Q. In the InterGroup Consultants Ltd. Report on page 37, Section 6.1 Industrial Rate Design, it is said that due to the major underlying changes occurring over the next few years, it is not an advisable time to adopt alternative rate designs based on marginal costs. Hydro in response to CA-NLH-033 estimates that in 2018, if the Labrador Interconnection comes online, its marginal energy cost may drop to between 5.4 and 7.2 cents per kwh, and the proposed marginal energy rate for the industrial customers is 4.782 cents per kwh. Do you agree that when rates are below marginal cost, there are perverse price signals that provide incentives to consume additional amounts of energy that provide benefits that are below the resource costs of producing the additional energy? Please explain your response.

A. At the outset, it is important to clarify that industrial customers operate at a high load factor. This typically means that they cannot increase their usage of energy without electing for a corresponding increase to their Power on Order (and vice versa). As a result, at the rates proposed by Hydro in its 2013 GRA [4.782 cents/kW.h energy and $9.13/kW demand charge], the marginal cost of energy for an industrial customer would approximate 6.253 cents/kW.h[1].

It is also important to recognize that industrial customers are often faced with energy management decisions which often require a large amount of investment by the industrial company (e.g., new energy efficiency initiatives) or a large commitment to revise operation (e.g., closing a shift, or a production line). These initiatives are based on changes that could affect operations for many years or decades. Imposing a marginal cost signal based on Holyrood in the short term (approximately 3 years) which is misaligned with much lower marginal costs that would occur following a Labrador infeed could incent investment in capital or process changes today that would be significantly inefficient within a reasonably short period of time.

For rate design, long-term cost trends should be balanced with the short-term to ensure fair and stable rates are set that send correct price signals.

[1] This reflects a customer operating at an 85% load factor who increases their load by 1 kW. This customer will consume about 7,446 kW.h added energy in a year, plus increase their Power on Order by 1 kW which would result total marginal cost of $465.63 for the added load or 6.253 cents/kW.h.