

Chelan County Public Utility District No. 1, Washington

New Issue Summary

Sale Date: Week of April 20, 2020.

Series: Consolidated System Revenue and Refunding Bonds, Series 2020A (Non-AMT), Consolidated System Revenue Refunding Bonds, Series 2020B (Non-AMT), and Consolidated System Revenue Refunding Bonds, Series 2020C (AMT).

Purpose: The majority of proceeds from the series 2020A bonds will be used to finance a new operations service center and various distribution system projects. The remaining portion of the series 2020A and the full amount of the series 2020B and 2020C bonds will be used to refund various series of outstanding consolidated system, and Rock Island and Rocky Reach project bonds for interest cost savings.

Security: A net revenue pledge of the consolidated system, which includes the electric distribution, water, wastewater and fiber-optics systems, and the Lake Chelan hydroelectric project.

Fitch Ratings' 'AA+' Issuer Default Rating (IDR) reflects the Chelan County Public Utility District No. 1's sizable portfolio of hydro-generating resources, which produce very inexpensive power, as well as solid revenue defensibility due to the district's independent ability to adjust retail rates that are among the lowest in the nation. The district's very low leverage profile is supported by the accumulation of cash reserves, which are near historical highs, and the continued rapid amortization of debt, and results in a healthy financial profile, which Fitch expects will remain very strong throughout its stress scenario.

The recent coronavirus outbreak and related government containment measures create an uncertain environment for the public power sector in the near term. While the district's performance through most recently available data has not indicated more than mild impairment, material changes in revenue and cost profile are occurring across the public finance sector and are likely to worsen in the coming weeks and months as economic activity suffers and government restrictions are maintained or expanded. Fitch's ratings are forward-looking in nature, and Fitch will monitor developments related to the severity and duration of the virus outbreak, and incorporate revised expectations for future performance and assessment of key rating drivers.

Fitch views the district and its separately secured hydro projects as a consolidated, integrated system. While the distribution system and the hydro-generating projects are accounted for and can be financed separately, they are managed and operated as an integrated system, with the same management team and loans flowing through the systems. As such, Fitch rates all the outstanding bonds in line with the district's 'AA+' IDR.

Key Rating Drivers

Revenue Defensibility: 'a'; Significant Wholesale Sales; Largely Contracted: The district's revenue base remains exposed to counterparty risk, which Fitch believes is largely mitigated through contractual step-up provisions, collateral postings and the ability to remarket the very low-cost power upon counterparty default. Of the district's very ample 1,988-MW capacity, under a quarter is necessary to meet the needs of its retail customers with the vast majority of excess power sold to third parties through long- or medium-term contracts. The reliance on the remaining relatively modest amount of revenue from competitive sources is considered manageable, as the power is sold under wholesale contracts designed to largely insulate the district from price and hydro-variability risks.

Rating

Long-Term Issuer Default Rating AA+

New Issues

\$124,415,000 Consolidated System Revenue and Refunding Bonds, Series 2020A (Non-AMT)	AA+
\$14,375,000 Consolidated System Revenue Refunding Bonds, Series 2020B (Non-AMT)	AA+
\$26,210,000 Consolidated System Revenue Refunding Bonds, Series 2020C (AMT)	AA+

Outstanding Debt

Consolidated System Revenue and Refunding Bonds	AA+
Rock Island Hydro Electric System Revenue Bonds	AA+
Rocky Reach Hydro Electric System Revenue Bonds	AA+

Rating Outlook

Stable

Applicable Criteria

[U.S. Public Power Rating Criteria \(March 2020\)](#)

[Public Sector, Revenue-Supported Entities Rating Criteria \(March 2020\)](#)

Related Research

[Fitch Ratings 2020 Outlook: U.S. Public Power and Electric Cooperatives \(Strong Affordability and Deleveraging Support Stable Outlook\) \(December 2019\)](#)

[U.S. Public Power Rating Criteria Update \(Ratings Under Criteria Observation Resolved\) \(October 2019\)](#)

