Q. In reference to the elements associated with the load forecast data and underlying mechanisms, to what extent do the forecasts include the effect of codes and standards that improve the efficiency of electric energy use and how are such effects directly incorporated into the forecast?

A. The current long term planning load forecast does not include an effect of codes and standards that improve the efficiency of electric energy use. Historically, changes to codes and standards are analyzed and quantified outside of the load forecast models. Changes to codes and standards that are quantified as having a measurable and material effect on customer consumption levels are included in the forecast through exogenous adjustment variables. In the past this modelling approach was used to include the electric energy impacts of building code changes in the 1980's affecting residential building envelopes and was also used to include the electric energy impacts of changing appliance efficiency standards that occurred in the 1990's.

Note that owing to the high saturation of electric heating in the residential and commercial customer base in the province, changes to certain codes and standards have less of an impact than in other regions of North America. A specific example would be changes to codes and standards that result in less heat output (e.g., motors, lighting) through efficiency improvements. The resulting electric energy reduction impact of such changes in Newfoundland and Labrador is reduced due to the extended heating season in the province and low air conditioning requirements due to cool summer temperatures. By contrast, changes to codes and standards that improve the building envelope (e.g., reduced heating energy requirements) of

the customer base generally result in more material electric energy impact (e.g., insulated basements).