

statistics

Monthly electricity statistics

iea

With data up to:
July 2019

TABLE OF CONTENTS

	Page #
HIGHLIGHTS	i
<hr/>	
ORGANISATIONAL AND REGIONAL TABLES	
OECD Total	1
OECD Americas	2
OECD Asia Oceania	3
OECD Europe	4
IEA Total	5
<hr/>	
COUNTRY TABLES	
Australia	6
Austria	7
Belgium	8
Canada	9
Chile	10
Czech Republic	11
Denmark	12
Estonia	13
Finland	14
France	15
Germany	16
Greece	17
Hungary	18
Iceland	19
Ireland	20
Italy	21
Japan	22
Korea	23
Latvia	24
Lithuania	25
Luxembourg	26
Mexico	27
Netherlands	28
New Zealand	29
Norway	30
Poland	31
Portugal	32
Slovak Republic	33
Slovenia	34
Spain	35
Sweden	36
Switzerland	37
Turkey	38
United Kingdom	39
United States	40
<hr/>	
NET TRADE MAPS	
OECD Europe	41 - 42
<hr/>	
PRINCIPLES AND DEFINITIONS	43-44
NOTES ON CHARTS AND MAPS	45
COUNTRY NOTES	46-48

MONTHLY ELECTRICITY STATISTICS

July 2019

HIGHLIGHTS

OECD

- In July 2019 electricity production was 948.0 TWh and rose by 11.3% compared to June 2019. Compared to July 2019, production is down by 1.4%.
- Renewables were up by 9.7% compared to July 2018 and accounted for 26.1% of total net production, with wind production up by 37.5% compared to July 2018, reaching 54.9 TWh.
- Conventional thermal production in the Year-to-Date was down by 4.7%, with coal production down by 12.6%. Natural gas electricity production rose by 3.0%, reaching 1 717.9 TWh. Together coal and natural gas accounted for half of the electricity generated in January-July 2019.

OECD Americas

- Net production in July 2019 was stable compared to July 2018, increasing only by 0.7%. Solar and wind posted increases of 37.2% and 30.6% respectively, reaching productions of 26.5 TWh and 13.8 TWh.
- In Chile, wind production has been higher since January 2019, reaching a historical maximum of 493.9 GWh in July 2019, with a share of 6.9%. Solar production is also higher in 2019; it is up by 40% in July 2019 vs. July 2018 reaching a production of 385.9 GWh with a share of 5.4%.

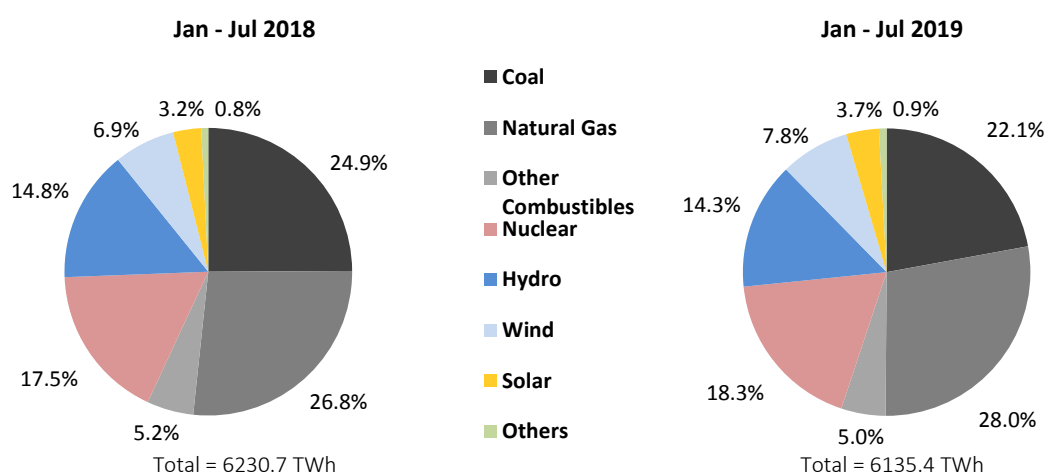
OECD Asia/Oceania

- Net electricity production was 155.4 TWh in July 2019, up by 9.2% compared to June 2019 and down by 10.2% compared to July 2018. Renewables accounted for one fifth of the production.
- Nuclear production in Korea is up by 25% over the January-July 2019 period compared to the same period in 2018, reaching 87 TWh, but is equivalent to production in January-July 2017 which was 86 TWh.

OECD Europe

- In July 2019, OECD Europe produced 283 TWh of electricity, 0.2% more than in the same period last year. The total share of renewables accounts for 38.7% of the mix.
- In July 2019, Belgium was a net exporter for the first time since September 2017, as a result of a higher net production, + 26.2% compared to July 2018, with nuclear production up by 64.4% compared to July 2018 and equivalent to 2017 production.
- Over the period January-July 2019, Portugal has been a net importer of electricity, whereas Portugal was a net exporter, in the same periods of 2017 and 2018. This can be a result of lower hydroelectric production in 2019.
- In July 2019, electricity production in Switzerland reached a historical maximum, at 7.7 TWh, up by 22.5% compared to June 2019 and by 16.1% compared to July 2018, as renewables production is higher. This results in a peak in exports, +18.3% compared to July 2018 and +35.1% compared to June 2019.

OECD Electricity Production by Fuel Type Year-to-Date Comparison



OECD Total

	Jul 2019				Year-to-Date			2018	
	TWh	change ¹	change ²	share	2019	2018	change ³	TWh	share
CONVENTIONAL THERMAL	561.8	-5.5%	20.6%	59.3%	3 381.1	3 546.8	-4.7%	6 155.2	57.8%
Coal ⁵	215.6	-14.2%	20.9%	22.7%	1 357.0	1 552.5	-12.6%	2 692.5	25.3%
Oil ⁵	15.7	-26.7%	11.8%	1.7%	106.7	127.1	-16.1%	204.4	1.9%
Natural Gas ⁵	302.6	3.0%	22.3%	31.9%	1 717.9	1 667.5	3.0%	2 914.0	27.4%
Combustible Renewables ⁵	24.7	5.5%	5.9%	2.6%	172.3	167.4	2.9%	289.2	2.7%
Other Combustibles ⁵	3.3	-29.0%	8.7%	0.3%	27.3	32.3	-15.3%	55.1	0.5%
Nuclear	159.6	-1.3%	4.1%	16.8%	1 121.4	1 088.4	3.0%	1 869.9	17.6%
Hydro	122.0	0.2%	-4.1%	12.9%	875.9	922.4	-5.0%	1 483.4	13.9%
Wind	54.9	37.5%	-1.7%	5.8%	478.1	427.2	11.9%	739.1	6.9%
Solar	42.0	14.2%	-0.4%	4.4%	226.0	196.7	14.9%	319.7	3.0%
Geothermal	4.2	4.8%	2.9%	0.4%	30.2	28.1	7.5%	49.0	0.5%
Other Renewables	0.1	-1.9%	-	0.0%	0.7	0.7	-1.5%	1.2	0.0%
Non-Specified	3.4	31.6%	8.7%	0.4%	22.1	20.4	8.1%	34.4	0.3%
RENEWABLES	247.8	9.7%	-1.9%	26.1%	1 783.1	1 742.4	2.3%	2 881.6	27.1%
NON-RENEWABLES	700.1	-4.8%	16.9%	73.9%	4 352.3	4 488.3	-3.0%	7 770.4	72.9%
TOTAL NET PRODUCTION	948.0	-1.4%	11.3%		6 135.4	6 230.7	-1.5%	10 652.0	
+ Imports	41.8	3.4%	6.3%		288.4	289.9	-0.5%	490.2	
- Exports	41.0	2.6%	8.3%		276.7	275.6	0.4%	473.9	
= ELECTRICITY SUPPLIED	948.8	-1.3%	11.2%		6 147.2	6 244.9	-1.6%	10 668.4	
- Used for pumped storage ⁴	7.0	-2.2%	-0.9%		45.2	50.9	-11.3%	87.3	
- T&D Losses ⁴	63.1	-1.4%	8.5%		400.2	412.7	-3.0%	689.3	
= ELECTRICITY CONSUMED	878.7	-1.3%	11.5%		5 701.8	5 781.3	-1.4%	9 891.7	

¹ current month to month of last year change

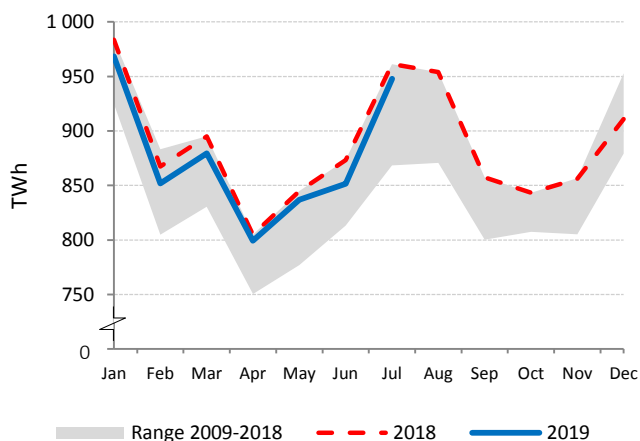
² month-to-month change

³ year-to-date compared to same period last year

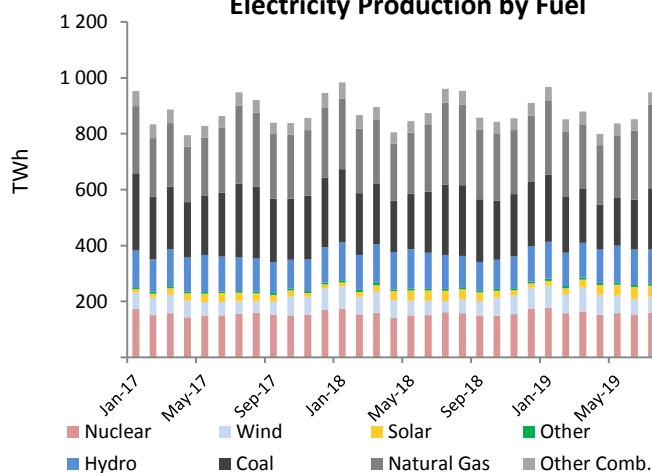
⁴ estimated for certain countries

⁵ the breakdown of conventional thermal is estimated from annual data for Canada, Estonia and Italy

