

CREDIT OPINION

28 July 2020

Update

✓ Rate this Research

RATINGS

Avista Corp.

Domicile	Spokane, Washington, United States
Long Term Rating	Baa2
Type	LT Issuer Rating
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Edna R Marinelarena +1.212.553.1383
Analyst
edna.marinelarena@moodys.com

Domenic Giovannone +1.212.553.1647
Associate Analyst
domenic.giovannone@moodys.com

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

Michael G. Haggarty +1.212.553.7172
Associate Managing Director
michael.haggarty@moodys.com

Jim Hempstead +1.212.553.4318
MD-Utilities
james.hempstead@moodys.com

CLIENT SERVICES

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

Avista Corp.

Update to credit analysis

Summary

Avista Corporation's (Avista) credit profile reflects its primary business as a low-risk vertically integrated electric and gas utility with supportive cost recovery mechanisms, such as electric and gas decoupling. The credit further incorporates the company's adequate track record with its primary regulator, the Washington Utilities and Transportation Commission (WUTC). Although Avista has experienced some relatively contentious proceedings in the past, we expect regulatory outcomes to become more predictable over time because of the May 2019 passage of a new clean energy bill in Washington. The bill is credit positive for Avista because it clarifies the WUTC's authority to consider and implement various constructive regulatory mechanisms including multiyear rate plans and performance and incentive-based regulation.

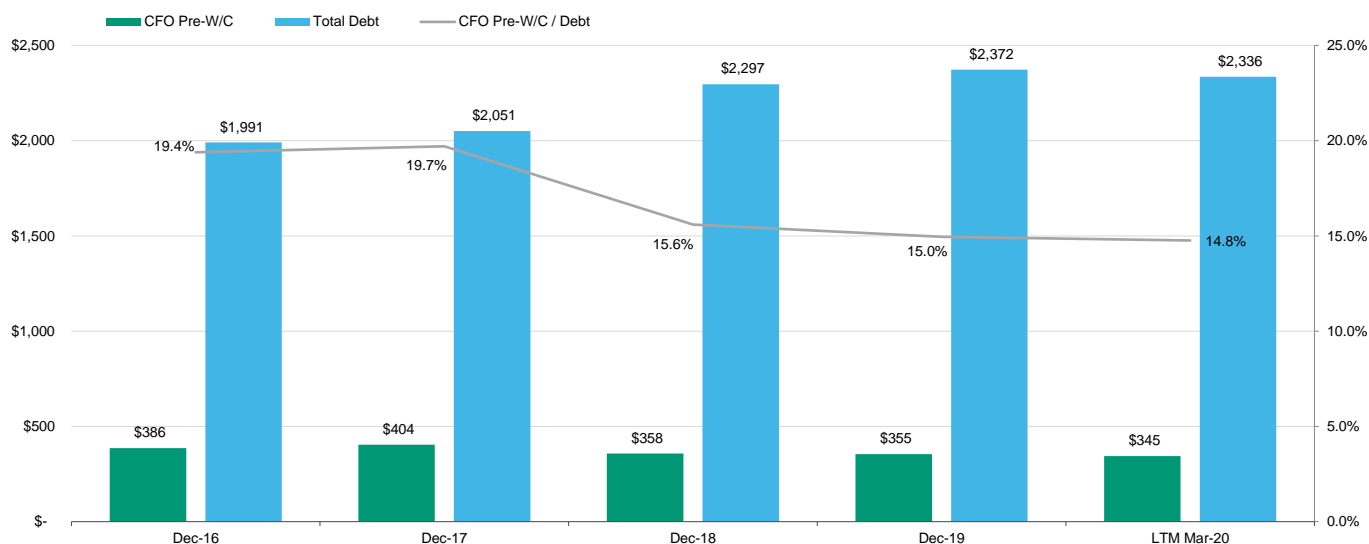
Avista's credit is constrained by lower key metrics driven by issuance of new debt to support liquidity and fund capex. We expect key metrics including CFO pre-WC to debt to be at about 14% over the next several years and should improve as the company files more frequent rate cases to recover costs. Avista has some unregulated exposure in addition to its ownership of regulated utility [Alaska Electric Light and Power](#) (AEL&P, Baa3 Stable) that provides marginal operational and cash flow diversity, but remain neutral in terms of our view of Avista's credit.