[Fitch Rates Chelan County PUD, WA's \\$165MM Consolidated Sys Rev Bonds at 'AA+'; Outlook Stable \(April 2020\)](#)

Analysts

Parker Montgomery

+1 212 908-0356

parker.montgomery@fitchratings.com

Kathy Masterson

+1 512 215-3730

kathryn.masterson@fitchratings.com

Operating Risk: 'aa'; Exceptionally Inexpensive and Robust Hydro Resources: The district's operating risk assessment reflects its valuable hydropower generation resources at the Rocky Reach, Rock Island and Lake Chelan projects that provide exceptionally low-cost electric power. While declines in market prices over the prior decade continue to narrow the district's cost advantage relative to market prices, wholesale demand for the district's carbon-free hydropower products remains solid, and the district's products sell at a premium to market prices. Fitch's operating cost burden metric is very low at 2.65 cents per KWh. Capital plans are significant but manageable, and will largely be funded from cash.

Financial Profile: 'aa'; Very Strong Financial Profile: The district's financial metrics remain very strong with coverage of full obligations at a healthy 2.9x or better for the fourth consecutive year as of fiscal 2019. The district is prudently using margin from wholesale sales and surplus cash flow to rapidly decrease leverage through optional and scheduled debt payments while preparing for a period of increased capital spending. This has positioned the district well to address the upcoming period of capital spending and potential load declines due to the spread of the coronavirus and resulting economic contraction. Fitch's forward look and stress scenario produce a leverage ratio that increases to just 3.0x. Liquidity was very strong in fiscal 2019 at 680 days and remains healthy through the forward look.

Rating Sensitivities

Factors that could, individually or collectively, lead to positive rating action/upgrade:

- An upgrade to 'AAA' is possible but highly unlikely absent strong government support in the form of guarantees from an equivalently rated entity.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

- Reduced demand for the district's wholesale products for any reason, including persistently low wholesale market prices.
- Prolonged slowdown in economic activity in the service area resulting in weaker revenue defensibility or slimmer financial margins.

Credit Profile

The district provides electric, water, wastewater and wholesale telecommunications service throughout Chelan County, WA, and wholesale power supply to a variety of regional electric customers. The integrated electric system accounts for approximately 90% of operating revenues, and serves as the primary driver of the rating. Additional revenues are derived from the water and wastewater utility at just under 2% of revenue, followed by a more minimal portion of revenues from the fiber telecom network. The electric system serves approximately 52,000 retail customers in the county.

The integrated electric system consists of its retail distribution system and hydroelectric generation on the Columbia River in central Washington State, which are the Rocky Reach (1,300 MW), Rock Island (629 MW) and Lake Chelan (59 MW) hydroelectric projects.

Revenue Defensibility

Retail Revenues

An important, but small, portion of the consolidated revenues (14% in 2019) is provided by the district's retail electric customers. Fitch views retail electric revenues as a business line that exhibits monopolistic characteristics and provides a high degree of revenue consistency. The retail customer base is heavily weighted toward residential customers that provide about half of the retail revenues. The retail load is a growing portion of revenue, but will remain small compared to the district's sizable capacity.

The district's reliance on the sale of excess generation for the majority of its revenue base is considered separately as an asymmetric rating factor consideration.

Service Area Characteristics

The service area's economic and demographic metrics are generally midrange compared with national and state averages. Chelan County is historically anchored by the agriculture industry with

Rating History (IDR)

Rating	Action	Outlook/ Watch	Date
AA+	Affirmed	Stable	4/9/20
AA+	Affirmed	Stable	10/8/13
AA+	Affirmed	Negative	4/27/11
AA+	Upgraded	Stable	10/24/08
AA	Affirmed	Positive	2/15/08
AA	Affirmed	Stable	4/24/07
AA	Upgraded	—	9/3/98
AA-	Upgraded	—	5/12/97
A+	Assigned	—	8/17/92

some diversification into manufacturing, healthcare, education and, more recently, cryptocurrency mining and other technology as the county has grown and serves as the regional economic hub. Unemployment in the county remains low and generally trends in line with the national level, despite some level of volatility due to the seasonal nature of the more narrow economy. Unemployment generally peaks in December or January (January 2020 unemployment was 6%). Median household income (MHI) reflects these trends and is just below the national average. While the current period of economic stress could weaken these metrics, Fitch expects that the county's service area will remain on pace with the national averages.