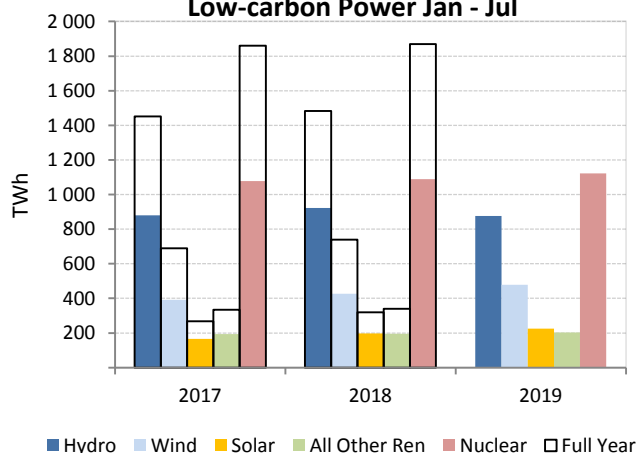
Electricity Production



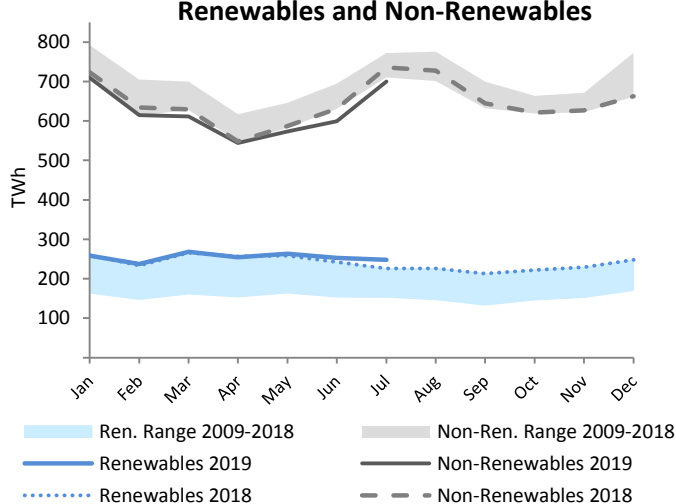
Electricity Production by Fuel



Low-carbon Power Jan - Jul



Renewables and Non-Renewables



OECD Americas

	Jul 2019				Year-to-Date			2018	
	TWh	change ¹	change ²	share	2019	2018	change ³	TWh	share
CONVENTIONAL THERMAL	325.3	-1.4%	24.6%	63.8%	1 768.6	1 795.3	-1.5%	3 152.0	59.9%
Coal ⁵	113.6	-12.0%	27.0%	22.3%	653.4	741.7	-11.9%	1 290.6	24.5%
Oil ⁵	7.8	2.1%	14.3%	1.5%	47.6	46.9	1.5%	79.0	1.5%
Natural Gas ⁵	196.6	6.0%	24.4%	38.6%	1 018.1	954.6	6.6%	1 694.8	32.2%
Combustible Renewables ⁵	6.4	-4.6%	6.8%	1.3%	44.0	46.4	-5.2%	77.8	1.5%
Other Combustibles ⁵	0.9	-2.6%	6.3%	0.2%	5.6	5.7	-2.2%	9.9	0.2%
Nuclear	82.4	0.3%	4.6%	16.2%	534.8	536.9	-0.4%	915.7	17.4%
Hydro	59.2	-4.0%	0.0%	11.6%	442.0	457.1	-3.3%	748.1	14.2%
Wind	26.5	37.2%	-0.9%	5.2%	207.7	194.7	6.7%	320.3	6.1%
Solar	13.8	30.6%	2.3%	2.7%	73.5	61.4	19.9%	102.3	1.9%
Geothermal	1.9	3.7%	2.4%	0.4%	12.7	12.3	3.8%	21.4	0.4%
Other Renewables	-	-	-	-	0.0	0.0	-91.7%	0.0	0.0%
Non-Specified	0.4	-4.9%	6.6%	0.1%	3.0	3.2	-8.3%	5.2	0.1%
RENEWABLES	107.8	7.7%	0.5%	21.2%	780.0	771.8	1.1%	1 270.0	24.1%
NON-RENEWABLES	401.7	-1.0%	20.2%	78.8%	2 262.4	2 289.1	-1.2%	3 995.1	75.9%
TOTAL NET PRODUCTION	509.5	0.7%	15.4%		3 042.3	3 060.9	-0.6%	5 265.0	
+ Imports	7.2	8.8%	16.6%		42.9	46.7	-8.2%	73.7	
- Exports	7.4	-2.9%	22.0%		42.5	46.5	-8.7%	77.6	
= ELECTRICITY SUPPLIED	509.3	0.9%	15.3%		3 042.7	3 061.1	-0.6%	5 261.1	
- Used for pumped storage ⁴	3.2	-2.9%	37.9%		15.3	15.8	-3.6%	27.6	
- T&D Losses ⁴	37.9	0.7%	8.9%		220.7	223.3	-1.2%	366.4	
= ELECTRICITY CONSUMED	468.3	0.9%	15.7%		2 806.8	2 821.9	-0.5%	4 867.1	

¹ current month to month of last year change

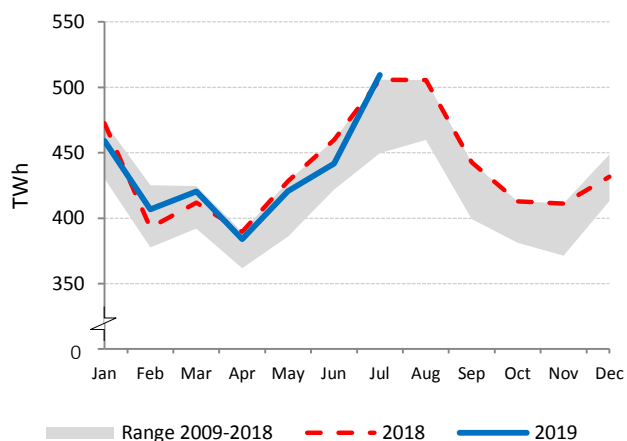
⁴ estimated for certain countries

² month-to-month change

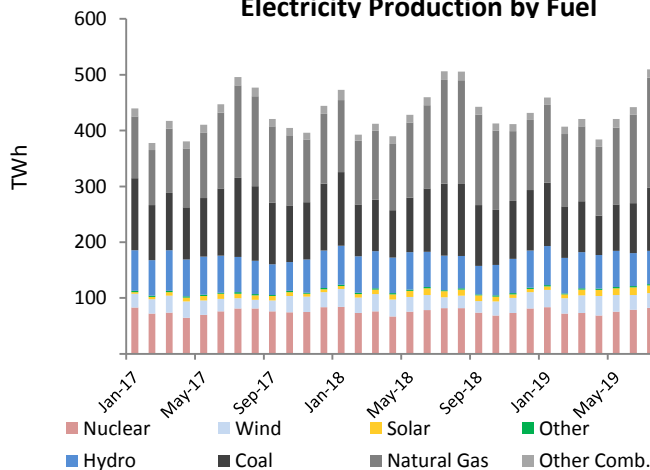
⁵ the breakdown of conventional thermal is estimated from annual data for Canada

³ year-to-date compared to same period last year

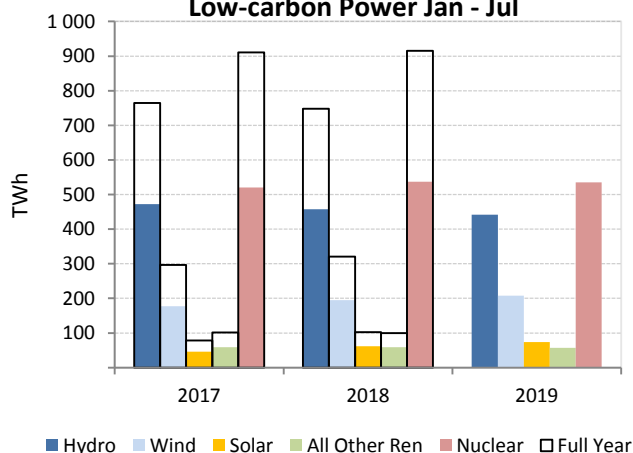
Electricity Production



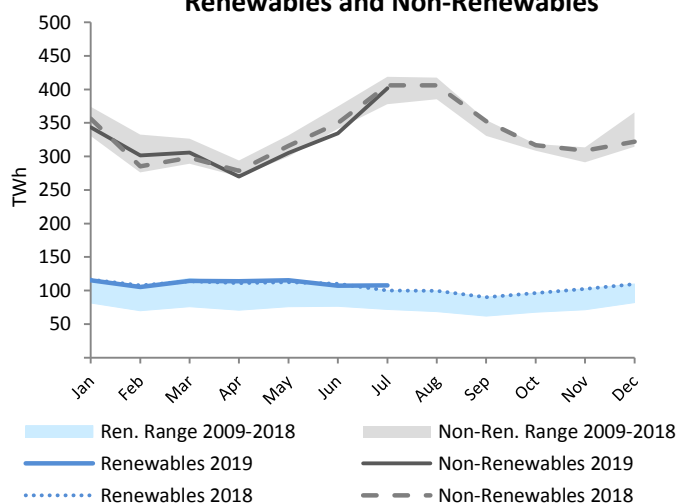
Electricity Production by Fuel



Low-carbon Power Jan - Jul



Renewables and Non-Renewables



OECD Asia Oceania

	Jul 2019				Year-to-Date			2018	
	TWh	change ¹	change ²	share	2019	2018	change ³	TWh	share
CONVENTIONAL THERMAL	109.8	-14.3%	13.3%	70.6%	746.0	837.1	-10.9%	1 398.4	75.0%
Coal	59.8	-8.0%	13.5%	38.5%	387.5	418.6	-7.5%	716.4	38.4%
Oil	3.8	-61.1%	10.1%	2.4%	32.0	53.2	-39.8%	78.4	4.2%
Natural Gas	42.4	-13.8%	13.8%	27.3%	300.0	335.5	-10.6%	553.0	29.7%
Combustible Renewables	3.6	44.8%	8.7%	2.3%	21.4	17.9	19.5%	30.8	1.7%
Other Combustibles	0.1	-95.6%	28.5%	0.0%	5.1	11.8	-56.4%	19.8	1.1%
Nuclear	16.4	-3.2%	-6.7%	10.6%	127.0	90.1	40.8%	174.4	9.4%
Hydro	13.3	-10.0%	2.4%	8.6%	75.9	88.2	-14.0%	144.4	7.7%
Wind	2.9	9.4%	18.8%	1.9%	18.9	16.2	16.6%	28.7	1.5%
Solar	9.6	20.2%	2.5%	6.2%	58.9	50.2	17.4%	85.3	4.6%
Geothermal	0.9	3.8%	3.6%	0.6%	5.7	5.5	2.6%	9.7	0.5%
Other Renewables	0.0	-	-	0.0%	0.3	0.3	-	0.5	0.0%
Non-Specified	2.4	59.0%	11.8%	1.6%	15.6	13.5	15.5%	22.8	1.2%
RENEWABLES	30.4	5.3%	4.6%	19.5%	181.0	178.3	1.5%	299.4	16.1%
NON-RENEWABLES	125.0	-13.3%	10.3%	80.5%	867.2	922.8	-6.0%	1 564.8	83.9%
TOTAL NET PRODUCTION	155.4	-10.2%	9.2%		1 048.2	1 101.1	-4.8%	1 864.1	
+ Imports	-	-	-		-	-	-	-	
- Exports	-	-	-		-	-	-	-	
= ELECTRICITY SUPPLIED	155.4	-10.2%	9.2%		1 048.2	1 101.1	-4.8%	1 864.1	
- Used for pumped storage ⁴	1.1	-31.2%	10.2%		6.8	9.4	-27.2%	16.4	
- T&D Losses ⁴	5.5	-19.6%	9.6%		35.1	45.0	-22.1%	76.4	
= ELECTRICITY CONSUMED	148.8	-9.6%	9.1%		1 006.3	1 046.7	-3.9%	1 771.3	

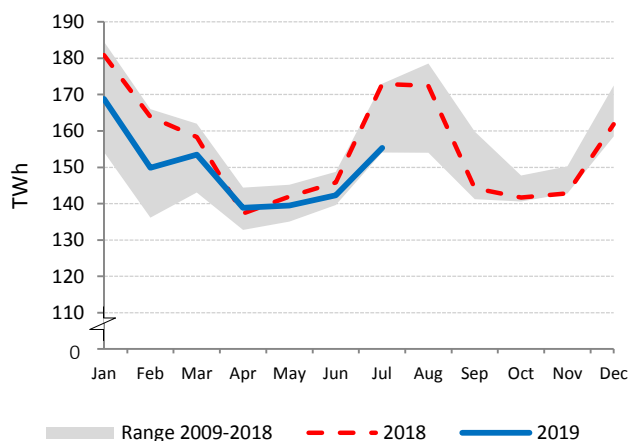
¹ current month to month of last year change

