

# Reporting of used parameters and variables included in Annex 1, part 2, of the Energy Union Governance as agreed in trilogue

All parameters and variables highlighted in green are already currently requested under existing legislation (MMR, RES Directive, or Energy Efficiency Directive), see e.g. [http://cdr.eionet.europa.eu/help/mmr/MMR\\_projections\\_templates\\_2018.zip](http://cdr.eionet.europa.eu/help/mmr/MMR_projections_templates_2018.zip)

All energy related parameters and variables highlighted in red might require to rely on complementary tools than standard energy system models

All variables highlighted in orange correspond to indicators to be computed on the basis of parameters and variables already available elsewhere in the excel file

	Unit	2005	2010	2015	2017	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2035	2040	Comments MS	
<b>1. General parameters and variables</b>																				
1	Population	million	5,4	5,5	5,7	5,8	5,9	5,9	5,9	6,0	6,0	6,0	6,0	6,1	6,1	6,1	6,2	6,3		
2	GDP	EUR million	240475	243168	258857	271794	283416	287787	290869	293965	298064	302117	305970	310322	313781	317096	321941	340391	359358	fixed 2010 prices
3	Gross value added	EUR million	206402	209842	223264	233933	242609	247179	250150	253042	256908	260740	264190	268305	271540	274589	279012	295122	312117	fixed 2010 prices
	Agriculture	EUR million	2775	2923	2836	3357	3359	3197	3141	3121	3117	3107	3100	3109	3120	3134	3295	3514	3514	fixed 2010 prices
	Construction	EUR million	10823	9284	11361	12436	13726	14538	14855	15046	15296	15522	15737	15922	16051	16168	16385	17016	17744	fixed 2010 prices
	Services	EUR million	132067	141002	149758	155577	161147	163399	165284	167180	169639	172014	174203	176937	179214	181326	184004	194511	205990	fixed 2010 prices, Excluding freight and passenger
	Energy Sector	EUR million	14563	10690	7802	8093	7026	7714	7904	8060	8262	8487	8588	8639	8555	8496	8533	8670	8042	fixed 2010 prices
	Industry	EUR million	27143	26543	30204	32623	35001	35637	35909	36203	36777	37407	37972	38723	39237	39717	40965	43576	46653	fixed 2010 prices
4	Number of households	million	N/A	N/A	N/A	N/A	2,8	N/A	N/A	N/A	N/A	2,9	N/A	N/A	N/A	N/A	2,9	N/A	3,0	
5	Households size	inhabitants/household	N/A	N/A	N/A	N/A	2,0	N/A	N/A	N/A	N/A	2,0	N/A	N/A	N/A	N/A	1,9	N/A	1,9	
6	Disposable income of households (yearly)	EUR	89605	108062	122034	133557	150059	153377	158691	165188	170391	176795	182263	188120	194092	200149	205954	239508	279677	Current prices
7	Number of passenger-kilometers	million pkm	75870	77425	81277	84591	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	For modeling, vehicle-km is used. Pkm and tkm are
	Public road transport	million pkm	7169	6837	6850	7300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Private cars	million pkm	59013	60737	63900	67168	71216	72619	74050	75509	76996	78513	80060	81637	83245	84885	86557	95426	105203	
	Motorcycles	million pkm	3010	2620	3090	2850	462	N/A	N/A	N/A	N/A	462	N/A	N/A	N/A	N/A	462	462	462	
	Rail	million pkm	6136	6577	6808	6622	7100	N/A	N/A	N/A	N/A	7800	N/A	N/A	N/A	N/A	8000	8000	8000	
	Aviation	million pkm	316	470	357	354	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Inland navigation	million pkm	226	184	272	297	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
8	Freight transport tonnes-kilometres	million tkm	11501	12689	14463	14135	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Trucks	million tkm	11059	10573	12324	12561	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Rail	million tkm	442	167	203	163	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Inland navigation	million tkm		1949	1936	1411	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
