ITEM NO. CA7

PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: March 21, 2019

REGULAR ____ **CONSENT** __X__ **EFFECTIVE DATE** __**Upon Commission Approval**__

DATE: March 14, 2019

TO: Public Utility Commission

FROM: Matt Muldoon mjm

THROUGH: Jason Eisdorfer and John Crider JC

SUBJECT: CASCADE NATURAL GAS: (Docket No. UF 4309) Requests authority to issue up to $75 million of debt securities.

STAFF RECOMMENDATION:

Staff recommends the Commission approve Cascade Natural Gas Corporation's (Cascade, CNG, or Company) application subject to the following conditions and reporting requirements:

1. Authorization Limit

   Total debt securities issued, sold, or exchanged under this authority shall not exceed $75 million and shall have maturities between 5 and 40 years inclusive.

   Note: If the bonds and notes are issued at an Original Issue Discount (OID) not to exceed one percent, such greater amount shall result in an aggregate offering price of not more than $75 million.

2. Withdrawal of Prior Authorization

   All prior Commission debt securities outstanding unused issuance authorizations will expire 60 calendar days after the Commission's order is entered in this docket, UF 4309, approving Cascade debt securities up to the limits shown in Condition 1.

3. Cost Requirements

   Subsequent to an authorizing Commission order pursuant to this Application, the Company may issue debt securities without further Commission approval provided that proceeds are used for lawful utility purposes, and provided either:

   A. All-in rate spread(s) over yield(s) on like maturity U.S. Treasury (UST) do not exceed the limits set forth in Attachment A. Interest rates on the Unsecured

Notes may be periodically reset based on a fixed spread over 1-, 2-, 3-, 6-, or 9-month London Interbank Offering Rates (LIBOR) as reported on Bloomberg, Reuters, or other customary LIBOR sources. In no case for Unsecured Notes will the fixed spread over pertinent LIBOR exceed 1.5 percent. In the event that LIBOR is not reported or is unavailable, the parties may use a rate from another recognized source or a rate agreed to by the parties intended to approximate LIBOR; or

B. The all-in fixed coupon rate does not exceed a **7.0** percent "hard cap." However, the agreements related to debt securities may contain customary or market terms and conditions required by lenders or holders, including without limitation, yield protection, capital adequacy requirements and tax indemnification, which will not be included in the hard cap.

Both "A" and "B" above incorporate the restriction that all costs of any hedging associated with any issuance under the authority requested must be accomplished within the all-in spreads or rate specified above.

The Company may also incur a new prevailing fee(s) (Unanticipated Fee Allowance), not to exceed an aggregate 10 basis points of affected principal. Such Unanticipated Fee Allowance is in addition to the hard caps described above. The Company should include materials in its next reporting to the Commission demonstrating that this cost was new and market pervasive at issuance.

4. Hedging and Currency Exchange

   Interest rate hedging arrangements and international financing are not authorized.

5. Cost Competitive

   Agent and underwriting commissions for the issuance of debt securities will not exceed the fees as shown in Attachment A, and will not in any case exceed 0.875 percent of gross proceeds. The Company shall demonstrate for all debt issuances and associated activities that the Company achieved all-in rates that contemporaneously were both competitive and cost effective.

6. Timely Reporting

   The Company will provide the Commission with the customary Report of Securities Issued and Disposition of Net Proceeds statements (reports) no later than 30 calendar days after any transaction has been closed and funded. Reporting will be denominated in U.S. dollars and will include, but not be limited to: total value of the issuance; total and per unit fees and expenses; interest costs; and copies of itemized invoices for all external legal costs.

7. Authorization End Date(s)

   Provided all conditions and reporting requirements are fulfilled, authorization under an order issued pursuant to this application will remain in effect until superseded or exhausted. See Exception.

   Exception: If Standard & Poor's (S&P) long-term local credit rating for the Company falls below investment grade, Cascade must provide notice to the Commission and return to the Commission for reauthorization of any unused remaining authority.[1]

8. Reservation of Judgment Regarding Reasonableness

   The Commission will reserve judgment on the reasonableness for ratemaking purposes of the Company's capital costs, capital structure, and the commissions and expenses incurred for security issuance and related activities, and may address same in any subsequent rate case or other Commission proceeding.

