Q. In your Expert's report in Section 4: Industrial Customer Second Block Energy Rate, page 16, you recognized that a second block energy rate set at marginal cost of energy sends a price signal to customers to conserve electric energy. However, due to Vale's load ramping up, you agree with Hydro that a second block not be implemented for industrial customers. Do you agree that a single energy rate of 5.15 cents per kWh, if the marginal cost of energy is 15.37 cents per kWh, would provide for the implementation of economically perverse energy price signals for all industrial customers at this time and at least for the next several years? Please provide a detailed explanation of your response.

A. As explained in PUB-V-002, I do not believe that a two block rate would be economically efficient for new industrial customers which are starting up their operations. When all industrial customers are at a stable production level, I believe that a two block energy rate should be considered. I do note that the 2015 cost of service (COS) lists the industrial firm energy rate at 5.15 ¢/kWh and the demand rate at $8.38/kW/month. (Exhibit 13, 2015 COS, Schedule 1.3, page 1 of 1, line 2). Typically, the load factor (LF) for an industrial customer is high, in the range of 85%. This means that in order for the energy to increase, the demand must also increase. At these rates, the demand increase is 1.35¢/kWh[1], so the total cost for an extra kWh of energy is 6.50¢.

At about the same time that all the industrial customers are in stable operation, the Labrador in-feed will be coming on line. Although a marginal cost of energy has not been completed for this scenario, the estimated generation cost at the time of the Muskrat Falls review was 7.6 ¢/kWh (Muskrat Falls Review – Exhibit 36, page 2 of 2, second paragraph). The difference between the marginal cost and the industrial energy rate will diminish substantially.

[1] Calculation: (1 kW * $8.38/kW/month * 12 months/yr * 100 ¢/$) / (1 kW * 8760 hrs/year * 0.75 (LF)) = 1.35 ¢/kWh

Implementing a two block rate for the two industrial customers (CBPP and NARL) with a stable production rate would not result in a transparent, easy to understand rate and may be impossible to implement given the complexity of the rate stabilization plan. Simplicity and understandability is one of Bonbright's attributes of a sound rate structure[2].

[2] Reference: "Principles of Public Utility Rates", Bonbright, Danielsen, Kamerschen, 1988, page 384, item 9.