The district's customer base is stable, and management projects retail load growth of 2.5% through the forecast period, including new large industrial customer contracts. New customers have increased at just over 1% over the past five years, and Fitch expects this trend to produce moderate demand growth over the longer term, despite the current coronavirus stress.

New Advanced Technology Loads

Computing, data processing and other new technology-related businesses seeking a large, low-priced supply of energy continue to show significant interest in the district's energy products. The district has prudently imposed multiple moratoriums over the past few years on any new, large industrial customers to investigate the implication to retail customers. Ultimately, the district's high density load (HDL) rate structures (most recently updated in 2018 to address the growth of cryptocurrency-related load requests) ensure these operators carry the full operational and financial risks of providing this power. Going forward, these rates will be updated to reflect market conditions, but include market-based pricing and may include the value of the environmental attributes and transmission costs.

The district entered into an agreement beginning in April 2019 to provide Microsoft carbon-free hydroelectric energy to power its Puget Sound region campuses through March 2024. The contract is to supply market rate power, plus environmental and transmission costs, largely offsetting any concentration concerns as the district's cost of power is well-below market. Additionally, the Diamond Foundry, a San Francisco-based 2015 startup that produces laboratory-fabricated diamonds, moved to Chelan County and signed a contract to obtain a 19MW carbon-free load; the company is expected to begin using the district's power in 2H20.

Coronavirus Considerations on Demand

The district's relatively small portion of capacity used to supply local retail load at discounted prices (generally well below market prices) somewhat insulates revenues from retail demand shocks. Declines in retail loads would be sold through the district's power supply hedging program described above, similar to other excess power, although there will likely be a softening in market energy prices, given the abrupt economic contraction in the overall economy as a result of the collective response to the coronavirus.

Furthermore, the district expects the new diamond foundry customer to more than make up for the level of demand reduction in the retail load from the implication of the coronavirus and resulting economic downturn. The district's board is considering a delay of a retail rate increase by six months at this point, and Fitch is not able to predict the likelihood that an additional rate postponement could take place. Instead, Fitch believes hydrological, weather and energy market price variations are likely to continue to contribute to revenue volatility and that the district is in a position to hedge a majority of this risk as necessary.

Rate Flexibility

Fitch considers the district's retail rate flexibility to be very strong given its independent ability to set rates that are among the most competitive and affordable in the nation. Fitch calculates the average customer bill affordability is very high at 1.2% of MHI with rates consistently about 40% of the state average, according to the U.S. Energy Information Administration. The inflation-based rate increases planned for retail customers for the next three years will not affect Fitch's assessment of rate flexibility.

Asymmetric Rating Factor Consideration – Wholesale and Off-System Revenue

The district manages revenue risk associated with its off-system sales through a combination of contracted and market sales to a level Fitch considers adequate for the 'a' revenue defensibility assessment.

The largest source of the district's revenues (\$140 million, or 36% of 2019 revenue) is provided through long-term, take-or-pay contracts priced largely at cost plus margin, which Fitch believes sufficiently addresses hydrological, renewal and merchant risks. Through fiscal 2019, the three counterparties are Alcoa Corporation (Alcoa; BB+/Stable), contracted for 26% of the combined output of Rocky Reach and Rock Island through 2028; Puget Sound Energy, Inc. (PSE; BBB+/Stable), contracted for 25% of the combined output of the combined output of Rocky Reach and Rock Island through 2031; and Douglas County PUD (privately rated by Fitch), contracted for 5.5% of the output of Rocky Reach through 2031. A similar contract with Microsoft (AA+/Stable) for up to 50 average megawatts (aMW), or roughly 5% of combined district capacity, went into effect in April 2019 and is contracted through March 2024; it is estimated to provide roughly 6% of revenue on average.

