ISSUE	I	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	A	W	X	Y	Z
AP. C.		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												

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Amendment	BY	CH'D	APP	Date
Y UPDATES TO 16.08.01 ADDED INCLUDING VARIOUS LOAD RATINGS.	TN	BP		
Z UPDATES TO 10.06.02 ADDED INCLUDING VARIOUS LOAD RATINGS.	TN	BP	GS	06/02
AA UPDATES TO 31.03.03 ADDED INCLUDING VARIOUS LOAD RATINGS.	TN	BP	GS	3/04
AB UPDATES TO 01/05/04 ADDED INCLUDING VARIOUS LOAD RATINGS.	BP	MM	GS	05/04
AC UPDATES TO 01/05/05 ADDED INCLUDING VARIOUS LOAD RATINGS.	BP	MM	GS	06/05
W OTA T2 & T4 RATINGS CHANGED, MOK & WAA GENERATION ADDED AND.	BLM	GB		7/00
X MTN CONNECTED BETWEEN BPE–MDN CIRCUITS. SUBSTATION LOAD PEAKS AND CIRCUIT RATINGS CHANGED. OTA T5 ADDED. KTA, TUI AMENDED. KOE & SDF–ONG CIRCUIT REMOVED.	BLM	GB	GB	12/99

DATE OF CURRENT ISSUE 6/05

	DRAWN	CHECKED	REC. ISSUE	APP. ISSUE
6/88	S Mutton	P Clark	P Clark	C Bull
6/88				
6/88				

