

CREDIT OPINION

30 December 2019

Update



Rate this Research

RATINGS

Public Service Company of Colorado

Domicile	Colorado, United States
Long Term Rating	A3
Туре	LT Issuer Rating
Outlook	Stable

Please see the <u>ratings section</u> at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Public Service Company of Colorado

Update to credit analysis

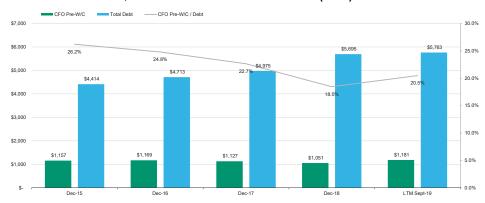
Summary

Public Service Company of Colorado's (PSCO) credit profile reflects the regulated vertically integrated electric and natural gas distribution utility's operations. It also considers our view of a constructive relationship with the Colorado Public Utility Commission (CPUC) and that the company's cash flows benefit from a suite of rate adjustment mechanisms that help to reduce regulatory lag. PSCO ranks as the largest subsidiary in the Xcel Energy Inc. (Xcel, Baa1 stable) family in terms of rate base (around 41% of estimated 2019 year-end rate base) as well as earnings before interest taxes depreciation and amortization (EBITDA) and cash flow contribution (35%-40%). In contrast to its three sister utility companies, PSCO's dividend distributions are not subject to regulatory restrictions based for example on debt-to-book capitalization ratios.

The combination of incremental debt to fund its significant investments and the cash impact of the implementation of the Tax Cuts and Jobs Act (TCJA) explain the material deterioration in PSCO's credit metrics in 2018. PSCO's elevated capital expenditure program of nearly \$7.7 billion planned for the 2020-2024 period, including the tail-end of its \$1 billion Colorado Energy Plan (CEP), will maintain pressure on credit metrics. However, we expect that a net credit positive outcome of its electric rate case (effective 2020) will help the utility will record a ratio of CFO before changes in Working Capital (CFO pre-W/C) to debt that hovers around 20%.

Exhibit

Historical CFO Pre-W/C, Total Debt and CFO Pre-W/C to Debt (\$MM)



Source: Moody's Financial Metrics

Credit strengths

- » Rate base of approximately \$12.4 billion by year-end 2019
- » Vertically integrated regulated utility that operates in a credit constructive regulatory environment
- » Numerous riders and trackers that reduce regulatory lag

Credit challenges

- » Moderate exposure to carbon transition risk
- » Elevated capital investment program including the \$1 billion Colorado Energy Plan

Rating outlook

PSCO's stable outlook is supported by the predictable nature of the utility's operations, and the expectation that its key credit metrics will remain adequate for its credit, including CFO pre-W/C to debt of at least 20%.

Factors that could lead to an upgrade

» The utility's ratings could experience positive momentum if higher than anticipated regulatory relief and/or cost savings allow it to record CFO pre-W/C to debt in excess of 23%.

Factors that could lead to a downgrade

» The ratings could be downgraded if we perceive a deterioration in the credit supportiveness of the regulatory environment, or if its credit metrics deteriorate; specifically, downward pressure on the ratings could result if its CFO pre-W/C to debt ratio falls below 20%, for an extended period.

Key indicators

Exhibit

Public Service Company of Colorado

	Dec-15	Dec-16	Dec-17	Dec-18	LTM Sept-19
CFO Pre-W/C + Interest / Interest	7.4x	7.4x	6.6x	5.7x	5.7x
CFO Pre-W/C / Debt	26.2%	24.8%	22.7%	18.5%	20.5%
CFO Pre-W/C – Dividends / Debt	18.7%	17.7%	15.9%	11.9%	13.6%
Debt / Capitalization	36.3%	36.7%	40.1%	41.7%	39.8%

[1] [Alliatios are based and individual and incorporate Moody's Clobal standard Adjustments for Non-financial Corporations. Source: Moody's Financial Metrics

