



World Energy Council

CONSEIL MONDIAL DE L'ENERGIE

Conclusions of the NZ Energy Conference 2002

R S Whitney

Chairman Energy Federation of New
Zealand

Acknowledgements to Morgan Williams
PCE

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SWOT Reports

- Resources / Future Supply
- New Technologies
- End Use / Demand Response
- Markets and Governance

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A Vision for New Zealand's Energy Future

An efficient use of energy resources at lowest cost to enhance social well-being and NZ's international competitiveness

- Long term continuity and sustainability of supply of energy,**
- Price stability,**
- Optimisation of resources to maximise renewable energy,**
- Rationalisation of regulatory constraints to allow innovation**
- Transition to greater use of renewable energy**
- Adoption of energy management and total energy use as a mainstream business and personal focus,**
- Integration of development and research of energy technologies in all sectors and for all energy forms.**

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A Plan of Action for the Future

- That the energy sector establish an integrated framework of action areas that will ensure;**
- **Identification of opportunities and barriers,**
 - **Priority setting,**
 - **Co-ordinated action to address issues,**
 - **Communication between interested parties including small and large players; consumers and suppliers; and regulators and participants,**
 - **Encouragement of investment in appropriate energy solutions.**

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Resources / Future Supply

STRENGTHS

- Relatively low cost energy
- Low carbon hydro electric base
- Historically internationally competitive
- Economic value from Maui gas
- Stable well educated population
- Low agriculture energy intensity
- Local population is low

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Resources / Future Supply

WEAKNESSES

- Currently 56% Hydro based with Low dry year security
- Loss of Maui gas "flexibility"
- High hydro inflow variability and Low hydro storage
- NZ's exports are energy intensive
- Long "thin" network and HVDC exposed
- No interconnection potential (countries)
- Dependence on oil imports
- Low energy price doesn't encourage energy investment
- Low offshore exploration
- Most of our natural exports are energy intensive

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Resources / Future Supply

OPPORTUNITIES

- New smelting start-ups possible
- More dairy & forestry processing
- More value added/activity on-shore
- Distributed generation reduces losses
- NZ has low cost coal reserves
- Potential to accelerate renewables use
- Many good wind sites
- More demand-side response is possible
- New technologies for thermal generation Cogen & process heat
- Kyoto opportunities:
- Forest sinks
- Technology
- Hydrogen economy (coal)
- More geothermal & hydro

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Resources / Future Supply

THREATS

- High energy prices stifle growth
- Carbon tax uncertainty delays projects
- Loss of international competitiveness
- Future gas reserves are expensive
- Supply shortfall due to RMA delays
- Gas dominated by one player
- Lack of R&D partnerships
- Slow movement to new technologies
- Wrong direction without a strategy

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