

# A New Approach to Assessing the Sustainable Share of Renewable Energy Sources in the Energy Economies of European Countries Supporting the Strong Sustainability Paradigm

## The dataset

This supplementary material includes the data collected for two models considered in the paper entitled "A New Approach to Assessing the Sustainable Share of Renewable Energy Sources in the Energy Economies of European Countries Supporting the Strong Sustainability Paradigm". The data collected for the first model considering the percentage share of RES is provided in Table [1](#). On the other hand, the data for the second model regarding performances in KTOE per population is given in Table [2](#).

Table 1: The dataset including European countries' performances provided in percentage RES share in different branches of the economy.

Country	$C_1$	$C_2$	$C_3$	$C_4$	$C_5$	$C_6$	$C_7$	$C_8$	$C_9$	$C_{10}$	$C_{11}$	$C_{12}$	$C_{13}$	$C_{14}$	$C_{15}$	$C_{16}$	$C_{17}$	$C_{18}$
Belgium	0.0040	0.1552	0.0790	0.0286	0.0243	0.0012	0.0039	0.0004	0.0900	0.0856	0.0049	0.0139	0.0109	0.0030	0.0001	0.0631	0.0516	0.0221
Bulgaria	0.1074	0.0369	0.0547	0.0000	0.0033	0.0003	0.0027	0.0001	0.0604	0.2741	0.0040	0.0386	0.0386	0.0000	0.0000	0.0608	0.1171	0.0158
Czechia	0.0313	0.0095	0.0373	0.0378	0.0391	0.0001	0.0030	0.0001	0.0529	0.2097	0.0202	0.0282	0.0249	0.0033	0.0000	0.0349	0.1351	0.0147
Denmark	0.0004	0.5063	0.0604	0.1541	0.0511	0.0056	0.0071	0.0000	0.0616	0.1731	0.2770	0.0511	0.0356	0.0155	0.0000	0.1630	0.2550	0.0201
Germany	0.0363	0.2360	0.1102	0.0187	0.0751	0.0018	0.0087	0.0000	0.0573	0.1375	0.0192	0.0160	0.0110	0.0050	0.0022	0.1044	0.0889	0.0105
Estonia	0.0034	0.0720	0.0599	0.1511	0.0046	0.0006	0.0004	0.0000	0.0466	0.3118	0.2635	0.0791	0.0546	0.0245	0.0000	0.0806	0.3048	0.0135
Greece	0.0908	0.1955	0.1275	0.0009	0.0092	0.0001	0.0011	0.0000	0.0318	0.2211	0.0000	0.0850	0.0850	0.0000	0.0000	0.1204	0.0986	0.0099
Spain	0.1124	0.2389	0.1332	0.0172	0.0073	0.0007	0.0041	0.0003	0.0485	0.1558	0.0000	0.0445	0.0437	0.0008	0.0000	0.1380	0.0649	0.0190
France	0.1238	0.0859	0.0406	0.0097	0.0133	0.0007	0.0041	0.0006	0.0725	0.1562	0.0336	0.0706	0.0656	0.0050	0.0028	0.0781	0.1072	0.0233
Croatia	0.3628	0.1204	0.0081	0.0383	0.0256	0.0003	0.0053	0.0007	0.0099	0.3345	0.0332	0.0044	0.0044	0.0000	0.0000	0.1235	0.1658	0.0048
Ireland	0.0226	0.3293	0.0044	0.0006	0.0109	0.0013	0.0004	0.0000	0.0566	0.0403	0.0000	0.0227	0.0225	0.0002	0.0000	0.0871	0.0228	0.0195
