A. Data Handbook

Data for the Te Aponga Uira O Tumu-Te_Varovaro power system on the island of Rarotonga in the Cook Islands is provided in this handbook for generation, transmission and distribution. Data that were missing or assumed are noted accordingly with a red highlight.

A.1 Generation

Generator data for the Te Aponga Uira O Tumu-Te_Varovaro power system on the island of Rarotonga in the Cook Islands is listed below.

Table 1. Rarotonga Island Generators

Bus-No	Generator Name	Voltage (kV)	Base KVA	PMax (KW)	PMin (KW)	QMax (KVAR)	QMin (MVAR)	Speed (rpm)	Status*	Type	Xd	X''d	Xo
1	GS-1	0.415	2,000	1,600	320	1,280	-960		1	MS Diesel	1.96	0.12	0.02
1	GS-2	0.415	2,000	1,600	320	1,280	-960		1	MS Diesel	1.96	0.12	0.02
1	GS-3	11.0	1,600	1,280	260	1,020	-760		1	MS Diesel	1.96	0.12	0.02
1	GS-4	0.415	600	480	100	380	-290		1	MS Diesel	1.9	0.215	0.025
1	GS-5	0.415	600	480	100	380	-290		1	MS Diesel	2.0	0.16	0.025
1	NZGS-1	0.415	850	680	136	540	-400		1	MS Diesel	1.74	0.181	0.104
1	NZGS-2	0.415	850	680	136	540	-400		1	MS Diesel	1.69	0.186	0.107
2	GS-6	11.0	1,200	960	190	760	-760		1	MS Diesel	1.69	0.21	0.107
2	GS-7	11.0	2,700	2,160	430	1,720	-1,290		1	MS Diesel	1.57	0.299	0.107

Note:

* Status of generator unit: 1= On-line, 2=Off-line.

A.2 Power Transformers

Power transformer data for Raratonga Island in the Cook Islands of the Te Aponga Uira O Tumu-Te_Varovaro power system is listed below.

Table 2. Power Transformers

No.	From Bus	Bus No.	To Bus	KVA	Nominal Voltage		Impedance p.u.*		Year	Status**
					Primary (KV)	Secondary (KV)	Resistance	Reactance		
TR-1	POWER STATION	BUS-1	GS-1	2500	0.415	11	0.0006	0.0550	1990	1
TR-2	POWER STATION	BUS-1	GS-2	2500	0.415	11	0.0006	0.0550	1990	1
TR-3	POWER STATION	BUS-1	GS-4	750	0.415	11	0.0011	0.0530	1976	1
TR-4	POWER STATION	BUS-1	GS-5	750	0.415	11	0.0011	0.0557	2007	1
TR-5	POWER STATION	BUS-2	PLANT AUX.	300	11	0.415	0.0026	0.0414	1975	1
TR-6	POWER STATION	BUS-1	PLANT AUX.	300	11	0.415	0.0026	0.0418	1975	1
TR-7	POWER STATION	1	NZ GS-1 & 2	2500	0.415	11	0.0006	0.0550	2004	1

Note:

* Per unit impedance based on the transformer base MVA

** Status of transformer: 1= On-line, 2=Off-line

A.3 Distribution System Data

Distribution system equipment data for Raratonga Island in the Cook Islands of the Te Aponga Uira O Tumu-Te_Varovaro power system is listed below.

Distribution system equipment listed in this section include data for distribution feeders, distribution transformers, and secondary wires.

Table 3. Distribution Feeders

Feeder	Substation	Bus No.	Total feeder Length (km)	Connected KVA
AVURA CITY (AC) FEEDER	POWER PLANT	BUS-1	6.887	2,710
AIRPORT (A) FEEDER	POWER PLANT	BUS-2	11.959	1,000
CROSS LINE (CL) FEEDER	POWER PLANT	BUS-2	22.898	3,510
EAST COAST (EC) FEEDER	POWER PLANT	BUS-1	16.442	2,220
SEAPORT (S) FEEDER	POWER PLANT	BUS-2	7.528	2,150
WEST COAST (WC) FEEDER	POWER PLANT	BUS-2	17.346	2,980
FEEDER TOTALS			**83.060**	**14,570**

