Pre-Filed Testimony of Troy Brown

In the 2019-20 Centra Gas General Rate Application

On behalf of the Industrial Gas Users

June 21, 2019

Section 1: Introduction

1. **Please state your name and business location**.

   Troy Brown

   3710, 520 3rd Ave SW

   Calgary, SW

2. **Please state your qualifications.**

   BComm, University of Saskatchewan

   9 years of natural gas market experience in Canada

3. **Please state your current employer and describe your current role.**

   Current Employer: Koch Canada Energy Services, LP (KCES)

   Current Role: Natural Gas Trading & Origination

4. **Please describe your experience with gas supply for industrial customers in Manitoba.**

   Supplier to the Koch Fertilizer Brandon Facilities

5. **Please describe your experiences with gas supply for industrial customers in other jurisdictions.**

   Currently I supply and procure gas in Alberta, Saskatchewan, Manitoba, Ontario

Section 2: Current Operations in Manitoba

6. **Please describe your understanding of the current scheduling and balancing requirements for T-service or Special Contract customers in Manitoba.**

   KCES submits nominations on TCPL Mainline to deliver gas at the Centra MDA interconnect. KCES then sends an emailed nomination to the Centra Gas nominations group to confirm our receipt of gas onto the Centra Manitoba system, which is delivered to the plant. Intra-day changes follow a similar pattern, except KCES either pays back Centra for a draft that has been created or withdraws from Centra when a pack has been created. KCES attempts to keep the pack and draft within +/- 1000 GJ at any one point in time.

   Centra Gas Manitoba often contacts KCES and other market participants to buy or sell intra-day gas to manage its own imbalances. KCES frequently shows bids for gas that Centra Gas Manitoba needs to take off its system. KCES buys that gas at a market rate depending on ability to move gas to downstream markets. KCES may also sell gas to Centra Gas Manitoba when their load levels are higher than expected. KCES has the ability to move gas to the MDA system, which we sell at a market based rate. These buys and sells help Centra Gas Manitoba balance their overall system, including Koch Fertilizer's consumption.

7. **Please described your understanding of the current penalty structure when T-Service or Special Contract customers are out of balancing tolerances.**

   When customers are not in balance and Centra incurs imbalance charges, out of balance customers are charged balancing fees.

Section 3: Centra's Proposed Changes to Balancing Fees

8. Please describe your understanding of why Centra is proposing changes?

Centra plans to charge balancing fees to incent customers to balance gas volume better than they do today. It is my understanding there are only a few customers that do not manage imbalance levels well, but I do not know the quantity of those imbalances.

9. In your view, is Centra's proposal consistent with your experience in other jurisdictions?

a. Tolerance levels:

Other pipelines typically have a higher tolerance level, for example, instead of 1-3% being exempt from fees, 5, 10 and 15% are the most prevalent ranges allowed. Almost all have different operating conditions under which the tighter tolerance ranges can be utilized if needed, but not on an ongoing basis. For example, if the tolerance range is up to 10% or more normally, but the pipeline is in constrained operating conditions, it can declare a warning including notice that imbalances must be managed more tightly during that time. After the operating constraints pass, the tolerance returns to its original level.

b. Minimum volume before balancing fees:

There is usually a minimum volume threshold that must be met before balancing fees apply. This is helpful and fair for small customers who may be out of balance by a percentage of flow, but where the actual volume level is not significant in the context of the overall natural gas system operations.

c. Trading:

Almost all balancing services allow customers to trade imbalances with other customers. If one customer is short and another long, within certain regions or operating areas, those customers are allowed to offset each other's imbalance.

d. Other options:

Aside from service options to manage imbalances, most transporters allow agents to aggregate imbalances across many customers to manage at a higher level. The agent is then responsible for its overall balance daily instead of each customer on its own.

10. Please describe any concerns you have about Centra's new balancing fee proposal.

Balancing fees should not be a revenue generator for the company nor be a customer subsidy. The net proceeds or profits in the balancing program should be refunded annually at a minimum and distributed to the customer groups that are subject to balancing fees. Refund allocations should be based on the lowest imbalance (as a percentage of volume delivered) customers within defined time periods (daily or monthly at the longest) receiving the highest percentage of the refunds.

The tolerance levels proposed by Centra are too small and the small tolerance range is unnecessary for operating reasons or to incent customers to proactively balance. Centra has not shown why the current balancing fees are not adequate.

Centra should continue netting imbalances and charging only the customers who cause Centra to incur costs. The incentive to balance *will still exist since the customer will not know during the imbalance period whether it will be charged or not*.

11. Please describe what options customers in Manitoba have to avoid the balancing fees under Centra's new proposal.

Very few options on the Centra system allow a customer to manage its imbalances. The primary tools available are on assets (pipeline, storage) off the Centra system.

