

**IR Number:** CVR No. 2.1

**Topic:** Power and DRA Costs

- References:**
- (1) CER Information Request No. 1.1 Attachment a.2, (page 1 of 1 Lines 5 and 9)
  - (2) CER Information Request No. 1.1 Attachment b
  - (3) Keystone Response to Coffeyville Information Request No. 1.1-5 Attachment Shipper Meeting Presentation Materials Page 8 of 8.
  - (4) Keystone Response to P66/Husky Information Request No. 1.13(c)
  - (5) Keystone Response (Revised) to P66/Husky Information Request No. 1.1 Attachment 1.01(a-1 to a-9).
  - (6) Keystone Pipeline 2015-2020 Q4 Quarterly Surveillance Reports (“QSR”) Schedules 1.0 and 5.0, <https://apps.cer-rec.gc.ca/REGDOCS/Item/View/673804>
  - (7) Keystone Response to P66/Husky Information Request No. 1.7 Attachment 1.07b-4

**Preamble:** Table 1 below summarizes information captured from the References 1, 2 and 5 above regarding annual Throughput, DRA Costs, Power Costs and reported Power Unit Cost Component of the Term Committed Shipper Variable Tolls.

Year	Forecast Volume	Actual Volume (KBPD)	Forecast DRA Costs (\$CDN M)	Actual DRA Costs (\$CDN M)	Forecast Power Costs	Actual Power Costs (\$CDN M)	Power Unit Cost Component (\$/m3/100km)
2015		555	4	\$6.5	78.7	\$69.7	\$0.21
2016	567	523	5.6	\$9.5	73.8	\$68.6	\$0.22
2017	565	564	5.9	\$14.3	80.0	\$80.7	\$0.24
2018	575	589	12.5	\$17.3	93.3	\$100.1	\$0.25
2019	592	552	9.4	\$34.4	106.9	\$96.1	\$0.27(e)
2020	592	565	46.6	\$30	103	\$96.6	\$0.25(e)

Table 2 below compares power cost information reported in Reference 6 to the information provided in Reference 1

Year	Q4 QSR Schedule 1 Power Costs (\$000s) Reference 6	Power Costs (\$CDN M) Reference 1	Difference (\$000s)
2015	73,527	69.7	3,927
2016	69,662	68.6	1,062
2017	81,744	80.7	1,044
2018	101,360	100.1	1,260
2019	97,371	96.1	1,271
2020	97,736	96.6	1,136

Table 3 below summarizes information captured from Reference 6 regarding intercorporate transactions relating to power costs incurred by Keystone to TransCanada Energy Ltd and TransCanada Pipelines Limited.

Year	Contracting Party	Nature of Service	Description	Actual Amount Paid by Keystone (\$000s)
2015	TransCanada Energy Ltd.	Power	Power for pump stations	41,323
2016	TransCanada Energy Ltd.	Power	Power for pump stations	35,174
2017	TransCanada Energy Ltd.	Power	Power for pump stations	42,057
2018	TransCanada Energy Ltd.	Power	Power for pump stations	57,924
2019	TransCanada Energy Ltd.	Power	Power for pump stations	42,559
2020	TransCanada Energy Ltd.	Power	Power for pump stations	52,325
	TransCanada Pipelines Limited	Power	Power Contracts	<u>13,016</u>
				<u>65,341</u>

In Table 1, 2019 Power Costs were reported to be \$4 million less than in 2018, despite throughput levels declining by 37,000 KBP. Conversely, DRA costs significantly increased (i.e. \$17.1 million or nearly 100% over 2018 levels).

In Table 1, 2017 and 2020 Throughput was approximately the same, however, Power Costs increased by \$15.9 Million or approximately 19.7%. DRA Costs for this period increased by \$15.7 million or approximately 109.7%. The Power Unit Cost Component of the Variable Toll increased only by \$.01.

In Reference 3, Keystone advised Shippers that use of DRA on a go-forward basis was intended to “minimize/optimize OPEX, e.g. in lieu of Power.”

In Table 2, Keystone reported amounts paid to TransCanada Energy Ltd for “power for pump stations”. Expressed as a percentage of the total power costs reported in Table 1, the annual intercorporate transaction amounts range between 51% (2016) and 54.2% (2020).

In Table 3, Keystone reported an additional payment was made in 2020 to TransCanada Pipelines Limited totalling approximately \$13 million for “power contracts”. When this amount is added to the “power for pump stations”, the total amount for power paid to Keystone’s affiliates in 2020 increased to approximately 67% of the total power costs reported in Tables 1 and 2 above. No prior period Quarterly Surveillance Report (“QSR”) shows Keystone making payments to TransCanada Pipelines Limited for “power contracts”. In Reference 7, Keystone outlines the parameters for the 2020 Variable Toll Estimate. DRA costs were estimated with an assumed equal distribution of heavy and light in each segment and power/DRA cost optimization is not applied. Additionally, Power Costs do not account for the effect of DRA injection.

**Request:**

1. Are all Unit Cost Components reported in Reference 2 (including the Power Unit Cost Component repeated above in Table 1) reported in Canadian dollars? If not, please provide a table which shows all Unit Cost Components for Canadian transportation in Canadian dollars for the period 2015-2020.
2. Please provide the actual (as opposed to estimated) Power Unit Cost Components for 2019 and 2020.
3. Explain why annual Forecast DRA Costs have consistently been underestimated as compared to Actual DRA Costs as shown in Table 1.
4. Confirm that the forecast and actual Power Costs reported in Table 1 contemplated the use of DRA in each of the reported years. For each year reported in Table 1, to what degree did the change in the incurred vs forecast DRA Cost mitigate/reduce overall actual Power Costs? Please show all calculations that show the dollar amount reductions in Power Cost attributable to dollar level increases incurred with DRA Costs?
5. For each of the years reported in Table 1, please provide Keystone’s forecast vs actual Canadian Power Unit Cost Component reported in Canadian dollars.

6. Please confirm that all differences between forecast DRA Cost and actual DRA Cost are recovered as part of the annual true up mechanism applied to the Term Shippers Variable Toll calculation. If not confirmed, please explain why not.
7. Please provide the ratio of light versus heavy barrels moved on the system from 2015-2020. Please explain how the ratio relates to the assumed equal distribution of heavy and light in each segment?
8. Please explain why DRA usage was estimated at \$CDN 46.6M, but power cost estimates did not account for the effect of DRA injection?
9. For 2019 and 2020, explain why relatively lower actual achieved throughput levels were achieved with higher actual Power Costs and DRA Costs as compared to prior years?
10. Please fully explain the process used by Keystone to minimize/optimize OPEX through use of DRA in lieu of Power in each of the years that Keystone has implemented its DRA Program (i.e. 2015-2021). In your response, provide the sensitivity case analysis Keystone performed in each of the years reported in Table 1 regarding different throughput, DRA and Power Cost assumptions.
11. For each of 2015-2020, please provide forecast and actual variable toll impacts for Canada only and full path (Canada and US) consistent with the information reported to Shippers in Reference 2 page 6 of 8. In your response, discuss the expected vs actual incremental increase or decrease in the overall variable toll component resulting from the use of DRA Costs.
12. Why did Keystone choose not to present updated information about the actual financial impacts arising from the implementation of its DRA Program and in follow up to the information first reported in 2014 as per Reference 3 (Keystone Shipper Meeting Presentation page 6 to 8).
13. Please describe the general pricing mechanism(s) used to calculate Power Costs shown in Table 1. In your response, please segregate the reported annual Power Cost into fixed (i.e. demand charge) versus variable (i.e. dependent on throughput levels) cost categories.
14. Please describe the specific pricing mechanism used to calculate the Power Costs paid by Keystone to its affiliates as reported in Table 3. In your response, please discuss what portion of the amounts annually paid to affiliates are fixed vs. being amounts dependent upon throughput levels.

15. For each of the years reported in Table 1, provide an annual breakdown of the quantity of actual power used (kW h), and the annual average cost per kW h to transport the reported throughput levels.
16. What accounts for the differences in the level and direction of the year over year changes in the Power Unit Cost levels shown in Table 1, as compared to the level of variability and is compared to the level and direction of year over year changes in reported throughput levels and Power Costs reflected in the Power Unit Cost amounts?
17. Please explain the reasons for the dollar amount differences in the annual total power cost amounts shown in Table 2. Which of the annual total power cost amounts shown in Table 2 were used to calculate the annual Variable Toll component? If the Power Costs reported in Keystone's filed in its annual Q4 Schedule 1 QSR reports is not used for the purpose of calculating the Variable Toll component, explain why not.
18. Regarding Reference 3, please fully describe the "power for pump stations" intercorporate transactions made with TransCanada Energy Ltd. In your response, please confirm whether the amounts paid to TransCanada Energy Ltd are amounts included as part of:
  - o the total power costs reported in Table 1
  - o the reported "Power" operating cost component in each Schedule 1 QSR.
  - o the total power costs used to calculate the Variable Toll component.
19. Please explain why Keystone made payments TransCanada Pipelines Limited in 2020 for "Power Contracts". In your response, please confirm whether or not, this type of charge was incurred in prior periods and whether they were made to an affiliate or non-affiliate of Keystone. If no such similar payment was previously made, explain what changes in circumstances caused Keystone to incur this cost.
20. Did Keystone adopt any type of competitive bid process for the procurement of the services obtained from affiliates and reported in Table 3?
  - a. If so, please describe these processes including, when the competitive procurement process took place, details including duration of the procured service arrangement, the number of competitive bids received from non-affiliates, and the selection criteria used if overall cost of the procured service was not the determining factor.

- b. If not, please explain the reasons why a competitive bid process was not used.
21. In each of the years reported in Tables 1-3 above, the total power costs reported are greater than the amount of “power for pump stations” incurred by Keystone. Please provide a breakdown of the total power costs which shows the amounts paid to Keystone’s affiliates, non-affiliates, who each of the non-affiliated parties were, and the nature and purpose of the services provided by the non-affiliated counterparty.

**Response:**

1. Yes.
2. See Table CVR IR 2.1-2. Any discrepancies between this table and the Preamble Table 1 are due to full path rate (Preamble Table 1) and the Canadian rate.

**Table CVR IR 2.1-2: Canadian Power Unit Cost**

Canadian Power Unit Cost (Cad\$)		
\$/m3/100km	Fcst	Actual
2015	0.200	0.181
2016	0.187	0.185
2017	0.198	0.201
2018	0.223	0.237
2019	0.252	0.245
2020	0.245	0.241

3. Keystone prepares forecasts with the best information available at that particular time. Keystone cannot include DRA usage for pressure restriction mitigations in the forecasts unless they are defined and known at the time of the forecast. Due to the timing when forecasting is completed, overall DRA usage can result in higher than forecasted and anticipated annual volumes.
4. There is no linear relationship between power and DRA costs. Any calculations to demonstrate a relationship between power and DRA usage would be highly dependant on multiple factors including location, power contract structure, baseline and incremental DRA requirements, and throughput targets. Any or all calculations would require a detailed analysis of these specific factors, including circumstantial operational information at any given time.

Power forecasting utilizes appropriate historical actuals as a benchmark. When identifying a relevant benchmark, Keystone considers numerous factors that align the benchmark with the current forecasting assumptions such as throughput and DRA usage. Since DRA was introduced onto Keystone, power forecasts have taken DRA use into account.

During years in which pressure restrictions were imposed, power forecasts were generally higher than actuals due to the implication of the pressure restrictions which were imposed after the forecasting period (see response to 3 above). When under a pressure restriction, power is limited due to a lower maximum allowable discharge pressure at the affected pump stations, and therefore less pumping power is available and utilized. This reduced pressure and resulting power restriction is mitigated and offset by the use of DRA to reach the same target throughputs.

Keystone uses DRA to mitigate the lower power usage resulting from pressure restrictions imposed for integrity reasons. Keystone does not use DRA injections to reduce power usage on its system.

5. Refer to response 2 above.
6. Confirmed.
7. Keystone moves predominately heavy volumes in Canada as indicated in Table CVR IR 2.1-7 below. In Canada, there is one segment from Hardisty to the Canada/U.S. border, so the ratio is based on this volume. In the U.S., from the Canada/U.S. border, light volumes are generally delivered to Patoka, Illinois and generally no light volumes are transported to Cushing, Oklahoma or the Gulf Coast segments.

**Table CVR IR 2.1-7: Ratio of Light vs. Heavy**

<b>Ratio of Light vs. Heavy m3 volumes moved</b>						
	2020	2019	2018	2017	2016	2015
Light	5%	5%	2%	4%	7%	12%
Heavy	95%	95%	98%	96%	93%	89%

8. Refer to response 4 above that describes the non-linear relationship between power and DRA. Keystone estimated the 2020 DRA usage to account for known pressure restrictions at the time of the forecast. The 2020 power forecast also accounted for the pressure restrictions in place at the time by benchmarking against the few months the system operated under the pressure restrictions for which DRA injections were mitigating throughput impacts. Both the power and DRA actuals came in lower than the forecasted amounts due to lower throughput volumes.
9. For the years 2019 and 2020 during which lower throughput was achieved, power costs were higher due to the Alberta Pool rates being higher during those years. DRA costs were higher due to the pressure restrictions in place during those years.
10. Refer to response 4 above. Keystone does not use DRA injections to reduce power usage.
11. See Figures CVR IR 2.1-11(1) and (2) below. For a discussion related to the expected vs actual incremental increase or decrease in the overall variable toll resulting from DRA costs/use, refer to responses to 3 and 4 above.