Italy	0.1480	0.0647	0.0865	0.0134	0.0584	0.0006	0.0053	0.0027	0.0453	0.1394	0.0072	0.0531	0.0528	0.0003	0.0060	0.0877	0.0925	0.0163
Cyprus	0.0000	0.0444	0.1142	0.0000	0.0110	0.0000	0.0000	0.0000	0.0374	0.2662	0.0017	0.0850	0.0836	0.0014	0.0627	0.0415	0.1284	0.0134
Latvia	0.3959	0.0219	0.0056	0.0755	0.0342	0.0016	0.0030	0.0001	0.0158	0.4293	0.1806	0.0000	0.0000	0.0000	0.0000	0.0802	0.3480	0.0050
Lithuania	0.0341	0.1484	0.0267	0.0308	0.0246	0.0005	0.0001	0.0002	0.0601	0.2537	0.2359	0.0258	0.0201	0.0056	0.0000	0.0517	0.2260	0.0216
Luxembourg	0.0148	0.0495	0.0413	0.0401	0.0136	0.0004	0.0010	0.0000	0.0789	0.0440	0.1048	0.0053	0.0024	0.0029	0.0000	0.0241	0.0408	0.0350
Hungary	0.0050	0.0136	0.0987	0.0305	0.0056	0.0002	0.0022	0.0000	0.0563	0.1772	0.0182	0.0081	0.0077	0.0004	0.0000	0.0328	0.1029	0.0167
Malta	0.0000	0.0000	0.0987	0.0000	0.0025	0.0003	0.0000	0.0000	0.0516	0.0429	0.0000	0.1370	0.1370	0.0000	0.2000	0.0354	0.0718	0.0176
Netherlands	0.0007	0.1820	0.1453	0.0488	0.0223	0.0041	0.0042	0.0000	0.0656	0.0466	0.0179	0.0214	0.0151	0.0062	0.0000	0.0896	0.0446	0.0157
Austria	0.5770	0.1003	0.0516	0.0112	0.0066	0.0024	0.0166	0.0110	0.0534	0.2472	0.0230	0.0356	0.0356	0.0000	0.0000	0.1672	0.1529	0.0235
Poland	0.0131	0.1070	0.0469	0.0335	0.0096	0.0001	0.0021	0.0000	0.0552	0.1982	0.0151	0.0141	0.0094	0.0046	0.0000	0.0420	0.1120	0.0160
Portugal	0.2260	0.2434	0.0631	0.0635	0.0137	0.0003	0.0039	0.0000	0.0588	0.3190	0.0000	0.1365	0.1365	0.0000	0.0000	0.1689	0.1653	0.0213
Romania	0.2799	0.1190	0.0353	0.0026	0.0005	0.0011	0.0051	0.0001	0.0763	0.2563	0.0062	0.0000	0.0000	0.0000	0.0000	0.0820	0.1372	0.0222
Slovenia	0.3079	0.0004	0.0436	0.0110	0.0072	0.0004	0.0036	0.0001	0.0385	0.2762	0.0292	0.0345	0.0345	0.0000	0.0000	0.0943	0.1202	0.0177
Slovakia	0.1523	0.0002	0.0232	0.0375	0.0158	0.0002	0.0037	0.0011	0.0633	0.1596	0.0256	0.0140	0.0140	0.0000	0.0000	0.0488	0.1111	0.0165
Finland	0.1736	0.1524	0.0046	0.1385	0.0102	0.0036	0.0061	0.0000	0.1426	0.3733	0.1607	0.0486	0.0325	0.0161	0.0029	0.1433	0.3250	0.0242
Sweden	0.4840	0.2421	0.0142	0.0804	0.0128	0.0098	0.0230	0.0027	0.2261	0.3793	0.2087	0.1029	0.0375	0.0654	0.0030	0.2991	0.3352	0.0595
Iceland	0.6976	0.0003	0.0000	0.0000	0.2940	0.0152	0.0000	0.0000	0.0703	0.0717	0.7638	0.0000	0.0000	0.0000	0.0000	0.4949	0.2746	0.0085
Norway	1.0937	0.1035	0.0013	0.0000	0.0015	0.0401	0.0149	0.0033	0.0810	0.1743	0.0402	0.1269	0.0677	0.0592	0.0000	0.6686	0.0834	0.0297