9	International Fuel prices	EUR/GJ or EUR/toe																		
	Oil	EUR/GJ or EUR/toe	9	11	8	8	10	10	10	10	11	11	11	11	12	12	13	14	14	2016-EUR/GJ
	Gas (NCV)	EUR/GJ or EUR/toe	6	6	7	5	6	5	5	5	6	6	6	6	6	6	6	7	7	2016-EUR/GJ
	Coal	EUR/GJ or EUR/toe	2	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2016-EUR/GJ
10	Carbon price ETS sectors	EUR/ ton CO2	22	15	8	6	16	17	17	18	19	19	20	21	22	24	25	32	41	2016-EUR/ton
11	Exchange rate to EUR and to US dollar	EUR/DKK	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	EUR/DKK
		USD/DKK	6	6	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	USD/DKK
12	Heating degree days		3068	3742	2921	2970	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
13	Cooling degree days		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
14	Technology cost assumptions (see specific excel file circulated with technology cost assumptions as used in EU Reference Scenario 2016 for suggestions on what could be relevant to report)																			
<b>2. energy balances and indicators</b>																				
<b>2.1 energy supply</b>																				
1	Production (incl. recovery of products)	ktoe	31336	23375	16219	15727	13065	12923	15594	17431	19933	19207	18551	18067	17967	18216	19282	17925	15863	
	Solids	ktoe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Oil	ktoe	19025	12486	7899	6920	4551	4295	5142	6016	7385	6608	6101	6025	5816	5896	6109	5139	3744	
	Natural gas	ktoe	9383	7343	4144	4350	1235	1087	2631	3419	4356	4287	3718	3147	3062	3051	3621	2863	2132	
	Nuclear	ktoe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Renewable energy sources	ktoe	2522	3136	3801	4074	6836	7099	7379	7555	7751	7882	8303	8465	8659	8840	9132	9504	9575	Including Ambient heat for heat pumps
	Waste (Non-renewable fraction)	ktoe	406	410	374	383	441	442	442	442	442	430	430	429	429	420	419	412	412	
2	Net Imports (ktoe)	ktoe	-10120	-3671	3528	3009	5695	5809	3331	1492	-894	-139	399	910	1041	-384	1046	3231		
	Solids	ktoe	3712	2430	2290	2379	1207	958	939	657	693	701	697	663	637	307	305	293	280	
	Oil	ktoe	-9394	-3842	454	-330	3032	3284	2432	1548	158	1396	1396	1563	1429	1166	1848	3013	3013	
	Natural gas	ktoe	-4948	-3040	-1137	-1395	1018	1119	-534	-1310	-2286	-2290	-1884	-1323	-1244	-1245	-1810	-1172	-593	
	Electricity	ktoe	118	-98	508	392	109	90	-2	100	33	23	-321	-338	-427	-360	-562	-439	16	
	District heating	ktoe	4	4	4	3	29	34	54	66	69	69	69	70	74	75	73	70	70	
	Renewable energy sources	ktoe	389	875	1357	1916	300	324	442	442	442	442	442	442	442	442	443	443	445	
	Waste (Non-renewable fraction)	ktoe	0	0	52	43	0	0	0	0	0	0	0	0	0	0	0	0	0	
3	Import Dependency	%	-32%	-16%	22%	19%	44%	45%	21%	9%	-4%	-1%	2%	5%	6%	4%	-2%	6%	20%	Energy dependence = (imports - exports) / gross
4	Main import sources for energy carriers																			
	1st main country (Sweden) of origin of Electricity Purchases	% of total imports	N/A	N/A	N/A	N/A	58%	56%	56%	54%	48%	50%	48%	46%	44%	43%	39%	33%		
	2nd main country (Norway) of origin of Electricity Purchases	% of total imports	N/A	N/A	N/A	N/A	37%	36%	36%	36%	33%	33%	34%	33%	35%	35%	34%	33%	30%	
	Main country (please specify here) of origin of Biomass Purchases	% of total imports	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	1st main country (please specify here) of origin of Gas Purchases	% of total imports	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	2nd main country (please specify here) of origin of Gas Purchases	% of total imports	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3rd main country (please specify here) of origin of Gas Purchases	% of total imports	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
