

Requestor Name: Panorama Subdivision Owners Association (PSOA)
Information Request No: 1
To: Corix Multi-Utility Services Inc. (CMUS) Panorama Water
Date: September 26, 2020
Reference No: 7677
Application Name: 2020 – 2022 Water Revenue Requirements Application

1.0 Reference: Panorama Water Utility Revenue Requirement & Rate Application for 2020 – 2022 Page 7

Explanation: On July 10, 2018, the Utility submitted the final cost estimates and physical design to the Comptroller and requested approval to proceed with construction of the project with an estimated completion date of July 2019. Through Order No. 2531, dated July 30, 2018, the Comptroller ordered that the: "...final cost estimate of \$6,934,974 and the physical design for the GSDP Project are accepted and approval to proceed with the construction of the project is granted. Corix is to file a Revenue Requirements and Rate Application by December 31, 2019".

Request:

1.1 What major cost factors caused this relatively straightforward construction project to cost so much and to run \$604,319 over the "final cost estimate" approved by the BC Comptroller of Water Rights?

Corix Response:

The GSDP Project has a number of factors that make it more challenging than a "straightforward construction project". The project site was on the side of a mountain at an elevation of approximately 1,300 meters above sea level. The location had difficult terrain and varying geological formations. Access to the construction site was limited by weather and the operations of the ski hill. There was no or limited access from November to April. Primary access was from May to October. There were also delays from the Interior Health Authority in the permitting process. The application filed with IHA required months to approve due to a backlog of applications from other water systems.

1.2 Was this final cost estimate of \$6,934,974 determined by a competitive bid process or by other means?

Corix Response:

The project was originally tendered in four parts:

- Part 1 – Buildings and Automation
- Part 2 – Waterline and Bulk Excavation
- Part 3 – Bolted Steel Reservoir
- Part 4 – Decommissioning and Site Rehabilitation

These tenders were sent to ten (10) contractors. All these contractors had previously confirmed interest in the project and indicated that they intended to bid on the work.

The work was bid as a fixed price contract. However, it was intended that certain elements be provided in the final contract based on measured quantities (ie. unit price payment).

Of these contractors, five (5) were intending to bid the full scope of work (ie. all four sections); three (3) were intending to bid the reservoir alone; one (1) was intending to bid only the waterline and bulk excavation; and, one (1) was intending to bid only the decommissioning and site rehabilitation work.

Bids were received from two contractors for the full scope of work. Additionally, one bid was received for waterline and bulk excavation and one bid was received for decommissioning and site rehabilitation work.

Corix completed follow-up calls with contractors that had indicated that they would bid the work, but then did not. Corix found the reasons for not submitting to be primarily a result of the busy work environment, remote location or having been awarded other large contracts prior to the tender close date.

The quotes received for the project were all significantly over the project budget established by the project engineer. As such, Corix engaged in direct negotiation with the low bidder (Acres Enterprises) to arrive at a project cost and schedule that was suitable to both the contractor and Corix Utilities. As part of this negotiation Corix also worked with the contractor and project engineer to value engineer the project. Value engineering resulted in certain elements of the project being redesigned to be more efficient, and the use of alternate products that were more readily available or preferable for the selected contractor; therefore reducing the overall project cost.

The final contract with Acres Enterprises awarded them Parts 1, 2 and 3 of the project. Part 4, decommissioning and site rehabilitation work, was awarded to a local contractor (Ralph Stewart Contracting) to avoid additional mobilization requirements as decommissioning would occur at least six months after project commissioning. Ralph Stewart Contracting was the low bidder on this portion of the contract.

- 1.3 If not by a competitive bid process, on what basis was the contract for construction awarded?

Corix Response:

See the above response to Question 1.2.

- 1.4 Detail what, if any, cost containment measures Corix implemented to reduce the overall cost of this project.

Corix Response:

As discussed above in response to Question 1.2 Corix implemented value engineering for the project. Throughout the project many meetings were held with the construction team, project manager, and Corix team. The project manager for the GSDP is a well experienced professional as he completed a similar major water project in the region one year prior.

1.5 Explain in simple terms in how many years Corix expects to recover the full cost of this project.

Corix Response:

The GSDP project has a weighted average life of 51 years. The two largest structures, the Water Treatment Plant and Reservoir have a 50 year life. Transmission Mains have a 75 year life. There are other components such as pumping equipment with a 25 year life. In accordance with standard utility practice, Corix intends to recover the cost of the equipment on a straight-line basis over its useful life.