COVID-19 Developments

The rapid spread of the coronavirus outbreak, severe global economic shock, low oil prices and asset price volatility are creating a severe and extensive credit shock across many sectors, regions and markets. The combined credit effects of these developments are unprecedented. We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety.

We expect Avista and its subsidiaries to be resilient to recessionary pressures related to the coronavirus because of its primary rate regulated, essential service business model and cost recovery framework. Nevertheless, we are watching for electric usage declines, utility bill payment delinquency and the regulatory response to counter these effects on earnings and cash flow. As the events related to the coronavirus unfold, we are taking into consideration a wider range of potential outcomes, including more severe downside scenarios. The effects of the pandemic could result in financial metrics that are weaker than expected; however, we see these issues as temporary and not reflective of the core operations or long-term financial or credit profile of the company

Exhibit 1
Historical CFO pre-WC, Total Debt and CFO pre-WC to Debt
 \$ in millions



Source: Moody's Financial Metrics

Credit Strengths

- » Low-risk, \$3.4 billion rate base utility with supportive cost recovery mechanisms
- » Track record of strong cash flow generation
- » 2019 clean energy bill provides for additional credit positive regulatory tools

Credit Challenges

- » Limited financial buffer expected over next three years
- » Delayed cost recovery due to historic test year requirement
- » History of contentious regulatory proceedings

Rating Outlook

The stable outlook incorporates our view that Avista's financial profile will remain adequate over the next several years with CFO pre-WC to debt at about 14%. In addition, the stable outlook assumes Avista will receive adequate cost recovery authorizations within its regulatory jurisdictions and that unregulated operations will remain below 15% of consolidated earnings and cash flow.

Factors that Could Lead to an Upgrade

A rating upgrade is unlikely over the next 12 to 18 months given expectation of narrowed financial performance as a result of higher debt coupled with delayed plans to file rate cases as a result of economic impacts from the coronavirus. An upgrade could occur if financial metrics improve such that CFO pre-WC to debt was above 19% and CFO pre-WC less dividend was above 13% on a consistent basis. Additionally, a demonstrated improvement in regulatory environment and relationship will remain a key rating driver.

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 www.moody.com for the most updated credit rating action information and rating history.

Factors that Could Lead to a Downgrade

A rating downgrade could result should there be a degradation of regulatory relationships resulting in inadequate cost recovery and CFO pre-WC to debt dropping below 14% on a sustained basis.

Key Indicators

Exhibit 2

Avista Corp. [1]

	Dec-16	Dec-17	Dec-18	Dec-19	LTM Mar-20
CFO Pre-W/C + Interest / Interest	5.4x	5.2x	4.5x	4.3x	4.2x
CFO Pre-W/C / Debt	19.4%	19.7%	15.6%	15.0%	14.8%
CFO Pre-W/C – Dividends / Debt	15.0%	15.2%	11.3%	10.6%	10.4%
Debt / Capitalization	44.5%	48.4%	50.5%	49.2%	49.4%

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

Source: Moody's Financial Metrics

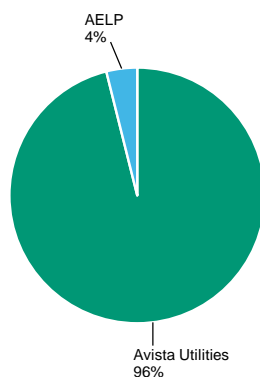
Profile

Avista is primarily an electric and natural gas utility whose Avista Utilities operating division provides electric transmission and distribution, and natural gas distribution services in parts of eastern Washington and northern Idaho. Avista Utilities also provide natural gas distribution service in parts of northeastern and southwestern Oregon. The utility has electric generating facilities in Washington, Idaho, Oregon and Montana and also supplies electricity to a small number of customers in Montana. For the three months ended 31 March 2020, Avista Utilities averaged over 394,000 electric and over 362,000 gas customers.

Avista owns Alaska Energy and Resources Company (AERC; not rated), parent of Alaska Electric Light and Power Company (AEL&P; Baa3 Stable) which serves around 17,000 electric customers in Juneau, Alaska.

