

# Credit Opinion: Gas Natural de Lima y Callao S.A. (Calidda)

Global Credit Research - 06 May 2015

Peru

# **Ratings**

CategoryMoody's<br/>RatingOutlookStableSenior UnsecuredBaa3

Parent: Empresa de Energia de Bogota S.A.

ESP. (EEB)

Outlook Positive Senior Unsecured Baa3

### Contacts

Analyst Phone
Natividad Martel/New York City 212.553.4561
William L. Hess/New York City 212.553.3837

## **Key Indicators**

# [1]GasNaturaldeLimayCallaoS.A.(Calidda)

	12/31/2010	12/31/2011	12/30/2012	12/31/2013	12/31/2014
CFO pre-WC + Interest / Interest	3.6x	5.0x	4.4x	3.6x	6.0x
CFO pre-WC / Debt	15.9%	22.2%	19.7%	10.2%	21.8%
CFO pre-WC - Dividends / Debt	15.9%	22.2%	19.7%	10.2%	21.8%
Debt / Capitalization	50.6%	54.8%	49.6%	57.3%	54.4%

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

Note: For definitions of Moody's most common ratio terms please see the accompanying <u>User's Guide</u>.

### Opinion

# **Rating Drivers**

- -Cash flow visibility enhanced by the terms of the BOOT agreement and its May 2010 addendum
- Low business risk LDC profile albeit exposure to unregulated customers is material
- Overall credit supportive regulatory environment
- Credit metrics expected to remain commensurate with the Baa-rating category despite material capex during ramp-up of services
- Expected prudent dividend policy will allow for maintaining an adequate liquidity profile

## **Corporate Profile**

Headquartered in Lima, Gas Natural de Lima y Callao S.A. (Calidda; Baa3, stable) started commercial operations in 2004 after a two year construction period.

Calidda is currently the largest Local Distribution Company (LDC) of natural gas in Peru (A3 stable) as measured by number of customers (year-end 2014 around 255,000) and volume of natural gas supplied. With around 4,700 km natural gas distribution network with a 420 million cubic feet per day (MMCFD) system capacity Calidda currently provides its services to residential end-users in 15 out of the 49 districts in the Department of Lima and the Constitutional Province of Callao, while its natural gas vehicle (NGV) stations and industrial customers extend over 34 districts.

Calidda operates under a 33-year Build Operate Own and Transfer (BOOT) concession agreement and its May 2010 Addendum. Calidda's tariffs are subject to regulatory purview of the Peruvian regulatory body, Organismo Supervisor de la Inversión en Energía y Mineria (OSINERGMIN), while its pre-agreed five year capital expenditure (capex) program is monitored by the Ministry of Energy and Mines (MEM).

Calidda's non-regulated revenues consists of fees for rendering services ancillary to its LDC operations which are mainly related with installation and connections as well as the interest received for providing financing to new residential end-users for funding connection devices.

Calidda's majority shareholder is Empresa de Energia de Bogota (EEB; Baa3, positive) with an indirect and direct ownership stake of 66.2% given its 15.6% equity interest in Calidda's minority shareholder, Promigas S.A. E.S. (not rated; 40% interest).

For more details about the company, the terms of the BOOT concession agreement and 2010 Addendum and/or the key Peruvian natural gas provisions underpinning Calidda's operations please refer to the March 2013 Presale-Report available on our website.

## **SUMMARY RATING RATIONALE**

Calidda's Baa3 rating factors its overall low business risk profile and that the bulk of its revenues are derived from its regulated NG distribution operations. It further considers that the company's cash flow visibility is enhanced by the terms of its concession and tax stability agreements as well as the overall credit supportive regulatory environment under which it operates. The rating is tempered by Calidda's overall modest albeit growing footprint, its significant exposure to unregulated end-users despite its growing residential customer base, and the increasing contribution to Calidda's cash flows of unregulated ancillary services. Importantly, the rating assumes that Calidda's credit metrics will remain commensurate with the Baa-rating category while its total debt to EBITDA ratio is limited to a maximum 3.5x. The rating assumes the continuation of a prudent financial policy to fund its planned material capex as well as responsible dividend distributions over the medium term, and acknowledges Calidda's hedging program to offset some cash flows mismatching due to some foreign exchange risk exposure.

