

Upper North Island (UNI)

Summer 07/08 Planning

5th December 2007

Telephone Conference 2:00 - 3:00pm



UNI Summer 07/08 – Henderson-Otahuhu update

- Environmental court Judge has granted authority to allow the line to operate up to 986MVA during forced outages
 - Grid owner currently working through process of implementing new rating of 915MVA
 - Decision subject to appeal but remains effective until this is heard early next year
 - Until new rating implemented then no change to current operating conditions for managing Henderson - Otahuhu line i.e. 830MVA
 - Current operating conditions apply through until 31 December 2007



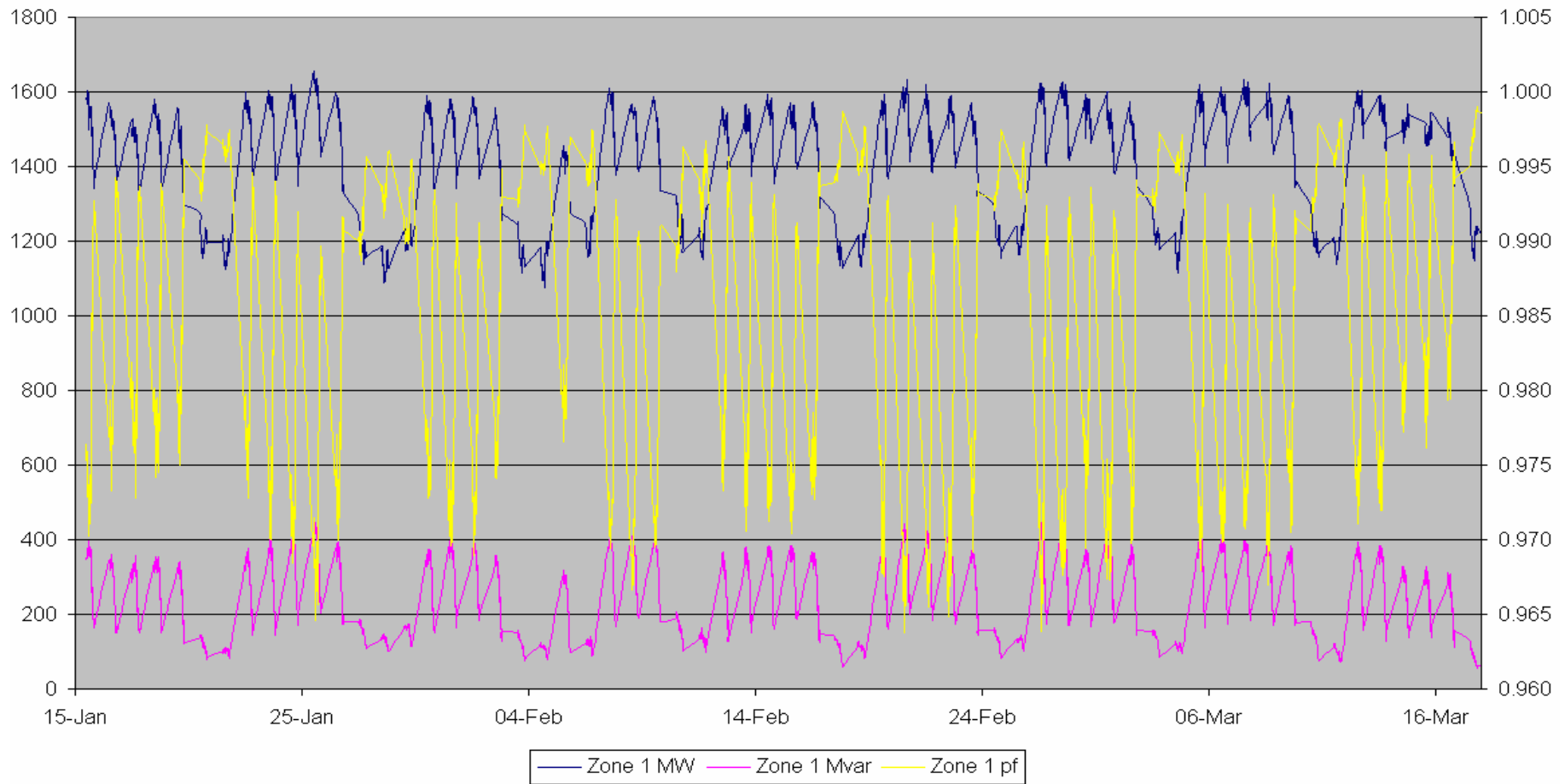
UNI Summer 07/08 – Summer Planning

- Review summer 06/07
 - 2006/2007 actual 1600 MW, 2007 / 08 Expected 1715 MW, Prudent 1784 MW
 - HLY river heating constrained N-G-1 scenario limit was 1750 MW
 - Power factor performance confirmed 0.97.
- Summer risk period mid Jan –mid Mar
 - No extended planned outages HLY 5 or OTC through risk period
- Risk period security planning to N-1 & N-G-1 limits
 - Include HLY U5. OTC contingent risk (-G)
 - HLY availability confirmed
 - one 250 MW unit at full load; U5 CCGT at full load; U6 GT at full load (~670 MW; ~+300MVar)
 - MDN SC2 unavailable
 - ALB C2 (+100 MVar); OTA SC 1&2. (+60 MVar); SWN E105 (+40 MVar if not generating)
 - All plant normally available