TRANSPOWER

TRANS POWER TRANSMISSION

NORTH ISLAND POWER SYSTEM DIAGRAM
LOADFLOW TRANSMISSION LINE RATINGS
AND SUBSTATION LOADS

NIPS–6

ISSUE AC

GZ1 Northland

220 kV

110 kV

50 kV

BRB 40 — 389 — 347 — 457 — HPI 694 — SVL 58 257 — ALB 120 — 3 640 — HEN 75 96 — 694 — G115 SWN — 694

MDN — 142 T01 — 142 T02 — +60 C −20 — MDN 3

ALB 200 T04 +30 +30 — 50 160 — ALB

HEN 200 T05 +30 +30 — 200 T01 — HEN

1 2 228 — MPE 38 — 30 T03 — 10 T01 — MPE 1 2 13 — DAR 12

1 2 63 — KOE 30 — 5 5 1 55 — KTA 25

1 2 76 — 1 146 — KEN 50

MTO 14 — WEL 28

1 2 91 — 1 2 55

HEP 1 152 2 114 — 1 2 3 4 91 124

ROS 220* — 1 2 91 — MNG 136 — 1 2 91

PEN 75 300 — 5 6 333 — 694 — G394 OTA 43 — 100

PEN 155* — 1 301 — 114 — PAK 120 — 229 — 114

OTA Split — 50 — 50

G40 — 2 182 — 2 333

200 T10 — 250 T05 — 250 T03 — 200 T04 +30 +30 — 100 T02 +30

1 2 91 — 1 2 61 — BOB 67 — WIR 64

1 2 50 — WES 18

1 2 152 — WHU 54 — 1 2 91 — WKO 30 — 1 2 89 — KPU 38

HAM 160 — 200 T06 — 200 T09 — HAM 33

1 2 57 — GDC 32 — G90 KPO — 63 — HIN 35 — TMU 30 — G54 ANC — 50

TAK 100 — 694 — GLN 157 — 694 — 614 — G1000 HLY — 469 — TWH 40 — 403

1 201 — 2 201 — 3 403 — G51 WPA 201 — G360 MTI — 1 2 201 — G110 MOK

G175 ARI — 1 57 2 63 — 103 — KIN — 50 9 63 — LFD — 1 57 2 57

G27 WHE — 65 — ROT — 1 2 63 10

25 — MTM 50 — 63 55 — TGA 93 — 63

G100 WKM — 333 — G81 ATI

TRK 200 T01 — 200 T02 — 1 2 333 — TRK — 63 — 76

OWH 14 — 56 — OKE 63 — TMI 24 — 63 — PIE — 63

HTI 27

EDG 50 T04 — 50 T05 — 1 2 238 — 54 — EDG — 48 — WAI 9 (T1&T2/T5) 3 — 3 — TKH 3

RCN HAMILTON — PALMERSTON NORTH RCC — 469 — 469 — 382 — 1 2 244 — 238 — G55 PPI 1.2 — 333

KAW 80 T12 — 80 T13 — 3 238 — 100 — KAW 115 — 1 2 48

1 2 88 — G72 MAT 3 — 91 — G25 ANI

G106 4 — OKI — 1 2 153 — G84 ARA — 128 — 333 — G112 OHK — 238 — G153 WRK — 50

GZ2 Auckland

GZ3 Hamilton

GZ4 Edgecumbe

GZ5 Hawkes Bay

GZ6 Taranaki

GZ7 Bunnythorpe

GZ8 Wellington

* NOTE the load on the 110 kV CBD feeders can be swapped between ROS and PEN. ROS peak load ranges from 130 MW to 220 MW. PEN 110 kV peak load ranges from 70 MW to 150 MW.

TMN 15 — G240 TKU 9 — 238 — G150 WHI 80 — 477 — 457 — RDF 80 T03 80 T04 — 1 2 274 — 80 — WTU — G120 RPO — 238 — 60 — TNG

12MVAr — GIS 46 — WRA 10 — G137 — 1 2 48 — 1 57 2 63 — TUI — 1 2 57 58 — RDF 102 — 1 — 2 — 50

G224 NPL — 200 T08 — G224 NPL 19 — 1 238 — 2 238 52 — CST — 1 63 2 63 15 — HUI — MNI 6 — 91 — 91 — 91

1 476 — 2 559 — SFD — 100 T10 — SFD 24 — 2 54 — 1 58 — 50 — HWA 28 — G32 PTA — 50 — WYY 4 — G50 WAA — 50

G350 TCC — 2 — 3 — 1 238 — BRK 28 — G24 KPI — 69 — OPK 12

1 2 609 — WGN 33 — 63 — MTN 15 — 63 — 1 63 — 2 63

BPE 90 — 50 T01 — 50 T02 — 50 T03 — BPE — 44 — LTN

1 2 48 — G26 MHO 35 — 1 2 50

CPK 145 — 1 184 — 3 228 — WIL 73 — 110 T08 — 694 — 3 694 — 690 — 1 2 201 — HAY

+50 −30 C −40 — 210 T01 — +60 C −30 — 210 T02 — +35 −20 C C −40 — 210 T05

1 2 55 — 43 — KWA — MLG 61 — 1 2 63

PRM 60 — 1 2 50 — PNI 20 — 1 2 91 — 1 — 2 — 281 — TKR 81 — 1 2 281

GFD 53 — 1 2 109 — MGM 12 — 42 — MST 40 — 1 2 63 — GYT 11 — 1 2 63 — UHT 29 — 1 2 109

HAY 28

T 23 — G +656 max G −680 max — POLE 2 BEN–HAY 2 +/− 350kV HVDC

+60MVAr +46MVAr F3 — +60MVAr +46MVAr F4 — HARMONIC FILTERS

47.5MVAr F1 — 47.5MVAr F2 — HARMONIC FILTERS

T 7 C +65 −40 — 1 — G +151 max G −85 max

T 8 C +65 −40 — 2 — G +151 max G −85 max

T 9 C +65 −40 — 3 — G +151 max G −85 max

T 10 C +65 −40 — 4 — G +151 max G −85 max

POLE 1A BEN HAY 1 — +/− 270kV HVDC — POLE 1B BEN HAY 1

2.5 — ONG 9 — 57 — RTR — 48 — NPK 6 — 57 — OKN 8 — 57

FHL 44 — 2 — 1 50 — WPW 21 — DVK 15 — 2 — 1 48 — G90 TAP — 3 — WDV — 2 — 1 57 — 42

MTR 9 — 57

RCN HAMILTON — PALMERSTON NORTH RCC

* NOTE this diagram is intended for quick reference purposes only. The accuracy of any load or circuit rating data contained on this drawing is not guaranteed by Transpower. This data should NOT be relied on without independently confirming its accuracy.

LEGEND

- Harmonic Filter
- G50 — Power Station (showing generation MW)
- 17 — Substation (Showing peak load MVA 2003) MD
- 100 — Interconnecting Transformer 100MVA Rating
- HVDC Valve Group
- On Load Tap Change Transformer
- C +30 −15 — Rotary Condenser Rating −15 to +30 MVAR
- +15 +15 — Static Capacitor – Two Stages Switchable MVAR
- 220 kV Lines
- 110 kV Lines
- 50 kV Lines
- 1 — Transmission Circuit No.
- 2 / 50 — Summer Conductor rating (MVA)
- Regional Boundary
- Operational System Split

44

67