

## CREDIT OPINION

19 January 2024

# Update



#### **RATINGS**

### **Rochester Gas & Electric Corporation**

Domicile	United States
Long Term Rating	Baa1
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.

#### Contacts

Ryan Wobbrock +1.212.553.7104 VP-Sr Credit Officer ryan.wobbrock@moodys.com

Charlie Gibson +1.212.553.3974
Ratings Associate
charlie.gibson@moodys.com

Michael G. Haggarty +1.212.553.7172

Associate Managing Director
michael.haggarty@moodys.com

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

# **Rochester Gas & Electric Corporation**

Update following ratings affirmation

# **Summary**

Rochester Gas and Electric's (RG&E) credit profile reflects: 1) its low business risk transmission and distribution (T&D) operations, 2) a transparent rate framework with supportive cost recovery provisions and 3) improving regulatory support in New York.

RG&E's credit is constrained by extremely weak, declining financial metrics and the challenge of improving cash flow amid recessionary-type economic pressures, which we expect to occur given the company's 2023 rate case outcome. There is also uncertainty related to the future of its natural gas business (just under 22% of its rate base) and associated depreciation recovery as New York pursues a path toward reducing economy wide greenhouse gas emissions.

Exhibit 1
Historical CFO Pre-WC, Total Debt and CFO Pre-WC to Debt (\$ MM)



Source: Moody's Financial Metrics™

# **Credit strengths**

- » Low business risk transmission and distribution utility assets
- » Improving regulatory support
- » Operates under a revenue decoupling mechanism which helps to support fixed cost recovery, regardless of volumetric demand

# **Credit challenges**

- » Weak, declining financial metrics that we expect to improve over the next 12-18 months
- » Uncertainty surrounding state energy policy and path toward decarbonization
- » Small, concentrated operations

# **Rating outlook**

RG&E's stable outlook reflects improvements in the regulatory support for utility cost recovery and our expectation that its ratio of CFO pre-WC to debt will improve to at least 14% in the next 12-18 months and be sustained above that level thereafter.

# Factors that could lead to an upgrade

- » Additional material improvement in the credit supportiveness of RG&E's political and regulatory framework
- » Stronger financial metrics, such that its CFO pre-WC to debt ratio is 18% or higher on a sustained basis

# Factors that could lead to a downgrade

- » Inadequate revenue improvement from the recently approved rate case, such that CFO pre-WC to debt remains below 14%
- » Degradation in the relationship between the company and New York politicians or regulators

## **Key indicators**

Exhibit 2
Rochester Gas & Electric Corporation [1]

	Dec-19	Dec-20	Dec-21	Dec-22	LTM Sept-23
CFO Pre-W/C + Interest / Interest	4.3x	4.0x	4.0x	3.5x	2.0x
CFO Pre-W/C / Debt	23.4%	13.8%	10.6%	7.9%	4.0%
CFO Pre-W/C – Dividends / Debt	23.4%	10.2%	-5.3%	0.7%	-3.5%
Debt / Capitalization	46.0%	46.9%	48.3%	46.7%	42.4%

<sup>[1]</sup> All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. Source: Moody's Financial Metrics™

#### **Profile**

Rochester Gas & Electric (RG&E) is the third largest regulated electric and gas distribution utility subsidiary of Avangrid Networks, Inc. (Networks, not rated), a direct subsidiary of Avangrid (AGR Baa2 stable). The company's operations are regulated by the New York Public Service Commission (NYPSC) and the Federal Energy Regulatory Commission (FERC).

AGR is a publicly listed diversified utility holding company with the company's regulated operations accounting for approximately 80% of operating cash flow. AGR's primary owner is Iberdrola S.A. (Baa1 stable). Iberdrola owns an 81.6% stake in the company with the remaining 18.4% being held by the public. Iberdrola is a global diversified energy company primarily operating in Spain, the United Kingdom, the United States, Mexico and Brazil.

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.

#### **Detailed credit considerations**

## Improving regulatory support and a strong suite of cost recovery provisions

A significant aspect of RG&E's credit support is derived from the transparency of the NYPSC regulatory framework, which includes a suite of cost recovery mechanisms that allow the company to recover various costs on a timely basis. The most important features include a forward-looking test year (for most expenses and all planned capital expenditures), full recovery of purchased electric and natural gas costs and electric and gas revenue decoupling mechanisms (RDMs) for the majority of customers. Utilities within the state have often operated under multiyear rate plans, which allow recovery of projected capital and operating costs commensurate with the spend.

