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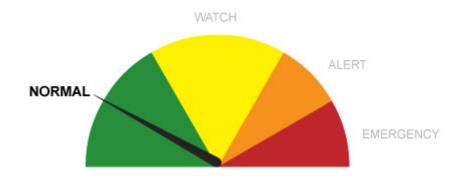
# **Current Outlook – 31 July 2009**

Electricity is one of New Zealand's key economic inputs. Supply has a high standard of reliability, but at times approaches shortage due to events such as extended dry periods, which in the absence of accessible information leads to concerns about security.

As part of its responsibilities for managing security of supply, the Electricity Commission conducts seasonal assessments and publishes the Current Outlook to assist industry in making informed risk-management decisions.

Excluding possibilities of sudden, short-duration local interruptions through incidents such as damage to power lines, as at 31 July 2009, the risk of electricity shortages during the August-November period is assessed as being very low.

In the unlikely event of a natural disaster or multiple equipment failure, in which the situation changes quickly, the Commission will update the assessment.



**Current risk level: Security Normal.** 

### Regional assessment



The risk level is consistent across the country.

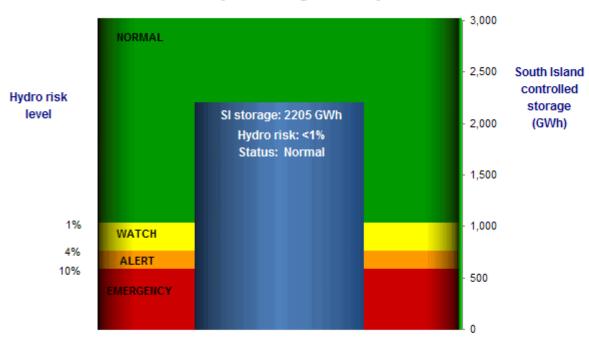
### Current situation in summary – as of 31 July 2009

- Total South Island storage is slightly above average for the time of year.
- Lake Taupo storage is below average for the time of year, but is not a major concern at this point.
- Given the high storage level, the risk of running out of water in the next few months is assessed to be very low (less than 1%, barring major unexpected equipment failures).
- Looking forwards over the next few months, there is no expectation that generation outages or transmission constraints will lead to regional energy shortages.
- HVDC Pole 1 (one of the two circuits making up the inter-island link) is not currently available for general use, but Transpower makes it available when specific conditions are met, with a limited operating capability. Pole 2 availability is expected to be normal.
- Electricity demand at the Tiwai aluminium smelter had been reduced due to a transformer being out of service. Following the transformer's return to service, the smelter's demand has been slowly but steadily increasing towards the normal level. Otherwise, national electricity demand over winter has been normal, and this is expected to continue.
- Meridian's Project West Wind, Contact Energy's Stratford, and Mighty River Power's Nga Awa
  Purua are scheduled to be completed in 2010. These new power plants jointly represent over a billion dollars of capital investment, and will make a major contribution to security of supply.

# **Hydro generation**

- Total South Island storage is slightly above average for the time of year.
- Inflows into South Island hydro systems were very high in May, but unusually low in June and early July. The graph on the next page demonstrates how volatile inflows can be from week to week and month to month.
- The risk of running out of water in the next few months is assessed to be very low (less than 1%, barring major unexpected equipment failures).
- Lake Taupo storage is below average for the time of year, but is not a major concern at this point.