⁴ estimated for certain countries

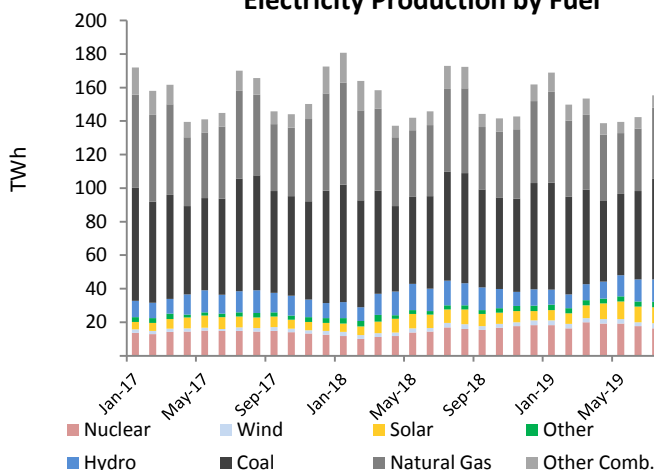
² month-to-month change

³ year-to-date compared to same period last year

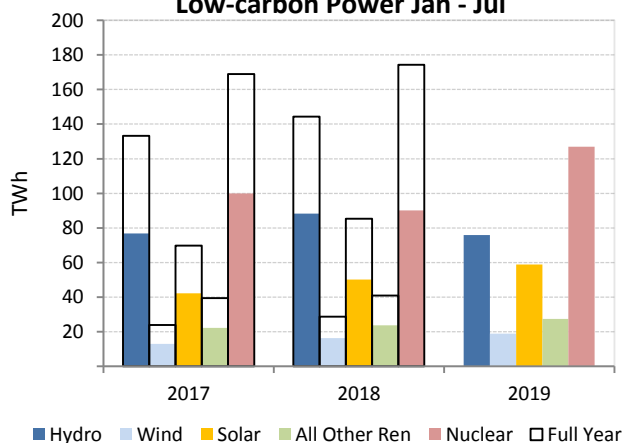
Electricity Production



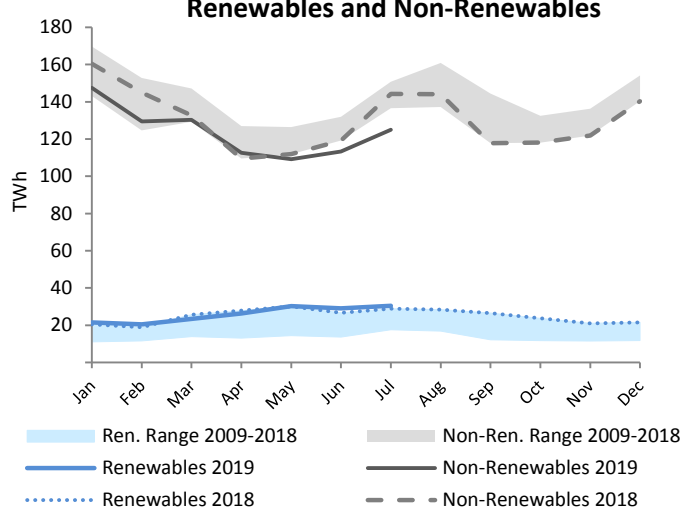
Electricity Production by Fuel



Low-carbon Power Jan - Jul



Renewables and Non-Renewables



OECD Europe

	Jul 2019				Year-to-Date			2018	
	TWh	change ¹	change ²	share	2019	2018	change ³	TWh	share
CONVENTIONAL THERMAL	126.8	-7.1%	17.4%	44.8%	866.5	914.4	-5.2%	1 604.9	45.6%
Coal ⁵	42.2	-26.5%	16.9%	14.9%	316.2	392.1	-19.4%	685.6	19.5%
Oil ⁵	4.1	1.7%	8.9%	1.5%	27.0	27.0	-0.2%	47.0	1.3%
Natural Gas ⁵	63.5	7.9%	22.1%	22.4%	399.8	377.3	6.0%	666.2	18.9%
Combustible Renewables ⁵	14.6	3.4%	4.8%	5.2%	106.9	103.1	3.6%	180.6	5.1%
Other Combustibles ⁵	2.4	11.4%	9.1%	0.8%	16.6	14.8	12.6%	25.5	0.7%
Nuclear	60.7	-2.9%	6.9%	21.5%	459.6	461.4	-0.4%	779.9	22.1%
Hydro	49.4	9.4%	-10.1%	17.4%	358.0	377.0	-5.0%	590.9	16.8%
Wind	25.4	42.1%	-4.5%	9.0%	251.5	216.3	16.3%	390.2	11.1%
Solar	18.7	2.1%	-3.6%	6.6%	93.5	85.2	9.8%	132.1	3.7%
Geothermal	1.5	6.8%	3.1%	0.5%	11.8	10.3	14.5%	17.9	0.5%
Other Renewables	0.1	-	-	0.0%	0.4	0.4	-	0.7	0.0%
Non-Specified	0.5	-13.2%	-2.8%	0.2%	3.5	3.7	-4.7%	6.4	0.2%
RENEWABLES	109.6	13.1%	-5.8%	38.7%	822.1	792.3	3.8%	1 312.3	37.3%
NON-RENEWABLES	173.4	-6.5%	14.6%	61.3%	1 222.8	1 276.4	-4.2%	2 210.5	62.7%
TOTAL NET PRODUCTION	283.0	0.2%	5.7%		2 044.9	2 068.7	-1.2%	3 522.9	
+ Imports	34.6	2.3%	4.3%		245.6	243.2	1.0%	416.5	
- Exports	33.6	3.9%	5.6%		234.2	229.1	2.2%	396.2	
= ELECTRICITY SUPPLIED	284.1	0.1%	5.6%		2 056.2	2 082.7	-1.3%	3 543.1	
- Used for pumped storage ⁴	2.7	18.4%	-27.7%		23.1	25.7	-10.2%	43.4	
- T&D Losses ⁴	19.7	1.1%	7.3%		144.4	144.4	0.0%	246.5	
= ELECTRICITY CONSUMED	261.6	-0.2%	6.0%		1 888.7	1 912.6	-1.3%	3 253.3	

¹ current month to month of last year change

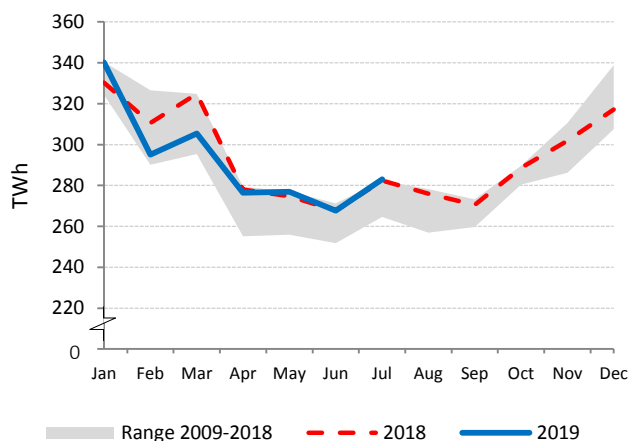
² month-to-month change

³ year-to-date compared to same period last year

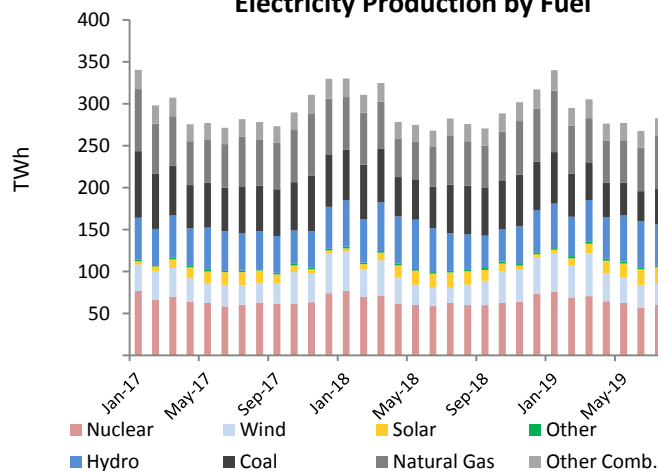
⁴ estimated for certain countries

⁵ the breakdown of conventional thermal is estimated from annual data for Estonia and Italy

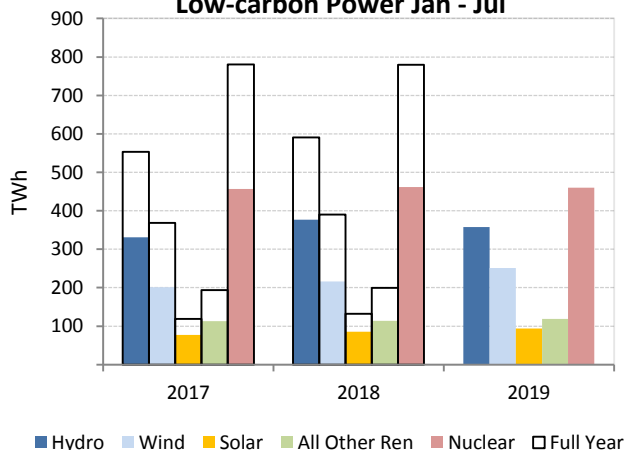
Electricity Production



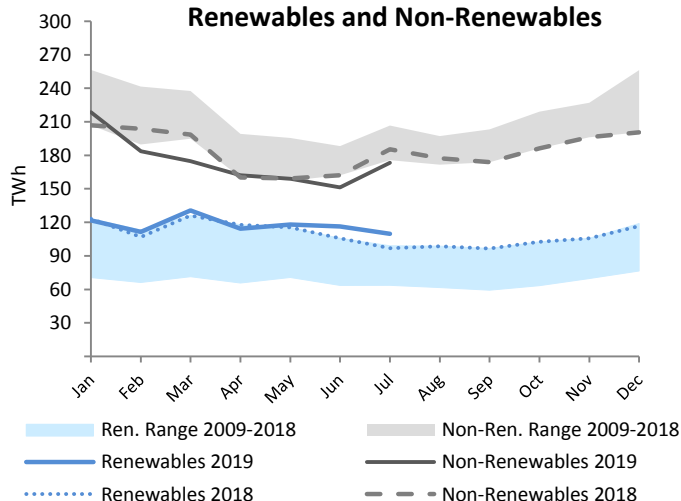
Electricity Production by Fuel



Low-carbon Power Jan - Jul



Renewables and Non-Renewables



IEA Total

	Jul 2019				Year-to-Date			2018	
	TWh	change ¹	change ²	share	2019	2018	change ³	TWh	share
CONVENTIONAL THERMAL	556.3	-5.6%	20.7%	59.4%	3 343.3	3 512.8	-4.8%	6 099.2	57.9%
Coal ⁵	212.6	-14.3%	21.3%	22.7%	1 338.1	1 533.7	-12.8%	2 660.8	25.3%
Oil ⁵	15.5	-27.4%	11.0%	1.7%	103.8	126.4	-17.9%	202.9	1.9%
Natural Gas ⁵	300.7	2.8%	22.4%	32.1%	1 705.8	1 657.4	2.9%	2 898.5	27.5%
Combustible Renewables ⁵	24.2	6.4%	6.2%	2.6%	168.4	163.1	3.3%	282.0	2.7%
Other Combustibles ⁵	3.3	-29.0%	8.7%	0.3%	27.3	32.2	-15.3%	55.1	0.5%
Nuclear	159.1	-1.3%	4.1%	17.0%	1 117.8	1 085.5	3.0%	1 864.4	17.7%
Hydro	118.9	0.6%	-4.0%	12.7%	853.2	896.1	-4.8%	1 438.8	13.7%
Wind	54.2	37.5%	-1.8%	5.8%	474.5	424.6	11.7%	734.3	7.0%
Solar	41.6	14.1%	-0.5%	4.4%	222.6	193.9	14.8%	314.3	3.0%
Geothermal	3.7	5.2%	2.5%	0.4%	26.6	24.6	8.3%	42.9	0.4%
Other Renewables	0.1	-1.9%	-	0.0%	0.7	0.7	-1.5%	1.2	0.0%
Non-Specified	3.4	32.5%	8.7%	0.4%	22.1	20.3	8.7%	34.2	0.3%
RENEWABLES	242.7	10.1%	-1.9%	25.9%	1 746.1	1 703.0	2.5%	2 813.6	26.7%
NON-RENEWABLES	694.6	-4.9%	17.0%	74.1%	4 314.9	4 455.5	-3.2%	7 115.8	73.3%
TOTAL NET PRODUCTION	937.3	-1.4%	11.4%		6 060.9	6 158.5	-1.6%	10 529.4	
+ Imports	39.4	3.4%	6.8%		272.1	274.0	-0.7%	463.3	
- Exports	39.4	2.1%	9.1%		266.1	265.1	0.4%	457.0	
= ELECTRICITY SUPPLIED	937.3	-1.4%	11.3%		6 066.9	6 167.4	-1.6%	10 535.7	
- Used for pumped storage ⁴	6.8	-3.4%	-1.3%		44.7	50.4	-11.4%	86.4	
- T&D Losses ⁴	62.6	-1.3%	8.5%		396.3	408.8	-3.0%	682.6	
= ELECTRICITY CONSUMED	867.8	-1.4%	11.6%		5 625.9	5 708.2	-1.4%	9 766.7	

¹ current month to month of last year change

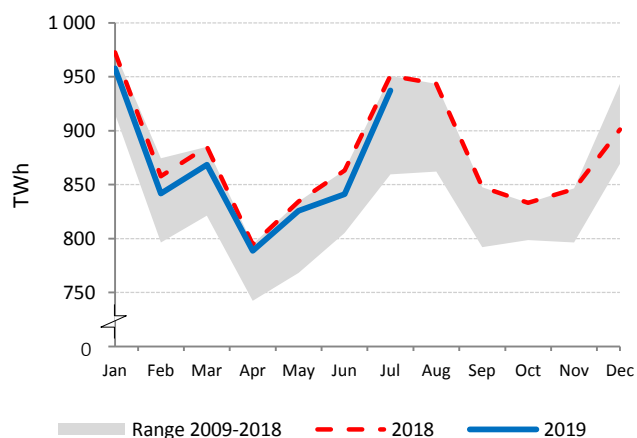
² month-to-month change

³ year-to-date compared to same period last year

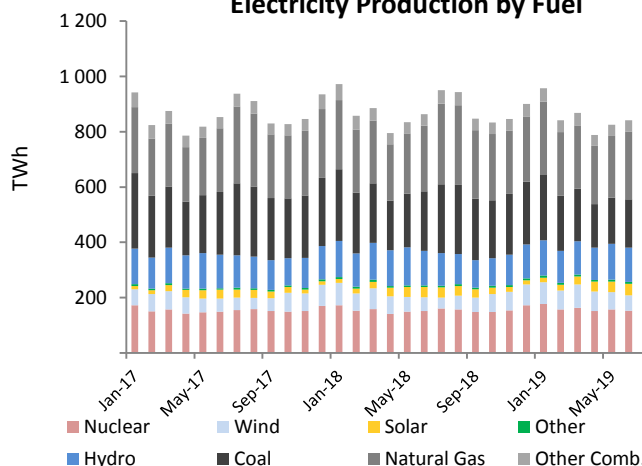
⁴ estimated for certain countries

⁵ the breakdown of conventional thermal is estimated from annual data for Canada, Estonia, and Italy