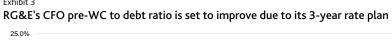
These features provide quick cost recovery that help to stabilize gross margin regardless of the volume sold to customers. This is an important feature, since they are needed to help keep the company's financial profile intact as the state and industry transitions to a more efficient and distributed network.

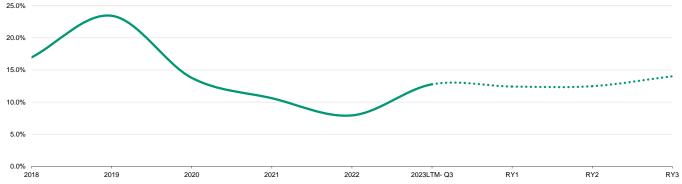
While New York rate outcomes had exhibited a degree of political influence during the 2020 time frame, recent rate orders have improved cash collections for key regulatory accounts, such as storm cost recovery. These provisions indicate that stakeholder relationships have improved since RG&E's last rate order in 2020, with increased political support, more predictable regulatory outcomes and better cost recovery. Continuation of this trend will be important as state utilities seek to improve and transform their service offerings amid the state's climate agenda goals.

#### Weak, declining financial metrics expected to improve dramatically

On 12 October 2023, the NYPSC approved a three-year rate plan, which allows levelized rate increases for RG&E and its affiliate New York State Electric and Gas (NYSEG, Baa1 stable) totaling approximately \$770 million through 30 April 2026. The rates were premised off a 48% equity capitalization and 9.20% allowed ROE (earnings sharing begins above 9.70%), which is higher than the 8.80% allowed ROE in the companies' previous rate plan from 2020. The new rates represent a compounded incremental increase, over current rates, of about 17% and 11% for RG&E's electric and gas businesses, respectively, by the end of the plan.

The NYPSC rate order will help RG&E obtain much-needed cash recovery of historical costs that have mounted since the COVID-19 pandemic. Current financial metrics are extremely weak, but we expect that revenue increases from the three-year rate plan will result in year-over-year improvement in cash flow to debt ratios, which will increase to at least 14% in the next 12-18 months and be sustained above that level thereafter. The exhibit below shows the expected trend, historical versus what the rate plan should yield on a rate year (RY) basis, which is not on a calendar year basis. RG&E's new rates became effective in November 2023.





Source: Moody's Financial Metrics and Moody's projections

Importantly, RG&E's adjusted cash flow to debt ratios will also benefit from certain NYPSC policies for approved energy efficiency expenditures that are reported as operating expenses under US GAAP. In New York, the NYPSC has authorized utilities to accumulate, amortize, and earn a return on certain energy efficiency expenditures, and treat them as rate based assets and investments. Therefore, we adjust our financial ratios to reflect these expenditures as capital investments, rather than as reductions to CFO. The magnitude of

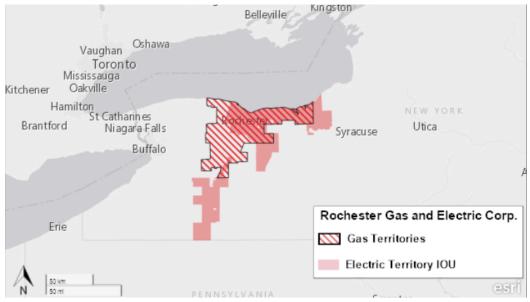
these expenditures is increasing, so reallocating energy efficiency spending from cash flow from operations to cash flow from investing activities will become more material to financial ratios going forward.

# Longer-term challenges face RG&E's gas business

Despite the transparent and formulaic nature of New York's regulatory practices and improved regulatory support, the state continues to design policy around reaching net zero emissions by 2050, which was outlined in 2019 legislation (i.e., Climate Leadership and Community Protection Act, CLCPA) and given further definition in the state's Climate Action Council's (CAC) latest Scoping Plan, released in December 2022.

New York is seeking to reduce economy wide greenhouse gas (GHG) emissions by 40% by 2030 and 85% by 2050 from 1990 levels, which will require a substantial reduction of fossil natural gas use and a strategic downsizing of the gas system. These goals threaten the long-term viability of RG&E's gas business, which stands to be more materially negatively impacted than affiliate NYSEG, since RG&E has a relatively larger gas business and its combined service territory does not have as high a degree of overlap (see a map of RG&E's service territory, below). This means that to the extent RG&E experiences losses in its gas business, it's likely not to be compensated for by growth in the electric business.