Avista's utility operations are regulated by the Washington Utilities and Transportation Commission (WUTC), the Idaho Public Utilities Commission (IPUC), the Oregon Public Utility Commission (OPUC) and the Montana Public Service Commission (MPSC). AEL&P is under the purview of the Regulatory Commission of Alaska (RCA).

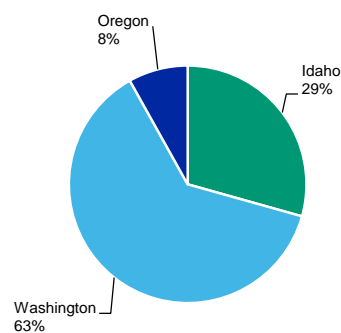
2019 earnings contribution breakdown



Excludes other segments
Source: Avista Corp. Filings

Exhibit 4

Rate base by jurisdiction



As of 31 March 2020, excludes AEL&P

Source: Company Documents & Moody's Investors Service

Detailed Credit Considerations

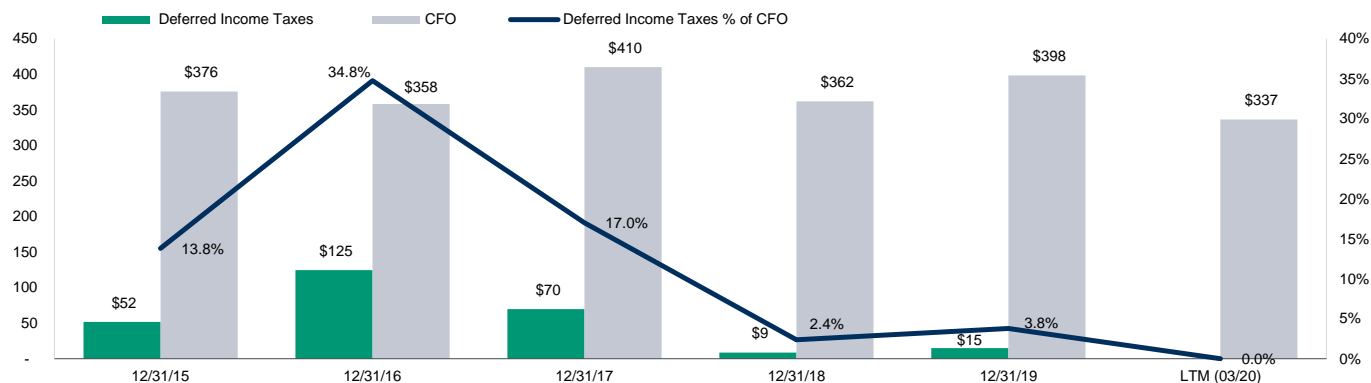
Strong cash flow producer with narrow financial metrics expected over next three years

Avista has a history of strong cash flow production averaging about \$360 million from 2014 to 2019. Deferred income taxes historically constituted a significant portion of Avista's operating cash flow, which averaged 30% over the 2014 to 2017 period. Post tax reform, Avista's reliance on deferred income reduced annually reaching about zero as of LTM Q120 (see Exhibit 5). The loss of deferred tax resulted in lower financial metrics ranging in the midteens over the last two years.

