

CREDIT OPINION

22 June 2022



Contacts

Clifford J Kim +1.212.553.7880 VP-Sr Credit Officer clifford.kim@moodys.com

A. J. Sabatelle +1.212.553.4136 Associate Managing Director angelo.sabatelle@moodys.com

Jim Hempstead +1.212.553.4318 MD - Global Infrastructure & Cyber Risk james.hempstead@moodys.com

CLIENT SERVICES

Americas

1-212-553-1653 Asia Pacific 852-3551-3077 81-3-5408-4100 Japan **EMEA** 44-20-7772-5454

Seattle (City of) WA Electric Enterprise

Update Following Affirmation of Aa2 and Stable Outlook

Summary

Seattle (City of) WA Electric Enterprise's (Seattle City Light or SCL) credit profile considers the wealthy and diverse service area covering the City of Seattle (UTGO Aaa/stable) and surrounding communities, SCL's historical willingness to raise rates when necessary, and credit supportive financial policies. Other credit supportive factors are SCL's ownership of low-cost hydro generation, long-term power supply contract with Bonneville Power Administration (BPA, Aa2/positive) and SCL's participation in the City of Seattle's consolidated cash pool.

The Aa2 rating also captures long term credit challenges including declining electric load growth relative to the service area's historically strong economic growth, system average rates above the regional investor owned utility and state average, and SCL's rising debt burden that funded its historically large capital improvement plan (CIP). Also considered in the rating are hydrology risk, wholesale price exposure, and financial metrics historically in the 'A' category with Moody's adjusted debt service coverage ratio (DSCR) averaging at 1.64x and days cash on hand averaging at 141 days over the last year 3 years.

For 2021, Moody's adjusted DSCR for SCL improved to 1.71x compared to 1.51x in 2020 given a 5.1% increase to electricity demand. The unexpectedly large increase in demand is attributed to a combination of a stronger regional economy and a cold winter. As of April 2022, Seattle's unemployment rate declined to 1.6% compared 3.8% a year prior and is well below the US average of 3.6%. Given the improved economy and expiration in April 2022 of the citywide executive order preventing disconnects, the utility plans to resume its full collection process in August 2022. We expect this will help address the elevated amount of overdue receivables totaling around \$63 million as of year-end 2021, which is around double the amount in 2019.

Also, in 2021, SCL revised its Rate Stabilization Account (RSA) policy, a material credit negative. SCL moved \$60 million from the overfunded DSRA to the operating account that was a key driver of 2021's improved days cash on hand. SCL plans to contribute additional funds into the DSRA to ensure sufficient funding when the surety policy expires in 2029. The RSA policy revisions include lower required thresholds of \$75 million (\$90 million originally) before a retail rate surcharge is implemented, lower threshold of less than \$25 million (\$50 million originally) before city council action is required to replenish the reserve over a 24-month period (12 months originally), and lower frequency of possible rate surcharges with any implementation limited to a semiannual basis instead of quarterly. While the weakening of the RSA is credit negative, we also understand that SCL's latest draft strategic plan incorporates a target to have 130 days cash on hand, which is slightly lower than its

five-year historical average of 138 days cash on hand and within our expected range for the utility. Thus, the weakening of the RSA is somewhat moderated by the utility's target to maintain liquidity generally commensurate with its past.

Looking forward, SCL expects to have above average financial performance in 2022. Moody's calculates an adjusted DSCR at around 1.90x and 190 days cash on hand, thanks to better hydrology conditions and higher wholesale power prices. As a result, net wholesale revenues in 2022 should double compared to 2021. That said, SCL's near-term financial boost will be temporary. Longer term, the utility is expected to maintain financial metrics consistent with historical financial performance and commensurate with its financial policies and goals, including a DSCR averaging at least 1.50x and liquidity averaging around 130 days cash on hand.

