

Trappers Way Intervener Request

REQUESTOR NAME: Trappers Way Residential Group

INFORMATION REQUEST NO: 1

TO: Corix Multi-Utility Services Inc. (CMUS), Panorama Water

DATE: September 25, 2020

REFERENCE NO: 7677

APPLICATION NAME: 2020-2022 Water Revenue Requirements Application

1.0 Reference: Evidentiary Update, pg. 13, section 3, Tables 1 and 1A

Explanation: Annual Operating and Maintenance (O&M) expenses are decreasing by 18% from 2018 to 2020, yet rates are substantially increasing due to the cost recovery methodology for the Groundwater Source Development Program (GSDP) and not due to increasing O&M costs. There is a wide range in variability in O&M expenses seemingly driven by changes in Allocations from Panorama and Kootenay Ops, Corporate and Regional Services, Utilities and Regulatory Costs.

Request:

1.1 Please provide a detailed explanation of why there is so much variability in these costs from year to year, particularly with respect to the allocations, corporate services and regulatory services and whether we will see such variability beyond 2022.

Corix Response:

The Corporate and Regional Services allocations from 2016 to 2018 are actuals shown in Table 1 for Panorama Water which did not affect customer rates or recovery from customers. This is because during those years the rates charged to customers were based on Decision and Order No. 2232 issued by the Comptroller on June 28, 2010. The Decision and Order No. 2232 approved a revised revenue requirement and a revised water rate and tariff structure effective March 1, 2010. Customers rates were unchanged from March 1, 2010 to January 1, 2019.

As noted on page 23 of the Evidentiary Update, CWP was sold in January 2018. As CWP was a significant segment of Corix, the remaining utilities were allocated a higher cost since CWP was no longer a part of the company to be assigned its allocation. After the sale, Corix embarked on a new Corporate Allocation Methodology to fairly allocate costs. Comptroller Order 2548 approved \$63,993 for Forecast 2019. The Actual for 2019 was \$61,938. The higher allocations in Forecast 2020 to 2022 reflect the higher gross plant and revenues in Panorama Water from the GSDP project.

Regulatory Costs are related to the applications made to the Comptroller. The 2018 Actual Regulatory Costs were for Corix's costs to prepare the application and respond to the information request, and final order. Further information on Regulatory Costs can be found in the

Trappers Way Intervener Request

Application for 2019 Rates.¹ The Actual 2019 Regulatory Costs is for the costs for the Comptroller's consultant for reviewing the 2019 rate application. The Forecast 2020 cost of \$26,000 is for the costs of Corix's consultant to prepare the application and to respond to information requests and the final order. Forecast 2020 costs also include the anticipated cost for the Comptroller's consultant to review the 2020 to 2022 rate application. Also, Corix has included an estimated \$5,000 for each of 2021 and 2022 for any regulatory filings. Page 22 of the Amended Application provides details on the Regulatory Costs contained in the Amended Application. Regulatory costs will be uneven since regulatory applications vary between years.

Table 1 Line 25 Allocations from Panorama & Kootenay Ops has estimated costs of approximately \$25,000 for Forecast 2020 to 2022. In 2020 Corix changed the way it allocated costs from Panorama & Kootenay Ops to Panorama Water. The change allows for internal administrative efficiencies. The allocated costs are from Line 20 Office expenses, Line 21 Shop Supplies, and Line 22 Training where the costs are shared with other business units

Beyond 2022 the Corporate and Regional Allocations should stabilize as Panorama Water will have a relatively stable Gross Property Plant & Equipment and Gross Revenue. The three composite factors underlying the Corporate Allocation Model (Gross PP&E, Gross Revenue and Headcount) are the primary drivers of the allocated costs. Allocations for Panorama & Kootenay Ops should stabilize though there may be some variability arising from actual operational matters. If Corix is able to obtain other service contracts, the economies of scale gained will benefit customers. However, if Corix loses some service contracts the dis-economies of scale may affect customers unfavourably. Overall, costs are forecast to stabilize as the new water system will have been operating for a number of years and the revenues and assets of Panorama Water will have reached a steady state.

2.0 Reference: Evidentiary Update, pg. 13 section 3, Tables 1 and 1A

Explanation: Chlorine costs are forecast to increase by 91% between 2019 and 2020, yet testing costs are forecasted to decline. Furthermore, a new UV system was installed which should reduce chlorine demand.

Request:

2.1 Please explain why chlorine costs are expected to increase as indicated.

Corix Response:

Forecast 2021 is based on the average of the previous 5 years. An average has been historically used since the chlorine costs show no predicable trend. For 2022 and onwards, the chlorine costs are increased by 2.0% CPI.

¹ 2019 Rate Application. See Regulatory Costs explanation on pages 8 and 13. https://www.corix.com/docs/default-source/pdfs/panorama-pdfs/cmus-pmv-water-rate-application---2018-11-26.pdf?sfvrsn=8e61625d_0

Trappers Way Intervener Request

The UV system may reduce the chlorine demand. However, chlorine demand is dependent on many factors (eg. source water quality, community water demand). It will require time and experience operating the GSDP system to quantify changes in chlorine demand.

For clarity it should be noted that if the Revenue Deficiency Deferral Account (RDDA) is accepted as proposed in the Amended Application, any savings from lower chlorine costs relative to budget will flow through the RDDA for the benefit of ratepayers. Corix will not realize any financial benefit from savings to budget on any expense item.

2.2 Please provide a forecast for the relative proportion of surface water relative to ground water that is to be used on a monthly/seasonal basis over a calendar year.

Corix Response:

The Panorama Ground Source Development Project was designed and constructed to wholly eliminate the Taynton Creek surface sourced system. Therefore, the relative proportion of surface water to ground water is 0% / 100%.

3.0 Reference: Evidentiary Update, pg. 17, section 3.2-6, Utilities

Explanation: Utilities costs are projected to increase by 154% from 2019 to 2020. Corix attributes this large increase to increased electricity usage driven by the pumping requirements of the GSDP and increased water demand due to distribution system leakage, apparently caused by the increased hardness of the water.

Request:

3.1 It is our understanding that Taynton Creek was going to continue to supply Panorama with water, as well as the GSDP. Please describe and explain any differences in pump operation when surface water from Taynton Creek is used, when groundwater is used and when there is a mix, as well as the differences in electricity usage due to variation of water source.

Corix Response:

The Taynton Creek system has not been used since February 10, 2020.

The Taynton Creek surface supply is scheduled for decommissioning in October 2020. Since the GSDP system was commissioned February 11, 2020, the water source for Panorama has been solely sourced from the wells located northeast of Panorama Staff Accommodations. Corix anticipates increased electrical consumption from the GSDP project. This is because the elevation difference from the well source to the reservoir is greater than the Taynton Creek source to the reservoir, resulting in the addition of pumping capacity, heat for Well and Reservoir control kiosks, heat and light for the new Water Treatment plant, and the Operation of UV Reactors in the water treatment process.

Trappers Way Intervener Request

3.2 Please identify the material (cast iron?, carbon steel?) used for the distribution system and why leakage is being attributed to the hardness of the water; also please provide the Langelier Saturation Index for the groundwater and the surface water from Taynton Creek.

Corix Response:

The distribution piping at Panorama is a combination of ductile iron, HDPE, and PVC, depending on the installation date.

Upon further investigation leakage is not attributed to water hardness. Refer to response to Question 3.5 for further discussion on the source of distribution system leaks.

The Langelier Saturation Index for Panorama ground water is 0.16. The result for surface water is irrelevant, as Corix is no longer using Taynton Creek as a source.

Below are the results for a 2020 and a 2019 sample:

For the 2020 sample:

- Langelier index – 0.60 (not corrosive)
- Ryznar index – 6.62 (not corrosive)
- Aggressiveness index – 12.66 (not corrosive)

For the 2019 sample:

- Langelier index – 0.08 (not corrosive)
- Ryznar index – 8.19 (slightly corrosive)
- Aggressiveness index – 12.14 (not corrosive)

3.3. Given that Corix identified in summer 2020 that Pressure Relief Valves on hot water tanks were being lifted at Panorama (including this intervener's) due to pressure transients during GSDP operation, please explain why these pressure transients are not responsible for the system leakage.

Corix Response:

The pressure transients occurring in the Panorama water distribution system are unrelated to "GSDP operation". The Ground Source Development Project was focused on water source, treatment and storage (well development, disinfection infrastructure, and reservoir replacement). The pressure events experienced by the intervener were related to watermain flushing activities and poorly performing pressure regulating valves (PRV's) in the distribution system. The PRV's have received thorough inspections, service and retrofit of pilot control lines to improve performance and response to sudden changes in flow.

3.4 Please explain whether or not the increased chlorine usage per 2.0 was a result of this distribution leakage. If so, the leakage would appear to be almost as great as the consumption by customers.

Trappers Way Intervener Request

Corix Response:

Refer to the response to Question 3.5 for discussion on system leaks and chlorine usage.

3.5 Please explain whether the distribution system leakage was occurring at joints, or through wall of the system conduit and if the latter, whether it is due to erosion or corrosion or both.

Corix Response:

Five distinct leaks were identified and repaired in the Panorama Water Distribution System between May 2020 and September 2020. It is estimated that the leaks accounted for approximately 15 litres/second, or 68% of the Panorama water treatment system's production capacity of 22 litres/sec. Therefore, elevated levels of chlorine consumption and electricity usage would directly correlate to increased production in response to system water leaks.

All leaks were located on the service lines between the watermain and the customer's curb stop (isolation valve located at the property line). In the case of all Greywolf Drive leaks, the 25mm copper service line was deficiently backfilled by the developer's contractor with 19mm minus aggregate (crush) mixed with cobble. The fractured aggregate and cobble damaged the copper service line resulting in punctures.

Based on the investigations and repairs undertaken to date, it is reasonable to conclude that the recent leaks are a result of installation deficiencies and not erosion nor corrosion related to water quality.

3.6 Given the large increase in electrical usage, please provide information on:

3.6.1 the wattage and power factor for all pump motors,

Corix Response:

The requested information is below:

Well Pumps (Qty 2 – operation is sequential, not concurrent)

Grundfos 16B700C4 4 stage Submersible Well Pump; 25hp (19kW) 575V/3p/60Hz
Power Factor (as measured and reported by BC Hydro): 99%

Water Treatment Plant – Booster Pumps (Qty 2 – operation is sequential, not concurrent)
Goulds Model MT FFFM-7CLC-6 Stage 75hp (56kW), 575V/3P/60Hz
Power Factor (as measured and reported by BC Hydro): 98%.

3.6.2 on pump operation (duration, stops and starts etc.) and

Trappers Way Intervener Request

Corix Response:

Pump hours as of Oct. 22, 2020

Well #1 – N/A

Well #2 – 5,650 hrs

Booster Pump #1 – 3,640 hrs

Booster Pump #2 - 1,746 hrs

Data on Starts, Stops and Duration is not available in the equipment control panel or VFD drives.

3.6.3 whether operation of the GSDP to date is representative of future operation.

Corix Response:

Due to the distribution leaks, the Well and Booster pumps were operating continuously at full load. Recent operations since Sept 9th should be representative of steady state operation.

For further information on GSDP operations, please see Confidential Attachment 3 for the Corix Response to Trappers Way IR1 Question 3.6.3 regarding the Corix Groundwater Source Development Electrical Controls and Operations Description manual.

This confidential manual is provided solely to the Comptroller and the Interveners in this hearing. Interveners may only use this information for the purposes of this hearing and it is not to be reproduced and/or disseminated to other parties.

4.0 Reference: Evidentiary Update, pg. 18, Section 3.2.1, Wages - Operators and Administration

Explanation: “Corix provides fair market-based compensation for those personnel in the Kootenay and Panorama areas. Historically Corix has struggled to find and keep qualified operators at our Panorama location. In 2014 Corix completed a salary survey to benchmark operator compensation. The benchmark results indicated that upwards adjustments were required for Corix to be at a competitive market compensation level.”

Table 2 identifies that the annual wage and salary for an operator is \$100,494 for 2020, which is 15% more than the Sun Peaks utility and is to be escalated at 3% per year.

Request:

4.1 Please provide further information as to :

4.1.1 why the wage and salary for a Panorama operator is so much higher than Sun Peaks,

Trappers Way Intervener Request

Corix Response:

Corix notes that the \$100,494 for 2020 is the average for labour time from six available operators, one administrator and one manager. Most of the 1.1 FTE would be for the operators.