Exhibit 5

Reduced reliance on deferred income taxes will continue

Historical CFO and deferred income taxes



Source: Moody's Investors Service

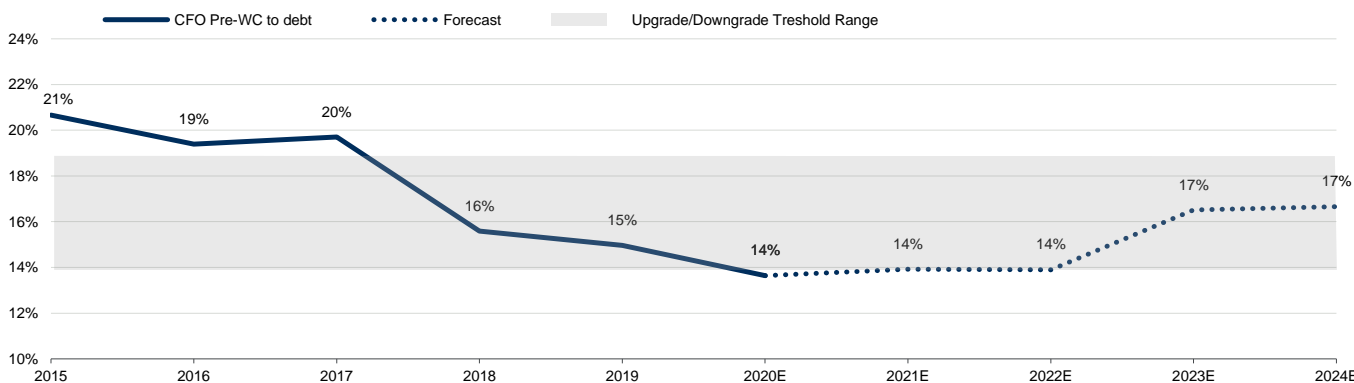
We expect cash flow generation will continue to be strong although financial metrics will be weakened over the medium-term as a result of additional debt to support liquidity and capital investment. As highlighted in Exhibit 6, CFO pre-WC to debt in 2020 is likely to be just under 14% and sustain at about 14% through 2022. Avista intends to file a general rate case in Washington and Idaho in late 2020, which is the driver behind the improved CFO in the later year of the forecast period.

Because of historic test year requirements, Avista has experienced cash flow lags over the past several years. Management intended to improve the lag by filing rate cases more frequently, but the coronavirus driven economic downturn delayed plans to file until late 2020. Any outcome thereafter will not be effective until late 2021. Although the company's financial buffer will be limited over the next several years, we expect performance will be close to forecast because the company has a strong track record of producing consistent financial results in line with expectations.

Exhibit 6

Stable financial metrics through 2022 with improved flexibility in 2023

Historical and forecast CFO pre-WC to debt



Source: Moody's Investors Service

We do not anticipate a material financial impact from the economic slowdown caused by COVID-19. Similar to other states, Washington, Idaho and Oregon shutdown economic activity affecting sales primarily in March and April. Management reports a modest overall decline in electric load driven by higher residential usage offsetting load loss in commercial and industrial customer class; natural gas demand was within normal bounds. Favorably, Avista benefits from decoupling and other cost recovery mechanisms, which mitigates effects from load loss within residential and commercial customers. The company instituted cost savings to offset any additional negative impacts from the coronavirus and filed requests to recover costs associated with COVID-19 with all regulatory jurisdictions.

Credit supportive regulatory jurisdictions with adequate track record for cost recovery

Washington

We view Avista's regulatory jurisdictions to be generally credit supportive. The Washington Utilities and Transportation Commission (WUTC), which regulates roughly 60% of the company's rate base and revenue, has electric and gas decoupling mechanisms which allow for timely recovery of fixed costs for the utility and drive stable and predictable gross margin and cash flow in the face of declining use. Even so, the use of historic test years result in the need for Avista to file general rate cases frequently to recover and earn on investments.

Avista filed its most recent electric and natural gas general rate cases on 30 April 2019 with WUTC and reached a partial settlement in November 2019. The commission approved the settlement in March 2020. The partial settlement allows for a one year rate plan increasing electric revenue by \$28.5 million and natural gas revenue by \$8 million effective 1 April 2020. The agreement is based on an ROE of 9.4% and equity layer of 48.5%, which are slightly below industry averages. Additionally, the settlement includes provisions for cost recovery associated with Colstrip units 3 and 4 decommissioning and remediation (D&R) expenses estimated at about \$33 million as of 31 March 2020 and ability to accelerate depreciation to 2025 in recognition of the state's new energy bill requirements. The original filing was for a two-year rate plan that included a \$45.8 million increase in annual electric revenue and a \$12.9 million increase in annual natural gas revenue effective April 2020 and a \$18.9 million increase for annual electric revenue and a \$6.5 million increase for annual natural gas revenue effective April 2021. The request was based on a 9.9% ROE and 50% equity layer. Additionally, the order disallowed Avista recovery of costs associated with a 2018 Colstrip plant outage, ruling Avista failed to prove the costs were prudently incurred. Total costs were about \$3 million.

