OTE ENERGY

		Units	2008	2009	2010	2011	2012	2013	2014	2015	2016
Energy consumption [1]		GWh	320.25	323.90	316.50	314.94	294.55	291.83	288.45	296.26	302.25
	Electricity [2]										
	Telecom network	GWh	232.81	238.12	235.39	237.42	224.02	216.91	211.09	211.62	219.79
	Buildings [3]	GWh	28.91	28.61	31.84	30.58	30.76	34.89	39.85	40.58	41.07
	Stationary installations										
	Heating oil	GWh	21.85	16.20	13.35	12.05	9.25	7.62	1.92	2.50	2.12
	Natural gas	GWh	1.47	2.98	2.30	2.83	2.31	2.70	5.08	6.26	5.72
	District heating	GWh			0.45	0.53	0.50	0.51	0.45	0.43	0.34
	Diesel for electricity generators [4]	GWh	10.88	9.55	3.52	3.53	2.29	1.53	2.00	4.89	1.59
	Road transportation										
	Unleaded gasoline	GWh	20.32	22.95	23.53	21.34	19.60	19.45	18.89	11.85	11.74
	Diesel	GWh	3.10	4.80	6.01	6.59	5.78	8.20	9.19	18.14	19.88
	Leaded gasoline [5]	GWh	0.91	0.68	0.11	0.07	0.04	0.03	0.00	0.00	0.00
GHG emissions [6]		t CO_2 eq	206,000	215,674	215,066	218,755	210,012	208,590	190,910	186,980	195,996
	Direct emissions										
	Space heating [7]	t CO_2 eq	6,159	4,952	4,049	3,806	2,951	2,591	1,543	1,938	1,728
	Electricity generators [7]	t CO_2 eq	2,912	2,557	943	944	612	409	534	1,308	425
	Vehicles [7]	t CO_2 eq	6,408	7,499	7,832	7,408	6,645	6,954	7,068	7,661	8,089
	HFCs - AC systems [8]	t CO_2 eq	Not Available	Not Available	5,948	12,106	15,969	16,506	9,057	11,625	10,157
	Indirect (scope 2) emissions [9]										
	Telecom network	t CO_2 eq	169,478	179,144	172,811	172,194	161,545	156,797	145,201	137,913	147,892
	Buildings	t CO_2 eq	21,043	21,522	23,483	22,296	22,291	25,332	27,507	26,536	27,705
Transport											
	Service vehicles										
	Unleaded gasoline vehicles	#	2,081	2,082	2,049	2,035	1,823	1,613	1,440	923	895
	Diesel vehicles	#	327	378	360	565	471	614	597	1,610	1,607
	Leaded gasoline vehicles	#	107	87	14	11	4	4	0	0	0
	Distance covered	km	19,671,268	25,919,097	24,151,746	24,910,080	21,432,394	22,877,439	18,252,406	37,827,671	31,609,629
	Company vehicles										
	Unleaded gasoline vehicles	#	190	228	213	206	208	308	309	47	152
	Diesel vehicles	#	0	0	0	0	0	3	15	7	37
	Distance covered	km	2,850,000	2,736,000	2,984,599	3,113,867	3,500,000	5,901,000	5,791,041	1,013,000	3,728,121

[1] As of 2011, energy consumption is based on actual consumption data for most months of a year, which is extrapolated to the end of that year due to data provision arrangements within the DT group

[2] As of 2013, electricity consumption in buildings where joint occupancy of OTE and COSMOTE occurs, is allocated (after subtracting consumption items directly related to either company) between the two companies on the basis of their staff share at that location. This applies to the Central Administration building and the office complex in Paiania. The allocation of fuel consumption for space heating is made only for 2013 and 2014.

[3] The term "Buildings" describes Offices, Data Centers, Warehouses and Shops

[4] Data for diesel fuel consumption of electricity generators refer to planned tenders for supplies for 2008 - 2009 and actual consumption after 2010

[5] In 2014, the remaining leaded gasoline vehicles were withdrawn

[6] GHG emissions calculated include CO_2, CH_4, N_2O and f-gases from AC systems. Global Warming Potential (GWP) values applied are those included in the Annex III of Decision 24/CP.19 and derive from the 4th Assessment Report of IPCC

[7] Direct GHG emissions from energy consumption are calculated on the basis of the emission factors suggested by the Greenhouse Gas Protocol and the 2005 IPCC Guidelines

[8] Emissions are calculated on the basis of data submitted to the Ministry for Environment and Energy

[9] For consistency reasons among the DT Group companies, CO_2 emissions are estimated on the basis of the emission factors developed by the International Energy Agency. The non-CO_2 (i.e. CH_4 and N_2O) emission factors for electricity refer to X-2 year and are applied for X year. These factors derive from the latest Greek National GHG emissions inventory and EUROSTAT data on gross electricity generation.