DISCUSSION:

Issue

Whether the Commission should approve Cascade's request to sell or exchange up to $75 million of debt securities with maturities between 5 and 40 years inclusive, when cost and risk effective, and cancel the Company's previously approved outstanding debt issuance authority, including that authorized in Order No. 14-321 in Docket No. UF 4290.

Applicable Law

Under ORS 757.405, a utility must obtain Commission approval prior to issuing stocks and bonds, notes and other evidences of indebtedness. The Commission may authorize an issuance if it is for one of the permissible purposes listed in ORS 757.415(1), satisfies the criteria of ORS 757.415(2)(b), and, except as permitted, the purpose of the issuance is not reasonably chargeable to operating expenses or income, ORS 757.415(2)(c). Permissible purposes for an issuance under ORS 757.415(1) include the acquisition of property, the construction, completion, extension or improvement of its facilities, the improvement or maintenance of its service, and the discharge or lawful refunding of its obligations.

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1 Moody's Investors Service: Moody's withdrew its ratings for MDU Resources on April 7, 2011. Moody's had downgraded MDU Resources and Centennial but confirmed Baa1 / Stable ratings for Cascade Natural Gas on April 20, 2009. In this docket, Staff relies entirely on Standard & Poor's current ratings. S&P's lowest investment grade rating for long-term debt is BBB–.

Finally, OAR 860-027-0030 requires utilities to provide certain information when seeking authority to make an issuance under ORS 757.405-757.415.

Analysis

Cascade's Application

The Company seeks authority to issue securities between 5 and 30 years in length, in one or more series, in amounts not to exceed $75 million in the aggregate. It is expected but not a certainty that Cascade's notes will be sold at one time to institutional investors in a private placement led by Wells Fargo Securities, LLC and US Bancorp Investments, Inc. Cascade proposes to use the proceeds of the issuance(s) to construct, extend, or improve utility facilities, improve or maintain service, or for the discharge or lawful refunding of obligations that were incurred for utility purposes permitted under ORS 757.415. At this time a primary intended use is to pay $30 million of short-term debt obligations due June 2019, and to aid in addressing projected capital additions in fiscal year 2019 of approximately $105 million.

Cascade agrees that if the Commission approves the Company's Application, authorization to issue new debt securities under previous Commission orders will no longer be valid.

The Company asks that it be authorized to issue fixed-rate secured long-term debt in the form of fixed or floating rate notes, with a term of up to 30 years. These debt securities, may or may not be registered. Any private placement may be arranged with a delayed start if practicable.

The Company anticipates issuance as described in its application, but the requested authority would allow for a variety of borrowing options in order to provide financial flexibility, to obtain lower all-in cost, to reduce risk, and ensure access to investors.

Cascade does not request an exemption from competitive bidding requirements of any nature, though in Oregon, competitive bidding is not required. Rather debt issuance must be cost effective and reflective of market conditions regardless of issuance method selected.

The Company provides estimates for agent and legal fees as well as for out-of-pocket costs. Successful private placement in the Company's estimation will avoid a variety of fees as shown in Attachment C.

Any floating rate notes issued under the Commission's order would be authorized to have interest rates that would be reset with a periodic LIBOR rate source, with an expected issuance cost of no more than one percent of principal. If, as expected, LIBOR would not be available in the near future, permission is requested to use a prevailing alternative acceptable to banks and pertinent entities.

The Company does not request a sinking fund provision or an early redemption feature with any incremental breakage fee or other indemnification. Nor does Cascade ask for authority to enter into interest-rate hedges. The Company expects to issue debt securities denominated in U.S. dollars, avoiding transactions that could entail currency exchange.

Cascade indicates that it will notify the Washington Utilities and Transportation Commission with a timely filing addressing issuance of long-term debt described herein.

Staff Analysis and Recommendations

In the following analysis, Staff addresses whether the proposed issuance complies with ORS 757.415(1) and satisfies the Commission's no harm standard. Staff performs usual and customary financial review of the Company's filling while also explaining why the Commission would want to ensure that Cascade's financial tools are refreshed and ready now to address prevailing industry challenges and in anticipation of potentially less advantageous financial market conditions a year from now.