Table 4. Distribution Feeder Data

Feeder-Section	From Bus	To Bus	Conductor	Type	Distance (meters)	Year Installed
AIRPORT FEEDER						
A-1	POWER STATION	A-107	3-1/C-70 mm^2 AL	XLPE	2,950	1999
A-2	A-107	A-108	3-1/C-150 mm^2 AL	XLPE	940	2009
A-3	A-107	A-PC1	3-1/C-70 mm^2 AL	XLPE	300	unknown
A-4	A-108	A-108_A	3-1/C-70 mm^2 AL	XLPE	100	1985
A-5	A-108	A-129_A	3-1/C-70 mm^2 AL	XLPE	512	1988
A-6	A-129_A	A-129	3-1/C-150 mm^2 AL	XLPE	120	2010
A-7	A-108	A-108_B	3-1/C-150 mm^2 AL	XLPE	750	2008
A-8	A-108_B	A-109	3-1/C-150 mm^2 AL	XLPE	813	2009
A-9	A-109	A-303	3-1/C-150 mm^2 AL	XLPE	2,145	2009
A-10	A-303	WC-302	3-1/C-150 mm^2 AL	XLPE	879	2008
A-11	A-PC1	A-PC3	3-1/C-35 mm^2 AL	XLPE	100	unknown
A-12	A-PC3	A-MWS	3-1/C-35 mm^2 AL	XLPE	100	unknown
A-13	A-MWS	COOL STORE-A	3-1/C-70 mm^2 AL	XLPE	100	unknown
A-14	A-PC1	A-PC2	3-1/C-35 mm^2 AL	XLPE	1,100	unknown
A-15	A-PC2	WC-110	3-1/C-35 mm^2 CU	PILC	1,050	unknown
		AIRPORT FEEDER TOTAL			**11,959**	
AVURA CITY FEEDER						
AC-1	POWER STATION	AC-101	3-1/C-150 mm^2 AL	XLPE	2,300	2006
AC-2	AC-101	AC-102_A	3-1/C-35 mm^2 CU	PILC	460	unknown
AC-3	AC-102_A	AC-102	3-1/C-150 mm^2 AL	XLPE	40	2008
AC-4	AC-101	AC-103	3-1/C-150 mm^2 AL	XLPE	40	1991
AC-5	AC-102	AC-103	3-1/C-95 mm^2 AL	XLPE	300	200

Feeder-Section	From Bus	To Bus	Conductor	Type	Distance (meters)	Year Installed
AC-6	AC-103	AC-126	3-1/C-150 mm^2 AL	XLPE	170	1991
AC-7	AC-126	AC-135_A	3-1/C-150 mm^2 AL	XLPE	560	unknown
AC-8	AC-135_A	AC-135	3-1/C-150 mm^2 AL	XLPE	45	2011
AC-9	AC-135	AC-135_B	3-1/C-150 mm^2 AL	XLPE	45	2011
AC-10	AC-135_B	AC-121	3-1/C-95 mm^2 AL	XLPE	700	unknown
AC-11	AC-126	AC-112_A	3-1/C-95 mm^2 AL	XLPE	470	1991
AC-12	AC-112_A	AC-112	3-1/C-150 mm^2 AL	XLPE	70	2004
AC-13	AC-112	AC-112_B	3-1/C-150 mm^2 AL	XLPE	70	2004
AC-14	AC-112_B	AC-130_A	3-1/C-95 mm^2 AL	XLPE	45	1991
AC-15	AC-130_A	AC-130	3-1/C-150 mm^2 AL	XLPE	96	2011
AC-16	AC-130	AC-130_B	3-1/C-150 mm^2 AL	XLPE	96	2011
AC-17	AC-130_B	AC-118	3-1/C-95 mm^2 AL	XLPE	110	1991
AC-18	AC-118	AC-132_A	3-1/C-95 mm^2 AL	XLPE	220	2000
AC-19	AC-132_A	AC-132	3-1/C-95 mm^2 AL	XLPE	160	2000
AC-20	AC-132	AC-132_B	3-1/C-95 mm^2 AL	XLPE	160	2000
AC-21	AC-132_B	AC-125	3-1/C-150 mm^2 AL	XLPE	730	1991
		AVURA CITY TOTAL			**6,887**	
CROSS LINE FEEDER						
CL-1	POWER STATION	CL-128	3-1/C-150 mm^2 AL	XLPE	780	1991
CL-2	CL-128	CL-128_A	3-1/C-70 mm^2 AL	XLPE	20	unknown
CL-3	CL-128	CL-400_A	3-1/C-150 mm^2 AL	XLPE	5,820	1991
CL-4	CL-400_A	CL-400	3-1/C-70 mm^2 AL	XLPE	330	1991
CL-5	CL-400	CL-400_B	3-1/C-70 mm^2 AL	XLPE	330	1992
CL-6	CL-400_B	CL-210	3-1/C-150 mm^2 AL	XLPE	220	1991
CL-7	CL-210	CL-313	3-1/C-70 mm^2 AL	XLPE	1,200	1999

