Q. Please provide a list of substation transformers replaced by the company over the past 15 years and provide the age and loading data applicable to the decision to replace each transformer.

A. In the past 15 years, Newfoundland Power has installed 4 transformers to meet customer and sales growth. Table 1 includes the 4 power transformers. Three were new purchases and the unit in Bayview was relocated from Walbournes in 2004.

Table 1
Replacement and Additional Transformers
Required for Loading

Company Number	Location	Capacity (MVA)	Voltage (kV)	Installation Date	Purpose
200354	Virginia Waters	25	66-25/12.5	2003	Load growth in St. John's East area
200353	Chamberlains	25	66-25/12.5	2003	Load growth in CBS area
200355	Walbournes	25	66-12.5	2004	Load growth in Corner Brook area
200145	Bayview	15	66-12.5	2004	Load growth in Corner Brook area

Table 2 provides loading data for the four substations which were impacted by the installation of these 4 power transformers.

Table 2
Substation Peak Loading (MVA)[1]

	Capacity[2]						
Location	**Existing**	**Upgraded**	**2002**	**2003**	**2004**	**2005**	**2006**
Virginia Waters[3]	50	75	43.7	38.1	45.6	49.3	57.4
Chamberlains[4]	25	50	24.2	24.2	24.8	28.0	28.4
Walbournes T2[5]	15	25	15.0	14.5	15.6	16.2	15.4
Bayview[6]	20	35	19.9	20.2	21.3	18.8	20.8

1 The timing of transformer peak loadings is influenced by weather conditions. A warmer winter than normal can result in a transformer loading being lower than forecast.
2 Existing capacity is the capacity before the transformer in Table 1 was installed. Upgraded capacity is the capacity after the transformer in Table 1 was installed.
3 In 2003, a 25 MVA transformer was installed at Virginia Waters. This increased the capacity of the substation from 50 MVA (2 transformers) to 75 MVA (3 transformers).
4 In 2003, a 25 MVA transformer was installed at Chamberlains. This increased the capacity of the substation from 25 MVA (1 transformer) to 50 MVA (2 transformers).
5 In 2004, the 15 MVA transformer at Walbournes was replaced with a 25 MVA unit.
6 In 2004, the 15 MVA transformer, which was removed from Walbournes was relocated to Bayview . This increased the capacity of Bayview substation from 20 MVA (1 transformer) to 35 MVA (2 transformers).