See also Section 5.2 Deprecation and Capital Cost Allowance, page 40 in the Amended Application (June 2020 Evidentiary Update).

2.0 Reference: Panorama Water Utility Revenue Requirement & Rate Application for 2020 – 2022 Page 7

Explanation: Corix states: Additional work beyond the scope of the approved budget was also required. The provided contingency of \$345,973 was not sufficient for these additional items. These items are, for the most part, typical for a project of this magnitude and include costs for winter work, unknown conditions and addressing on-site conditions related to rock and ski hill infrastructure. The cost of these works in excess of the contingency provided was \$63,781.65. Corix further states: The remaining difference \$109,000 relate to contract issues on unit price portions.

Request:

2.1 Provide details of work done for the \$63, 781.65 in excess of the contingency provided

Corix Response:

To be responsive to the question Corix is providing the confidential Panorama Progress Sheet from Acres attached as Confidential Attachment 3: Corix Response to PSOA IR1 Questions 2.1 and 2.2 regarding the details of the excess spend for the Acres portion of the GSDP project. **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.**

Explanation of the Panorama Progress Sheet from Acres.

The Progress Sheet consists of three parts. The first part depicts the contracted items, the second part is time and material (T&M) items, and the third part is changes to the project scope (itemized as 'C', or 'CCO' – "change" or "contract change order").

The first part has fifteen sections for different components of the project. The first four columns after the item description are the unit of measurement (LS=lump sum), the quantity, the unit cost, and the extended cost (the product of the quantity and unit cost). As the project progressed, unit quantities varied depending on site conditions. For example, item 4.12, "50mm PVC Electrical and Control Conduit in Common". The contract originally budgeted for 400 meters, but only 194 meters was used. This was due to routing all wiring on the front side of the reservoir in a common

conduit, rather than routing certain items on the back side of the reservoir. This led to a \$6,489 savings to the project.

The second part is for time and material items. In general, these are items that cannot be accurately budgeted in advance, or for items that were not anticipated in the original project scope. For example, HDPE pipe that had been fused in advance and stored over the winter had to be re-fused since Panorama Mountain Resort staff had cut the pipe to accommodate the requests of homeowners whose properties back on to the platter lift.

The third part is for changes in the project scope. For example, the regulator, Interior Health Authority, required changes to the design submitted for approval. Specific examples are the addition of isolation valves for the source water piping crossing the Toby Creek (\$4,000), and automated isolation valves on the ultra-violet disinfection reactors (\$20,135.61).

The Progress Sheet provides the detail on cost variances for the Acres portions of the project.

- 2.2 Provide details of contract issues resulting in additional charges of \$109,000 to the cost of this project.

Corix Response:

At the time of the Evidentiary Update Corix was anticipating additional charges due to contract issues. Corix was able to settle many of the issues favourably.

Please see the response to Question 2.1 and confidential Attachment 1 that provides the full variances for the Acres portion of the project.

- 3.0 Reference: Schedule of Operating & Maintenance Expenses Schedule 2 FS3

Explanation: Schedule 2 of O & M Expenses on page FS3 indicates Insurance costs for the CMUS Panorama Water Utility rising from \$2,767 in 2016 to a forecast \$28,892 in 2024.

Request:

- 3.1 CMUS to provide an explanation as to why this small utility with substantially new infrastructure would be subject to a 1000% increase in insurance costs over 8 years?

Corix Response:

An explanation for the insurance costs were provided in the Amended Application on page 20.

A number of factors have caused a large increase in insurance costs.

- From 2016 to 2017, Corix included Corix Water Products (CWP) which was a competitive non-regulated business which was sold in 2018. When CWP was owned by Corix, it accounted for 52% of the revenues and was allocated 62% of the insurance premium. When CWP was owned by Corix it had the effect of reducing the insurance premiums for the other businesses; a benefit to the non-CWP businesses. However, when the CWP sale was completed in January 2018, the non-CWP businesses were no longer able to benefit from CWP allocation of costs. This is evident with 2016 and 2017 costs at \$2,767 and \$2,945, respectively.