Figure CVR IR 2.1-11(1): Unit Cost vs Throughput History - Canada

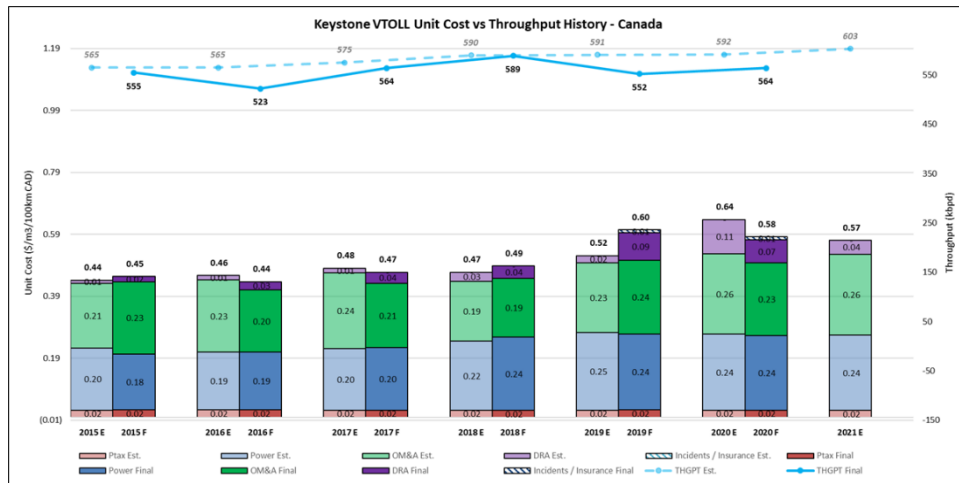
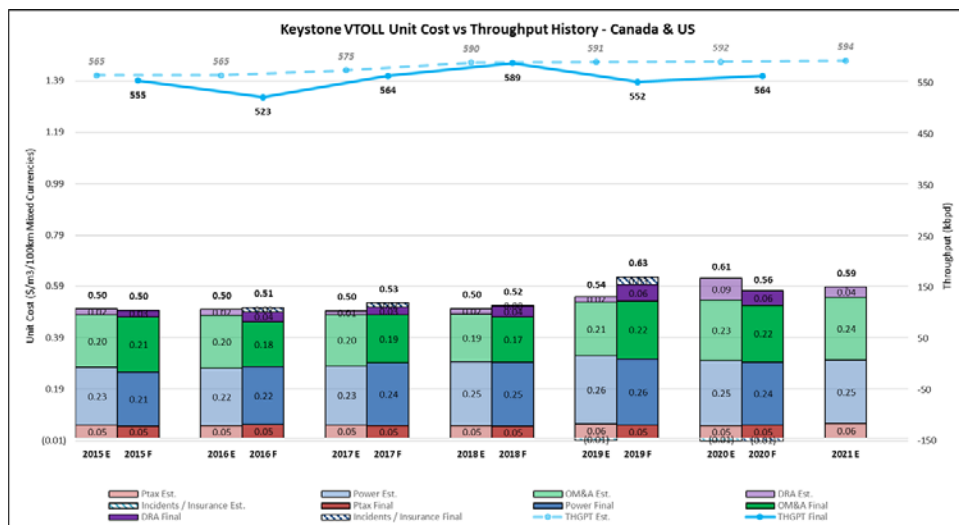


Figure CVR IR 2.1-11(2): Unit Cost vs Throughput History – Canada & U.S.



12. In September 2014, Keystone consulted with shippers regarding the usage of DRA. Additional consultation occurred in 2015 and 2016, where Keystone described the use of DRA on a go-forward basis as an operating cost. Shippers were advised DRA costs were included in the annual variable toll.

Consistent with its general practice, Keystone provided operating costs to its shippers in accordance with the TSAs and received no complaints from shippers. Following the initiation of the CER and FERC regulatory proceedings, Keystone has been providing regular cost information on DRA, including separate line items in the 2020 Final and 2021 Variable Toll Estimates. Keystone also provided shippers further information by providing a DRA Overview presentation on June 22, 2020 which included historical cost information for 2018, 2019 and a 2020 Estimate.



13. For estimates:

- Based on the throughput forecast, Keystone obtains the applicable Demand and Energy forecast for each pump station.
- For each pump station, Keystone obtains the most recent/accurate information pertaining to the power bill attributable to it.
- Keystone obtains the overall costs by applying the applicable kW/kWh for each pump station's bill information.

For actuals:

- Based on the power invoices paid by Keystone on the applicable month in which they are received.

Keystone notes that the work required to examine each invoice for the fixed versus variable cost categories would be disproportionate to the probative value of the information requested. To be helpful, Keystone provides that on average, the approximate fixed cost portion of power is 39% based on estimated calculations.

14. Please refer to response to 13 above. Keystone pays the invoice from its affiliates the same way it pays invoices from third-parties.

15. See Table CVR IR 2.1-15 below.

**Table CVR IR 2.1-15: Annual Breakdown of Power Used and Throughput**

<b>Annual Breakdown of Power used, Avg Cost/kWh, Throughput</b>					
	Annual Power Cost (CAD)	Annual kWh	\$/kWh	Throughput (kbpd)	
2015	\$ 69,655,382	1,088,524,938	\$ 0.06	555	
2016	\$ 68,564,451	1,061,472,851	\$ 0.06	523	
2017	\$ 80,657,075	1,245,360,526	\$ 0.06	564	
2018	\$ 100,148,361	1,305,535,244	\$ 0.08	589	
2019	\$ 96,081,580	1,150,819,078	\$ 0.08	552	
2020	\$ 96,862,853	1,182,068,916	\$ 0.08	565	

16. Contract rates and the Alberta Pool Price account for the level and direction of the changes in power costs. If throughput is consistent but Alberta Pool Price and contract rates change in either direction, then the cost of power is impacted.

17. The annual Keystone QSR reports total Power Costs for Keystone which includes both the Keystone Pipeline System operations and Hardisty B operations. The Power Cost Component on the Variable Toll only includes costs related to the operations of the Keystone Pipeline System. Please refer to previously submitted Attachment P66-Husky IR 1.08a (Filing ID: 13198) for a reconciliation of the annual QSR power costs to the Power Cost component on the Variable Toll.

Also note the following corrections to the numbers provided in Preamble Table 1 and Table 2:

- Preamble Table 2: 2015 Q4 QSR Sch 1 Power Costs of \$73,527 (\$000s) is incorrect; the correct cost is \$70,301 (\$000s).
- Preamble Table 1 & Table 2: 2020 Power Costs Reference 1 of \$96.6M is incorrect; the correct cost is \$96.9M.

18. Keystone has contracts with TransCanada Energy Ltd. to provide power to sites in Alberta and Manitoba.

In Alberta, electricity is generated, sold and bought on the wholesale electricity market. TransCanada Energy Ltd. acts as Keystone's retail/billing company that buys electricity from the wholesale market and ensures Keystone is connected to the distribution system. The power bought from the market powers Keystone's sites in Alberta (pump stations, valves, and other equipment required for the operation of the pipeline).

In Manitoba, TransCanada Energy Ltd. arranged the power supply on behalf of Keystone as they had expertise in the area. Manitoba Hydro supplies the power to TransCanada Energy Ltd. and TransCanada Energy Ltd. supplies the power to Keystone's Manitoba sites.

With respect to CVR's specific questions:

- Not all amounts paid to TransCanada Energy Ltd. for power are included in Preamble Table 1. Amounts for the Hardisty B Terminal are excluded.
- All amounts paid to TransCanada Energy Ltd. for power are included in each Schedule 1 of the annual QSR.
- Not all amounts paid to TransCanada Energy Ltd. for power are included in the total power costs used to calculate the Variable Toll. Amounts for the Hardisty B Terminal are excluded.

Also note the corrections identified in response to 17 above.

19. Keystone did not make any payments to TransCanada PipeLines Limited in 2020 for "Power Contracts". If the question was intended to refer to the payment made to TransCanada Keystone Pipeline, LP, this transaction is related to construction of the Keystone XL Project. All costs related to Keystone XL do not form part of the current Keystone System and are not recovered in Keystone tolls.
20. Refer to response to 18 above which describes TransCanada Energy Ltd.'s role as an agent for Keystone to supply power from Manitoba Hydro, a singular provider of power in the province of Manitoba; no competitive bid process would be applicable. With regards to power supply in Alberta, Keystone cannot confirm that there was a competitive bid process. However, Keystone notes that TransCanada Energy Ltd. acted

on behalf of Keystone as it had the expertise in the area and that Keystone pays market rates with no premium paid to its affiliate.

21. A breakdown of power costs is provided in Table CVR IR 2.1-21 below.

**Table CVR IR 2.1-21: Breakdown of Power Costs**

Power Costs (\$'000)	2015	2016	2017	2018	2019	2020
TransCanada Energy Ltd (Affiliated)	\$39,201 <sup>(1)</sup>	\$35,174	\$42,057	\$57,924	\$59,392 <sup>(2)</sup>	\$52,325
TransCanada Pipelines Ltd (Affiliated)	(\$2)	-	(\$4)	-	-	-
SaskPower	\$31,045	\$32,225	\$39,355	\$42,537	\$39,381	\$44,072
Manitoba Hydro	\$1	\$1	\$1	\$1	\$1	\$1
Intergroup Consultants Ltd	\$25	\$15	\$12	\$21	\$11	-
Industrial Power Consumers	-	\$11	-	-	-	-
Accruals	\$308	\$2,235	\$325	\$968	(\$1,405)	\$1,651
Miscellaneous	(\$59)	-	(\$1)	(\$91)	(\$10)	-
<b>Total Power Costs</b>	<b>\$70,519</b>	<b>\$69,661</b>	<b>\$81,745</b>	<b>\$101,360</b>	<b>\$97,370</b>	<b>\$98,049</b>
Notes:						
1 In 2015 the QSR Intercompany Costs for TransCanada Energy Ltd. were overstated; the correct amount should have been \$39,201 thousand.						
2 In 2019 the QSR Intercompany Costs for TransCanada Energy Ltd excluded \$16,834 related to power provided in Manitoba.						

The nature of the services provided by non-affiliated counterparties are:

- SaskPower - power utility provider for Keystone's Saskatchewan sites.
- Manitoba Hydro - power utility provider for two valve sites at or near Portage La Prairie.
- Intergroup Consultants - consulting group that informs Keystone on any Manitoba Hydro rate hearings and/or regulatory matters and acts on behalf of Keystone in advocating for fair rates.
- Industrial Power Consumers - consulting group that informs Keystone on any Alberta Electric System Operator (AESO) rate hearings and/or regulatory matters and acts on behalf of Keystone in advocating for fair rates.

**IR Number:** CVR No. 2.2

**Topic:** Underutilization Risk, Achieved Return and DRA Usage

- References:**
- (1) National Energy Board Reasons For Decision OH-001-2007, Section 3.3 at 18.
  - (2) National Energy Board Reasons For Decision OH-001-2008, Sections 3.1-3.2 (pp. 12-18); 4.1.
  - (3) Keystone Pipeline Quarterly Surveillance Reports (“QSR”) 2010 - 2021, <https://apps.cer-rec.gc.ca/REGDOCS/Item/View/673804>
  - (4) Keystone Response to CER Information Request No. 1.1; Attachment 1.4(b) 2018-2021 Rate of Return included in Non-Routine Adjustment Capital
  - (5) CER Website Pipeline Profile Information for Keystone Pipeline, Table 2: Keystone Pipeline Financial Data <https://www.cer-rec.gc.ca/en/data-analysis/facilities-we-regulate/pipeline-profiles/oil-and-liquids/pipeline-profiles-keystone-pipeline.html#financial>

**Preamble:** In References (1) and (2), the National Energy Board characterized the fixed component of the Committed Toll as not being based on traditional cost of service calculations. Under the approved methodology, the fixed toll component was based capital costs incurred to provide 591,000 barrels per day of transportation service. Keystone accepted additional risks over the terms of the TSAs (not taken under a traditional cost of service model) including risks of system underutilization.

In Reference (2) at pages 16-12, the National Energy Board upheld the determinations made in its OH-001-2007 Reasons For Decision regarding filing requirements if and when uncommitted tolls are discounted.