5	Gross Inland Consumption	ktoe	20020	19187	17893	18201	17519	17505	17763	17659	17830	17872	18142	18186	18308	18091	18328	18281	17953	Includes international aviation
	Solids	ktoe	3953	3519	2644	2190	1207	958	939	657	693	701	697	663	637	305	293	280	280	
	Oil	ktoe	8116	7186	6416	6579	6575	6570	6566	6556	6535	6516	6488	6412	6372	6317	6267	5979	5750	
	Natural gas	ktoe	4597	4201	3176	2979	2177	2130	2014	2026	1986	1919	1800	1791	1786	1774	1780	1661	1508	
	Nuclear	ktoe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Solid biomass	ktoe	1628	2395	2811	3400	3749	3717	3650	3626	3589	3552	3490	3445	3396	3352	3318	3117	2982	
	Other bioenergy (incl. biogas and biofuels)	ktoe	635	676	902	1005	1259	1286	1406	1410	1413	1400	1401	1402	1402	1402	1389	1369	1331	
	Other renewable energy forms (incl. wind and solar energy)	ktoe	676	820	1505	1616	2111	2403	2746	2943	3173	3354	3835	4042	4285	4512	4850	5444	5688	
	Waste (Non-renewable fraction)	ktoe	413	390	437	433	441	442	442	442	442	430	430	430	429					



2.5. Prices																				
<b>1 Electricity prices by type of using sector (residential, industry, tertiary)</b>																				
residential - GENERAL END USE	euro/MWh	N/A	N/A	235	231	213	208	209	206	207	200	203	203	203	202	204	208	General End-Use, 2016-EUR/MWh		
residential - SPACE HEATING END-USE	euro/MWh	N/A	N/A	167	165	129	117	119	121	123	124	123	123	122	122	124	128	Space Heating End-Use, 2016-EUR/MWh		
industry	euro/MWh	N/A	N/A	95	90	82	78	80	82	84	85	84	83	83	83	85	89	2016-EUR/MWh		
tertiary - GENERAL END USE	euro/MWh	N/A	N/A	213	210	194	189	190	187	187	181	184	184	183	183	185	189	General End-Use, 2016-EUR/MWh		
tertiary - SPACE HEATING END-USE	euro/MWh	N/A	N/A	167	164	150	146	147	147	148	148	147	145	144	144	140	141	2016-EUR/MWh		
<b>2 National retail fuel prices (including taxes, per source and sector)</b>																				
<b>Diesel oil</b>																				
Industry	euro/ktoe	N/A	N/A	565055	547239	615059	624127	632258	641149	649783	656473	670189	677900	685016	691867	698054	741852	777974	2016-EUR/ktoe	
Households	euro/ktoe	N/A	N/A	975023	965426	1033074	1042448	1051069	1060189	1068897	1075184	1089190	1097086	1104199	1111452	1118195	1163756	1199878	2016-EUR/ktoe	
Transport private	euro/ktoe	N/A	N/A	1433759	1455380	1540452	1550661	1563550	1576257	1587512	1596517	1615530	1626498	1636737	1646577	1655690	1715620	1762938	2016-EUR/ktoe	
Transport public	euro/ktoe	N/A	N/A	1433759	1455380	1540452	1550661	1563550	1576257	1587512	1596517	1615530	1626498	1636737	1646577	1655690	1715620	1762938	2016-EUR/ktoe	
<b>Gasoline</b>																				
Transport private	euro/ktoe	N/A	N/A	1868805	1877125	1904037	1914245	1927133	1939840	1951094	1960099	1979111	1990078	2000316	2010156	2019268	2079195	2126510	2016-EUR/ktoe	
Transport public	euro/ktoe	N/A	N/A	1433759	1455380	1540452	1550661	1563550	1576257	1587512	1596517	1615530	1626498	1636737	1646577	1655690	1715620	1762938	2016-EUR/ktoe	
<b>Natural gas</b>																				
Industry	euro/ktoe	N/A	N/A	257049	333177	363184	317287	315791	310852	316182	321241	327415	333378	339020	344556	349735	376488	397274	2016-EUR/ktoe	
Households	euro/ktoe	N/A	N/A	690351	774592	803968	763750	761884	767369	772784	777461	783929	790082	795731	801669	807398	835914	856701	2016-EUR/ktoe	
<b>2.6. Investments</b>																				