## **DETAILED RATING CONSIDERATIONS**

# CREDIT SUPPORTIVE BOOT-CONCESSION TERMS

The terms of Calidda's BOOT-agreement and 2010-addendum are a key rating consideration. The initial expiration is scheduled after the maturity of the US\$320 million Yankee notes (Baa3 stable) due in 2033. The BOOT-agreement is subject to 10-year extensions until 2060 further diminishing the refinancing risk, another credit positive. We consider the risk of an early termination of the BOOT agreement as low given the LDC's operational performance to-date and our understanding of the overall constructive relationship with the MEM. Calidda's cash flow visibility is further enhanced by the terms of its Tax Stability Agreement which limits its exposure to changes in taxation.

### MODEST SIZED LDC BUT GROWING FOOTPRINT

Calidda's service territory accounts for around 34% of the country's total population (around 30 million) and around 45% of GDP. A key rating consideration is Calidda's multi-year aggressive expansion strategy. This targets growing the LDC's customer base to 600,000 by 2017. This equates to adding over the next couple of years around 100,000 connections p.a.; however, this seems manageable after Calidda added almost 91,200 new connections in 2014, a material increase over 2013 (+56%) and compared to 144,000 total new connections added in the 2010-2013 period. Failure to implement that goal would not negatively impact its BOOT-agreement as its customer base already exceeds the expansion target agreed under the 2010 BOOT (91,000 additional customers

to the already connected as of May, 2010 which approximated 30,000). That said, we believe it could negatively impact its relationship with OSIGNERGMIN. We understand that the regulator would like Calidda's expansion program to progress at a faster pace amid the Government various initiatives to extend the use of NG throughout the country.

For the 2014-2017 period OSINERGMIN has approved the recovery in rates of capital outlays aggregating US\$428 million (2014: around US\$80 million). Nevertheless, this expansion is not without risks including performing construction work in densely populated areas; however, we note that Calidda has discretion over the areas for growing its customer base. This has resulted in its commercial strategy being primarily focused on those areas where end-users have higher incentives for switching to natural gas, particularly the low to medium income residential end-users. In addition to the country's low regulated NG prices customers also benefit more from promotional discounts and the installation financing arrangements also provided by Calidda. OSIGNERMIN set in the 2014-2018 Promotion Plan a discount at S/322 (before: S/315 per customer) and estimated that a total 371,379 customers would benefit from this discount by the end of period (2013: 119,814). It also concluded that the savings from NG compared to using Liquefied Petroleum Gas (the most direct alternative fuel source) could average 20%. Calidda further expects that its growth strategy will benefit from the recent simplifications of the building standards and the requirements that new multifamily buildings include natural gas installations.

Calidda will continue growing its networks (2014: +1,274km), mainly its secondary ducts. This consists currently of 428km of high pressure steel pipes (2014: +20km) to serve NG vehicle (NGV) stations and industrial customers as well as almost 4,250km of polyethylene network pipe. This expansion provides the LDC access to potential new customers which Calidda has estimated aggregate 466,000 at year-end 2014 (2013: 331,000). Compared with its current customer base this results in a penetration rate of 55% (2013: 50%; 2009: 20%) and economies of scale, another credit positive. According to OSIGNERGMIN's estimations in 2013 Calidda's clients were located every 21m (or around 10m according to Calidda's calculations) compared to 150 meters in 2005. Calidda's goal is to achieve a 80% penetration rate by 2019.

