

## R-3842-2013

### HQT-HQD - Demande d'approbation du taux de rendement des capitaux propres et du mécanisme de traitement des écarts de rendement

November 4, 2013

#### Paul Centolella Undertaking 2: Information Asymmetry and ESMs in the Economic Literature

As indicated in both Prepared Direct Testimony of Paul Centolella at pages 11 – 12 and Mr. Centolella's response to Hydro Quebec's counsel in the transcript for October 30<sup>th</sup> at page 114, the Régie's decision regarding Gaz Métro in Case No. R-3809-2012, Phase 2, is an example of the regulator taking the asymmetry of information into account in creating an ESM for a comparable case.

The most common use of an ESM is as a component in a multi-year rate plan. Information asymmetry plays a prominent role in the economic literature as the basis for multi-year rate plans that include ESMs. The following are examples from the literature on regulatory economics:

1. C.R. Carlson, *Performance Based Regulation of Utilities: Theoretical Developments in the Last Two Decades*, The Van Horne Institute (March 2010): This report by a Canadian research institute describes "the essence" of incentive based utility regulation as being a response to asymmetric information and earnings sharing as "necessary" to the implementation of incentive regulation (pages 1 and 5).
2. Karl A. McDermott and Carl R. Peterson, "The Essential Role of Earnings Sharing in the Design of Successful Performance-Based Regulation," in A. Faruqui and B.K. Eakin (eds.), *Electricity Pricing in Transition* (2002): McDermott and Peterson characterize the limitations of rate of return regulation as being a result of the regulator's lack of information and propose ESMs as means of reconciling the objectives of the rate of return regulation and performance based regulation (p. 327), "While rate of return regulation is simple in that it abstracts from the realities of the economic world, it is often extremely complicated to implement in practice. The difficulty does not lie in the complications of the system, but in the extremely poor level of information regulators have to make decisions."
3. G. Comnes, et al., *Performance Based Ratemaking for Electric Utilities: Review of Plans and Analysis of Economic and Resource Planning Issues, Volume 1*, Lawrence Berkeley National Laboratory, LBL-37577 (November 1995): In introducing the concept of Performance Based Regulation (PBR), this survey of plans states (page 2), "PBR mechanisms are developed with recognition of the information asymmetry between regulators and regulated utilities." And, it addresses ESMs as one of the "Essential Design Elements" of such plans.
4. Paul Joskow, *Incentive Regulation in Theory and Practice: Electricity Distribution and Transmission Networks*, AEI-Brookings Joint Center for Regulatory Studies, Working Paper 05-18 (September 2005): In this paper, Professor Joskow describes the role of information asymmetry and the information disadvantages facing regulators in the historical and recent development of regulatory models that share earnings.

5. Paul Joskow, "Incentive Regulation and Its Application to Electricity Networks," *Review of Network Economics*, Volume 7, Issue 4 (December 2008): In this article, Professor Joskow discusses the design issues that arise in incentive regulation when regulators are imperfectly informed and there is asymmetric information about costs, managerial effort, and quality of service. He describes the use of sharing mechanisms in incentive regulation in the United Kingdom in response to these concerns.
6. Cloda Jenkins, *RIIO Economics: Examining the Economics Underlying Ofgem's New Regulatory Framework*, Florence School of Regulation Working Paper (June 2011): This article describes the economic basis for the conclusions of a multi-year review of rate setting policies by the U.K. Office of Gas and Electric Markets (Ofgem). This review resulted in a transition from price cap regulation to Ofgem's current model, RIIO – "**R**evenue set to deliver strong **I**ncentives, **I**nnovation and **O**utputs." As Dr. Jenkins describes (at page 4), "The aim with RIIO was to build on the successes of RPI-X by developing an adapted incentive framework that was better suited to the changing nature of energy network services and that better reflected the fact that companies and the regulator were making decisions in a long-term repeated game with asymmetric information and uncertainty." RIIO includes an earnings sharing mechanism in which companies retain a fixed percentage of any savings (page 13).