

PowerNet Asset Management Plans

Lower South Island Stakeholder Forum

10 October 2008

AMP's

- Last published 31 August 2007
 - Next publish 31 March 2009
 - Requirements defined by Commerce Commission under “Electricity Information Disclosure Requirements 2004”
 - Good to get input and feedback from Stakeholders
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- SIESA AMP with Owner for approval

AMP Information

- What is covered in AMP's:
 - Background and Objectives
 - Details of Assets
 - Proposed Service Levels
 - Development Plans
 - Managing the Assets Lifecycle
 - Risk Management
 - Funding the Business
 - Processes and Systems
 - Performance and Improvement

Stakeholder Interests

	Interests			
	Viability	Supply quality	Safety	Compliance
Shareholder	✓	✓	✓	✓
Bankers	✓			
Connected consumers	✓	✓	✓	
Contracted manager (PowerNet)	✓	✓	✓	✓
Energy retailers	✓	✓		
Mass-market representative groups	✓	✓		
Industry representative groups	✓	✓		
Staff and contractors	✓		✓	✓
Suppliers of goods and services	✓			
Public			✓	
Councils (excluding as a consumer)			✓	✓
Land Transport			✓	✓
Ministry of economic development			✓	✓
Commerce commission	✓	✓		✓
Electricity commission				✓

AMP: Service Levels

- Primary:
 - SAIDI – system average interruption duration index. This is a measure of how many system minutes of supply are interrupted per year per consumer connected to the network.
 - SAIFI – system average interruption frequency index. This is a measure of how many system interruptions occur per year per consumer connected to the network.
- Secondary:
 - Communication from PowerNet staff
 - Response times on Quality Problems
 - Notice period for Planned work

