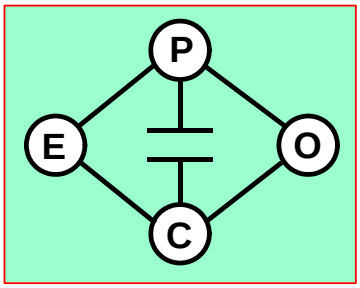
Submission on



Centralised Dataset Additions

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Executive Summary

The Electricity Commission seeks feedback on the likely value of including two additional data types in its Centralised Dataset: embedded generation meter data, and lake level data. EPOC strongly supports the inclusion of both data types, and would be likely to make use of both.

1. Embedded generation data.

Historical load and generation meter data are essential ingredients in most market simulation models. The provision of such data via the CDS has enabled modellers such as ourselves to greatly increase the accuracy with which our models are calibrated. However, a perennial difficulty with such data is to identify generation included with load. This is well illustrated by the current version of the CDS itself, which has to make various guesses (documented in Gnash's Aliases file) about where the contributions of embedded generators fall in the data. Some of these guesses are probably wrong.

Explicit identification of the contribution from particular embedded generators would certainly help to create a more reliable picture of the overall pattern of generation and load. In particular, models which attempt to study uncertainties in generation and load will usually do better if they can consider separately the different uncertainties in the gross load and the embedded generation. This is true whether the model has a time horizon of 2 hours or 20 years.

Wind generation is an area where short-term uncertainties are particularly important, and which is receiving a lot of modelling attention at present. Reliable data on the probability distributions of wind generation, including the correlation between different sites, is really only available from actual wind farms (rather than anemometers). There is a paucity of such data in New Zealand, as most of the available wind farm sites have yet to be developed. Inclusion of embedded generation meter data in the CDS would be a good way to disseminate such wind data - including from new wind farms - as it becomes available.

2. Lake level data.

Historical lake level (energy storage) data is an essential requirement for any team contemplating work on a "minzone" supply-security type model, or more advanced reservoir optimization models. The required information is made public by other sources, but not at the time (daily) or spatial (catchment level) resolution desirable. It therefore seems to be an excellent example of the kind of data the CDS was created to house.