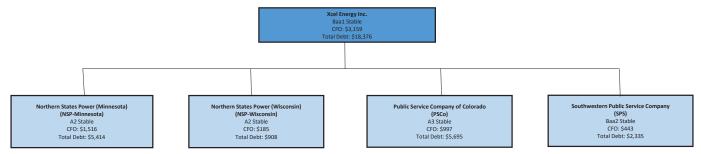
Profile

Public Service Company of Colorado (PSCO, A3 stable) is the largest integrated utility in Colorado, where it serves 1.5 million electric customers (2018 rate base: \$8.3 billion) and 1.4 million natural gas customers (rate base: \$2.5 billion). The utility also renders sales for resale and wholesale transmission service (rate base: \$516 million). As depicted in Exhibit 3 PSCO's parent, Xcel Energy Inc. (Xcel, Baa1 stable), is a holding company with utility operations in eight states serving around 3.6 million electric and about 2 million natural gas customers. PSCO is one of the largest subsidiaries in terms of regulated rate base and contributions to Xcel's consolidated net income between 35-45%.

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Exhibit[®] Xcel Energy Inc. Organizational Chart (year-end 2018) (\$ in millions)



Source: Xcel Energy Inc., Moody's Financial Metrics

Detailed credit considerations

Credit supportive regulatory environment

Our opinion that the regulatory environment under which PSCO operates is credit supportive considers our view that the utility's relationship with the regulators has generally been constructive, and that the company's cash flows benefit from a suite of rate adjustment mechanisms that help to reduce regulatory lag.

Exhibit**2** Summary of key regulatory mechanisms available to PSCO

	Multi-year Rate Plans	Forward Test Year	Interim Rates	Fuel Recovery Mechanism	Capacity Recovery Mechanism	Renewable Rider	Transmission Rider	Pension Deferral Mechanism	Property Tax Deferral/ True- up	Decoupling	
PSCO	Allowed	Allowed	Allowed	\checkmark	$\sqrt{}$	\checkmark	\checkmark	\checkmark	\checkmark	√	_

Source: Xcel Energy Inc., regulatory filings

The utility benefits from several riders but it reported an actual RoE (GAAP) of around 8% for the last twelve month (LTM) period ended September 2019 pending the implementation of its electric rate case.

Exhibit Summary of key financial parameters including authorized and actual RoEs and applicable regulatory plans

		Authorized RoE	W/A	Earned RoE (ac	tual)	Regulatory Plan
			2016	2017	2018	-
	Electric - Co	9.83%	9.22%	8.81%	8.93%	Filed Rate Case in 2019; final order expected Jan. 2020
PSCO	NG- Co	9.35%	7.34%	6.64%	8.68%	2018 Rate Case
	Wholesale - PSCo	*	*	*	*	

^{*}Authorized®oEffor®SCollaransmission@and@roductionfformula@9.72% Source: Company presentations

Natural gas operations (around 22% of PSCO's rate base)

In October 2018, the CPUC approved the extension of PSCO's Pipeline System Integrity Adjustment (PSIA) rider that allows the utility to recover the return on and of its investments in the natural gas systems. These investments will represent around 23% of PSCO's 2020-2024 capital expenditures. The extension of the PSIA rider is important as we note certain resistance in the state for PSCO to implement multi-year rate plans for its natural gas operations as evidenced again by the outcome of its last rate case in December 2018.

In April 2019, the utility appealed its last the natural gas rate case outcome which seems to point towards some contentiousness in the relationship of the utility with the Commission, a credit negative. The ruling is still pending.

In June 2017, the utility filed a multi-year rate case requesting a total rate increase of \$139 million for the 2018-2020 period, including \$63 million in 2018. The CPUC's December 2018 final order, upheld its August 2018 interim decision, that authorized a rate increase for 2018 of \$46 million (prior of TCJA impacts) or \$22 million (after TCJA), with no additional increases. The final order was based on a 9.35% RoE (requested: 10% RoE). The utility's appeal seeks judicial review of the other three key drivers of the gap between its requested and the CPUC's approved rate increase; that is differences in (i) authorized rate base, (ii) equity ratios, and (iii) the CPUC's denial of PSCO's request to earn a return on the prepaid pension and retiree medical asset.

