

Station name	Owner name	Generation type	Capacity	Station name	Owner name	Distributor	Whether the distributor pays ACOT
Waihopai	Trustpower	Hydro	2.5	1927	BLN0331	Marlborough Lines	Pays ACOT
Kumara	Trustpower	Hydro	6.5	1928	KUM0661	Westpower	Pays ACOT
Dillmans	Trustpower	Hydro	3.5	1928	KUM0661	Westpower	Pays ACOT
Duffers	Trustpower	Hydro	0.5	1928	KUM0661	Westpower	Pays ACOT
McKays Creek	Trustpower	Hydro	1.1	1931	HKK0661	Westpower	Pays ACOT
Arnold	Trustpower	Hydro	3.1	1932	DOB0331	Westpower	Pays ACOT
Brooklyn Power Station	Lloyd Wensley	Hydro	0.2	1934	MOT0111	Network Tasman	Doesn't pay ACOT
Roaring Meg	Pioneer Generation	Hydro	4.2	1936	CML0331	Aurora Energy	Pays ACOT
Wye Creek	Pioneer Generation	Hydro	1.35	1936	FKN0331	Aurora Energy	Pays ACOT
Hinemaiaia A	Trustpower	Hydro	2.4	1939	WRK0331	Unison Networks	Pays ACOT
Highbank	Trustpower	Hydro	25.2	1945	ASB0661	Electricity Ashburton	Pays ACOT
Fraser	Pioneer Generation	Hydro	2.8	1956	CYD0331	Aurora Energy	Pays ACOT

Station name	Owner name	Generation type	Capacity	Station name	Owner name	Distributor	Whether the distributor pays ACOT
Wahapo (Okarito Forks)	Trustpower	Hydro	3.1	1960	HKK0661	Westpower	Pays ACOT
Kuratau	King Country Energy	Hydro	6	1962	ONG0331	The Lines Company	Pays ACOT
Wairere Falls	King Country Energy	Hydro	4.9	1963	ONG0331	The Lines Company	Pays ACOT
Mokauiti	King Country Energy	Hydro	1.9	1963	ONG0331	The Lines Company	Pays ACOT
Hinemaiaia B	Trustpower	Hydro	1.35	1966	WRK0331	Unison Networks	Pays ACOT
Oxburn/Glenorchy	Pioneer Generation	Hydro	0.4	1968	FKN0331	Aurora Energy	Pays ACOT
Lower Mangapapa	Trustpower	Hydro	6	1976	TGA0331	Powerco	Pays ACOT
Wairua Falls	Northpower	Hydro	5	1978	MPE0331	Northpower	Pays ACOT
Aniwhenua	Bay of Plenty Energy	Hydro	25	1979	ANI0331	Horizon Energy Distribution	Pays ACOT
Wellington Hospital	Vector	Cogeneration	10	1981	CPK0331	Wellington Electricity	Pays ACOT
Ruahihi	Trustpower	Hydro	20	1981	TGA0331	Powerco	Pays ACOT
Montalto	Trustpower	Hydro	1.8	1982	ASB0331	Electricity	Pays ACOT

Station name	Owner name	Generation type	Capacity	Station name	Owner name	Distributor	Whether the distributor pays ACOT
						Ashburton	
Hinemaiaia C	Trustpower	Hydro	2.85	1982	WRK0331	Unison Networks	Pays ACOT
Kaimai 5	Trustpower	Hydro	0.35	1982	TGA0331	Powerco	Pays ACOT
Teviot	Pioneer Generation	Hydro	10.5	1983	CYD0331	Aurora Energy	Pays ACOT
Paerau	Trustpower	Hydro	10	1984	NSY0331	OtagoNet Joint Venture	Pays ACOT
Patearoa	Trustpower	Hydro	2.25	1984	NSY0331	OtagoNet Joint Venture	Pays ACOT
Kawerau - BOP	Bay of Plenty Energy	Geothermal	6.4	1989	KAW0111	Horizon Energy Distribution	Pays ACOT
Rosedale Landfill	EnviroWaste	Other	2.8	1992	ALB0331	Vector	Pays ACOT
Greenmount Landfill	EnviroWaste	Other	5.5	1992	OTA0221	Vector	Pays ACOT
Wellington Wind Turbine	Meridian Energy	Wind	0.2	1993	CPK0331	Wellington Electricity	Pays ACOT
Silverstream Landfill	Mighty River Power	Other	2.7	1994	HAY0331	Wellington Electricity	Pays ACOT
Bay Milk	Bay of Plenty	Cogeneration	10	1996	EDG0331	Horizon Energy	Pays ACOT