- In 2018 the insurance costs rose to \$6,105. The increase reflects the loss of CWP when it was sold in 2018 which it was no longer paying for its allocated portion. Also, the overall premiums in 2018 went up.
- In 2019 the insurance costs rose to \$23,924. The allocated premium costs reflect the full effect of the sale of CWP; continued higher premium costs, and also the mostly complete GSDP project.
- In 2020 the insurance cost is \$29,387. The allocated premium costs reflect, higher insurance premium costs and the full year effect of GSDP project assets in service.

In summary, the three most significant reasons for the increase are the loss of CWP, rising insurance premiums in a challenging worldwide insurance market, and the large GSDP asset insured value which increased gross plant and revenues. When CWP has included in the insurance policy, CWP paid for a larger share of the costs which meant the non-CWP businesses received a benefit. Subsequently, without CWP the remaining businesses saw a rise in insurance costs. The GSDP project added \$7.6 million of direct costs to the assets which caused most of the increase in 2019 and 2020.

Please also see the response to Trappers Way IR1 Question 5.1.

4.0 Reference: Customer Count & Consumption Table 21, pg. 45. Customer Bill Impact Analysis Table 27, pg. 54

Explanation: Corix states: “From 2015 through 2019 the number of bed units for residential customers has grown from 1,814 to 2,048. For residential customers, Corix has forecasted growth in customer count by 1 customer in each of 2020, 2021 and 2022. This is equal to the growth in customer count for 2019 and in the absence of more definitive information to suggest otherwise, this represents a reasonable customer forecast. Consistent with the approved tariff, Corix assumes that one residential customer represents 10 bed units and has forecasted the number of bed units for 2020, 2021 and 2022 accordingly. Corix has forecasted 8 residential customer additions for each of 2023 and 2024, based on information from developers and has forecasted the number of bed units for these years accordingly”.

Request:

4.1 In Table 21: Utility Customers and Consumption Actual Forecast, Corix may be unaware of the three home presently under construction on Greywolf drive and the proposed fourth home that will be constructed in 2021 to bring the number of residential customers to 295 in 2021. What difference in their financial modelling will this bring about to forecast revenues?

Corix Response:

Please see impact on revenues in the table below for the two additional residential customers in 2021 to bring the total to 295 residential customers (up from 293 customers in the model).

Revenue Impact from two additional customers in 2021

(295 total residential customers in 2021)

Additional Customers:	2
Additional Bed Units for two customers:	20
Additional Metered Usage for two customers (cu. m):	169.6
<u>Additional Revenue</u>	
Residential Basic Charge	\$1,579
Residential Metered Usage	\$679
Consumption Deferral Account	\$205
<u>Other Revenue</u>	
New Connected Customer Charges	\$550
<u>Revenues foregone:</u>	
Standby revenue	(\$540)
Total Incremental Revenue in 2021	<u><u>\$2,472</u></u>

4.2 In Table 21 Corix shows residential consumption at an average ranging between 11.62 cu. m. and 12.10 cu. m. per bed unit in years 2019 – 2024 for an average yearly consumption per bed unit of 142 cu. m. In Table 27, Corix uses an average of 83.7 cu. m. – 83.9 cu. m. per bed unit to calculate the impact on the Total Bill Impact for Residential Customers Explain the difference in the two Tables and show the financial effect of using the same figures used in Table 21 to calculate the true Total Bill Impact for Residential Customers.

Corix Response:

Corix confirms that the calculations for Table 21 and Schedule 14 are internally consistent within the model when viewed as the system average for all residential customers in each year.

For example, Table 21 shows in 2020 the Consumption per bed unit at 12.10 cu. m/bu. It also shows 292 residential customers with 2,058 total number of bed units. The average residential bed unit per customer throughout the year is 7.0 (2,058 total number of bed units divided by 292 residential customers).

Schedule 14 line 1 in 2020 shows the 7.0 average number of bed units per month. The 7.0 average bed unit per month is the same figure as the average residential bed unit throughput the year calculated above.

Schedule 14 line 2 in 2020 shows 85.3 cu. m. of average consumption per year for a system average residential customer. It is not 85.3 cu. m per bed unit. The 85.3 average consumption per year (cu. m) for a residential customer is calculated as 24,899 total system residential annual consumption cu. m. divided by 292 total residential customers.

Note the 24,899 m³ consumption includes three effects: #1) prior customers at the prior bed units (~7.0 per customer, varies for each year), #2) new customers in the year at 10 bed units per customer; and #3) the effect of 1% conservation in the current year.