Corix does not have information on why Sun Peaks has a lower salary when it was privately owned. Corix notes that the “The Sun Peaks Mountain Resort Municipality assumed responsibility for the water and wastewater facilities on March 23, 2017.”² Since that acquisition by the Municipality, it is likely (though not confirmed) that the wages for operators have been adjusted to the municipality’s wage scale.

4.1.2 what the range of salaries for other water operators is in BC,

Corix Response:

Environmental Operators Certification Program conducted a study in 2017 titled “EOCP Certified Operator Salary Survey”.³ The first page stated the following:

“Some immediate details:

1. 556 Operators participated in the EOCP Salary Survey;
2. More than 50% of survey respondents have been Operators for less than 10 years;
3. Almost 92% of respondents are male;
4. The most commonly held certificate is WD Level I;
5. The most needed certificate for work is WT Level I;
6. Almost 83% of respondents do not get a salary increment for holding more than one certificate;
7. Almost 30% of respondents work in the Lower Mainland;
8. 72% of respondents work for public organizations;
9. More than 55% of respondents belong to a union;
10. 54% of respondents work as Operators;
11. More than 90% of respondents work full-time;
12. The most common salary band is \$71,000-\$80,000 (17.63%), followed by \$61,000-\$70,000 (17.07%);
13. The majority of respondents get benefits coverage for Dental, Extended Health, EOCP Dues, Education, etc.”

The BC Water & Waste Association and Environmental Operators Certification Program commissioned a survey in December 2015 titled “BC Water & Wastewater Sector Workforce

² Sun Peaks Municipality Utilities Division <http://sunpeaks municipality.ca/water-conservation-tiered-rate-newsletter/>

³ EOCP Certified Operator Salary Survey July 2017, <https://eocp.ca/wp-content/uploads/2017/08/EOCP-Certified-Operator-Salary-Survey-Summary.pdf>

Trappers Way Intervener Request

Profile”.⁴ The Workforce Profile was prepared by R.A. Malatest & Associates Ltd. and stated the following in its Executive Summary on page i:

“This report identifies three conclusions about the sustainability of the water sector workforce:

1. There is currently a shortage of skilled workers in the water and wastewater sector and demand for new workers will grow significantly in the next five to ten years.
2. There is a lack of education opportunities available to maintain technical skills, meet certification requirements and satisfy the evolving industry needs.
3. Resources are required to define the competencies associated with the priority occupational groups and to create accessible pathways for new individuals to enter the various roles within the sector to fill the growing workforce gaps.”

In response to the information request, Corix also performed a recent search of public job postings in BC that outlines some salary ranges. The search results are as follows:

- Regional District of Kootenay Boundary, Wastewater Treatment Plant Operator 2, \$35.49 per hour. “WWTP Level II certification through the EOCP.”^{5,6}
- Correctional Service Canada, Victoria, BC, Wastewater Treatment Operator, “\$29.84 to \$31.34 per hour (Plus 7% Inmate Training Differential allowance and Correctional Service Specific Duty Allowance of \$2,000 per year – allowances may be subject to change. Please note that salary will be adjusted with the valid collective agreement.)”⁷
- Comox Valley Regional District, Senior Operator Water Treatment, \$46.14 per hour.^{8,9}
- City of Nanaimo, Water Treatment Plant Operator, “This is a unionized position. \$36.77 per hour - after Probation (Jan 2018 Rate), based on a 40 hour work week. A comprehensive benefit package is included.”¹⁰
- FortisBC (gas), Equipment Operator/Distribution Apprentice, Burnaby, BC, IBEW \$36.36 per hour. “Requirements: High school/Grade 12 graduation/GED (education will be verified) Hold a current Class 5 Driver’s License with a safe driving record.”

⁴ BC Water & Wastewater Sector Workforce Profile, Dec 2015, https://www.workbc.ca/get-media/44aeba93-5f6f-4279-9339-d491a5d0755a/technology_bc-water-and-waste-labour-market-information-report_dec15.pdf.aspx

⁵ Regional District of Kootenay Boundary, Current Postings, Wastewater Treatment Plant Operator 2 Temporary Environmental Services, September 2020, accessed September 28, 2020, now unavailable, <https://rdkb.com/HotTopics/EmploymentOpportunities.aspx>

⁶ RDKB Wastewater Treatment Plant Operator 2, September 2020, https://rdkb.com/LinkClick.aspx?fileticket=R-le_WUFELs%3d&tabid=81

⁷ Correctional Services Canada, Wastewater Treatment Operator <https://ca.indeed.com/viewjob?jk=e854a2125555a6ea&tk=1ejb8v2vt4bn800&from=serp&vjs=3>

⁸ Com Valley Regional District, Senior Operator Water Treatment, Job Posting, <https://www.comoxvalleyrd.ca/about/careers/current-opportunities/senior-operator-water-treatment>

⁹ Comox Valley Regional District, Senior Operator Water Treatment, Job Description, https://www.comoxvalleyrd.ca/sites/default/files/uploads/job-posting/jd_senior_operator_-_water_treatment-clean_copy.pdf

¹⁰ City of Nanaimo, Water Treatment Plant Operator, February 2019 Job Posting, <https://www.nanaimo.ca/your-government/careers/job-postings/water-treatment-plant-operator>

Trappers Way Intervener Request

“Current Gasfitter qualifications (B ticket or higher) are considered an asset”¹¹

A review of the sample above shows the market wage paid by RDKB is similar to other postings given the skills level posted. Also, the RDKB job posting is the closest posting to Panorama. The RDKB job posting has the Wastewater Treatment Plant Operator 2 with a wage of \$35.49 per hour. Based on a 40 hour work week the annual salary would be \$73,819 ($\$35.49 \times 40 \text{ hours} \times 52 \text{ weeks}$). However, the salary to the worker must be loaded for additional benefits costs borne by the employers including health tax, employment insurance, extended health, WCB, and retirement plan. A benefit loading can range from 30% to 35% depending on the position and experience with the company. Assuming a loading of 30%, the total loaded salary for a WTP Operator 2 in RDKB is \$95,965 without any overtime, incentive payments, and emergency call outs.

Please also note the total loaded average wage of \$100,494 for an FTE for 2020 in Panorama is inclusive of all direct salary, benefit loadings, overtime, 24/7 emergency response, and emergency call outs. The figures show that Corix’s salary is competitive with other employers. However, when compared to a recent and directly related ‘apples to apples’ comparison of salary and labour for water operations (direct labour, benefits, overtime, and emergency call outs) Corix costs are much lower than EPCOR Water (West) Inc. at \$112,000.

4.1.3 whether a new benchmarking of salaries has been performed and

Corix Response:

Corix has not conducted a new benchmarking of salaries.

4.1.4 why Corix Panorama salaries and their escalation rates are so high, when the average 2019 salary for a BC water plant operator is \$61,250 with an escalation of 2.5% according to the Statistics BC database.

Given the impact of Covid-19, escalation rates are likely to become lower, resulting in lower salaries and raises, and the available labour force expanded resulting in less competition for the company.

Corix Response:

Corix is not able to confirm the \$61,250 water plant operator as no link was provided in the question; however, Corix has done some preliminary investigation of comparable salaries as noted above. It is not readily apparent which dataset was used in Statistics BC. Corix notes that if the \$61,250 is the salary for an employee it also requires benefit loading to obtain the cost for the employer. A loaded annual salary would be approximately, \$79,250 ($\$61,250 \times 1.30 \text{ loading}$). Overtime, on-call, regional differentials, and other incremental costs would need to be included as well in order to achieve an apples-to-apples comparison.

¹¹ FortisBC, Equipment Operator/Distribution Apprentice, Job Posting, September 2020, <https://careers.fortisbc.com/job/Burnaby-Equipment-OperatorDistribution-Apprentice-BC/541701817/>

Trappers Way Intervener Request

Corix Panorama salaries are based on current market conditions. A review of available public postings (see response to Question 4.1.2) indicate that Corix's wage level is within market and not at the top tier. Corix's labour costs are materially lower than EPCOR Water West (the only other rate base regulated water utility). Many water systems are municipally owned and operated which sets the demand and salary expectations of workers. The municipalities offering union wage levels and pension benefits provide a compelling compensation package that makes it a challenge for Corix to attract qualified operators.

Note that Panorama Water Operators are utilized across five utilities - Water Treatment, Water Distribution, Wastewater Collection, Wastewater Treatment, and Propane Storage/Distribution. Operators with multiple certifications are exceptional. The Panorama Wastewater plant requires a Level III WWT operator. This more valuable labour resource is available to be utilized in the Water operation. Also, worth noting is that Panorama Water utility only uses a portion of the operator's labour. If there was no cross over of personnel Panorama business operations, a stand-alone Water system would require two full time positions.

While the impact of the current pandemic has certainly increased the availability of labour in some sectors, the same cannot be said for the water and wastewater utility operations sectors, particularly in BC. Demand for operators continues to be strong. In fact Corix has experienced the loss of operators to other entities during the pandemic. That said, Corix does monitor labour markets in the regions in which it operates, and the Corix HR department does conduct periodic benchmarking studies to ensure that wages remain competitive in the marketplace, so any changes in market conditions will be identified and appropriate actions will be taken in response.

5.0 Reference: Evidentiary Update, pg. 20, Section 3.3-4, Insurance

Explanation: "Corix has one insurance policy that covers the assets and operations for all of its utilities. The total insurance cost is then allocated to each utility based on the underlying cost drivers (i.e. Replacement cost of the assets for Property Insurance, Revenue for liability insurance, etc.).Insurance costs for the Utility have increased due to a combination of the following factors:

- An increase in the total insurance premium for all Corix utilities
 - This is due to worsening insurance market conditions worldwide, resulting in higher insurance premiums across the market.
- An increase in the Utility's allocated portion of the total insurance premium due to:
 - An increase in budgeted revenue for the Utility with this Amended Application for an increase in customer rates;
 - An increase in fixed assets with the completion of the GSDP project."

Request:

5.1 Please provide the percentage of all utility revenue and fixed asset that Corix Panorama represents relative to all Corix insured utilities and a further explanation on how the increased revenues and fixed assets for Corix Panorama has resulted in a 382% increase in insurance rates from 2018.

Corix Response:

The requested percentages are shown in the Confidential Attachment 1 for the Corix Response to Trappers Way IR1 Question 5.1. **This confidential information is provided solely to the Comptroller and the Interveners in this hearing. Interveners may only use this information for the purposes of this hearing and it is not to be reproduced and/or disseminated to other parties.**

The insurance premiums increased from \$6,105 in 2018 to \$29,387 in 2020 because of Corix Water Products no longer being owned by Corix, worsening worldwide market conditions for insurance, and the higher value of insured assets at Panorama. In 2020 Corix was able to gain some economies of scale by including all of its US Regulated utilities under one insurance policy.

In the Amended Application on page 20 Corix provided a detailed explanation of insurance costs. That explanation noted the factors underlying the increase in 2019 actual costs relative to 2018. In summary, the 2018 costs reflected the insurance premiums with Corix Water Products (CWP) when it was owned by Corix Infrastructure Inc. (CII is the ultimate parent company of CMUS). In 2019, when CWP was no longer owned by Corix, the total insurance premium for Corix decreased by 27%. However, due to its size CWP was previously allocated approximately 62% of the total insurance premium. With CWP no longer in CII's portfolio, the allocations to the remaining utilities increased. The 27% reduction in the total insurance premium was not enough to offset the increase in the allocation of the insurance premiums to Panorama Water. In 2020 the insurance premiums continued to rise as explained on page 20 of the Evidentiary Update primarily due to worsening market conditions worldwide, resulting in higher insurance premiums across the market. There is also an increase in Panorama Water's allocated portion of the total insurance premium due to the increased in fixed assets with the completion of the GSDP project.

6.0 Reference: Evidentiary Update, pg. 21, Section 3.3-6, Hydrant Maintenance

Explanation: "Costs associated with semi-annual maintenance of the fire hydrants."

Request:

6.1 Please explain why the costs of hydrant maintenance are being borne by the Corix ratepayers and not by RDEK, given that 40% of our RDEK taxes are allotted to fire protection.