In Reference (3), Schedule 3.0 found as part of Keystone’s Q4 2016 Quarterly Surveillance Reports (“QSR”), information is provided regarding available capacity, nominal capacity, and throughput for each of the years 2010 to 2015. Reasons explaining any underutilization in each month of each year is provided. See: [https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90465/92835/565787/673804/3773504/3909949/C04937-1\\_Keystone\\_Quarterly\\_Surveillance\\_Report\\_-\\_Q4\\_2019\\_-\\_A7D7V1.pdf?nodeid=3909742&vernum=-2](https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90465/92835/565787/673804/3773504/3909949/C04937-1_Keystone_Quarterly_Surveillance_Report_-_Q4_2019_-_A7D7V1.pdf?nodeid=3909742&vernum=-2)

In Reference (3), Schedule 3.0 found as part of each of Keystone’s 2017, 2018, 2019, and 2020 Q4 QSRs did not include Traffic Data akin to the disclosure made in 2016. Instead, Keystone states that Traffic Data was

provided to the CER in a machine readable format. While Keystone anticipated Traffic Data filed with the Board might be made available, the website link provided in the 2017-2020 QSRs is not operational.

In Reference (4), Keystone reported that the rate of return earned on non-routine adjustment capital projects was set at 8%

In Reference (5) Keystone's actual achieved revenue, net plant, annual return on net plant (expressed as a percentage) are shown in Table 1 below along with throughput volumes reported from Table 1 to Coffeyville Information Request No. 2.1.

YEAR	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Throughput (KBPD)						555	523	564	589	552	565
Revenues (millions \$)	48	310	370	399	432	466	445	477	504	535	547
Net Income (millions \$)	19	164	205	214	223	243	223	239	245	213	234
Net Plant (millions \$)	1806	2106	2097	2060	2035	2090	2052	2008	1963	1920	1873
Return on net plant (%)	2.12	7.78	9.78	10.39	10.94	11.61	10.87	11.92	12.47	11.08	12.47

**Request:**

1. Please breakdown the Revenues shown in Table 1 so that the amounts attributable to Uncommitted transportation service and Committed transportation service are shown.
2. Please discuss whether Keystone has offered and agreed to discount tolls for Uncommitted transportation service since the pipeline system commenced operations. If so, please provide all documentation filed with the National Energy Board, including an explanation of the discounting mechanism.
3. If Uncommitted toll discounts were provided during the 2010 - 2020 period, please quantify the annual amount of the discounts. Please explain how these discounts were taken into account in the calculation of the and recovery of Keystone's fixed and variable toll components.
4. What consideration, if any, was give to calculating any discounted Uncommitted toll so that the revised toll included greater allocations for DRA costs, as well as the recovery of actual (instead of forecast) variable costs including DRA and Power costs.
5. Does Keystone agree that the imposition of voluntary pressure restrictions increased Keystone's underutilization risk by restricting the level of throughput it could accept from Committed and Uncommitted shippers?

6. Does Keystone agree that use of DRA partially mitigated system underutilization by allowing more throughput to be shipped during the times in which prolonged downstream voluntary pressure restrictions were imposed?
7. For each of the years 2015 - 2021, please provide the daily average capacity available for Committed and Uncommitted shippers under the scenarios (a) no DRA was used; and (b) when DRA was used.
8. Please provide Traffic Data information for the years 2016-2020 formatted in the same manner as Schedule 3.0 in the Q4 2016 QSR.
9. In each of the Traffic Data Schedules reported as part of Keystone's 2016 Q4 QSR Schedules 3.0 materials, "Downstream Restrictions" is the reason cited most frequently for reported variances from nameplate capacity arising on the Canadian portion of the system. For each year in which this reason is cited, please fully describe the circumstances giving rise to the reported downstream restriction that caused the reported variances in Canada. Please ensure this analysis is provided for all years up to and including 2020.
10. Restate the net income, net plant information found in Table 1 of Keystone's Pipeline Financial Information (i.e. Reference 5) on the assumption that DRA costs were not treated as a pass through cost to Committed Shippers, but instead, were costs attributable to Keystone (and not recoverable in rates) and incurred in order to mitigate incremental underutilization risk associated with Keystone's inability to meet the nominal capacity of contracted capacity of the pipeline. In your response, please also calculate the difference arising between the revised annual return on plant calculations to the 8% rate of return Keystone has reported in Reference 4.

**Response:**

1. See Table CVR IR 2.2-1.

**Table CVR IR 2.2-1: Revenue Breakdown**

Revenue (millions \$)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Committed transportation service	48	305	365	395	426	432	435	466	480	511	524
Uncommitted transportation service	-	5	5	4	6	26	1	2	15	17	16
Other revenue	-	-	-	-	-	8	9	9	9	7	7
<b>Total revenue</b>	<b>48</b>	<b>310</b>	<b>370</b>	<b>399</b>	<b>432</b>	<b>466</b>	<b>445</b>	<b>477</b>	<b>504</b>	<b>535</b>	<b>547</b>

2. Keystone has not discounted the Uncommitted Tolls in its local toll schedule. However, Keystone files an International Joint Tariff (“IJT”) for a full path uncommitted toll to the U.S. Gulf Coast. The supporting information filed with the IJT toll/rate demonstrates that the IJT toll/rate is less than the sum of the local tolls/rates filed in Canada and in the U.S. The IJT filings are available on the CER website.<sup>1</sup>
3. The revenue stream from uncommitted volumes on Keystone is not directly allocated to the recovery of specific types of costs. The full path discount helps Keystone attract more volumes by being responsive to market supply and demand conditions. For information on full path discounts please refer the IJT filings filed by Keystone.<sup>1</sup>
4. Keystone does not allocate operating costs among different classes of shippers. Please refer to CER IR 2.2 (Filing ID: C13540).
5. As a prudent operator, Keystone took the necessary and appropriate steps of imposing pressure restrictions to continue to operate the pipeline system in a safe manner. Keystone disagrees that the imposition of pressure restrictions increased Keystone’s underutilization risk. The underutilization risk referred to in the preamble is related to contract risk that Keystone assumed by not contracting the entire pipeline capacity and not having contract terms that match the economic life of the Keystone asset. This risk is different from variability risk that is based on year-to-year changes in variable costs and throughput on the Keystone system. Under the TSA framework, Keystone shippers bear the variability risk related to throughput impacts on the variable toll (i.e., if throughput is lower, all else equal, variable toll increases, similarly in periods of higher throughput variable toll decreases). Therefore, there is no association between Keystone’s assumed underutilization risk and any imposition of pressure restrictions which are necessary to ensure that the pipeline system operates in a safe manner.
6. Refer to 5 above.
7.
  - a) Due to the various factors that can influence pipeline capacity on any day (i.e., crude type, temperature, operational events, etc.), Keystone is not able to calculate what the precise throughput on the system would have been absent the use of DRA without making numerous assumptions on the overall system performance as well as system operating parameters at the time.

Making numerous hypothetical assumptions, if DRA were to be fully removed from the Keystone system in years prior to 2019, the estimated achievable annual average throughput would be approximately 535 kbpd. Between 2019 and 2020 while the system was constrained by the pressure restrictions, again using numerous hypothetical assumptions and absent the use of DRA, throughput would have been restricted to approximately 486 kbpd. These are theoretical backward-looking estimations and do not incorporate the actual operating environment and all system

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<sup>1</sup> <https://apps.cer-rec.gc.ca/REGDOCS/Item/View/565660>.

parameters during the requested timeframe. In reality, DRA was an operational tool available to Keystone and it is very difficult to determine what other decisions and resulting throughput capacity would have been, absent its use.

- b) Under standard operating conditions with DRA, and with 88,240 m<sup>3</sup>/d (555,000 bpd) of committed service, Keystone estimates it will have 5,600 m<sup>3</sup>/d (35,000 bpd) of nominal capacity available for the transportation of uncommitted service on the Keystone Pipeline System.

The nominal design capacity of the Keystone Pipeline System is 94,000 m<sup>3</sup>/d (591,000 bpd). Operating conditions may vary from month to month, which results in a range of nominal capacities throughout the year.

8. See Attachment CVR IR 2.2-8.
9. “Downstream Restrictions” in Keystone’s QSR Schedule 3.0 materials refer to operational restrictions in the U.S. portion of the pipeline. Such restrictions did not apply after 2017.
10. Keystone disagrees with the premise of this question as described in the response to 5 above. Nevertheless, in the spirit of being responsive Keystone has provided the requested arithmetic, please refer to Attachment CVR IR 2.2-10.



Schedule 3

**TransCanada Keystone Pipeline GP Ltd.**  
**Keystone Pipeline System**  
**TRAFFIC DATA**  
 For the Period Ended Dec 31, 2015  
 (000s m3)

Line No.	Particulars	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total	
		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Key Point - Export International Border, Haskett, MB <sup>1</sup> CAPACITY														
1	Available Capacity	Sum of Available Capacity (m3)	2,739	2,454	2,859	2,837	2,879	2,664	2,930	2,829	2,768	2,800	2,764	2,885	33,408
2	Variance from nameplate capacity		B	B	B	E	B	B	E	B	B	B	B	B	
	<b>APPORTIONMENT</b>	<b>Values</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	
3	Nominations	Sum of Total Nominations (m3)	3,014	2,511	2,642	2,634	2,612	2,528	2,682	2,785	2,850	2,613	2,580	3,207	32,658
4	Apportionment %	Sum of Apportionment Percentage	9%	2%	0%	0%	0%	0%	0%	0%	3%	0%	0%	10%	
5	Light Crude	Sum of Throughput Light Crude (m3)	323	226	255	309	361	326	305	376	310	294	369	241	3,695
6	Heavy Crude	Sum of Throughput Heavy Crude (m3)	2,416	2,228	2,604	2,528	2,233	2,164	2,625	2,453	2,400	2,194	2,233	2,417	28,495
7	Total	Sum of 5 & 6	2,739	2,454	2,859	2,837	2,594	2,490	2,930	2,829	2,710	2,488	2,603	2,658	32,190

Notes:

- (1) Direction of Flow = South; Longitude = -97.957657; Latitude = 48.998912
- (2) Average Nameplate Capacity was 94,000 m3/d
- (4) Nominations are based on original Nominations and do not include Late Nominations
- (5) Apportionment percentage represents the percentage of original Nominations not allocated by Available Capacity
- (6) Density as defined in the NEB Keystone Pipeline System Rules and Regulations, in effect
- (7) May not add due to rounding

(3) Legend:

- (A) NEB Regulatory Directive
- (B) Downstream Restrictions
- (C) Curtailment/Interruptions
- (D) Force Majeure
- (E) System Operating Factor

Schedule 3

**TransCanada Keystone Pipeline GP Ltd.**  
**Keystone Pipeline System**  
**TRAFFIC DATA**  
For the Period Ended Dec 31, 2016  
(000s m3)

Line No.	Particulars	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total	
		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Key Point - Export International Border, Haskett, MB <sup>1</sup> CAPACITY														
1	Available Capacity	Sum of Available Capacity (m3)	2,918	2,716	2,861	2,789	2,693	2,645	2,675	2,738	2,692	2,721	2,827	2,949	33,224
2	Variance from nameplate capacity		E	B	B	B,D	B	B	B	B	B	B	E	E	
	<b>APPORTIONMENT</b>	Values	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
3	Nominations	Sum of Total Nominations (m3)	3,207	3,082	3,248	3,080	2,943	2,545	2,612	2,838	3,054	3,311	3,480	3,573	36,972
4	Apportionment %	Sum of Apportionment Percentage	9%	12%	12%	9%	9%	0%	0%	4%	12%	18%	19%	17%	
5	Light Crude	Sum of Throughput Light Crude (m3)	281	192	98	122	139	0	107	263	151	247	192	188	1,978
6	Heavy Crude	Sum of Throughput Heavy Crude (m3)	2,637	2,478	2,607	1,788	1,875	1,846	2,317	2,476	2,534	2,474	2,635	2,761	28,427
7	Total	Sum of 5 & 6	2,918	2,669	2,704	1,910	2,014	1,846	2,424	2,738	2,685	2,721	2,827	2,949	30,405

Notes:

- (1) Direction of Flow = South; Longitude = -97.957657; Latitude = 48.998912
- (2) Average Nameplate Capacity was 94,000 m3/d
- (4) Nominations are based on original Nominations and do not include Late Nominations
- (5) Apportionment percentage represents the percentage of original Nominations not allocated by Available Capacity
- (6) Density as defined in the NEB Keystone Pipeline System Rules and Regulations, in effect
- (7) May not add due to rounding

(3) Legend:

- (A) NEB Regulatory Directive
- (B) Downstream Restrictions
- (C) Curtailment/Interruptions
- (D) Force Majeure
- (E) System Operating Factor

Schedule 3

**TransCanada Keystone Pipeline GP Ltd.**  
**Keystone Pipeline System**  
**TRAFFIC DATA**  
For the Period Ended Dec 31, 2017  
(000s m3)