COSMOTE ENERGY

	Units	2008	2009	2010	2011	2012	2013	2014	2015	2016
Energy consumption [1]	GWh	**180.36**	**195.19**	**185.83**	**180.35**	**182.63**	**180.83**	**178.12**	**191.26**	**197.94**
Electricity [2]										
Telecom network	GWh	138.79	149.65	142.23	137.88	137.16	137.46	138.77	150.08	158.10
Buildings [3]	GWh	11.42	15.77	16.82	17.08	19.79	18.75	18.61	19.09	19.38
Stationary installations										
Heating oil	GWh	0.72	0.63	0.44	0.68	0.58	0.95	0.30	0.74	0.60
Natural gas	GWh	0.00	0.00	0.00	0.00	0.00	0.08	0.69	0.00	0.00
Diesel for electricity generators [4]	GWh	22.64	22.47	19.14	18.04	18.00	15.60	11.65	13.60	12.43
Road transportation										
Unleaded gasoline	GWh	6.78	6.65	7.20	6.65	6.94	6.45	6.45	6.02	5.01
Diesel	GWh	0.01	0.02	0.01	0.01	0.15	1.54	1.65	1.72	2.42
GHG emissions [4]	t CO_2 eq	**118,066**	**131,913**	**124,994**	**121,337**	**121,364**	**120,275**	**114,540**	**117,273**	**126,062**
Direct emissions										
Space heating [5]	t CO_2 eq	207	231	138	293	156	272	220	200	161
Electricity generators [5]	t CO_2 eq	6,833	5,970	5,129	4,793	4,818	4,176	3,119	3,641	3,326
Vehicles [5]	t CO_2 eq	1,683	1,263	1,775	1,746	1,840	1,995	2,032	1,936	1,870
HFCs - AC systems [6]	t CO_2 eq	Not Available	Not Available	1,186	2,112	1,366	911	913	1,244	1,281
Indirect (scope 2) emissions [7]										
Telecom network	t CO_2 eq	101,033	112,584	104,418	100,002	98,912	99,367	95,457	97,809	106,382
Buildings	t CO_2 eq	8,310	11,865	12,349	12,391	14,272	13,554	12,800	12,443	13,042
Transport										
Service vehicles										
Unleaded gasoline vehicles	#	209	217	236	232	242	184	177	176	162
Diesel vehicles	#	4	4	4	4	12	72	84	85	97
Distance covered	km	3,901,025	3,941,408	5,219,757	4,876,876	5,479,038	6,829,400	5,012,103	5,337,000	5,655,849
Company vehicles										
Unleaded gasoline vehicles	#	104	110	125	127	130	127	140	140	112
Diesel vehicles	#	0	0	0	0	2	14	16	21	51
Distance covered	km	1,585,565	1,653,831	2,301,803	2,255,159	2,446,344	3,190,700	2,750,134	2,804,000	1,017,828

[1] As of 2011, energy consumption is based on actual consumption data for most months of a year, which is extrapolated to the end of that year due to data provision arrangements within the DT group

[2] As of 2013, electricity consumption in buildings where joint occupancy of OTE and COSMOTE occurs, is allocated (after subtracting consumption items directly related to either company) between the two companies on the basis of their staff share at that location. This applies to the Central Administration building and the office complex in Paiania. The allocation of fuel consumption for space heating is made only for 2013 and 2014

[3] The term "Buildings" describes Offices, Data Centers, Warehouses and Shops

[4] GHG emissions calculated include CO_2, CH_4, N_2O and f-gases from AC systems.
Global Warming Potential (GWP) values applied are those included in the Annex III of Decision 24/CP.19 and derive from the 4th Assessment Report of IPCC

[5] Direct GHG emissions from energy consumption are calculated on the basis of the emission factors suggested by the Greenhouse Gas Protocol and the 2005 IPCC Guidelines

[6] Emissions are calculated on the basis of data submitted to the Ministry for Environment and Energy

[7] For consistency reasons among the DT Group companies, CO_2 emissions are estimated on the basis of the emission factors developed by the International Energy Agency.
The non-CO_2 (i.e. CH_4 and N_2O) emission factors for electricity refer to X-2 year and are applied for X year. These factors derive from the latest Greek National GHG emissions inventory and EUROSTAT data on gross electricity generation.

Energy conservation measures	Scope	Result
Smart metering systems in base station sites with large energy consumption	Telecom network	420 systems were installed by the end of 2016 (COSMOTE).
Free cooling systems	Telecom network	The total number of such systems already installed is 1,848 (COSMOTE).
Replacement of old equipment	Telecom network	In 2016 OTE and COSMOTE replaced 189 and 150 old rectifier units respectively. On average, efficiency improved from 75% to 96% for OTE and from 90% to 96% for COSMOTE
Indoor Power Supply Units with A/C direct to battery cabinet	Telecom network	The installation of these systems aims to reduce energy consumption through the increase of internal temperature of Base Station (set point from 26ºC to 30ºC). The total number of systems already installed by the end of 2016 was 245 (COSMOTE)
Modernization of OTE telecom network	Telecom network	The transformation of the fixed network to VDSL, the removal of PSTN ports and the deactivation of associated equipment including AC units is in progress. Although the switch to VDSL will increase electricity consumption, a positive net benefit is expected.
Hybrid systems	Telecom network	Installation of a new hybrid system (PV and batteries) in one base station with 24-hour electricity generator (COSMOTE)
Rational use of buildings and space consolidation	Telecom network - Buildings	Consolidation (geographical and spatial) of the hardware necessary for network management. In 2016, the building area used by OTE was reduced by about 2% compared to 2015.
Maintenance of electricity generators	Telecom network	A maintenance program covering more than 2000 generators (for both 24–hour and emergency operation) was implemented. The program for the electrification of remote base stations is ongoing.
Energy retrofit of buildings	Buildings / Stores	Emphasis is given in the selection of materials with improved thermal characteristics and in the installation of energy efficient equipment. Remodelling of the retail stores
Energy retrofit of Data Centers	Data Centers	Energy conservation measures aiming to improve the performance of the installed equipment
Fleet renewal	Road transport	Replacement of 24% of old leased vehicles, at Group level, with new, more efficient ones
Teleconferences	Mobility	In 2016 8,500 audio-conferences and 31,500 video-conferences were held