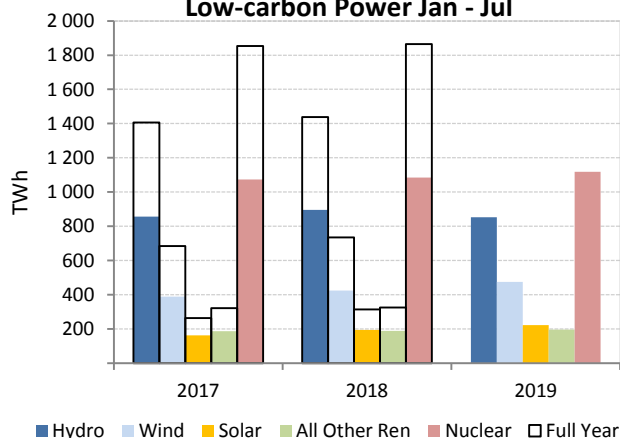
Electricity Production



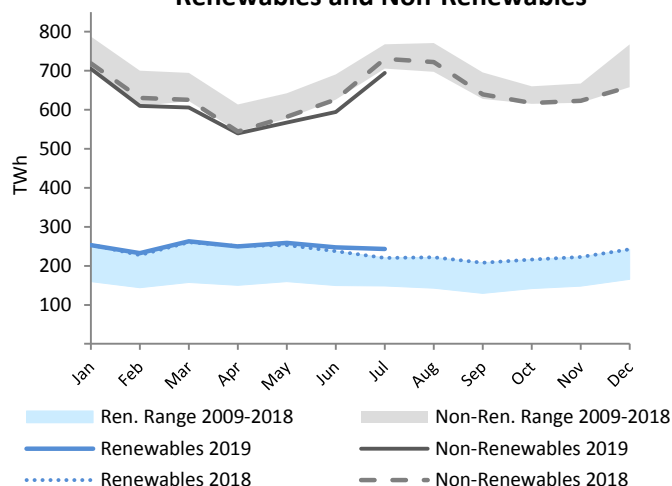
Electricity Production by Fuel



Low-carbon Power Jan - Jul



Renewables and Non-Renewables

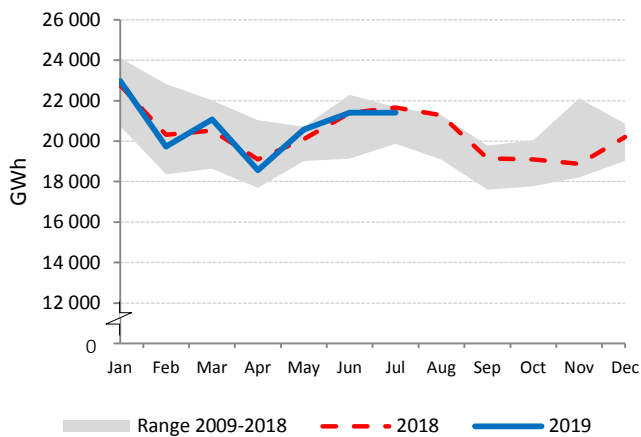


AUSTRALIA

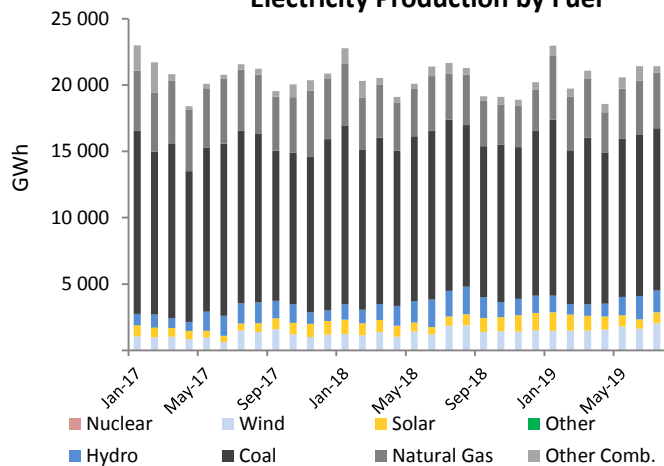
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	16 907	-1.5%	-2.3%	79.0%	118 510	120 454	-1.6%	198 606	81.2%
Coal	12 235	-5.2%	0.8%	57.1%	85 113	87 857	-3.1%	147 143	60.2%
Oil	263	-50.3%	-69.6%	1.2%	3 415	3 362	1.6%	4 486	1.8%
Natural Gas	4 179	20.6%	2.0%	19.5%	28 401	27 317	4.0%	43 776	17.9%
Combustible Renewables	230	-16.8%	8.1%	1.1%	1 581	1 918	-17.6%	3 201	1.3%
Other Combustibles	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	1 628	-16.2%	-7.5%	7.6%	8 629	10 485	-17.7%	17 819	7.3%
Wind	2 035	10.4%	23.7%	9.5%	11 533	9 221	25.1%	16 871	6.9%
Solar	840	20.2%	21.2%	3.9%	7 054	5 673	24.3%	11 151	4.6%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	4 733	-0.6%	9.8%	22.1%	28 797	27 297	5.5%	49 042	20.1%
NON-RENEWABLES	16 677	-1.3%	-2.5%	77.9%	116 929	118 536	-1.4%	195 405	79.9%
TOTAL NET PRODUCTION	21 411	-1.1%	0.0%		145 725	145 832	-0.1%	244 448	
+ Imports	-	-	-	-	-	-	-	-	-
- Exports	-	-	-	-	-	-	-	-	-
= ELECTRICITY SUPPLIED	21 411	-1.1%	0.0%		145 725	145 832	-0.1%	244 448	
- Used for pumped storage ⁴	42	50.3%	66.0%		143	151	-5.4%	257	
- T&D Losses ⁴	1 222	10.0%	13.7%		7 463	8 537	-12.6%	13 582	
= ELECTRICITY CONSUMED	20 147	-1.8%	-0.8%		138 119	137 143	0.7%	230 609	

¹ current month to month of last year change ⁴ estimated
² month-to-month change
³ year-to-date compared to same period last year

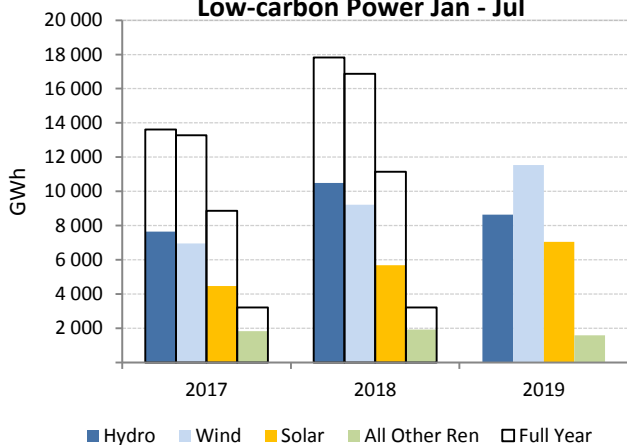
Electricity Production



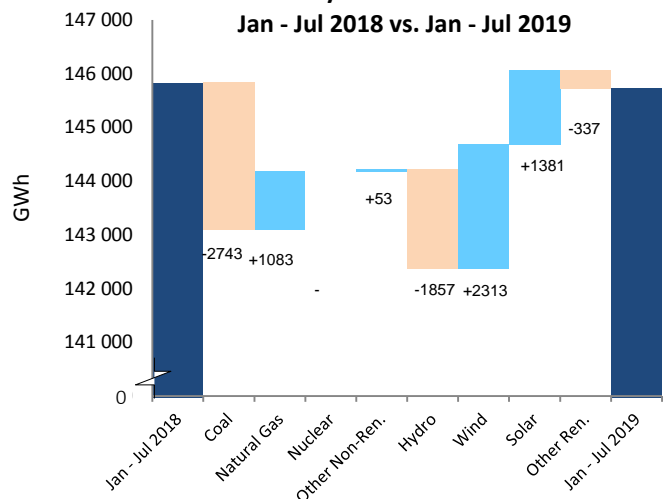
Electricity Production by Fuel



Low-carbon Power Jan - Jul



Electricity Production Variation Jan - Jul 2018 vs. Jan - Jul 2019



AUSTRIA

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	1 341	40.1%	34.5%	23.5%	10 868	10 169	6.9%	18 884	29.0%
Coal	294	112.4%	14.2%	5.1%	2 104	1 939	8.5%	3 436	5.3%
Oil	58	-11.5%	11.3%	1.0%	401	421	-4.8%	681	1.0%
Natural Gas	527	63.5%	112.0%	9.2%	5 187	4 730	9.7%	9 409	14.5%
Combustible Renewables	398	6.3%	3.8%	7.0%	2 733	2 654	3.0%	4 656	7.2%
Other Combustibles	64	14.0%	14.5%	1.1%	443	425	4.3%	702	1.1%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	3 897	16.0%	-22.4%	68.2%	27 324	25 966	5.2%	39 115	60.1%
Wind	311	-15.4%	-16.3%	5.4%	4 408	3 189	38.2%	5 723	8.8%
Solar⁴	164	-	4.0%	2.9%	897	897	-	1 364	2.1%
Geothermal	0	-	-	0.0%	0	0	-	0	0.0%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	1	-6.4%	-19.5%	0.0%	8	8	0.1%	12	0.0%
RENEWABLES	4 769	11.8%	-19.7%	83.5%	35 362	32 706	8.1%	50 859	78.1%
NON-RENEWABLES	944	61.7%	53.4%	16.5%	8 143	7 522	8.2%	14 241	21.9%
TOTAL NET PRODUCTION	5 713	17.8%	-12.8%		43 505	40 228	8.1%	65 100	
+ Imports	1 833	-12.8%	43.1%		14 572	14 281	2.0%	28 076	
- Exports	1 913	43.6%	-8.7%		14 442	11 191	29.0%	19 129	
= ELECTRICITY SUPPLIED	5 634	0.3%	-1.8%		43 634	43 318	0.7%	74 046	
- Used for pumped storage	246	-9.1%	-48.9%		2 740	2 761	-0.7%	5 116	
- T&D Losses	266	7.1%	5.7%		1 938	1 968	-1.5%	3 348	
= ELECTRICITY CONSUMED	5 122	0.4%	2.3%		38 956	38 589	1.0%	65 582	

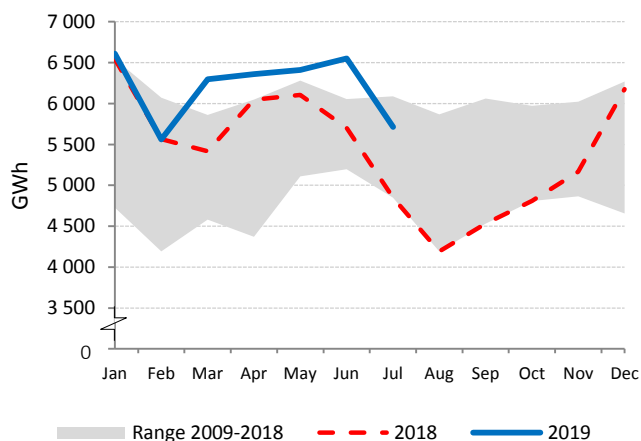
¹ current month to month of last year change

⁴ estimated by the IEA secretariat

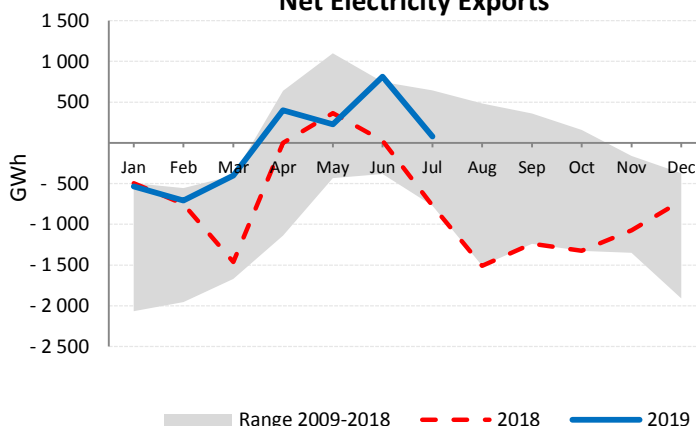
² month-to-month change

³ year-to-date compared to same period last year

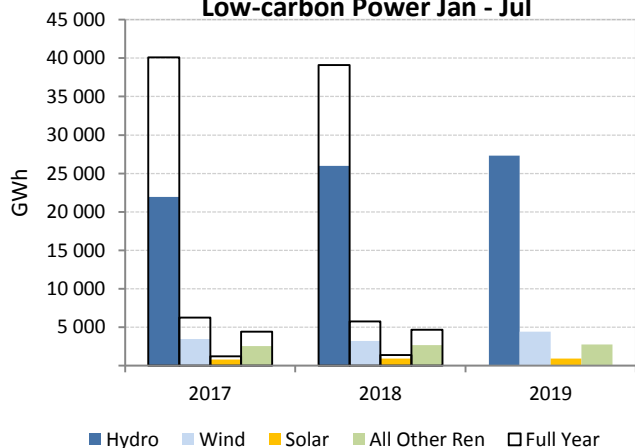
Electricity Production



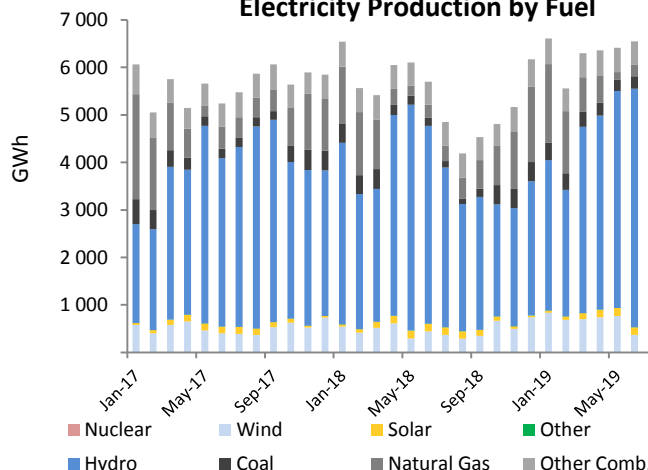
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