Another approximately 18% of 2019 revenue was derived from market-based "slice of the system" sales under various contracts that expire over the next 1 to 5 years. The slice contracts are with investment-grade counterparties and require posted collateral under one-way margining agreements. These contracts are monitored and continually updated under a five-year-laddered power supply management program. While a majority of these sales are under longer term contracts, the contracts expire on a rolling schedule, and, as such, a portion of these revenues contracted under shorter terms is continually up for renewal and exposed to market-based pricing that Fitch considers more variable. This "remaining surplus" portion of net wholesale revenues remains generally fully hedged for the coming year, but adds some level of competitive pricing exposure over any five-year period. Overall, the level of exposure is considered manageable and consistent with the 'a' revenue defensibility assessment.

Other revenues from retail water, wastewater, transmission, sale of RECs and fiber telecom services respectively make up a small portion of revenue, combining for 15% of revenue in fiscal 2019.

Counterparty Exposure

Importantly, the district is protected from its counterparty credit exposure to either Alcoa or Puget Sound Energy through contractual step-ups between the two entities that require either party to step up in the event that the other counterparty defaults. Under the power sales contract, Alcoa remains responsible for the costs at Rocky Reach and Rock Island regardless of the actual amount of power used through 2028 with the district alone retaining the right to terminate the contract. The district holds \$49 million in collateral from Alcoa for protection against default (minimum requirement in contract is \$40 million plus three months of operating expenses).

For the market-based slice contracts, the district requires that all posting requirements be met with a letter of credit, unless the counterparty holds a senior unsecured credit rating of 'A+' from at least one of the nationally recognized rating agencies.

Fitch believes the credit of the counterparties, credit management provisions and guarantees from the distribution system, which would ultimately have access to the very low-cost power supply in the event of counterparty default, further support Fitch's 'a' revenue defensibility assessment.

Operating Risk

Fitch calculated a very low operating cost burden for the district at 2.7 cents per KWh in fiscal 2019, anchoring the very strong 'aa' operating risk assessment. The district owns and operates three hydroelectric projects, Rocky Reach, Rock Island and Lake Chelan, which have a combined nameplate rating of 1,988 MW. Rock Island Dam was the first hydroelectric facility spanning the Columbia River and was placed into operation in 1933, followed by the larger Rocky Reach Dam in 1961. Lake Chelan is a small hydroelectric facility off the Columbia River and was traditionally part of the distribution system. The low-cost nature of these generating assets is a significant credit strength. Even with some operational challenges over the past few

years and modernization needs, discussed below, the average cost of power from these resources has been extremely competitive.

Operating Cost Flexibility

While the entirety of the district's electricity generation is hydro-based, providing for weaker flexibility assessment, the projects more than meet the power requirements from retail load and allow the district to sell significant amounts of excess power. These sales are done under various strategies with prices ranging from cost, to cost-plus-margin and to market prices that are well above the district's costs. While the district's cost advantage relative to the market has diminished significantly in recent years as wholesale power prices in the Northwest have declined with the introduction of abundant wind resources and other renewables, the district's stable and low production costs remain attractive to purchasers.

Demand for the district's medium- and long-term slice products has been solid. The district calculates a combined hydro cost of power at \$20.2/MWh, and forecasts a slight increase to \$21.1/MWh in 2024. However, costs at the district's projects remain well below the cost of power in the regional market (\$36.7/MWh) or from Bonneville Power Administration (BPA), which provided power to preference customers at an average cost of \$35.6/MWh in 2019.