Energy-related investment costs for overall economy	% of GDP		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Energy related investments costs for industry	% of value added		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<b>2.7. Renewables</b>																				
<b>Gross final consumption of energy from renewable sources and share of renewable energy in gross final energy consumption and by sector (electricity, heating and cooling, transport) and by technology</b>																				
<b>1</b>																				
RES in Gross Final Energy Consumption	%		16,0%	22,2%	31,0%	34,3%	41,1%	42,5%	44,7%	45,6%	46,5%	47,1%	49,5%	50,4%	51,5%	52,5%	54,2%	56,2%	56,0%	
Offshore	%		N/A	N/A	N/A	2,7%	3,6%	4,0%	4,9%	5,1%	5,7%	6,0%	8,1%	8,7%	9,7%	10,2%	11,6%	11,1%	9,9%	
Onshore	%		N/A	N/A	N/A	5,2%	6,1%	6,7%	7,0%	7,3%	7,4%	7,5%	7,6%	7,7%	7,5%	7,8%	7,9%	9,3%	9,7%	
Solar	%		N/A	N/A	N/A	0,8%	1,1%	1,3%	1,7%	2,0%	2,3%	2,7%	3,2%	3,5%	3,7%	4,0%	4,0%	5,1%	6,1%	
Bioenergy	%		N/A	N/A	N/A	21,3%	25,4%	25,2%	25,4%	25,2%	24,9%	24,6%	24,2%	23,9%	23,6%	23,3%	23,1%	21,8%	20,6%	
Waste (bio-degradeable)	%		N/A	N/A	N/A	2,8%	2,8%	2,8%	2,7%	2,7%	2,7%	2,6%	2,6%	2,6%	2,6%	2,5%	2,5%	2,5%	2,5%	
Ambient heat for Heat pumps	%		N/A	N/A	N/A	1,4%	3,0%	2,1%	3,2%	3,0%	3,5%	4,0%	4,3%	4,6%	4,9%	5,1%	6,4%	7,2%		
Other	%		N/A	N/A	N/A	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
RES-H&C share	%		N/A	N/A	39,3%	44,4%	53,5%	54,5%	56,6%	57,4%	57,8%	58,2%	58,3%	58,7%	59,1%	59,6%	59,9%	61,8%	63,1%	
Offshore	%		N/A	N/A	N/A	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
Onshore	%		N/A	N/A	N/A	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
Solar	%		N/A	N/A	N/A	0,7%	0,9%	1,0%	1,1%	1,2%	1,3%	1,6%	1,6%	1,7%	1,8%	1,8%	2,0%	2,7%		
Bioenergy	%		N/A	N/A	N/A	35,8%	43,1%	42,9%	44,0%	44,0%	43,7%	43,4%	42,8%	42,1%	41,8%	41,6%	40,2%	38,7%		
Waste (bio-degradeable)	%		N/A	N/A	N/A	5,0%	5,0%	5,1%	5,1%	5,1%	5,1%	5,0%	5,0%	5,0%	5,0%	4,9%	5,0%	4,9%		
Ambient heat for Heat pumps	%		N/A	N/A	N/A	2,9%	4,5%	5,5%	6,4%	7,1%	7,7%	8,3%	8,9%	9,5%	10,3%	11,0%	11,5%	14,6%	16,8%	
Other	%		N/A	N/A	N/A	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
RES-E share	%		27,4%	34,8%	56,0%	63,8%	76,6%	80,4%	84,8%	85,6%	87,7%	88,5%	98,2%	99,2%	101,8%	103,9%	108,9%	105,5%	95,9%	
Offshore	%		N/A	N/A	N/A	14,7%	19,2%	20,4%	24,3%	24,7%	26,6%	27,3%	36,7%	38,2%	41,8%	43,1%	48,2%	42,1%	34,3%	
Onshore	%		N/A	N/A	N/A	28,8%	32,0%	34,0%	34,6%	34,9%	34,7%	34,3%	34,2%	33,7%	33,0%	32,8%	35,2%	33,6%		
Solar	%		N/A	N/A	N/A	2,7%	3,4%	4,6%	5,8%	7,0%	8,1%	9,2%	10,2%	10,9%	11,7%	12,4%	13,2%	15,7%	17,2%	
Bioenergy	%		N/A	N/A	N/A	15,3%	19,9%	19,3%	18,1%	17,1%	16,4%	15,9%	15,3%	14,7%	14,2%	13,7%	13,2%	11,1%	9,5%	
Waste (bio-degradeable)	%		N/A	N/A	N/A	2,4%	2,1%	2,0%	1,9%	1,7%	1,8%	1,7%	1,6%	1,6%	1,5%	1,4%	1,4%	1,2%		
Ambient heat for Heat pumps	%		N/A	N/A	N/A	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
Other	%		N/A	N/A	N/A	0,1%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
RES-DH share	%		0,0%	0,0%	45,9%	55,1%	70,7%	72,4%	74,4%	76,3%	76,9%	77,6%	77,8%	78,3%	79,0%	79,3%	79,7%	79,8%		
Offshore	%		N/A	N/A	N/A	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
Onshore	%		N/A	N/A	N/A	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
Solar	%		N/A	N/A	N/A	1,2%	1,6%	1,8%	2,1%	2,3%	3,2%	3,5%	3,4%	3,3%	3,4%	3,6%	3,7%	4,9%		
Bioenergy	%		N/A	N/A	N/A	42,6%	56,9%	56,6%	56,9%	57,6%	57,2%	56,9%	56,4%	56,3%	56,2%	56,4%	56,8%	56,8%	55,5%	
Waste (bio-degradeable)	%		N/A	N/A	N/A	11,0%	11,3%	11,4%	11,5%	11,5%	11,3%	11,3%	11,4%	11,4%	11,5%	11,3%	11,5%	11,6%		
Ambient heat for Heat pumps	%		N/A	N/A	N/A	0,2%	1,0%	6,3%	4,0%	6,3%	4,9%	6,8%	7,3%	7,8%	7,9%	7,9%	7,9%	7,8%		