- Effect #1 has a neutral effect on the 2020 total consumption.
- Effect #2 in 2020 would increase consumption at 10 bed units per new customer while the system average is 7.0 units.
- Effect #3 in 2020 would decrease consumption for prior customers and new customers.
- Depending on the magnitude of the relative differences in the three effects, the total system consumption (Table 21, Consumption (m³)) may rise or fall. The average number of bed units per month (Schedule 14, line 1) gradually rises since the effects are neutral (from Effect #1) and directionally higher (from Effect #2).

There are two effects between years that is causing a change in the bill impact.

- The first, is that the model assumes any new residential customer is added as 10 bed units while the system average is approximately 7.0 bed units. In the year of the addition the bill is calculated with a higher bed unit (e.g changing from 7.0 to 7.1) which increases the total average calculated bill. The estimated bill impact has a blend of existing of new customers.
- The second effect is that Corix has modelled a 1% conservation savings in each year per customer. The second effect applies to existing and new customers where customers reduce annual consumption by 1% per customer each year. This effect can be indirectly observed in Table 21 Consumption per bed unit (m³/cu) for both residential and commercial customers where a steady decline can be seen from 2020 to 2024. The 1% conservation savings is actually modelled by a reduction in the monthly bed unit. In 2023 and 2024 the system average residential shown in Schedule 14 line 2 is the same at 83.9. This is because the 1% reduction from conservation is offset by an increase in the bed per customer and the new customers in 2024.

Note the Question above refers to Table 27 which is the Total Bill Impact for Residential Customers which does not have the 83.7 cu. m referred to in the question. Schedule 14 has the 83.7 cu. m referred to in the question and has been referenced in this response.

Since the model is internally consistent, the request to calculate the true Total Bill Impact for Residential Customers based on Table 21 has not been provided. However, the response to Question 4.3 below should address the bill impact to customers.

Table 21: Utility Customers and Consumption

	Actual	Forecast	Forecast	Forecast	Forecast	Forecast
	2019	2020	2021	2022	2023	2024
Residential⁽¹⁾						
No. of Customers	291	292	293	294	302	310
No. of bed units (bu)	2,048	2,058	2,068	2,078	2,158	2,238
Consumption per bed unit (m ³ /bu)	11.90	12.10	11.98	11.86	11.74	11.62
Consumption (m ³)	24,368	24,899	24,770	24,641	25,334	26,010
Commercial						
No. of Customers	37	37	37	37	37	37
No. of bed units (bu)	2,438	2,438	2,438	2,438	2,438	2,438
Consumption per bed unit (m ³ /bu)	29.06	30.66	30.35	30.05	29.75	29.45
Consumption (m ³)	70,860	74,741	73,994	73,254	72,521	71,796

- (1) The number of residential customers excludes Standby residential customers.
- (2) The number of bed units represents the annual average.
- (3) Consumption per bed unit is represented by an annual figure in this table. In the financial model this is calculated and forecast on a monthly basis.

**Corix Multi-Utility Services Inc.
Panorama Water Utility
Estimated Bill Impact
Schedule 14**

Line No.	Residential (per customer)	2019	2020	2021	2022	2023	2024
1	Average No. of Bed Units per month	7.0	7.0	7.1	7.1	7.1	7.2
2	Average Consumption per year (cu. m)	83.7	85.3	84.5	83.8	83.9	83.9
3	Basic Service Charge (\$ per bu per month)	\$3.09	\$5.30	\$6.59	\$8.57	\$10.94	\$11.81
4	Metered Usage Charge (\$ per cu. m)	\$1.88	\$3.22	\$4.01	\$5.21	\$6.65	\$7.18
5	CDA Rate Rider (\$ per cu. m)	\$1.21	\$1.21	\$1.21	\$1.46	\$0.00	\$0.00
6							
7	Annual Bill						
8	Fixed Charge	\$261	\$339	\$558	\$727	\$938	\$1,023
9	Variable Charge	\$157	\$207	\$339	\$437	\$558	\$603
10	CDA Rate Rider	\$101	\$103	\$102	\$123	\$0	\$0
11	Average Annual Bill (incl. Rate Rider)	\$520	\$649	\$1,000	\$1,286	\$1,496	\$1,625
12	Average Monthly Bill (incl. Rate Rider)	\$43	\$54	\$83	\$107	\$125	\$135
13							
14	Annual bill increase (incl. rate rider) (\$)		\$130	\$351	\$286	\$210	\$129
15	Annual bill increase (incl. rate rider) (%)		25%	54%	29%	16%	9%

4.3 In Table 27 Corix has used an average number of bed units of 7.0 – 7.2 to calculate the financial effects of the proposed rate changes on the Total Bill Impact for Residential Customers. Recalculate Table 27 to show the true effect per single family residence with 10 bed units as per Corix normal charges for one residential customer.