Feeder-Section	From Bus	To Bus	Conductor	Type	Distance (meters)	Year Installed
CL-8	CL-313	CL-312_A	3-1/C-70 mm^2 AL	XLPE	1,180	1999
CL-9	CL-312_A	CL-312	3-1/C-150 mm^2 AL	XLPE	20	2008
CL-10	CL-312	WC-312_B	3-1/C-150 mm^2 AL	XLPE	20	2008
CL-11	CL-312_B	CL-311	3-1/C-70 mm^2 AL	XLPE	930	unknown
CL-12	CL-312	CL-312_C	3-1/C-150 mm^2 AL	XLPE	20	2008
CL-13	CL-312_C	CL-310	3-1/C-70 mm^2 AL	XLPE	880	2005
CL-14	CL-210	CL-221_A	3-1/C-70 mm^2 AL	XLPE	513	1999
CL-15	CL-221_A	CL-221	3-1/C-150 mm^2 AL	XLPE	25	2008
CL-16	CL-221	CL-221_B	3-1/C-150 mm^2 AL	XLPE	25	2008
CL-17	CL-221_B	CL-209	3-1/C-70 mm^2 AL	XLPE	645	unknown
CL-18	CL-209	CL-214_A	3-1/C-70 mm^2 AL	XLPE	1,370	unknown
CL-19	CL-214_A	CL-214	3-1/C-150 mm^2 AL	XLPE	30	2002
CL-20	CL-214	CL-214_B	3-1/C-150 mm^2 AL	XLPE	30	2002
CL-21	CL-214_B	CL-207	3-1/C-150 mm^2 AL	XLPE	1,470	2003
CL-22	CL-207	CL-208_A	3-1/C-70 mm^2 AL	XLPE	535	1988
CL-23	CL-208_A	CL-208	3-1/C-150 mm^2 AL	XLPE	20	unknown
CL-24	CL-208	CL-208_B	3-1/C-150 mm^2 AL	XLPE	20	unknown
CL-25	CL-208_B	CL-219_A	3-1/C-70 mm^2 AL	XLPE	650	1988
CL-26	CL-219_A	CL-219	3-1/C-150 mm^2 AL	XLPE	20	2006
CL-27	CL-219	CL-219_B	3-1/C-150 mm^2 AL	XLPE	20	2006
CL-28	CL-219_B	CL-211_A	3-1/C-70 mm^2 AL	XLPE	335	1988
CL-29	CL-211_A	CL-211	3-1/C-150 mm^2 AL	XLPE	20	2001
CL-30	CL-211	CL-211_B	3-1/C-150 mm^2 AL	XLPE	20	2001
CL-31	CL-211_B	CL-206	3-1/C-70 mm^2 AL	XLPE	710	1988
CL-32	CL-206	CL-220_A	3-1/C-70 mm^2 AL	XLPE	679	1988