Table 2: The dataset including European countries' performances on RES share in different branches of the economy provided in KTOE per 100 000 inhabitants.

Country	$C_1$	$C_2$	$C_3$	$C_4$	$C_5$	$C_6$	$C_7$	$C_8$	$C_9$	$C_{10}$	$C_{11}$	$C_{12}$	$C_{13}$	$C_{14}$	$C_{15}$	$C_{16}$	$C_{17}$	$C_{18}$
Belgium	0.2580	9.9976	5.0891	1.8424	1.5636	0.0903	0.2813	0.0327	6.5673	12.2917	0.6966	1.9936	1.5692	0.4244	0.0168	18.3463	14.9987	6.4238
Bulgaria	5.1697	1.7749	2.6325	0.0019	0.1586	0.0139	0.1199	0.0039	2.6767	15.9890	0.2322	2.2498	2.2498	0.0000	0.0000	9.6000	18.4710	2.4901
Czechia	1.8005	0.5439	2.1472	2.1744	2.2459	0.0088	0.1955	0.0095	3.4434	27.3522	2.6339	3.6733	3.2441	0.4292	0.0000	8.6981	33.6594	3.6572
Denmark	0.0213	27.0433	3.2245	8.2309	2.7271	0.3743	0.4774	0.0000	4.1325	21.8258	34.9250	6.4391	4.4861	1.9530	0.0000	40.3954	63.1900	4.9842
Germany	2.0511	13.3381	6.2294	1.0592	4.2426	0.1130	0.5348	0.0000	3.5069	17.5973	2.4561	2.0494	1.4048	0.6446	0.2767	26.2727	22.3794	4.1547
Estonia	0.2204	4.6236	3.8479	9.7051	0.2977	0.0377	0.0235	0.0000	3.0705	33.5862	28.3793	8.5254	5.8839	2.6414	0.0000	18.6335	70.4909	3.1317
Greece	4.1811	8.9986	5.8692	0.0426	0.4256	0.0053	0.0547	0.0000	1.5369	11.5044	0.0000	4.4255	4.4255	0.0000	0.0000	19.4571	15.9299	1.5969
Spain	5.4643	11.6133	6.4757	0.8358	0.3528	0.0415	0.2547	0.0180	3.0474	8.9382	0.0000	2.5535	2.5033	0.0482	0.0024	24.4278	11.4942	3.3616
France	7.5922	5.2706	2.4884	0.5922	0.8157	0.0444	0.2590	0.0368	4.5677	13.3727	2.8739	6.0466	5.6146	0.4319	0.2429	16.4189	22.5361	4.9078
Croatia	15.1845	5.0404	0.3382	1.6020	1.0728	0.0146	0.2899	0.0412	0.5437	27.6407	2.7393	0.3656	0.3656	0.0000	0.0000	22.8921	30.7456	0.8895
Ireland	1.2975	18.9487	0.2520	0.0366	0.6257	0.1052	0.0324	0.0000	4.5568	3.5120	0.0000	1.9829	1.9626	0.0203	0.0000	21.0230	5.4949	4.6944
Italy	7.0054	3.0636	4.0962	0.6348	2.7670	0.0332	0.3093	0.1572	2.6647	12.1968	0.6324	4.6488	4.6191	0.0297	0.5223	17.0674	18.0003	3.1644
Cyprus	0.0000	2.2232	5.7202	0.0000	0.5497	0.0000	0.0000	0.0000	2.7501	16.8192	0.1060	5.3721	5.2846	0.0876	3.9650	8.4931	26.2623	2.7501
Latvia	13.2626	0.7333	0.1892	2.5291	1.1443	0.0840	0.1581	0.0056	0.8399	53.7829	22.6285	0.0000	0.0000	0.0000	0.0000	17.6108	76.4114	1.0874
Lithuania	1.3375	5.8186	1.0480	1.2067	0.9634	0.0359	0.0079	0.0129	4.2623	22.2170	20.6586	2.2562	1.7642	0.4920	0.0000	10.3175	45.1318	4.3190
Luxembourg	1.3179	4.4070	3.6806	3.5751	1.2130	0.0881	0.2605	0.0000	19.7860	6.6932	15.9570	0.8063	0.3632	0.4430	0.0000	13.8451	23.4565	20.1346
Hungary	0.2122	0.5775	4.1994	1.2983	0.2378	0.0129	0.1242	0.0011	3.1262	17.4321	1.7854	0.7978	0.7551	0.0427	0.0000	6.3872	20.0153	3.2568
Malta	0.0000	0.0010	4.7783	0.0000	0.1220	0.0162	0.0000	0.0000	2.4199	1.1182	0.0000	3.5732	3.5732	0.0000	5.2175	4.8851	9.9089	2.4361
Netherlands	0.0423	10.4575	8.3482	2.8050	1.2808	0.2159	0.2228	0.0000	3.4897	6.0700	2.3359	2.7834	1.9709	0.8126	0.0000	22.4952	11.1894	3.9285
Austria	40.5649	7.0532	3.6310	0.7850	0.4634	0.2031	1.3933	0.9262	4.4901	36.9494	3.4380	5.3239	5.3239	0.0000	0.0000	49.9750	45.7114	7.0127
Poland	0.5397	4.4134	1.9369	1.3831	0.3956	0.0063	0.1258	0.0005	3.2622	19.8612	1.5112	1.4087	0.9448	0.4639	0.0000	8.5361	22.7811	3.2546
Portugal	10.4706	11.2769	2.9229	2.9436	0.6342	0.0195	0.2181	0.0028	3.2951	19.1933	0.0000	8.2139	8.2139	0.0000	0.0000	28.0078	27.4073	3.5354
Romania	7.1189	3.0266	0.8979	0.0671	0.0117	0.0435	0.1974	0.0047	2.9339	17.7672	0.4320	0.0000	0.0000	0.0000	0.0000	10.8765	18.1992	2.9385
Slovenia	18.6038	0.0244	2.6343	0.6626	0.4370	0.0372	0.3465	0.0096	3.7283	22.7578	2.4037	2.8459	2.8459	0.0000	0.0000	21.9688	28.0074	4.1217
Slovakia	6.7385	0.0083	1.0284	1.6597	0.6977	0.0088	0.1828	0.0518	3.1036	18.0447	2.8924	1.5879	1.5879	0.0000	0.0000	9.8892	22.5250	3.3470
Finland	22.7826	20.0032	0.6080	18.1720	1.3330	0.2452	0.4225	0.0000	9.8371	89.9717	38.7184	11.7078	7.8252	3.8826	0.7005	62.2311	141.0984	10.5048
Sweden	55.0520	27.8362	1.6288	9.2460	1.4698	0.6929	1.6297	0.1911	16.0334	57.1513	31.4529	15.5038	5.6476	9.8562	0.4500	93.3190	104.5580	18.5471
Iceland	320.7740	0.1311	0.0000	0.0000	135.2015	1.3922	0.0000	0.0000	6.4186	21.6653	230.6595	0.0000	0.0000	0.0000	0.0000	454.7144	252.3248	7.8109
Norway	230.6904	21.8389	0.2740	0.0000	0.3249	3.1725	1.1833	0.2631	6.4169	15.8164	3.6450	11.5195	6.1438	5.3756	0.0000	248.5093	30.9809	11.0358