

Incentives for Innovation

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Topics

1. The need to protect incentives for innovation under the new Electricity Commission
2. What is working in the industry (as opposed to what isn't)?
3. Multiple complementary solutions to generator fuel shortages



1. The need to protect incentives for innovation

- Preconditions for innovation
 - The freedom to try new things
 - Rewards for success
- Poor quality regulation can stop both
- Initial problem definition can preclude best responses
- Example of regulation stifling innovation....

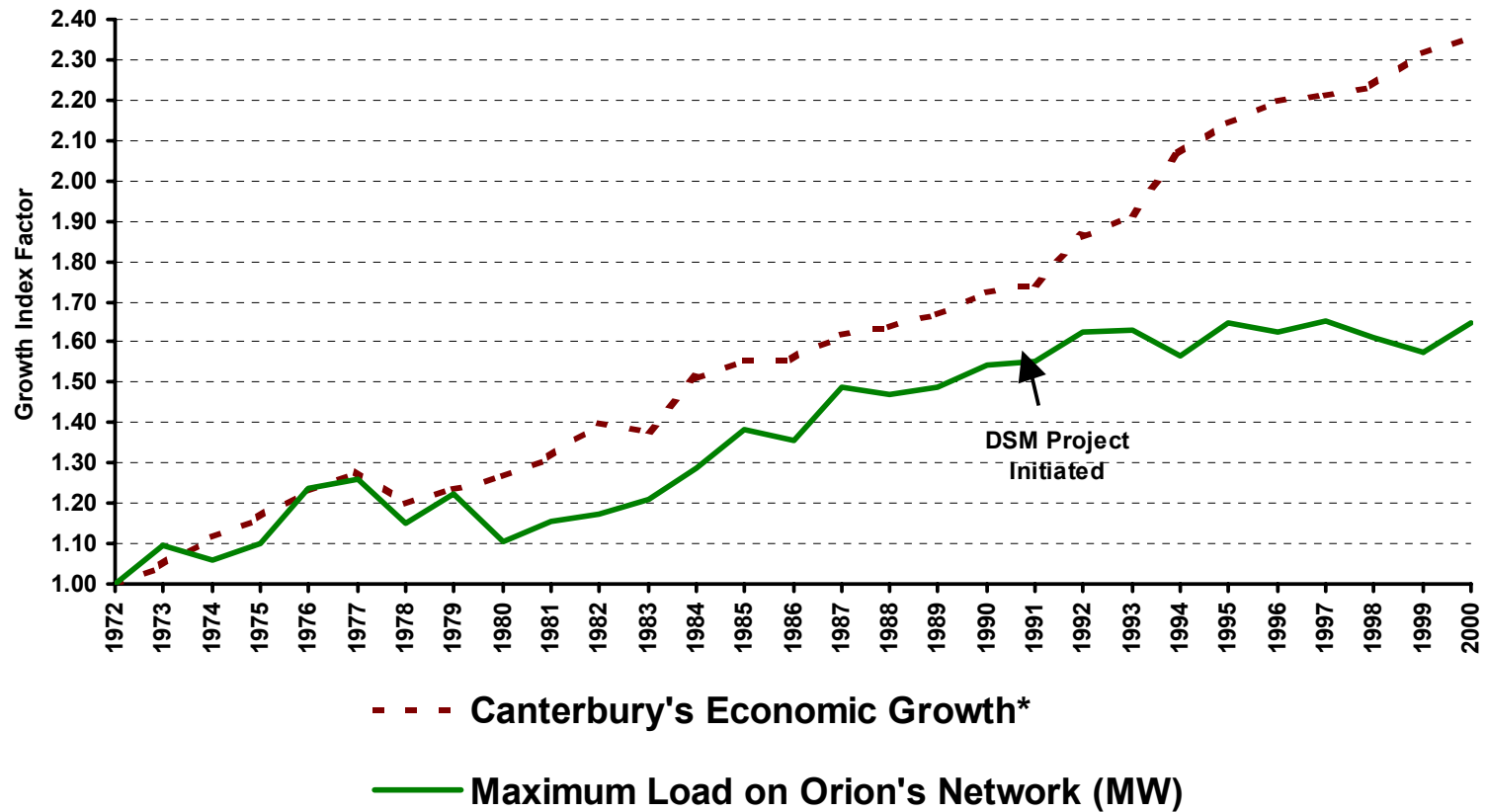


IPART Commissioned Report

- “Since introducing congestion period pricing in the mid-1990s, Orion has recorded minimal growth in system peak demand. Consequently its customers have been spared the expense of peak driven additions to distribution and transmission network capacity. *Interestingly these pricing approaches have been developed by the distributors without the need for any regulatory prompting.*”



Growth of maximum load on the Orion network versus growth of the Canterbury economy



* Source: National Bank Regional Economic Activity Indices for Canterbury. Not gathered prior to 1975 therefore 1972-75 national figures used.

2. What's working?

- Innovation in lines pricing has yet to be stifled
 - Watch this space
- Innovation in contracting models
- Good cooperation between retailers & linecos on registry and data handling issues
- Faults handling, billing, complaints commission