Environmental Initiatives

The district is in compliance and remains well positioned to meet additional required state RPS targets. Under Washington State's renewable portfolio standards (RPS), utilities that serve 25,000 customers or more are required to obtain 15% of their load from renewable resources by 2020, or approximately 31 aMW for Chelan PUD. Eligible resources include incremental hydro, wind, solar or renewable energy credits. A portion of Rocky Reach, Rock Island and Lake Chelan output was affirmed by Washington Department of Commerce as incremental hydro, providing the district with excess supply of renewable resources. Additionally, the district is well positioned, given its carbon-free power supply, to meet the state's Clean Energy Transformation Act (CETA), which requires the state to achieve a power supply free of carbon emissions by 2045.

Capital Planning and Management

Age of plant has increased to 24 years, indicating high lifecycle investment needs, which Fitch believes is being addressed in the updated capital plans. The capital improvement plan (CIP) for 2020-2024 totals roughly \$700 million, up from about \$440 million outlined in the 2017-2021 plan. The largest component of the plan, approximately \$285 million, will finance the Rock Island unit modernization and the FERC relicensing plan.

Modernization and replacement of the generating units at both Rock Island and Rocky Reach are ongoing. At Rock Island, the last of the original generating units were taken out of service in 2016 due to corrosion fatigue on the blades. This work, in addition to the FERC relicensing, is expected to cost the district over \$700 million by 2029, including the current repairs that will be credited to relicensing. FERC has approved over \$600 million of investments immediately (as of October 2019). These modernizations include environmental work, in partnership with Douglas County PUD that the districts have committed to for salmon and steelhead. The plans contemplate no net impact on fish runs for 50 years.

The new \$140 million operations and service center facility being financed with the current debt issuance, along with modernization at the distribution system, rounds out the majority of the CIP. The CIP will largely be funded through revenues and reserves, with an estimated \$38 million of new money financings likely beginning in 2022.

Financial Profile

The district ended fiscal 2019 with a fifth consecutive year of very strong performance, producing operating income of \$120 million that exceeded all financial policy targets. Overall revenues were roughly flat, benefitting from the district's power supply management and hedging programs, despite hydro conditions in 2019 that resulted in the fifth worst performance in the district's 88-year history. Average retail and wholesale prices increased from 2018 levels, the new Microsoft contract contributed additional firm sales, and lower expenses contributed to operating income that was \$36 million better than budget.

Available cash reserves remained very healthy at 680 days cash on hand in fiscal 2019, after a small draw down of cash for capex. Leverage remains very strong and anchors the 'aa' financial performance assessment. The district's reserves more than offset total outstanding direct debt with the remaining portion of net leverage largely associated with its net pension liability. Debt has declined in recent years as the district continues to amortize debt rapidly and redeem debt ahead of schedule. A third of outstanding debt was retired over the past five years.

Fitch Analytical Stress Test (FAST) Base Case and Stress Case

Given the very low leverage ratio in fiscal 2019, neither Fitch's base case (sensitized for the coronavirus pandemic) or stress case scenarios significantly affect the district's leverage ratio outside of expectations for the rating. Fitch notes that the coronavirus stress and related economic downturn will hit the district after a period of significant deleveraging and build up of reserves. The district's outstanding debt declined to \$476 million in fiscal 2019 from its peak at \$1.04 billion in fiscal 2009. In Fitch's forward look, cash balances remain healthy and in line with the district's policy target of 250 unrestricted days cash on hand, and coverage levels are expected to exceed the district's 2.0x target.

Fitch's base case is largely informed by the district's pro forma financial forecasts through 2024, and sensitized to reflect Fitch's expectation for more potentially pronounced declines in electric demand resulting from the coronavirus and weaker economic growth. Other assumptions include approved annual retail electric base rate increases in fiscal 2021 through fiscal 2024 of roughly 3%, and increased capex that is expected to be funded from a combination of cash reserves, rate increases and new money borrowing. Overall, Fitch expects the district's leverage ratio would increase modestly from a very low 1.5x in fiscal 2019 to just under 3.0x in fiscal 2022 in Fitch's sensitized base case.