Feeder-Section	From Bus	To Bus	Conductor	Type	Distance (meters)	Year Installed
CL-33	CL-220_A	CL-220	3-1/C-150 mm^2 AL	XLPE	55	2007
CL-34	CL-220	CL-220_B	3-1/C-150 mm^2 AL	XLPE	55	2007
CL-35	CL-220_B	CL-218_A	3-1/C-70 mm^2 AL	XLPE	723	1988
CL-36	CL-218_A	CL-218	3-1/C-95 mm^2 AL	XLPE	60	2005
CL-37	CL-218	CL-218_B	3-1/C-95 mm^2 AL	XLPE	60	2005
CL-38	CL-218_B	CL-205	3-1/C-70 mm^2 AL	XLPE	570	1988
CL-39	CL-215	CL-205	3-1/C-35 mm^2 CU	PILC	120	unknown
CL-40	CL-205	CL-213	3-1/C-150 mm^2 AL	XLPE	445	2010
CL-41	CL-213	CL-212	3-1/C-150 mm^2 AL	XLPE	473	2010
CL-42	CL-212	CL-204	3-1/C-150 mm^2 AL	XLPE	1,450	2010
			CROSS LINE TOTAL		**22,898**	
EAST COAST FEEDER						
EC-1	POWER STATION	EC-119	3-1/C-150 mm^2 AL	XLPE	4,000	1991
EC-2	EC-119	EC-120	3-1/C-150 mm^2 AL	XLPE	870	1991
EC-3	EC-120	EC-131	3-1/C-70 mm^2 AL	XLPE	90	1992
EC-4	EC-120	EC-121	3-1/C-150 mm^2 AL	XLPE	1,120	1991
EC-5	EC-121	EC-133_A	3-1/C-70 mm^2 AL	XLPE	580	1988
EC-6	EC-133_A	EC-133	3-1/C-150 mm^2 AL	XLPE	400	2004
EC-7	EC-133	EC-133_B	3-1/C-150 mm^2 AL	XLPE	400	2004
EC-8	EC-133_B	EC-122	3-1/C-70 mm^2 AL	XLPE	420	1998
EC-9	EC-122	EC-123_A	3-1/C-70 mm^2 AL	XLPE	840	1998
EC-10	EC-123_A	EC-123	3-1/C-150 mm^2 AL	XLPE	63	2007
EC-11	EC-123	EC-123_B	3-1/C-150 mm^2 AL	XLPE	63	2007
EC-12	EC-123_B	EC-124	3-1/C-70 mm^2 AL	XLPE	320	1999
EC-13	EC-124	EC-134_A	3-1/C-70 mm^2 AL	XLPE	320	1999

Feeder-Section	From Bus	To Bus	Conductor	Type	Distance (meters)	Year Installed
EC-14	EC-134_A	EC-134	3-1/C-150 mm^2 AL	XLPE	710	2007
EC-15	EC-134	EC-134_B	3-1/C-150 mm^2 AL	XLPE	710	2007
EC-16	EC-134_B	EC-202	3-1/C-70 mm^2 AL	XLPE	1,280	1999
EC-17	EC-202	EC-216_A	3-1/C-70 mm^2 AL	XLPE	370	1999
EC-18	EC-216_A	EC-216	3-1/C-150 mm^2 AL	XLPE	135	2003
EC-19	EC-216	EC-216_B	3-1/C-150 mm^2 AL	XLPE	135	2003
EC-20	EC-216_B	EC-217_A	3-1/C-70 mm^2 AL	XLPE	500	1999
EC-21	EC-217_A	EC-217	3-1/C-150 mm^2 AL	XLPE	730	2006
EC-22	EC-217	EC-217_B	3-1/C-150 mm^2 AL	XLPE	730	2006
EC-23	EC-217_B	EC-203	3-1/C-70 mm^2 AL	XLPE	900	1999
EC-24	EC-203	EC-204	3-1/C-150 mm^2 AL	XLPE	756	2010
			EAST COAST TOTAL		**16,442**	
SEAPORT FEEDER						
S-1	POWER STATION	S-105	3-1/C-150 mm^2 AL	XLPE	1,640	1991
S-2	S-105	S-125	3-1/C-70 mm^2 AL	XLPE	750	1988
S-3	S-125	S-125	3-1/C-70 mm^2 AL	XLPE	250	
S-4	S-125	S-115_A	3-1/C-95 mm^2 AL	XLPE	580	1991
S-5	S-115_A	S-115	3-1/C-95 mm^2 AL	XLPE	118	2000
S-6	S-115	S-115_B	3-1/C-95 mm^2 AL	XLPE	118	2000
S-7	S-115_B	S-114	3-1/C-95 mm^2 AL	XLPE	612	1991
S-8	S-114	S-117_A	3-1/C-95 mm^2 AL	XLPE	770	1991
S-9	S-117_A	S-117	3-1/C-150 mm^2 AL	XLPE	20	2003
S-10	S-117	S-117_B	3-1/C-150 mm^2 AL	XLPE	20	2003
S-11	S-117_B	S-113	3-1/C-95 mm^2 AL	XLPE	740	1991
S-12	S-113	S-116_A	3-1/C-95 mm^2 AL	XLPE	170	1991