Use of Proceeds
Authorization as requested will allow Cascade to repay approximately $30 million of short-term debt maturing this June, preserving the Company's financial liquidity to deal with gas transportation outages, pressure impairments and other possible challenges without undue cost to customers.[2] Separately docketed at this time in UF 4310, Cascade also asks the Commission to authorize it to refresh its revolving credit facility.

It is usual and customary for investor owned utilities to consolidate maturing short-term debt and where applicable commercial paper into longer term debt securities. For example, Duke Energy Corp sold $600 million of senior notes this month due in three

2 See Part C on page 4 of Application.

years to repay outstanding commercial paper obligations. The three-year term of new issues was predicated on Duke's debt maturity profile.[3]

Addressing MDU CFO, CapEx and FCF
MDU signed a distribution agreement for up to 10 million shares of common stock on February 22.[4] At an offering price of $26.27 per share this would raise an additional $262.7 million.[5]

This MDU stock issuance reassures Staff monitoring MDU Cash Flow from Operations (CFO). Staff saw an incremental $51.87 million in 2018 over 2017 but an increase in Capital Expenditures (CapEx) of $226.848 million for like year over year change. This imbalance of $174.978 million associated with negative Free Cash Flow (FCF) to MDU was concerning to Staff as without remedy, it would have left MDU ill-prepared to infuse equity support into Cascade were there need for such action.[6] Thus the MDU flotation alleviates part of Staff's concerns.

Unsettled Gas Prices
The Enbridge gas delivery system feeding natural gas from Canada into Washington State had a pipeline rupture on October 9, 2018. This event occurred when Jackson Prairie storage and Clay Basin storage were both down for maintenance. Sumas prices spiked in late November causing the ROM Index to rise for December and again in February affecting the FOM Index for March as demand for natural gas rose when most of Washington experienced snow and freezing temperatures. This was followed with an extreme spike on March 1, 2019, as Enbridge dropped pipeline pressure to 47 percent of nominal capacity amidst already limited capacity insufficient to address high demand. Again this was at a time when storage levels were relatively low and/or deliverability was reduced for maintenance or upgrades.

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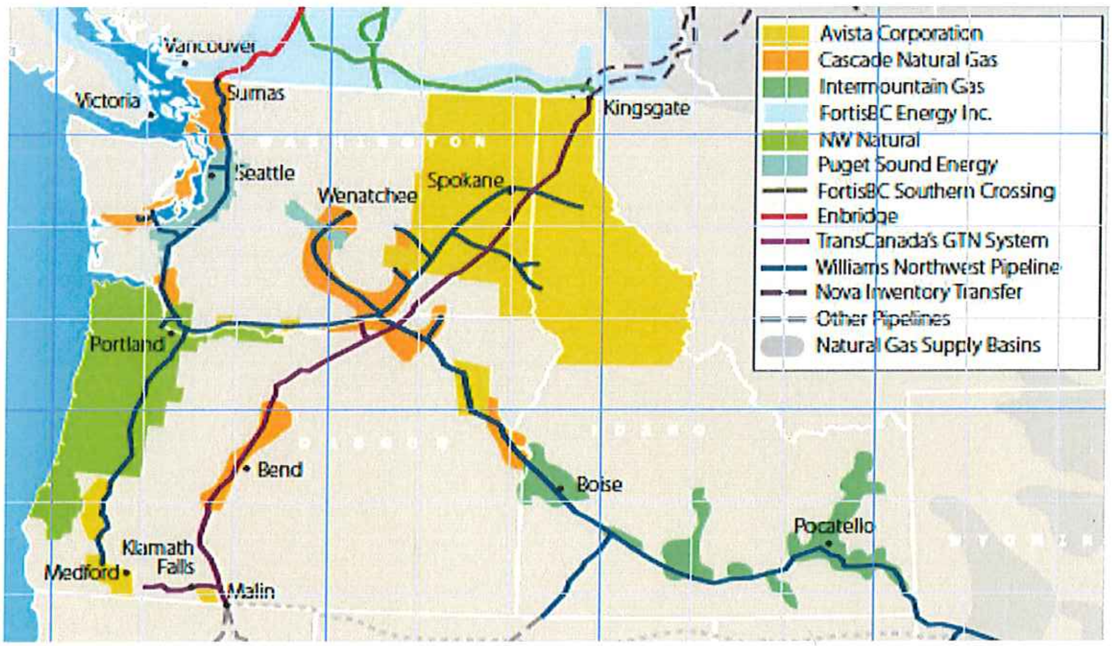
3 See "Duke Energy Sells $600M of Senior Notes" by Nephele Kirong of S&P Global Market Intelligence published on March 7, 2019.
4 See MDU Form 8-K filing with the SEC on February 22, 2019.
5 See "MDU Resources to Offer Up to $262.7 M of Common Shares" by Nephele Kirong of S&P Global Market Intelligence published on February 25, 2019.
6 Staff accessed MDU financial metrics through Bloomberg FA function on February 25, 2019.

