

1 Q. Provide the number and duration of unplanned outages on the Island  
2 Interconnected system each year from 2004 to 2013, inclusive, that resulted in  
3 Hydro's inability to supply customer load.

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6 A. The following table outlines the number and duration (in total hours) of unplanned  
7 outages on the Island Interconnected bulk transmission system for the period 2004  
8 to 2013 which have resulted in Hydro's inability to supply customer load.

## Unplanned Outages on the Hydro Bulk Island Interconnected System

Hydro	Year	Total Number of Interruptions	Total Interruption Duration (hours)
	2004	21	10
2005	19	19	
2006	20	23	
2007	48 <sup>1</sup>	49 <sup>2</sup>	
2008	18	24	
2009	17	11	
2010	23	11	
2011	79 <sup>3</sup>	84 <sup>3</sup>	
2012	35	22	
2013	62 <sup>4</sup>	114 <sup>5</sup>	

## Footnotes:

1. In 2007, the number of interruptions was affected by 14 interruptions to Hawke's Bay Terminal Station as a result of salt contamination on transmission line TL221.
2. The total forced outage duration was affected by three outages to the White Bay area. Broken insulators on transmission line TL253 and two Howley Terminal Station transformer T2 lockouts due to a faulty transformer protection relay which resulted in a 28 hour total forced outage duration.
3. Both the number of interruptions and total duration was affected by a wind storm in December that affected the Great Northern Peninsula. Approximately 63 interruptions occurred during this period, with an outage duration of approximately 60 hours.
4. In 2013, the number of interruptions was affected by 14 interruptions to the Hawke's Bay Terminal Station as the result of salt contamination on transmission line TL221. In addition, there were 14 interruptions to the Great Northern Peninsula, caused by transformer protection issues at Berry Hill Terminal Station, and insulator flashovers on transmission lines TL241, TL244, and TL256.
5. In 2013, the total forced outage duration was affected by the January 11 event which resulted in an eight-hour outage. Outages on the Great Northern Peninsula accounted for 48% of the total outage duration. The outages were generally caused by transmission line trips on TL239, TL241, TL244, TL256 and a transformer protection issue at Berry Hill Terminal Station.