The results of Fitch's FAST stress case and other sensitivities do not deviate meaningfully from the base case, primarily due to strategies in place to hedge price and hydro risk on the majority of the district's wholesale sales. The district is currently fully hedged through 2022 with fixed prices mitigating potential price declines. In Fitch's stress case, a significant amount of the district's margin is preserved due to the wholesale sales that include take-or-pay agreements with costs that include margin stabilization, and the laddering of expiration of shorter-term market-based contracts that secure sales over the next five years. Although performance weakens in these stress scenarios, the district's leverage ratio remains below 3.5x through 2024.

Debt Profile

The district's debt profile is neutral to the rating and included a total of \$476 million in long-term debt outstanding at FYE19 that amortizes through 2039. A small portion of currently outstanding debt is variable rate with a portion being refunded with fixed-rate debt in the current issuance. Approximately \$30 million of variable-rate debt is expected to remain outstanding after the current issuance. A majority of debt is issued on a lien of the consolidated system revenue, which has covenanted net revenues to provide a bond coverage ratio of at least 1.25x annual debt service, together with available funds, or 1.00x without available funds. The remaining debt consists of separately secured Rocky Reach revenue bonds and Rock Island revenue bonds. Fitch views the district and its separately secured hydro developments as a single integrated system with the consolidated system as the ultimate obligor.

ESG Considerations

ESG issues are credit neutral or have only a minimal credit impact on the entity(ies), either due to their nature or the way in which they are being managed by the entity(ies). For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.

Financial Summary

	2015	2016	2017	2018	2019
(\$000, as of Dec. 31)					
Net Adjusted Debt to Adjusted FADS (x)	3.09	2.55	2.14	1.53	1.44
Net Adjusted Debt Calculation (\$000)					
Total Current Maturities of Long-Term Debt	36,958	37,097	35,894	36,937	38,502
Total Long-Term Debt	583,916	559,492	506,537	480,799	437,840
Total Debt	620,874	596,589	542,431	517,736	476,342
+ Capitalized Fixed Charge - Purchased Power	118,262	85,243	103,142	127,682	118,687
+ Total Pension Obligation (GASB Fitch-Adj. NPL + FASB PBO)	134,570	107,385	121,972	105,181	101,434
- Total Unrestricted Cash	236,172	306,489	346,983	457,263	412,465
Adjusted FADS for Leverage Calculation (\$000)					
Total Operating Revenue (\$000)	370,487	362,830	372,857	386,521	385,186
Total Operating Expenses	236,188	246,301	250,675	269,353	265,110
Operating Income	134,299	116,529	122,182	117,168	120,076
+ Adjustment for Deferred and Subsidy Revenue	586	587	587	590	592
+ Depreciation and Amortization	47,310	47,296	47,534	44,186	43,575
+ Interest Income	5,685	6,802	7,959	11,435	15,148
Funds Available for Debt Service	187,880	171,214	178,262	173,379	179,391
+ Adjustment for Purchased Power	14,783	10,655	12,893	15,960	14,836
+ Pension Expense	3,813	7,131	5,261	2,391	2,668
Coverage of Full Obligations (x)	2.60	2.88	2.93	2.89	2.98
Funds Available for Debt Service	187,880	171,214	178,262	173,379	179,391
+ Adjustment for Purchased Power	14,783	10,655	12,893	15,960	14,836
Full Obligations Calculation					
Cash Interest Paid	19,089	15,490	15,216	13,662	13,373
Prior Year Current Maturities	44,195	36,958	37,097	35,894	36,937
Total Annual Debt Service	63,284	52,448	52,313	49,556	50,310
+ Adjustment for Purchased Power	14,783	10,655	12,893	15,960	14,836
Liquidity Cushion (Days)	456	562	623	741	680
Unrestricted Cash (days)	456	562	623	741	680
Liquidity Calculation					
+ Total Unrestricted Cash	236,172	306,489	346,983	457,263	412,465
Cash Operating Expense Calculation					
Total Operating Expense	236,188	246,301	250,675	269,353	265,110
- Depreciation and Amortization	47,310	47,296	47,534	44,186	43,575
Cash Operating Expenses	188,878	199,005	203,141	225,167	221,535

FADS - Funds available for debt service. PBO - Pension benefit obligation. D&A - Depreciation and amortization.
Source: Fitch Ratings, Fitch Solutions, Lumesis, EIA, Chelan County Public Utility District No. 1 (WA).