Feeder-Section	From Bus	To Bus	Conductor	Type	Distance (meters)	Year Installed
S-13	S-116_A	S-116	3-1/C-150 mm^2 AL	XLPE	70	2003
S-14	S-116	S-116_B	3-1/C-150 mm^2 AL	XLPE	70	2003
S-15	S-116_B	S-111_A	3-1/C-95 mm^2 AL	XLPE	505	1991
S-16	S-111_A	S-111	3-1/C-150 mm^2 AL	XLPE	25	2008
S-17	S-11	S-111_B	3-1/C-150 mm^2 AL	XLPE	25	2008
S-18	S-111_B	WC-110	3-1/C-95 mm^2 AL	XLPE	1,045	1991
			SEAPORT TOTAL		**7,528**	
WEST COAST FEEDER						
WC-1	POWER STATION	WC-110	3-1/C-150 mm^2 AL	XLPE	5,060	1991
WC-2	WC-110	WC-301	3-1/C-70 mm^2 AL	XLPE	476	unknown
WC-3	WC-110	WC-302_A	3-1/C-95 mm^2 AL	XLPE	850	1991
WC-4	WC-302_A	WC-302	3-1/C-150 mm^2 AL	XLPE	300	2008
WC-5	WC-302	WC-315	3-1/C-150 mm^2 AL	XLPE	630	2009
WC-6	WC-315	WC-304	3-1/C-150 mm^2 AL	XLPE	440	2009
WC-7	WC-304	WC-318	3-1/C-150 mm^2 AL	XLPE	1,510	1999
WC-8	WC-318	WC-319	3-1/C-150 mm^2 AL	XLPE	300	2005
WC-9	WC-304	WC-305_A	3-1/C-70 mm^2 AL	XLPE	100	2005
WC-10	WC-305_A	WC-305	3-1/C-150 mm^2 AL	XLPE	180	2005
WC-11	WC-305	WC-305_B	3-1/C-150 mm^2 AL	XLPE	180	2005
WC-12	WC-305_B	WC-306	3-1/C-70 mm^2 AL	XLPE	320	1999
WC-13	WC-306	WC-307	3-1/C-70 mm^2 AL	XLPE	700	1999
WC-14	WC-307	WC-316	3-1/C-150 mm^2 AL	XLPE	860	2007
WC-15	WC-307	WC-308	3-1/C-70 mm^2 AL	XLPE	810	2000
WC-16	WC-308	WC-309	3-1/C-70 mm^2 AL	XLPE	1,100	2000

Feeder-Section	From Bus	To Bus	Conductor	Type	Distance (meters)	Year Installed
WC-17	WC-309	WC-321_A	3-1/C-150 mm^2 AL	XLPE	470	2004
WC-18	WC-321_A	WC-321	3-1/C-150 mm^2 AL	XLPE	260	2004
WC-19	WC-321	WC-321_B	3-1/C-150 mm^2 AL	XLPE	260	2006
WC-20	WC-321_B	WC-317	3-1/C-150 mm^2 AL	XLPE	1,180	2006
WC-21	WC-309	WC-314_A	3-1/C-70 mm^2 AL	XLPE	710	unknown
WC-22	WC-314_A	WC-314	3-1/C-95 mm^2 AL	XLPE	20	2005
WC-23	WC-314	WC-314_B	3-1/C-95 mm^2 AL	XLPE	20	2005
WC-24	WC-324_B	WC-310	3-1/C-70 mm^2 AL	XLPE	610	2000
			WEST COAST TOTAL		**17,346**	