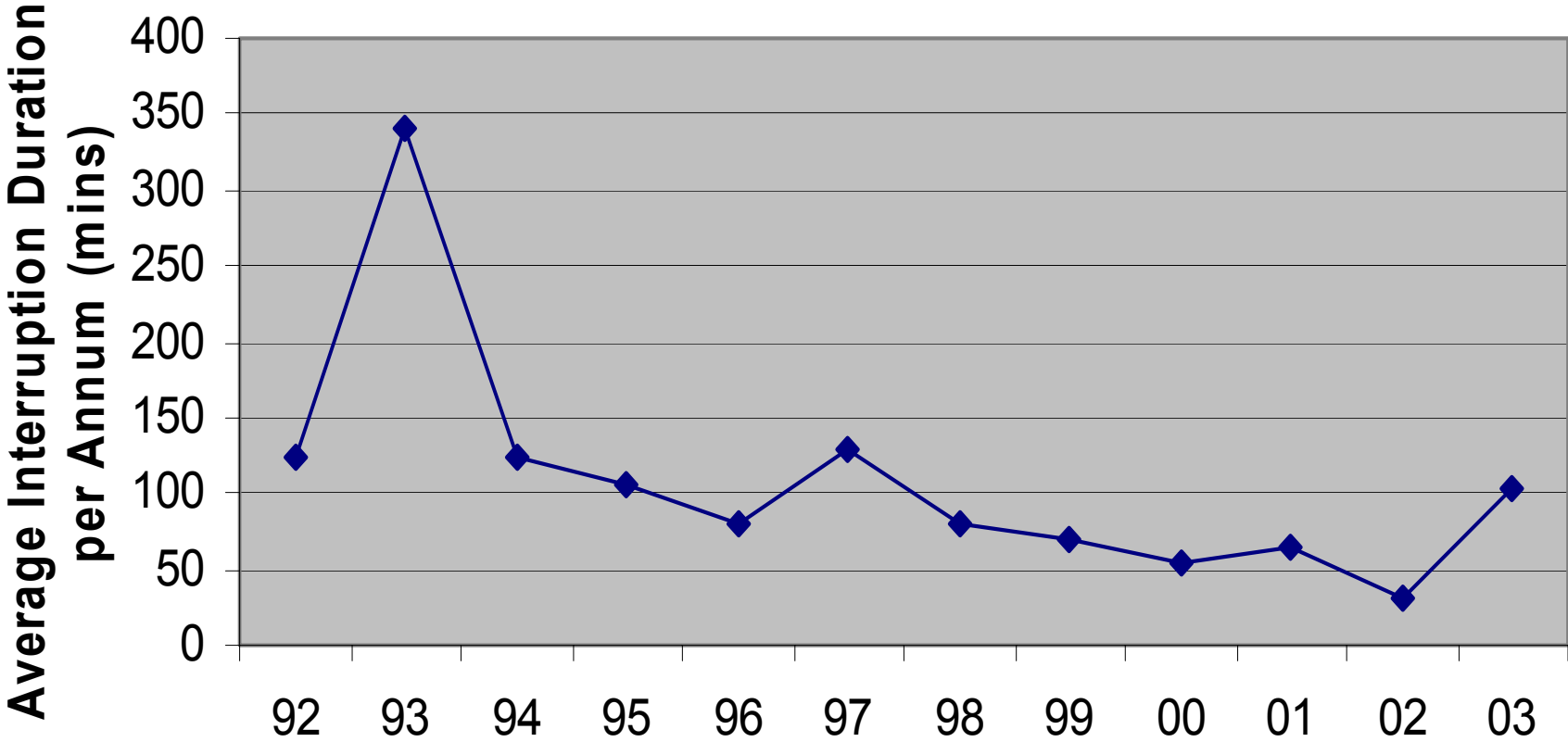


Distributor's Performance

- ODV Recalibration exercise
 - Few companies outside materiality test
- Low fixed charges
 - Several companies set to nil
- Unsolicited praise from overseas regulators
- Model approaches to pricing and contracting



Orion's SAIDI



3. Multiple complementary solutions to generator fuel shortages

- NZ has a long term 'condition to manage' in terms of variations in hydro catchment precipitation
- In 1992, 2001, 2003 it has been the demand-side that has responded
 - Demand-side must be involved in management of this condition



Energy Shortage

Call for savings	} 10-20%
Commercial incentives	
Hot water cuts	1-5%
Voltage reduction	1%
Rolling residential 2 hours/day	1%
Rolling cuts all customers 2/hrs/day	3%



Reserve Generation

- A substitute for 10% savings?
 - 500MW of negative load?
 - Must have certainty that 500MW available when needed
 - Penalty for non-provision?
- But
