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New Zealand's Energy Supply Future

George Hooper

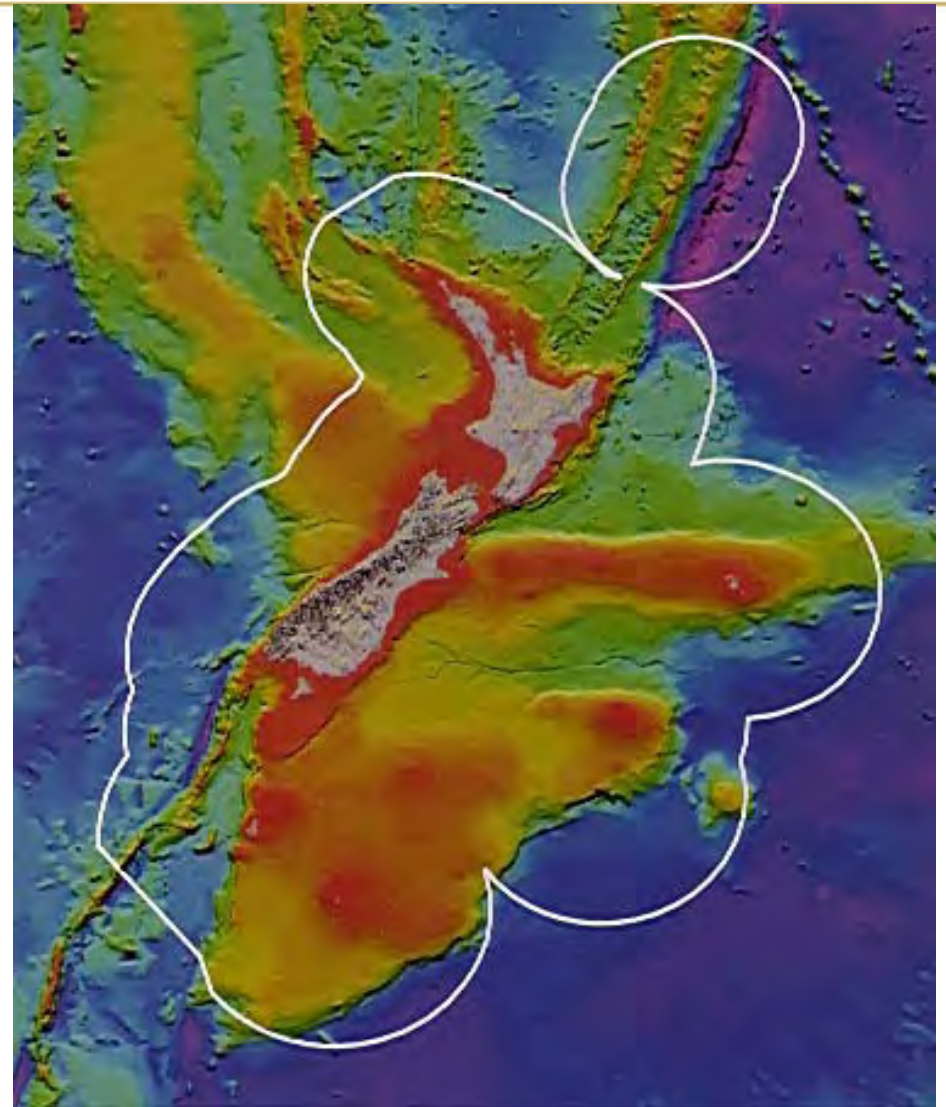
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All our energy sources ultimately derive from our primary resource base.

The question for today is:-

“Should this country with a small population and a large resource-rich territory be a net consumer or a net supplier of energy commodities”?