UNI Summer 07/08 – Summer Planning

Zone 1 Load for 2007 + 4% (between 12:00 & 20:00)



UNI Summer 07/08 – Summer Planning POC

id	Outage Block	GIP/GXPs	Start	End
35468	HLY4	HLY	28/12/2007 22:00	24/03/2008 22:00
2631445	OTA_C_4A	OTA	14/01/2008 07:00	17/01/2008 18:00
2631446	OTA_C_4B	OTA	14/01/2008 07:00	17/01/2008 18:00
2619608	GLN_220BS_A	GLN	16/01/2008 07:00	16/01/2008 12:00
2619684	GLN_OTA_1	OTA,GLN	16/01/2008 07:00	16/01/2008 17:00
2621001	TAK_T5	TAK	16/01/2008 07:00	16/01/2008 17:00
36122	HLY6	HLY	19/01/2008 00:01	19/01/2008 23:59
2614027	OTA_T2	OTA	19/01/2008 07:00	19/01/2008 18:00
2614030	OTA_C_2A	OTA	19/01/2008 07:00	19/01/2008 18:00
2614031	OTA_T3	OTA	19/01/2008 07:00	19/01/2008 18:00
2626938	OTA_TIE_1	OTA	19/01/2008 07:00	19/01/2008 18:00
2614033	OTA_PAK_1	PAK,OTA	19/01/2008 07:00	20/01/2008 18:00
2632198	MDN_MPE_2	MDN,MPE	24/01/2008 07:00	25/01/2008 21:00
40504	SWN_2	SWN	2/02/2008 00:00	2/02/2008 18:00
40505	SWN_3	SWN	2/02/2008 00:00	2/02/2008 18:00
40506	SWN_5	SWN	2/02/2008 00:00	2/02/2008 18:00
2630104	HEN_OTA_1	HEN,OTA	2/02/2008 07:00	3/02/2008 18:00
2630105	HEN_OTA_1	HEN,OTA	9/02/2008 07:00	10/02/2008 18:00
2618908	ARI_BOB_1	BOB,ARI	11/02/2008 07:00	16/02/2008 21:00
2625690	OTA_WKM_1	WKM,OTA	15/02/2008 06:00	18/02/2008 18:00
36123	HLY6	HLY	16/02/2008 00:01	16/02/2008 23:59
2621623	BRB_HPI_1	HPI,BRB	18/02/2008 07:00	18/02/2008 21:00
2619681	GLN_HLY_1	HLY,GLN	19/02/2008 06:00	19/02/2008 21:00
2621624	BRB_MDN_1	MDN,BRB	19/02/2008 07:00	20/02/2008 21:00
2619899	HPI_MDN_1	MDN,HPI	21/02/2008 07:00	21/02/2008 17:30
2620556	OTA_PEN_2	PEN,OTA	21/02/2008 07:00	23/02/2008 21:00
2625691	OTA_WKM_2	OTA,WKM	22/02/2008 06:00	25/02/2008 18:00
2630108	HLY_OTA_2	HLY,OTA	4/03/2008 07:00	6/03/2008 18:00
2618909	ARI_BOB_1	BOB,ARI	4/03/2008 07:00	8/03/2008 21:00
2632458	OTA_ROS_2	OTA,ROS	6/03/2008 06:30	7/03/2008 19:00
2630110	HLY_OTA_2	HLY,OTA	11/03/2008 07:00	13/03/2008 18:00



UNI Summer 07/08 – Summer Planning

UNISS 07/08 Scenario Limits Table

Number	Revised Scenarios								Final Voltage Limits	Z1 Thermal Transmission Limits	
	Otahuhu B	Huntly U5	Huntly 1-4	Huntly P40	Southdown	Glenbrook	Marsden +70MVAR	OTA Condenser x 5	Z1 Load Limits @ 5% margin	Z1 Load @ 15 min oload	Contingency
N - 1	Y	Y	Y 1x(250MW @ 121MVAR)	Y	Y	Y	N	Y	2085 (1245)	2105	OTA WKM 3
N - G - 1		Y	Y 1x(250MW @ 121MVAR)	Y	Y	Y	N	Y	1875 (1445)	1910	OTA WKM 3

Notes:

1. Zone 1 P.F of 0.97
2. Includes 175 MVAR of capacitors at PEN and 100 MVAR at HEP 110 kV
3. No Western Road load.
4. Voltage Stability limits have a 5% margin. Thermal limits have 15 min off load times.
5. Southdown at 195 MW, Genbrook at 51 MW
6. Marsden C2 not available
7. New Plymouth units not available.
8. Waikato generation of 775 MW, Whirinaki not generating.
9. HVDC North of 450MW



UNI Summer 07/08 – Summer Planning

- Summer security limits maintained
 - N-1 limit 2085 MW
 - provides for up to 22% load growth on forecast load 07/08 (1715 MW)
 - N-G-1 limit 1875 MW
 - provides for up to 10% load growth on forecast load 07/08 (1715 MW)
 - Industry contingency plan not required at this stage
- Monitor plant availability leading up to Summer risk period
 - OTC, HLY5, UNI reactive plant
- Convene UNI group for forced major plant outage
- AO's to advise any major changes to availability / capability

Further info System Operator SSF: <http://www.transpower.co.nz/?id=5993>

