Q. Consumer Question: Regarding load growth, if an average domestic all-electric customer were to install an air-source heat pump, how much does Nalcor estimate would be the reduction in that customer's electricity consumption per year? What if the heat pump was a ground-source one?

A. The table below provides Nalcor's estimates of the reduction in electricity consumption for heating if an average domestic all-electric household were to install an air-source or ground-source heat pump.

	Air-Source Heat Pump	Ground-Source Heat Pump
Heat Pump Seasonal Performance Factor (HSPF) [1,2]	6.7 to 7.4	8.9 to 12.0
Average All Electric Household Annual Consumption (kWh)	24,700	24,700
Average Annual Heating Energy Requirements (kWh)	15,400	15,400
Annual Energy Requirements with Heat Pump (kWh)	7,474	5,143
Electricity Savings (kWh)[3]	7,926	10,257
Percentage Savings on Household Consumption	32%	42%

Note 1: HSPF as per Natural Resources Canada
Note 2: Heat pump energy requirements calculated at HSPF range midpoint
Note 3: The impact on system peak demand of resistance or alternate backup for an air-source heat pump has not been established.