12. Moving forward, what are your recommendations to the PUB with respect to Centra's proposed balancing fee structure? Briefly describe what you think the PUB should do with Centra's proposal or specific changes they should look at directing Centra to implement.

Centra should retain its current balancing process and fees. It should also review best practices such as allowing trading across customers.

Section 4: How Koch Fertilizer Currently Manages Imbalances

13. When the Koch plant changes consumption level unexpectedly, how do you know?

Daily at 6:45 am MCT, Koch receives a report from Centra showing plant consumptions, nominations, and imbalances. Koch uses this information to estimate the next day's consumption and nominations. This report is sent again at 11:15 am MCT and includes several additional hours of actual consumption for the current day. Koch also receives a report showing hourly consumption at 3pm MCT. Centra has the ability to see flows through the meter at every hour; Koch keeps in close communication with Centra and if there is any change in consumption Centra sometimes notifies its customers. Most importantly, the team at the plant notifies us immediately if there is a drastic change to consumption or if the plant goes offline.

14. What causes unexpected changes?

Actual consumption at the plant is usually very close to KCES' estimates unless there is an unexpected change. Ambient temperatures will increase gas consumption, so KCES (for KF) checks temperatures at various Canadian cities in the morning. Gas quality changes potentially can affect quantity consumed; we have not found an efficient way of monitoring the gas quality real time. Recently gas quality impacted operations at the plant and the plant operators called KCES to inquire about the heat content. The heat content of the gas delivered to the plant had changed unexpectedly, and as a result, consumption at the plant was impacted. KF and KCES had no information available from Centra or TCPL that would have allowed it to anticipate this change that created an imbalance. Other times, the electricity available to the plant by its electric provider has caused the plant to 'trip' and as a result, incur an unexpected gas imbalance.

15. What do you do?

If KCES sees a drastic change in consumption, or the Koch plant alerts us they have had an unexpected trip or other operational changes, KCES looks for alternative markets on upstream pipelines or storage assets. Commonly, KCES will contract with an upstream

pipeline for services to manage the imbalance. For example, KCES may park or borrow gas for a fee upstream of Centa's pipeline to manage an imbalance. Gas shippers to Centra become constrained by the intra-day EPSQ1 when there are mid-day changes. This means the more hours that have passed in that 'gas day', the less flexibility to adjust customers have on upstream pipelines or with storage providers. The latest a nomination can be changed on the off-system pipelines to facilitate adjustments to nominations is 7pm CCT for the next business day.

16. What is the timing between all the steps?

During weekdays KCES can react more quickly (within one hour) to sudden changes, although the other pipelines and storage nomination deadlines and EPSQ rules remain a constraint. If the Koch plant trips on a weekend, it can take a little longer to react because of time it takes to contact various market participants and alternative pipeline representatives and to get to a computer in time to make all changes needed by the next cycle.

17. What are constraints to adjusting real time to avoid an imbalance that day, or the next day?

The restrictions on upstream pipelines and in the market can be challenging. Because of the high value of the gas at alternate locations, there often may not be an intra-day market making it more challenging to move the gas. When it is economical to move gas to alternate locations, KCES tries to work within the constraints to make that work. In the next day cycle, KCES uses the most recent days of plant consumption (and the plant's insights and forecast) to try to move any imbalance toward zero.

18. When the plant is coming up from an outage is our scheduling matched/balanced with the demand, or are there times when we can not synchronize to what the plant is doing?

[1] **Elapsed-prorated-scheduled quantity** means that portion of the scheduled quantity that would have theoretically flowed up to the effective time of the intraday nomination being confirmed, based upon a cumulative uniform hourly quantity for each nomination period affected

Communication with the plant is good as it's ramping up operationally. Constraints or issues delaying the plant restart can generally be anticipated. This allows KCES to better build in flexibility with supply arrangements and options on upstream pipelines (upstream of Centra) and storage assets to the extent possible. It is easier to bring more gas online than it is to reduce volume downward based on multiple pipelines used and the variety of rules and procedures.

19. When there is an existing imbalance on the day, how do you try to reduce that?

KCES regularly sees imbalances on the day. If the KF plant is short gas, KCES looks for alternative places to buy gas or somehow pull more supply. When the KF plant does not need as much gas, KCES looks for alternate places to sell or place the gas. Because of market and pipeline restrictions, often bringing gas on during the day is challenging or not possible. When a supplier upstream of Centra has storage, that can add intra-day flexibility. Centra does not have storage available to its customers. Market dynamics also impact intra-day options and flexibility.

20. What are the constraints to eliminating the imbalance position?

The biggest constraint to eliminating imbalances during the day is the pipeline's EPSQ mentioned previously. The mix of upstream and alternative assets available to the supplier and market dynamics also impact the ability to eliminate an imbalance.