

Upper South Island Security

Winter 08 Planning Update

14 May 2008

TRANSPower



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24-7
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USI - Last Meeting Summary

- From 27 March 2007
 - With information available at time, USI peak winter demand can be met with all available plant in service
 - Based on margins available at the time, no current requirements for
 - NIWA report
 - USI Contingency plan
 - Will be re-assessed if situation changes:
 - Unexpected outages on generators
 - Dry year for USI
 - Significant delays on major projects



Since March

- Status changes
 - Possible dry year
 - Last year's peak demands exceeded in first week of May this year
 - Delays in commissioning of new Islington capacitor advised
 - Islington SC 4 out of service
- Appropriate to review USI winter situation
 - What further information is available
 - Is a contingency plan required?



Winter 08 – USI Demand

- Zone 3 AM Peaks for 6 & 7 May 08 higher than 2007 peak
- Revision of forecasts (minor) following advice from participants



Winter 08 – Load Assumptions AMPK

Upper South Island Winter 2008 AMPK Load Estimate (morning)

	2007	2008	%growth	2008	%growth
	Peak Actual (MW)	Expected (MW)	from 2007 Actual	Prudent (MW)	from 2007 Actual
Network Tasman	137.7	131.5	-4.50%	136.9	-0.58%
Marlborough Lines	62.3	61.4	-1.44%	62.3	0.00%
Buller	10.7	15.0	40.19%	15.7	46.73%
Mainpower	81.0	79.0	-2.47%	81.4	0.49%
Orion	616.2	629.5	2.16%	665.4	7.98%
Electronet	22.1	37.7	70.59%	46.0	108.14%
Electricity Ashburton	26.0	52.2	100.77%	60.9	134.23%
Alpine	75.8	82.3	8.58%	92.1	21.50%
Total	1031.8	1088.6	5.50%	1160.7	12.49%

Note – Load figures have been updated after feedback from previous phone conference

- Avalon data used for Actual loads
- 2007 USI Average Half Hour AM Peak 16/7/07 @ 8:20
- Diversity included in 2008 Expected loads
- Expected 2008 loads calculated from customer data and diversified used Zone 3 AMPK
- % increase between customer Expected and Prudent load data used to calculate Prudent 2008 loads

5



Winter 08 – Load Assumptions PMPK

Upper South Island Winter 2008 PMPK Load Estimate (evening)

	2007	2008	%growth	2008	%growth
	Peak Actual (MW)	Expected (MW)	from 2007 Actual	Prudent (MW)	from 2007 Actual
Network Tasman	141.5	132.6	-6.3%	138.0	-2.5%
Marlborough Lines	64.0	62.0	-3.1%	62.9	-1.7%
Buller	10.8	15.2	40.2%	15.9	46.7%
Mainpower	86.3	80.4	-6.8%	82.9	-3.9%
Orion	617.5	637.7	3.3%	674.1	9.2%
Electronet	20.0	38.3	91.5%	46.7	133.5%
Electricity Ashburton	23.1	53.1	129.9%	62.0	168.4%
Alpine	78.8	83.0	5.4%	92.9	18.0%
Total	1042.0	1102.3	5.8%	1175.4	12.8%

Note – Load figures have been updated after feedback from previous phone conference

- Avalon data used for Actual loads
- 2007 USI Average Half Hour PM Peak 9/7/07 @ 17:40
- Diversity included in 2008 Expected loads
- Expected 2008 loads calculated from customer data and diversified used Zone 3 PMPK
- % increase between customer Expected and Prudent load data used to calculate Prudent 2008 loads



Winter 08 – Scenarios Studied

- Scenarios considered for Winter 08
 - All equipment in service
 - TKA/TKB generator outages
 - HBK available / unavailable
 - Medium regional generation
 - AUVLS disabled / enabled

Scenario	TKB	TKA	HBK
1	YY 2 x 80MW	Y 1 x 25MW	Y
2	out	out	Y
3	Y 1 x 80MW	Y 1 x 12.5MW	Y
4	Y 1 x 80MW	out	Y
5	YY 2 x 80MW	Y 1 x 25MW	N



Winter 08 – Generation Assumptions

	Medium Generation (MW)
Arnold	3
Argyle	8
Cobb	21
Coleridge	28
Highbank	20
Kumara	6
Tekapo A	20
Tekapo B	140
	246

- Medium generation scenario only due to current situation
- Should we look at low generation scenario?



Winter 08 – Projects Update

Bussing of Islington Timaru Twizel cct at Ashburton

- on target
- current planned completion date 25/5/08

ISL C27

- Has been delayed due to civil works delays
- Current planned commissioning date 10/9/08

ISL SC4

- Currently out on fault
- Anticipated earliest availability is 10 weeks (end July)



Winter 08 – Discussion

- What happened to USI demand in first week of May?
 - What degree of load management?
- What is USI generation likely to be over winter?
- What capability for improving regional power factor?
- Ashburton bussing outage requirements



Winter 08 – USI Margins

- Winter AM Peak
 - Prudent demand = 1160 MW
 - Indicative transfer limit (0.98 pf) = 1154 MW (scenario 2,3,5)
 - Margin = -6 MW
- Winter PM Peak
 - Prudent demand = 1175 MW
 - Indicative transfer limit (0.985 pf) = 1160 MW (scenario 2,5)
 - Margin = 1160 - 1175 MW = -15 MW



Winter 08 – Summary

- With currently available information studies show that USI peak winter demand will be tight but manageable
 - Due to project delays, changed assumptions, recently experienced loads early in winter, way the system is currently being run for potential dry year scenario
 - Based on 12% growth from 2007 for Prudent loads
- AUVLS give additional 30MW (approx.)
- Based on margins available current requirements:
 - USI Contingency planning work-stream to be activated
 - Contingency plan for USI to be updated
 - Feedback from generators regarding likely generation scenarios



Winter 08 – What's Next

Development of USI contingency plan

Next meeting: to be advised