Corix Response:

RDEK taxes fund the local volunteer fire department - labour costs (firefighters are paid for practice and call outs), equipment, and facility overhead (firehall). Traditionally, the hydrants are owned and maintained by the utility, not the municipal government. Hydrant maintenance costs are a negligible portion of the annual operating expenses.

RDEK does not provide compensation to Panorama Water for fire hydrant maintenance.

7.0 Reference: Evidentiary Update, pg. 22, Section 3.3.11, Regulatory Services

Explanation: Corix’s statement “internal staff time on regulatory filings will now be allocated to each utility as part of the corporate or regional services cost allocation. In addition, Corix has retained a consultant to assist with the regulatory review of this application. Therefore, the Regulatory Costs expense item now excludes Corix’s staff time and represents an estimate of the costs associated with any consultant costs and administrative expenses. For 2020, Corix has forecasted costs of:

- \$8,000 in consulting costs for any consultant the Comptroller’s office hires for the review of this application; plus
- \$18,000 in consulting costs for Corix’s consultant who will assist in preparing this application and the financial model that informs this application, responding to information requests, preparing final arguments and performing any additional tasks that may arise from the regulatory review of this application.

From 2021 onwards, Corix has reduced the regulatory costs forecast to reflect an increase in efficiency related to regulatory filings and a reduced level of use of external consultants by both the Comptroller’s office and Corix.”

Request:

7.1 Given that Corporate and Regional services include legal costs and corporate regional expertise is to be leveraged to decrease costs vice a stand alone utility (pg. 34), please explain why these additional costs are allocated to the ratepayer.

Corix Response:

The above Regulatory Costs are for incremental work related to infrequent applications to the Water Comptroller such as the 2019 rate application and the current 2020 to 2022 rate application. In prior years with no rate applications there were no incremental Regulatory Costs incurred. Note that Corix also files an Annual Report to the Comptroller. As these are small routine applications and not incremental, these costs are included within the Regional Costs and primarily allocated based on the Massachusetts Formula.

Legal costs are not consolidated with Regulatory Costs. Legal costs are allocated from the Corporate and Regional Services based on the Massachusetts Formula. Some other utilities assign internal and/or external legal counsel to regulatory applications. Corix does not typically assign legal counsel to rate applications but instead obtains internal legal advice when needed or when responding to specific legal matters. This approach keeps legal costs down for customers by only using legal counsel for specific legal matters rather than for non-legal matters.

7.2 Please explain why the ratepayer is paying for costs of consultants to the water comptroller.

Corix Response:

Corix understands that the Office of the Comptroller of Water Rights operates with a small staff. Occasionally the Comptroller may require additional expertise in rate base regulated water utilities.

The practice of utilities paying for the incremental costs of rate regulatory bodies is common in BC. For example, the British Columbia Utilities Commission has a practice to require utilities to pay for any external counsel and any external consultants obtained by the BCUC arising from a particular application from the utility.

7.3 How much more consultant cost will be incurred by providing information to the interveners and will it be charged to the ratepayer? Utilities in other provinces, typically pay the interveners for the time and research done to review and intervene on their application for rate increases, e.g. Ontario Hydro.

Corix Response:

Corix does not anticipate any additional Corix incurred consultant costs beyond what has been proposed.

With regards to Intervener Participant Funding, Corix has not been advised by the Comptroller of any potential costs. If the Comptroller orders payments to be made to an Intervener for consulting costs, Corix would make the prescribed payments and seek the recovery of those costs from ratepayers, in accordance with standard utility practice.

8.0 Reference: Evidentiary Update, pgs. 25-28, Section 3.4.2, Corporate Functions Costs

Explanation: “Corporate Functions refers to services provided at the corporate level that benefit all CII subsidiaries across Canada and the United States. They are allocated across all business units, regardless of geographic location.” “These include, but are not limited to:

- strategic management;
- corporate governance;
- management of accounting functions including utility accounting, tax, internal audit;
- treasury services;
- information technology systems and governance, including online security;
- human resource management and payroll services;
- health, safety and environment services;
- legal services;
- communications and public relations; and
- oversight of administrative and support services to CII’s subsidiaries and their business units.”

“Pooling these functions and providing these services across multiple business units results in multiple benefits, including:

1. increased efficiencies through economies of scale. Shared resource initiatives are a more

Trappers Way Intervener Request

efficient and cost-effective approach than having each business unit procure these services on a standalone basis; and

2. functionality and cost effectiveness. Certain capabilities, including some relating to customer interface options, cannot be cost effectively provided by small utilities operating on a stand-alone basis.”

Table 5 shows that Corporate Functions costs are increasing by 54% from 2020 to 2022. The methodology used to allocate these costs is the Massachusetts Model Composite Allocator. This allocator assigns a weighting of 33.33% to each of Gross Revenue, Headcount and Gross Property, Plant & Equipment per Table 3. The requirement for substantially increased revenue and increase in plant and equipment due to the GSDP, with no change in headcount is apparently resulting in a significant increase in Corporate functions costs. Given that the GSDP is the main driver for the requested rate increases for water by Corix Panorama, this appears to be double jeopardy. Corix makes the statement (pg. 27):

“As there are a virtual endless number of potential combinations of allocators and weightings, a deviation from the standard formula would require a specific and unique rationale and justification that is not present for Corix. As a result, the standard formula was deemed to best suit Corix’s requirements.”

Request:

8.1 Please explain the increase in Corporate Functions that are being provided to Corix Panorama due to the GSDP, that warrant a 54% increase in their costs from 2020 to 2022.

Corix Response:

The Corporate Functions before and after the GSDP Project are the same. A corporate cost allocation is inherently an estimate of a reasonable allocation of shared costs that are not directly assignable. As the allocation is a reasonable estimate of costs, fairness is the objective rather than preciseness. These costs are incurred during the provision of service from Corix’s parent company to the business units within its portfolio. What has changed is Panorama Water’s values for the three criteria used in the Composite Allocator formula: Gross Property, Plant & Equipment; Gross Revenue; and Headcount. The GSDP Project for Panorama Water has resulted in a major increase in Gross PP&E and Gross Revenue relative to all other Corix utilities. This relative increase is the key driver to why Panorama Water is allocated more costs.

The Composite Allocators above are consistent with the Massachusetts Formula, which is commonly utilized to allocate corporate and shared services costs in the utility industry in North America. The Massachusetts Formula is a multi-factor model based on gross revenue, capital investment, and direct labour of each affiliate utility relative to the entire company.

The Massachusetts Formula has been used in the US by the Federal Energy Regulatory Commission (FERC) to allocate corporate overhead costs where the three factors are weighted equally.¹² The Alberta Utilities Commission (AUC) has also approved a form of the

¹² For example in FERC Opinion 511 for SFPP, L.P., <https://www.ferc.gov/sites/default/files/2020-06/SFPP%2C%20L.P.%2C%20134%20FERC%2061%2C121%20%282011%29%2C.pdf>

Trappers Way Intervener Request

Massachusetts Formula for EPCOR Distribution & Transmission Inc. where the three factors are equally weighted.¹³ In addition to the FERC and the AUC, the BCUC has previously approved the use of the Massachusetts Formula to allocate corporate costs for (i) FortisBC¹⁴, and (iii) Creative Energy.¹⁵

8.2 Other than application of the standard formula being best suited to Corix's requirements, please explain why the GSDP and its large impact on water costs to the customer is not considered a specific and unique rationale and justification for a deviation from the standard formula in allocating Corporate Services Costs.

Corix Response:

Although the GSDP has a large impact on the costs allocated to Panorama Water, it is not unique for a utility to undertake a large capital project whether for purposes of upgrades, expansion or rehabilitation. In order to ensure objectivity Regulators are typically very reluctant to allow deviations from the standard formula, as such a deviation effectively transfers costs from one group of rate payers to another. There is nothing about the GSDP project that would justify a deviation from Massachusetts Formula using the composite categories of assets, revenues and headcount.

Corix is not aware of any other method that could be applied across the entire organization that would result in a fair allocation of costs, follow accepted regulatory practice, and be reasonable, consistent, and just. To ensure that no such method was overlooked, Corix retained regulatory consultants in 2018/19 to review its operations and recommend a corporate and shared service cost allocation methodology. The report from those consultants recommended the use of the Massachusetts model.

9.0 Reference: Evidentiary Update, pgs. 28-31, Section 3.4.2, Shared Services Canada Functions Costs

Explanation: "Shared Services Canada Functions are provided primarily for the benefit of CII's Canadian business units, and are therefore allocated primarily to CII's Canadian business units" (pg. 26). The same methodology used for allocation of Corporate Functions costs is used for Shared Services Canada Functions, so the comments in 8.0 apply. Table 7 indicates that these costs will increase by 41% from 2020 to 2022.

Request:

9.1 Please explain the difference in percentage increases between the Shared Services Canada Function costs and that for the Corporate Services Functions costs, given that the same allocation methodology is used.

¹³ AUC Decision 2012-272 for EPCOR Distribution & Transmission Inc., http://www.auc.ab.ca/regulatory_documents/ProceedingDocuments/2012/2012-272.pdf

¹⁴ BCUC Orders G-110-12, G-138-14 and G-139-14

¹⁵ Decision for Order G-205-18 regarding the Creative Energy 2018-2022 Revenue Requirements Application, p. 37.

Corix Response:

The Shared Services Canada Costs have a lower increase than the Corporate Function Costs primarily because of a) Burnaby Mountain District Energy Utility (BMDEU) biomass project, and b) the relative percentages of Panorama Water to Shared Services Canada and Corporate Functions Cost.

In Shared Services Canada most of the costs pertain to Canada only and are shared across all Canadian utilities, including Panorama Water and BMDEU. Panorama Water has a large increase in assets and revenue. However, the Known and Measurable Change incorporating the Approved Major Capital Project adjustment for BMDEU biomass project of approximately \$44 million in assets is much larger. This increase of \$44 million in assets for BMDEU represents a relatively large percentage of the asset base for Canadian utilities as a whole; however, given the larger size of Corix's US-based operations, the impact of the \$44 million increase in assets in BMDEU as a percentage of all Corix utilities is relatively small.

Given this phenomenon, BMDEU is increasingly making up a larger portion of the assets and revenues in Canada, which proportionately reduces the costs to the non-BMDEU utilities in Canada including Panorama Water. This is the reason why the Shared Services Canada Costs allocated to Panorama Water increases at a lower rate than the Corporate Functions Cost.

9.2 Please explain why it is reasonable that total cost of Corporate and Regional Services will represent 30% of O&M costs and exceed the wages and salaries of the workforce by 25% in 2022 and how these percentages compare to other water utilities in Canada.

Corix Response:

Corix is not aware of how the costs compare to other water utilities in Canada except for EPCOR Water (West) Inc. regulated by the Comptroller.

EPCOR in its latest filing provides some information on corporate costs. EPCOR West stated:

“The inter-corporate service charges are either directly assigned to EWW or determined based on a logical and appropriate allocation methodology. The allocated inter-corporate service charges are in the form of an annual fee, as shown in Financial Schedule 2.3. The allocated intercorporate charges are described in section 5.4 below and are comprised of (i) the allocated charges to EWW for corporate services provided by EUI and (ii) the allocated charges to EWW for shared support services provided by EWSI. Direct assigned inter-corporate charges for support services provided by EWSI are included in EWW's operating costs if those costs are incurred solely for the benefit of EWW rather than being a shared service cost.”¹⁶

¹⁶ EPCOR Water (West) Inc. 2018-2020 Revenue Requirement and Rates Application, page 28, paragraph 95, <https://www.epcor.com/products-services/water/rate-applications/Documents/fc-2018-2020-revenue-requirement-rate-application.pdf>

Trappers Way Intervener Request

On page 31 of its application to the Comptroller it provided Table 5.0-1 which shows the Operating costs and the Inter-Corporate Service Charges (line 6).

**Table 5.0-1
Operating Costs
2015-2020
(\$ thousands)**

Cost Category	A 2015A	B 2016A	C 2017D	D 2017F	E 2018F	F 2019F	G 2020F
1 Salaries and Benefits	557	556	510	515	525	539	553
2 Power and Other Utilities	67	70	71	74	87	90	92
3 Chemicals	36	41	34	42	43	44	45
4 Operations and Maintenance	214	159	202	216	223	227	232
5 Property Taxes	34	38	38	39	42	43	44
6 Inter-Corporate Service Charges	195	199	203	203	186	192	192
7 Total Operating Costs	1,103	1,062	1,058	1,089	1,107	1,135	1,158
8 Year/year increase from 2017D					4.6%	2.5%	2.0%
9 Increase from 2017D – 2020F							9.45%

From the above table Inter-Corporate Service Charges is \$192,000 in 2020. It is 16.6% of the Total Operating Costs.