While we consider the last two Washington rate case outcomes as neutral from a credit perspective, the company has had a somewhat contentious regulatory relationship in recent years particularly related to credit supportive mechanisms that would allow for faster cost recovery. In an ongoing review of Avista's 2015 rate case, the rate base attrition adjustments, which we considered credit supportive, were ruled by the Washington Court of Appeals in August 2018 as against the state's used and useful law. Subsequently, both the Court of Appeals and Superior Court terminated and remanded the case back to the WUTC to recalculate Avista's rates without the attrition adjustment used in the final order. On 06 March 2020, the WUTC issued a final order which concluded the 2015 rate case review. The order required Avista reimburse customers a total of \$8.4 million or \$4.9 million to electric customers and \$3.5 million to natural gas customers.

Idaho

Avista reached an all parties settlement on 11 October 2019 for its electric general rate case filed 10 June 2019. The settlement, which was approved on 1 December 2019 by IPUC, included a revenue reduction of \$7.18 million effective 1 December 2019. The approved revenue decrease was based on a 9.5% ROE and a 50% equity ratio, which were in line with prior approved levels. Avista requested a revenue increase of about \$5.3 million that included costs associated with their wind generation PPAs in base rates instead of continuation of the Power Cost Adjustment (PCA) mechanism. The settlement approved continuation of the PCA instead of inclusion in base rates. Avista was authorized electric and gas decoupling mechanisms, known as Fix Cost Adjustment (FCA) in Idaho, in December 2015 for a three-year period beginning 1 January 2016. The company filed a request for continuation, and the IPUC approved the request on 17 December 2019.

Oregon

The company filed its latest natural gas rate case on 16 March 2020 seeking a \$6.8 million or 6.8% base rate increase. Management expects proceedings to move along and could reach an overall settlement with effective rates mid January 2021. On 9 October 2019, the OPUC approved an all-party natural gas rate settlement filed in August 2019 taking effect 15 January 2020. The approved

settlement increases natural gas revenue by \$3.6 million and maintains the 9.4% ROE and a 50% equity layer. As part of its March 2016 rate case order in Oregon, Avista is allowed to implement a revenue per customer decoupling mechanism.

Alaska

AELP lowered customer rates by 6.7% or \$2.4 million annually effective 1 August 2018 to reflect the lower tax rate associated with tax reform. The RCA also approved AELP's proposal to refund to customers a one-time credit equal to the 6.7% rate reduction for 1 January through 31 July 2018. The utility completed the refund during the third quarter of 2018. The impact of the TCJA on AELP's deferred income taxes will be addressed in its next general rate case to be filed by August 30, 2021. AELP's allowed ROE of 11.95% and equity layer of 58.18% is above the average of authorized returns for the industry, a credit positive. However, we note that Alaska has a statutory period of 450 days or approximately 15 months to decide on rate cases, the longest in the nation and has not authorized cash flow stabilizing mechanisms such as revenue decoupling.

Washington's clean energy bill enhances regulatory framework

In May 2019, Washington State Governor Jay Inslee signed a package of clean energy legislation including the 100% clean energy and regulatory reform bill (SB 5116). We expect Avista's regulatory environment to strengthen as a result of passage of this legislation. The bill requires electric utilities to eliminate coal-fired generation by 2025, transition the state's electricity supply to 80% renewables and 100% carbon neutral power by 2030 and be 100% carbon free by 2045. We view the law as credit positive because it includes the potential for enhanced cost recovery mechanisms that can improve utility financial performance and provides a legal and regulatory framework to reduce carbon exposure risks.

Compliance with the law will require significant investment and an overhaul of existing state electric infrastructure. However, the law acknowledges the WUTC's authority to implement performance and incentive based regulation, multiyear rate plans and other "flexible regulatory mechanisms" to achieve the state's public interest objectives. Importantly, the law also recognizes that the policy must include safeguards that do not impair the reliability of the electricity system nor impose unreasonable costs on utility customers.

