

Environment

Environmental Performance Indicators



Environment

	SINGTEL			OPTUS			SINGTEL GROUP		
	2019	2018	2017	2019	2018	2017	2019	2018	2017
Total energy use (GJ)	1,347,094	1,395,100	1,404,843	1,749,622	1,724,106	1,702,440	3,096,716	3,119,206	3,107,283
Energy intensity (GJ/\$million revenue)	161	169	177	194	191	194	178	181	186
Energy intensity (GJ/TB*)	0.35	0.43	0.53	0.59	0.71	0.92	0.46	0.55	0.69
(i) Electricity Use (GJ)	1,323,825	1,372,809	1,385,099	1,719,144	1,692,773	1,665,694	3,042,969	3,065,582	3,050,793
Electricity Use (MWh)	367,729	381,336	384,750	477,540	470,215	462,693	845,269	851,551	847,443
Electricity Intensity (GJ/\$million revenue)	158	167	175	191	187	190	175	178	183
Electricity Intensity (GJ/TB)	0.35	0.42	0.52	0.58	0.70	0.90	0.45	0.54	0.67
Electricity Intensity (kWh/TB)	97	118	144	160	195	251	125	151	187
(ii) Fuel use from non-renewable sources (GJ)	22,877	21,935	19,369	30,014	30,869	36,282	52,891	52,804	55,651
(iii) Fuel use from renewable sources (GJ)	392	356	375	464	464	464	856	820	839
Solar energy (MWh)	109	99	104	129	129	129	238	228	233
Total carbon emissions (tonnes CO₂ equivalent)¹	164,629	174,391	173,811	418,060	418,760	418,269	582,689	593,151	592,080
(i) Scope 1	4,085	3,367	1,992	2,567	2,725	2,495	6,652	6,092	4,487
Refrigerants	2,455	1,828	643	470²	589 ²	N.A. ²	2,925	2,417	643
Fuel combustion	733	587	582	291	329	397	1,024	916	979
Company fleet	897	952	767	1,806	1,807	2,097	2,703	2,759	2,864
(ii) Scope 2	154,152	164,470	165,943	402,290	399,257	397,785	556,442	563,727	563,728
(iii) Scope 3	6,392	6,554	5,876	13,203	16,778	17,989	19,595	23,332	23,865
Contractor fleet	411	687	733	1,264	1,168	1,119	1,675	1,855	1,852
Air travel	4,000	3,845	3,113	5,738	8,004	8,551	9,738	11,849	11,664
Employee commute ³	1,821	1,821	1,821	6,201	7,606	8,319	8,022	9,427	10,140
Retail franchisees	160	201	209	N.A.	N.A.	N.A.	160	201	209
Carbon Intensity (tCO₂e/\$ million revenue)	20	21	22	46	46	48	34	34	35
Carbon Intensity (tCO₂e/TB)⁴	0.04	0.05	0.06	0.14	0.17	0.22	0.08	0.10	0.13
Total Water Use (m³)	753,238⁵	752,207	814,447	78,774⁶	74,235	82,111	832,012	826,442	896,558
Water Intensity (m³/\$million revenue)	91	90	103	N.A.	N.A.	N.A.	48	47	54
Total Waste: hazardous and non-hazardous (tonnes)	7,538	6,289	4,613	2,294⁷	2,197 ⁷	1,853 ⁷	9,832	8,486	6,466
Total Non-Hazardous Waste by disposal method (tonnes)	2,130	2,227	2,194	1,683⁷	1,972 ⁷	1,177 ⁷	3,813	4,199	3,371
Incineration with energy recovered	1,972	1,968	2,116	N.A.	N.A.	N.A.	1,972	1,968	2,116
Landfill	0	0	0	1,476	1,720	517	1,476	1,720	517
Recycle / Reuse	158	259	78	207	252	660	365	511	738
Total Hazardous Waste by disposal method (tonnes)	5,408	4,062	2,419	611⁷	225 ⁷	677 ⁷	6,019	4,287	3,095
Incineration with energy recovered	282	388	285	N.A.	N.A.	N.A.	282	388	285
Landfill	776	593	184	8	3	10	784	596	193
Recycle / Reuse	4,350	3,081	1,950	603	222	667	4,953	3,303	2,617
Customer E-waste Recycling (tonnes)	63	36	21	4	4	4	67	40	25

Footnotes:

- * TB refers to terabyte of data transported across our network.
- ¹ The carbon emissions reported in the table are based on the reporting requirements of the WRI and WBCSD 'GHG Protocol Corporate Accounting and Reporting Standard'. The equivalent CO₂ emissions for electricity use are calculated based on the updated simple operating margin grid emission factors from the National Environment Agency in Singapore for the relevant time period and from corresponding states in Australia. Scope 1 direct emissions and Scope 3 indirect emissions are calculated using BEIS (Department for Business, Energy & Industrial Strategy) Greenhouse gas reporting: conversion factors 2018. Scope 3 air travel emission factors are derived from WRI.
- ² Optus uses a combination of air, water and refrigerant cooling systems. Refrigerants tracked from FY2018.
- ³ Employee commute carbon emissions data will be updated only when there is a significant change in our company's operations or workforce in Singapore. Employee commute carbon emissions data in Australia applies to Optus Campus in Sydney.
- ⁴ Covers Scope 1 and 2 only.
- ⁵ Total volume withdrawn from municipal water supplies and includes use of 132,374 m³ NEWater instead of potable water. Water stress areas are not applicable.
- ⁶ Total volume withdrawn from municipal water supplies and includes rainwater harvesting of 15,513 m³ instead of potable water. Water use for Optus Sydney campus only.
- ⁷ Data covers waste directly managed by Optus' contracted waste vendor.