The utility filed its rate increase request based on forward test year (as allowed in Colorado). However, the CPUC's decision was premised on a rate base using a 2016 historic test year with a 13-month average rate base of \$1.5 billion. PSCO's appeal seeks to apply a year-end rate base methodology. The CPUC's decision was also based on authorized equity layer of 54.6% which is below the utility's previous authorized 56.51% equity layer. PSCO's appeal argues that the order does not use the utility's actual historical test year level. In its original filings (June 2017) PSCO sought approval of a 55.25% ratio but in September 2018, PSCO requested a 56% equity ratio to mitigate the impact on the credit metrics of the implementation of the TCJA. This request was denied. However, we also note that the CPUC allowed the utility to use a portion of the refunds due to its ratepayers in connection with the revaluation of its accumulated deferred income tax liabilities (ADITL) at the 21% corporate tax rate (previously: 35%) to reduce accelerate the amortization of its prepaid pension assets, a credit positive.

Electric and steam operations (around 74% of the rate base)

In 2018, the CPUC approved a settlement agreement that allowed PSCO to use \$113 million out of the total \$222 million refunds related to the excess ADITL due to its electric ratepayers in 2018 and 2019 to accelerate the amortization of prepaid pension assets, a credit positive. Our view of PSCO's credit also considers that its electric operations cash flows benefit from several forward-looking riders for the recovery, between rate cases, of investments in renewables and transmission as well as capital outlays under the 2010 Clean Air Clean Jobs Act (CACJA), along with pension costs and property taxes.

We believe that the combination of the reduction in the tax refunds and these recovery mechanisms have partially mitigate the regulatory lag following the expiration of its multi-year rate plan in 2017 and the increase in its operational and maintenance (O&M) expenses in 2018 (+3.5% compared to 2017) and 2019 (+4.3% for the nine month period ended September 2019 compared to same period ended in September 2018). Higher vegetation management expenses to mitigate wildfire risk contributed to these increase in costs.

In October 2019, PSCO revised its initial May 2019 filed request for an increase in its electric base rates. In the current proceeding, PSCO is seeking a net increase in base rates of \$108 million (or around \$104 million including subsequent identified corrections also considered in the intervenors' recommendations). The requested net increase considers certain forecasted plant additions through June 2019, a 10.20% RoE and an equity layer of 55.61% (calculated using a 13-month average equity ending August 2019 as well as inclusion of short-term debt in the capital structure and CWIP in rate base).

PSCO's requested increase is net of about \$249.4 million of revenues previously collected through riders that the utility is proposing to move into base rates. Key intervenors have recommended the of transfer at least 86% of these rider revenues to base rates. However, their recommendations regarding the overall net change to PSCO's base rates differ significantly from the utility's request. Recommendations range from the Colorado Energy Consumers' proposal to implement a net rate reduction of \$26.1 million to the Staff's recommendation to increase net rates by only \$7.7 million. Key drivers of the difference include the recommended RoE (ranging between 8.9% and 9%) and equity layers (ranging between 54.27% and 55.57%).

We understand that the utility and the Staff both recommended an equity layer of 55.6% (including short-term debt in the capital structure and construction work in progress in rate base) which was approved in the CPUC's recent verbal decision in December 2019. The final order is still pending, expected in January 2020, including the final impact on rates. However, we understand that rates will be based on a test year ending August 2019 and an authorized a RoE of 9.3%. We acknowledge that this RoE would be higher than the intervenors' recommended returns but it is below the utility's previously authorized return of 9.83% (see Exhibit 4), a credit negative.

That said, the increase in the authorized equity layer which is similar to the allowed equity layer of PSCO's small steam operations (settled rates approved last September) should help the utility to mitigate the impact on the credit metrics of the lower RoEs.

Environmental, social and governance considerations

Environmental considerations incorporated into our credit analysis for Xcel and PSCO factor in the group's goal to reduce carbon emissions by 80% from 2005 levels by 2020, and to achieve a 100% reduction in carbon emission by 2050. We also consider PSCO's coal ash environmental requirements related to groundwater as well as the clean-up expenses of its natural gas distribution operations related to manufactured gas plants (MGP). Social risks incorporated into our credit analysis of PSCO are primarily related to health and safety as well as demographic and societal trends along with customer and regulatory relations. Corporate governance considerations include financial policy and we note that a strong financial position is an important characteristic for managing environmental and social risks amid PSCO's significant capital expenditure (capex) program.

According to Xcel's November 2019 investment program, PSCO plans to invest total of \$7.7 billion over the 2020-2024 period. In absolute terms the utility's capex program remains elevated compared to the around \$6.2 billion invested during the 2014-2018 period. However, we note certain moderation in relative terms as we calculate that on average, PSCO's annual capital outlays will represent around 2.0x the utility's depreciation expense during the 2020-2024 period (compared to nearly 2.7x during the 2014-2018 period).