Calidda's system capacity of 420MMCFD is sufficient to meet this growing customer base (current peak at 300MMWCFD) while it is currently negotiating with the Camisea consortium the extension of its NG supply agreement (scheduled to expire in 2016). According to the last estimates available from the authorities (published in 2013) the proven NG reserves in the country were estimated to remain sufficient for least 30 years considering 2013 production levels and transportation capacity. Calidda has also transportation contracts in place with Transportadora de Gas del Peru (TgP; Baa1 stable) that secure its access to sufficient NG pipeline capacity. Calidda is considering participating in TgP's next open season for the capacity (around 20MMCF) that was not allocated last year. Total of around 80MMCF incremental capacity was allocated mainly to Calidda's customers which somewhat mitigates the risk for the LDC of limited access to transportation capacity.

# MATERIAL EXPOSURE TO NON-RESIDENTIAL CUSTOMERS AND UNREGULATED ANCIALLIARY REVENUES

The rating is tempered by the significant exposure of Calidda's cash flows from unregulated ancillary services, largely associated with connecting new customers. We acknowledge that the issuer benefits from a competitive advantage over other potential service providers such that these services are expected to remain a key component of its gross profit margin (currently over 30%) defined as revenues after the pass-through of related cost components. The importance of NG for the end-users' quality of life and the costs associated with connecting to an alternative fuel source after a disconnection provides incentives to make their payments on time. This is evidenced by the low bad-debt recorded by Calidda's financing operations (less than 1%).

We consider credit positive Calidda's current focus on growing its residential and commercial customer base (2014: <1% of its distributed volumes and 4.5% of its revenues); however the issuer's exposure to its unregulated customers is expected to remain material. This exposure ranks among the highest across Moody's rated universe of regulated LDCs in the Americas, a credit negative. This considers that the bulk of the country's natural gas fired power generation facilities are located in Calidda's service territory. These accounted for around 32% of Calidda's adjusted revenues at year-end 2014 (for 2014: 74.2% of distributed volumes). Industrial end-users represented the next largest segment (2014: 16% of volumes and and 15.3% of adjusted revenues) followed by NGV stations (2014: 9.0% of volumes and 11.2% of adjusted revenues).

On a positive note, the bulk of Calidda's total adjusted revenues (2014: 63%) are not volumetric, including those related to the installation services (2014: 37%) as well as services rendered under firm contracts (take-or-pay agreements). These contracts (51.1MMCFD or 80% of Calidda's distributed volumes) will expire in 2033, and have been mainly executed with the NG-fired power generation companies. The credit concerns associated with this large exposure to the power generation sector is offset by their importance in the Peruvian energy mix (historically

at least 30% of the total output regardless of the season). Also this results in power generator's NG-demand in Peru being less volatile than in other countries in the region where the contribution of hydro-electric plants are significantly higher, causing the dispatch of NG-fired plants to be more seasonal and unpredictable. No new NG-fired facilities are expected to start operations over the next several years in Calidda's service territory after the 534MW Fenix (albeit off-line for some time) and 200MW Termochilca were commissioned in 2013 (+126MMCFD).

# OVERALL CREDIT SUPPORTIVE REGULATORY ENVIRONMENT

Calidda's rating also reflects our opinion that the Peruvian regulatory environment is overall credit supportive albeit it also captures its limited historical track-record and some inconsistency in the application of some of the existing regulatory mechanisms.

Our opinion considers the outcome of the 2014-2018 tariff review. This progressed significantly smoother than the previous review (due in 2008 but completed in May 2010) and was completed in around eight months, a credit positive. Following Calidda's motion in its final decision published in June (rates became effective in July) the OSINERGMIN agreed to review upward slightly some of the key variables considered in setting rates, namely capex (+US\$1 million to US\$306.6 million) and OPEX (+US\$10 million to US\$109.6 million). As a result, rates averaged \$22/m3, a 6.4% increase compared to the average tariff applicable during the 2009-2014 period and a 2.2% hike over the average tariffs decided in May 2014. That said, the impact varied by customer class with the more significant increase for very large demand customers (large industrial: +71% and power generators: +40%) while the tariffs for those residential customers with the lowest demand and for NG stations dropped by (0.6%) and (1.3%), respectively. Moody's calculates that after considering volumes the new tariffs resulted in a 20% increase in revenues.

