As a sole operator, I do not have the time or the resources necessary to examine the document closely. But I would like to make some comments.

From what I have been able to gather, having a renewable electricity system seems to take priority over providing a reliable and economic supply. I think this is wrong and it will become obvious to everyone when the lights go out.

A few weeks ago I wrote an article for the Telegraph in the UK followed by a version adapted for New Zealand which is attached. The major theme of the article is that without a very large amount of long-term low-cost storage, major increases in wind and solar power will inevitably lead to high prices and blackouts when the wind is not blowing and the sun is not shining. No such storage technology exists at the moment. When the wind is blowing and the sun is shining, the price will collapse. Therefore the economic outlook for wind and solar power is extremely uncertain. Note that many offshore wind farms are being cancelled in UK and other countries because they are too expensive. Note also that several major manufacturers of wind turbines are operating at a loss.

Nobody has seriously challenged my conclusions. There were more than 3000 comments on the Telegraph website and virtually all of them agreed with the basic theme.

As far as I can make out, the need for long-term (several months), low-cost storage is not covered in the EA review. This seems to be a fatal error that makes the study largely worthless.

There seems to be a little commentary on the need for gas. Yet, without ample supplies of stored gas and coal and the generating plant to use it, major blackouts are inevitable in dry years and when solar and wind power are effectively absent during a high demand period.

No attention is paid to the installed capacity needed to provide all the energy required to supply demand and to cover the storage losses of any stored energy needed to meet dry years and low wind and solar periods. I have estimated that 12,000 MW of wind and solar power will be needed by 2050 to provide the energy envisaged by the Climate Change Commission scenario. In turn, this will require 4000 MW of long-term storage. (See attachment “Dream and reality”)

The cost of all the new generating plant and the necessary storage capacity and its effect on the power price is ignored.

You should also note that net zero is being criticised heavily in many countries as people realise that it only leads to high prices and shortages and has only a tiny effect on the world emissions of greenhouse gases. In many cases, the policies have led to increased use of coal fired power stations. (Germany is a classic case.) https://mailchi.mp/2d4379d73b99/will-net-zero-survive-voter-rebellion-197459?e=464d52ffaa

I would suggest that the Electricity Authority needs to start again with the basic premise that its job is to provide a reliable and economic supply of electricity. As far as I can see, it has totally lost the plot.

A good start would be to load all the data into the excellent generation modelling program developed by the late Bruce Smith when he was with the Electricity Authority. This will immediately reveal the magnitude of the problem and very high costs associated with the proposal.
Kind regards,

Bryan Leyland