Line No.	Particulars	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total	
		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Key Point - Export International Border, Haskett, MB <sup>1</sup> CAPACITY														
1	Available Capacity	Sum of Available Capacity (m3)	2,964	2,585	2,960	2,848	2,996	2,840	2,908	2,887	2,833	2,790	2,719	2,871	34,201
2	Variance from nameplate capacity		E	B	E	E	E	E	B	B	E		D	D	
	<b>APPORTIONMENT</b>	Values	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
3	Nominations	Sum of Total Nominations (m3)	3,621	3,151	3,803	3,826	2,995	2,963	3,355	3,153	3,495	3,599	2,941	3,925	40,826
4	Apportionment %	Sum of Apportionment Percentage	18%	18%	22%	26%	0%	4%	13%	8%	19%	22%	8%	27%	
5	Light Crude	Sum of Throughput Light Crude (m3)	237	139	112	48	74	133	61	218	65	119	30	189	1,426
6	Heavy Crude	Sum of Throughput Heavy Crude (m3)	2,727	2,442	2,848	2,795	2,883	2,708	2,722	2,669	2,768	2,672	1,394	2,682	31,309
7	Total	Sum of 5 & 6	2,964	2,582	2,960	2,843	2,957	2,840	2,783	2,887	2,833	2,790	1,424	2,871	32,734

Notes:

- (1) Direction of Flow = South; Longitude = -97.957657; Latitude = 48.998912
- (2) Average Nameplate Capacity was 94,000 m3/d
- (4) Nominations are based on original Nominations and do not include Late Nominations
- (5) Apportionment percentage represents the percentage of original Nominations not allocated by Available Capacity
- (6) Density as defined in the NEB Keystone Pipeline System Rules and Regulations, in effect
- (7) May not add due to rounding

(3) Legend:

- (A) NEB Regulatory Directive
- (B) Downstream Restrictions
- (C) Curtailment/Interruptions
- (D) Force Majeure
- (E) System Operating Factor

Schedule 3

**TransCanada Keystone Pipeline GP Ltd.**  
**Keystone Pipeline System**  
**TRAFFIC DATA**  
For the Period Ended Dec 31, 2018  
(000s m3)

Line No.	Particulars	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
	Key Point - Export International Border, Haskett, MB <sup>1</sup> CAPACITY													
1	Available Capacity	2,922	2,660	2,905	2,883	2,908	2,844	2,947	2,782	2,785	2,853	2,793	2,905	34,187
2	Variance from nameplate capacity	E	E		E		E	E						
	<b>APPORTIONMENT</b>													
	Values	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
3	Nominations	4,263	3,902	4,246	4,279	3,869	3,675	4,658	4,449	4,587	5,116	21,177	30,283	94,505
4	Apportionment %	31%	32%	32%	33%	25%	23%	37%	37%	39%	44%	87%	90%	
5	Light Crude	63	65	0	15	31	107	125	0	0	30	29	147	612
6	Heavy Crude	2,858	2,595	2,905	2,868	2,871	2,738	2,822	2,782	2,782	2,822	2,764	2,758	33,565
7	Total	2,922	2,660	2,905	2,883	2,902	2,844	2,947	2,782	2,782	2,853	2,793	2,905	34,177

Notes:

- (1) Direction of Flow = South; Longitude = -97.957657; Latitude = 48.998912
- (2) Average Nameplate Capacity was 94,000 m3/d
- (4) Nominations are based on original Nominations and do not include Late Nominations
- (5) Apportionment percentage represents the percentage of original Nominations not allocated by Available Capacity
- (6) Density as defined in the NEB Keystone Pipeline System Rules and Regulations, in effect
- (7) May not add due to rounding

(3) Legend:

- (A) NEB Regulatory Directive
- (B) Downstream Restrictions
- (C) Curtailment/Interruptions
- (D) Force Majeure
- (E) System Operating Factor

Schedule 3

**TransCanada Keystone Pipeline GP Ltd.**  
**Keystone Pipeline System**  
**TRAFFIC DATA**  
 For the Period Ended Dec 31, 2019  
 (000s m3)

Line No.	Particulars	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
	Key Point - Export International Border, Haskett, MB <sup>1</sup> CAPACITY													
1	Available Capacity	2,933	2,613	2,767	2,699	2,966	2,814	2,928	2,913	2,730	2,933	2,783	2,826	33,903
2	Variance from nameplate capacity	E	D	D		E		E			E,D	D		
	APPORTIONMENT													
	Values	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
3	Nominations	4,789	4,008	22,561	23,449	26,594	8,539	14,238	27,833	33,281	18,598	9,220	8,599	201,710
4	Apportionment %	39%	35%	88%	88%	89%	66%	80%	90%	92%	84%	68%	68%	
5	Light Crude	165	159	228	128	205	0	0	31	184	228	139	0	1,466
6	Heavy Crude	2,764	2,207	2,539	2,571	2,761	2,450	1,682	2,795	2,627	2,700	2,770	2,730	30,595
7	Total	2,929	2,366	2,767	2,699	2,966	2,450	1,682	2,826	2,811	2,928	2,908	2,730	32,061

Notes:

- (1) Direction of Flow = South; Longitude = -97.957657; Latitude = 48.998912
- (2) Average Nameplate Capacity was 94,000 m3/d
- (4) Nominations are based on original Nominations and do not include Late Nominations
- (5) Apportionment percentage represents the percentage of original Nominations not allocated by Available Capacity
- (6) Density as defined in the NEB Keystone Pipeline System Rules and Regulations, in effect
- (7) May not add due to rounding

(3) Legend:

- (A) NEB Regulatory Directive
- (B) Downstream Restrictions
- (C) Curtailment/Interruptions
- (D) Force Majeure
- (E) System Operating Factor

Schedule 3

**TransCanada Keystone Pipeline GP Ltd.**  
**Keystone Pipeline System**  
**TRAFFIC DATA**  
 For the Period Ended Dec 31, 2020  
 (000s m3)

Line No.	Particulars	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total	
		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	
	Key Point - Export International Border, Haskett, MB <sup>1</sup> CAPACITY														
1	Available Capacity	Sum of Available Capacity (m3)	2,791	2,697	2,878	2,743	2,924	2,666	2,719	2,727	2,728	2,931	2,803	2,946	33,554
2	Variance from nameplate capacity					E			E		E		E		
<b>APPORTIONMENT</b>															
	Values	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
3	Nominations	Sum of Total Nominations (m3)	35,555	31,683	23,158	2,980	2,924	2,666	2,774	5,484	5,621	4,247	7,323	10,391	134,807
4	Apportionment %	Sum of Apportionment Percentage	92%	91%	88%	8%	0%	0%	2%	50%	51%	31%	62%	72%	
5	Light Crude	Sum of Throughput Light Crude (m3)	0	0	0	311	409	254	145	129	189	87	0	16	1,539
6	Heavy Crude	Sum of Throughput Heavy Crude (m3)	2,791	2,690	2,812	2,234	2,242	2,335	2,554	2,598	2,447	2,845	2,803	2,930	31,282
7	Total	Sum of 5 & 6	2,791	2,690	2,812	2,545	2,651	2,589	2,699	2,727	2,636	2,931	2,803	2,946	32,821

Notes:

- (1) Direction of Flow = South; Longitude = -97.957657; Latitude = 48.998912
- (2) Average Nameplate Capacity was 94,000 m3/d
- (4) Nominations are based on original Nominations and do not include Late Nominations
- (5) Apportionment percentage represents the percentage of original Nominations not allocated by Available Capacity
- (6) Density as defined in the NEB Keystone Pipeline System Rules and Regulations, in effect
- (7) May not add due to rounding

(3) Legend:

- (A) NEB Regulatory Directive
- (B) Downstream Restrictions
- (C) Curtailment/Interruptions
- (D) Force Majeure
- (E) System Operating Factor

**TransCanada Keystone Pipeline GP Ltd.**  
**Keystone Pipeline System**  
**INCOME SUMMARY - RESTATED**  
 For the Years Ended December 31, 2010 to 2020  
 (Millions \$)

Particulars	July-Dec 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Net Income - Filed	19	164	205	214	223	243	223	239	245	213	234
DRA Costs	-	-	-	-	-	(7)	(9)	(14)	(17)	(34)	(35)
Net tax effect	-	-	-	-	-	-	-	-	5	9	9
<b>Restated Net Income</b>	<b>19</b>	<b>164</b>	<b>205</b>	<b>214</b>	<b>223</b>	<b>236</b>	<b>214</b>	<b>225</b>	<b>233</b>	<b>188</b>	<b>208</b>
Net Plant-Filed	1,806	2,106	2,097	2,060	2,035	2,090	2,052	2,008	1,963	1,921	1,873
Return on Net Plant - Filed	2.12%	7.78%	9.78%	10.39%	10.94%	11.61%	10.87%	11.92%	12.47%	11.08%	12.47%
Return on Net Plant - Restated	2.12%	7.78%	9.78%	10.39%	10.94%	11.29%	10.43%	11.21%	11.87%	9.79%	11.10%
NRA Return (8%)	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
Difference (Return Restated Vs. 8%)	-5.88%	-0.22%	1.78%	2.39%	2.94%	3.29%	2.43%	3.21%	3.87%	1.79%	3.10%

**IR Number:** CVR No. 2.3

**Topic:** Quarterly Surveillance Reports References

- References:**
- (1) Schedule 5.0 to Keystone 2020, 2019, 2018 Q4 Quarterly Surveillance Reports (“QSR”) Filed with the CER. See: [https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90465/92835/565787/673804/3930251/4050348/C11706-1\\_Keystone\\_Quarterly\\_Surveillance\\_Report\\_Q4\\_2020\\_-\\_A7R5R3.pdf?nodeid=4050141&vernum=-2](https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90465/92835/565787/673804/3930251/4050348/C11706-1_Keystone_Quarterly_Surveillance_Report_Q4_2020_-_A7R5R3.pdf?nodeid=4050141&vernum=-2)
  - (2) Schedule 5.0 and 5.1 to Keystone’s 2020, 2019, 2018, 2017 QSRs,
  - (3) Schedule 1, Note 2, Schedule 2, Note 1 to Keystone 2015 Q4 Quarterly Surveillance Report Filed with the CER. See: [https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90465/92835/565787/673804/2777010/2931156/A75689-1\\_Keystone\\_Quarterly\\_Surveillance\\_Report\\_Q4\\_2015\\_-\\_A4Y3Y8.pdf?nodeid=2931804&vernum=-2](https://docs2.cer-rec.gc.ca/ll-eng/llisapi.dll/fetch/2000/90465/92835/565787/673804/2777010/2931156/A75689-1_Keystone_Quarterly_Surveillance_Report_Q4_2015_-_A4Y3Y8.pdf?nodeid=2931804&vernum=-2)
  - (4) TC Energy Ltd., Management Discussion and Analysis Report dated May 7, 2021 (Quarterly Report to Shareholders for First Quarter 2021) at Adobe page 20 of 40. See:
  - (5) Schedule 2 to Keystone’s 2018, 2019, 2020 Q4 QSRs
  - (6) Keystone Response to P66-Husky Information Request No. 1.6 Attachment 1.06a-3, pg 9 of 9

**Preamble:** In Reference 1, TransCanada Keystone Pipeline GP Ltd. reported that it received the following amounts from TransCanada Liquids Marketing Ltd. by way of an intercorporate transactions for “Transportation” Service:

YEAR	Amount (\$ Million)
2020	\$38,890
2019	\$20,423
2018	\$377
2017	\$1,013
2010 - 2016	0

In Reference 1, (2020 Q4 QSR) Keystone reported receipt of \$33,928,000 from 2249158 Investments Limited Partnership by way of an intercorporate transaction for “Contribution from Partner”.



In Reference 2, Keystone reported payments were made for “Transportation” to TransCanada Keystone Pipeline, LP as follows:

TABLE 2	
Year	Amount (\$ Million)
2020	\$43,075
2019	\$40,132
2018	\$9,582
2017	\$6,132
2010 - 2016	0

In Reference 2, Keystone reported payments were made to TransCanada for “Operating Agreement” as follows:

TABLE 3	
Year	Amount (\$ Million)
2020	\$131,756
2019	\$110,417
2018	\$76,248
2017	\$85,937
2016	\$83,356
2015	\$82,708
2014	75,238
2013	51,645
2012	47,619
2011	39,744
2010	10,475

In Reference 3, Keystone reported that TransCanada Keystone Pipeline Limited Partnership evaluated its investment in Keystone XL and related projects, including Hardisty B Terminal, and determined that an impairment charge was necessary in connection with the November 6, 2015 denial of the U.S. Presidential permit. This resulted in Keystone reporting a \$192 million impairment charge to its calculation of gross plant in service.

In Reference 4, TC Energy Ltd reported that its Liquids Pipelines segmented (losses)/earnings incurred a pre-tax asset impairment charge, net of expected contractual recoveries and other contractual and legal obligations, of

\$2.8 billion related to the Keystone XL pipeline and related projects in connection with the January 20, 2021 revocation of the Presidential Permit for the Keystone XL Project.

In Reference 1 (2020 QSR dated March 1, 2021), no references are made to impairment charges in either Schedule 1 or 2, akin to the steps taken in Reference 3.

In Reference 4, the Gross and Net Plant statement shows the following:

Year	Gross Plant Pipe (\$000)	Net Plant Pipe (\$000)
2018	\$1,255,377	\$1,050,943
2019	\$1,260,933	\$1,032,351
2020	\$1,264,570	\$1,010,424

In Reference 2, the 2020 Schedule 5.1 notes an Intercorporate Transaction of \$82,563,000 for the Purchase of Pipe.

