1 and 4 is not expected to begin until Q1 2015 with the final retirement of Units 2 and 3 on December 31, 2017. See Figure 10 for a depiction of the SJGS revised SIP timeline.

Upon signing of the non-binding agreement in February 2013, the EPA stated that if the timeline does not proceed as planned due to factors not controlled by PNM and the NMED, then the EPA will work with PNM and the state to identify a reasonable alternative plan and time schedule to comply with appropriate standards.

One of the hurdles that needs to be cleared involves the pending litigation residing at the US 10th Circuit Court of Appeals, where PNM's request to delay the installation of SCRs as recommended under the EPA's August 2011 FIP was denied. The 10th Circuit referred the litigation to the 10th Circuit Mediation Office, which is asking all parties to continue to discuss the matter and informally resolve issues around the pending appeals. It is expected that if the revised SIP is approved and continues towards implementation that the 10th Circuit remediation would likely be resolved.

Any changes to the proposed SIP that could cause additional liquidity or time constraints on the utilities potentially impacting safety and reliability or otherwise impacting operating performance would be credit negative.

FIGURE 10
SJGS State Implementation Plan Timeline



Source: Company Filings

Appendix A: Key Financials and Ratios

Public Service Company of New Mexico					
	LT Issuer Rating: Baa3		Outlook: Positive		
(in \$ millions)	FY 2009	FY 2010	FY 2011	FY 2012	LTM 1Q 2013
Revenue	968	1,017	1,057	1,092	1,100
EBITDA	232	316	350	387	381
Net Property Plant & Equipment	2,808	3,002	3,146	3,158	3,164
Total Assets	3,937	4,131	4,341	4,360	4,351
Total Debt	1,527	1,702	1,689	1,594	1,662
Total Equity	1,156	1,135	1,224	1,263	1,279
Cash From Operations	156	237	305	381	261
Capital Expenditures	265	237	267	208	186
Dividends	300	29	48	35	35
CFO pre-W/C + Interest / Interest	4.2x	4.5x	5.0x	4.6x	4.4x
CFO pre-W/C / Debt	19.7%	17.9%	21.5%	21.2%	19.5%
CFO pre-W/C - Dividends / Debt	0.0%	16.2%	18.7%	19.0%	17.4%
Debt / Capitalization	48.7%	50.5%	48.3%	45.4%	46.1%
Tucson Electric Power					
	LT Issuer Rating: Baa2		Outlook: Stable		
(in \$ millions)	FY 2009	FY 2010	FY 2011	FY 2012	LTM 1Q 2013
Revenue	1,099	1,125	1,156	1,162	1,185
EBITDA	388	393	374	351	355
Net Property Plant & Equipment	2,267	2,416	2,664	2,764	2,785
Total Assets	2,825	3,014	3,262	3,466	3,405
Total Debt	1,431	1,488	1,572	1,581	1,524
Total Equity	643	710	825	861	863
Cash From Operations	283	316	279	268	306
Capital Expenditures	233	278	352	253	248
Dividends	60	60	0	30	30
CFO pre-W/C + Interest / Interest	4.7x	4.2x	4.0x	4.4x	4.9x
CFO pre-W/C / Debt	20.5%	17.8%	17.1%	19.5%	22.4%
CFO pre-W/C - Dividends / Debt	16.3%	13.8%	17.1%	17.6%	20.4%
Debt / Capitalization	62.5%	61.4%	59.1%	57.3%	56.1%

Moody's Related Research

Special Comments:

- » [Increasingly Stringent Environmental Mandates Lurch Forward, January 2012 \(139096\)](#)
- » [Credit Implications Associated with Increasingly Stringent Environmental Regulations, November 2011 \(136831\)](#)
- » [Cost Recovery Provisions Key to U.S. Investor Owned Utility Ratings and Credit Quality, June 2010 \(122304\)](#)
- » [U.S. Electric Utilities See Some Clarity in Evolving Federal Energy Policies, February 2010 \(123062\)](#)
- » [Carbon Risks Becoming More Imminent for US Electric Utility Sector, March 2009 \(115175\)](#)
- » [Carbon Dioxide: Regulating Emissions Following a Long and Winding Road, November 2008 \(112822\)](#)
- » [New Generating Capacity In A Carbon Constrained Environment, March 2008 \(107453\)](#)

Sector Comment:

- » [Delay of EPA's Pollution Rule Provides a Temporary Reprieve to Coal-Fired Power Plants, January 2012 \(138839\)](#)

Industry Outlook:

- » [US Regulated Utilities: Regulatory Support, Low Natural Gas Prices Maintains Stability, February 2013 \(149379\)](#)

Credit Opinions:

- » [PNM Resources, Inc., June 2013](#)
- » [UNS Energy Corporation, June 2013](#)
- » [Tucson Electric Power Company, June 2013](#)

Rating Methodology:

- » [Regulated Electric and Gas Utilities, August 2009 \(118481\)](#)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.



Report Number: 156477

Author
Jeffrey F. Cassella

Production Specialist
Shubhra Bhatnagar

© 2013 Moody's Investors Service, Inc. and/or its licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. ("MIS") AND ITS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND CREDIT RATINGS AND RESEARCH PUBLICATIONS PUBLISHED BY MOODY'S ("MOODY'S PUBLICATIONS") MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process. Under no circumstances shall MOODY'S have any liability to any person or entity for (a) any loss or damage in whole or in part caused by, resulting from, or relating to, any error (negligent or otherwise) or other circumstance or contingency within or outside the control of MOODY'S or any of its directors, officers, employees or agents in connection with the procurement, collection, compilation, analysis, interpretation, communication, publication or delivery of any such information, or (b) any direct, indirect, special, consequential, compensatory or incidental damages whatsoever (including without limitation, lost profits), even if MOODY'S is advised in advance of the possibility of such damages, resulting from the use of or inability to use, any such information. The ratings, financial reporting analysis, projections, and other observations, if any, constituting part of the information contained herein are, and must be construed solely as, statements of opinion and not statements of fact or recommendations to purchase, sell or hold any securities. Each user of the information contained herein must make its own study and evaluation of each security it may consider purchasing, holding or selling.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

MIS, a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MIS have, prior to assignment of any rating, agreed to pay to MIS for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody's.com under the heading "Shareholder Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

For Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail clients. It would be dangerous for retail clients to make any investment decision based on MOODY'S credit rating. If in doubt you should contact your financial or other professional adviser.