Further considerations for NAESB LAUF standard

**Reporting period.** ICF’s Lost and Unaccounted for Gas study prepared for the Massachusetts Department of Public Utilities[[1]](#footnote-1) recommends an annual reporting period (Accounting Period) that begins and ends in the summer, when gas usage is more stable. This allows for a more complete annual picture of gas usage, relative to an Accounting Period that would begin and end in the winter, a period in which use tends to be highly variable. Furthermore, we recommend that the Accounting Period conform to PHMSA’s “12 months ending June 30 of the reporting year,” in order to reduce data preparation redundancies and inefficiencies that lead to higher administrative costs.

**Relative contribution of LAUF Factors.** In studying factors contributing to LAUF for a few utilities in Massachusetts, ICF found that the contribution of some factors to LAUF is relatively low in magnitude compared to others. For factors that are small in magnitude, ICF advised that simplified quantification methods be used, while larger factors should be quantified more carefully and accurately.

**Guidance on data management and calculations.** ICF recommends that a framework should provide guidance on data and estimation methods that are acceptable for reporting. It should establish detailed methods for estimating each LAUF Factor.

**Uncertainties in reported numbers.** ICF further recommends that guidelines should be provided on how to identify and report on uncertainties in the reported data and estimates.

**Operational capacity of small LREs.** As noted in the ICF study, smaller LREs may find it challenging to comply with a uniform standard for reporting. Whereas larger LREs have existing capacity for capturing and reporting individual LAUF Factors, smaller LREs might not have the ability to gather the necessary resources for such observations and reporting.

**LAUF Factors: accounting vs. adjustments.** It is possible that the contribution of certain LAUF Factors to LAUF is very minor. In some cases, the magnitude of LAUF Factors may vary by geography. Regardless of this variation, it is necessary for all LREs in a given category (i.e. interstate pipelines, intrastate pipelines, LDCs, storage operators) to use the same accounting methods for each LAUF Factor and apply the same adjustments in LAUF when reporting LAUF to federal and applicable state governments. LAUF shall be separately calculated and reported by facility classification (i.e., distribution, storage, and transmission) to allow for fair comparison. Thus, LREs with storage, transmission, and production/gathering facilities should calculate and report LAUF volumes for each of these facilities separately. Where a LAUF Factor is accounted for by the LRE but not included in the list of Adjustments, the LRE should consistently apply the same methodology within Accounting Period(s). Any LRE that introduces a change to its methods to quantify such a factor between Accounting Periods should, as part of its LAUF reporting obligations for the Accounting Period in which it implements such change, describe the change in sufficient detail to allow for the calculation of comparable values across Accounting Periods.

A list of LAUF Factors is provided in Appendix B of the proposed standardized accounting framework, and an example list of adjustments is provided in Appendix A. In consideration of the possible negligible nature of some LAUF Factors, and the lack of publically accessible data on the relative magnitude and range of each LAUF Factor, it may be necessary to apply a comprehensive accounting method for LAUF Factors for several years to serve as a study baseline. Once sufficient data has been gathered, and it is determined which LAUF Factors are negligible, then the list of adjustments in the NAESB standard could be reduced, if warranted.

**Transparency.** It is essential that LAUF volumes and percentages be comparable across and within LREs in a given category (as outlined under “LAUF Factors: accounting vs. adjustments” above). Therefore, the final list of adjustments should be agreed to in the formation of the NAESB standard.

# Questions for discussion:

We anticipate that the consideration of this proposed standard for accounting for LAUF as part of the NAESB standards development process will raise a number of questions for discussion. Some of these questions are noted below:

1. What are the acceptable data sources for each LAUF Factor?
2. Should the standard include a description of the appropriate metering and engineering practices to be used for reporting?
3. On the quantification of various components of the LAUF formula:
   1. Under what circumstances is it appropriate to allow for estimation of volumes?
   2. Can the standard assume that some values are negligible, given that there is little information available, and that some methods are likely to be less accurate than others?
   3. Should the standard include a requirement to assess and identify uncertainties in reported data and estimates?