In Reference 2, Keystone notes an Intercorporate Transaction of \$231,000 in 2019 and \$672,000 in 2020 for Business Development.

In Reference 6, the Unaudited Financial Statement Note 6, identifies the Partnership expects to record a predominantly non-cash impairment charge on Keystone XL in 2021 as a result of the revoking of the Presidential Permit for Keystone XL.

**Request:**

1. Please fully explain the nature of the intercorporate transactions involving TransCanada Liquids Marketing Ltd as summarized in Table 1 above. In your response, please discuss the “Transportation” descriptor (for example, whether TransCanada Liquids Marketing Ltd. is a Term or Non-term shipper on the Canadian portion of the Keystone System) and breakdown the amounts received by Keystone for Term vs Non-term transportation service.
2. If TransCanada Liquids Marketing Ltd. is a shipper on the Keystone system:
  - a. When did it obtain shipper status?
  - b. From the date it obtained shipper status, provide a breakdown of the type of transportation service it has received, including the level of capacity contracted and the volumes shipped under each type of transportation service?

- c. Did it successfully participate in the 2019 Open Season? If so, how much of the Open Season capacity was it allocated?
3. Please fully explain the nature of the intercorporate transactions involving TransCanada Keystone Pipeline, LP as summarized in Table 2 above. In your response, please elaborate and discuss the “Transportation” descriptor used to describe the nature of the service obtained. How have these amounts been included in the calculation of the Term Shipper Tolls? For example, have all or a portion of these amounts been included in either of the variable or fixed toll components.
4. Explain why the “Transportation” amounts summarized in Table 2 above have significantly increased in 2019 and 2020 as compared to all prior years.
5. Explain why Operating Agreement payments (shown in Table 3) made to TransCanada have increased significantly in 2019 and 2020 relative to prior years?
6. Please provide a copy of the Operating Agreement referenced in Schedule 5 to the Keystone Q4 QSR Reports.
7. How was the annual level of compensation paid under the Operating Agreement, negotiated between TransCanada and Keystone? Please describe the level of involvement or disclosure that Keystone has provided to its shippers regarding the terms of this agreement and the instances in which the terms have been re-negotiated and re-negotiations resulted in the higher reported costs being charged to Keystone.
8. Explain whether the Hardisty B Terminal, or any other assets attributable to the Keystone XL Project were included in the calculation of the Fixed or Variable Toll Component of the tolls paid by Term Shippers.
9. Confirm whether, or not, the 2015 impairment charge had any toll impact upon the calculation of the Fixed or Variable Toll Component of the tolls paid by Term Shippers. If not, please explain why not.
10. Explain whether, or not, the impairment charge reported on May 7, 2021 and described in Reference 4 and Reference 6 above is expected to result in the calculation of the Fixed or Variable Toll components paid by Term Shippers. How do revisions made to Keystone’s reported gross and net plant calculations found in Schedule 1 and 2 to the 2020 QSR dated March 1, 2021 affect Term and Non-term toll calculations?

11. Please explain and justify Keystone's reasons for purchasing \$82 MM of pipe from TransCanada Pipelines Limited in 2020. In your response, please explain why this acquisition is not included in the calculation of the Gross and Net Plant Statements.
12. How and when is Keystone intending to recover the cost of its 2020 pipe purchase in tolls charged to its shippers. Please provide all details including the nature of the project(s) that would cause tolls to reflect recovery of this incremental capital cost.
13. Please explain the additional amounts paid to TransCanada Pipelines Limited for Business Development, given that Business Development charges did not appear in the statements until 2019 and the Operating Agreement charges line states it includes business and information services. What additional services were required and why?
14. Please explain how common costs are shared and allocated with respect to the Keystone System and Keystone XL. In your response, explain whether increases in Keystone XL costs have been allocated to and included in the Operating Costs reported in Table 3 above. That is, are the increases in 2019 and 2020 Operating Costs (compared to prior periods) due to allocations of higher common costs incurred for Keystone XL prior the reported impairment charge taken on May 7, 2021?

**Response:**

1. TransCanada Liquids Marketing Ltd (TCLM) is a shipper on the Keystone System. The receipts relate to transportation services associated with the movement of oil on Keystone billed in accordance with Keystone tolls.

Keystone declines to provide a breakdown of the amounts received from TCLM for Term vs Non-term transportation service because it is TCLM-specific information that is commercially sensitive and confidential, just like all shipper-specific information on the Keystone System.

2. See response to 1 above.
3. The intercorporate transactions in Preamble Table 2 are between Keystone ("Keystone Canada") and TransCanada Keystone Pipeline, LP ("Keystone U.S."). Keystone Canada receives payment for the tolls from customers who ship under International Joint Tariff ("IJT") uncommitted service. The IJT service is similar to uncommitted service. The difference is the shippers that utilize the service pay a single invoice issued by Keystone Canada, instead of two invoices issued by Keystone Canada and Keystone U.S. Shippers. This intercorporate transaction is the payment from Keystone Canada to Keystone U.S.

for Keystone U.S.'s portion of the IJT toll. These payments are not included in the Fixed or Variable Tolls.

4. The reason for the increase in amounts from 2017/2018 to 2019/2020 was due to more shippers contracting for IJT service.
5. The Operating Agreement payments made to TransCanada PipeLines Limited primarily relate to the Operating, Maintenance, and Administration (OM&A) costs reported on Schedule 1. These OM&A costs are mostly incurred to support Keystone operations and are included in the Variable Tolls. Please refer to previously submitted P66-Husky IR 1.08a (Filing ID: C13198) for a reconciliation of the OM&A costs reported in the QSR to the cost details included in the Variable tolls. The increase in 2019/2020 costs relative to 2017/2018 are due to several cost components with most of the cost increase in the 2019/2020 period attributable to higher DRA and pipeline integrity costs incurred to ensure safe and reliable operations. Please refer to previously submitted CER IR 1.1a (Filing ID: C13540) and P66-Husky IR 1.07a (Filing ID: C13198) for a breakdown of the actual costs included in the Variable Tolls during this period.
6. Please refer to Attachment CVR IR 2.3-6.
7. The operating services provided under this agreement are completed on a cost reimbursable basis and no premium is paid by Keystone. There is no fee or other compensation paid to TransCanada PipeLines Limited for providing these services and therefore no negotiation required with respect to this item. This agreement was amended once in 2018 without changes to the provision of operating services on a cost reimbursable basis; therefore, there was no impact to costs charged to Keystone as a result of this amendment.
8. Hardisty B Terminal and Keystone XL Project assets are not included in the calculation of the Fixed or Variable Toll Component of the tolls.
9. See response 8 above. The impairment charge noted in the Keystone 2015 Q4 Quarterly Surveillance Report (QSR) relates to Keystone XL and related projects. Keystone confirms that this impairment charge had no toll impact on the existing Keystone system. In 2015, the Keystone XL Project was an asset under construction and these costs would only have been recovered in tolls if the project was completed and placed into service. The impairment charge reported in the 2015 QSR is a reduction to Keystone Net Income which confirms that these costs were an expense to Keystone and not recovered in tolls.
10. The impairment charge noted in Reference 4 and Reference 6 relates to Keystone XL. There is no impact to the Fixed or Variable Component of the tolls. Also see responses to 8 and 9 above.
11. The \$82 MM pipe purchase from TransCanada PipeLines Limited was related to construction of the Keystone XL Project. These capital costs do not form part of the current Keystone system and are not recovered in Keystone tolls. The Gross and Net

Plant costs reported in the QSR include capital that is in-service, which does not include Keystone XL.

12. See response to 11 above.
13. The amounts paid to TransCanada PipeLines Limited for Business Development activities do not pertain to the current Keystone system and are not included in determination of Keystone tolls.
14. All costs that directly support the Keystone XL Project are charged to the capital project. This includes charges from third party vendors, internal labour and corporate overhead. Costs related to Keystone XL are carried in capital projects and do not form part of the Keystone operating service costs provided by TransCanada PipeLines Limited as reported in Preamble Table 3. Please see response to 5 above for the explanation of the cost increases in 2019 and 2020.

**KEYSTONE CANADA  
AMENDED, RESTATED AND CONSOLIDATED DEVELOPMENT MANAGEMENT  
AND OPERATING AGREEMENT**

**THIS AGREEMENT** is made effective as of September 1, 2018 (the “**Effective Date**”) between:

**TRANSCANADA KEYSTONE PIPELINE GP LTD.**, a corporation  
existing under the laws of Canada, as general partner on behalf of  
**TRANSCANADA KEYSTONE PIPELINE LIMITED PARTNERSHIP**,  
a limited partnership registered under the laws of Alberta  
 (“**Carrier**”);

and

**TRANSCANADA PIPELINES LIMITED**,  
a corporation existing under the laws of Canada  
 (“**Operator**”).

**RECITALS:**

- A. Carrier and TransCanada Oil Pipeline Operations Ltd. (“**TCOP**”) are parties to the Keystone Canada Development Management Agreement dated as of December 31, 2008 (as amended, the “**KXL Canada DMA**”);
- B. Carrier and Operator are parties to the Keystone Canada Operating Agreement dated as of December 28, 2007 (as amended, the “**Keystone Canada OA**”); and
- C. Carrier and Operator desire to amend, restate and consolidate the KXL Canada DMA and the Keystone Canada OA in accordance with the terms and conditions set forth in this Agreement, and as acknowledged by TCOP on the signature page to this Agreement, in order for:
  - a. Carrier to engage Operator, in its own capacity and not in its capacity as a limited partner of Carrier, to provide the Development Management Services and the Operating Services to assist in the development and operation of the Pipeline System; and
  - b. Operator, in its own capacity and not in its capacity as a limited partner of Carrier, to provide the Development Management Services and the Operating Services to assist in the development and operation of the Pipeline System.

**NOW THEREFORE** the Parties agree as follows:

**ARTICLE 1  
DEFINITIONS AND PRINCIPLES OF INTERPRETATION**

**1.1 Definitions**

Except as otherwise provided in this Agreement, the following terms, as used in this Agreement, shall have the following meanings:

"**Affiliate**" means any person that, directly or indirectly, controls, or is controlled by or under common control with, such specified person.

"**Agreement**" means this agreement, including all schedules, and all amendments or restatements as permitted.

"**Carrier**" has the meaning given in the introductory paragraph to this Agreement.

"**Development Management Services**" has the meaning given in Section 3.1.

"**Effective Date**" has the meaning given in the introductory paragraph to this Agreement.

"**Intellectual Property**" means all intellectual property used in, developed during or incorporated in the operation of the Pipeline System by either Party under this Agreement. Intellectual Property includes, by way of example, patents, patent applications, copyrights and trademarks that are not owned by the Operator.

"**Keystone Canada OA**" has the meaning given in the Recitals.

"**Keystone US Pipeline System**" means the Petroleum receipt, delivery, pipeline, pumping, monitoring, control and ancillary facilities owned by US Carrier which connect to the Pipeline System at the international boundary at or near Haskett, Manitoba and Monchy, Saskatchewan and terminating at or near Patoka, Illinois and at or near Port Arthur and Houston, Texas, as such facilities may be modified, expanded or extended from time to time.

"**KXL Canada DMA**" has the meaning given in the Recitals.

"**KXL Expansion Facilities**" means that portion of the Pipeline System consisting of the Petroleum receipt, delivery, pipeline, pumping, monitoring, control and ancillary facilities commencing at or near Hardisty, Alberta and terminating at the international boundary at or near Monchy, Saskatchewan.

"**Management Tools**" mean Operator's assessment tools, monitoring and performance enhancement tools, computer software and data management systems not directly associated with the operation of the Pipeline System, data, test results, documents, reports, plans, books and records, charts, procedure manuals, plans, specifications, drawings, management systems, policies, procedures, and standards. The Management Tools also include all trademarks owned by the Operator.

"**Operating Services**" has the meaning given in Section 3.2.

"**Operator**" has the meaning given in the introductory paragraph to this Agreement.

"**Parties**" means Carrier and Operator and "**Party**" means either one of them.

"**Petroleum**" means the direct liquid product of oil wells, oil processing plants, oil sands, or a mixture of such products, but does not include natural gas or natural gas liquids or refined petroleum products. For the purposes of this definition, "oil" includes crude oil, synthetic crude oil, or a bitumen blend consisting of bitumen blended with synthetic crude oil, condensate or both, that is recovered in processing and that is in a liquid state at the conditions under which its volume is measured or estimated.



“**Pipeline System**” means the Petroleum receipt, delivery, pipeline, pumping, monitoring, control and ancillary facilities owned by Carrier commencing at or near Hardisty, Alberta and terminating at the international boundary at or near Haskett, Manitoba and at or near Monchy, Saskatchewan which are connected to the Keystone US Pipeline System and which, for greater certainty, includes the KXL Expansion Facilities, as such facilities may be modified, expanded or extended from time to time.