Some of the key components of SB 5116 include: four year clean energy implementation plans to be filed and approved beginning in 2022; successive four year compliance periods to implement WUTC approved clean energy plans for interim goals beginning in 2022; penalty payments for failure to comply with emissions goals; alternative compliance options (including payments, use of renewable energy certificates, investment in "energy transformation projects"); and 2% revenue increase caps on compliance costs. It also promotes energy transformation projects, including support of the electrification of transportation, smart grid investments, distributed generation and grid resilience, among others. SB 5116 also requires the WUTC to accelerate depreciation schedules for coal generation resources, including transmission lines, to December 31, 2025, or to allow investor-owned utilities to recover costs in rates for earlier closure of those facilities.

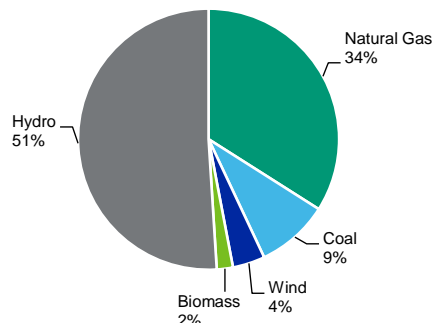
ESG considerations

From an environmental perspective, Avista has moderate carbon transition risk within the regulated electric and gas utility sector. The company's electric generation resource mix consists of 34% fossil fuels and 9% coal. The Washington and Idaho commissions agreed to set aside \$11.7 million and \$6.4 million, respectively, of TCJA related electric tax benefits to offset costs associated with accelerating depreciation of Avista's only coal facilities, Colstrip Units 3 and 4. The remaining useful life under the WUTC agreement is 31 December 2025 while the IPUC authorized to 31 December 2027. Colstrip Units 3 & 4 will cease service to Washington customers in 2025 in line with state requirements. Moody's framework for assessing carbon transition risk in the utility industry is discussed in "[Prudent regulation key to mitigating risk, capturing opportunities of decarbonization](#)" (2 November 2017).

Exhibit 7

Avista electric generation mix

As of 31 March 2020



Based on maximum capacity, excludes AEL&P
 Source: Avista Corp. Filings

Social considerations include risks associated with safety and reliability of company services and supply, business reputation or regulatory relations, an aging workforce and ability to hire and retain qualified personnel. With respects to regulatory relations, Avista has experienced a contentious relationship in the past, we anticipate a more predictable regulatory environment as a result of the 2019 legislative action. Regarding health and safety, we see a rise of social risks associated with the COVID-19 pandemic and its effect on the health and safety of plant operations. The safety and reliability of service are extremely important and are a key focus for Avista's utilities.

From a governance perspective, financial and risk management policies including a strong financial profile are important characteristics for managing environmental and social risks. We view the governance of Avista as strong based on our assessment criteria. Moody's framework for assessing corporate governance is discussed in "[Utilities and power companies – North America Corporate governance assessments show generally credit-friendly characteristics](#)" (September 19, 2019).