Exhibit

PSCO's rate base and 2012-2024 historical and projected capital expenditure plan

\$ in billions



Source: Xcel Energy Inc.

Investments in PSCO's electric operations account for the majority of its planned capex (around 70%) with the majority earmarked for the utility's distribution (33%) and transmission (24%) operations.

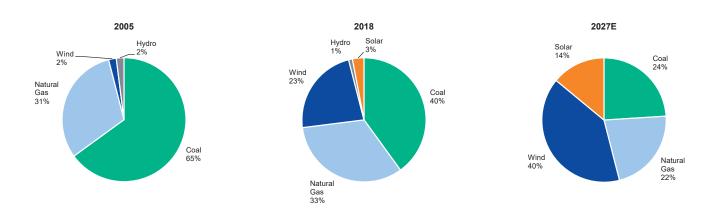
Following the completion of the 600 MW Rush Creek project, PSCO's first owned wind farm, last year, the utility's renewables investments will approximate \$160 million next year largely to complete the 500 MW Cheyenne Ride wind-farm. The project's planned commissioning in 2020 will allow it to quality to receive 100% of the value of available Production Tax Credits (PTC). This wind-farm is part of PSCO's \$1 billion Colorado Energy Plan (CEP), approved in August 2018. The CEP also foresees the construction of transmission lines to support its renewables and the acquisition of 383 MW combustion turbine capacity in 2022. In addition, PSCO will also enter into power purchase agreements (PPA) for over 1.3 gigawatt wind and solar capacity to be built by third parties. Some of these winning bids include a combination of solar resources and battery storage (275M), which illustrates that the cost of this technology is also rapidly declining.

Within the Xcel group, PSCo has undertaken most of the group's recent coal-plant retirements or conversions to natural gas, including Cherokee (717 MW), Arapahoe Unit 3 (144 MW) and Valmont Unit 5 (184 MW), between 2011 and 2017. By 2025, PSCO's coal-fired installed capacity will aggregate 1,238 MW (on an ownership adjusted basis) compared to over 3,000MW before 2011. According to

its CEP, PSCo will retire 660 MW at the coal-fired Comanche plant (Unit 1 in 2022 and Unit 2 in 2025.) while the retirement of Craig-Craig's Unit 1 is expected also in 2025 (PSCO owns 10% or 82 MW). The combination of these retirements and the addition of owned and purchased solar and wind resources explain the material increase in the renewables total contribution (54%) to PSCO's energy supply expected in 2027 (2018: 27%).

Exhibit

2005-2027 planned development of PSCO's energy mix



Source: Xcel Energy Inc.

Units 1 and 2 of the Comanche plant are more than 35 years old and we assume their remaining rate base is relatively small, and largely reflects environmental compliance investments. The CPUC has approved the recovery of the plant's remaining rate base, which also contributes to our view that the utility's exposure to carbon transition risk is moderate, a credit positive.

The retirement of these facilities has reduced PSCO's fixed costs, which along with the lower fuel costs associated with renewable resources and the flow back to customers of PTCs, will help the utility to limit the impact from its material investments on its customers' bills. This is credit positive, particularly in an environment of flat to declining electric sales growth (for PSCO nine months ended September 2019 was-0.5% on a weather adjusted basis) amid lower usage per customer. Importantly, we understand that PSCO's electric decoupling mechanism for its residential and small C&I customers will become effective upon implementation of its pending rate case (early 2020). This mechanism will mitigate the impact of demand side management, distributed generation and other energy saving programs on PSCO's sales volumes, a credit positive.

Financial metrics have declined

Exhibit 1 and 2 shows a deterioration in PSCO's credit metrics in 2018 and for the last twelve month period ended September 2019. Although PSCO's cash flows benefit from several riders, key factors contributing to this deterioration in financial metrics include the utility's increased O&M expenses along with the incremental debt to fund its material investments amid the expiration of bonus depreciation and the aforementioned ADIT refunds, upon implementation of federal tax reform in December 2017.

The pending final rates (expected early January 2020) will be key to allow PSCO to record credit metrics that remain adequate for the credit, including a ratio of CFO pre-W/C to debt that hovers around 20%.