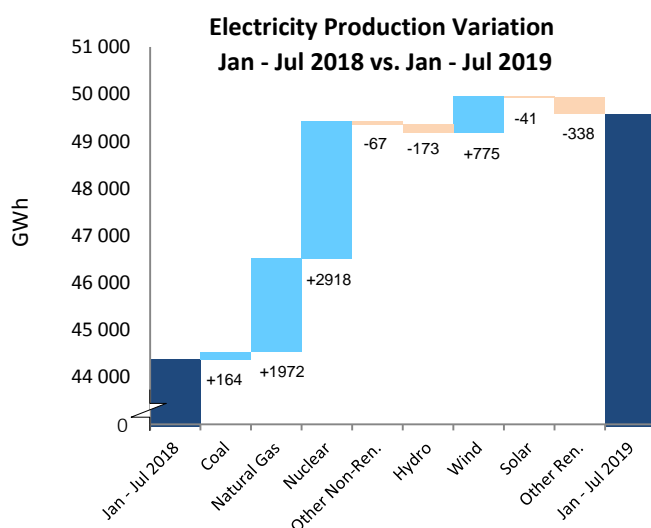
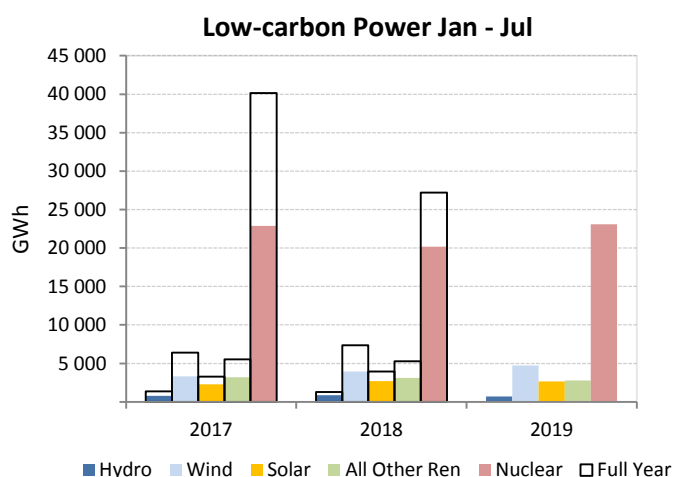
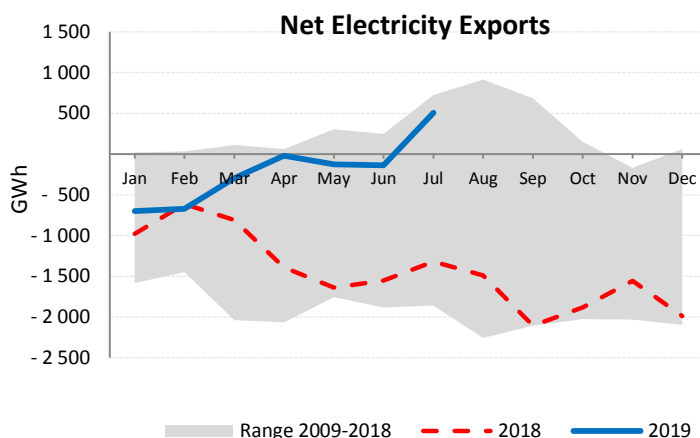
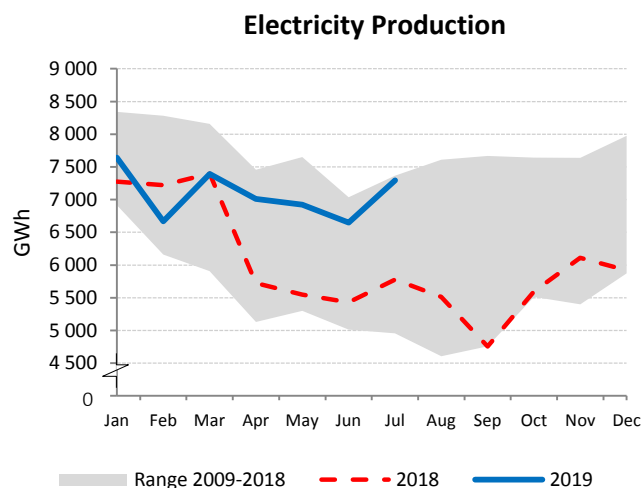
BELGIUM

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	2 653	3.7%	7.0%	36.4%	18 154	16 410	10.6%	31 924	44.2%
Coal	215	0.0%	8.0%	2.9%	1 447	1 283	12.8%	2 257	3.1%
Oil	2	-35.3%	19.6%	0.0%	16	95	-82.8%	159	0.2%
Natural Gas	1 900	8.2%	9.5%	26.0%	13 134	11 162	17.7%	22 939	31.7%
Combustible Renewables	438	-8.0%	-1.6%	6.0%	2 777	3 114	-10.8%	5 274	7.3%
Other Combustibles	99	-10.4%	-1.1%	1.4%	781	756	3.3%	1 295	1.8%
Nuclear	3 593	64.4%	23.0%	49.3%	23 080	20 162	14.5%	27 198	37.6%
Hydro	58	-14.5%	-36.6%	0.8%	678	852	-20.3%	1 284	1.8%
Wind	414	41.9%	-24.3%	5.7%	4 726	3 951	19.6%	7 370	10.2%
Solar	539	-14.1%	-5.4%	7.4%	2 645	2 686	-1.5%	3 943	5.5%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	37	-20.9%	-2.0%	0.5%	298	311	-4.1%	552	0.8%
RENEWABLES	1 448	-1.0%	-12.3%	19.8%	10 826	10 603	2.1%	17 871	24.7%
NON-RENEWABLES	5 846	35.4%	17.0%	80.2%	38 756	33 769	14.8%	54 400	75.3%
TOTAL NET PRODUCTION	7 294	26.2%	9.7%		49 582	44 372	11.7%	72 270	
+ Imports	813	-48.3%	-42.5%		8 851	11 689	-24.3%	21 634	
- Exports	1 319	420.8%	3.5%		7 399	3 385	118.6%	4 308	
= ELECTRICITY SUPPLIED	6 788	-4.4%	0.0%		51 034	52 676	-3.1%	89 596	
- Used for pumped storage	72	-11.6%	-31.1%		679	844	-19.6%	1 348	
- T&D Losses	280	-4.4%	0.5%		2 104	2 164	-2.8%	3 686	
= ELECTRICITY CONSUMED	6 436	-4.3%	0.5%		48 251	49 668	-2.9%	84 563	

¹ current month to month of last year change

² month-to-month change

³ year-to-date compared to same period last year

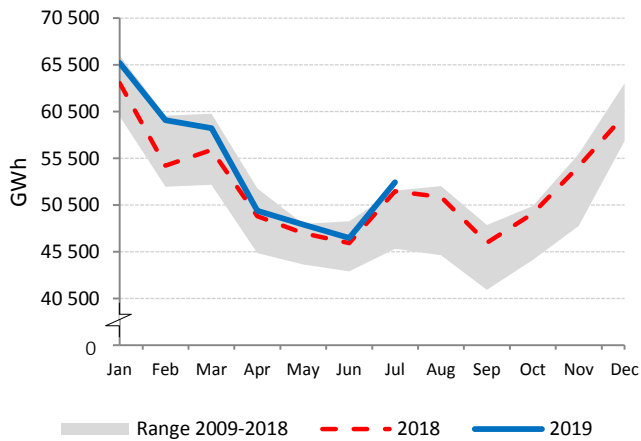


CANADA

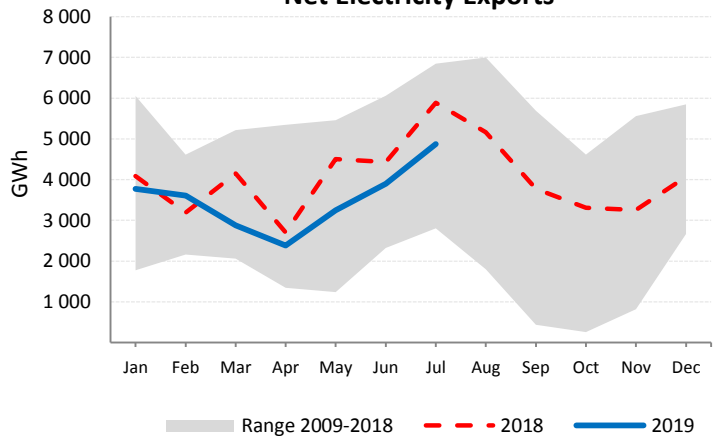
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	11 836	6.8%	33.8%	22.4%	78 603	70 577	11.4%	123 978	19.6%
Coal ⁴	4 885	6.8%	33.8%	9.2%	32 444	29 131	11.4%	51 173	8.1%
Oil ⁴	654	6.8%	33.8%	1.2%	4 343	3 899	11.4%	6 849	1.1%
Natural Gas ⁴	5 638	6.8%	33.8%	10.6%	37 442	33 619	11.4%	59 056	9.3%
Combustible Renewables ⁴	650	6.8%	33.8%	1.2%	4 319	3 878	11.4%	6 813	1.1%
Other Combustibles ⁴	8	6.8%	33.8%	0.0%	55	50	11.4%	87	0.0%
Nuclear	9 379	10.2%	2.7%	17.7%	56 927	54 046	5.3%	95 037	15.0%
Hydro	29 411	-2.3%	10.1%	55.5%	225 962	225 593	0.2%	379 691	60.1%
Wind	1 691	-3.1%	-2.6%	3.2%	17 920	17 143	4.5%	29 358	4.6%
Solar	620	18.2%	12.7%	1.2%	2 776	2 400	15.7%	3 816	0.6%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	1	11	-91.7%	20	0.0%
Non-Specified	11	-36.1%	25.2%	0.0%	116	136	-14.4%	231	0.0%
RENEWABLES	32 373	-1.9%	9.8%	61.1%	250 978	249 026	0.8%	419 697	66.4%
NON-RENEWABLES	20 576	8.3%	17.6%	38.9%	131 326	120 880	8.6%	212 434	33.6%
TOTAL NET PRODUCTION	52 949	1.8%	12.7%		382 305	369 906	3.4%	632 131	
+ Imports	1 353	100.2%	39.9%		8 676	8 327	4.2%	13 188	
- Exports	6 226	-5.1%	28.0%		33 339	37 281	-10.6%	61 712	
= ELECTRICITY SUPPLIED	48 076	4.3%	11.6%		357 642	340 951	4.9%	583 606	
- Used for pumped storage ⁴	16	-2.3%	10.1%		125	125	0.2%	210	
- T&D Losses ⁴	5 716	5.3%	13.3%		41 154	38 999	5.5%	66 538	
= ELECTRICITY CONSUMED	42 344	4.1%	11.4%		316 362	301 828	4.8%	516 858	

¹ current month to month of last year change ⁴ estimated from annual data
² month-to-month change
³ year-to-date compared to same period last year

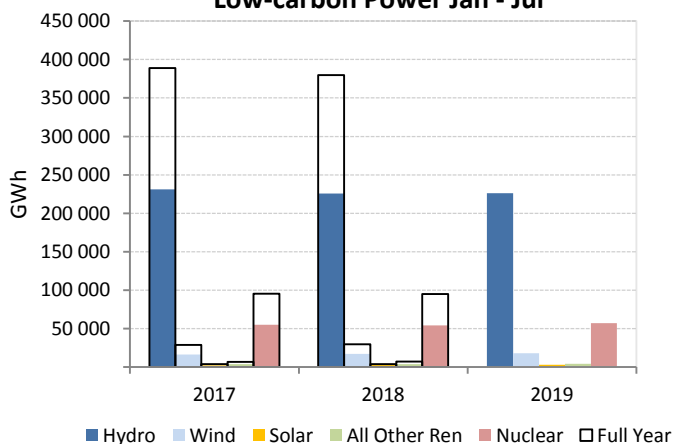
Electricity Production



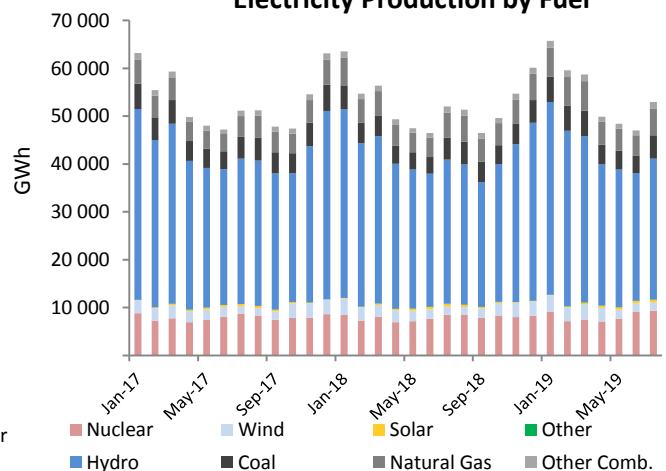
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