“**Proprietary Information**” means technical or business information that is not generally known to or used by others that a Party hereto deems to be proprietary or of a confidential nature and has made reasonable efforts and taken reasonable care under the circumstances to maintain its secrecy. For the purposes of this Agreement, Proprietary Information will include, but not be limited to, information, data, nominations and specifications relating to any shipper (including requests for transportation services on the Pipeline System), specifications, forecasts, business plans, reports, formulas, patterns, compilations, computer programs in various stages of development (including subroutines, source code, object code, documentation, diagrams and flow charts), devices, methods, techniques, processes, methods of manufacture, technology set forth in pending but unpublished patent applications, product specifications, analyses (including computer simulations), models, prototypes, dimensions, tolerances, sketches, drawings, blueprints, photographs, or the like and in whatsoever form disclosed. A Party’s Proprietary Information will include any Proprietary Information which is modified for uses relating to the Pipeline System. The use by Operator’s Affiliates of Proprietary Information in the operation of pipelines shall not be considered to be inconsistent with maintaining the secrecy of the Proprietary Information.

“**TCOP**” has the meaning given in the Recitals.

“**US Carrier**” means TransCanada Keystone Pipeline, LP and its successors and assigns.

## 1.2 Certain Rules of Interpretation

In this Agreement:

- (a) **Governing Law:** This Agreement is a contract made under and shall be governed by and construed in accordance with the laws in force in the Province of Alberta.
- (b) **Severability:** If, in any jurisdiction, any provision of this Agreement or its application to any Party or circumstance is restricted, prohibited or unenforceable, such provision shall, as to such jurisdiction, be ineffective only to the extent of such restriction, prohibition or unenforceability without invalidating the remaining provisions of this Agreement and without affecting the validity or enforceability of such provision in any other jurisdiction or without affecting its application to other Parties or circumstances.

## ARTICLE 2 RELATIONSHIP OF THE PARTIES

### 2.1 Appointment of Operator

Carrier hereby appoints Operator as development manager and operator of the Pipeline System to provide the Development Management Services and the Operating Services, effective as of the Effective Date, and Operator hereby accepts such appointment. For greater certainty, Operator (in its capacity as development manager and operator) shall have no obligation or liability in respect of the state or

condition of the Pipeline System or any part thereof (or any associated documentation) existing or accrued prior to or as of the Effective Date.

## **2.2 General Principles Regarding Relationship**

- (a) Subject to the overall management of Carrier, Operator shall provide the Development Management Services and Operating Services as an independent contractor and not in its capacity as a limited partner of the Carrier, with full control of its employees, agents and equipment engaged in the performance of its development and operations. Carrier shall have the right to monitor, consult with, and make suggestions to Operator in connection with Operator's performance of its responsibilities. By virtue of its entering into this Agreement or performing the Development Management Services and Operating Services, Operator shall not be deemed to be a partner, agent (except as expressly set forth in Section 2.3), joint venturer or attorney in fact of Carrier or any of its investments and shall have no fiduciary duties or expanded liability to Carrier based on partnership, agency or other similar principles.
- (b) Nothing in this Agreement shall limit Carrier's right to manage the business of the Pipeline System.

## **2.3 Operator as Agent**

Operator, in its capacity as development manager and operator of the Pipeline System and not as a limited partner of the Carrier, may negotiate, enter into, and execute, as agent on behalf of Carrier, contracts or amendments to contracts, including with respect to the procurement of goods, properties, equipment and services, relating to the Pipeline System. Operator shall have the authority and discretion to determine the terms and conditions of the contracts entered into in its capacity as agent on behalf of Carrier and to negotiate and settle all matters arising out of such contracts. Any goods, properties, equipment or services procured pursuant to a contract contemplated in this Section 2.3 but in the possession of Operator shall remain the property of the Carrier. Notwithstanding the foregoing, Carrier shall remain the principal in respect of the development and operation of the Pipeline System.

## **2.4 Other Business Activities**

- (a) For the avoidance of doubt, nothing contained in this Agreement grants any rights not expressly mentioned herein or restricts any Party from engaging in any business or activity for its own individual profit.
- (b) Carrier hereby acknowledges, understands and agrees that Operator has and may have interests in pipeline assets, in managing the development of pipeline assets or operations apart from the Pipeline System.

## **2.5 Carrier's Covenants**

Carrier shall:

- (a) cooperate with Operator in order to facilitate the performance of the obligations set forth in this Agreement including the Development Management Services and Operating Services;

- (b) provide Operator with all data and information reasonably necessary for Operator to perform its duties; and
- (c) ensure all necessary rights of access and licenses in its name are in good standing.

### **ARTICLE 3 OBLIGATIONS OF OPERATOR**

#### **3.1 Operator's Developmental Responsibilities**

Operator shall provide, directly or through subcontractors, supervision, development, permitting, design, construction, pre-in-service operations and maintenance, project management, operations build-up and commissioning of the Pipeline System, administrative and related services to Carrier (including legal, accounting, invoicing, banking, procurement, construction, supervision, engineering, planning, treasury, insurance administration, tax services and tax filings, inspection, quality control, health safety and environment, audit, industry relations, public affairs, human resource support and support for regulatory matters) in respect of the Pipeline System (collectively, the “**Development Management Services**”), in a safe and competent, and proper and workmanlike manner and in accordance with relevant procedures adopted by Operator as its procedures and all in accordance with the overall direction of Carrier.

#### **3.2 Operator's Operating Responsibilities**

Operator shall provide, directly or through subcontractors, overall commercial operations, management, supervision, operations and maintenance planning, field operations and maintenance, records management, administrative and related services to Carrier (including legal, accounting, invoicing, banking, procurement, repair and overhaul planning, integrity management, replacement of plant, construction, supervision, scheduling, indigenous relations, risk management, engineering, planning, treasury, insurance administration, tax services and tax filings, inspection, quality control, health safety and environment, audit, information systems, industry relations, public affairs, human resource support and support for regulatory matters) in respect of the Pipeline System (collectively, the “**Operating Services**”), in an efficient and economically prudent manner in accordance with usual and customary industry practices and in accordance with all laws, all in accordance with the overall direction of Carrier.

#### **3.3 Operator's Personnel**

- (a) Operator shall select and employ or retain, remunerate and have supervision over the persons required by Operator to perform the Development Management Services and Operating Services (whether from its Affiliates or otherwise). Operator shall ensure payment of all reasonable costs and expenses in connection therewith, including compensation, salaries, wages, overhead and administrative and general expenses (including training), including those incurred by Operator's Affiliates, and, if applicable, employment insurance premiums, benefits, taxes, workers' compensation insurance, retirement and insurance benefits, severance obligations and other such expenses. The compensation for Operator's employees shall be determined by Operator. All costs and expenses paid by Operator pursuant to this Section 3.3 shall be reimbursed to Operator by Carrier.

- (b) For the purpose of fulfilling its obligations under this Agreement, Operator may utilize its employees, secondees, the services of leased employees, independent contractors or the services of its Affiliates.

### 3.4 Subcontracting

Operator may, in its capacity as development manager and operator of the Pipeline System hereunder, subcontract any part of (but not all) of its duties and responsibilities to a reliable and competent subcontractor.

## ARTICLE 4 RISK, LIABILITY AND INDEMNITY

### 4.1 Operator Limitation of Liability

Notwithstanding anything to the contrary, Operator, its Affiliates (other than the Carrier) and their respective directors, shareholders, officers, employees, partners, members, agents, servants, consultants, representatives, successors, transferees and assigns are not liable to Carrier or any person claiming by, through or under Carrier (including any shipper) for any damage or liabilities related to the provision of the Development Management Services, the Operating Services and/or its performance of any other obligations or duties hereunder except (subject to the limitations set forth in Section 4.3) to the extent caused by the gross negligence or wilful misconduct of Operator. Such liability does not extend to errors of judgment or for any acts or omissions that do not constitute gross negligence or wilful misconduct, it being the intention of the parties that neither Operator nor such of its Affiliates or agents as it shall appoint to perform duties hereunder or their respective agents, consultants, representatives, successors, transferees and assigns shall be liable for their own negligence (sole, partial or concurrent) or for any acts/omissions done or omitted in accordance with instructions or concurrence of Carrier.

### 4.2 Carrier's Indemnity

Carrier shall indemnify, release, defend and hold harmless Operator and every Affiliate of Operator (other than Carrier) as it shall appoint to perform duties hereunder and their respective directors, shareholders, officers, members, partners, employees, agents, consultants, representatives, successors, transferees and assignees (individually, an "**Indemnified Party**" and collectively the "**Indemnified Parties**") from, against and in respect of any and all claims asserted by or on behalf of any person arising from, relating to, or associated with the performance or failure to perform or provide by Operator any of the services or the failure by Carrier to perform any of its obligations under this Agreement, in each case regardless of whether any such claim results from the negligence (sole, partial or concurrent) of Operator or any of the Indemnified Parties, provided, however that such indemnification shall not extend to any amount of damages that are determined to be attributable to the gross negligence or wilful misconduct of an Indemnified Party.

### 4.3 Limitations

Neither Party will be liable to the other Party for any incidental, indirect, economic, consequential, exemplary or punitive damages, costs or expenses howsoever characterized (including loss of profits or opportunity) suffered by the other Party. For further clarity, the Parties intend that, for such purposes:

- (a) where the nature of such claims is the cost of repairs to the Pipeline System, such claims will be deemed to be in respect of direct damages and not indirect or consequential damages; and
- (b) where the nature of such claims is loss of economic profits to shippers or loss of payments of transportation tariffs by shippers to Carrier, such claims will be deemed to be in respect of indirect or consequential damages.

#### **4.4 Non-Obligation for Abandonment**

Notwithstanding anything to the contrary contained in this Agreement, whether expressly or by implication, Operator is not obligated by virtue of this Agreement for:

- (a) the abandonment of the Pipeline System or the permanent cessation of operations thereat;
- (b) the disposal of assets upon such abandonment or cessation;
- (c) the fulfilment of any requirements of laws in connection with reclamation of any lands or interest therein upon such abandonment or cessation; or
- (d) the accounting for or distribution of the proceeds of sale of the Pipeline System upon such abandonment or cessation,

it being the intent and understanding of the Parties that such matters are and will remain the obligation and responsibility of Carrier as the owner of the Pipeline System and that only by arrangements satisfactory to the Parties will Operator have any such obligations or responsibilities.

### **ARTICLE 5 ACCOUNTING AND COMPENSATION**

#### **5.1 Accounting and Compensation**

- (a) Operator shall keep a full and complete account of all costs and expenses incurred by it, including costs and expenses associated with tax obligations, tax credits, salary and benefits of its personnel and overhead, in connection with the provision of the Development Management Services and Operating Services in accordance with its typical accounting procedures.
- (b) Operator shall be reimbursed by Carrier on a timely basis for all reasonable and proper costs and expenses paid by it for Carrier, including costs and expenses associated with tax obligations, tax credits, salary and benefits of its personnel and overhead, in connection with the provision of the Development Management Services and Operating Services.

## **ARTICLE 6 TERM AND TERMINATION**

### **6.1 Term**

This Agreement shall be effective as of the Effective Date and shall continue in full force and effect until such time as it is terminated in accordance with Section 6.2 or 6.3.

### **6.2 Removal of Operator**

Operator may be removed by Carrier and this Agreement shall thereupon be terminated:

- (a) if Operator fails to cure within 90 days of notice from Carrier, or to commence and diligently pursue a cure if not remediable within such period, any material default in an obligation under this Agreement; or
- (b) upon notice from Carrier to Operator if Operator becomes insolvent, bankrupt, takes the benefit of any insolvency or bankruptcy law, enters into a plan of arrangement for the benefit of its creditors, or makes a general assignment for the benefit of creditors.

### **6.3 Resignation of Operator**

Operator may, at its option, resign as Operator and this Agreement shall thereupon be terminated:

- (a) if Carrier fails to cure within 30 days of notice from Operator, or to commence and diligently pursue a cure if not remediable within such period, any material default in an obligation under this Agreement;
- (b) upon notice from Operator to Carrier if Carrier becomes insolvent, bankrupt, takes the benefit of any insolvency or bankruptcy law, enters into a plan of arrangement for the benefit of its creditors, or makes a general assignment for the benefit of creditors;
- (c) upon the sale of all or substantially all of the Pipeline System by the Carrier or if Carrier is no longer an Affiliate of the Operator;
- (d) upon the abandonment of the Pipeline System or the permanent cessation of operations thereat; or
- (e) at any time upon 12 months' notice to Carrier, provided that Operator shall endeavour in advance of such notice to notify Carrier of any developing issues that may lead to the resignation of Operator.

### **6.4 Transition Costs**

Upon termination of this Agreement pursuant to Sections 6.2(a) or 6.3, Operator shall be reimbursed by Carrier for all reasonable costs and expenses incurred by Operator in demobilizing, winding up its duties under this Agreement (including reasonable costs and expenses to terminate and pay severance to and relocate employees and contractors) and transferring its duties to the succeeding development manager or operator. The Parties agree to negotiate in good faith and reach mutual agreement regarding such costs and expenses prior to incurring such costs and expenses.