Map 1 – Sumas WA is located north of Seattle.



See Attachment E for more about challenges in restoring full transportation capacity at Sumas. Staff does not have enough information to assess whether this disruption will be over by the end of this heating season or if there will be ongoing difficulties. However, the difficulties are proving to need more than just a single prompt one-time remedy.

Issuance Flexibilities
While Cascade's intent is to issue fixed rate debt, authority to issue floating or variable rate debt provides the Company with additional flexibility should it be needed. Interest rates for floating rate notes may be periodically reset based on a fixed spread over 1-, 2-, 3-, 6-, or 9-month LIBOR. In no case will the fixed spread over pertinent LIBOR exceed 1.5 percent. In the event that LIBOR is not reported or is unavailable, Cascade and pertinent parties may use a rate from another recognized source or a rate agreed to by the parties intended to approximate LIBOR.

Longer Maturities
Cascade requests the ability to issue debt securities with maturities up to 30 years inclusive. However, Staff notes that authorization of maturities up to 40 years can lower costs for ratepayers while diminishing risk of debt maturity concentration. Therefore, Staff recommends the Commission authorize an upper maturity of 40 years. Because the Company plans to issue in private placement, there is likely to be little or no

incremental cost to issue, for example, 31-year debt that might reduce the amount of debt maturing in a given year.

Private Placement
Debt issued in the private placement market may also be advantageous versus a public offering because it may provide flexibility of timing and size, and lower issuance costs. Private placements generally do not require rating by rating agencies. But, they can have implied ratings based on the Company's current ratings.

Hedging Authority
No hedging authority is requested or authorized.

Currency Exchange Risk
No international market access requiring currency exchange is requested or authorized.

Credit Support
No incremental credit support is requested or authorized.

Pro-Rata Issuance
Securities will not be issued on a pro-rata basis, using a proportional or share-of-outstanding securities basis.[7]

Financial Decision-Making under Uncertainty
It may be that in-house or external legal resources relied on by MDU or Cascade have offered an opinion that Cascade must wait for all opportunities for appeal of a Commission Order to expire before issuing debt securities. Such an interpretation would be unfortunate.

Rather than wait for all uncertainty to pass, financial economics requires finance professionals to address probabilities of outcomes given multiple inputs. Simple probabilistic models allow for decision making before absolute certainty. In fact, waiting for absolute certainty on a regular basis can ensure higher costs than necessary and higher rates for utility ratepayers.

The result of waiting 60 days for possible appeal of a Commission order regarding debt securities issuance is more likely to subject the issuing utility to risk of movement in UST yields and also more likely to subject the issuing utility to risk of movement in spreads over UST yields to issue utility debt securities.

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7 See Application page 4, Part B.

Waiting until outcomes are 100 percent certain in this instance is known to be certain to increase risk. This application of probabilistic logic becomes important in any prudence review.

Outlook for UST Yields

U.S. fixed income markets have important news to digest coming from the European Central Bank's (ECB) decisions to: A) Drop the European Gross Domestic Product (GDP) growth rate forecast for 2019 to just 1.1 percent, B) Provide very low cost loans to bank, and C) Reinvest principal payments from maturing bonds for the ECB asset portfolio into the future.[8] The ECB has not actually stopped taking positions in sovereign debt and other securities.

Former Fed Chair Bernanke reassured the public that the U.S. Federal Reserve (Fed) could hold debt securities and troubled assets to maturity providing a logical and non-disruptive exit strategy from gargantuan Fed balance sheet asset holdings. In practice, central banks reinvested the final principal payments of their held securities on maturity. In Las Vegas, this would be called "letting it ride" vs. cashing in one's chips and ceasing that activity. Now both the Fed and the ECB indicate they will not actually stop taking the proceeds of maturing securities held and reinvesting them into additional positions in other securities. There is in fact no tapering of the ECB's vast bond holdings. This suggests that there is both greater global financial risk and global growth headwinds. These factors can converge to drive the cost of issuing utility bonds downward in the near term to ratepayer benefit.