Other	%		N/A	N/A	N/A	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
RES-T share	%		N/A	N/A	6,5%	6,7%	8,3%	8,8%	9,3%	10,1%	10,7%	11,4%	13,8%	15,4%	17,0%	18,6%	30,3%	45,0%		
Biofuel (1. generation)	%		N/A	N/A	N/A	5,3%	4,4%	4,5%	4,6%	4,6%	4,7%	4,8%	4,8%	4,9%	4,9%	4,9%	4,9%	4,6%	4,1%	
Biofuel (2. generation)	%		N/A	N/A	N/A	0,1%	1,7%	1,7%	1,7%	1,7%	1,7%	1,7%	1,7%	1,7%	1,7%	1,7%	1,7%	1,6%	1,6%	
Biogas (1. generation)	%		N/A	N/A	N/A	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	
Biogas (2. generation)	%		N/A	N/A	N/A	0,0%	0,0%	0,1%	0,1%	0,1%	0,1%	0,1%	0,1%	0,1%	0,2%	0,2%	0,2%	0,2%	0,2%	
Electricity (rail)	%		N/A	N/A	N/A	1,4%	1,8%	1,1%	1,2%	1,2%	1,5%	1,5%	1,7%	3,0%	3,2%	3,3%	3,4%	3,5%	3,5%	
Electricity (road)	%		N/A	N/A	N/A	0,0%	0,9%	1,1%	1,4%	1,8%	2,2%	2,7%	3,6%	4,5%	5,6%	6,9%	8,5%	20,3%	35,7%	
(final consumption of renewable energy in transport as contribution to overall target)	%		N/A	N/A	N/A	1,3%	1,3%	1,4%	1,4%	1,4%	1,4%	1,4%	1,4%	1,4%	1,4%	1,4%	1,4%	1,3%	1,1%	
Contribution of biofuels and biogas produced from feedstock listed in part A of Annex IX and consumed in transport	%		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Contribution of biofuels and biogas produced from feedstock listed in part B of Annex IX and consumed in transport	%		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Contribution from biofuels, bioliquids and biomass fuels consumed in transport, produced from food or feed crops	%		N/A	N/A	N/A	1,3%	1,1%	1,1%	1,1%	1,2%	1,2%	1,2%	1,2%	1,2%	1,2%	1,2%	1,1%	0,9%		
Contribution of other biofuels and consumed in transport	%		N/A	N/A	N/A	0,0%	0,2%	0,2%	0,2%	0,2%	0,2%	0,2%	0,2%	0,2%	0,2%	0,2%	0,2%	0,2%	0,2%	
Gross final consumption of RES for heating and cooling	ktoe		N/A	N/A	2885	3400	4095	4164	4318	4380	4405	4425	4442	4462	4490	4503	4587	4684		
Gross final consumption of electricity from RES	ktoe		N/A	N/A	1620	1867	2383	2595	2846	2970	3139	3248	3676	3823	4000	4159	4443	4762	4767	
Gross final consumption of energy from RES in transport	ktoe		N/A	N/A	257	268	358	343	364	386	418	442	471	570	634	696	759	1192	1726	
Total Gross final consumption of RES	ktoe		N/A	N/A	6715	7597	7001	7408	7597	7931	8356	8522	8720	8907	9203	9590	9665			
Gross final consumption of RES from district heating and cooling	ktoe		0	0	1419	1774	2223	2267	2315	2361	2372	2386	2363	2363	2367	2379	2376	2334	2272	
Gross final consumption of waste heat and cold for heating and cooling																				

Efficiency and heat generation from renewable energy in buildings (as defined in Article 2(1) of Directive 2010/31/EU); this shall include, where available, disaggregated data on energy produced, consumed and injected into the grid by solar photovoltaic systems, solar thermal systems, biomass, heat pumps, geothermal systems, as well as all other decentralized		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
If applicable, other national trajectories, including long-term or sectorial ones (the share of food-based and advanced biofuels, the share of renewable energy in district heating, as well as the renewable energy produced by cities and energy communities as defined by Article 22 of [recast of Directive 2009/28/EC as proposed by COM(2016) 767])	%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>3. GHG emissions and removals related indicators</b>																			
<b>1 Regulation and LULUCF</b>		tCO2eq																	
ETS sector emissions (in ETS scope since 2013)	tCO2eq	26475745	25266385	15926097	15215447	12221948	11266047	11239100	10248567	10402793	10298625	9930517	9818436	9744616	8422433	8438401	8369795	8139911	