Exhibit 4
RG&E's vulnerability to electrification will be most prominent where there is no direct overlap between its gas and electric service territories.



Source: S&P Global Market Intelligence

As New York's decades-long effort continues, we expect ongoing modifications and rulemaking to ensue, as all stakeholders navigate the complex energy transition. The efforts to transform the state's energy economy will also include attention toward customer affordability and system reliability, which could necessitate a change to the pace of the energy transition. This will also provide some time for the NYPSC to respond with regulatory changes to support the necessary investments, while maintaining utility financial health (e.g., accelerated depreciation of assets where useful lives have been cut by the phase-out of fossil fuels).

#### **ESG** considerations

## RG&E's ESG credit impact score is CIS-3

Exhibit 5

#### ESG credit impact score



Source: Moody's Investors Service

RG&E's **CIS-3** credit impact score indicates that ESG considerations have a limited impact on the current credit rating with potential for greater negative impact over time. Physical climate risks such as storms and exposure to demographic and social trends, including the potential for a less supportive regulatory environment and customer affordability concerns, could weaken credit quality over the long-term.

Exhibit 6
ESG issuer profile scores



Source: Moody's Investors Service

#### **Environmental**

RG&E's **E-4** issuer profile score is driven by its geographic concentration in New York, which exposes the company to material and extreme weather events. This is somewhat counterbalanced by the company's asset profile as a regulated electric and gas transmission and distribution utility.

Cost recovery of storm events have consistently been a challenge for RG&E and its NYSEG affiliate; however, the NYPSC has provided for nearly double historical rate allowances for annual storm events (i.e., to about \$47 million and nearly \$8 million for Major Storms for NYSEG and RG&E, respectively, compared to about \$26 million and \$3 million, respectively, from the 2020 rate case). This will help to improve annual cash flow and limit short-term debt balances needed to bridge the difference between actual storm costs versus that which is set in rates.

#### Social

RG&E's **S-4** issuer profile score reflects demographic and societal trends to reduce GHG emissions in New York, which increases the risk for the company's gas distribution operations. The score also considers the fundamental utility risk that these trends could include social pressures or public concern around affordability, the utility's reputation or the environment. In turn, these pressures could result in adverse political intervention into utility operations or regulatory changes.

While the company's 2023 rate order evidenced improved stakeholder relationships and regulatory support for investment, we expect that these risks will continue to be prominent in years to come, since the company is seeking to significantly increase capital spending (for system resiliency and energy transition) and will need to recover higher operating expenses.

#### Governance

RG&E's **G-3** issuer profile score is driven by that of its parent, Avangrid. Avangrid's moderately negative governance risks (G-3 issuer profile score) stem from high management turnover which creates uncertainty around risk categories such as management credibility and track record. Avangrid's governance risks are also associated with having a majority owner (i.e., Iberdrola SA (Baa1 stable, **CIS-3**), which owns 81.6% of Avangrid; the remaining 18.4% is owned by public shareholders). These risks are weighed against the extensive industry experience of Avangrid's CEO as well as Iberdrola's supportive ownership practices, including access to its expertise for conducting major projects such as offshore wind. While we view Iberdrola as a supportive help to Avangrid's board and management, we regard Avangrid as having distinct long-term financial policies and practices.

ESG Issuer Profile Scores and Credit Impact Scores for RG&E are available on Moodys.com. In order to view the latest scores, please click <u>here</u> to go to the landing page for RG&E on MDC and view the ESG Scores section.

# Liquidity analysis

RG&E's internal liquidity consists of cash flow from operations, which we expect to be in the \$250 million range over the next 12 months, compared to around \$400 million of capital expenditures, resulting in roughly \$150 million of negative free cash flow before any upstreamed dividends to Avangrid. We expect RG&E's dividend policy to be driven by maintaining its regulatory allowed capital structure, which could mean that the utility pays no dividends, or even that Avangrid infuses equity into the utility to help fund capital needs and balance RG&E's growing debt.

Avangrid employs a centralized approach to managing its liquidity. To the extent possible given certain regulatory restrictions, Avangrid aims to concentrate its cash at the holding company and primarily conduct its short-term borrowings through Avangrid. The utilities optimize their cash balances through a virtual money pool arrangement. Under the terms of this agreement, utilities may lend to each other but not to their unregulated affiliates or parent. These terms meet a regulatory requirement set at the time of Avangrid's acquisition of the utility companies which prohibits them from lending to unregulated affiliates, including Avangrid. To the extent that additional liquidity is required, RG&E borrows under a bilateral loan agreement with Avangrid.