Credit strengths

- » Strong and diverse service area anchored by the City of Seattle
- » Demonstrated willingness to set rates
- » Supportive financial policies
- » Ownership of low cost hydro and contracted power from BPA
- » Liquidity support through the City of Seattle's consolidated cash pool

Credit challenges

- » Decoupling of retail electricity demand from economic growth
- » Large, ongoing capital spending program
- » Hydrology and wholesale market risk
- » 'A' category financial metrics
- » Average system rates above state average

Rating outlook

The stable outlook considers the strong local economy and our expectation that the utility will maintain liquidity averaging around 130 days cash on hand adjusted DSCR averaging of 1.50x or higher over the long term.

Factors that could lead to an upgrade

» SCL's rating could improve if Internal liquidity comfortably exceeds 200 days cash on hand and adjusted DSCR exceeds 2.0x on a sustained basis.

Factors that could lead to a downgrade

» SCL's rating could be downgraded if its financial policies are materially weakened, willingness to increase rates diminishes, the underlying regional economy sustains a severe and sustained deterioration or liquidity support through the City of Seattle's cash pool is restricted. Furthermore, the utility's rating could also be downgraded if internal liquidity drops below 90 days cash on hand or Moody's adjusted DSCR drops below 1.50x on a sustained basis.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on https://ratings.moodys.com for the most updated credit rating action information and rating history.

Key indicators

Exhibit 1

	2017	2018	2019	2020	2021
Total Sales (mWh)	13,103,832	12,403,350	12,439,054	12,247,934	12,786,249
Debt Outstanding (\$'000)	2,345,500	2,491,600	2,567,100	2,533,500	2,587,300
Debt Ratio (%)	58.4	57.2	54.6	51.8	50.9
Adjusted Debt Ratio (%)	76.2	74.1	70.2	69.7	69.2
Total Days Cash on Hand (days)	130	137	153	113	156
Fixed Obligation Charge Coverage (if applicable)(x)	1.60	1.55	1.70	1.51	1.71

Source: Moody's Investor Service, SCL's audited financials

Profile

Seattle City Light is a department of the City of Seattle, which operates a utility system that primarily generates and delivers electricity to approximately 485,155 customers in the City of Seattle and several surrounding communities under franchise agreements. The City of Seattle is in the western part of Washington State and is a commercial hub for the Pacific Northwest. SCL's service area is comprised of 131 square miles and has a population of approximately 941,000.

Detailed credit considerations

Revenue Generating Base

Strong and diversified service area in the economic heart of the region

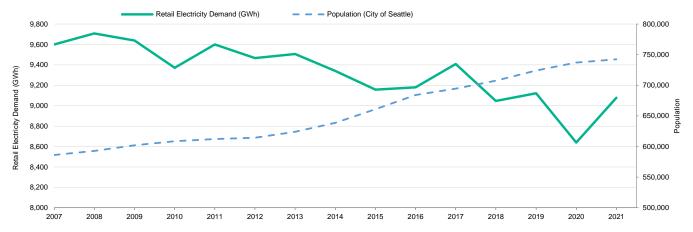
The utility derives around 90% of its revenues from the sale of electricity to retail customers in the City of Seattle and surrounding communities, which has 941,000 residents. Service in the surrounding communities is provided under franchise agreements. SCL's rate process is governed by the city council and is not regulated by the State regulatory board.

The City of Seattle is located in King County, WA (UTGO Aaa/stable), which is the economic heart of the Pacific Northwest region. The City of Seattle has socioeconomic figures that are amongst the strongest in the country with estimated median family income at 172% of the U.S. national average. Software development and aircraft manufacturing are key components of the local economy, and the area serves as the headquarters or major operating base to some of the world's most well-known international corporations, including Amazon (A1 stable), Boeing (Baa2 negative), Microsoft (Aaa stable), and Starbucks (Baa1 stable).