Page 8 of the EPCOR application shows that it has a net revenue requirements of \$1.711 million in 2020.

Page 42 of the EPCOR application shows that it has a Gross PPE of \$13.4 million and a Rate Base of \$5.7 million which would be an input into EPCOR’s composite cost causation allocator to obtain the \$192,000 allocated cost. Page 6 of the application indicates that EPCOR has approximately 2,000 customers.

The water systems between Panorama Water and EPCOR are different but there appears to be general consistency on the allocation of overheads. It appears that EPCOR’s higher allocated cost (\$192,000 vs \$102,000 for Panorama) is because of the higher gross assets and higher revenues at EPCOR.

The observation of total cost of Corporate and Regional Services representing 30% of Total O&M costs in 2022 for Corix is a residual result and directly correlated to the capital infrastructure invested in the GSDP. If Panorama Water did not proceed with the GSDP, the allocated costs based on the Massachusetts Formula would be much smaller since Panorama Water would have fewer assets and lower revenues. The Massachusetts Formula is a regulatory accepted method of allocating shared corporate costs. These costs are a necessary part of doing business, and all Corix utilities and their rate payers benefit from the provision of these services through a shared service model rather than having to secure all of these services independently. The Massachusetts Formula equally weights the three categories revenues, assets, and headcount. If a utility has relatively low values in these three categories it would be allocated a relatively low amount of the corporate costs. However, if a utility has relatively higher values in these categories that utility we be assigned a larger portion. Since Panorama Water has recently brought into service the GSDP project the assets and revenues have increased relative to prior years thus a larger portion of costs are allocated.

Trappers Way Intervener Request

In the response to the Comptroller IR No. 1 Question 8.1, Corix further explains why a larger asset base attracts a higher proportion of allocated costs.

10.0 Reference: Evidentiary Update, pgs. 31-32, Section 3.4.3, Regional Services Costs

Explanation: “Regional Services Costs are shared costs incurred at the regional business unit level in order to provide operational services specifically for utilities within that region and business unit. In the case of the Utility, the region is BC and Alberta and the Business Unit is Canadian Utilities (excluding District Energy systems, which are under the purview of the Energy Services Canada business unit). These costs consist of:

- salaries and benefits for senior management and support staff responsible for that region (including executive and operations management, financial planning & analysis and governance and compliance);
- the associated building and vehicle expenses; and office expenses, travel, training and external consulting costs.”

Table 9 shows that these costs are increasing by 23% and regional allocation from 2.0% to 2.7%. “Regional Services Costs are allocated from the regional cost centre to each utility based on the pro-rated allocations developed for the Corporate Services Costs.” Since the GSDP has increased Corporate services allocation, Regional Services Costs are being increased by this methodology.

Request:

10.1 Given that the GSDP has increased Corporate Services costs primarily due to the GSDP and increases in physical plant and forecast revenues, please provide information on how the actual Regional Services to Corix Panorama are being increased to warrant the increase in their charges to Corix Panorama.

Corix Response:

As previously noted the intent of the corporate and shared service allocation formula is to provide an objective and fair mechanism for the allocation of common costs, and as such it is not intended to represent a precise correlation between costs and services provided. Notwithstanding this fact, management time dedicated to Panorama Water, as well as time provided for Treasury services, Tax services, Legal services, and Accounting/Finance services, together with all ancillary associated costs, including travel, has increased substantially during the GSDP project.

Also, as explained in response to the Comptroller IR No. 1 Question 8.1, the GSDP project include a significant capital asset investment of approximately \$7.5 million that requires asset stewardship and safe-guarding of assets over the life of the assets. The higher asset value requires increased oversight and support for operating, maintaining, insuring, protecting (physical, cyber, and legal), and long-term planning for upgrades, rehabilitation and/or replacement.

11.0 Reference: Evidentiary Update, pgs. 32-34, Section 3.4.4, Total Corporate and Regional Service Cost Allocations

Explanation: Total Corporate and Regional Service costs are increasing by a total of 44% from 2020 to 2022 with a 24% increase in 2021, an additional 16% increase in 2022 per Table 10. This is to be followed by projected increases of 3% per year through 2024 per Schedule 2. Furthermore, these costs are being allocated to support a workforce of 1.1 FTEs (Table 2), which has not changed.

“Corix requests approval of these allocations supported by the allocation methodology described above. This approach is a just, reasonable and non-discriminatory method of systematically allocating shared costs to the relevant business units in a consistent manner (pg.33) ...Fortunately, as part of the Corix Group of Companies Panorama Water is able to leverage the expertise of substantial corporate resources at reasonable cost, to the benefit of ratepayers (pg.44).”

Request:

11.1 Please provide information as to the extent that use of these services have been increased by the GSDP which is the driver of the request for increased water rates. In addition, to what extent was the Corporate and Regional expertise leveraged to mitigate cost overruns of \$638k above the budgeted \$346k as a contingency.

Corix Response:

See the response to Question 10.1 with regard to the extent of the increased services.

With regards to the second part of the question, regarding the expertise leveraged to mitigate cost over runs the president, vice-president, legal department, and financial planning and analysis department were all directly involved. The president and vice-president provided constant oversight. Combined the president and vice-president have over 25 years of experience in the industry, which includes utility design, construction and Operations & Maintenance. Additionally, legal input and controls were put in place to adjust the contract price and manage change orders, and investigations were undertaken to ensure that cost overruns were not the result of oversights or negligence relative to the system design or implementation. As outlined in other responses to Information Requests, the cost overruns were the result of unavoidable events, and the expertise provided by Corix served to ensure that these overruns were mitigated to the extent reasonably possible.

12.0 Reference: Evidentiary Update, pgs. 32-34, Section 4, Capital Costs

Explanation: “Forecasted non-GSDP capital costs are:

- 2020: \$0 (due to COVID-19, meter replacements are deferred by one year to 2021 and 2022)

Trappers Way Intervener Request

- 2021: \$20,000 for meter replacements and \$15,000 to replace a snowmobile.
- 2022: \$20,000 for meter replacements and \$30,000 for distribution mains replacement.

The current snowmobile is 13 years old and approaching end of life. Costly repairs have been needed to keep it operational. Daily access for operators to the reservoir is required which is 1 km uphill. During winter season a snowmobile is required for operators to efficiently and safely access the reservoir. The utility plans a preventative maintenance review of its distribution mains with leak detection and investigation. Presently the utility has higher than normal system water losses. The utility has forecast capital expenditures in 2022 for anticipated mains improvements to the system.”

Request:

12.1 Please provide information as to why meter replacements are required, the average age of the replacements and how many meters are to be replaced. Table 15 indicates that they should have a service life of 25 years.

Corix Response:

The proposed meter replacements are intended for hotel condominium buildings that utilize commercial grade meters. Construction of these commercial properties commenced in the mid 1990's. Therefore, the meters are approximately 25 years old. When water meters degrade, they tend to report lower than actual consumption. It is expected that updating the meters will lead to increased revenue from higher consuming commercial properties.

Address	Meter Serial #	Installation Date
2050 Summit Drive	73630484	Feb. 2011
2064 Summit Drive	52188349	Jan 2003
2060 Summit Drive	53737876	Sept 2009
2070 Summit Drive	14200045	Jan 2003
2080 Summit Drive	10078117	Jan 2003
2090 Summit Drive	13227152	Jan 2003
2049 Summit Drive	14197733	Jan 2003

The main water meters at the hotel condominium facilities were largely replaced in January 2003, with two exceptions.

12.2 Please explain why \$15k is required to replace a snowmobile when their price range is between \$10k and 16k\$. If \$15k is to be spent, please consider an electric snowmobile e.g. from Tiaga for approximately that cost.

Corix Response:

With the upgrade to the GSDP water system, daily reliance on the snowmobile has been reduced, as operators no longer need to access the surface water intake. Thus, the need for this expenditure will be reassessed based on experience this winter.

Trappers Way Intervener Request

The snowmobile was budgeted in capital because it is approximately 13 years old and was nearing the end of its lifecycle. A replacement snowmobile would be purchased from a regional dealer for parts and service availability. The closest Taiga dealership is north of Edmonton, AB and does not list Taiga snowmobiles in their inventory.

See also the response to Comptroller IR1 Question 14.3.

12.3 Will the distribution mains displacement be with materials in kind or a different material?

Corix Response:

All service line replacements that have been conducted in 2020 have replaced the copper tubing with PEX material.

12.4 Please provide information on the age of the distribution mains and explain why they did not last their expected service life of 75 years (Table 15).

Corix Response:

The age of the mains would be from 8 to 45 years. The leaks have occurred in the distribution lines.

Service lines (connecting watermains to customer curb stops) have been the source of water leaks. Please refer to the response to Question 3.5 for a more detailed discussion summary of these leaks. At the time the capital budget was developed, it was not known what the source of the leaks were. Thus, 'distribution mains replacement' was the nomenclature used for this capital expense budget.

13.0 Reference: Evidentiary Update, pg. 35, Section 4.1, GSDP Project Costs

Explanation: "Comptroller Order No. 2531 accepted a final cost estimate of \$6,934,974 and the physical design for the GSDP Project and granted approval to proceed with the construction of the project. The approved project cost included a contingency amount of \$345,973 (representing approximately 5% of the total project budget). Based on project costs to May 2020, Corix is currently anticipating a final total project cost of \$7,572,618. This variance amount of \$637,644 is approximately 9.19% over the approved project budget."

Request:

13.1 Given the cost of the project and cost overruns that were incurred, was the project request for proposal bid out as a fixed project cost or cost plus basis? How many companies bid on the project and was the selected contractor the low bid? If not the low bid, why not?

Corix Response:

Please refer to the response to Panorama Subdivision Owners Association (PSOA) IR1 Questions 1.2 and 1.4.

14.0 Reference: Evidentiary Update, pg. 39, Section 5.1.1, Capital Structure

Explanation: “The capital structure consists of 57.5% debt and 42.5% equity. This capital structure is equal to the minimum default capital structure approved in the BCUC’s Generic Cost of Capital (“GCOC”) Proceeding Stage 2 decision which, according to the BCUC, “represents a reasonable balance”. In a 2016 rate base decision, Fortis BC was allowed an ROE of 8.75% and an equity ratio of 38.5% (Ref. Fortis BC “Cision” news release August, 2016), both of which, if applied to Corix, would result in a lower revenue requirement and hence, proposed rate increase. It is to Corix’s advantage to have a higher equity ratio as the requested ROE percentage is more than twice the deemed interest rate on debt (pg. 39). Given that the substantial increase in rates being proposed by Corix is due to a capital project, the proposed capital structure may not be a reasonable balance.

Request:

14.1 Please provide justification why Corix is using a higher equity ratio than Fortis, given that almost 50% of required revenue (per Table 19) is due to capital expenses.

Corix Response:

The BCUC in its Generic Cost of Capital Proceeding Stage 2 stated the following regarding thermal energy services (TES) projects:

“The Commission Panel finds that a minimum default capital structure consisting of 57.5 percent debt and 42.5 percent common equity represents a reasonable balance. This equity ratio is 4.0 percentage points higher than that awarded to the Benchmark.”¹⁷

The Benchmark referred to above is the low risk benchmark utility in BC, FortisBC Energy Inc. Corix for Panorama Water is proposing to use the same default capital structure and ROE premium for a TES project. Panorama Water and TES Projects are small utilities that share similar risk profiles. The default TES Project ROE and capital structure has been rigorously reviewed in the BCUC’s Generic Cost of Capital Proceedings Stage 1 and Stage 2.