The final outcome compares relatively well with Calidda's proposed tariffs. Some of the items that drove the difference (the gap averaged around 5% as the rate-increase for some customers was larger than requested) included OSINERGMIN's lower approved investments related to the promotional discounts in order to expand services among the low and mid-income categories also contributed to the difference. Also, the recovery of a lower authorized operational expenses (opex) as OSINERMIN's tariffs reflect higher efficiencies than assumed by the LDC. In addition OSINERGMN's approved a higher capex program (gap aggregates around US\$25 million) albeit additional investments are fully recoverable in rates, credit neutral.

We consider credit positive the LDC's ability to adjust tariffs quarterly to reflect changes in the US Producer Price Index (US-PPI), the Peruvian Wholesale Prices Index, the Steel and the polyethylene indexes; however, OSINERGMIN's decision places a higher weight on the local (79%) and US-PPI (13.1%) rates compared to Calidda's proposed actualization weights for those same factors of 53.3% and 9.5%, respectively. The regulator also reduced the relative weight of the polyethylene (1.4% versus Calidda's proposed 2.7%) and steel-index (34.3% versus Calidda's submitted 6.5%). The latter is a credit negative considering that polyethylene and steel are some of the key components of Calidda's capex program; however, we also acknowledge that changes in steel prices are a component included in the US-PPI-index calculations, slightly offsetting our concerns.

Our view about the regulatory framework's credit supportiveness further factors other features including the LDC's ability to adjust annually the bills of the captive regulated customers with demand under 30,000 Standard cubic meter (SCM) for which it procures NG and transportation services. The latter includes not only residential, commercial end-users but also small and medium size industries as well as NG stations. This annual frequency matches the suppliers' contractual adjustments reducing the LDC's cost recovery lag and enhancing its cash flow visibility. Another credit positive is Calidda's ability to recoup and to generate returns (based on a 12% annual rate and a 30-year recovery period of the capital investments) not only on its past but also on those capital outlays earmarked for the next four years.

The five-year capex program pre-agreed with the MEM and subject to OSINERGMIN's consideration during the tariff review process should theoretically help mitigate the risk of investment disallowances, another credit positive. While OSINERGMIN's biannual review of Calidda's actual investments, operating costs and demand assumptions versus forecasted amounts used in setting the tariffs increases regulatory scrutiny; we believe it also helps to smooth the tariff review setting process that takes place every four years. The next biannual review should take place next year. During the 2012 biannual review tariffs were adjusted (effective in 2013) to reflect higher than anticipated volumes (used in setting the 2008 tariffs).

Calidda's cash flows are exposed to some currency risk associated with the payments received from its regulated customers. While the charges are initially calculated in US\$-dollars the revenues are invoiced in nuevos soles after monthly adjustments of the charges. This is a credit negative since the bulk of Calidda's cost structure and indebtedness is in US-dollars (not converted into nuevos soles); however, we also believe that the monthly

adjustment process helps to reduce the impact of any potential nuevos soles devaluation which somewhat lessens our credit concerns. That said, we consider Calidda's hedging program (in place since last year) to fully eliminate this risk, a credit positive.

#### CREDIT METRICS COMMENSURATE WITH THE Baa-RATING CATEGORY

As depicted in the tables above, during 2014 Calidda's credit metrics improved significantly compared to the year before. Growing demand (new customers) and almost a half-year of higher tariffs (July) aided the issuer to record an improvement in its cash flows compared to the year before.