For 2021, retail electricity demand rebounded by 5.1% compared to 2020 and was similar to demand in the 2018-2019 period. A combination of a stronger regional economy and a cold winter drove the increased demand. As of April 2022, Seattle's unemployment rate declined to 1.6% compared 3.8% a year prior and is well below the US average of 3.6%. Given the improved economy and expiration of the citywide executive order preventing disconnects in April 2022, the utility plans to resume its full collection process in August 2022, which we expect will help address the elevated amount of overdue receivables totaling around \$63 million as of year-end 2021, which is around double the amount in 2019.

While SCL's service area is economically strong, the utility continues to face a long term challenge of a growing service area that drives a large capital program but declining electricity demand (see Exhibit 2 and 3).

Exhibit 2
Seattle's Electricity Demand Has Decoupled From Economic and Population Growth

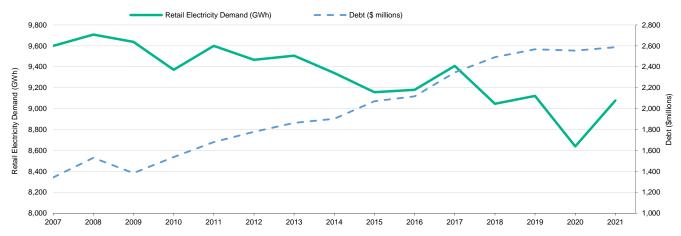


Note: Electricity demand steeply drop in 2020 due to the negative economic impact of the COVID19 outbreak followed by a sharp rebounded in demand in 2021 as the economy recovered.

Source: Census Bureau and Moody's Investors Service

Exhibit 3

Debt has grown even as retail electricity sales have declined over time although the debt growth trajectory has moderated in recent years



Source: Moody's Investors Service and Audited Financial Statements

The decoupling between economic growth is caused by energy efficiency initiatives that ultimately pressures retail revenues. SCL expects electrification of transportation will be an important source of new demand that contributes to demand flattening by the mid 2020s and growing by the 2030s. These factors highlight the continued importance of the utility's willingness to raise rates to ensure expected financial performance.

Ongoing demonstrated willingness to raise rates remains a key credit support anchor

Seattle's city council has shown a demonstrated willingness to use its authority to raise retail rates to support SCL's financial condition and the city's willingness is considered an essential credit support factor to ensure that the utility's financial performance is according to expectations. Typically, the utility has implemented annual base rate increases with the most recent comprising of a 3.9% increase as of January 1, 2022.

Additionally, formal policies supportive of SCL's financial health include setting rates to achieve 1.80x DSCR (according to SCL's calculations that uses net revenues excluding city taxes), funding 40% of its capital spending with operating cash flow, and the Rate Stabilization Account (RSA). On the latter, SCL weakened the RSA policy in 2021 to include lower required thresholds of \$75 million (\$90 million originally) before a retail rate surcharge is implemented, lower threshold of less than \$25 million (\$50 million originally)

before city council action is required to replenish the reserve over a 24 month period (12 months originally), and lower frequency of possible rate surcharges with any implementation limited to a semiannual basis instead of quarterly (see Exhibit 4 below).

Exhibit 4
RSA policy was weakened in 2021

Prior	Current	
\$100 million	\$100 million	
\$125 million	\$125 million	
Quarterly	Semi annual (Jan or June)	
Below \$90 million, 1.5% surcharge	Below \$75 million, 2.0% surcharge	
Below \$80 million, 3.0% surcharge	Below \$50 million, 4.0% surcharge	
Below \$70 million, 4.5% surcharge	None	
RSA reaches \$100 million	RSA reaches \$100 million	
Below \$50 million, city council action required to bring RSA balance to \$100 million over 12 months	Below \$25 million, city council action required to bring RSA balance to \$100 million over 24 month	
	\$100 million \$125 million Quarterly Below \$90 million, 1.5% surcharge Below \$80 million, 3.0% surcharge Below \$70 million, 4.5% surcharge RSA reaches \$100 million Below \$50 million, city council action required to	

Source: Seattle City Light

While the weakening of the RSA is credit negative, we also understand that SCL's latest draft strategic plan incorporates a target to have 130 days cash on hand, which is slightly lower than its five-year historical average of 138 days cash on hand and within our expected range for the utility. Thus, the weakening of the RSA is somewhat moderated by the utility's target to maintain liquidity generally commensurate with its past.