Key Definitions

Terms	Definition	Significance
Issuer Default Rating (IDR)	An expression of overall enterprise risk and relative vulnerability to default.	Provides an opinion of the relative ability of an entity to meet financial commitments, expressed as an ordinal measure of credit risk.
Adjusted Debt	Total long-term debt + unfunded pension liability below 80% PBO + 5.0x operating lease expense	Provides an inclusive evaluation of total long-term liabilities.
Cash to Adjusted Debt	Unrestricted cash and investments / adjusted debt	Indicates financial flexibility and cushion against decline in operating profitability.
Net Debt	Total debt - unrestricted cash and investments	Indicates the level of unrestricted liquid asset cushion available to cover debt.
Adjusted EBITDA	EBITDA + pension expense + annual operating lease expense	Provides an indication of cash flow available for the payment of debt service, adjusting for pension and operating lease obligations.
Net Adjusted Debt to Adjusted EBITDA	{Adjusted debt - unrestricted cash and investments} / adjusted EBITDA	Provides an indication of net total leverage position against available operating cash flow.
Base Case	The expected forward-looking case in the current macro-economic environment.	Provides the analytical starting point in the forward-looking analysis, and also informs the rating case.
Rating Case	The potential performance under a common set of assumptions.	Illustrates how cycles affect individual issuers differently, and informs the level of rating stability and credit resiliency.

The FAST scenario results are not a forecast. The results are intended only to illustrate performance under a given set of assumptions made by Fitch for a specific issuer that fall within the range of performance that is consistent with a stable rating. In this sense, the rating case scenario depicts a rating sensitivity and suggests the level of change in performance in stress consistent with the rating assigned. It should not be interpreted as a prediction of actual performance under stress. As an issuer can respond to a decline in portfolio value and profitability in the rating case in varied ways, actual metrics may also vary from those depicted in the scenario analysis.

The ratings above were solicited and assigned or maintained at the request of the rated entity/issuer or a related third party. Any exceptions follow below.

ALL FITCH CREDIT RATINGS ARE SUBJECT TO CERTAIN LIMITATIONS AND DISCLAIMERS. PLEASE READ THESE LIMITATIONS AND DISCLAIMERS BY FOLLOWING THIS LINK: [HTTPS://FITCHRATINGS.COM/UNDERSTANDINGCREDITRATINGS](https://fitchratings.com/understandingcreditratings). IN ADDITION, RATING DEFINITIONS AND THE TERMS OF USE OF SUCH RATINGS ARE AVAILABLE ON THE AGENCY'S PUBLIC WEB SITE AT WWW.FITCHRATINGS.COM. PUBLISHED RATINGS, CRITERIA, AND METHODOLOGIES ARE AVAILABLE FROM THIS SITE AT ALL TIMES. FITCH'S CODE OF CONDUCT, CONFIDENTIALITY, CONFLICTS OF INTEREST, AFFILIATE FIREWALL, COMPLIANCE, AND OTHER RELEVANT POLICIES AND PROCEDURES ARE ALSO AVAILABLE FROM THE CODE OF CONDUCT SECTION OF THIS SITE. FITCH MAY HAVE PROVIDED ANOTHER PERMISSIBLE SERVICE TO THE RATED ENTITY OR ITS RELATED THIRD PARTIES. DETAILS OF THIS SERVICE FOR RATINGS FOR WHICH THE LEAD ANALYST IS BASED IN AN EU-REGISTERED ENTITY CAN BE FOUND ON THE ENTITY SUMMARY PAGE FOR THIS ISSUER ON THE FITCH WEBSITE.