CHILE

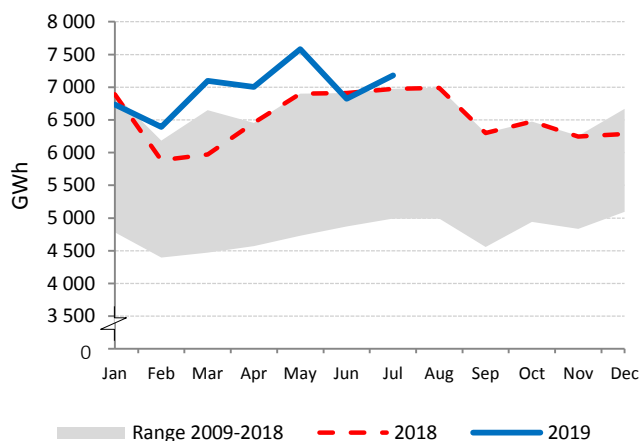
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	4 752	7.9%	6.8%	66.2%	32 518	28 874	12.6%	46 614	59.5%
Coal	2 524	-9.9%	-4.8%	35.1%	16 649	16 593	0.3%	27 630	35.3%
Oil	235	100.6%	129.7%	3.3%	2 821	680	314.7%	1 343	1.7%
Natural Gas	1 601	69.3%	25.9%	22.3%	10 104	8 151	24.0%	12 027	15.4%
Combustible Renewables	392	-27.0%	-7.5%	5.5%	2 944	3 449	-14.6%	5 614	7.2%
Other Combustibles	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	1 533	-19.2%	-1.5%	21.3%	10 508	12 574	-16.4%	22 842	29.2%
Wind	494	38.0%	6.2%	6.9%	2 558	1 809	41.4%	3 581	4.6%
Solar	386	26.7%	14.5%	5.4%	3 108	2 618	18.7%	5 027	6.4%
Geothermal	17	40.8%	-4.4%	0.2%	123	108	13.7%	214	0.3%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	2 821	-9.3%	0.8%	39.3%	19 241	20 559	-6.4%	37 278	47.6%
NON-RENEWABLES	4 360	12.8%	8.3%	60.7%	29 574	25 425	16.3%	41 000	52.4%
TOTAL NET PRODUCTION	7 181	3.0%	5.2%		48 815	45 983	6.2%	78 278	
+ Imports	-	-	-	-	-	-	-	-	-
- Exports	-	-	-	-	-	-	-	-	-
= ELECTRICITY SUPPLIED	7 181	3.0%	5.2%		48 815	45 983	6.2%	78 278	
- Used for pumped storage	-	-	-	-	-	-	-	-	-
- T&D Losses	279	-15.1%	4.2%		2 099	2 193	-4.3%	3 738	
= ELECTRICITY CONSUMED	6 902	3.9%	5.3%		46 716	43 791	6.7%	74 540	

¹ current month to month of last year change

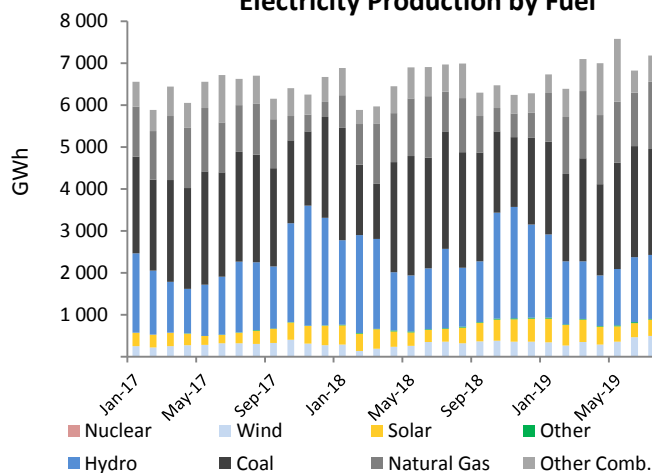
² month-to-month change

³ year-to-date compared to same period last year

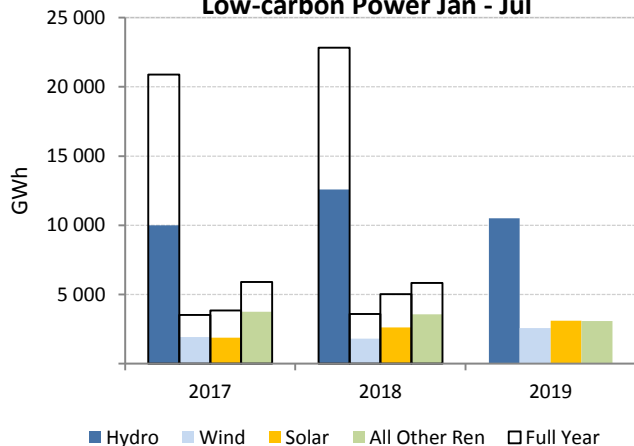
Electricity Production



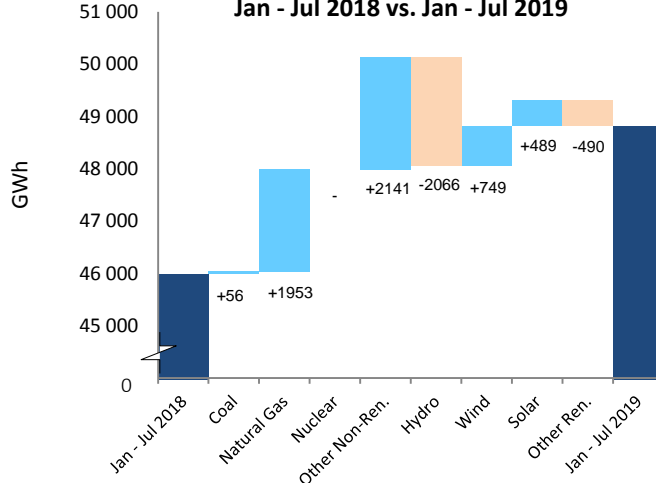
Electricity Production by Fuel



Low-carbon Power Jan - Jul



Electricity Production Variation Jan - Jul 2018 vs. Jan - Jul 2019



CZECH REPUBLIC

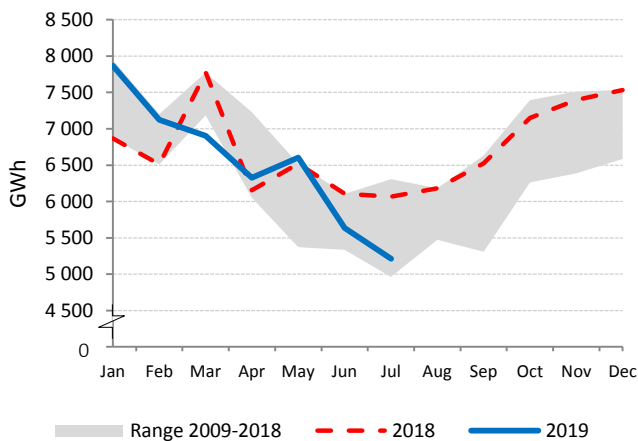
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	2 932	-19.4%	2.7%	56.2%	25 623	26 318	-2.6%	46 878	58.0%
Coal	2 046	-31.5%	-2.6%	39.2%	20 342	22 166	-8.2%	39 034	48.3%
Oil	9	2.7%	-11.8%	0.2%	61	45	34.1%	94	0.1%
Natural Gas	516	79.1%	27.2%	9.9%	2 637	1 540	71.3%	3 356	4.2%
Combustible Renewables	355	2.1%	6.9%	6.8%	2 540	2 522	0.7%	4 322	5.4%
Other Combustibles	6	-5.3%	-4.7%	0.1%	43	45	-4.1%	72	0.1%
Nuclear	1 776	-8.9%	-19.8%	34.1%	16 058	15 976	0.5%	28 245	35.0%
Hydro	180	29.8%	-7.8%	3.5%	2 031	1 805	12.6%	2 651	3.3%
Wind	28	-0.5%	-22.4%	0.5%	402	332	21.3%	599	0.7%
Solar	289	-4.8%	-11.6%	5.5%	1 496	1 507	-0.8%	2 316	2.9%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	10	7.3%	48.1%	0.2%	64	61	3.9%	98	0.1%
RENEWABLES	851	4.1%	-4.3%	16.3%	6 469	6 166	4.9%	9 889	12.2%
NON-RENEWABLES	4 363	-16.9%	-8.0%	83.7%	39 205	39 833	-1.6%	70 898	87.8%
TOTAL NET PRODUCTION	5 214	-14.1%	-7.4%		45 674	45 999	-0.7%	80 787	
+ Imports	1 339	64.3%	71.5%		6 813	6 257	8.9%	11 573	
- Exports	1 653	-18.8%	14.6%		13 345	13 107	1.8%	25 481	
= ELECTRICITY SUPPLIED	4 900	1.1%	-1.4%		39 142	39 149	0.0%	66 880	
- Used for pumped storage	113	111.1%	33.1%		805	868	-7.3%	1 373	
- T&D Losses	295	2.4%	1.3%		2 370	2 325	2.0%	4 102	
= ELECTRICITY CONSUMED	4 491	-0.3%	-2.2%		35 967	35 956	0.0%	61 405	

¹ current month to month of last year change

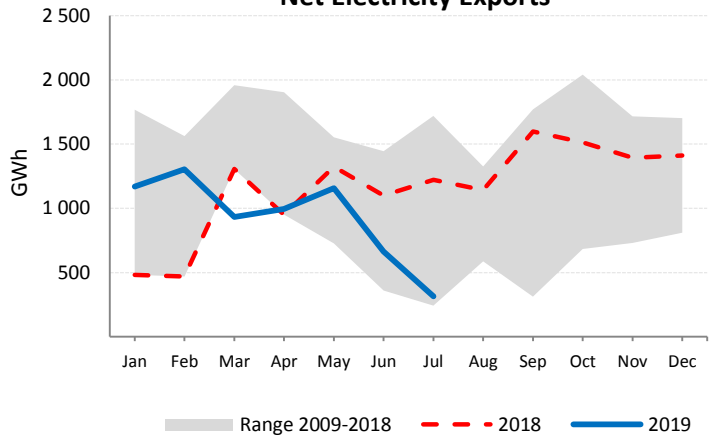
² month-to-month change

³ year-to-date compared to same period last year

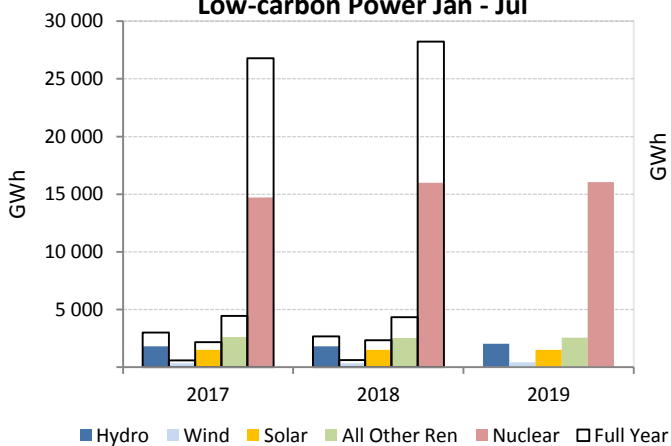
Electricity Production



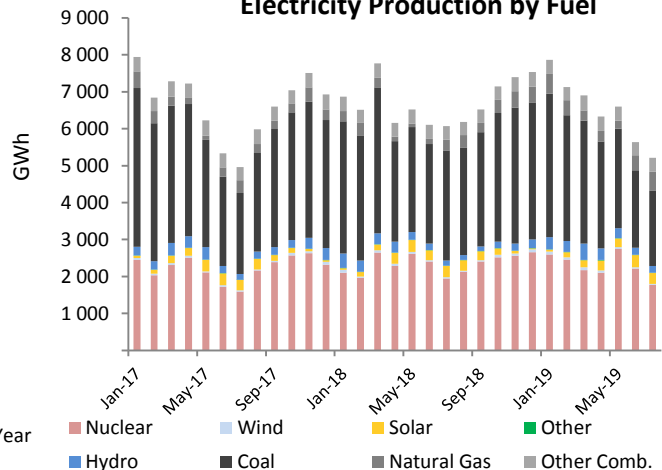
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