**PA LAUF Rule (for reference – not to be included in the final proposed standard)**

**59.111. Unaccounted-for-gas.**

 (a) *Definitions*. The following words and terms, when used in this section, have the following meanings, unless the text clearly indicates otherwise:

*Adjustments*—Gas used by an NGDC or city natural gas distribution operation for safe and reliable service, such as company use, calculable losses from construction, purging, storage migration, other temperature and pressure adjustments, and adjustments for heat content of natural gas.

*Gas delivered*—Gas provided by the distribution, transmission, storage or production/gathering facilities of an NGDC or city natural gas distribution operation, regardless of use, adjusted for temperature or pressure variations. This category includes quantities of gas consumed by an end user, exchange gas supplied to another utility, gas delivered to transportation customers or other gas delivered to a user other than the utility. When bill timing issues arise, an effort shall be made to reasonably estimate consumption.

*Gas received*—Gas that is supplied to the distribution, transmission, storage or production/gathering facilities of an NGDC or city natural gas distribution operation, regardless of use, adjusted for temperature or pressure variations. This category includes gas for sales, storage, transportation quantities, exchange gas received or other quantity of gas that otherwise enters the utility's facilities.

*NGDC*—Natural gas distribution company.

*UFG—Unaccounted-for-gas*—The difference between the total gas available from all sources and the total gas accounted for as sales, net interchange and company use. This difference includes leakage or other actual losses, discrepancies due to meter inaccuracies, variations of temperatures or pressures, or both, and other variants, particularly billing lag.

 (b) *Calculation*.

 (1) UFGx = Gas Receivedx - Gas Deliveredx - Adjustmentsx

 (2) %UFGx = (UFGx/Gas Received) \* 100

 (3) X denotes the system type (distribution, transmission, storage or production/gathering). When possible, UFG must be computed and reported by system type.

 (4) Gas received, gas delivered and adjustments must represent actual gas quantities. Estimates may be provided but must be clearly identified and have supporting justification, assumptions and calculations.

 (5) Adjustments must be individually identified by category (such as company use, calculable losses from construction, purging, storage migration, other temperature and pressure adjustments, and adjustments for heat content of natural gas). Adjustments must be supported by metered data, sound engineering practices or other quantifiable results that clearly support the utility's need for the adjustment. Adjustments must be consistent from filing to filing.

 (6) The definition of ''UFG'' in subsection (a) and the calculation under this subsection apply to UFG filed with the Commission.

 (c) *Metrics for distribution system losses.*

 (1) Each NGDC and city natural gas distribution operation shall, at a minimum, reduce distribution system loss performance in accordance with the metrics in the following table, beginning with its first subsequent Purchased Gas Cost (PGC) or Gas Cost Rate (GCR) filing after August 11, 2014. The metric starts with 5% in the first year and decreases by 0.5% every year in the subsequent years until it reaches 3% as shown in the following table:

|  |  |  |
| --- | --- | --- |
|  | **Year** | **Percent UFG** |
|  | 1 | 5.00% |
|  | 2 | 4.50% |
|  | 3 | 4.00% |
|  | 4 | 3.50% |
|  | 5 | 3.00% |

 (2) The distribution metrics shall be applied on an annual basis for the 12 months ending August 31. UFG reports, as described by the Commission and relating to this section, shall be filed by September 30th of each year.

 (3) UFG levels above the applicable annual targets in paragraph (1) shall be presumed to be excessive absent evidence to the contrary and may not be recovered within the current or a future PGC or GCR filing. If an NGDC's actual UFG exceeds an applicable target, the NGDC may demonstrate that its level of UFG is warranted.

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1. ICF International (2014) Lost and Unaccounted for Gas. Cambridge, Massachusetts. Retrieved from <http://www.mass.gov/eea/docs/dpu/gas/icf-lauf-report.pdf>. [↑](#footnote-ref-1)