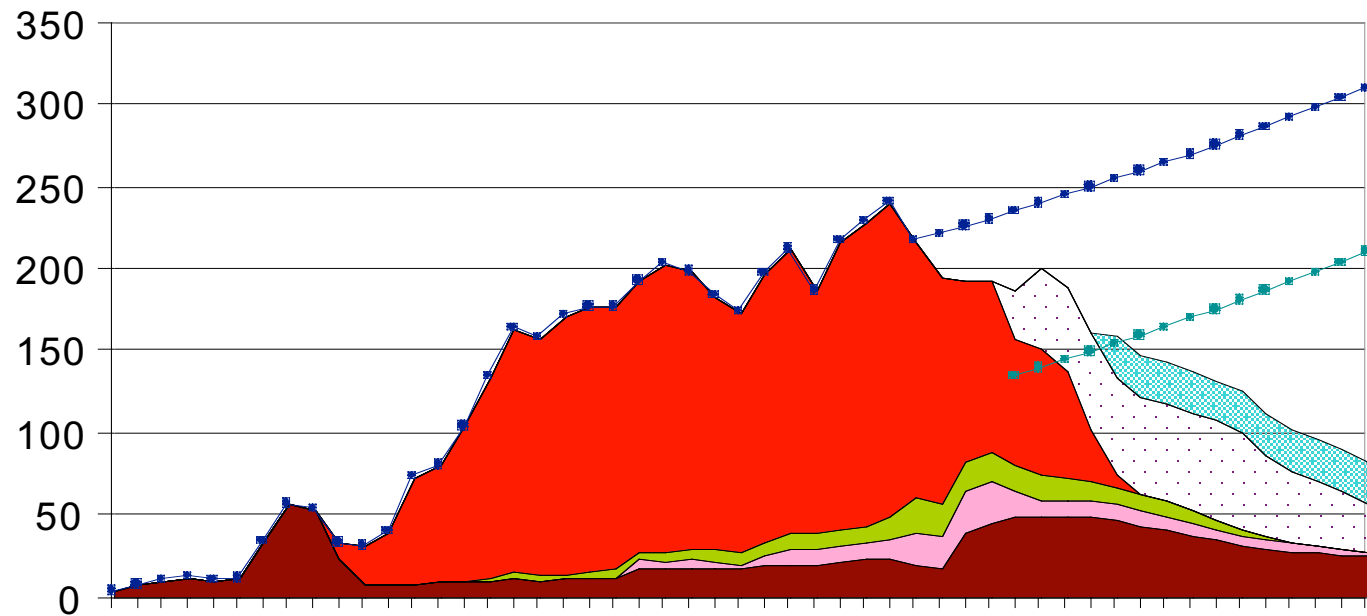




Maui - a one-off opportunity

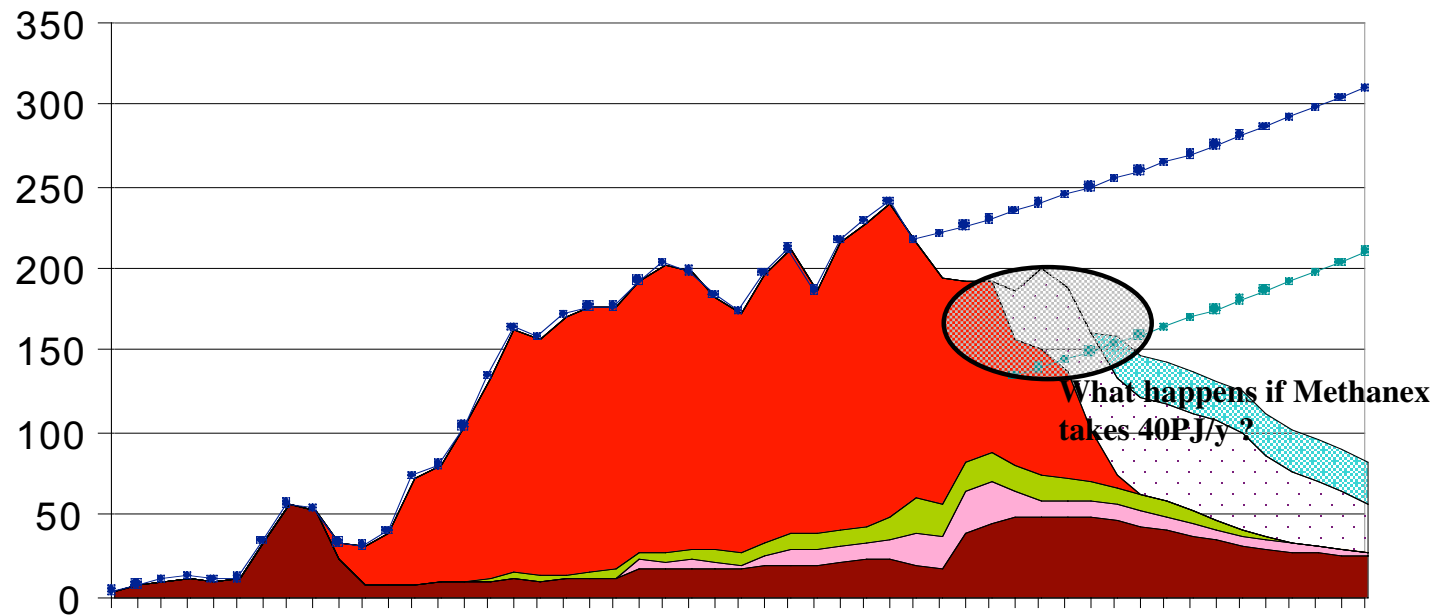
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New Zealand gas market