While the utility's long history of implementing needed rates increases is credit positive, the extent of the rate increases caused in part by the utility's large capital program has resulted in the diminishing of SCL's rate competitiveness. Based on 2020 EIA information, the utility average system rate is above the main investor owned utility in the area and materially above the adjusted state weighted average.

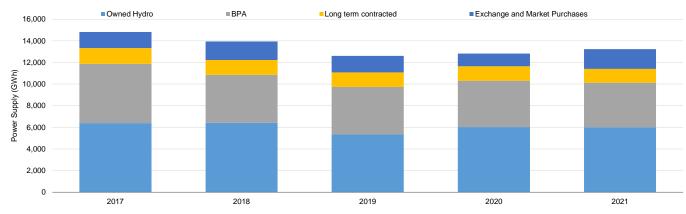
Looking forward, we expect the utility will implement annual rate increases to ensure financial metrics commensurate with its stated goals and policies.

Financial Operations and Position

Hydro dependent power supplies

Typically, SCL receives approximately 40% to 45% of its power from owned hydro generation, 30% to 35% from BPA, and the remainder from other sources such as the wholesale market, exchange agreements, and other various long-term contracts (see exhibit 5 below).

Exhibit 5 **Hydro power dominates power supply**



Source: Issuer

Owned generation totals 1,872 MW of nameplate hydro dams and primarily consists of the 1,022 MW Boundary hydro project (Boundary Project) and the 802 MW Skagit hydro projects (Skagit Projects). The Boundary Project is located in Pend Oreille County in Washington State and its FERC license expires in 2055. The Skagit Projects consist of three hydro projects that operate as one system since they are located on the same ten-mile section of the Skagit River. The Skagit projects' FERC license expires in 2025 and relicensing remains in process. SCL also has smaller hydro facilities totaling 48 MW. While the hydro dams provide zero carbon emitting power, it also represents a volatile supply source given the variability of regional hydrology.

SCL also has a long-term contract with BPA that provides firm power (Block) shaped through the year. SCL also has long-term agreements with other hydro projects such as the Priest Rapids project and long-term agreements with wind, landfill and biomass projects that contribute to Washington State's renewable portfolio standards. SCL meets the state renewable requirements primarily through the 'no load growth' alternate compliance option. Additionally, the utility's portfolio mix positions SCL to meet the State's requirement to supply 80% of its retail sources with non-carbon emitting power by 2030 which rises to 100% by 2045.

Growth of large capital spending plan has flattened

Through 2018, SCL's 6-year forecasted capital program had grown steadily on a rolling basis from \$1.6 billion for the 2010-2015 period to peaking at \$2.5 billion for the 2018 to 2023 period (see Exhibit 6). Since 2019, the utility has been able to modestly reduce the size of its capital spending program through a combination of project cancellations and the deferral of noncritical work, which has led to the overall moderation of SCL's debt growth since 2019.

Under SCL's latest capital expending plan, the largest focus of its \$2.37 billion capital program continues to remain on the distribution system at around \$1.34 billion, which includes replacement of underground and overhead equipment. Forecasted power supply related expenditures total \$400 million and include environmental mitigation and plant improvements.

2.400 2 200 2.000 \$ Millions 1,800 1,400 1.200 1 000 2010-2015 2011-2016 2012-2017 2013-2018 2014-2019 2015-2020 2016-2021 2017-2022 2018-2023 2019-2024 2020-2025 2021-2026 2022-2027 Six Year, Forward Looking Capital Plan

Exhibit 6
Growth to Utility's Rolling 6-Year Capital Program Has Flattened Since 2019

Source: Official Statements

SCL plans to fund these expenditures approximately 49% with debt, 40% from operations and the remainder from capital contributions. SCL's ability to control the size of its capital program remains an important driver of managing its debt burden especially as electricity demand has decoupled from economic growth as previously highlighted in Exhibits 2 & 3.