Table 5. Three-phase Distribution Transformers

TR. NO.	LOCATION	FEEDER	KVA	BUS NO.	Nominal Voltage		Year Made	Total
					Primary (KV)	Secondary (V)		
DT-101	TUTAKIMOA	AVURA CITY	250	AC-101	11	415	1990	250
DT-102	TELECOM	AVURA CITY	300	AC-102	11	415	2005	300
DT-103	COOL STORE	AVURA CITY	500	AC-103	11	415	1990	500
DT-105	AVATIU	SEAPORT	250	S-105	11	415	1990	250
DT-107	AIRPORT	AIRPORT	100	A-107	11	415	1990	100
DT-108	TEREORA	AIRPORT	200	A-108	11	415	2002	200
DT-108A	SPORTS COMPLEX	AIRPORT	300	A-108_A	11	415	1978	300
DT-108B	STADIUM	AIRPORT	200	A-108_B	11	415	2008	200
DT-109	TEPUKA	AIRPORT	100	A-109	11	415	1976	100
DT-110	POKOINU	WEST COAST	160	WC-110	11	415	1990	160
DT-111	MET	SEAPORT	200	S-111	11	415	1999	200
DT-112	POLICE HQ	AVURA CITY	100	AC-112	11	415	2006	100
DT-113	PARLIAMENT	SEAPORT	200	S-113	11	415	1988	200
DT-114	PANAMA	SEAPORT	200	S-114	11	415	2009	200
DT-115	CITC	SEAPORT	300	S-115	11	415	1990	300
DT-116	OASIS	SEAPORT	300	S-116	11	415	2003	300
DT-117	KIDS ACTION	SEAPORT	100	S-117	11	415	2003	100
DT-118	WESTPAC	AVURA CITY	500	AC-118	11	415	2007	500
DT-119	TAKUVAINE	EAST COAST	100	E-119	11	415	1978	100
DT-120	ANDELECT	EAST COAST	200	E-120	11	415	1999	200
DT-121	TUPAPA	SEAPORT	300	S-121	11	415	1990	300
DT-122	CLUB RARO	EAST COAST	200	E-122	11	415	1999	200

DT-123	SUPER BROWN	EAST COAST	300	E-123	11	415	2007	300
DT-124	UPPER TUPAPA	EAST COAST	100	E-124	11	415		100
DT-126	POST OFFICE	AVURA CITY	500	AC-126	11	415	1990	500
DT-127	AVATIU WHARF	SEAPORT	300	S-127	11	415	2004	300
DT-128A	AVATIU VALLEY	CROSSLINE	100	CL-128_A	11	415	1987	100
DT-129	NAVAL	AIRPORT	100	A-129	11	415	1986	100
DT-130	C.I.D.B.	AVURA CITY	160	AC-130	11	415		160
DT-131	CULTURE CENTRE	EAST COAST	300	EC-131	11	415	1971	300
DT-132	MEATCO	AVURA CITY	200	AC-132	11	415	1989	200
DT-133	KIIKII	EAST COAST	100	E-133	11	415	2001	100
DT-134	TITAMA	EAST COAST	100	E-134	11	415	2003	100
DT-135	BAMBOO JACK	AVURA CITY	100	AC-135	11	415	2003	100
DT-202	MATAVERA	EAST COAST	200	E-202	11	415	1990	200
DT-203	LOWER NGATANGIIA	EAST COAST	160	E-203	11	415	1990	160
DT-204	TURANGI	EAST COAST	160	E-204	11	415	2006	160
DT-205	MURI	CROSSLINE	300	CL-205	11	415	1990	300
DT-206	TIKIOKI	CROSSLINE	160	CL-206	11	415	1990	160
DT-207	TITIAVEKA	CROSSLINE	200	CL-207	11	415	1990	200
DT-208	MOANA SANDS	CROSSLINE	100	CL-208	11	415	2003	100
DT-209	AVAAVAROA	CROSSLINE	200	CL-209	11	415	1990	200
DT-211	GARNIER	CROSSLINE	100	CL-211	11	415	2000	100
DT-212	LIONAL BROWNE	CROSSLINE	200	CL-212	11	415	1990	200
DT-213	ESCAPA	CROSSLINE	200	CL-213	11	415	2002	200
DT-214	SEA SCAPE	CROSSLINE	200	CL-214	11	415	2003	200
DT-215	PACIFIC RESORT	CROSSLINE	250	CL-215	11	415	2003	250
DT-216	CIFA	EAST COAST	100	E-216	11	415	2003	100