Moreover, Calidda's financial performance and cash flows were not impacted by several negative one-time off items registered in 2013. These included (i) fees related to the debt prepayment and the Yankee bonds issuance, (ii) accrued interest (2010-May 2013: around US\$10.4 million) under its shareholders' loans (payment was subject to restrictions) and in arrears (payable for the period October-December 2013: around US\$4.7 million) and (ii) higher outflows associated with prepaid taxes (\$22.5 million; 2014: \$6.5 million). During 2014, Calidda's EBITDA margin approximated 17% which was more aligned with its historical levels after the significant drop registered the year before due to an increase in the expenses related to the outsourced construction works.

Calidda's 2012-2014 cash flow from operations (CFO) pre W/C (CFO pre-W/C) to debt and interest coverage averaged 17% and 4.7x, respectively. These are commensurate with the lower end of the Baa-rating category according to the guidelines provided for low business risk in the Regulated Electric and Gas Utility Methodology published in December 2013. Given the absence of dividend payments Calidda's 2012-2014 average Retained Cash Flow (RCF) to debt of around 17% is robust for the rating category.

Importantly, Calidda was also able last year to meet management's target to limit total debt to EBITDA at 3.5x (2013: 4.4x), a credit positive.

Going forward, we expect Calidda's credit metrics will remain commensurate with the Baa-rating category. This year its cash flows should benefit from a full-year of the July 2014-tariffs while growing demand (new customers) will further drive its financial performance. This also assumes that Calidda will be able to adjust its cost structure to closely reflect the OPEX considered by OSINERGMIN when setting the 2014 final rates. Also, some uncertainty remains regarding the indebtedness to be incurred by Calidda to fund its capex and possible dividend distributions. That said, we gain comfort from management's prudent commitment to limit Calidda's total debt/EBITDA to 3.5x.

Calidda's rating assumes that despite the increased indebtedness to fund its ongoing capex program the LDC will be able to record 3-year average CFO pre-W/C to debt and interest coverage of at least 11% and 3.0x, respectively. Importantly, we assume a prudent dividend policy will be sized to allow the company to record a RCF to debt of at least 7% while also allowing the company to maintain adequate cash balances in the absence of any committed credit facilities to meet any unanticipated cash shortfalls.

## **Liquidity Profile**

Calidda has currently no material debt maturity before 2023 when the Yankee notes become due. Calidda used a portion of the proceeds (increased indebtedness by US\$120 million) to fund its material capex program. At year-end 2014, Calidda's cash balance approximated US\$79 million. In the absence of any further shareholders' equity contributions we anticipate Calidda will be required to issue new debt to further finance its planned investments (around US\$80 million p.a.). While Calidda's shareholders expect the utility to start making dividend distributions over the medium term, we acknowledge EEB's historical proven track-record of forgoing dividend distributions and providing subordinated shareholder loans to its other controlled subsidiaries. Another important rating consideration is that in the absence of a multi-year committed credit facility Calidda is expected to maintain a prudent cash balance that will allow it to meet any unexpected cash flow shortfalls.

## Rating Outlook

The stable outlook reflects our expectation that Calidda will continue to successfully implement its expansion plans within the residential segment and that the regulatory environment will remain overall credit supportive. The stable outlook further considers management's target for Calidda to report over the medium term a Debt/EBITDA ratio below 3.5x. It also reflects our expectation that, in the absence of committed credit facilities, the company will maintain adequate cash balances amid a responsible dividend policy so as to remain in a position to cope with any external shocks, particularly given its substantial capex program. The stable outlook assumes that Calidda will record credit metrics (mentioned earlier) that are appropriate for the rating category.

# What Could Change the Rating - Up

The rating could be upgraded if Calidda's liquidity profile over the medium term improves significantly along with a significant improvement in its credit metrics such that it records CFO pre-W/C to debt, interest coverage and RCF to debt in the very high teens, above 4x, and mid teens, respectively, on a sustainable basis.