From an external liquidity standpoint, Avangrid and its regulated utility subsidiaries, including RG&E, are parties to a \$3.575 billion revolving credit facility that expires in November 2026. RG&E's minimum sublimit under the facility is \$200 million. We view management's incorporation of a minimum sublimit as helpful in providing visibility into what amounts of the shared facility are dependably allocated to the utility. Given Avangrid's centralized liquidity management philosophy and the virtual money pool of its utilities, we view the bank facility as effectively serving as a committed lender of last resort.

The bank credit facility does not include an ongoing material adverse change clause and the only financial covenant is a maximum allowed debt to capitalization ratio of 65%. We understand that, as of 30 September 2023, each company was in compliance with this covenant.

RG&E's next maturities include a \$152 million tax-exempt pollution control revenue bonds due June 2025 and \$450 million of first mortgage bonds due in June 2027.

#### Iberdrola also provides incremental liquidity to Avangrid

Aside from cash balances and utility dividends, Avangrid has access to both \$2.5 billion of the aforementioned shared \$3.575 billion facility. At 25 October 2023, there was \$1,386 million of commercial paper outstanding, backstopped by the facility.

Avangrid is also party to a notional cash pooling arrangement along with other Iberdrola subsidiaries. Parties to the agreement, including Avangrid, may deposit funds with or borrow from the pool, provided that the net balance of funds deposited or borrowed by all pool participants in the aggregate is not less than zero. This agreement provides Avangrid with a third avenue for liquidity, supplementing its access to the debt and equity capital markets.

Lastly, Avangrid also has a \$750 million credit facility with Iberdrola Financiacion, S.A.U., a company of the Iberdrola Group, which expires in June 2028.

# Rating methodology and scorecard factors

**Methodology Scorecard Factors** Rochester Gas & Electric Corporation

Regulated Electric and Gas Utilities Industry Scorecard [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	A	Α	A	А	
b) Consistency and Predictability of Regulation	Baa	Baa	Α	А	
Factor 2 : Ability to Recover Costs and Earn Returns (25%)	<del>.</del>				
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	Ва	Ba	Ba	Ва	
b) Generation and Fuel Diversity	N/A	N/A	N/A	N/A	
Factor 4 : Financial Strength (40%)					
a) CFO pre-WC + Interest / Interest (3 Year Avg)	3.3x	Baa	3x - 4x	Baa	
b) CFO pre-WC / Debt (3 Year Avg)	8.5%	Ba	13% - 15%	Baa	
c) CFO pre-WC – Dividends / Debt (3 Year Avg)	-1.1%	В	10% - 12%	Baa	
d) Debt / Capitalization (3 Year Avg)	41.7%	Α	40% - 44%	Α	
Rating:	<u>.</u>				
Scorecard-Indicated Outcome Before Notching Adjustment	•	Baa2		Baa1	
HoldCo Structural Subordination Notching	0				
a) Scorecard-Indicated Outcome		Baa2		Baa1	
b) Actual Rating Assigned	Baa1		Baa1		

<sup>[1]</sup> All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

<sup>[2]</sup> As of 9/30/2023(L)

<sup>[3]</sup> This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures. Source: Moody's Financial Metrics™

# **Appendix**

Exhibit 8
Illustrative: Adjustments for NYPSC-approved Energy Efficiency (EE) expenditures improves RG&E's ratios

RG&E	2023	2024	2025
CFO pre-WC before EE adjustment	\$ 200	\$ 210	\$ 250
NYPSC approved EE spending	\$ 26	\$ 31	\$ 35
CFO pre-WC after EE adjustment	\$ 226	\$ 241	\$ 285
Debt	\$ 1,800	\$ 1,900	\$ 2,000
CFO pre-WC to debt (pre-EE adj.)	11.1%	11.1%	12.5%
CFO pre-WC to debt (post-EE adj.)	12.6%	12.7%	14.3%

Source: NYPSC Case 18-M-0084 and Moody's Investors Service projections

Exhibit 9

Cash Flow and Credit Metrics [1]