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New Zealand gas market





New Zealand is at a crossroad

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- We are an energy-rich country, yet unless we change our thinking we are facing a shock as severe as the oil crises of the 1970s
- The critical constraint facing the New Zealand gas market requires immediate action to manage the transition from dependence on Maui gas to a preferred energy future
- If we get the strategy wrong, New Zealand will revert to being dependent on global oil markets; limiting our options; raising costs and stunting economic growth

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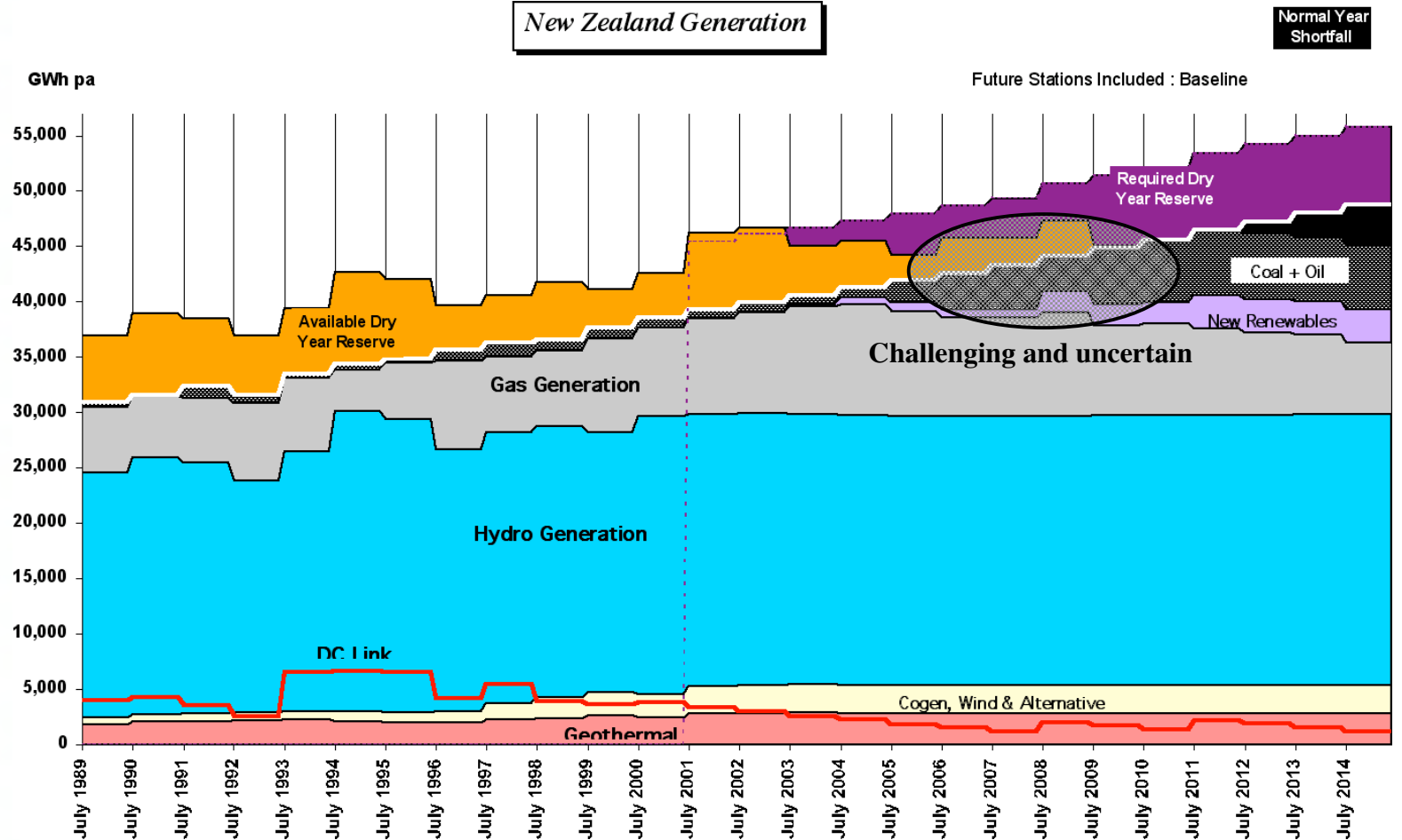
Electricity:

- Economy highly vulnerable to power shortages
- Potential for significant economic cost and lost opportunity from supply interruption or system failure
- Emerging opportunity cost to New Zealand from deferred investment in new manufacturing or industrial plant
- A fragmented and incomplete governance framework is not delivering supply-side solutions for electricity supply
- Focus on reserve capacity has potential to deter new investment by generators to meet normal growth profiles

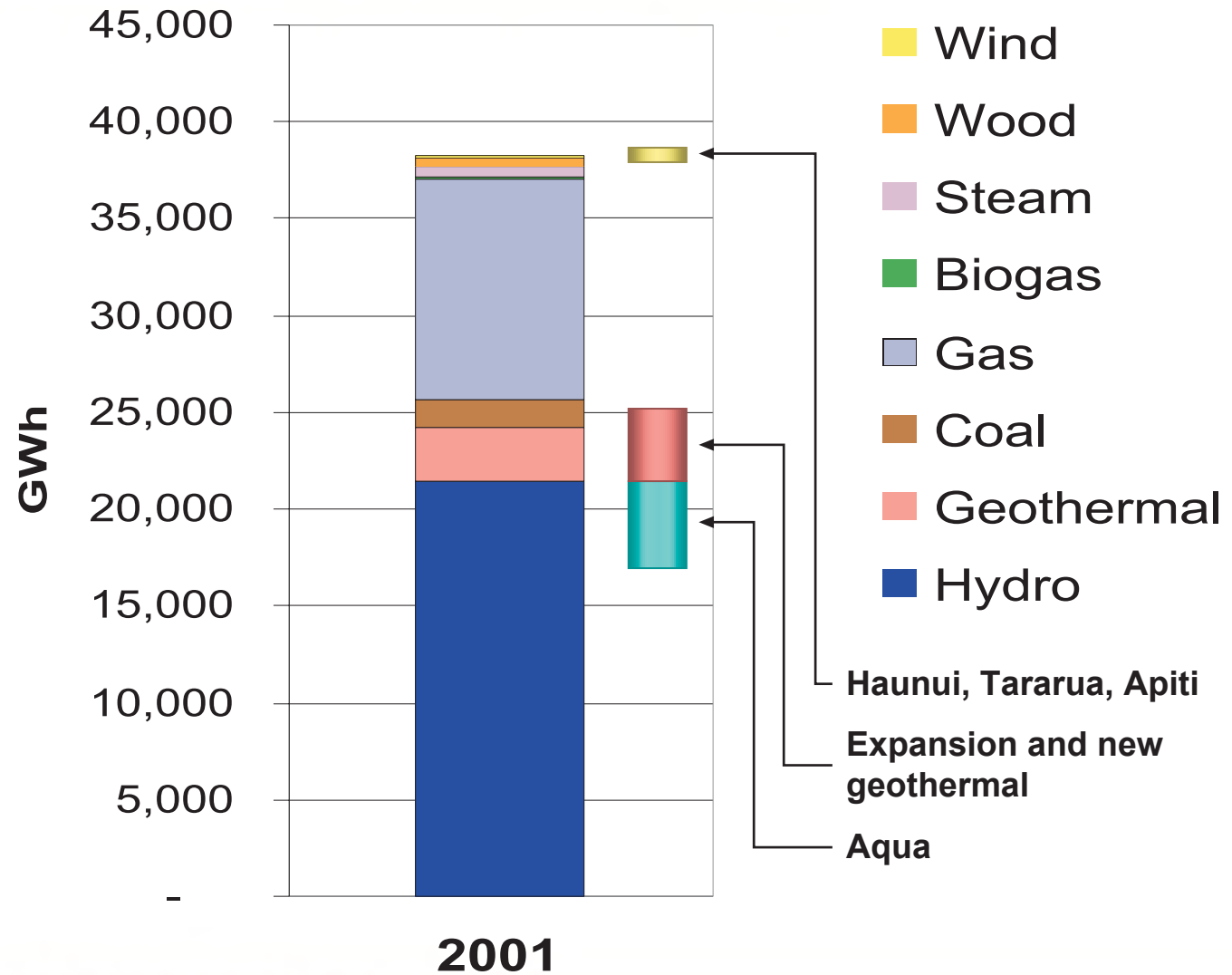


NZ electricity generation in a normal year

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SO what is missing?