## What Could Change the Rating - Down

Calidda's rating could be downgraded if Moody's perceives that the issuer's liquidity profile is insufficient to comfortably cope with potential external shocks. Negative rating pressure could also result from unexpected changes in the regulatory framework that negatively impacts its ability to generate sufficient cash flows to help carry-out its planned capital investment program. Other negative events would include a downgrade of the Peruvian sovereign ratings, and/or if Calidda's majority shareholder, EEB, were to experience a multi-notch downgrade. Failure over the medium term to report credit metrics that are commensurate with the Baa-rating category, such that its CFO pre-W/C-to-debt and interest coverage that remain below 11% and 3x for an extended period, would likely trigger a downgrade. An aggressive future dividend distribution policy that results in the issuer reporting RCF to-debt below 7% on a sustainable basis, could also trigger a downgrade.

### **Other Considerations**

The rating considers that Calidda's functional currency is the US\$. This provides a natural hedge given that the bulk of its payables and 100% of the company's currently outstanding indebtedness is also denominated in that currency. However, as mentioned earlier, the company is exposed to some currency risk because of the mechanics of the payments of the residential customers bills. That said, we consider credit positive that a new hedging program using 30-day forwards based on the forecasted exchange rate Nuevos Solese/US\$ (reviewed on a monthly basis) was approved and implemented last year.

As mentioned earlier, Moody's evaluates Calidda's financial performance relative to the low business risk option under the updated Regulated Electric and Gas Utility Methodology published in December 2013. As depicted in the grid below the company's indicated rating based on historical and projected credit metrics is Baa3 which is the same as the currently assigned senior unsecured rating.

# **Rating Factors**

# GasNaturaldeLimayCallaoS.A.(Calidda)

Regulated Electric and Gas Utilities Industry	Fiscal Year	
Grid [1][2]	12/31/2014	
Factor 1 : Regulatory Framework (25%)	Measure	Score
a) Legislative and Judicial Underpinnings of the Regulatory Framework	Baa	Baa
b) Consistency and Predictability of Regulation	Baa	Baa
Factor 2 : Ability to Recover Costs and Earn Returns (25%)		
a) Timeliness of Recovery of Operating and Capital Costs	Ва	Ва
b) Sufficiency of Rates and Returns	Baa	Baa
Factor 3 : Diversification (10%)		
a) Market Position	Ва	Ba
b) Generation and Fuel Diversity	N/A	N/A
Factor 4 : Financial Strength (40%)		
a) CFO pre-WC + Interest / Interest (3 Year Avg)	4.7x	Baa
b) CFO pre-WC / Debt (3 Year Avg)	16.9%	Baa
c) CFO pre-WC - Dividends / Debt (3 Year Avg)	16.9%	Baa
d) Debt / Capitalization (3 Year Avg)	54.4%	Baa

[3]Moody's 12-18 Month Forward ViewAs of May 2015				
Measure	Score			
Baa	Baa			
Baa	Baa			
Ва	Ва			
Baa	Baa			
Ba N/A	Ba N/A			
3x-4.5x	Baa			
11%-19%	Baa			
7% - 15%	Baa			
50% - 59%	Baa			

Rating:				ı
Grid-Indicated Rating Before Notching Adjustment	Baa3		Baa3	Ì
HoldCo Structural Subordination Notching	0		0	ı
a) Indicated Rating from Grid	Baa3		Baa3	ı
b) Actual Rating Assigned	Baa3		Baa3	ı

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. [2] As of 12/31/2014 (LTM); Source: Moody's Financial Metrics [3] 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.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on <a href="http://www.moodys.com">http://www.moodys.com</a> for the most updated credit rating action information and rating history.



© 2015 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 INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND CREDIT RATINGS AND RESEARCH PUBLICATIONS PUBLISHED BY MOODY'S ("MOODY'S PUBLICATIONS") MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR, MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, 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 AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS FOR RETAIL INVESTORS TO CONSIDER MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS IN MAKING ANY 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.

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 the Moody's 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 SUCH RATING OR 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 rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

For Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 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 clients. It would be dangerous for "retail clients" to make any investment decision based on MOODY'S credit rating. If in doubt you should contact your financial or other professional adviser.

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 rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000. MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.