Moody's Capital Markets Research, Inc.'s Chief Economist John Lonski cautioned that market conditions look similar to those in 1998 when global growth faced a slowdown from economic weakness abroad. Moody's therefore projects that absent other news or developments, it is likely in the near term that 10-year UST yields will fall below 2.65 percent if historical patterns repeat.[9]

Two Year Economic Outlook

Staff finds that consensus economic forecasts and surveys suggest it is equally likely that there will be an economic downturn in 2020 as not. Staff will discuss this further in the concurrent docket UF 4310. But the general take-away is that it is best for the Company's financial health to be proactive and enter contracting markets with all

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8 See "ECB Reverses Course with New Stimulus Measures" by Tom Fairless and Brian Blackstone published in March 7, 2019, edition of the Wall Street Journal (WSJ).

9 Much as John Lonski projected, UST 10-year yield closed at 2.637 percent on March 7, 2019.

general financial tools refreshed and current. This avoids having to refresh financial tools under distress at higher cost to Company and ratepayers.[10]

Spreads over UST Yields
Staff recommends replacing the Company's requested values on page 3 of its Application with the values shown in Attachment B to this memorandum. Staff's recommended values in Attachment B are based in part on Bloomberg data summarized by the graphs in Attachment D. Limits shown in Attachment B allow adequate headroom for the Company to issue debt securities under financial market conditions anticipated by the Board of Governors of the Federal Reserve System over the next several years.[11]

As shown in Attachment C, Staff's recommended spread over UST provides adequate headroom for the Company's likely maturities for debt security issuances.

Hard Cap Alternative
Staff recommends that the Commission impose Staff's recommended condition that in the event all-in spreads exceed the relevant maximum spread over UST set forth in Attachment A, the Company may still issue debt securities without further Commission approval if the all-in rate does not exceed a "hard cap" of 7.0 percent, as outlined in Condition 3.[12] A 7.0 percent all-in rate "hard cap" allows adequate headroom to assure Company access to debt markets, while providing reasonable cost controls to protect ratepayers. This hard cap value is set to be a practicable limit based on Bloomberg forward yield curves over at least the next 18 months.

Provision for New Bank Fees
Additionally, the Company may incur a new prevailing fee(s), not to exceed an aggregate 10 basis points of affected principal. If relying on this provision, Cascade's next reporting to the Commission should include materials to demonstrate that this cost was new and market-pervasive at time of issuance. This flexibility addresses the potential for an additional fee(s) or charge(s) by investment banks, agents, organizers, or other parties that is not part of itemized bond issuance costs routinely encountered in 2019 bond markets.

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10 See for example: the National Association for Business Economics (NABE) Economic Policy Survey of February 2019.

11 Staff accessed the materials of the Board of Governors of the Federal Reserve System's latest statistical release and the 'Beige Book" posting on March 6. 2019, at https://www.federalreserve.gov/.

12 See the definition for "All-in Cost" by browsing to the lower right corner of the Commission's home webpage at: http://www.puc.state.or.us/Pages/index.aspx. Then, click the Quick Link: "Standard Data Requests for Energy Rate Cases" and scroll to page 32, "Terms."

Underwriter and Agent Fees
Appendix A shows Staff's recommendation regarding the maximum range of allowed agent and underwriting commissions for issuances. Underwriters' commissions represent the maximum commission to be paid by the Company and vary depending on the maturity of the Debt Securities issued (e.g., 0.875 percent is estimated to be the fee for issuances with maturity dates of approximately 30 years). Shorter maturities typically require lower commissions than do longer maturities.

Staff's recommended limits on underwriting commissions are stated in basis points (bps) or percentages of aggregate issuance amounts. Under Staff's recommendations, underwriting commissions will not in any case exceed 0.875 percent of gross proceeds.