Financial performance

'A' category financial metrics

For 2021, the utility financial performance improved relative to 2020 with Moody's adjusted debt service coverage ratio (DSCR) of 1.71x and liquidity of 156 days cash on hand compared to DSCR of 1.51x and liquidity of 113 days cash on hand in 2020. Higher retail revenue was the major driver of the improvement based on higher retail demand. A combination of a stronger regional economy and a cold winter drove the increased demand.

Looking forward, SCL expects to have above average financial performance in 2022. Moody's calculates an adjusted DSCR at around 1.90x and 190 days cash on hand, thanks to better hydrology conditions and higher wholesale power prices. As a result, net wholesale revenues in 2022 should double compared to 2021. That said, SCL's near-term financial boost will be temporary. Longer term, the utility is expected to maintain financial metrics consistent with historical financial performance and commensurate with its financial policies and goals, including a DSCR averaging at least 1.50x and liquidity averaging around 130 days cash on hand.

Liquidity

SCL's standalone liquidity consists of unrestricted funds and balances in the RSA account that equaled 156 days cash on hand at year-end 2021, which was stronger than 2020's 113 days cash on hand. The increase was due to the transfer of \$60 million from the overfunded DSRA and to a lesser extent improved financial performance in 2021. SCL plans to once again contribute additional funds into the DSRA to ensure sufficient funding when the surety policy expires in 2029.

Supplementing the utility's internal liquidity is its participation in the City of Seattle's consolidated cash pool. On the former, City of Seattle's consolidated cash pool, totaled \$1.62 billion net of enterprise funds (\$2.8 billion gross) as of year end 2021. Seattle's Director of Finance is authorized to make loans to Seattle's various enterprise funds including SCL for up to 90 days. For loans beyond the 90-day period, city council approval is required. Loans bear interest at the cash pool's rate of return. The City of Seattle's willingness to provide liquidity support to SCL via the cash pool has been demonstrated on several occasions, including during the 2001 power crisis when SCL borrowed up to \$107 million from the cash pool and again in 2010 when SCL borrowed \$14 million.

Debt and other liabilities

Legal security

SCL's bonds benefit from a pledge of the net revenues of SCL and covenants require that the City of Seattle set rates to fund debt service, operating costs and other costs to maintain the system. Moody's considers the rate covenant to be weaker than typical for similar issuers. For additional indebtedness, SCL is required to meet a 1.25x DSCR based on net system revenues incorporating draws from and deposits into the RSA. Furthermore, the bonds have a debt service reserve for all parity bonds sized to the lesser of maximum annual debt service or reasonably required reserve or replacement fund per the tax code. The reserve is currently sized to 125% of average annual debt service (excluding variable rate debt). Post issuance, the reserve is expected to be funded with a \$71.5 million surety from Assured Guaranty Municipal Corp (insurance strength: A2-stable) and \$101.5 million of cash. The previous overfunded balance was distributed to the utility's operating fund in 2021.

Debt structure

Most of SCL's debts are traditional fixed rate obligations that fully amortize over time. The only exception is around \$190 million variable rate debt. There is no credit enhancement such as a letter of credit supporting the variable rate debt.

Debt-related derivatives

SCL does not have any debt related derivatives.

Pensions and OPEB

SCL participates in the City of Seattle's single-employer defined-benefit public employee retirement plan (SCERS). Moody's calculates the utility's adjusted net pension liability (ANPL) for FY 2021 relating to its proportionate share of SCERS to be around \$894 million, compared to the utility's reported proportionate share of the net pension liability of around \$200 million. Moody's adjusts the reported pension liabilities of entities that report under governmental accounting standards, to enhance comparability across rated issuers. Under governmental pension accounting, liabilities are discounted using an assumed rate of investment return on plan assets. Under our adjustments, we value liabilities using a market based discount rate for high quality taxable bonds, a proxy for the risk of pension benefits.