15.0 Reference: Evidentiary Update, pg. 39, Section 5.1.2, Deemed Interest Rate

¹⁷ BCUC GCOC Stage 2 Decision, p. 124, https://www.bcuc.com/Documents/Proceedings/2014/DOC_41123_03-25-2014-BCUC-GCOC-Stage-2-Decision-WEB.pdf

Trappers Way Intervener Request

Explanation: “The deemed interest rate on debt financing was determined using the credit spread that reflects BBB or BBB (low) rated debt relative to the 10-year Government of Canada bond yield, consistent with the approach outlined for calculating a default debt component for small Thermal Energy System (“TES”) utilities ... The 10-Year bond yield was calculated based on a 12 month rolling average as of December 2019.” Table 14 identifies this GCOC bond yield to be 1.55%. The rolling average Government of Canada 10 year bond yield from October 2019 to August 2020 is now 0.97%. In addition, a premium of 1.84% for BBB credit is applied to determine the deemed interest rate, which seems high in the current Bank of Canada interest rate environment.

Request:

15.1 Please explain why Corix is considered similar to a small TES utility, when it is a water utility.

Corix Response:

TES projects regulated by the BCUC, which are small stand-alone utilities with a small number of customers, face lack of customer diversity, and have similar business and financial risk as water utilities such as Panorama. A minor difference is that TES projects provide thermal energy service to customers while water utilities such as Panorama provide water service to customers.

Both Panorama Water and a TES utility are rate regulated under the same act. Under the Water Sustainability Act¹⁸, the Utilities Commission Act¹⁹ and Water Utility Act²⁰, the Comptroller of Water Rights Regulates water utilities. The definition of water utility is defined under the Water Utility Act. The definition of an energy utility is defined by the Utilities Commission Act. Though water utility and energy utility are defined under two different acts, they are both rate regulated under the same act, the Utilities Commission Act. In this Amended Application in section 1.2 Regulatory Approvals Sought the requested rates are made under Sections 59 to 61 and Sections 89 and 90 of the Utilities Commission Act.

TES projects come in many different sizes, geographic locations, and customer profiles. The closest TES project that Corix is aware of that is similar to Panorama Water is Shannon Estates Utility Ltd. (Shannon Estates). Shannon Estates had its first rates approved in 2017 by the BCUC in Order G-190-17.²¹ Shannon Estates currently has an application with the BCUC for its 2021 rates.²²

Shannon Estates describes its project as:

“In 2012, the City of Vancouver approved WFC’s development of a project located at 57th Avenue and Granville Street in Vancouver. This project,

¹⁸ Water Sustainability Act <http://www.bclaws.ca/civix/document/id/complete/statreg/14015>

¹⁹ Utilities Commission Act http://www.bclaws.ca/civix/document/id/complete/statreg/96473_01

²⁰ Water Utility Act http://www.bclaws.ca/civix/document/id/complete/statreg/96485_01

²¹ Shannon Estates G-190-17, December 19, 2017, <https://www.ordersdecisions.bcuc.com/bcuc/orders/en/303931/1/document.do>

²² Shannon Estates Utility Ltd.

Levelized Rate Application for the Shannon Estates Thermal Energy System https://www.bcuc.com/Documents/Proceedings/2020/DOC_58656_B-1-SEUL-TES-LevelizedRate.pdf

Trappers Way Intervener Request

referred to as the Shannon Wall Centre Kerrisdale Development, consists of ten buildings (including restored heritage buildings), new townhomes and suites, one rental apartment building (Shannon Mews & Apartments), gardens, swimming pools, parks and grounds, and related infrastructure (the “Development”).²³ The project has space heating, space cooling, and domestic hot water heating.”²⁴

Shannon Estates further describes that: “Each SETES customer is individually metered for the thermal energy services provided to them.” Table 2 in its Application shows 602 units.²⁵

Shannon Estates states:

“Pursuant to Commission Order G-190-17, the capital structure for SEUL is set at 57.5% debt and 42.5% equity. SEUL is allowed a ROE of 9.5% and a return on debt based on SEUL’s cost of debt.”²⁶ Also, Shannon Estates states: “In Commission Order G-190-17, the Commission approved the establishment of a deferral account to record any annual revenue deficiencies or surpluses resulting from the difference between the annual revenue at approved rates and the annual cost of service (including an allowed ROE of 9.5%). The deferral account is approved to accrue carrying charges based on SEUL’s weighted average cost of capital (“WACC”).”²⁷

Shannon Estates provides information on the size of the asset invested:

“As of SEUL’s last completed fiscal year (ended January 31, 2020), SUEL’s average net investment into the SETES is \$6,278,116 (line 91 of the Financial Model), on which the proportion of investment allocated to equity and debt is as follows:

- Equity (42.5%) \$2,668,199
- Debt (57.5%) \$3,609,917”²⁸

Panorama Water and Shannon Estates share many similarities such as the total value of rate base, deferral account treatment, captive customers with no or limited utility alternatives, and the same requested ROE and capital structure. They differ in that Shannon Estates has more customers than Panorama Water. Also, Shannon Estates is located in an urban center while Panorama is located in non-urban area at Panorama Mountain Resort.

It appears that the deferral accounts for Shannon Estates are not materially different from what is being proposed for Panorama. However, Shannon Estates has a higher customer count and is located in an urban centre (in the westside of Vancouver), resulting in relatively lower risk than Panorama Water. The information suggests the business and financial risk between Panorama

²³ Shannon Estates Application, p. 3.

²⁴ Shannon Estates Application, p. 3.

²⁵ Shannon Estates Application, p. 4.

²⁶ Shannon Estates Application, p. 26.

²⁷ Shannon Estates Application, p. 27.

²⁸ Shannon Estates Application, p. 26.

Trappers Way Intervener Request

and Shannon Estates are very similar. Overall, Corix submits the two utilities are overall relatively similar in risk and are comparable in most key respects.

15.2 Please explain why Corix assigns itself a BBB or BBB(low) credit rating when it has no competition and is placing the risk of the GSDP project on the ratepayer, with the proposed rate increases.

Corix Response:

Please see the response to Comptroller IR No. 1 Questions 16.1 and 16.2.

15.3 Has Corix ever received a bond rating and if so, what is it?

Corix Response:

Corix has never received a bond rating.

15.4 Given that the 12 month rolling average GCOC 10 year bond rating is now 0.97%, which is 0.58% or 37% relatively less than the rate used for the rate basis, why did this evidentiary update not amend the proposed deemed interest rate?

Corix Response:

See the Corix Response to Comptroller IR No. 1 Question 16.1 for the actual 10 year bond yield and BBB/BBB(low) monthly results.

When the June 2020 Evidentiary Update was being prepared in mid-June and later approved by management in late June, the information regarding the indicative deemed interest rate was highly unstable. When the update was prepared the April 2020 rate was known but the May 2020 results were not yet compiled.

Month	Deemed Interest Rate %	GOC Benchmark Bond Yield 10-year %	Corporate Spread 10-Year Term %	Issuance Fee %
January 2020	3.28	1.31	1.72	0.25
February 2020	3.12	1.21	1.66	0.25
March 2020	3.01	0.88	1.88	0.25
April 2020	5.11	0.56	4.30	0.25
May 2020	3.58	0.54	2.79	0.25
June 2020	3.40	0.54	2.61	0.25
July 2020	3.04	0.48	2.31	0.25
August 2020	2.88	0.61	2.02	0.25
September 2020	2.75	0.57	1.93	0.25

Trappers Way Intervener Request

	3.35	
Actual Deemed Average (Year to Date for 2020)		

The above table shows the actual monthly results up to September 2020. The average deemed interest up to September 2020 is 3.35%. The April 2020 rate showed a 5.11% interest rate and a May 2020 rate at 3.58% which is close to the applied for 3.64% proposed rate. During the evidentiary update the markets were still in significant flux.

Please see the proposal in response to Comptroller IR No. 1 Question 16.1. Corix proposed in the RDDA to true-up its actual interest costs. For clarity, Corix proposes to calculate the actual annual deemed interest rate by averaging the actual monthly deemed interest rates. The actual annual deemed interest rate will be calculated based on the actual rates for the 10 Year Benchmark Canada Yield and the actual 10 Year Corporate Credit Spreads for each month. The resulting actual average deemed interest rate for the year would then be used to true up the RDDA.

15.5 Please provide the change in required revenues if the deemed interest rate uses a 0.97% for the Government of Canada 10 year bond yield and what impact this would have on proposed rate increases.

Corix Response:

The tables below illustrate the scenario impacts by changing the interest rate in the model from 1.55% to 0.97%. Scenario E (updated) is the proposed rates from the Amended Application with the additional years 2025 to 2027.

Scenario E (updated) + TW 15.5: RDDA Recovery in 2026	2020	2021	2022	2023	2024	2025	2026	2027
June 2020 Evidentiary Update								
Total Revenue Requirements (excl. CDA Rider 1)	\$908,428	\$1,043,593	\$1,075,414	\$1,096,624	\$1,212,705	\$1,174,754	\$1,153,397	\$1,101,341
Rate Residential (<i>Fixed and Metered Charge</i>)	64%	27%	30%	28%	8%	0%	-7%	-16%
Rate Commercial (<i>Fixed and Metered Charge</i>)	64%	27%	30%	28%	8%	0%	-7%	-16%
Target % Recovery of Total Rev. Req. (excl CDA)	52.5%	74.4%	93.2%	118.0%	115.8%	119.5%	113.5%	100.0%
Target Revenue Requirement	\$476,930	\$776,196	\$1,002,772	\$1,294,017	\$1,404,312	\$1,403,831	\$1,309,490	\$1,101,341
RDDA Balance (\$)	\$431,498	\$698,895	\$771,537	\$574,145	\$382,537	\$153,460	(\$2,633)	(\$2,633)
Residential Bill Impact	23%	53%	29%	17%	8%	0%	-7%	-16%
Commercial Bill Impact	24%	49%	28%	10%	7%	0%	-7%	-16%

Trappers Way Intervener Request

Scenario E (updated): RDDA Recovery in 2026	2020	2021	2022	2023	2024	2025	2026	2027
June 2020 Evidentiary Update								
Total Revenue Requirements (excl. CDA Rider 1)	\$928,944	\$1,069,944	\$1,102,213	\$1,118,592	\$1,239,197	\$1,198,006	\$1,175,566	\$1,121,883
Rate Residential (<i>Fixed and Metered Charge</i>)	71%	25%	30%	28%	8%	0%	-7%	-16%
Rate Commercial (<i>Fixed and Metered Charge</i>)	71%	25%	30%	28%	8%	0%	-7%	-16%
Target % Recovery of Total Rev. Req. (excl CDA)	52.5%	74.4%	93.2%	118.0%	115.8%	119.5%	113.5%	100.0%
Target Revenue Requirement	\$487,701	\$795,795	\$1,027,761	\$1,319,938	\$1,434,990	\$1,431,618	\$1,334,659	\$1,121,883
RDDA Balance (\$)	\$441,242	\$715,391	\$789,844	\$588,497	\$392,704	\$159,093	\$0	\$0
Residential Bill Impact	25%	54%	29%	16%	9%	0%	-7%	-16%
Commercial Bill Impact	26%	50%	28%	10%	7%	-1%	-7%	-16%

Difference	2020	2021	2022	2023	2024	2025	2026	2027
June 2020 Evidentiary Update								
Total Revenue Requirements (excl. CDA Rider 1)	(\$20,516)	(\$26,351)	(\$26,799)	(\$21,967)	(\$26,492)	(\$23,252)	(\$22,168)	(\$20,542)
Rate Residential (<i>Fixed and Metered Charge</i>)	-7%	2%	0%	1%	0%	0%	0%	0%
Rate Commercial (<i>Fixed and Metered Charge</i>)	-7%	2%	0%	1%	0%	0%	0%	0%
Target % Recovery of Total Rev. Req. (excl CDA)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Target Revenue Requirement	(\$10,771)	(\$19,599)	(\$24,989)	(\$25,922)	(\$30,678)	(\$27,787)	(\$25,169)	(\$20,542)
RDDA Balance (\$)	(\$9,745)	(\$16,497)	(\$18,307)	(\$14,353)	(\$10,167)	(\$5,633)	(\$2,633)	(\$2,633)
Residential Bill Impact	-2%	-1%	0%	0%	0%	0%	0%	0%
Commercial Bill Impact	-2%	-1%	0%	0%	0%	0%	0%	0%

The scenario results are:

- Changing the interest rate reduces the Total Revenue Requirement in 2020 by \$20,516. The impacts to other years vary marginally from that amount.
- In 2020 the rate change is reduced by 7% from 71% to 64% if the 52.5% Target % Recovery of Total Revenue Requirement (excl. CDA) is maintained.
- Note: In 2020 the Total Revenue Requirements is less than the Target Revenue Requirement recovered from customers.
 - Given the under recovery, if the Target Revenue Requirement collected from customers remains the same at \$476,930 in 2020, the 71% proposed rate change would remain the same even if the interest rate was adjusted lower. The lower interest rate would instead impact the RDDA balance favourably with a lower balance caused by the lower interest rate cost.