Corix Response:

The requested scenario for Table 27 is shown below:

Table 27 (PSOA IR1, Q4.3): Total Bill Impact for Residential Customers

Residential Customers ^{(1), (2), (3)}	Actual	Proposed	Proposed	Proposed	Indicative	Indicative
	2019	2020	2021	2022	2023	2024
Fixed Charge (\$ / bed unit / month)	3.09	5.30	6.59	8.57	10.94	11.81
Metered Rate (\$ / m ³)	1.88	3.22	4.01	5.21	6.65	7.18
CDA Rider 1 (\$ / m ³)	1.21	1.21	1.21	1.46	-	-
Average Annual Bill (\$)	738	921	1,417	1,820	2,094	2,252
Average Monthly Bill (\$)	62	77	118	152	174	188
Total Annual Bill Change (\$)	-	183	495	403	274	158
Total Annual Bill Change (%)	-	25%	54%	28%	15%	8%

- (1) The annual average number of bed units is 10 bed units per customer from 2019 to 2024.
- (2) The average consumption ranges from 119.0 to 116.2 cubic metres per year from 2019 to 2024.
- (3) The Proposed 2020 tariff rates shown are to be effective August 1, 2020.

Also, shown below is Schedule 14 that provides additional detail on how Table 27 shown above is calculated.

Corix Multi-Utility Services Inc.
 Panorama Water Utility
 Estimated Bill Impact (10 bed units, average annual consumption based on 1 bed units, 1% conservation)
 Schedule 14 (PSOA IR1, Q4.3)

Line No.	Residential (per customer)	2019	2020	2021	2022	2023	2024
1	Average No. of Bed Units per month	10.0	10.0	10.0	10.0	10.0	10.0
2	Average Consumption per year (cu. m)	119.0	121.0	119.8	118.6	117.4	116.2
3	Basic Service Charge (\$ per bu per month)	\$3.09	\$5.30	\$6.59	\$8.57	\$10.94	\$11.81
4	Metered Usage Charge (\$ per cu. m)	\$1.88	\$3.22	\$4.01	\$5.21	\$6.65	\$7.18
5	CDA Rate Rider (\$ per cu. m)	\$1.21	\$1.21	\$1.21	\$1.46	\$0.00	\$0.00
6							
7	<u>Annual Bill</u>						
8	Fixed Charge	\$371	\$481	\$791	\$1,028	\$1,312	\$1,417
9	Variable Charge	\$224	\$294	\$481	\$618	\$781	\$835
10	CDA Rate Rider	\$144	\$146	\$145	\$173	\$0	\$0
11	Average Annual Bill (Incl. Rate Rider)	\$738	\$921	\$1,417	\$1,820	\$2,094	\$2,252
12	Average Monthly Bill (Incl. Rate Rider)	\$62	\$77	\$118	\$152	\$174	\$188
13							
14	Annual bill increase (incl. rate rider) (\$)		\$183	\$495	\$403	\$274	\$158
15	Annual bill increase (incl. rate rider) (%)		25%	54%	28%	15%	8%

Scenario Notes for Schedule 14 (PSOA IR1, Q4.3):

- Line 1 Average No. of Bed Units per month was changed to 10 bed units for all years
- Line 2 Average Consumption per year (cu. m) was revised for each year to match consumption equally 10 bed units. The 10 bed units was multiplied by actual year's annual consumption per bed unit. For example in 2020 the 121.0 Average Consumption per year (cu. m) is equal to 12.10 Consumption per bed unit (m³/bu) multiplied by 10 bed units. [Equivalently, for example in 2020, 121.0 Average Consumption per year (cu. m) = Table 21 Consumption per bed unit (m³/bu) x Schedule 14 (PSOA IR1, Q4.3, line 1)]

CONFIDENTIAL

Attachment 3

Corix Response to
Panorama Subdivision Owners Association (PSOA)
Information Request No. 1
Questions 2.1 and 2.2

Filed as a separate and confidential document.