

Sustainability Data Trends 2023

GR/EUSS	KPI	Unit	2019	2020	2021	2022	2023	Change (2022-23)	% change	
EU1	Installed Capacity									
	Thermal capacity	MW		57615.00	60735.00	63385.00	64665.00	1280	1.98	
	Coal	MW		51104.00	54224.00	56874.00	58154.00	1280	2.20	
	Natural gas	MW		6511.00	6511.00	6511.00	6511.00	0	0.00	
	Renewable capacity	MW		4495.00	5075.00	5577.00	6929.00	1352	19.51	
	Hydroelectric	MW		3425.00	3725.00	3725.00	3725.00	0	0.00	
	Small Hydro	MW		32.00	32.00	32.00	32.00	0	0.00	
	Wind	MW		163.00	163.00	163.00	163.00	0	0.00	
	Solar	MW		875.00	1155.00	1657.00	3009.00	1352	44.93	
	Total Gross Installed capacity	MW		62110.00	65810.00	68962.00	71594.00	2632	3.68	
EU2	Generation									
	Thermal capacity	MU		285253.98	300843.06	345874.28	381510.59	35636	9.34	
	Coal	MU		276017.27	289589.74	337275.00	376334.38	39059	10.38	
	Natural gas	MU		9236.71	11253.32	8599.28	5176.21	-3423	-66.13	
	Renewable capacity	MU		4937.33	13230.74	14642.27	17799.38	3157	17.74	
	Hydroelectric	MU		3449.60	11366.77	12094.30	12875.01	781	6.06	
	Small Hydro	MU		13.15	91.56	80.64	113.85	33	29.17	
	Wind	MU		103.11	296.01	337.85	324.04	-14	-4.26	
	Solar	MU		1371.47	1476.40	2129.49	4486.48	2357	52.54	
	Total Gross Generation	MU		290191.31	314073.81	360516.55	399309.97	38793	9.72	
Total Net Generation	MU		268060.99	291788.05	335758.49	371278.00	35520	9.57		
EU4	New Project Development (Under Construction)	MW		21333.00	17989.00	15675.32	16883.00	1208	7.15	
	Thermal capacity	MW		16430.00	12850.00	9980.00	9960.00	-20	-0.20	
	Coal	MW		16430.00	12850.00	9980.00	9960.00	-20	-0.20	
	Natural gas	MW		0.00	0.00	0.00	0.00	0.00	0.00	
	Renewable capacity	MW		4903.00	5139.00	5695.32	6923.00	1228	17.73	
	Hydroelectric	MW		2555.00	2255.00	2255.00	2255.00	0	0.00	
	Small Hydro	MW		0.00	0.00	0.00	0.00	0.00	0.00	
	Solar	MW		2348.00	2884.00	3290.32	4668.00	1378	29.51	
305-5	Fuel Procured									
	Coal	MMT		191.20	192.20	225.41	247.86	22	9.06	
	Imported	MMT		3.20	1.06	2.46	15.56	13	84.18	
	Domestic	MMT		188.00	191.14	222.95	232.30	9	4.02	
	Gas	MMSCM		2599.00	2029.63	416.40	-1613	-387.42		
	Biomass	(000 t)		3.90	24.60	38.69	23.88	-15	-62.01	
	Carbon Sink Created	mil t		0.70	0.72	0.74	0.76	0	2.63	
	Avoided emissions	mil t		4.10	10.45	11.57	14.06	2	17.74	
	Energy Saving	MWh		1622.5	1643.3	1693.5	1735.5	42	2.42	
				450698.05	456488.37	470420.63	482087.78	11667	2.42	
305-1	Direct greenhouse gas emissions (Scope 1)									
	CO2 emissions from the electricity production and heat	mil t _{eq}		252.44	263.90	304.08	336.61	33	9.66	
	Emissions from coal electricity gen.	mil t _{eq}		248.58	258.82	300.10	333.83	34	10.10	
	Emissions from gas electricity gen.	mil t _{eq}		3.86	5.08	3.98	2.78	-1	-43.45	
	Other CO2eq emissions due to electricity production and other activities	mil t _{eq}		0.00	0.00	0.06	0.02	0	-208.56	
	of which: emission from losses of SF6 from energy production	toneq				2.40	20250.47	20248	99.99	
	of which: emission from losses of HFCs from energy production	toneq				7.58	210.64	203	96.40	
Total direct emissions (Scope 1)	mil t _{eq}		251.74	263.18	303.41	335.87	32	9.66		
305-4	Specific emissions									
	Specific CO2 emissions from total gross production	g/kWh		869.90	861.00	843.46	842.97	0	-0.06	
	Specific CO2eq emissions from Scope 1	gCO2eq/kWh		867.48	837.96	841.59	841.12	0	-0.06	
305-2	Indirect greenhouse gas emissions (Scope 2)									
	Purchased electricity from the grid									
	Non-Plant Locations	Ton		15845.34	15221.86	16400.34	15731.66	-669	-4.25	
	Total indirect emissions (Scope 2)	Ton		15845.34	15221.86	16400.34	15810.23	-590	-3.73	
305-3	Other indirect greenhouse emissions (Scope 3)									
	Transport of coal by sea	Ton		493024.00	167400.00	492900.00	3451606	2958706	85.72	
	Transport of coal by train	Ton		459667.13	366776.43	606841.98	891322.305	284480	31.92	
	Business Travels by Employees	Ton		62.00	10695.23	10456.90	10414.31533	-43	-0.41	
	Commute to workplaces by Employees	Ton		28000.00	26918.79	2103.62	6045.822257	3942	65.21	
	Total indirect emissions (Scope 3)	Ton		980753.13	5,71,790.45	11,12,302.49	43,59,388.78	3247086	74.48	
	Other atmospheric emissions									
SO2 emissions	Ton		1279366	1552254	1621349	1767822	146473	8.29		
NOx emissions	Ton		612983	602832	640419	660769	20350	3.08		
Particular Matter	Ton		89247	88431	91115	89860	-1256	-1.40		
Hg emissions	Ton		10.18	4.66	7.23	7.00	0	-3.22		
305-7	Specific emissions									
	SO2 emissions	g/kWh	3.38	4.41	4.94	4.50	4.43	0	-1.64	
	NOx emissions	g/kWh	1.77	2.11	1.93	1.78	1.65	0	-7.57	
	Particular Matter	g/kWh	0.26	0.31	0.28	0.25	0.23	0	-11.09	
	Hg emissions	g/kWh		0.00	0.00	0.00	0.00	0.00	0.00	
	Ozone Depleting Substances emissions									
305-6	ODS (CFC-11 equivalent)	kgCFC-11eq		1194.00	23499.86	403.00	315.18	-88	-27.86	
	Specific ODS	(x10 ⁻⁶) gCFC-11eq/ kWh		4.11	74.82	1.12	0.79	0	-41.62	
302-1	Energy Consumption									
	Fuel consumption by primary source in GJ from non-renewable sources	GJ		2820455009.48	2953663879.38	3385265320.57	3742448770.17	357183450	9.54	
	Coal	GJ		2742624115.68	2851164930.66	3305688837.96	3687815606.35	382126768	10.36	
	Natural gas	GJ		77819740.05	101630257.86	79144416.79	53847760.23	-25296657	-46.98	
	Naptha	GJ		4656.34	862567.80	423850.99	777481.61	353631	45.48	
	LDO	GJ		4394.91	4143.90	5491.43	5358.02	-133	-2.49	
	HFO	GJ		2099.24	1968.72	2034.79	1474.02	-561	-38.04	
	HSD	GJ		3.27	10.43	688.60	1089.93	401	36.82	
	from renewable resources	GJ		48022.70	302912.40	497293.50	246700.00	-250593	-101.58	
	Biomass, biogas and waste	GJ		48022.70	302912.40	497293.50	246700.00	-250593	-101.58	
	Total direct consumption	GJ		2820503032.18	2953966791.77	3385762614.07	3742695470.17	356932856	9.54	
	Net Energy Intensity	MJ/ kWh		10.52	10.11	10.08	10.01	0	-0.74	
	RAW MATERIALS	Resources used in the production process								
		Fuel consumption for thermolectric production from non-renewable sources								
Coal		mil t		187.53	195.00	226.55	250.20	24	9.45	
Natural gas	(Mm ³)		1957.86	2555.00	2030.91	1386.95	-644	-46.43		

