Q. Re: 2013 Capital Projects 500,000 and Over: Explanations, page C-50 Upgrade Terminal Station:
How long has the reliability performance and safety performance of the Wiltondale Thermal Station been considered sub-par?

A. The reliability performance of the Wiltondale Terminal Station, indicated in the tables below, includes forced outages as a result of both transmission line and terminal station faults. The five-year average forced outages are based on the following statistics.

Table 1A: T-SAIFI (2007-2011 Forced Outages)

Year	Hydro	TRO Northern	Wiltondale	CEA
2007	1.82	4.00	1.00	0.74
2008	0.95	2.58	2.00	0.75
2009	0.38	1.25	1.00	0.71
2010	1.38	4.08	4.00	0.64
2011	3.49	14.08	12.00	0.71

Table 1B: T-SAIDI (2007-2011 Forced Outages)

Year	Hydro	TRO Northern	Wiltondale	CEA
2007	104.71	47.92	1.00	68.32
2008	63.29	96.00	283.00	61.99
2009	13.53	58.17	1.00	56.21
2010	41.27	9.58	4.00	50.38
2011	220.48	868.17	610.00	84.34

The outage statistics for 2011 show a significant change from previous years with 12 outages lasting 610 minutes in total.

The Wiltondale Terminal Station is comprised of various pieces of equipment, all of which impact the safety performance. The grounding system poses the greatest risk to the safety performance of the station and has been sub-par since 2000.

In 2000, the Institute of Electrical and Electronics Engineers (IEEE) re-issued the industry standard *IEEE 80-2000 – IEEE Guide For Safety in AC Substation Grounding*. This standard lists the safety criteria for step and touch potentials in terminal stations. When different voltage levels are present in close proximity to one another, there is a risk of electrical shock or electrocution should an individual touch a grounded piece of equipment or step from one location to another.