DENMARK

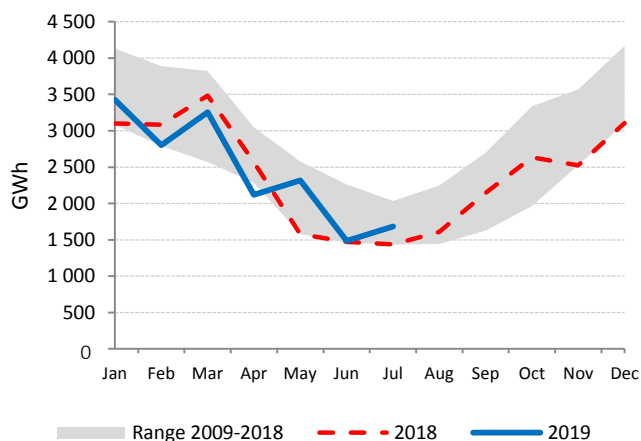
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	425	-23.8%	19.6%	25.3%	7 045	8 618	-18.3%	13 879	48.3%
Coal	0	-100.0%	-99.9%	0.0%	2 213	3 786	-41.6%	5 880	20.5%
Oil	15	2.7%	19.4%	0.9%	126	130	-3.2%	236	0.8%
Natural Gas	56	10.5%	-2.7%	3.4%	963	1 016	-5.1%	1 711	6.0%
Combustible Renewables	296	94.9%	45.1%	17.6%	3 283	3 314	-1.0%	5 422	18.9%
Other Combustibles	57	3.9%	1.9%	3.4%	460	372	23.7%	630	2.2%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	1	-3.4%	-23.2%	0.0%	9	9	-8.8%	14	0.0%
Wind	1 116	55.7%	13.5%	66.4%	9 336	7 417	25.9%	13 899	48.4%
Solar	140	-13.0%	-5.0%	8.3%	694	679	2.2%	953	3.3%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	1 553	50.7%	16.3%	92.3%	13 321	11 420	16.6%	20 288	70.6%
NON-RENEWABLES	129	-68.2%	-14.9%	7.7%	3 762	5 304	-29.1%	8 458	29.4%
TOTAL NET PRODUCTION	1 681	17.1%	13.1%		17 084	16 724	2.1%	28 746	
+ Imports	1 538	-3.7%	-11.5%		8 875	9 123	-2.7%	15 634	
- Exports	609	18.5%	-3.9%		6 116	6 080	0.6%	10 409	
= ELECTRICITY SUPPLIED	2 611	3.7%	0.8%		19 843	19 767	0.4%	33 970	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses	139	3.8%	-3.3%		1 133	1 018	11.3%	1 790	
= ELECTRICITY CONSUMED	2 472	3.6%	1.0%		18 710	18 749	-0.2%	32 180	

¹ current month to month of last year change

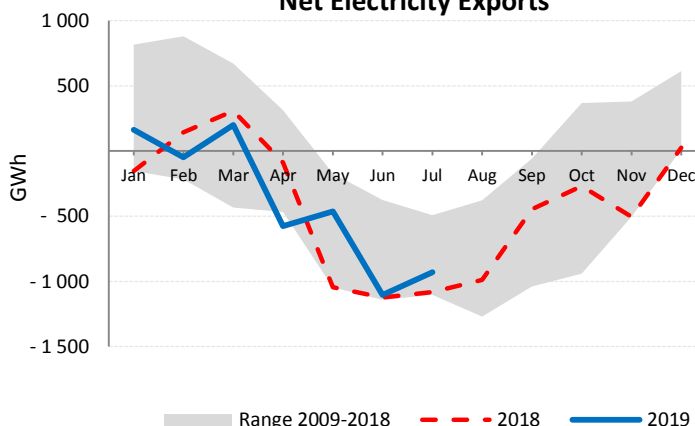
² month-to-month change

³ year-to-date compared to same period last year

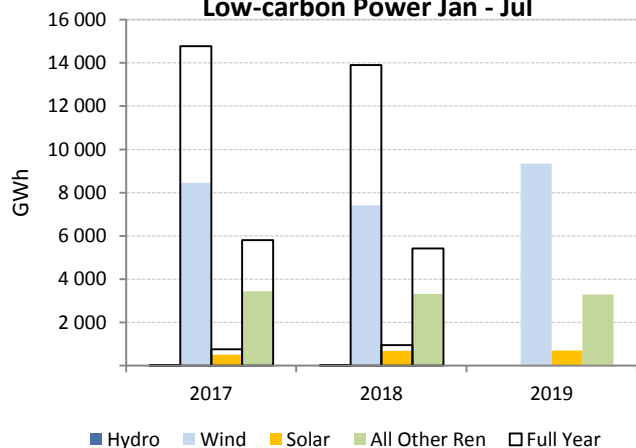
Electricity Production



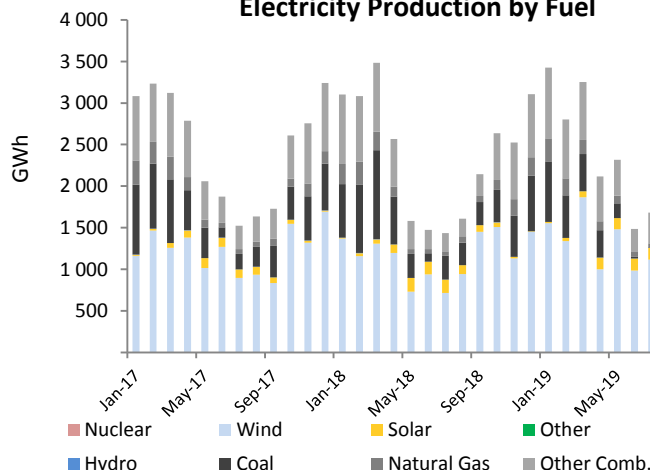
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



ESTONIA

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	289	-63.2%	1.4%	89.6%	3 801	5 990	-36.5%	9 989	93.9%
Coal ⁴	251	-63.2%	1.4%	77.6%	3 293	5 190	-36.5%	8 655	81.3%
Oil ⁴	3	-63.2%	1.4%	0.9%	39	61	-36.5%	102	1.0%
Natural Gas ⁴	1	-63.2%	1.4%	0.4%	19	30	-36.5%	50	0.5%
Combustible Renewables ⁴	31	-63.2%	1.4%	9.6%	409	645	-36.5%	1 076	10.1%
Other Combustibles ⁴	3	-63.2%	1.4%	1.0%	41	64	-36.5%	107	1.0%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	0	66.7%	-28.6%	0.1%	9	11	-17.1%	16	0.1%
Wind	33	-9.4%	-16.4%	10.3%	385	325	18.8%	636	6.0%
Solar	-	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	65	-46.7%	-8.8%	20.1%	804	981	-18.0%	1 728	16.2%
NON-RENEWABLES	258	-63.2%	1.4%	79.9%	3 391	5 345	-36.5%	8 914	83.8%
TOTAL NET PRODUCTION	323	-60.7%	-0.8%		4 195	6 325	-33.7%	10 641	
+ Imports	597	287.7%	2.8%		2 778	1 525	82.2%	3 053	
- Exports	315	-12.7%	1.9%		1 892	2 740	-31.0%	4 950	
= ELECTRICITY SUPPLIED	605	-1.7%	1.2%		5 082	5 111	-0.6%	8 745	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses ⁴	47	-5.8%	1.5%		355	400	-11.2%	698	
= ELECTRICITY CONSUMED	558	-1.4%	1.2%		4 726	4 711	0.3%	8 047	

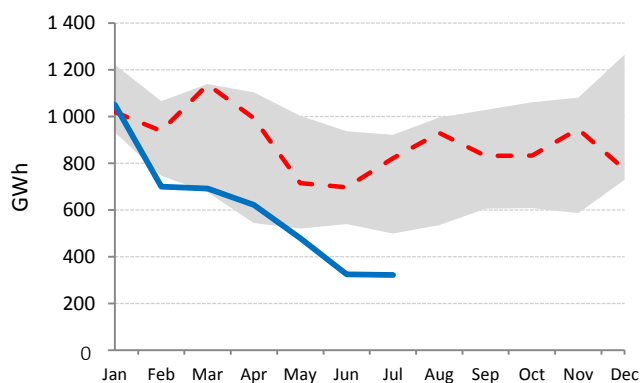
¹ current month to month of last year change

⁴ estimated from annual data

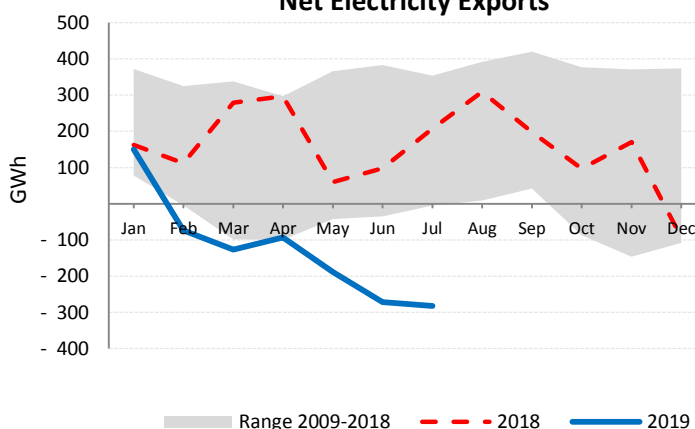
² month-to-month change

³ year-to-date compared to same period last year

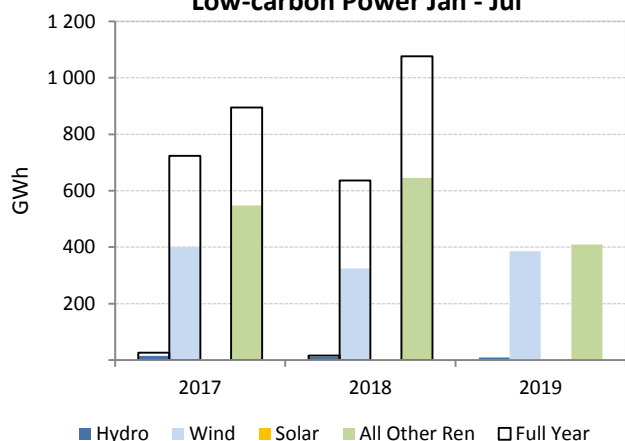
Electricity Production



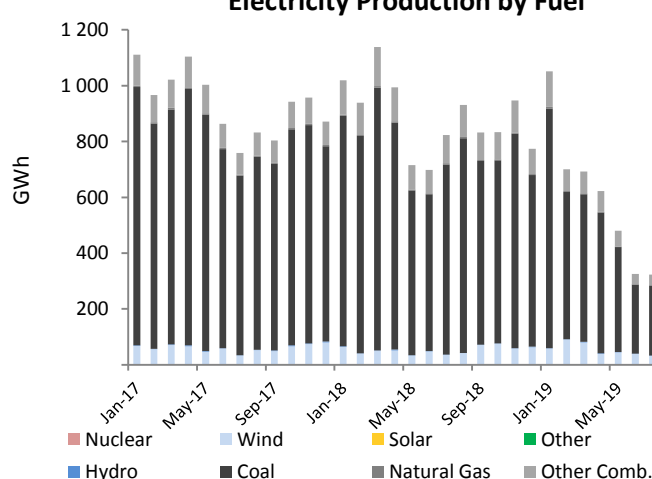
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



FINLAND

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	1 247	-17.1%	10.8%	26.4%	14 699	15 008	-2.1%	26 091	38.7%
Coal	258	-55.4%	-0.4%	5.4%	4 663	5 711	-18.4%	9 418	14.0%
Oil	16	-7.1%	8.3%	0.3%	123	126	-1.9%	240	0.4%
Natural Gas	115	118.9%	63.4%	2.4%	2 370	2 207	7.4%	3 954	5.9%
Combustible Renewables	823	0.6%	9.6%	17.4%	7 282	6 698	8.7%	12 020	17.8%
Other Combustibles ⁴	36	-9.8%	13.8%	0.8%	261	266	-2.0%	460	0.7%
Nuclear	2 048	7.5%	15.5%	43.3%	13 332	12 720	4.8%	21 885	32.4%
Hydro	977	26.8%	-22.5%	20.7%	7 662	8 750	-12.4%	13 146	19.5%
Wind	305	11.2%	-30.2%	6.5%	3 531	2 997	17.8%	5 857	8.7%
Solar⁵	126	245.0%	19.0%	2.7%	410	107	281.4%	162	0.2%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	27	-	-	0.6%	186	186	-	318	0.5%
RENEWABLES	2 231	17.5%	-12.7%	47.2%	18 884	18 552	1.8%	31 185	46.2%
NON-RENEWABLES	2 498	-4.6%	14.9%	52.8%	20 935	21 216	-1.3%	36 274	53.8%
TOTAL NET PRODUCTION	4 729	4.7%	0.0%		39 819	39 768	0.1%	67 459	
+ Imports	1 959	14.2%	18.4%		13 360	12 837	4.1%	22 548	
- Exports	563	411.8%	8.5%		2 356	1 197	96.7%	2 612	
= ELECTRICITY SUPPLIED	6 125	0.0%	4.5%		50 823	51 408	-1.1%	87 395	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses	188	-	4.6%		1 559	1 579	-1.3%	2 686	
= ELECTRICITY CONSUMED	5 937	0.0%	4.5%		49 264	49 828	-1.1%	84 709	