15.6 Please provide the basis for a 1.84% BBB premium with today's current Bank of Canada prime interest rate.

Corix Response:

Please see the response to Comptroller IR No. 1 Question 17.1 and response above to Trappers Way Question 15.4.

16.0 Reference: Evidentiary Update, pg. 39-40, Section 5.1.3, Return on Equity

Explanation: "Corix proposes a return on equity ("ROE") based on the approved ROE for the benchmark low-risk utility as determined by the BCUC from time to time, currently set at 8.75%,

Trappers Way Intervener Request

plus a minimum default equity risk premium above the benchmark utility's return. Corix proposes a minimum default equity risk premium of 75 basis points, equal to the equity risk premium approved by the BCUC for small TES utilities.”

In 2008, National Economic Research Associates (NERA) Inc. published a paper titled “Allowed Return on Equity in Canada and US-An Economic Financial and Institutional Analysis”. Table 2 on page 17 of this analysis suggests that if GCOC 10 year bond yields are less than 3%, ROEs should be less than 8.25%. According to this analysis, BC was the first province in Canada to apply a formula that related the regulated ROE to the GCOC 10 year bond yields in 1994.

Request:

16.1 Given that the risk of the GSDP project is being placed primarily on the ratepayer, with the proposed rate increases, and as a water utility, the risk for Corix, with no competition for its product, should be less than that of a TES, please explain what warrants a 0.75% default equity risk premium for ROE?

Corix Response:

Corix disagrees with the statement that the risk of the GSDP project is being primarily placed on the ratepayer. The utility owner takes the risk of any imprudent costs incurred. Also, the utility owner takes the long-term business risk of operating in a remote location that may not support utility operations if there is a significant loss of customers. As a stand-alone utility Corix does not have the ability to offset losses in one customer area by having another customer group in a different location pay for those losses. Also, Corix has proposed in its Amended Application that the Comptroller reviews the actual costs incurred by Panorama Water and accepts those costs to calculate the RDDA balance. Corix remains at risk for costs that are not justified.

TES projects and Panorama Water are both “utilities”²⁹ rate regulated under the Utilities Commission Act. The legislation recognizes both water and energy utilities should be rate regulated given the limited customers options and no competition from other providers.

Please also see the response to Trappers Way Question 15.1 and Corix response to Comptroller IR No. 1 Questions 16.2 and 17.3 with regard to the equity risk premium.

16. Can both Corix and the Water Comptroller please identify whether a formula based on GCOC 10 year bond yields per the NERA analysis is still being used by BC to determine a regulated ROE?

Corix Response:

Presently, the BCUC has suspended the automatic adjustment mechanism to determine the ROE.

For a complete explanation please refer to the response to Comptroller IR No. 1 Question 17.2.

²⁹ “Water utility” under the Water Utility Act and “public utility” (energy) under the Utilities Commission Act.

17.0 Reference: Evidentiary Update, pg. 45, Section 7, Revenue Requirements

Explanation: In Table 18, Corix is identifying a revenue increase of 111% from 2020 to 2022, assuming their proposed rate increases are implemented, yet the proposed rate increase is 145% over this period. In addition, the identified revenue increase by 2024 is 194%, yet the proposed rate increase will be 204% over this time.

Request:

17.1 Please explain why the percentage proposed rate increases are greater than the percentage increased revenue generated by these rate increases, per Table 18.

Corix Response:

The inclusion of the tariff rate change on August 1, 2020 (shown as year 2020) cannot be simply compared with the other years (2021 to 2024) with a January 1st rate change.

Table 24: Scenario E: RDDA Recovery in 2025 – June 2020 Evidentiary Update on page 57 provides shows the detailed explanation. Note that the Table 24 scenario is the same as Table 18 (proposed rates). The Target Revenue Requirement in Table 24 is the Revenue line in Table 18. The percentage tariff increases shown in the top part of Table 25 (Rate Residential and Rate Commercial) are the increases in tariff rates from the prior year. For example, the 71% increase in 2020 is the increase from 2019 tariff rates to the 2020 tariff rates. Also complicating the calculations is that 2020 tariff rates were effective on August 1, 2020 which is seven months later than a normal January 1, 2020 rate change. The August 1, 2020 rate change means that from January 1, 2020 to July 31, 2020 the rates were the same as previously set on January 1, 2019. This partial year rate increase is shown by the 25% residential bill increase in Table 24 which is different from the 71% tariff rate change.

With regards to Table 24, the rate change from 2021 to 2024 are all based on a January 1 rate change. The change from 2021 to 2024 is 80% rounded $[(\$1,434,990/\$795,795) - 1] \times 100$. The compounded cumulative residential rate increase from 2021 to 2024 is 80% rounded $[(1+30\%) \times (1+28\%) \times (1+8\%)] - 1$. The equality at 80% demonstrates that the figures presented are internally consistent when the rate change starts on January 1.

18.0 Reference: Evidentiary Update, pg. 47, Section 7.2, Income Tax

Explanation: In Table 19, Corix is forecasting a taxable income of \$534,598 by 2024 and using past losses as a tax write-off in previous years. After tax income, i.e. net income, in 2024 is calculated to be \$390,256. Given that the value of the Panorama physical plant (asset) in 2024 is assessed at \$7,844,230 per Table 16, the Return on Asset (ROA) becomes $\$390,256/\$7,844,230$ or 4.98%. The average ROA for water utilities in North America is 2.84% per [CSIMarket.com](https://www.csimarket.com).

Request:

Trappers Way Intervener Request

18.1 Given the substantial return that the proposed rate increase will generate in 2024 and beyond, please explain the continuation of the increased rates through 2024 and thereafter, when the ROA will be already much higher than the average in North America.

Corix Response:

There is not enough information to conclude why CSIMarket.com calculates 2.84% ROA. However, Corix is able to provide a plausible explanation by using American Water Works as a proxy to the water industry.

The largest investor owned water utility in the US is American Water Works Inc (AEP).³⁰ CSIMarket.com calculates an ROA of 2.76% as of June 30, 2020. An analysis of AEP would provide insights to the water utilities reported by CSIMarket.com.

AEP's 2018 Annual Report³¹ was reviewed by Corix. The reason for the low ROA for AEP is the leverage employed by AEP at the holding company level. AEP had \$5.864 billion in shareholders equity on \$21.223 billion total capitalization and liabilities.³² AEP's equity to total assets ratio is 27.6%. Net income attributable to common shareholders is \$0.567 billion.³³ The 2018 ROE for AEP would be 9.7% ($\$0.567/\5.864).

18.2 Please explain why it is reasonable, given the requested rate increases, for Corix to obtain a well above average Return on Asset.

Corix Response:

Based on the information above it appears that the apparent low ROA is due to leverage employed by AEP. The return on ROE for AEP in 2018 was 9.7% which is similar to the proposed ROE for Panorama Water.

See the response to Comptroller IR No. 1 Questions 17.1 to 17.3 regarding how the BCUC benchmark low risk utility and the TES projects equity risk premium was used to for Panorama Water's proposed capital structure and ROE.

The BCUC Generic Cost of Capital Proceedings in Stages 1 and 2 reviewed the appropriate capital structure and ROE for energy utilities in BC. The Comptroller in past rate hearings have approved for operating margin regulated water utilities an ROE based on the BCUC methodology. The other rate base regulated water utility, EPCOR Water West has a similar capital structure and ROE to what is proposed for Panorama Water.

19.0 Reference: Evidentiary Update, pg. 47, Section 7.3, Revenue Deficiency Deferral Account (RDDA)

³⁰ <https://csimarket.com/stocks/AWK-Return-on-Assets-ROA.html>

³¹ American Water Works 2018 Annual Report, <https://ir.amwater.com/dA/30c785b874/2018%20Annual%20Report.pdf>

³² AEP 2018 Annual Report, p. 100

³³ AEP 2018 Annual Report, p. 101

Explanation: “due to the size of the GSDP capital project, current customer rates, and the current number of customers, Corix is proposing the use of a RDDA to phase-in and smooth the GSDP related rate increase over several years. This leads to a revenue requirement shortfall in the initial years of operation, followed by surplus revenue in later years to reduce the balance of the RDDA. This complies with Order No. 2548, in which the Comptroller directed Corix to: “recommend phase-in options to smooth the GSDP related rate increases over several years.”” Corix has proposed an RDDA and resulting rate increases that would completely pay off the RDDA in 2026, likely with a surplus that year. A profit to commence this pay off will start in 2023. The impact of rate increases due to the RDDA is compounded by pay off of the rate rider by the end of 2022.

Request:

19.1 Please explain what would be the impact on rates and the result/disadvantage to the ratepayers of smoothing out the GSDP related costs beyond 2026, e.g. to 2030.

Corix Response:

Corix has provided additional scenario analysis on rate increases in response to Comptroller IR No. 1 Question 22.1 (see Scenario G and Scenario E (updated)).

The rate modelling conducted shows:

1. Large increases in the early years (2020 at 71%, 2021 at 25%, and 2022 at 30%) are required to keep the RDDA balance manageable. Even with the aforementioned rate increases, the 3 years of under recovery of revenues has an RDDA balance of \$789,844 in 2022. Any lower rate increases in the first 3 years would cause the RDDA balance to become unmanageable where the balance would approach the annual revenue requirement in the year.
2. If rate increases are delayed it results in larger rate increases in the following years.
3. The rate modelling does show that after 2022 the RDDA balance starts to decline and would be paid off depending on the rate increases applied in 2023 and 2024.
4. After 2022 (peak RDDA) an aggressive recovery via higher rate increases causes a corresponding aggressive rate decreases after the RDDA reaches zero.
5. The advantage of recovery of the RDDA by 2026 is that the balance is fully recovered and customers in following years would receive rate decreases. The disadvantage is that full recovery by 2026 would mean rate increases to 2025.
6. The advantage of recovery of the RDDA by 2030 is that the rate increases would be more gradual and after full recovery of the RDDA balance the corresponding rate decreases would be more gradual.

20.0 Reference: Evidentiary Update, pg. 50, Section 8, Customer Count and Consumption

Explanation: “For residential customers, Corix has forecasted growth in customer count by 1 customer in each of 2020, 2021 and 2022.” In 2020 alone, there have been 3 new residences completed on Trappers Way and 2 more that will be completed in 2021. There are also 4

Trappers Way Intervener Request

residences to be completed in 2021 in the Greywolf subdivision. This will increase the number of residential customers and subsequently, revenues more than forecast.

Request:

20.1 Please identify the impact on the requested rates if these additional customers are added to the revenue base, commencing in 2021.

Corix Response:

Corix has modelled a scenario by adding 2 additional customers in 2020, 1 additional in 2021 and 3 additional in 2022, assuming they were previously standby customers. The customers were assumed to have a full year impact on revenues collected.

The scenario results shown below are as follows:

- For 2020 the proposed rate increase goes down by 1.0%. For 2021 the model shows an increase of 0.2%. For 2022 the model shows the rate goes down by 0.6%.
- The scenario modelling shows an anomalous result in 2020 with a 0.0% residential bill impact. This is because the new customers are assumed to have 10 bed units per customer addition which makes the system average residential bed unit rise from 7.0 to 7.1 bed units which increases the bill impact.