The Company anticipates approximately 40 basis points or about $300,000 should the debt securities be issued in private placement with Wells Fargo Securities, LLC and US Bancorp Investments, Inc., depending on maturities and other factors.[13]

Other Technical Expenses
After netting-out issuance fees as illustrated in Attachment B, the Company expects to achieve approximately $74,500,000 in aggregate net proceeds, not including any OID determined at the time of issuance. While the Company plans to issue the debt securities in one arrangement, should that prove impracticable, issuance may be spread out over time rather than a single set of coordinated issuances within the same quarter.

Usual Early Redemption Features Are Authorized
The Company does not request any early redemption feature to provide financial flexibility. However, Staff finds that usual early redemption features are reasonable and usually cost effective. Therefore, Staff recommends that the Commission authorize early redemption features provided the Company stands ready to demonstrate how any early redemption executed were cost effective based on prevailing market conditions at time of execution.

For example: A make-whole redemption feature allows an issuer to call bonds at any time at a cost equal to the future debt service discounted back to the redemption date. Such provisions are usual and generally a benefit to ratepayers. The discount rate for a make-whole provision within a call feature is likely be a rate based on the prevailing treasury yield to current maturity plus 50 basis points. This type of redemption does not typically require the issuer to pay a higher coupon or fee since the bond holder is effectively made whole.

[13] See Application page 4, Paragraph D, Part j.

Capital Structure
Cascade targets a 50/50 Debt/Equity capital structure over time. An order authorizing the Company to issue debt securities in the form and quantity requested would refresh Cascade's authorization to issue long-term debt consistent with the Company's current utility obligations.

Selection of Agents
Staff has indicated that Wells Fargo Securities, LLC and US Bancorp Investments are selected to lead the issuance of debt securities. However to control costs and maintain flexibility so as to achieve lowest practicable issuance costs, selection of agents, underwriters, and external counsel may include any entities associated with the Company's outstanding debt based in part on knowledge of the Company's business, and proven ability to place debt, and to provide cost effective financial services.

Estimated Legal Fees
Cascade anticipates legal fees for agent counsel will be reimbursed to agents and that the Company's legal counsel will be about $125,000 for the planned issuance.[14]

Continued Commission Reliance on S&P Ratings
Staff recommends the Commission still monitor Cascade's S&P implied ratings even for issuances in private placement which do not strictly require ratings. S&P local currency long term credit rating for Cascade is currently BBB+. Ratings from the S&P provide an early warning system that can alert the Commission to any problems early enough for inexpensive and straightforward remedies to be deployed.[15]

Reasonably Necessary or Appropriate
Staff recommends the Commission find that the requested authorization is necessary for Cascade to deliver safe and reliable utility service.

Won't Impair Cascade's Ability to Perform
Authorization amounts and issuance methods are prudent and appropriately within the scale and scope of proper performance of the Company.

Cascade Board of Directors (BOD) Authorized:
Cascade supplemented its February 27, 2019 application to include Cascade BOD's March 11, 2019 authorization to issue an incremental $75 million of debt securities.

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[14] See page 4, Paragraph D, Part J of Application.
[15] Ratings are drawn on March 8, 2019, by Staff at: https://www.standardandpoors.com/en_US/web/guest/ratings/entity/-/org-details/sectorCode/UTIL/entityId/100399.

Compatible with the Public Interest
The requested authorization working in conjunction with Docket No. UF 4310 will help ensure Cascade's financial toolkit is well maintained to minimize cost and risk for Company and ratepayers.

No Harm
The requested authorization will facilitate the Company's low cost streamlined plan for debt issuance in private placement via proven agents familiar with Cascade's business. However, Staff's supporting framework and conditions preclude too narrow of an authorization that could cause the Company to be captive to specific agents or issuance methods. Said flexibility helps prevent any last minute extra fees or costs that might otherwise arise. Further, the requested authorization is an important component in refreshing Cascade's financial readiness to address gas-delivery disruption or economic changes routinely and without incremental cost or risk associated with any stress that could arise in the absence of the requested authorizations.

Conclusion

Staff concludes that, subject to Staff's recommended conditions, the proposed issuance satisfies the Commission's and the statutory criteria and Staff recommends that the Commission approve the Application. Thereafter, debt securities may be issued under this new authority, subject to Staff's recommended conditions, in any proportion and in any combination of differently sized offerings, which may be issued pursuant to a shelf registration filed with the SEC, or private placements, provided that the combined aggregate total of these offerings does not exceed $75 million, inclusive of any OID.