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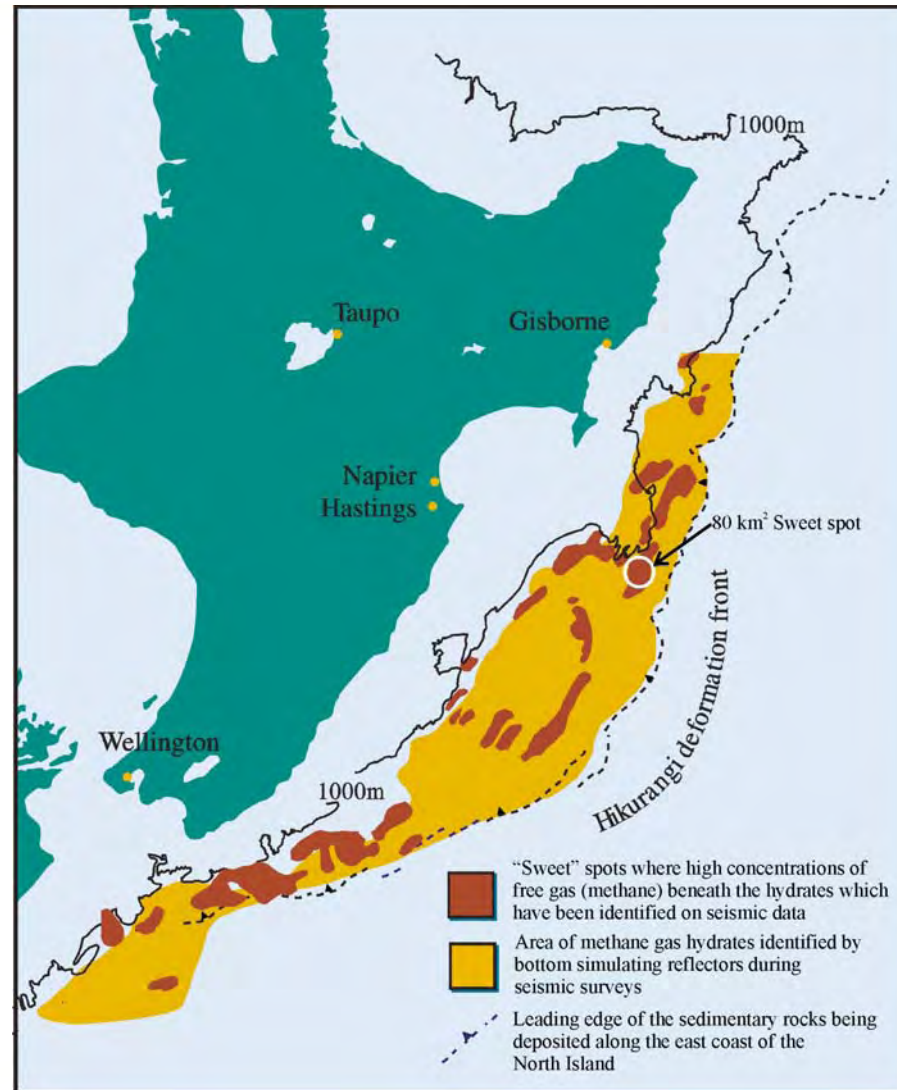
NZ needs to see solutions that can act to:

- reduce the supply-demand gap emerging in New Zealand's electricity supply
- balance the risk/return equation to encourage investment
- provide an alternative to expanding the capacity of established electricity transmission and distribution networks
- alleviate constraints on new hydro development and thermal supply by providing a more diverse energy base for electricity generation
- recognise the macroeconomic value to this country of supply diversity.

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Critical characteristics that determine an efficient electricity market:

- ***Matching network demand and supply capacities***
- ***Suppling the market with overall more fuel efficient and lower capital cost plant***
- ***Taking up fuels opportunities that are essentially free***
- ***Risk sharing that promotes and enables the evolution of more decentralised power system.***



Gas hydrate
2015?