Effort Sharing sector GHG emissions (in scope since 2013)	tCO2eq	39753287	37770407	32205803	32673413	31975215	31732147	31429976	31277934	31092518	30908451	30704262	30376440	30162108	29940293	29732554	28459566	27680149	
LULUCF (accounted according to EU legislation requirements)	tCO2eq	4351881	-945791	3803746	3132961	2526539	2022943	2552439	2604410	2888817	2305326	3220740	3056279	2968188	2757332	3344480	3027428	3492427	
GHG emissions by IPCC sector and by gas (where relevant split into EU ETS and Effort Sharing sectors).	tCO2eq	<i>Please use for reporting on GHG emissions by IPCC sector and gas the same excel template as used for reporting on Annex XII to Commission Implementing Regulation (EU) 749/2014 (IPArticle23_table1), next due 15/3/2019. It is provided as separate file.</i>																	
<b>3 Carbon intensity of the overall economy</b>	tCO2eq/GDP	0,28	0,26	0,19	0,18	0,16	0,15	0,15	0,14	0,14	0,14	0,13	0,13	0,13	0,12	0,12	0,11	0,10	
<b>4 CO2 emission related indicators</b>																			
<b>a GHG intensity of domestic power and heat generation</b>	tCO2eq/MWh	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>b GHG intensity of final energy consumption by sector</b>	tCO2eq/toe																		
Industry	tCO2eq/toe	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Residential	tCO2eq/toe	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tertiary	tCO2eq/toe	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Passenger transport	tCO2eq/toe	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Freight transport	tCO2eq/toe	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>5 Non-CO2 GHG emission related parameters</b>																			
<b>a Livestock</b>																			
dairy cattle	1000 heads	N/A	N/A	N/A	N/A	584	586	590	593	596	600	604	611	616	622	629	629	629	629
non-dairy cattle	1000 heads	N/A	N/A	N/A	N/A	979	985	990	995	1001	1006	1011	1017	1022	1027	1032	1032	1032	1032
pigs	1000 heads	N/A	N/A	N/A	N/A	12247	12272	12278	12269	12263	12238	12199	12182	12152	12118	12082	12082	12082	12082
sheep	1000 heads	N/A	N/A	N/A	N/A	204	204	204	204	204	204	204	204	204	204	204	204	204	204
poultry	1000 heads	N/A	N/A	N/A	N/A	19314	19460	19578	19653	19692	19703	19691	19677	19637	19589	19530	19530	19530	19530
<b>b Nitrogen input from application of synthetic fertilizers</b>	kt nitrogen	N/A	N/A	N/A	N/A	268	265	261	257	254	250	247	243	240	236	232	232	232	232
<b>c Nitrogen input from application of manure</b>	kt nitrogen	N/A	N/A	N/A	N/A	213	214	216	217	218	220	221	223	224	225	227	227	227	227
<b>d Nitrogen fixed by N-fixing crops</b>	kt nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>e Nitrogen in crop residues returned to soils</b>	kt nitrogen	N/A	N/A	N/A	N/A	140	139	138	138	137	136	136	135	134	134	133	133	133	133
<b>f Area of cultivated organic soils</b>	hectares	N/A	N/A	N/A	N/A	111746	111393	111034	110616	110197	110151	110105	110058	110012	109966	109920	109689	109458	
<b>g Municipal solid waste (MSW) generation</b>	t	15728000	N/A	15497000	N/A	17114000	N/A	N/A	N/A	N/A	18602000	N/A	N/A	N/A	N/A	19496000	20214000	20214000	Data refers to the total amount of primary waste pr
<b>h Municipal solid waste (MSW) going to landfills</b>	t	982987	2505416	1094096	802120	496000	507000	518000	529000	540000	551000	563200	575400	587600	599800	612000	755000	612000	Data refers to the total amount waste going to lanc
<b>i Share of CH4 recovery in total CH4 generation from landfills</b>	%	0	0	0	0	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,2 "Recovered methane" (as reported in the energy s