Liquidity analysis

Like its sister companies, PSCO has its own separate committed credit facility scheduled to mature in June 2024. This back-stops its \$700 million CP-program (Prime-2). At the end of September 2019, the utility had \$328.1 million of cash on hand an \$691 million available under this credit facility (letters of credit outstanding: \$9 million). The facility provides for same day funding and borrowings are not subject to conditionality. We anticipate the utility will be able to continue to comfortably comply with the only financial covenant embedded in the facility, namely a total debt to capitalization ratio below 65%.

PSCO also participates in a regulated money pool with its sister companies, NSP-Minnesota and SPS. As of September 2019 and year-end 2018, PSCO's \$250 million borrowing limit was fully available. This money pool allows for short-term loans among those utility subsidiaries and allows for short-term loans from Xcel to the utilities. However, it does not permit loans from the utilities to Xcel.

Next year, we anticipate that the utility will fund its capital requirements, including investments (2020: \$1.4 billion), largely with internally generated cash flows (LTM September 2019: \$1.0 billion) and a combination of internal and external sources including parent contributions and short- and long-term debt. In 2019, PSCO issued \$950 million in first mortgage bonds: \$400 million due September 2049 and \$550 million due March 2050. PSCO's next debt maturity consists of \$400 million in first mortgage bonds due in November 2020.

In addition, we anticipate that Xcel will continue to manage PSCO's dividends (LTM September 2019: \$399 million) and its equity contributions to the utility (LTM September 2019: \$638 million) to maintain its regulatory capital structure (pending regulatory decisions). In January 2019, Xcel contributed \$150 million across the four pension plans (PSCO's contribution: \$43 million; 2017: \$22 million). In July 2019, Xcel also made a \$4.0 million contribution to the Xcel Energy Inc. Non-Bargaining Pension Plan (South), of which \$2.7 million was attributable to PSCO.

Rating methodology and scorecard factors

Moody's evaluates PSCO's financial performance relative to the standard business risk grid under the Regulated Electric and Gas Utilities rating methodology published in June 2017. As depicted in the grid below, the company's indicated rating under this methodology based on historical as well as projected average key credit metrics is A3, the same as its assigned senior unsecured rating.

Exhibit®
Public Service Company of Colorado

Regulated Electric and Gas Utilities Industry Grid [1][2]	Curre LTM 9/30		Moody's 12-18 Month Forward View As of Date Published [3]		
Factor 1 : Regulatory Framework (25%)	Measure	Score	Measure	Score	
a) Legislative and Judicial Underpinnings of the Regulatory Framework	А	Α	A	Α	
b) Consistency and Predictability of Regulation	А	А	A	Α	
Factor 2 : Ability to Recover Costs and Earn Returns (25%)					
a) Timeliness of Recovery of Operating and Capital Costs	Aa	Aa	Aa	Aa	
b) Sufficiency of Rates and Returns	Baa	Baa	Baa	Baa	
Factor 3 : Diversification (10%)	<u>.</u>	-			
a) Market Position	А	Α	A	Α	
b) Generation and Fuel Diversity	Baa	Baa	Ваа	Baa	
Factor 4 : Financial Strength (40%) [4]	·				
a) CFO pre-WC + Interest / Interest (3 Year Avg)	6.2x	Aa	5.5x - 6x	Α	
b) CFO pre-WC / Debt (3 Year Avg)	21.3%	Baa	20% - 22%	Baa	
c) CFO pre-WC – Dividends / Debt (3 Year Avg)	14.6%	Baa	12% - 15%	Baa	
d) Debt / Capitalization (3 Year Avg)	38.9%	Α	35% - 40%	Α	
Rating:					
Scorecard-indicated Outcome Before Notching Adjustment		A3		A3	
HoldCo Structural Subordination Notching					
a) Scorecard-indicated Outcome		A3		A3	
b) Actual Rating Assigned		A3		A3	

[1] All Matios Are Based In Adjusted Inancial Mata And Incorporate Moody's Clobal Istandard Adjustments In Inancial Corporations.

[2]AsBofB9/30/2019(L)

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[4] Standard Bisk Brid For Inancial Strength.