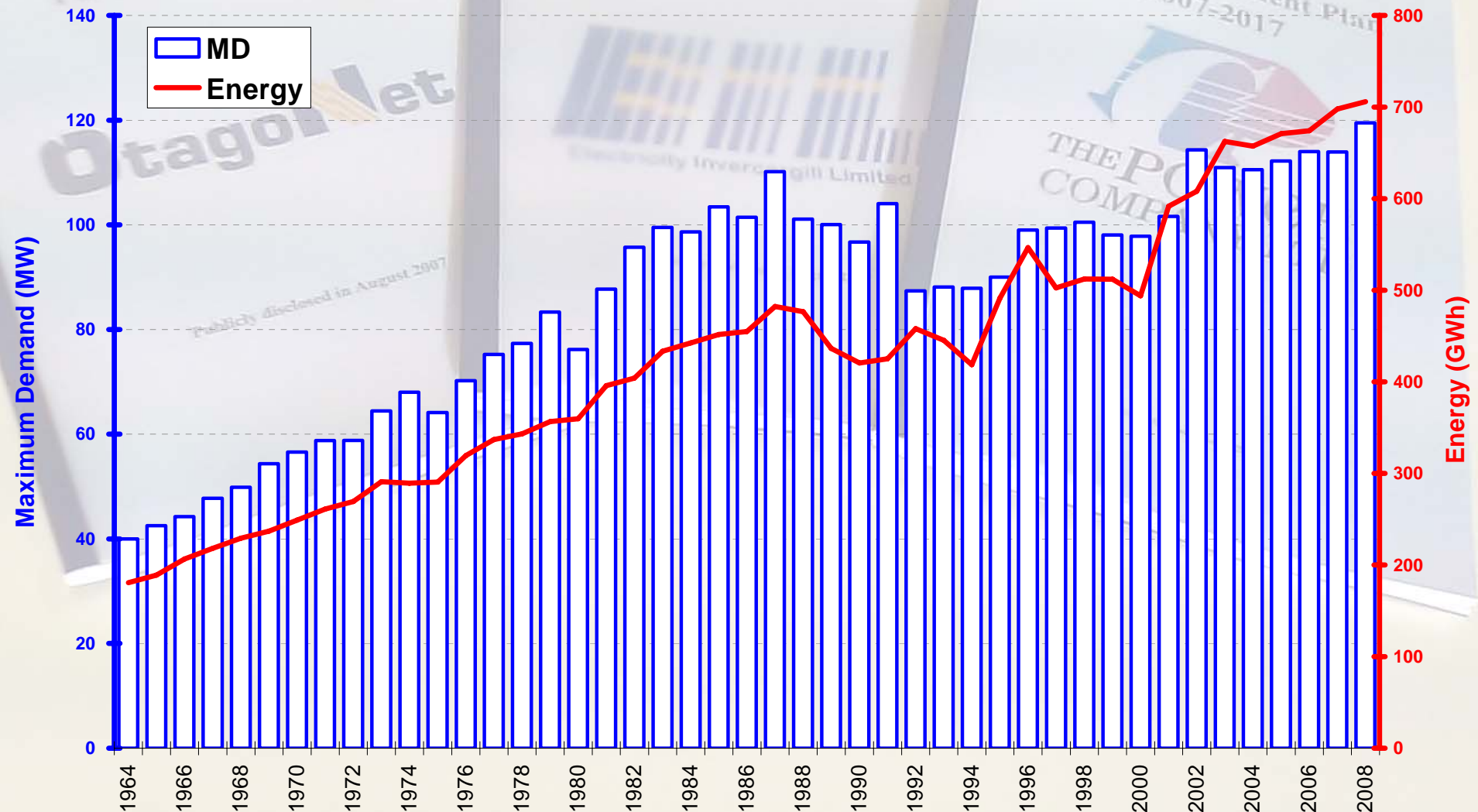
Reliability Standards

- In setting target security levels the following guiding principles are used:
 - Where a substation is for the predominant benefit of a single consumer, their wish for security will over-ride prevailing industry guidelines.
 - The preferred means of providing security to rural zone substations will be back-feeding on the 11kV subject to interconnection, line ratings and surplus capacity at adjacent substations.
 - The preferred means of providing security to urban zone substations will be by secondary sub-transmission assets with any available back-feeding on the 11kV providing a third tier of security.

Description	Load type	Security level
AAA	Greater than 12MW or 6,000 consumers.	No loss of supply after the first contingent event.
AA	Between 5 and 12MW or 2,000 to 6,000 consumers.	All load restored within 25 minutes of the first contingent event.
A(i)	Between 1 and 5MW	All load restored in time to isolate and back-feed following the first contingent event.
A(ii)	Less than 1MW	All load restored in time to repair after the first contingent event.