Difference	2020	2021	2022
June 2020 Evidentiary Update			
Total Revenue Requirements (excl. CDA Rider 1)	\$0.0	\$0.0	\$0.0
Rate Residential (<i>Fixed and Metered Charge</i>)	-1.0%	0.2%	-0.6%
Rate Commercial (<i>Fixed and Metered Charge</i>)	-1.0%	0.2%	-0.6%
Target % Recovery of Total Rev. Req. (excl CDA)	0.0%	0.0%	0.0%
Target Revenue Requirement	\$0.0	\$0.0	\$0.0
RDDA Balance (\$)	\$0.0	\$0.0	(\$0.0)
Residential Bill Impact	0.0%	0.1%	-0.2%
Commercial Bill Impact	-0.3%	-0.2%	-0.7%

Alternate scenario with bed units at 7.0 for all years:

- The scenario modelling below assumes the bed unit remains unchanged at 7.0, the 2020 result would be a residential bill decrease of 0.3%, a bill decrease of 0.2% in 2021, and a decrease of 0.6% in 2022.
- The 2021 tariff rate increases by 0.2% since that is the net effect of the higher customer addition (lower rates) with lower 1% unit conservation from all customers (higher rates). Note that any conservation by customers impact rates but not bills (assuming total costs do not change in the short run). Hypothetically, for example, a \$100 customer bill on 20 units of consumption yields a unit rate of \$5. If consumption halves to 10 units, the rate doubles to \$10 per unit, but the bill remains the same at \$100.

Trappers Way Intervener Request

Difference (residential bed unit average unchanged)	2020	2021	2022
June 2020 Evidentiary Update			
Total Revenue Requirements (excl. CDA Rider 1)	\$0.0	\$0.0	\$0.0
Rate Residential (<i>Fixed and Metered Charge</i>)	-1.0%	0.2%	-0.6%
Rate Commercial (<i>Fixed and Metered Charge</i>)	-1.0%	0.2%	-0.6%
Target % Recovery of Total Rev. Req. (excl CDA)	0.0%	0.0%	0.0%
Target Revenue Requirement	\$0.0	\$0.0	\$0.0
RDDA Balance (\$)	\$0.0	\$0.0	\$0.0
Residential Bill Impact	-0.3%	-0.2%	-0.6%
Commercial Bill Impact	-0.3%	-0.2%	-0.7%

21.0 Reference: Evidentiary Update, pg. 50, Section 8, Customer Count and Consumption

Explanation: “In the Utility’s Application for 2019 Rates, the monthly consumption per bed unit was forecast based on a three-year rolling average. This allowed the Utility to ensure the forecast reflected more recent consumption patterns. In this Amended Application, the Utility has continued the three-year rolling average as it reflects recent usage while also smoothing variability caused by weather and economic conditions. However, the Utility recognizes that the proposed rate increases could lead to a change in consumption patterns due to conservation. Therefore, the Utility applied a reduction factor to the forecast consumption per bed unit, for both residential and commercial customers, of 1% per year from 2020 to 2024”. Given the number of residences occupied throughout the past summer due to families relocating here during Covid-19, it is likely that water consumption, on average, is greater than forecast.

Request:

21.1 Please provide the average residential consumption of water per bed unit in 2020 to date and how it compares to forecast.

Corix Response:

Please see the table below for the comparison of the average residential consumption of water per bed unit by month for 2020.

Trappers Way Intervener Request

Average Consumption per bed unit - Residential (cu. M/bu)	Actual 2020	Forecast 2020	Difference Actual-Forecast
January	0.84	1.25	-0.41
February	1.21	1.13	0.08
March	0.92	1.09	-0.17
April	1.07	0.76	0.31
May	1.43	0.69	0.73
June	0.73	0.85	-0.12
July	1.55	1.52	0.03
August	2.53	1.91	0.62

22.0 Reference: Evidentiary Update, pg. 52, Section 9.1, Rate Design Analysis

Explanation: “Over 85% of the Utility’s costs associated with providing water service are fixed costs that do not vary with the amount of water consumed. While this is an important factor in designing an equitable rate that apportions the actual costs of service appropriately to all groups of customers, it must be considered in the context of designing rates that also incorporate a charge per volume of water consumed to encourage customers to use the water resource wisely.” These fixed costs result in a service that is available at any time, including the provision of firewater to protect property, whether residents are using water or not. According to section 9.1.3, “approximately 48% of the annual revenues from the fixed basic charge and the remainder 52% from the variable metered rates. Instead of recovering all the fixed costs (at minimum 85% of the total revenue requirement) through the Fixed Charge, the Utility recovers some of the fixed costs through the Metered Charge, thereby incentivizing customers to conserve water.” In a 2016 document published by the UBC Water Planning Lab, it was noted that the average daily usage of water in BC is 0.312 cubic metres per capita.

“A Bed unit is a unit of measurement used to determine the relative number of occupants and is based on the floor area typically required to provide overnight accommodation for one person.” Using the above water use study, the average per capita annual water usage in 2016 was 113.9 cubic metres. This compares to the actual usage of 11.9 cubic metres per bed unit for Panorama residential customers in 2019 or almost 90% less than the average across BC in 2016, per Table 21. Table 21 also indicates consumption is increasing and not decreasing between 2019 and 2020 for both residential and commercial customers. Furthermore, future consumption rates are forecast to be reduced by only 1% in spite of the substantial increase in proposed Metered Charge rates.

Request:

22.1 Please explain why it is fair and “equitable” that only 48% of the required annual revenues are being proposed to come from the Fixed Charge when fixed costs with providing water service are 85%, and there is likely very little reduction in usage to be achieved by weighting the majority of required revenues to be generated from the Metered Charge.

Corix Response:

The rate structure was last approved to set January 1, 2019 rates by Comptroller Decision and Order No. 2548 and Order No. 2551. The Comptroller decided for 2019 those rates were just and reasonable.

For 2020 to 2022, Corix proposes to continue the relative proportions between the fixed and variable charge. The analysis was contained in Section 9.1 of the Amended Application.

Metro Vancouver has issued “Residential Water Metering in Metro Vancouver: Best Practices Guide for Local Governments.”³⁴ Metro Vancouver found the benefits of water metering include improved billing equity, water conservation, leak detection and reduction, water systems management, environmental stewardship, and resiliency to climate change.

The Best Practices Guide states:

“Water metering initiatives in Metro Vancouver and in other areas have made significant positive impacts on water conservation efforts. Conservation success is due in part to the financial incentives that come along with water metering, as a reduction in water consumption generally results in a decrease in household water bills. Local governments have found that water meters and water conservation programs benefit one another when adopted in conjunction with one another.”³⁵ A notable finding in the guide was: “In the City of Surrey, where 70% of single-family homes are metered, the purchase of water from Metro Vancouver over the last 15 years has remained constant while the population has grown by around 45%.”³⁶

Changing the fixed recovery charge from 48% to 85%, will have a material financial disincentive to conserve water. As the fixed recovery charge in customer bills approaches 100% that is equivalent to not metering customers.

Corix submits for the test period the balance between fixed and variable recovery in rates provides a reasonable balance between conservation and the recognition that costs are primarily fixed though there are some short run variable costs that can be saved such as chlorine and electricity when consumption decreases. However, Corix notes that a strong conservation signal will have long term benefits to ratepayers by reducing future system capacity expansion costs that may arise from higher average unit consumption increases.

23.0 Reference: Evidentiary Update, pg. 52-53, Section 9.1.1, Customer Demand Characteristics

Explanation: “Residential customers have a load factor of approximately 57%. Commercial customers have a load factor of approximately 47%. The results show that residential customers

³⁴ Residential Water Metering in Metro Vancouver: Best Practices Guide for Local Governments, <http://www.metrovancouver.org/services/water/WaterPublications/ResidentialWaterMeteringinMV-BestPracticesGuide.pdf>

³⁵ Metro Vancouver Best Practices Guide, p. 12

³⁶ Metro Vancouver Best Practices Guide, p. 12

Trappers Way Intervener Request

have a marginally better capacity utilization. This indicates that residential customers given their favourable capacity utilization impose a lower cost to the water system than commercial customers.” In addition, the disappearance of drinking water advisories resulting from the GSDP stands to benefit commercial customers more than residential customers, through removal of the negative perceptions of guests brought on by non-potable water unfit to drink at the resort. Commercial customers also use 300% more water than residential customers (per Table 21) and have the advantage that any water rate increases can be passed on to their clients, unlike residential customers.

Request:

23.1 Please explain why Commercial ratepayers do not bear a greater proportion of the proposed rate increases related to the GSDP project than Residential ratepayers (the percentage increase in rates from 2021 to 2024 for both residential and commercial ratepayers is essentially the same per Tables 27 and 28), especially when the annual commercial consumption is projected to be 153% more per bed unit than annual residential consumption per Table 21.

Corix Response:

The two primary reasons for the rate increase differences between residential and commercial customers is because of the 1% conservation water usage estimate for residential and commercial customers and higher average bed units per customer. The model when adding new residential customers assumes 10 bed units as per the tariff. This causes a slight increase in the system average residential bed units where the system average is about 7.1 bed units. Existing customers would not have changes in bed units so for this factor the calculated average annual increase would be lower.

Schedule 14 Estimated Bill Impact (June 2020 Evidentiary Update FS-29) shows the calculated rate increases for the residential and commercial customers. In 2020 the commercial customers have a higher rate increase than residential customers. The annual bill increases show that the increases are generally similar with an apparent higher percentage increase for residential customers in 2021 to 2024. As mentioned above the primary reasons for the difference are from the 1% conservation estimate on metered usage and the change in average bed units each year. The other minor factors for the difference are caused by the CDA Rider and the ratio of the Fixed Charge and the Metered Charge,

The year 2024 is a good example to use since there is no CDA Rider impact. For 2024 the residential increase is 9% compared to 7% for commercial customers even though the same general increase of 7.9% is uniformly applied to the Fixed and Metered Charges for Residential and Commercial customers. In 2024 the residential Fixed Charge is \$1,023 on a total bill of \$1,625; 63% of the total annual bill is fixed and 37% is variable. Also, in 2024 the residential Metered Charge increases to \$603 from \$558; an 8.1% increase. In 2024 the commercial Fixed Charge is \$10,362 on a total bill of \$24,968; 42% of the total annual bill is fixed and 58% is variable. The Metered Charge increases to \$14,605 from \$13,667; an increase of 6.9%.

For 2024, residential customers have a slightly higher system average bed units compared to 2023 which causes the 2024 annual bill to be higher. Also, since commercial customers have a

Trappers Way Intervener Request

higher variable portion of the bill and combined with a 1% conservation for water usage, there is a smaller annual bill rate increase when compared to residential customers.

Corix confirms that in the financial model when setting the bed units and the consumption in 2024 to be same as in 2023 for both residential and commercial customers, the results have the same annual bill increase for each customer group when all other factors are held constant.

24.0 Reference: Evidentiary Update, pg. 61, Section 11.2, Customer Bill Impact Comparison

Explanation: Table 29 indicates that Annual Residential Bills from neighbouring utilities such as Invermere, Windermere, Radium Hot Springs, Canal Flats and Edgewater range between 46% to 75% lower for 2021 than the annual bill for Panorama residents, after the proposed rate increase and when including the rate rider. This gap will undoubtedly be widened in 2024 when annual bills for Panorama are proposed to increase another 63%.

Corix states “the utility rate comparison should also take into consideration the factors listed below.

- Number of customers at that utility – Utilities benefit from increased economies of scale so large capital costs can be spread over a larger customer base; thus reducing costs to each customer.
- Owner of the utility (Municipality/Private) – A municipality that owns and operates a water utility may spread some of its costs across all the municipal services provided. Municipal staff would not work exclusively for the water utility and therefore could have their costs recovered through taxation. In addition, the taxation system of the municipality may result in revenue being collected from taxes being used to supplement revenue from water utility rates in order to operate and maintain the utility.
- Water Source – The source of the water may have an impact on the costs required to treat and distribute the water to customers. For example, facilities for water utilities that have a surface water supply are typically less expensive to construct and operate than facilities for a water utility with a groundwater supply.
- Service Area Terrain – Hilly or mountainous service areas require higher electrical consumption to pump water throughout the system, as opposed to services areas located on flatlands.
- Compliance with Drinking Water Quality program requirements – Water utilities that are in compliance with the applicable provincial/regional drinking water quality program requirements typically cost more to construct and operate than a system that is not designed to comply.
- Access to Grants – Municipal systems sometimes receive grants from the provincial/federal governments to undertake large capital projects. These grants would

Trappers Way Intervener Request

reduce the capital costs required for municipal water utilities, when compared to the capital costs required for privately-owned utilities undertaking the same capital project.