Source: Moody's Financial Metrics

Appendix

Exhibit 199

Peer Comparison [1]

	Public Servic	e Company of Cole	orado	lo Black Hills Power, Inc.		Indiana Michigan Power Company			PacifiCorp			
	(P)A3 Stable		A3 Stable		A3 Stable		A3 Stable				
	FYE	FYE	LTM	FYE	FYE	LTM	FYE	FYE	LTM	FYE	FYE	LTM
(in US millions)	Dec-17	Dec-18	Sept-19	Dec-17	Dec-18	Sept-19	Dec-17	Dec-18	Sept-19	Dec-17	Dec-18	Sept-19
Revenue	\$4,043	\$4,086	\$4,218	\$288	\$298	\$301	\$2,121	\$2,371	\$2,343	\$5,237	\$5,026	\$5,073
EBITDA	\$1,421	\$1,442	\$1,439	\$123	\$119	\$124	\$680	\$796	\$827	\$2,300	\$2,109	\$2,187
CFO Pre-W/C / Debt	22.7%	18.5%	20.5%	23.8%	23.9%	21.1%	22.0%	22.4%	22.6%	23.0%	21.8%	18.9%
CFO Pre-W/C – Dividends / Debt	15.9%	11.9%	13.6%	12.3%	14.9%	21.1%	18.1%	18.7%	20.3%	14.9%	15.7%	16.1%
Debt / EBITDA	3.5x	3.9x	4.0x	3.0x	3.4x	3.3x	4.8x	4.1x	4.1x	3.2x	3.5x	3.6x
Debt / Capitalization	40.1%	41.7%	39.8%	42.1%	43.6%	42.2%	50.8%	50.3%	49.2%	42.2%	41.5%	42.2%
EBITDA / Interest Expense	7.1x	6.5x	5.7x	5.4x	5.3x	5.4x	5.1x	5.3x	6.0x	6.0x	5.6x	5.9x

Exhibit 10

Cash flow and credit metrics [1]

CF Metrics	Dec-15	Dec-16	Dec-17	Dec-18	LTM Sept-19
As Adjusted					
FFO	1,180	1,141	1,163	1,084	1,168
+/- Other	(23)	28	(36)	(33)	12
CFO Pre-WC	1,157	1,169	1,127	1,051	1,181
+/- ΔWC	96	11	74	(54)	(169)
CFO	1,253	1,179	1,201	997	1,012
- Div	331	337	334	375	399
- Capex	996	1,108	1,445	1,566	1,474
FCF	(74)	(266)	(578)	(944)	(861)
(CFO Pre-W/C) / Debt	26.2%	24.8%	22.7%	18.5%	20.5%
(CFO Pre-W/C - Dividends) / Debt	18.7%	17.7%	15.9%	11.9%	13.6%
FFO / Debt	26.7%	24.2%	23.4%	19.0%	20.3%
RCF / Debt	19.2%	17.1%	16.7%	12.4%	13.4%
Revenue	4,164	4,048	4,043	4,086	4,218
Cost of Good Sold	1,748	1,622	1,594	1,592	1,676
Interest Expense	180	184	201	221	251
Net Income	517	539	486	461	443
Total Assets	14,157	14,887	16,026	17,349	18,844
Total Liabilities	9,075	9,657	10,247	11,116	11,904
Total Equity	5,082	5,230	5,779	6,233	6,940

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Ratings

Exhibit@1

Category	Moody's Rating
PUBLIC SERVICE COMPANY OF COLORADO	
Outlook	Stable
Issuer r ating	A3
First Mortgage Bonds	A1
Senior&ecured&helf	(P)A1
SrIJUnsec Bank IC redit IF a cility	A3
Senior Insecured 5 helf	(P)A3
Commercial Paper	P-2
PARENT: XCEL ENERGY INC.	
Outlook	Stable
Issuer r ating	Baa1
SrIUnsecBankICreditIFacility	Baa1
Senior Insecured	Baa1
Subordinate \B helf	(P)Baa2
Pref. Shelf	(P)Baa3
Commercial Paper	P-2

Source: Moody's Investors Service

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RETAIL@NVESTORS@TO@JSEBMOODY'S@REDIT@RATINGS@RBMOODY'S@UBLICATIONS@WHENDMAKING@N@NVESTMENT@SCISION.@FIN@OUBT@YOUGHOULD@CONTACT
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