Staff review of this application indicates that the debt securities issuance with maturities equal to or less than 40 years will do no harm and can be expected to benefit ratepayers. Cascade has endeavored to streamline its requested authority to enable just what the Company expects to need in its actual planned issuance. Staff appreciates this focus, but provides a somewhat broader framework with certain usual and customary flexibilities. Those flexibilities allow the Company to negotiate more strongly because the authorization does not restrict the Company from selecting other agents and methods should planned approaches prove more expensive or cumbersome than expected.

The Company has reviewed and agrees with this memo including the Staff proposed conditions and reporting requirements.

PROPOSED COMMISSION MOTION:

Approve the Company's application for authority to issue and sell or exchange up to $75 million of debt securities subject to eight conditions and reporting requirements set forth in Staff's Recommendation.

Attachment A

Maximum Allowable
Agent and Underwriter Commissions
for FMB and Unsecured Notes
in Normal Market Conditions

Maturity		**Maximum Underwriter Commission**
At Least	**But Less Than**	
Years		**Basis Points (bps)**
1	1.5	15
1.5	2	20
2	3	25
3	4	35
4	5	45
5	7	60
7	10	62.5
10	**12**	**65**
12	15	67.5
15	20	70
20	25	75
25	**41**	**87.5**

Attachment B

Maturity		Maximum Annual All-In Spread Over Benchmark U.S. Treasury (UST) Yields	
Years		Basis Points (bps)	
Over	Not More Than	FMB	Unsecured Debt
1	2	100	125
2	3	125	150
3	5	150	175
5	7	175	200
7	**10**	**200**	225
10	20	225	250
20	**30**	**250**	275
30	40	275	300

Note: Comparing Bloomberg data[16] for like rated utility bonds, Staff finds that the above limitations provide access to capital with reasonable headroom for likely combinations of issuances in public, and private placement with delayed start at no or minimal incremental cost that could be beneficial to ratepayers, over the next two years. First Mortgage Bonds are abbreviated as FMB above.

[16] Staff referenced Bloomberg FMB and Unsecured USD indexed data on March 8, 2019. One Basis Point (bp) is defined as one-one hundredth of a percentage point, i.e., 100 bps equals one percent.

