PETRINEX
CANADA'S PETROLEUM INFORMATION NETWORK

TIP

# Changes to Volumetric Reporting for LNG Facilities

| Jurisdiction | Release/Revision Date | Location of Change in this Document | Comment |
|---|---|---|---|
| BC | October 2, 2024 | | Initial Release |

**Audience:** BC LNG Facility Operators

**Purpose:** To advise LNG facility operators of new requirements for volumetric reporting.

**Background:**

The BC Energy Regulator (BCER), in consultation with Industry, determined that the current volumetric reporting rules for LNG (LN) facilities do not adequately reflect the liquefaction process of converting natural gas to LNG.

As of October 3, 2024 (September 2024 production month), changes to volumetric reporting were implemented in Petrinex that better reflect the process and will accommodate operators in the accurate reporting of volumetric activity at LNG facilities. These changes are go-forward and any prior period updates would follow the previous volumetric reporting rules.

**Reporting Changes:**

Changes implemented are primarily to create new balancing rules for products similar to the balancing rules in effect at gas plants.

Gas Balancing:

Previously, gas related activities were balanced with LNG related activities. A unit of LNG was equal to a unit of gas. There was no ability to report volumes of natural gas liquids (butanes, pentanes, etc.) processed from the gas.

New BCER rules will allow for the processing of natural gas liquids (NGL). LNG will also be treated as a product that is processed from the gas. The gas

equivalent shrinkage (SHR) of processed volumes of NGL and LNG products is auto-calculated by Petrinex. The factors used to calculate SHR are fixed for each NGL product in Petrinex and cannot be changed. The factor used to calculate SHR from LNG will be input by the operator (see below).

Gas equivalent volumes are subtracted from the inlet gas in determining the metering difference (DIFF) of gas for balancing purposes.

Volumetric Non-Compliance rules for gas balancing at LNG facilities will be the same as those for gas plants.

- A warning is generated for a gas metering difference between 5 and 20 per cent.
- A warning is generated for a gas metering difference that is between 20 and 100 per cent, but the total volume is less than 15 $e^3m^3$.
- An error is generated for a gas metering difference that is between 20 and 100 per cent, and the total volume is greater than 15 $e^3m^3$.
- An error is generated for a gas metering difference of 100 per cent, regardless of volume.

Volumetric non-compliance errors are subject to a regulatory penalty if not corrected before the volumetric reporting deadline. Warnings are not subject to penalty.

<u>Natural Gas Liquid (NGL) Balancing:</u>

NGL products include mix and spec products extracted from gas (LITEMX, C2-MX to C5-MX, C2-SP to C5-SP). These products have their own product groups for balancing purposes. For example, BUTANE-MX (C4-MX) is a separate product group for balancing purposes than BUTANE-SP (C4-SP).

Previously, it was assumed that the majority of NGL products would be extracted from the upstream gas processing plants and there would be limited processed (extracted) volumes of NGL products at the LNG facility. However, due to the large gas volumes at some of the LNG facilities and extreme temperatures associated with the liquefaction process, there will be varying volumes of NGLs extracted.

Going forward, Petrinex will auto-calculate a processed (PROC) volume for any NGL product that has reported activity at the facility. The PROC volume balances

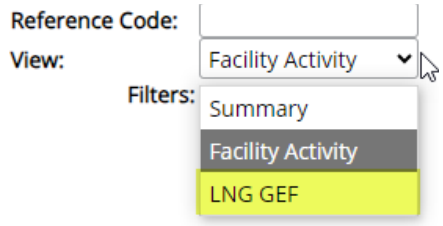
the product group and is used to calculate a SHR volume from the gas (using fixed factors as mentioned above).

Petrinex calculates PROC as closing inventory + total disposition - opening inventory - total receipts - total Production - inventory adjustment - fractionation yield + fuel + flare.

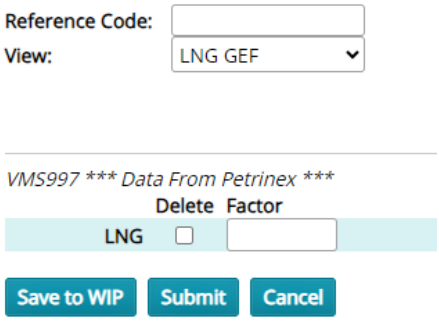
LNG Balancing & LNG GEF:

LNG will now be treated as its own product group. Like NGL products, Petrinex will auto-calculate a PROC volume (using the same formula above) to balance the product group. Petrinex will also use that PROC volume (along with a factor) to calculate the SHR volume from the gas.

The difference for LNG is that the gas equivalent factor (GEF) is input by the operator. A new "View" screen has been developed within the Edit Volumetric Submission reporting module to input the factor. When editing volumetrics online, this screen can be found by clicking the drop-down for View and selecting the LNG GEF option.




Users will then be taken to the new screen where a GEF can be provided.



PETRINEX
CANADA'S PETROLEUM INFORMATION NETWORK

# TIP

If any volumetric activity is reported for LNG in a production month, a GEF must be provided. The BCER has established that the acceptable range for the GEF is from 0.54000 to 0.66000.

It should be noted that the ability to report the LNG GEF has not been added to the volumetric batch upload process. If volumetrics are submitted via batch upload, Petrinex will automatically assign a GEF of 0.60000 for the month. Any changes to the factor must be submitted online.

Acid Gas:

Previously, operators were not able to report activities specific to acid gas removed as part of LNG facility processing. Operators may now report certain volumetric activities for the acid gas product (ACGAS):

- Receipts (REC) of acid gas from other facilities/locations.
- Flaring (FLARE) of acid gas.
- Manual shrinkage (SHR) volumes of acid gas.

Acid gas activity is under the gas product group for balancing purposes.

**More information:** Please contact the Petrinex Business Desk.

Phone: 403-297-6111
Toll Free: 1-800-992-1144
E-mail: petrinexsupport@petrinex.ca