Station name	Owner name	Generation type	Capacity	Station name	Owner name	Distributor	Whether the distributor pays ACOT
Edgecumbe	Energy					Distribution	
Hau Nui	Genesis Energy	Wind	8.45	1996	GYT0331	Powerco	Pays ACOT
Christchurch City Wastewater	Orion	Other	3.2	1996	BRY0111	Orion New Zealand	Doesn't pay ACOT
Rotokawa	Mighty River Power	Geothermal	34	1997	WRK0331	Unison Networks	Pays ACOT
Ngawha	Top Energy	Geothermal	25	1998	KOE0331	Top Energy	Doesn't pay ACOT
Opuha	Alpine Energy	Hydro	7.5	1999	ABY0111	Alpine Energy	Doesn't pay ACOT
Te Rapa	Contact Energy	Cogeneration	44	1999	TWH0331	WEL Networks	Pays ACOT
Tararua Stage 1	Trustpower	Wind	31.7	1999	LTN0331	Powerco	Pays ACOT
Blue Mountain Lumber	Blue Mountain Lumber	Cogeneration	1.4	2000	GOR0331	The Power Company	Pays ACOT
Christchurch Wind Turbine	Orion	Wind	0.5	2003	SPN0331	Orion New Zealand	Doesn't pay ACOT
Watercare Mangere	Watercare Services	Cogeneration	7	2003	MNG0331	Vector	Pays ACOT
Horotiu Landfill	Green Energy	Other	0.9	2004	TWH0331	WEL Networks	Pays ACOT

- D.12 On a present value basis, therefore, the productive efficiency loss over the next 10 years resulting from ACOT-funded generation displacing potentially more efficient generation over the last 10 years can be estimated as:

$$I = \text{Sum over } y=2014\dots2023 \text{ of } ((1-r)^{y-2013} * AS * AFG * PC)$$

where:

r is the real discount rate (assume 0.08 or 8%)

AS is the average ACOT payment in \$/MWh terms (estimated at \$15/MWh, based on a payment of \$50M spread over 727 MW of generation operating at a mean load factor of 50%.⁶⁵

AFG is the amount of ACOT-funded generation, as MWh per year (estimated at 1,370,000 MWh, as above)

PC is the proportion of ACOT-funded generation that falls into category C.

- D.13 PC is unknown but a scenario-based approach can be used to produce a range of estimates of I .
- D.14 A reasonable lower bound is to assume $PC = 0.05$ (i.e. less than 20 MW of ACOT-funded generation was significantly uneconomic and would not have proceeded without ACOT), in which case $I = \$6.7\text{m}$ (present value).⁶⁶
- D.15 A reasonable upper bound is to assume $PC = 0.3$ (i.e. about 100 MW of ACOT-funded generation was significantly uneconomic and would not have proceeded without ACOT), in which case $I = \$40\text{m}$ (present value).⁶⁷

⁶⁵ Note that this is a lower load factor than that used in the main paper of 67%. This is because a high proportion of more recently constructed DG is wind, which would mean a lower load factor is appropriate.

⁶⁶ Note that this estimated lower bound is just an assumed lower bound and has not been estimated.

⁶⁷ Note that this estimated upper bound is just an assumed upper bound and has not been estimated.