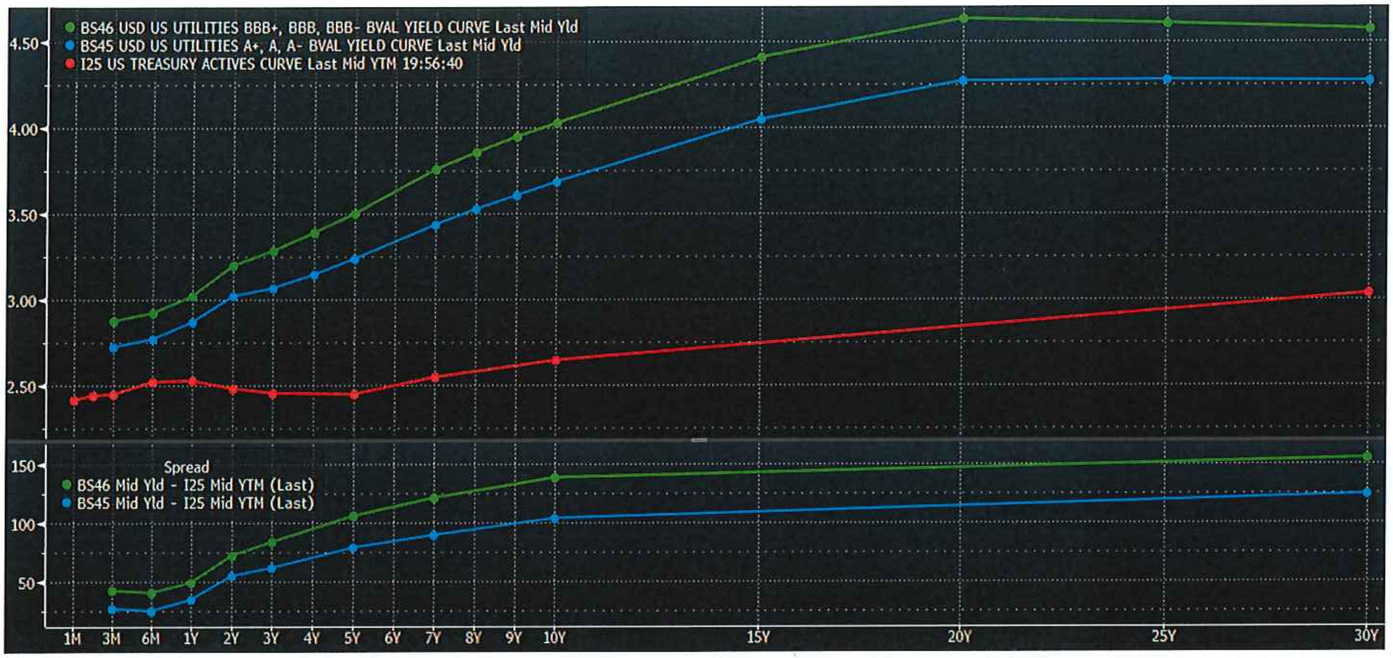
Attachment C

CNG Estimated Representative Issuance Expenses

Item	Debt Securities $		Per $100
Principal Amount (Face Value)	$75,000,000		$100
Plus Premium or Less Discount	(Not Applicable)		
Gross Proceeds	**$75,000,000**		$100
Underwriter Spread & Commissions	0	Cap	0.875
Regulatory Agency Fees	0		
SEC Fees	0		
Printing & Engraving	0		
Trustee / Indenture Fees	0		
Accounting	0		
Rating Agency Fees	0		
Company Counsel Fees	125,000		
Miscellaneous Expenses	300,000		
Total Deductions	425,000	$	0.567
Estimated Realized Net Amount	**$74,575,000**	**$**	**99.433**

Attachment D

Bloomberg Current
Investment Grade Utility Spreads Over UST
Bloomberg CRVF Function Plot
Accessed by Staff on March 7, 2019



Referent Points of Interest:
10 Year Maturity Range from **A rated 104 bps** to B rated 139 bps,
30 Year Maturity Range from **A rated 124 bps** to B rated 155 bps.

Attachment E

Sumas Hits Historic High on Demand Jump, Pipeline Constrictions

by Veda Chowdhury – **S&P Global Market Intelligence, Platt's** – Mar. 1, 2019

Northwest, Canadian border (**Sumas**) **prices hit** a **historic high Friday**, as **demand surged** and **maintenance restricted flows**. **Gas** changed hands as $152.91/MMBtu, a **$127.39 jump day on day**, blowing **cash basis** to **$149.74/MMBtu**, the **highest on record**, **deals were concluded** as **high as $200/MMBtu**.

HISTORICAL NORTHWEST CANADIAN BORDER SUMAS CASH PRICES

Source: S&P Global Platts

The **sharp price spike** comes as West **demand** totals are set to average **nearly 17 Bcf/d through Monday**, up **from 4Bcf** from the **same time in 2018**, according to S&P Global Platt's Analytics data. Demand averaged 13.5 Bc/d over the last week.

The National Weather Service forecast calls for a **cold** active wintry period across much of Colorado through the weekend with lows of around 6 degrees in Denver. In **Seattle**, **average temperatures** are expected to hover **near freezing**. **Normally**, Seattle's **high** at this time of year is **about 40 degrees**.

The **high demand comes** at a time **when** Westcoast Energy **maintenance** at **Station 48 South** has **resulted** in **tight supplies** in the Pacific Northwest. **Capacity** at **that location will be cut to about 1.3 Bcf/d this weekend after averaging about 1.7 Bcf/d across much of February,** according to **Enbridge** Westcoast Energy website.

The impact of the capacity decrease rippled down the line to Sumas, which was expected to see flows of 621 MMcf Friday, Platt's Analytics data showed. According to the Norwest Pipeline website, total scheduled quantity stands at about 737 MMcf at the **Sumas** Receipt point against total capacity of 1.3 Bcf, putting **capacity at only 47 percent**.

The **maintenance** at Station 4B South is **expected to continue through summer**, **giving support** to **futures contracts**. The **Sumas April contract** was **up 91 cents to Henry Hub** plus **92.5 cents/MMBtu**, while the **May basis contract rose 14 cents to trade at Henry Hub minus 40 cents/MMBtu.**