CF Metrics	Dec-19	Dec-20	Dec-21	Dec-22	LTM Sept-23
As Adjusted					-
FFO	217	210	233	263	214
+/- Other	65	-18	-66	-127	-147
CFO Pre-WC	282	191	167	136	67
+/- ΔWC	-68	16	98	-72	-14
CFO	214	207	264	64	53
- Div	0	50	250	125	125
- Capex	367	352	430	349	401
FCF	-153	-195	-416	-410	-472
(CFO Pre-W/C) / Debt	23.4%	13.8%	10.6%	7.9%	4.0%
(CFO Pre-W/C - Dividends) / Debt	23.4%	10.2%	-5.3%	0.7%	-3.5%
FFO / Debt	18.0%	15.1%	14.8%	15.3%	12.8%
RCF / Debt	18.0%	11.5%	-1.1%	8.1%	5.3%
Revenue	893	872	958	1,180	1,160
Interest Expense	86	64	55	55	65
Net Income	89	104	97	117	80
Total Assets	4,049	4,368	4,654	5,008	5,202
Total Liabilities	2,960	3,162	3,386	3,512	3,420
Total Equity	1,089	1,206	1,268	1,495	1,782

<sup>[1]</sup> All figures and ratios are calculated using Moody's estimates and standard adjustments. Periods are Financial Year-End unless indicated. LTM = Last Twelve Months Source: Moody's Financial Metrics<sup>TM</sup>

Exhibit 10
Peer Comparison Table [1]

		& Electric Corpo	oration	Central Hudson Gas & Electric Corporation Baa1 (Stable)		Consolidated Edison Company of New York, Inc. A3 (Stable)			New York State Electric and Gas Corporation Baa1 (Stable)			
	FYE	FYE	LTM	FYE	FYE	LTM	FYE	FYE	LTM	FYE	FYE	LTM
(In US millions)	Dec-21	Dec-22	Sept-23	Dec-21	Dec-22	Sept-23	Dec-21	Dec-22	Sept-23	Dec-21	Dec-22	Sept-23
Revenue	958	1,180	1,160	796	1,018	1,071	11,716	13,268	13,583	1,804	2,221	2,104
CFO Pre-W/C	167	136	67	165	112	100	2,855	3,057	2,679	197	60	(66)
Total Debt	1,572	1,718	1,676	1,030	1,223	1,253	20,296	21,959	21,971	2,311	2,576	3,008
CFO Pre-W/C + Interest / Interest	4.0x	3.5x	2.0x	5.5x	3.6x	2.9x	4.5x	4.6x	3.9x	4.0x	1.8x	0.3x
CFO Pre-W/C / Debt	10.6%	7.9%	4.0%	16.0%	9.1%	8.0%	14.1%	13.9%	12.2%	8.5%	2.3%	-2.2%
CFO Pre-W/C – Dividends / Debt	-5.3%	0.7%	-3.5%	16.0%	9.1%	8.0%	9.2%	9.5%	7.5%	-3.2%	-4.5%	-14.7%
Debt / Capitalization	48.3%	46.7%	42.4%	45.8%	47.2%	45.7%	46.8%	47.8%	44.7%	46.8%	44.7%	46.2%

<sup>[1]</sup> All figures & ratios calculated using Moody's estimates & standard adjustments. FYE = Financial Year-End. LTM = Last Twelve Months. RUR\* = Ratings under Review, where UPG = for upgrade and DNG = for downgrade.

Source: Moody's Financial Metrics<sup>TM</sup>

# **Ratings**

#### Exhibit 11

Category	Moody's Rating
ROCHESTER GAS & ELECTRIC CORPORATION	
Outlook	Stable
Issuer Rating	Baa1
First Mortgage Bonds	A2
Senior Secured	A2
LT IRB/PC	Baa1
Underlying Senior Secured	A2
ULT PARENT: IBERDROLA S.A.	
Outlook	Stable
Issuer Rating	Baa1
ST Issuer Rating	P-2
PARENT: AVANGRID, INC.	
Outlook	Stable
Issuer Rating	Baa2
Senior Unsecured	Baa2
Commercial Paper	P-2

Source: Moody's Investors Service

© 2024 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 OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") 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 MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS 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 MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS 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 OR OTHERWISE MAKES AVAILABLE ITS MATERIALS 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 MATERIALS 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 MATERIALS 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. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODE!

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS 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 credit rating process or in preparing its Materials.

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 such information, 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. 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, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at <a href="https://www.moodys.com">www.moodys.com</a> under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V, I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Calificadora de Riesgo S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.

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 India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.

Additional terms with respect to Second Party Opinions (as defined in Moody's Investors Service Rating Symbols and Definitions): Please note that a Second Party Opinion ("SPO") is not a "credit rating". The issuance of SPOs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.

REPORT NUMBER

1390063