DT-217	VAENGA	EAST COAST	100	E-217	11	415	2003	100
DT-218	SHANGRI-LA	EAST COAST	100	E-218	11	415	2003	100
DT-219	LITTLE POLYNESIAN	CROSSLINE	100	CL-219	11	415	2003	100
DT-220	THE POINT	CROSSLINE	300	CL-220	11	415		300
DT-221	WIGMORE	CROSSLINE	200	CL-221	11	415	2008	200
DT-302	LOWER SANATORIUM	WEST COAST	200	WC-302	11	415	1990	200
DT-303	SANATORIUM	WEST COAST	200	WC-303	11	415	2007	200
DT-305	EDGEWATER	WEST COAST	300	WC-305	11	415	2004	300
DT-306	PWD	WEST COAST	250	WC-306	11	415	2006	250
DT-307	INAVE	WEST COAST	200	WC-307	11	415	1984	200
DT-308	ARORANGI	WEST COAST	250	WC-308	11	415	2004	250
DT-309	BETELA	WEST COAST	200	WC-309	11	415	1990	200
DT-310	KAVERA	WEST COAST	160	WC-310	11	415	1990	160
DT-311	AROA	WEST COAST	160	WC-311	11	415	1990	160
DT-312	RAROTONGAN	CROSSLINE	500	CL-312	11	415	2007	500
DT-313	RUTAKI	AVURA CITY	100	CL-313	11	415		100
DT-314	JIM BRUCE	WEST COAST	100	WC-314	11	415	2003	100
DT-315	KOKO	WEST COAST	100	WC-315	11	415	2002	100
DT-316	UPPER INAVE	WEST COAST	100	WC-316	11	415	2007	100
DT-317	T&M	WEST COAST	100	WC-317	11	415	2003	100
DT-318	WASTE MANAGEMENT	WEST COAST	100	WC-318	11	415	2004	100
DT-319	T&M CRUSHER	WEST COAST	300	WC-319	11	415	2004	300
DT-321	BETELA BACK	WEST COAST	100	WC-321	11	415	2006	100
DT-400	SHERATON	CROSSLINE	400	CL-400	11	415	1978	400
	TOTALS	**AIRPORT**	**1,000**					
		AVURA CITY	**2,710**					

		CROSSLINE	**3,510**					
		EAST COAST	**2,220**					
		SEAPORT	**2,150**					
		WEST COAST	**2,980**					
	TOTALS		**14,570**					**14,570**

A.3.1 Secondary Wires

Distribution secondary service wires for Raratonga Island are listed below. All secondary service conductors are 4-wire.

Table 6. Secondary Service Wires

Manufacturer	Rated Voltage	Insulation	Conductor Type	Conductor Size
General Cable	600	XLPE	Hard Drawn Aluminum	25 mm^2
General Cable	600	XLPE	Hard Drawn Aluminum	35 mm^2
General Cable	600	XLPE	Hard Drawn Aluminum	50 mm^2
General Cable	600	XLPE	Hard Drawn Aluminum	70 mm^2
General Cable	600	XLPE	Hard Drawn Aluminum	95 mm^2
Olex	600	XLPE	Hard Drawn Aluminum	50 mm^2
Olex	600	XLPE	Hard Drawn Aluminum	70 mm^2
Olex	600	XLPE	Hard Drawn Aluminum	90 mm^2