ESG considerations

SEATTLE (CITY OF) WA ELECTRIC ENTERPRISE's ESG Credit Impact Score is Positive CIS-1

Exhibit 7

ESG Credit Impact Score



Source: Moody's Investors Service

Seattle (City of) WA Electric Enterprise's (Seattle City Light or SCL) ESG Credit Impact Score is positive (**CIS-1**). Its ESG attributes are considered to have a positive impact on the current rating. SCL's **CIS-1** reflects moderate environmental risks, neutral-to-low social risks, and positive exposure to governance risks.

Exhibit 8 ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

Seattle City Light's moderate environmental risk (**E-3** issuer profile score) largely reflects highly negative exposure to physical climate risks mostly in the form of volatile weather patterns and moderately negative exposure to water management that stems from the inherent risks to relying on 1.9 GW of hydroelectric power plants for around 40% to 45% of its power supplies and whose power output is subject to regional hydrology conditions. These are partially offset by positive carbon transition exposure since the utility has most of its power supplies coming from carbon emissions free resources. These considerations are balanced by neutral-to-low risk for waste & pollution and natural capital.

Social

SCL's exposure to social risks is neutral-to-low (**\$-2**) which considers neutral-to-low risk scores across customer relations, human capital, demographic & societal trends, health & safety, and responsible production.

Governance

The influence of governance risk (**G-1**) is positive which reflects a positive financial strategy and risk management given SCL's demonstrated access to the City of Seattle's multi-billion-dollar consolidated cash pool that serves as an important additional source of liquidity for the City of Seattle and all of its enterprises including SCL. This is partially offset by moderately negative board structures and policies that stems from full government control. These considerations are balanced by neutral-to-low risk scores for management creditability & track record, organizational structure, and compliance & reporting.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click here to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Rating methodology and scorecard factors

Moody's evaluates Seattle City Light under the US Public Power Electric Utilities with Generation Ownership Exposure methodology and the scorecard indicated outcome is Aa2, in line with its current Aa2 rating.

The grid is a reference tool that can be used to approximate credit profiles for public power with generation ownership in most cases. However, the grid is a summary that does not include every rating consideration. Please see US Public Power Electric Utilities with Generation Ownership Exposure for more information about the limitations inherent to grids.

Exhibit 9 SCL's methodology scorecard

Factor	Subfactor	Score	Metric
1. Cost Recovery Framework Within Service Territory		Aaa	
2. Wllingness and Ability to Recover Costs with Sound Financial Metrics		Aa	
3. Generation and Power Procurement Risk Exposure		А	
4. Competitiveness	Rate Competitiveness	Ваа	
5. Financial Strength and Liquidity	a) Adjusted days liquidity on hand (3-year avg) (days)	А	141
	b) Debt ratio (3-year avg) (%)	А	69.7%
	c) Adjusted Debt Service Coverage or Fixed Obligation Charge Coverage (3-year avg) (x)	А	1.64
eliminary Grid Indicated rating from Grid factors 1-5		Aa3	
		Notch	
6. Operational Considerations			
7. Debt Structure and Reserves		1.0	
8. Revenue Stability and Diversity		0.0	
rid Indicated outcome:		Aa2	

Source: Moody's Investor Service

© 2022 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved. CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. 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 OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE,

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

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.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

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 or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

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

Moody's Investors Service, Inc., 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 Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms 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 657AFSL 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 investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER

1331768

CLIENT SERVICES

 Americas
 1-212-553-1653

 Asia Pacific
 852-3551-3077

 Japan
 81-3-5408-4100

 EMEA
 44-20-7772-5454