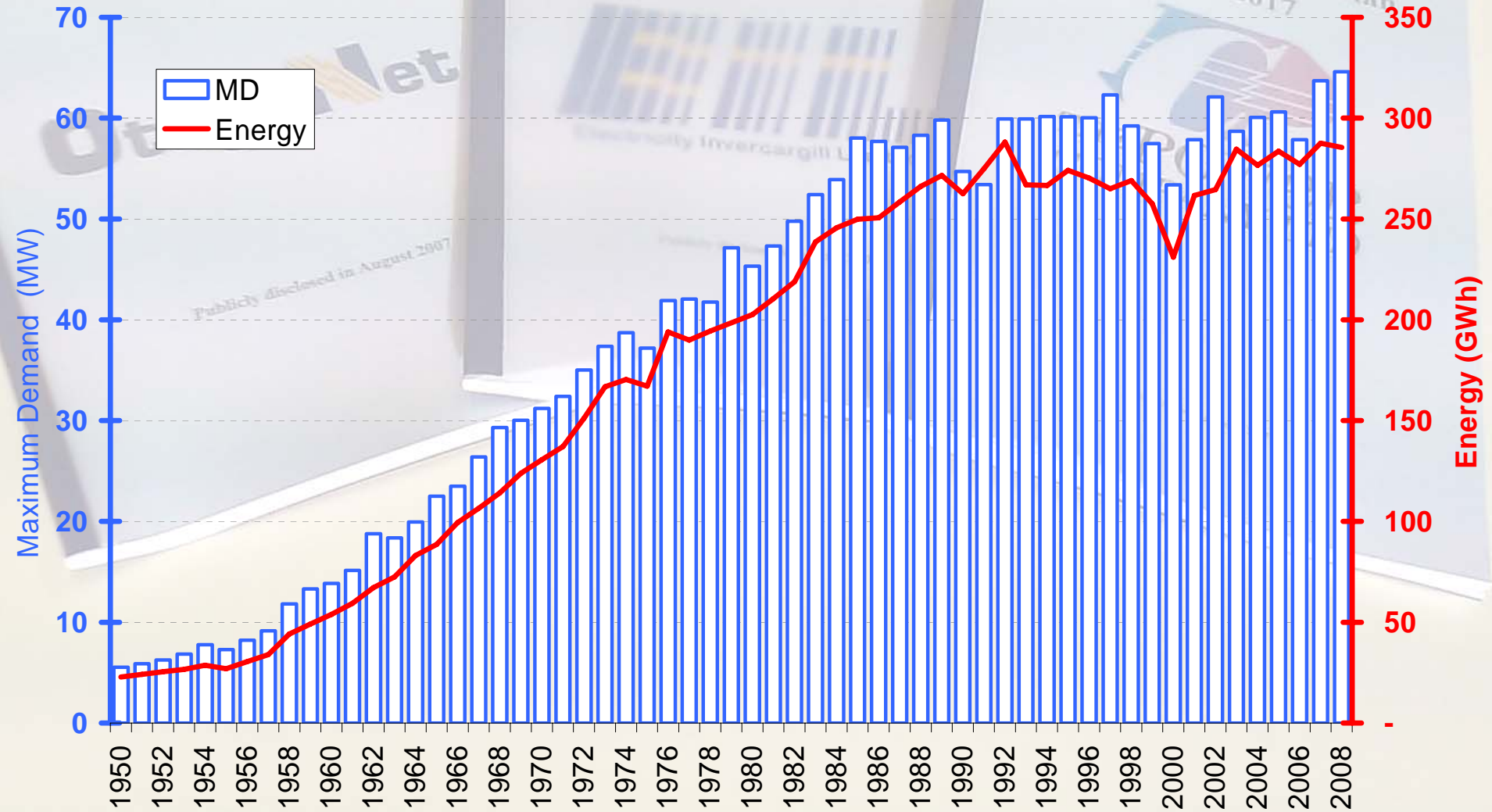
Load Trends: TPCL

Maximum Demand & Energy Transmitted



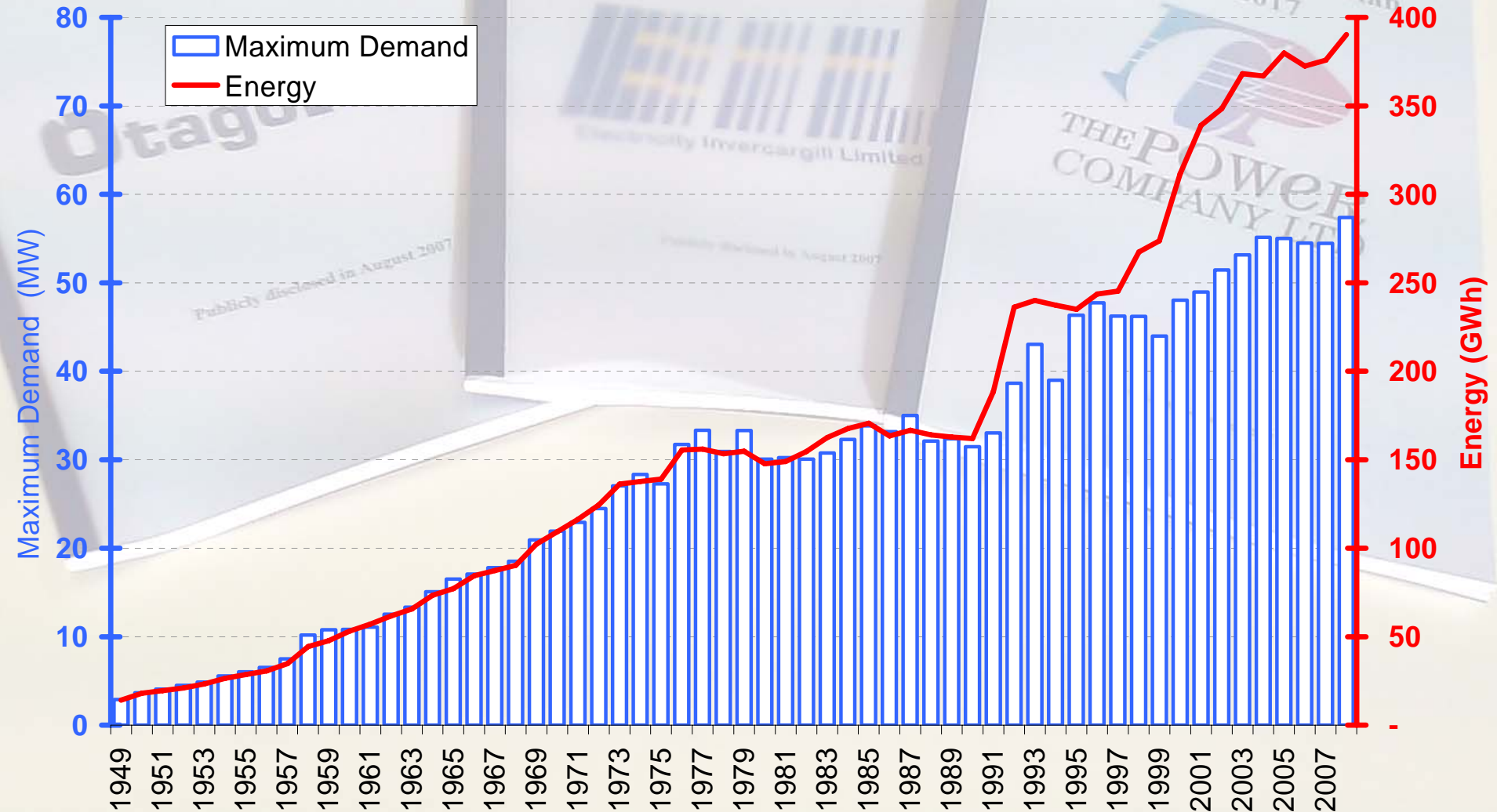
Load Trends: EIL

Maximum Demand & Energy Transmitted



Load Trends: OJV

Maximum Demand & Energy Transmitted



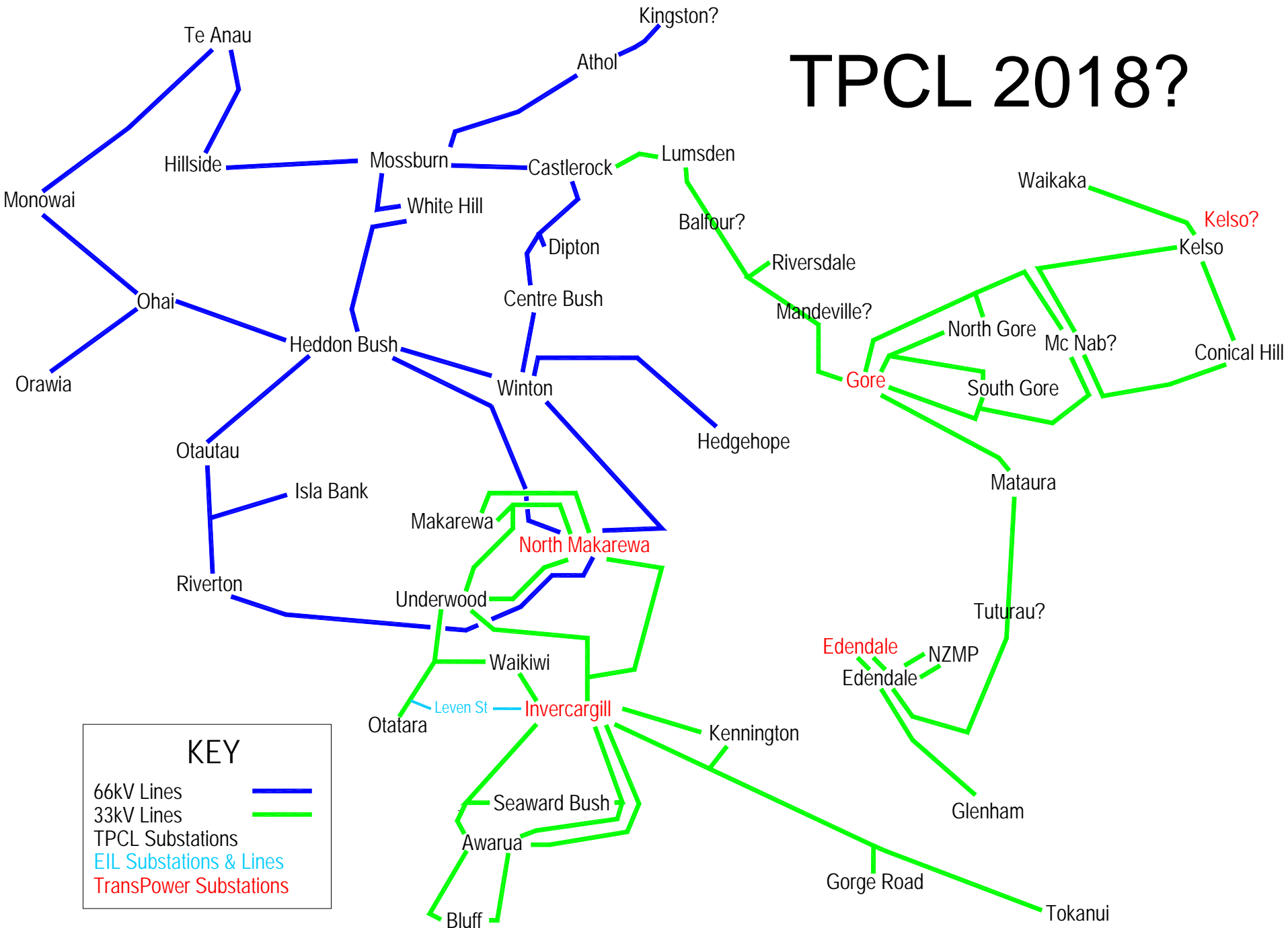
Development Plans

- TPCL
 - Major Expansion Planned, see following slides.
- EIL
 - Mainly Renewal and Upgrades of Existing Equipment
- OJV
 - Mainly Renewal and Upgrades of Existing Equipment
- SIESA
 - Mainly Renewals Recommended




Possible Drivers of Future Growth

- Connection of Generation
 - DG, Wind, Hydro, ?
- Milling of Local Forests
- Irrigation
- Dairy Conversions
- Mining and Processing (Coal, Gold, ?)
- Oil Industries
- Tourism

TPCL 2018?



KEY

- 66kV Lines 
- 33kV Lines 
- TPCL Substations
- EIL Substations & Lines 
- TransPower Substations 