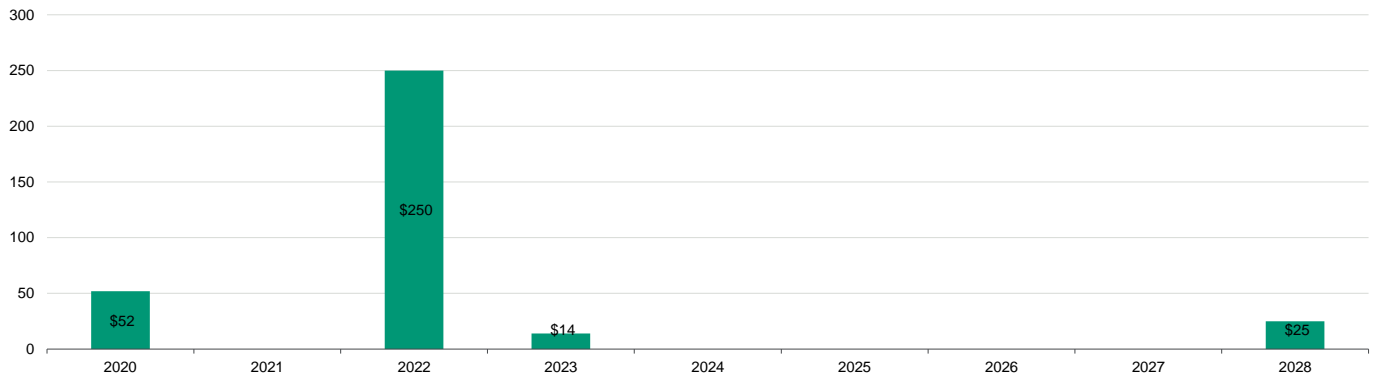
Liquidity Analysis

We expect Avista to maintain adequate liquidity over the next 12-18 months. Avista's external liquidity sources consist of a \$400 million senior secured revolving credit facility, which expires in April 2022. At the end of Q120, there was about \$182 million available under the line of credit. Since Avista currently has unsecured investment-grade ratings from two nationally recognized rating agencies, the company has the option to request the banks to relinquish the existing First Mortgage Bond collateral position. Avista has not asked for the release, keeping the company as one of the few US regulated utilities to maintain a secured bank credit facility. The secured nature of the credit facilities constrains Avista's liquidity flexibility, in our opinion, since the typical investment grade issuer (having an unsecured facility) can use collateral as an option to improve bank credit access during periods of unforeseen liquidity stress. Avista was in compliance with the facility's sole covenant of less than 65% capitalization, with a ratio of 53.7% as of 31 March 2020. We note that the company has no material adverse change language beyond the close of the facility, a credit positive.

AEL&P has a \$25 million line of credit which expires in 2024 and requires a consolidated debt to capitalization covenant of 67.5%. As of 30 March 2020, there were no borrowings or letters of credit outstanding under the facility and AEL&P was in compliance with its covenant, with a ratio of 52.3%.

Avista entered into \$100 million 364-day term loan in April 2020 to support liquidity. Additionally, the company plans to issue \$165 million in long-term debt to refinance the \$52 million in senior debt maturing in December 2020 as well as fund capital spending estimated at \$405 million annually through 2024. This is consistent with prior years where the company funds capex with a combination of long-term debt and equity.

Exhibit 8
Avista Corp. Debt Maturities
(\$ in millions)



Excludes \$15 million term loan at Alaska Energy and Resources Company maturing in 2024
Source: Avista Corporation

Methodology and Scorecard

Exhibit 9

Rating Factors

Avista Corporation

Regulated Electric and Gas Utilities Industry [1][2]	Current LTM 3/31/2020		Moody's 12-18 Month Forward View As of Date Published [3]	
	Measure	Score	Measure	Score
Factor 1 : Regulatory Framework (25%)				
a) Legislative and Judicial Underpinnings of the Regulatory Framework	A	A	A	A
b) Consistency and Predictability of Regulation	Baa	Baa	Baa	Baa
Factor 2 : Ability to Recover Costs and Earn Returns (25%)				
a) Timeliness of Recovery of Operating and Capital Costs	Baa	Baa	Baa	Baa
b) Sufficiency of Rates and Returns	Baa	Baa	Baa	Baa
Factor 3 : Diversification (10%)				
a) Market Position	A	A	A	A
b) Generation and Fuel Diversity	A	A	A	A
Factor 4 : Financial Strength (40%)				
a) CFO pre-WC + Interest / Interest (3 Year Avg)	4.6x	A	4x - 4.5x	Baa
b) CFO pre-WC / Debt (3 Year Avg)	16.7%	Baa	13.6%-14.0%	Baa
c) CFO pre-WC – Dividends / Debt (3 Year Avg)	12.2%	Baa	9%-10%	Baa
d) Debt / Capitalization (3 Year Avg)	48.4%	Baa	48%-51%	Baa
Rating:				
Scorecard-Indicated Outcome Before Notching Adjustment		Baa1		Baa1
HoldCo Structural Subordination Notching	0	0	0	0
a) Scorecard-Indicated Outcome		Baa1		Baa1
b) Actual Rating Assigned		Baa2		(P)Baa2

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

[2] As of 3/31/2020 (LTM)

[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.