#### South Island hydro storage - 31 July 2009

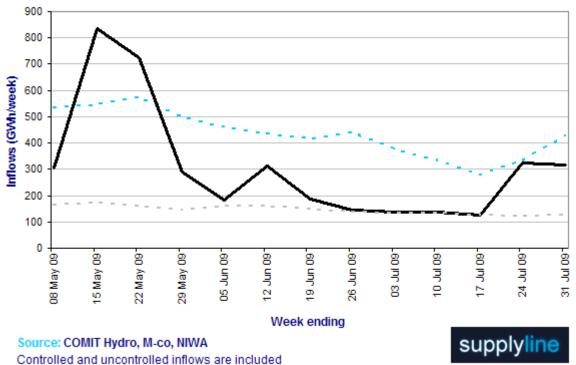


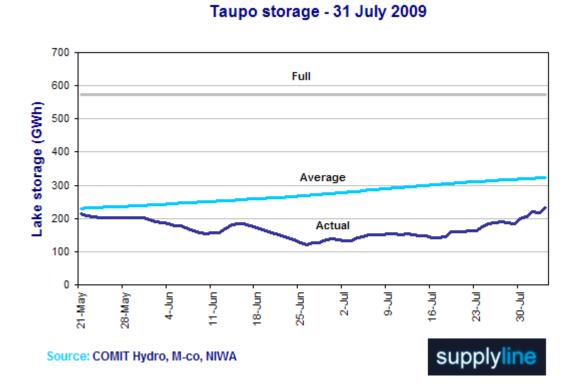
Source: Comit Hydro, M-co, NIWA

supplyline

### Inflows to key South Island hydro systems - 31 July 2009

Dashed lines show 90th and 10th percentiles of historical record





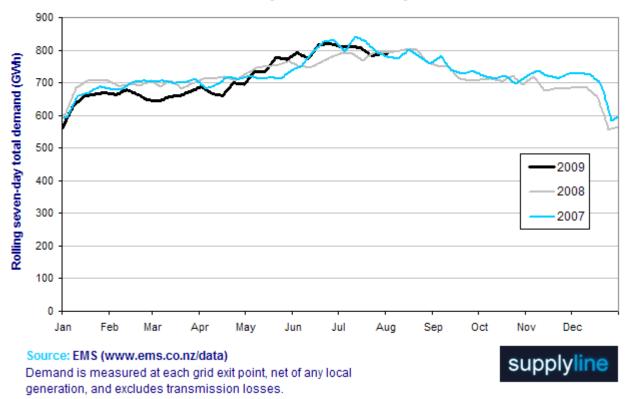
### Non-hydro generation

- Over the three-month period to 31 July 2009, thermal generation has averaged 28% of total supply and hydro 53%. Combined output from geothermal, cogeneration and wind has averaged 18% of total supply. The contribution of thermal generation has increased over the period, due largely to a seasonal rise in demand.
- Looking forwards over the next six months, thermal generation availability is forecast to be high. The Commission is not aware of any reason to expect that thermal generation might be restricted, beyond the current known assumptions on fuel availability, transmission system configuration and plant maintenance.
- Several new generating plants are currently under construction, the key ones being Meridian's Project West Wind, Contact Energy's Stratford, and Mighty River Power's Nga Awa Purua.
   These new plants are scheduled to be completed in 2010; they jointly represent over a billion dollars of capital investment, and will make a major contribution to security of supply.

# **Electricity demand**

- Electricity demand at the Tiwai aluminium smelter has been reduced due to a transformer being out of service. Following the transformer's return to service, the smelter's demand has been slowly but steadily increasing towards the normal level.
- Otherwise, national electricity demand over winter has been normal.





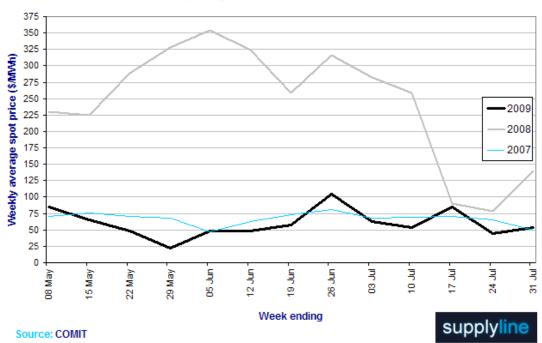
### **Transmission**

- Power has been flowing mainly northwards over the inter-island link during the last three months, due to low South Island demand and high South Island hydro lake levels.
- Looking forwards over the next few months, there is no expectation that transmission constraints will lead to regional energy shortages. The Commission is not aware of any reason to expect that transmission might be restricted beyond the current known assumptions on circuit availability, line ratings, grid configuration and maintenance.
- HVDC Pole 1 (one of the two circuits making up the HVDC link) is not currently available for general use. However, Transpower makes it available with limited operating capacity and in specified conditions (during a Grid Emergency, or if particular assets are unavailable and a Grid Emergency could occur, or when tests are required). HVDC Pole 2 availability is expected to be normal.

# Wholesale pricing

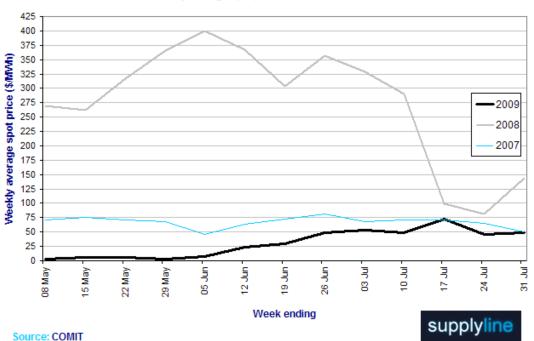
 Weekly average spot prices for each island over the three months to 31 July 2009 are shown in the graphs below. The corresponding prices for 2007 and 2008 are also included for comparison.

#### Recent North Island spot prices - 31 July 2009 Weekly average spot prices at Haywards



#### Recent South Island spot prices - 31 July 2009

Weekly average spot prices at Benmore



#### **Further information**

The full Current Update can be found at <a href="http://supplyline.electricitycommission.govt.nz">http://supplyline.electricitycommission.govt.nz</a> . The website also includes:

- more information about the Commission's role in security of supply
- more information about Supplyline
- an overview of the electricity sector
- useful links to other sites.

### **Disclaimer**

The Electricity Commission takes every reasonable step to provide current and accurate information in this document. The contents are intended to provide general information to the public and every effort has been taken to ensure that the information set out is accurate. However, be advised that the Commission does not accept any responsibility or liability whatsoever whether in contract, tort, equity or otherwise for any action taken as a result of reading, or reliance placed on this document because of having read, any part, or all, of the information in this document or for any error, inadequacy, deficiency, flaw in or omission from the information provided.