Expert Report

of

H. Edwin Overcast

RÉGIE DE L'ÉNERGIE

D-2017-009 R-3867-2013 Phase 3

Pursuant to ordering paragraph 41 of the February 1, 2017 Order in the Docket, each of the experts must set out their position on the points of divergence in their individual report. My focus begins with some basic economics and adds comments on the areas of disagreement with the other experts.

Basic Economics

The decision to use long run marginal costs (LRMC) to estimate operation and maintenance (O&M) expenses associated with new customer additions is a flawed concept. LMRC has no properties related to economic efficiency with one exception when short run marginal cost (SRMC) equals long run marginal cost. Even then any movement from this combination of marginal cost and output must be based on SRMC to promote economic efficiency. There is no dispute of this conclusion in economic theory. For example Alfred Kahn states "it is short-run marginal cost to which price should at any given time—*hence always*—be equated, because it is short-run marginal that reflects the social opportunity cost of providing the additional unit that buyers are at any given time trying to decide whether to buy."[1] (Emphasis added.) Severin Borenstein reaches the same conclusion when he states "The idea that economic efficiency is maximized when price reflects full short-run social marginal cost (SMC) is a bedrock principle of microeconomics."[2] Further, the application of theory in this case is superior to the use of incorrect values.

By adopting the use of LRMC inefficiencies are created that harm both society, in general, and both present and future gas customers as well. Because LRMC exceeds the SRMC for O&M of customer additions despite economies of scale as the result of inflation in future costs, customer connections are reduced depriving current customers of lower costs per unit due to those scale economies. This result is demonstrated for Gaz Metro in response to the data request numbered 3.2 for Mr. Chernick. It shows how the unit costs decline when customers are added where there is capacity in the fixed customer O&M such as meter reading, billing, call centers and so forth to absorb that

[1] The Economics of Regulation, Alfred E. Kahn, the MIT Press, 1995 (Sixth Printing), Vol. I, page 71
[2] "The Economics of Fixed Cost Recovery by Utilities", Severin Borenstein, July 2016, Energy Institute at Haas, p.3

customer without addition costs. This point is stated succinctly by Ralph Turvey when he states "Marginal cost is an estimate of how economic cost would change if output changed. Marginal means a first derivative, but in practice, because of *indivisibilities* in plant sizes, we are often interested in the per unit change in cost that will be caused by a substantial change in a future output, not of a one unit change. Furthermore, *investment and capacity are not continuously variable, they are lumpy*."[3] The important point Turvey makes applies to fixed O&M expenses such as meter reading, customer service and others that are heavily supported by investments in capacity including meter data management, billing systems and customer service systems. In the short run capacity is available to absorb added customers without any SRMC even though LRMC that are lumpy will be added at some point in the future. That future time is a function of many variables that make even an estimate of that point in time much less the costs of the activity at that time unknowable. With respect to the Régie, the statement justifying the use of LRMC- "As the profitability analysis of the development plan bears on a 40-year period, it would seem logical to use long-term costs"[4] ignores the fact that the profitability analysis over 40 years is based on the levelized costs of the lumpy capacity addition as determined by SRMC. The basis for the capital components are the current dollars required for capital investments at the time of connection. The Régie should not add to the current value marginal costs an estimate of LRMC for customer connections. The two components are not additive and result in inefficient investments. This is contrary to one of Bonbright's three principles of rates- the Consumer Rationing Principle. Consumer rationing means that the approved "rates should discourage wasteful use of utility services and *promote all use that is economically justified through application of economically sound rate designs*."[5] (Emphasis added.)

The simple conclusion is that the use of LRMC as required in the current review does not produce a policy for system expansion that serves the best interests of Gaz Metro customers or potential Gaz Metro customers. These concepts are discussed in more detail in Section 2 of the Black & Veatch Report.

Areas of Disagreement with Other Experts

The areas of disagreement in the export report are defined by costs that were excluded from the Black & Veatch report as having zero LRMC values. These include costs where marginal cost for the foreseeable future is zero. This includes meter reading where there has been no change in the cost of meter reading beyond inflation for almost twenty years. Given technology changes in meter reading, the advent of smart meters and the ability to read meters remotely Black & Veatch believes it is correct to use a

[3] "WHAT ARE MARGINAL COSTS AND HOW TO ESTIMATE THEM?" by Ralph Turvey, Desktop published by Jan Marchant, © The University of Bath, p.2
[4] D-2013-106, Phase 2
[5] Principles of Public Utility Rates, James C. Bonbright, 1961, p. 385

zero value for LRMC at this time. The fixed nature of meter reading expense is such that fixed costs do not impact marginal cost and these dollars should be excluded from the calculation.

Cost of bad debt and collection and recovery costs are not, by their nature, marginal costs for a utility. It is important to note that not every cost in revenue requirements is associated with a marginal cost to the utility. These costs are pass-through costs but are not marginal costs. For example Severin Borenstein as cited above states "utility revenues are expected to cover some public purpose programs whose costs are not marginal (*subsidies for low income customers*, energy efficiency programs, distributed renewable generation incentives, among others)." The important point is that inclusion of these costs in the LRMC estimate of customer O&M treats a social cost established by regulatory policy as a cost that is marginal to the connection of a new customer. Absent regulation a rational utility would not connect a customer expecting to not be paid for service and would eliminate the possibility by requiring a prepaid meter much as cell phone companies have done for customers who are a credit risk. These costs are correctly set at zero for LRMC.

Customer retention programs are also public purpose programs designed to minimize rates for all customers. They are not LRMC of customer connections but are a necessary component of maintain benefits for all customers as economic circumstances evolve in ways that Gaz Metro does not control. To be consistent with marginal costs, the utility must be able to control the costs. These costs are not LRMC.

The issue of opening a billing file in years subsequent to the first year appears to be in dispute as well. It seems that the dispute is based on an argument about what happens when a new occupant of a premise causes a customer connection after year one. In the analysis it is assumed that year one applies to the customer not the premise. Where that is the case there should be no dispute over the zero value for first year costs in subsequent years.

Maintenance of service lines is another area of lumpy fixed cost for preventive maintenance and is both lumpy and incident related for corrective maintenance. Most service lines are plastic mains that absent the line being cut by an outside party require little or no corrective maintenance over the life of the pipe. Since outside damage is the responsibility of a third party most gas utilities collect damages from the third party and hence no marginal cost to the utility. If the policy differs so that the utility bears the cost it becomes a social cost that is not marginal to the utility in that event. As for preventive maintenance such as leak surveys, those costs are fixed and change infrequently when required by regulation or substantial growth in miles of line. Since these costs are fixed over long periods, the value of zero is the best estimate of LRMC currently.

Finally, there is a dispute over metering equipment for residential and CII customers. The value for residential and CII is zero for standard metering as it should be since the great majority of customers will have standard metering and no LRMC in these categories. Values have been included in the maximum costs merely to note that should any of this extra equipment be required it would be subject to inclusion in the analysis of LRMC.

I conclude that the disagreements related to these other items are not well supported and that the categories included in the Black & Veatch Report should not be altered as that will result in social welfare losses as well as higher rates for existing customers by foreclosing system expansion to marginal customers who nevertheless contribute to spreading fixed costs over more units resulting in lower per unit costs for all customers.