Source: Moody's Financial Metrics™

Appendix

Exhibit 10

Peer Comparison Table [1]

(in US millions)	Avista Corp.			Puget Sound Energy, Inc.			Idaho Power Company			Portland General Electric Company		
	(P)Baa2 Stable			Baa1 Stable			A3 Stable			A3 Stable		
	FYE Dec-18	FYE Dec-19	LTM Mar-20	FYE Dec-18	FYE Dec-19	LTM Mar-20	FYE Dec-18	FYE Dec-19	LTM Mar-20	FYE Dec-18	FYE Dec-19	LTM Mar-20
Revenue	1,397	1,346	1,353	3,346	3,401	3,422	1,367	1,343	1,384	1,991	2,123	2,082
EBITDA	452	463	458	1,393	1,329	1,331	503	527	507	749	787	754
CFO Pre-W/C / Debt	15.6%	15.0%	14.8%	20.3%	15.1%	18.5%	17.5%	15.3%	17.9%	22.2%	19.7%	21.4%
CFO Pre-W/C – Dividends / Debt	11.3%	10.6%	10.4%	16.5%	11.7%	15.2%	12.2%	9.8%	12.3%	17.8%	15.3%	16.9%
Debt / EBITDA	5.1x	5.1x	5.1x	3.3x	3.6x	3.6x	4.5x	4.5x	4.5x	3.8x	3.8x	3.8x
Debt / Capitalization	50.5%	49.2%	49.4%	49.9%	49.3%	50.3%	43.9%	43.6%	43.5%	49.6%	50.5%	49.6%
EBITDA / Interest Expense	4.4x	4.3x	4.3x	5.7x	5.2x	5.4x	4.5x	4.8x	4.5x	5.5x	5.7x	5.5x

[1] All figures & ratios calculated using Moody's estimates & standard adjustments. FYE=Financial Year=End. LTM=Last Twelve Months.

Source: Moody's Financial Metrics

Exhibit 11

Cash Flow and Credit Metrics [1]

(\$ in millions)

CF Metrics	Dec-16	Dec-17	Dec-18	Dec-19	LTM Mar-20
As Adjusted					
EBITDA	473	488	452	463	458
FFO	442	389	332	365	355
- Div	87	92	98	103	101
RCF	355	297	234	262	253
FFO	442	389	332	365	355
+/- ΔWC	(28)	8	4	47	(7)
+/- Other	(56)	15	26	(10)	(10)
CFO	358	412	362	402	338
- Div	87	92	98	103	101
- Capex	407	412	424	447	452
FCF	(136)	(93)	(160)	(147)	(215)
Debt / EBITDA	4.2x	4.2x	5.1x	5.1x	5.1x
EBITDA / Interest	5.4x	5.0x	4.4x	4.3x	4.3x
FFO / Debt	22.2%	19.0%	14.5%	15.4%	15.2%
RCF / Debt	17.8%	14.5%	10.2%	11.1%	10.8%
Revenue	1,442	1,446	1,397	1,346	1,353
Cost of Good Sold	547	525	495	438	455
Interest Expense	88	97	102	107	107
Net Income	141	126	84	128	75
Total Assets	5,310	5,518	5,833	6,082	5,965
Total Liabilities	3,672	3,799	4,074	4,158	4,086
Total Equity	1,637	1,719	1,759	1,925	1,879

[1] All figures & ratios calculated using Moody's estimates & standard adjustments. Periods are Financial Year-End unless indicated. LTM = Last Twelve Months.

Source: Moody's Financial Metrics™

Ratings

Exhibit 12

Category	Moody's Rating
AVISTA CORP.	
Outlook	Stable
Issuer Rating	Baa2
First Mortgage Bonds	A3
Senior Secured	A3
Senior Unsecured MTN	(P)Baa2
ALASKA ELECTRIC LIGHT AND POWER COMPANY(AELP)	
Outlook	Stable
Issuer Rating	Baa3
AVISTA CORP. CAPITAL II	
Outlook	Stable
BACKED Pref. Stock	Baa3

Source: Moody's Investors Service

© 2020 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/OR ITS CREDIT RATINGS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S INVESTORS SERVICE 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 MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S INVESTORS SERVICE CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

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

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing its Publications.

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

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

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

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$2,700,000. MCO and Moody's investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody's.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

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

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY250,000,000.

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

CLIENT SERVICES

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