## **6.5 Amounts Due Upon Termination**

Termination of this Agreement shall not relieve either Party from paying amounts of money due hereunder which (a) were due prior to, or (b) become due after or as a result of, such termination.

## **ARTICLE 7 INTELLECTUAL PROPERTY**

### **7.1 Ownership of Materials**

- (a) For the purposes of this Article 7, any reference to Intellectual Property, Management Tools or Proprietary Information owned by Operator includes Intellectual Property, Management Tools or Proprietary Information owned by Operator's Affiliates (excluding Carrier).
- (b) Any Management Tools which are used or modified during the performance of this Agreement, or incorporated in the Pipeline System, that were developed for general use by Operator or its Affiliates and not specifically for the Pipeline System, shall remain the property of Operator. Operator, insofar as it lawfully may, grants to Carrier an irrevocable, except as provided herein, non-transferable, non-exclusive, paid-up license to use, execute, reproduce, display, perform, make copies of and prepare derivative works of any Management Tools owned by the Operator that is incorporated into the Pipeline System, solely for use in the Pipeline System. This license will survive termination of this Agreement. Operator warrants that Management Tools owned by the Operator will not be removed from the Pipeline System if that Management Tool directly controls or affects the normal operation of the Pipeline System. For the purpose of this subsection, "normal operation" means the ability of the Pipeline System to operate in accordance with its design capacity and in accordance with the prior operation of the Pipeline System, to comply with Laws, and to operate safely, all in accordance with the standards set out in Section 3.2. Although the Management Tools may enhance efficiency of the Pipeline System, Operator agrees that the removal of any software tool will not alter the normal operation of the Pipeline System.
- (c) Subject to Section 7.1(d), any Intellectual Property that is either owned by Carrier or licensed to Carrier (with the exception of the Management Tools owned by Operator and licensed to Carrier in accordance with Section 7.1(b)) which is used during the performance of this Agreement or incorporated in the Pipeline System, shall remain the property of Carrier or such licensor, as applicable. Carrier, insofar as it lawfully may, grants to Operator and its Affiliates an irrevocable, non-transferable, non-exclusive, paid-up license to use, execute, reproduce, display, perform, make copies of and prepare derivative works of any Intellectual Property owned by Carrier that is incorporated into the Pipeline System.
- (d) The title to and ownership of any and all Intellectual Property in any form that is developed by Operator or is jointly developed by both Carrier and Operator solely for the Pipeline System, shall be jointly owned by Carrier and Operator, unless the Parties determine, under mutual written agreement signed by both Parties, that any such Intellectual Property will not be owned jointly by the Parties. As used herein, joint ownership shall mean that each Party shall have the unrestricted right to freely use,

license, sub-license, assign and otherwise exploit such jointly owned Intellectual Property without either the necessity of obtaining the consent of or financially accounting to the other Party which is a joint owner.

- (e) Carrier, insofar as it lawfully may grant, hereby grants to Operator (and its assignees and designees) a perpetual, irrevocable, non-exclusive, transferable, royalty-free license to use, execute, reproduce, display, perform, make copies of and prepare derivative works based on Intellectual Property owned by Carrier and the right to authorize others to do the same. Operator shall have the right to assign such license or use such Carrier Intellectual Property in any pipeline owned by, controlled by or operated by Affiliates of Operator.

## **ARTICLE 8 MISCELLANEOUS**

### **8.1 Entire Agreement, Amendment, Restatement and Consolidation**

This Agreement amends, restates and consolidates the KXL Canada DMA and the Keystone Canada OA effective as of the Effective Date. This Agreement constitutes the entire agreement between the Parties and supersedes all prior agreements between the Parties related to the subject matter hereof, including the KXL Canada DMA and the Keystone Canada OA. All obligations of TCOP under the KXL Canada DMA that remain outstanding upon the effectiveness of this Agreement shall constitute obligations of Operator governed by the terms of this Agreement.

### **8.2 Assignability**

This Agreement shall not be assigned by either Carrier or Operator without the written consent of the other except that Operator may assign this Agreement to a wholly-owned Affiliate without such consent (in which case Operator shall not be released of its obligations hereunder until such consent has been obtained from Carrier).

### **8.3 Amendment**

This Agreement shall only be amended by an instrument in writing executed by both Parties.

### **8.4 Enurement**

The Agreement shall enure to the benefit of and be binding upon the Parties and their respective successors (including any successor by reason of amalgamation of any Party) and permitted assigns.

### **8.5 Execution and Delivery**

The Agreement may be executed by the Parties in counterparts and may be executed and delivered by facsimile or electronically and all such counterparts, facsimiles and electronic forms shall together constitute one and the same agreement.

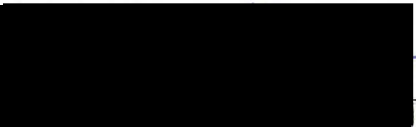

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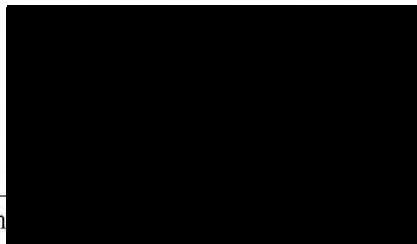
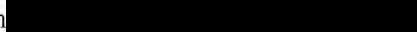



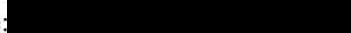
IN WITNESS OF WHICH the Parties have executed this Agreement with effect as of the Effective Date.



**TRANSCANADA KEYSTONE  
PIPELINE GP LTD.** in its capacity as  
general partner for and on behalf of  
**TRANSCANADA KEYSTONE  
PIPELINE LIMITED  
PARTNERSHIP**

**TRANSCANADA PIPELINES  
LIMITED**

By:   
Name:   
Title: Vice President, Law

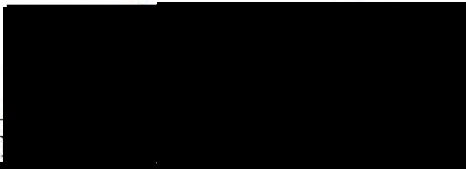

By:   
Name:   
Title: *President, Keystone XL*

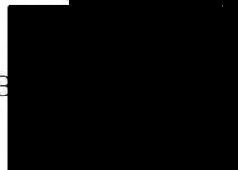

By:   
Name:   
Title: Vice-President, Risk Management

By:   
Name:   
Title: Vice-President, Law and Corporate Secretary

**THE TERMS AND CONDITIONS OF THIS AGREEMENT ARE HEREBY ACKNOWLEDGED  
BY:**

**TRANSCANADA OIL PIPELINE  
OPERATIONS LTD.**

By:   
Name:   
Title: **VICE PRESIDENT**

By:   
Name:   
Title: Vice-President

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CONTENT	

**IR Number:** CVR No. 2.4

**Topic:** Property Taxes

- References:** (1) Keystone Response to CER Information Request No. 1.1 Attachment a.2, (page 1 of 1 Line 10)
- (2) Keystone Response to CER Information Request No. 1.1 Attachment b

**Preamble:** The following information is summarized from the Reference 1 and 2 above regarding annual Throughput, Property Tax and Property Tax amounts expressed as a unit cost amount.

Year	Throughput (kbpd)	Property Tax (\$Cdn million)	Keystone Cost per Unit (\$/m3/100 km)
2015	555	\$9.1	\$0.05
2016	523	\$9.0	\$0.05
2017	564	\$9.2	\$0.05
2018	589	\$9.0	\$0.05
2019	557	\$9.1	\$0.05
2020	565	\$9.0	\$0.05

- Request:**
1. Please explain whether the information reported in Table 1 from the noted References relates only to Canadian tolls or is the unit cost breakdown provided for both Canada and the US (i.e. full path)? Please revise Table 1 to reflect any noted changes so that unit cost information is reported for the Canadian portion of the system.
  2. Please explain why reported unit cost calculations (\$/m3/100 km) shown in Table 1 are constant despite throughput variability and relatively constant annual property tax amounts?

**Response:**

1. The property tax reported in Table 1 relates to the full path of the system. Table CVR IR 2.4-1 below reflects the property unit cost information for the Canadian and full-path portion.

**Table CVR IR 2.4-1: Property Unit Cost**

	CAN Only Unit Cost (\$/m <sup>3</sup> /100km)	Full-Path Unit Cost (\$/m <sup>3</sup> /100km)
2015	0.02	0.05
2016	0.02	0.05
2017	0.02	0.05
2018	0.02	0.05
2019	0.02	0.05
2020	0.02	0.05

2. The property tax on a unit cost calculation is based on a weighted m<sup>3</sup>-km and not only on throughput.

**IR Number:** CVR No. 2.5

**Topic:** DRA Required To Meet Term Shipper Commitments

- References:**
- (1) Keystone Response to CER Information Request No. 1.1(d)
  - (2) Keystone Response to Coffeyville Information Request No. 1.1(5)
  - (3) Keystone Response to Coffeyville Information Request No. 1.3 (1)
  - (4) Written Evidence of Keystone, page 19 of 22.

**Preamble:** In Reference 1, the CER requested the primary factors driving higher variable tolls in 2020 and 2021, compared to previous years. Keystone's response described additional pipeline integrity activities, including the imposition of voluntary pressure restrictions.

Keystone states that absent DRA injections presumably made in 2019 and 2020, voluntary pressure restrictions would have prevented Keystone from meeting Term Shipper commitments and the Non-Term Shipper available capacity, negatively impacting all shippers' ability to transport crude oil on the Keystone Pipeline System.

In Reference 2, Keystone's Response included copies of materials provided to Shippers at meetings held to discuss DRA programs.

In Reference 3, Keystone outlines that absent the use of DRA, capacity on the system would have been reduced by 105,0000 bpd, of which 70,000 bpd would have been curtailed and prorated amongst Term Shippers.

In Reference 4, Keystone states that in addition to the 50,000 bpd of firm capacity contracted in the 2019 Open Season, an additional 10,000 bpd of new contracts will be allocated July 2021-December 2021. Keystone will bear the capital costs associated with the incremental 50,000 bpd which does not include DRA costs. The incremental Fixed Tolls associated with the 50,000 bpd will be used to recover the capital investment.

- Request:**
1. When did Keystone first come to the realization that absent increased DRA injections, its imposed voluntary pressure restrictions would have prevented Keystone from meeting Term Shipper commitments and the Non Term Shipper available capacity?
  2. At the time Keystone conducted its 2019 Open Season, why did Keystone not notify or provide its Shippers with information indicating Keystone could not meet existing Term Shipper commitments absent DRA injections?

3. When did Keystone first advise Shippers and the CER of its 105,000 bpd capacity shortfall condition? Please provide all documentation distributed that discussed these circumstances.
4. Please provide the cost benefit analysis calculations justifying the use of DRA to overcome the 105,000 bpd reduction in capacity. Was this information provided to Shippers and if so, when?
5. Please clarify if the noted shortfall of 70,000 bpd of Term Shippers' volume would include the 50,000 bpd awarded during the 2019 Open Season?
6. Explain why Keystone conducted an open season for additional Term Commitments when it was aware of pipeline integrity issues that would impede the ability to meet Term and Non-Term Shipper commitments?
7. As of June 2019, what was the nominal capacity of the Keystone Pipeline System with and without the use of DRA?
8. What is the current nominal capacity of the Keystone Pipeline System, without any use of DRA?
9. What is the current nominal capacity of the Keystone Pipeline System when it is optimized with DRA?
10. What was the nominal capacity of the Keystone Pipeline System when voluntary pressure restrictions were imposed?
11. But for the use of DRA, what incremental capital facilities and operating costs (e.g. Power) would have been required for Keystone to provide the incremental transportation service contracted in the 2019 Open Season process? Would any of these incremental capital and operating costs been avoided had the Keystone XL Project proceeded.
12. When did Keystone commence transportation service to parties who contracted through the 2019 Open Season?
13. Given the original contracting of 495 kbps plus 35 kbps reserved for Uncommitted Shippers plus the new contracts for 50 and 10 kbps from the 2019 Open Season, please confirm that total commitments of the System now total 590 kbps? If not confirmed please explain why?
14. Please confirm if DRA is still required on the system now that the voluntary pressure restrictions have been removed. If so, please explain why? If DRA is still required, how does Keystone propose allocating that DRA and will they be consulting with Shippers prior to future use?

