



1 Deriving ‘value’ from high impact weather forecasts – a commercial airline’s perspective

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Terminal aerodrome forecast (TAF) is a weather product used by a variety of aviation customers, including civilian, military and commercial airlines. The forecasts, written in a code format, designed by the World Meteorological Organisation (WMO), provide the weather forecast and any holding fuel requirements, for the relevant airport. It is issued every 6 hours and amended as required.

Since 1997, Australian forecasters have been issuing a ‘code grey’ statement in conjunction with the standard TAF, for the major ports. ‘Code Grey’ service is a special forecast intended to supplement the routine TAF and reduce operational impact should a significant amend to the TAF be required later on. It is used if ‘*small but realistic chance*’ (between 1-29%) of a thunderstorm or below special alternate (SLAM) conditions at the relevant airport. This form of probability forecasting has led to efficiency gains for flight planning and reduces fuel requirements, especially by long-haul aircrafts operating into Australian ports.

Using this form of probability forecasting, Qantas Airways has attempted to test such a system, for long haul flights out of Australia and some results are presented. Narita, Japan is used as the test port with WeatherNews Incorporated (WNI) providing the probability forecast to supplement the routine TAF issued by Japanese Meteorological Agency (JMA).

The benefit and value of this low probability (code grey) forecasting is evaluated. An

attempt to put an economical/numerical value of this benefit/forecasting strategy is also discussed and compared with using the TAF alone.