- Fire protection – Systems that do not include the cost for the provision of fire protection are typically cheaper to operate and maintain than systems that provide fire protection”

Request:

24.1 With regard to customer base, please indicate how the Panorama customer base compares to Edgewater and Canal Flats.

Corix Response:

Edgewater in 2019 had 465 connections.³⁷ Canal Flats in 2014 had 238 units.³⁸

Panorama Water in 2019 had 328 metered customers excluding availability of service (standby) customers.

24.2 With regard to staffing of municipalities being able to be shared among other responsibilities, please identify to what extent Corix staffing for sewage disposal, propane distribution and meter reading is used to support the water utility.

Corix Response:

As stated in the Amended Application on page 16:

- “Two full-time operators that split their time operating and maintaining all three utilities at Panorama.”
- Additionally, there are “four operators who primarily work on Operating Contracts that Corix has with clients in the Kootenay region and that occasionally assist the two full-time operators with field work for the Utility.”
- Also, Panorama Water shares a Utility Administrator and an Operations Manager with the other Panorama utilities and with the Kootenay operating contracts.

The above personnel are available in the local region to work on Panorama Water.

Meter reading is performed by the operators.

24.3 With regard to water source from surface water being less costly than from groundwater, what proportion of water annually will now be sourced from our surface water in Taynton Creek, which has served Corix well to date, given the availability of the GSDP?

³⁷ RDEK 2019 Water Annual Report, page 1, http://www.rdek.bc.ca/web/utilityreports/AnnualWater_ReportMay_202020b.pdf

³⁸ The Village of Canal Flats, 20 Year Capital Plan, October 27, 2014, page 5, <https://canalflats.civ-icweb.net/document/1031>

Trappers Way Intervener Request

Corix Response:

The surface water source will be decommissioned and has not been the source for Panorama Water since February 11th, 2020. The Taynton Creek source was not a reliable source since annual Boil Water Advisories were imposed due to elevated turbidity during spring freshet. This annual event typically lasted from May to August. Furthermore, the existing surface water intake was at risk of destruction from a debris torrent. This event would have rendered the Panorama community without any water source.

24.4 With regard to service area terrain requiring higher pumping electricity consumption due to mountainous nature, to what extent has this contributed to increased electricity consumption and to the proposed rate increase, given that utility costs with the GSDP in service are less than 20% of total O&M costs per Table 1 and previous operation required pumping/

Corix Response:

The water from the well requires pumping over a greater elevation from the previous source from the creek, this higher pumping requirement would necessitate higher electrical energy requirements.

Please see the response to Comptroller IR No. 1 Question 6.1 regarding the explanation of the high electricity bills and the latest electricity forecast. The previous high electricity forecast was due to distribution leaks and incorrect billing from Toby Creek Electrical. The leaks uncovered in the summer have been addressed and Toby Creek will review its invoices. Corix forecasts that the revised electrical bill for 2021 is estimated at \$55,000. This ongoing electricity cost will have a relatively minor impact on the revenue requirement.

The higher revenue requirements are primarily GSDP project asset related and attributable to interest, return on equity, and depreciation. Table 18: Forecast Revenue Requirements for the Utility shows the components of the revenue requirement of \$928,944 in 2020.³⁹ As a comparison the Approved 2019 Forecast revenue requirement totaled \$380,728.⁴⁰ Most of the 2019 costs were related to O&M plus an operating margin. The difference in revenue requirements is attributable to the large capital investment from the GSDP project.

24.5 With regard to water utilities having to be in compliance with applicable provincial/regional drinking water quality program requirements costing more to construct and operate, please identify which of the water utilities identified in Table 29 do not have to comply.

³⁹ June 30, 2020 Evidentiary Update, Amended Application, Table 18: Forecast Revenue Requirements for the Utility, p. 45

⁴⁰ Panorama 2019 Approved Water Rates, Table 4: Revenue Requirements, p. 7, https://www.corix.com/docs/default-source/pdfs/panorama-pdfs/cmus-panorama-water-2019-water-rates-amended-application---2019-07-23.pdf?sfvrsn=630c635d_0

Trappers Way Intervener Request

Corix Response:

Provincially all water systems must comply with the Drinking Water Protection Act⁴¹ for the provision of potable water. In particular water systems under the Act must comply with Drinking Water Protection Regulation.⁴²

The prescribed water quality standards for potable water are set out in Schedule A.

Schedule A
Water Quality Standards for Potable Water
(sections 2 and 9)

Parameter:	Standard:
Fecal coliform bacteria	No detectable fecal coliform bacteria per 100 ml
<i>Escherichia coli</i>	No detectable <i>Escherichia coli</i> per 100 ml
Total coliform bacteria	
(a) 1 sample in a 30 day period	No detectable total coliform bacteria per 100 ml
(b) more than 1 sample in a 30 day period	At least 90% of samples have no detectable total coliform bacteria per 100 ml and no sample has more than 10 total coliform bacteria per 100 ml

In addition, the Regulation in Schedule B sets out the Frequency of Monitoring Samples for Prescribed Water Supply Systems.

In Table 29, the Corix owned water utilities (Panorama Water, Canadian Lakeview Estates, Cultus Lake Water, and Okanagan Landing Utility) all meet requirements under the Drinking Water Protection Act during normal operations.

For Panorama Water, in addition to provincial legislation, Interior Health Authority has issued its Drinking Water Objective, which states:

“Water suppliers are required to provide potable water to all users on their systems. The 4-3-2-1-0 drinking water objective provides a performance target for water suppliers to ensure the provision of microbiological safe drinking water. Interior Health supports water suppliers to meet this objective. All water suppliers serving populations greater than 500 people should have an implementation plan to meet this as a standard.

This objective will be applied as a performance standard for all new water systems. Many existing water systems already meet most of the standard. Risk to human health is substantially reduced when water suppliers meet this objective.

⁴¹ Drinking Water Protection Act https://www.bclaws.ca/civix/document/id/complete/statreg/01009_01

⁴² Drinking Water Protection Regulation, https://www.bclaws.ca/civix/document/id/complete/statreg/200_2003

Trappers Way Intervener Request

Water suppliers will be required to provide long term plans to reach the goals of:

- 4 log inactivation of viruses
- 3 log removal or inactivation of Giardia Lamblia and Cryptosporidium
- 2 refers to two treatment processes for all surface drinking water systems
- 1 for less than 1 NTU of turbidity with a target of 0.1 NTU
- 0 total and fecal coliforms and E. Coli”⁴³

IHA Drinking Water Objective also refers to the Canadian Drinking Water Guidelines.⁴⁴

IHA issued an objective to meet a performance standard. However, for existing water systems IHA requires a long-term plan to the goals of 4-3-2-1-0. New water systems are expected to meet the IHA Drinking Water Objective.

Corix owns and operates Canadian Lakeview Estates and Okanagan Landing Utility in the Interior and Cultus Lake Water in the Lower Mainland. If the IHA Objectives applied to them they would not presently meet the IHA Objectives.

Corix does not have information on whether the other non-Corix utilities would meet the IHA Drinking Water Objective. Many of the non-Corix water systems in Table 29 are located in the Regional District of East Kootenay (RDEK). The RDEK does not appear to definitively claim it meets the IHA Drinking Water Objective. The RDEK stated in its Annual Water Systems Report 2019 the following:

“The RDEK is committed to providing safe potable water to the public by working with IHA and maintaining standards set by Canadian Drinking Water Guidelines. This report represents a way of communicating facts and keeping the public apprised of the operational processes of the RDEK’s water systems in the East Kootenay.”⁴⁵

Corix in its response to Comptroller IR No. 1, Question 23.1 provides a response to a question by the Comptroller on Windermere Water and Spur Valley Water located in the RDEK. The response provides information on these two utilities that outlines the upgrades to these systems to address boil water notices.

24.6 With regard to municipal systems sometimes receiving grants from the provincial/federal governments to undertake large capital projects, did Corix apply for government grants and if

⁴³ Interior Health 4-3-2-1-0 Drinking Water Objective https://www.obwb.ca/fileadmin/docs/43210_Drinking_Water_Objective.pdf

⁴⁴ Canadian Drinking Water Guidelines, <https://www.canada.ca/en/health-canada/services/environmental-workplace-health/water-quality/drinking-water/canadian-drinking-water-guidelines.html>

⁴⁵ Regional District of East Kootenay, Annual Water Systems Report 2019, page 12, http://www.rdek.bc.ca/web/utilityreports/AnnualWater_ReportMay_202020b.pdf

not, why not? The federal government on many occasions has indicated that they are committed to providing all Canadians with drinkable water and has set up an Infrastructure Bank to enable such projects.

Corix Response:

Corix is not aware of any grants that are available to investor-owned utilities.

24.7 With regard to systems that do not include the cost for the provision of fire protection being typically cheaper to operate and maintain than systems that provide fire protection, to what extent has this contributed to the proposed rate increases, given that hydrant maintenance is less than 2% of Corix O&M costs per Table 1? Furthermore, does Corix receive any compensation for this maintenance from the RDEK, to whom Panorama customers pay taxes for fire protection, and if not, why not?

Corix Response:

See response to Question 6.1 above with regard to RDEK and fire hydrants.

25.0 Reference: Evidentiary Update, pgs. FS-30 to FS-32, Schedule 15, Panorama Water Utility Comparison to other water utilities

Explanation: Per Schedule 15, in 2021 fixed charges for Corix Panorama water will represent 66% of the total bill, when including the rate rider and 62% when excluding the rate rider. Fixed charge rates for neighbouring utilities with metered charges, range between 68% to 89% of the total bill, and average 81% of the total bill. This suggests that the Corix requested required revenues ought to incorporate higher fixed charges and lower metered charges into the rate increase than proposed. Furthermore, this would reduce the sensitivity to variable water consumption in forecasting required revenues.

Request:

25.1 Please identify what the impact on the requested rate increases would be if the fixed charges were raised to 80% and metered charges reduced to 20% of the total bill, yet still deliver Corix's required revenue requirements and how that would impact the total average customer bill.

Corix Response:

Corix modelled the change for 2021 by fixing the same revenue requirement at \$795,795. The target without the standby charge is \$788,235. The fixed portion at 80% would be \$630,588. The variable portion at 20% would be \$157,647. This scenario assumes more revenue would be recovered from the existing fixed charge and less revenue recovered from the variable charge. The scenario assumed the same rate change (+107.9%) was applied to the fixed rate for the residential customers and the commercial customers. Also, the scenario assumed the same rate change (-52.2%) was applied to the variable rate for the residential and commercial customers.

Trappers Way Intervener Request

The residential basic service charge changed from \$5.30 to \$11.01. The residential metered charge changed from \$3.22 to \$1.54.

The commercial basic service charge changed from \$5.88 to \$12.22. The commercial metered charge changed from \$3.38 to \$1.61.

The rate impact for the residential customers was a 79% increase in 2021. The annual bill rises from \$649 to \$1,165. For comparison, the Amended Application has the annual bill rising from \$649 to \$1,000, a change of 54%.

The rate impact for the commercial customers was a 38% increase in 2021. The annual bill rises from \$11,104 to \$15,310. For comparison, the Amended Application has the annual bill rising from \$11,104 to \$16,615, a change of 50%.

In the scenario modelling, Corix has assumed that the rate increase for the fixed portion on 2020 rates in 2021 is the same for residential and commercial customers. Also, Corix has assumed that the rate increase for the variable portion on 2020 rates in 2021 is the same for residential and commercial customers. The percentage rate changes can be different for the fixed portion for residential and commercial customers but that would necessitate an explicit rate shift between customer classes.

Corix notes that any material rate structure changes that are deemed necessary by the Water Comptroller are best addressed in a separate rate design application after the revenue requirement for the year has been set. Rate design issues include: the appropriate rate to charge for the fixed and variable components, whether the components differ between residential and commercial customers, setting the appropriate portion of cost recovery from residential customers and commercial customers, and conservation goals. It may also be prudent to defer any desired rate design initiatives for a minimum of one to two years in order to ensure that a sufficient level of cost and revenue history has been established with the new GSDP system and the rate changes proposed herein.

Corix also notes that rate design applications require significant modelling and data analysis which can make an application costly for a small utility.

CONFIDENTIAL

Attachment 1

Corix Response to
Trappers Way Residential Group
Information Request No. 1
Question 3.6.3

Filed as a separate and confidential document.

CONFIDENTIAL

Attachment 2

Corix Response to
Trappers Way Residential Group
Information Request No. 1
Question 5.1

Filed as a separate and confidential document.