 - This is an energy-volume issue (MWh per week) not a power output issue (MW)
 - It is not a wholesale price issue directly, but rather a fuel shortage issue



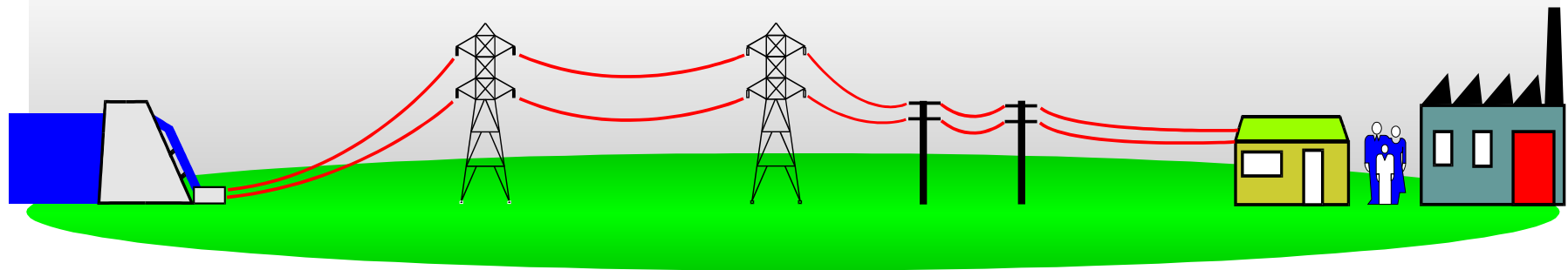
Innovation in Reserve ‘Generation’

- Multiple complementary solutions needed, not committed every half-hour to the reserve
 - More standby export plant (8MW in ChCh)
 - Non-export plant (18MW in ChCh)
 - Load shedding within premises
 - Regional load shedding
- Verification regime
 - Metering a subset, don't lock in old thinking.....



Energy Industry Model 1998

Energy Flow



Generators



Wholesale Market

Transpower

Distributors



Energy Retailers

The Commission

- 7- person Electricity Commission
 - Pick up existing industry rules
 - Can be directed by Minister
 - Must observe Government Policy Statements
 - Central forecasting role

And what of innovation?...



The regulatory slippery slope:

“The cure for boredom is curiosity. There is no cure for curiosity.”

Ellen Parr