**Response:**

1. Keystone became aware of the throughput limitations as a result of the pressure restrictions imposed in 2019 and 2020 shortly after the system parameters were defined and hydraulic analysis was performed.
2. For details on Keystone's communication with shippers regarding DRA, refer to P66-Husky IR 2.10. Information shared with shippers as it relates to the 2019 Open Season was focused on the provision of incremental capacity. Keystone had been using DRA to provide services to meet existing Term Shipper commitments and had provided shippers with information regarding DRA since 2014. Refer to previously submitted Attachment CVR IR 1.1-5 (Filing ID: C11661).
3. Keystone did not provide the specific capacity that would be available absent DRA injections. However, Keystone advised Term Shippers that the system was operating with pressure restrictions that could be mitigated with the use of DRA and outside of the CER and FERC regulatory proceedings, no shippers raised concerns. Following the incidents, committed and uncommitted shippers continued to nominate to access the 591 kbpd of system capacity. As a common carrier, Keystone is required to serve the transportation demands of its customers, and Keystone was able to mitigate the effects of the pressure restrictions through the injection of DRA.
4. Keystone did not conduct cost-benefit analysis calculations for the 105,000 bpd reduction in capacity while under pressure restrictions; however, Keystone did conduct assessments of the DRA mitigation requirements to meet shippers' transportation demands. Additionally, Keystone employed a real time injection optimization program that continuously adjusted the amount of DRA injected into the pipeline to 1) reduce the overall DRA cost, and 2) prevent hydraulic bottlenecks. Refer to response 3 above regarding shipper communication.
5. The shortfall of the 70,000 of Term Shipper's volume does not include the 50,000 bpd of capacity awarded during the 2019 Open Season.
6. Keystone conducted an open season in July 2019 prior to the St. Paul and Edinburg incidents and resultant pressure restrictions being put into place. Keystone was not aware of pipeline integrity issues that would impede the ability to meet Term and Non-Term Shipper commitments at the time the 2019 Open Season was conducted.
7. For nominal capacity of the Keystone Pipeline System as of June 2019 without the use of DRA, refer to previously submitted P66-Husky IR 1.4c(ii)\_Updated (Filing ID: 13198). Considering the use of DRA, the nominal capacity of Keystone as of June 2019 is 591 kbpd.
8. Refer to CVR IR 2.2-7 for the Keystone Pipeline System's nominal capacity absent the use of DRA.
9. The nominal capacity of the Keystone Pipeline System with DRA is 591 kbpd.

10. Refer to 7 above.
11. Keystone did not assess a specific alternative of providing the 50,000 bpd associated with the 2019 Open Season without the use of DRA. The costs related to providing the incremental transportation service contracted in the 2019 Open Season was independent of Keystone XL proceeding or not proceeding.
12. Service associated with contracts resulting from the 2019 Open Season has not commenced.
13. Not confirmed. Commitments on Keystone can be broken down as follows:

2005 Open Season (as stated in OH-1-2007)	340 kbpd
2007 Open Season (as stated in OH-1-2008)	155 kbpd
2009 Open Season	35 kbpd
2015 Open Season	15 kbpd
2017 Open Season	10 kbpd
<b>Total commitments effective on Keystone as of June 2021</b>	<b>555 kbpd</b>
2019 Open Season commitments (executed but not in-service)	50 kbpd
<b>Overall commitments executed</b>	<b>605 kbpd</b>

In addition to the commitments listed above, Keystone reserves 35 kbpd of uncommitted capacity.

14. Confirmed. Keystone still utilizes DRA on the system absent pressure restrictions. Please refer to previously submitted CVR IR 1.2-5\_Updated (Filing ID: C13198) for an explanation as to why DRA is utilized on the Keystone Pipeline System to alleviate the effect of hydraulic bottlenecks. There is also a baseline requirement of DRA to achieve throughput of committed volumes. Refer to CVR IR 2.2-7 for further information. As per Keystone's approved toll design, as negotiated and set forth in the TSAs, Keystone does not allocate operating costs and expenses between toll type and/or Term and Non-Term Shippers. Keystone's Variable Tolls are based on a flow-through, rolled-in system average unit cost calculation. As such, all volumes transported on the Keystone System contribute to the recovery of operating expenses, including DRA.

Keystone conducts regular consultation with shippers and communicates operational updates through term shipper meetings, one-on-one meetings, and variable toll estimates/final notices where DRA and other topics are discussed.

**IR Number:** CVR No. 2.6

**Topic:** DRA Usage - Shipper Specific Commodities

- References:**
- (1) Keystone Response to P66-Husky Information Request No. Attachment 1.01a-8
  - (2) Keystone Response to Coffeyville Information Request No. 1.2, Question 5
  - (3) Keystone Written Evidence, the Keystone VTOLL OPEX vs Throughput History- Canada chart, pg 15 of 22.

**Preamble:** In Reference 1, the April 1, 2020 Notice of 2019 Final Variable Tolls/Rate on the Keystone Pipeline System, page 2 of 7, Keystone identifies there was a 15.6% increase over 2019 Estimated Variable Toll. Specifically, “[m]ore DRA was used than planned to mitigate impacts of operational conditions on available capacity such as but not limited to:

- Hydraulic debottlenecking
- Temperature mitigation
- Mitigating effects of pressure restrictions
- Accommodating shipper specific commodities
- Sprint the system in response to planned maintenance or unplanned outages

In Reference 1, on page 4 of 7, the total throughput for 2019 is listed as 552 kbpd vs the estimate of 591 kbpd, and the DRA used was \$34.4 MM vs the estimate of \$9.4 MM.

In Reference 2, Keystone provides examples of when hydraulic bottlenecking can occur. Specifically on page 5 of 6, it states that examples of hydraulic bottlenecks include: shipper specific commodities.

In Reference 3, the throughput in 2018 was 589 kbpd and DRA costs were \$17.3 MM and in 2019, throughput was 552 kbpd and DRA costs were \$34.4 MM

- Request:**
1. Explain how the use of DRA has accommodated shipper specific movements. In your response, please provide an annual breakdown of the volume of shipper specific commodities that have been accommodated/assisted through use of DRA in each of 2015 to 2020.



2. Please clarify whether shipper specific commodity movements created hydraulic bottlenecks, which in turn resulted in Keystone using of DRA? Please provide the percentage of DRA required to accommodate the referenced shipper specific commodity movements.

**Response:**

1. In general, DRA injections do not accommodate movements for specific shippers' commodities outside of injecting heavy DRA into heavy crude and light DRA into light crude.

For annual DRA consumed on Keystone Canada, please refer to previously submitted CVR IR 1.1-7 (Filing ID: C13198).

2. Please refer to Keystone's Written Evidence (Filing ID: C11126) for hydraulic bottlenecks created by shipper specific commodity movements.

The approximate percentage of annual Keystone Canada DRA required to accommodate hydraulic bottlenecks due to winter synbits are outlined in Table CVR 2.6-2 below.

**Table CVR 2.6-2: Keystone Canada Annual Percent DRA Allocation for Winter Synbits**

2018	2019	2020
6%	5%	4%

**IR Number:** CVR No. 2.7

**Topic:** Incentive Tolling Arrangements

**References:** (1) Keystone Written Evidence dated January 2021, Appendix D (Pro forma TSA); Appendix B to the Pro forma TSA at Paragraph D.7.

**Preamble:** Reference 1 states that after the third anniversary of the Commencement Date, Carrier shall seek to negotiate and incentive tolling agreement with Term Shippers whereby Term Shippers and Carrier would be entitled to share in any cost savings realized as a result of any reductions in the Operating, Maintenance and Administrative Costs.

**Request:** 1. Please describe the efforts made by Keystone to fulfill the obligations outlined in the TSA with respect to incentive tolling arrangements?

**Response:**

1. Section C. 7 of Appendix B to the Pro forma TSA was intended to provide an avenue towards establishing an incentive mechanism on the variable toll component of the committed toll. In 2016, Keystone communicated an intent to propose incentive tolling negotiations, however; Keystone did not advance this initiative due to the continued evolution of the system, which resulted in a changing state of operations impacting the system throughput and OM&A costs. Keystone has recently re-initiated incentive tolling discussions with committed shippers. Shippers have indicated an interest in further pursuing these discussions.

**IR Number:** CVR No. 2.8

**Topic:** Variable Cost recovery from non-term Shippers

- References:** (1) Attachment CER 1.1b  
 (2) Keystone Response to P66-Husky IR No. Attachment 1.01a-9

**Preamble:** In Reference 1, Keystone has provided Term Shippers with its Notice of the 2020 Variable Toll/Rate Estimate. This included a historical Keystone Unit Cost vs Throughput chart and the Variable Toll-OPEX.

In Reference 2, Keystone explains the variance between the 2020 Estimate and 2020 Final and notes DRA rebates.

- Request:**
- Please confirm whether the Variable Toll Unit Cost and Variable Toll OPEX reported in Reference 1 are stated in Canadian or US dollar amounts. If these amounts take into account costs incurred for service in both of the US and Canada, please provide updated charts that separate the Variable Toll Unit Cost and the Variable Toll OPEX for the services in each of Canada and the US (and stated in their respective currencies).
  - Please fully describe the rebates mentioned in Reference 2. In your response, discuss how the rebates were calculated and how they have been accounted for when calculating the Variable Toll.

**Response:**

- See updated charts below.

**Figure CVR IR 2.8-1-1: Keystone Unit Cost vs Throughput History – Canada**

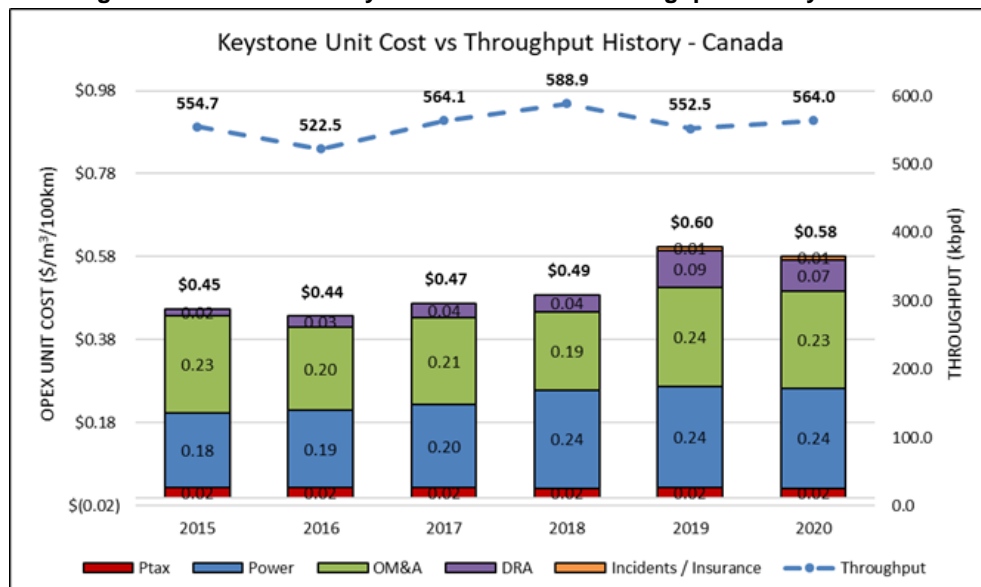
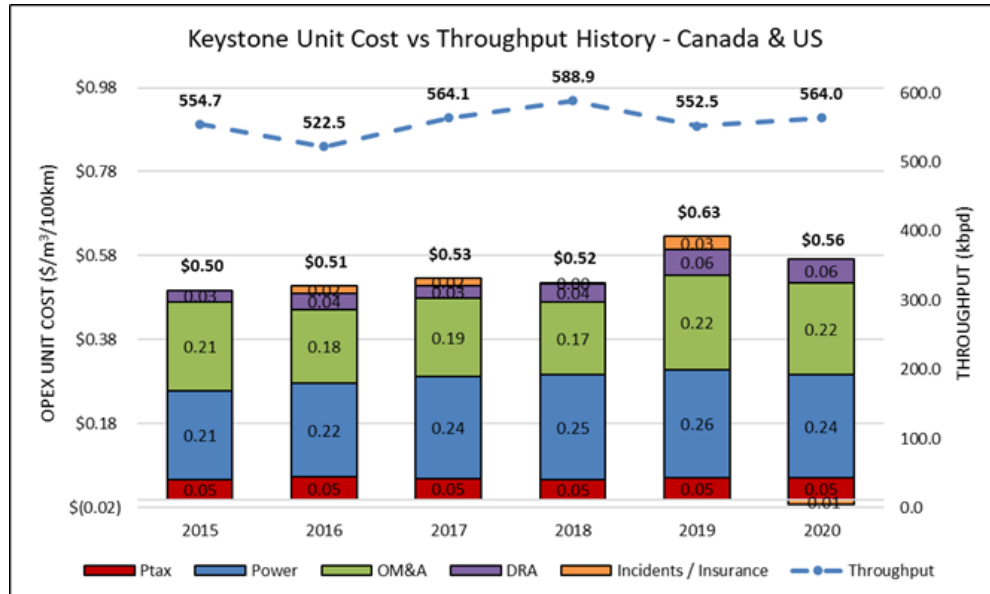


Figure CVR IR 2.8-1-2: Keystone Unit Cost vs Throughput History – Canada & U.S.



- Keystone’s contract to purchase DRA includes an annual rebate mechanism that is determined based on the aggregate volume of DRA purchased for Keystone Canada and Keystone U.S. The rebates are determined at the end of each calendar year and received in the following year. The 2020 actual (final) DRA costs include the rebate associated with the 2019 DRA volumes and price adjustment negotiated, which was received in March 2020, plus the rebate associated with the 2020 DRA volumes which was received in February 2021. For purposes of calculating the 2020 final Variable Toll, both rebates for 2019 and 2020 were included. The 2021 rebate to be received in early 2022 will be accrued for in 2021 results and included in the 2021 final Variable Tolls.