Copyright © 2020 by Fitch Ratings, Inc., Fitch Ratings Ltd. and its subsidiaries. 33 Whitehall Street, NY, NY 10004. Telephone: 1-800-753-4824, (212) 908-0500. Fax: (212) 480-4435. Reproduction or retransmission in whole or in part is prohibited except by permission. All rights reserved. In issuing and maintaining its ratings and in making other reports (including forecast information), Fitch relies on factual information it receives from issuers and underwriters and from other sources Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The manner of Fitch's factual investigation and the scope of the third-party verification it obtains will vary depending on the nature of the rated security and its issuer, the requirements and practices in the jurisdiction in which the rated security is offered and sold and/or the issuer is located, the availability and nature of relevant public information, access to the management of the issuer and its advisers, the availability of pre-existing third-party verifications such as audit reports, agreed-upon procedures letters, appraisals, actuarial reports, engineering reports, legal opinions and other reports provided by third parties, the availability of independent and competent third-party verification sources with respect to the particular security or in the particular jurisdiction of the issuer, and a variety of other factors. Users of Fitch's ratings and reports should understand that neither an enhanced factual investigation nor any third-party verification can ensure that all of the information Fitch relies on in connection with a rating or a report will be accurate and complete. Ultimately, the issuer and its advisers are responsible for the accuracy of the information they provide to Fitch and to the market in offering documents and other reports. In issuing its ratings and its reports, Fitch must rely on the work of experts, including independent auditors with respect to financial statements and attorneys with respect to legal and tax matters. Further, ratings and forecasts of financial and other information are inherently forward-looking and embody assumptions and predictions about future events that by their nature cannot be verified as facts. As a result, despite any verification of current facts, ratings and forecasts can be affected by future events or conditions that were not anticipated at the time a rating or forecast was issued or affirmed.

The information in this report is provided "as is" without any representation or warranty of any kind, and Fitch does not represent or warrant that the report or any of its contents will meet any of the requirements of a recipient of the report. A Fitch rating is an opinion as to the creditworthiness of a security. This opinion and reports made by Fitch are based on established criteria and methodologies that Fitch is continuously evaluating and updating. Therefore, ratings and reports are the collective work product of Fitch and no individual, or group of individuals, is solely responsible for a rating or a report. The rating does not address the risk of loss due to risks other than credit risk, unless such risk is specifically mentioned. Fitch is not engaged in the offer or sale of any security. All Fitch reports have shared authorship. Individuals identified in a Fitch report were involved in, but are not solely responsible for, the opinions stated therein. The individuals are named for contact purposes only. A report providing a Fitch rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Ratings may be changed or withdrawn at any time for any reason in the sole discretion of Fitch. Fitch does not provide investment advice of any sort. Ratings are not a recommendation to buy, sell, or hold any security. Ratings do not comment on the adequacy of market price, the suitability of any security for a particular investor, or the tax-exempt nature or taxability of payments made in respect to any security. Fitch receives fees from issuers, insurers, guarantors, other obligors, and underwriters for rating securities. Such fees generally vary from US\$1,000 to US\$750,000 (or the applicable currency equivalent) per issue. In certain cases, Fitch will rate all or a number of issues issued by a particular issuer, or insured or guaranteed by a particular insurer or guarantor, for a single annual fee. Such fees are expected to vary from US\$10,000 to US\$1,500,000 (or the applicable currency equivalent). The assignment, publication, or dissemination of a rating by Fitch shall not constitute a consent by Fitch to use its name as an expert in connection with any registration statement filed under the United States securities laws, the Financial Services and Markets Act of 2000 of the United Kingdom, or the securities laws of any particular jurisdiction. Due to the relative efficiency of electronic publishing and distribution, Fitch research may be available to electronic subscribers up to three days earlier than to print subscribers.

For Australia, New Zealand, Taiwan and South Korea only: Fitch Australia Pty Ltd holds an Australian financial services license (AFS license no. 337123) which authorizes it to provide credit ratings to wholesale clients only. Credit ratings information published by Fitch is not intended to be used by persons who are retail clients within the meaning of the Corporations Act 2001.