GRI/EUSS	KPI	Unit	2019	2020	2021	2022	2023	Change (2022-23)	% change	
301-1	Naptha	t		97.90	18280.00	8923.49	16355.58	7432	45.44	
	LDO	kl		110322.84	103298.00	139853.77	144360.29	4507	3.12	
	HFO	kl		50726.27	47562.00	49821.36	38087.07	-11734	-30.81	
	HSD	kl		86.57	285.00	18177.57	28835.93	10658	36.96	
	from renewable resources									
	Biomass and waste for thermoelectric production	(,000 t)			3.90	24.60	40.39	20.03	-20	-101.63
	Consumables									
	Chlorine	t			5387.00	5462.95	5370.00	4850.89	-519	-10.70
	Ammonia	t			9341.00	1031.13	1532.64	1307.56	-225	-17.21
	Alum	t			13493.00	14104.28	13480.00	29346.24	15866	54.07
	HCl	t			18241.00	19910.88	18175.00	32916.50	14741	44.78
	H2SO4	t			20691.00	23915.97	20690.00	34240.35	13550	39.57
Lube Oil	kl			1005.00	848.99	974.00	231.59	-742	-320.57	
Transformer Oil	kl			341.00	175.27	329.00	153.32	-176	-114.59	
Workforce by type of Business										
Green Jobs	Renewable	numbers				77	173	96	55.49	
	Hydro	number				77	173	96	55.49	
	Other Non-fossil	number								