¹ current month to month of last year change

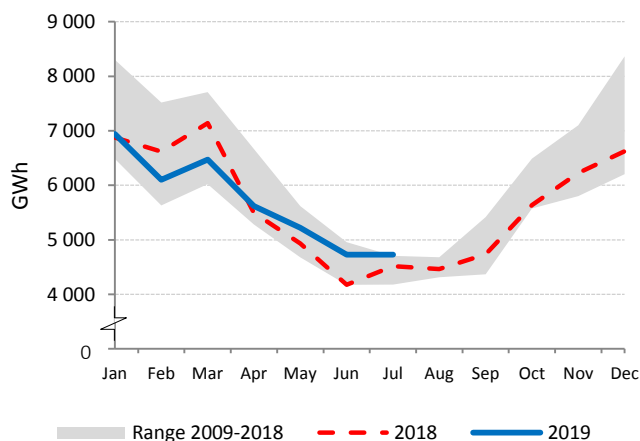
² month-to-month change

³ year-to-date compared to same period last year

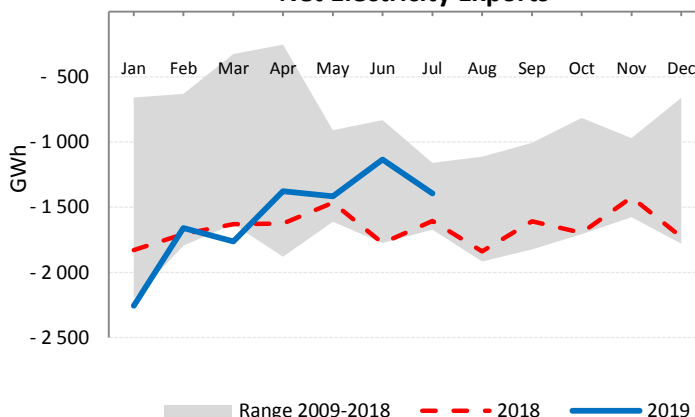
⁴ includes generation from peat

⁵ increased coverage since March 2018

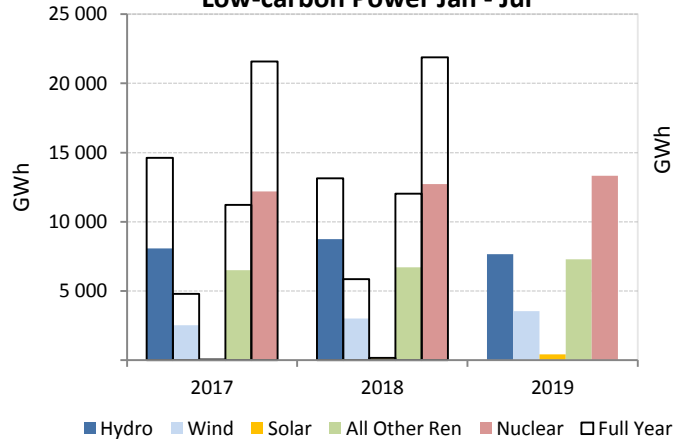
Electricity Production



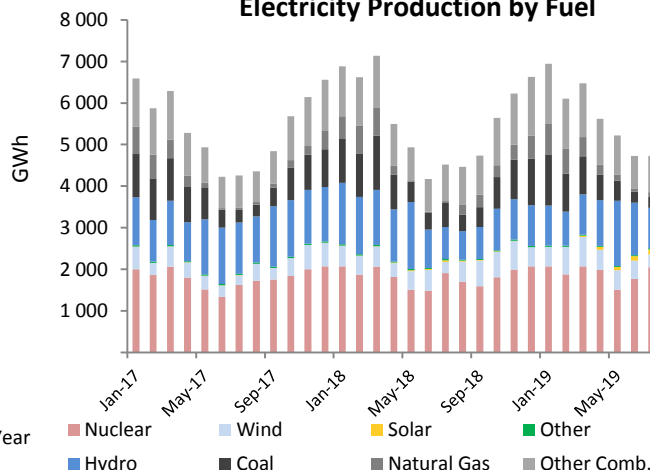
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



FRANCE

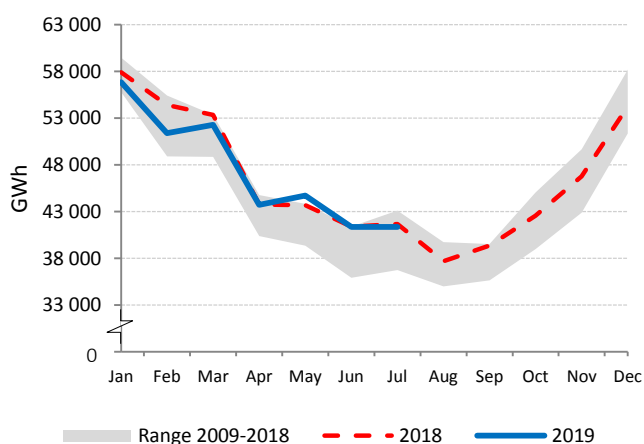
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	4 051	7.0%	34.3%	9.8%	32 682	29 934	9.2%	54 205	9.7%
Coal	188	-75.0%	49.0%	0.5%	1 756	5 418	-67.6%	8 746	1.6%
Oil	458	8.8%	1.1%	1.1%	3 247	3 174	2.3%	5 277	0.9%
Natural Gas	2 799	45.7%	49.5%	6.8%	22 257	15 048	47.9%	30 058	5.4%
Combustible Renewables	427	-19.1%	-2.3%	1.0%	3 981	4 997	-20.3%	7 731	1.4%
Other Combustibles	180	7.3%	40.6%	0.4%	1 442	1 297	11.1%	2 393	0.4%
Nuclear	29 204	-2.5%	2.2%	70.6%	232 991	232 687	0.1%	393 261	70.6%
Hydro	4 674	-13.1%	-23.5%	11.3%	37 605	49 934	-24.7%	69 277	12.4%
Wind	1 901	72.7%	-7.9%	4.6%	19 980	16 475	21.3%	28 501	5.1%
Solar	1 408	5.4%	-5.3%	3.4%	7 566	6 334	19.4%	10 196	1.8%
Geothermal⁴	13	33.4%	-	0.0%	93	70	33.4%	120	0.0%
Other Renewables	56	-	-	0.1%	392	392	-	671	0.1%
Non-Specified	56	-	-	0.1%	393	393	-	674	0.1%
RENEWABLES	8 480	0.9%	-16.6%	20.5%	69 617	78 201	-11.0%	116 497	20.9%
NON-RENEWABLES	32 884	-1.2%	5.4%	79.5%	262 086	258 018	1.6%	440 408	79.1%
TOTAL NET PRODUCTION	41 364	-0.8%	0.0%		331 703	336 219	-1.3%	556 905	
+ Imports	944	22.4%	174.2%		7 268	6 984	4.1%	13 576	
- Exports	6 548	-6.8%	-12.6%		45 430	48 409	-6.2%	76 488	
= ELECTRICITY SUPPLIED	35 760	0.9%	4.5%		293 542	294 794	-0.4%	493 993	
- Used for pumped storage	383	-11.2%	-29.7%		3 458	4 242	-18.5%	7 392	
- T&D Losses	2 593	-2.9%	4.4%		23 303	22 915	1.7%	38 609	
= ELECTRICITY CONSUMED	32 783	1.4%	5.1%		266 780	267 637	-0.3%	447 993	

¹ current month to month of last year change

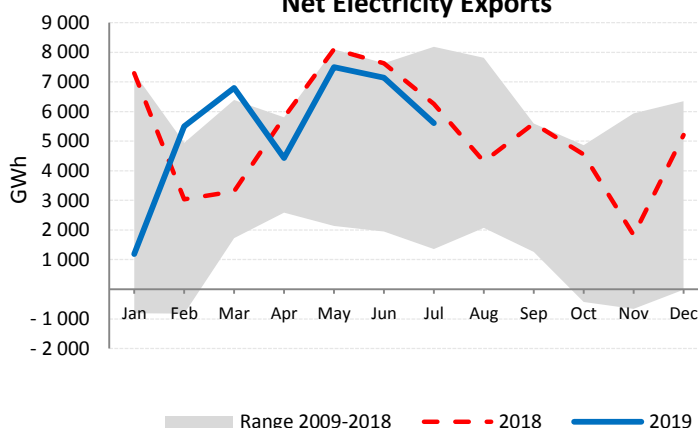
² month-to-month change

³ year-to-date compared to same period last year

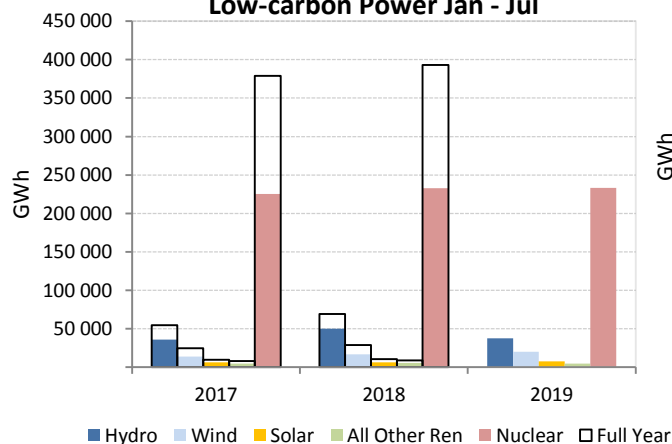
Electricity Production



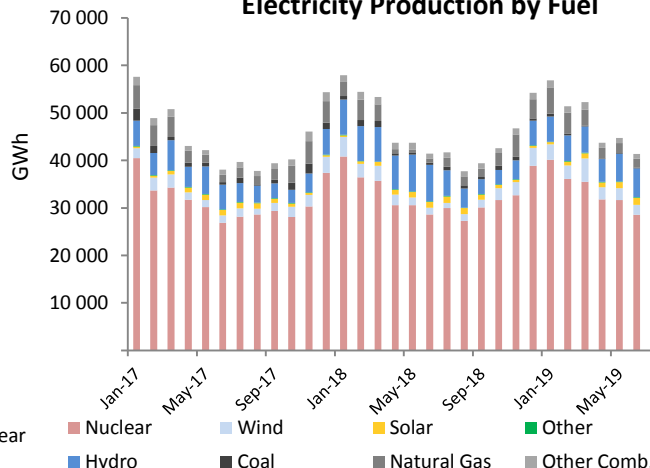
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



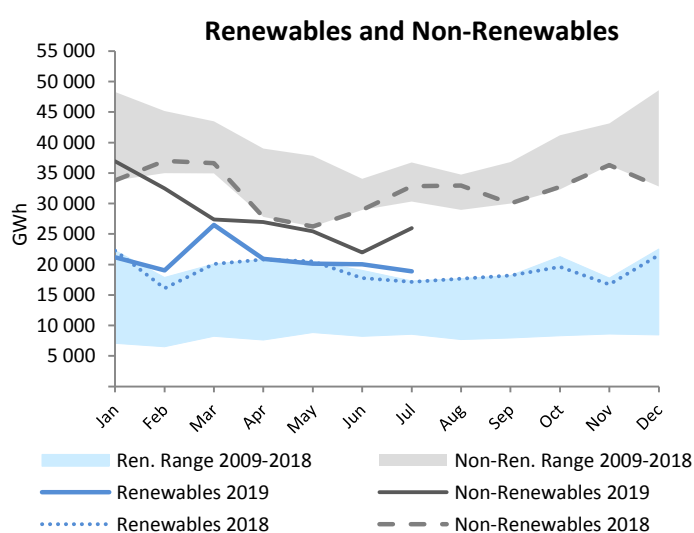
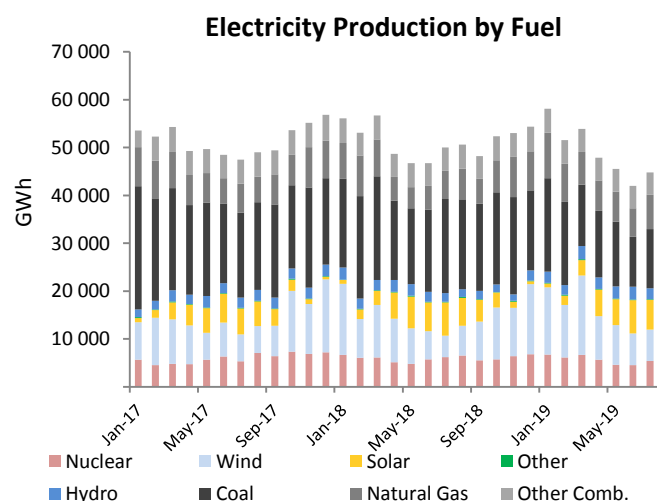
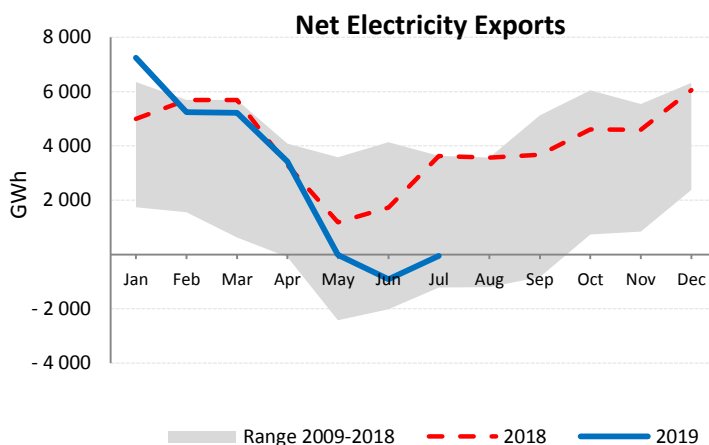
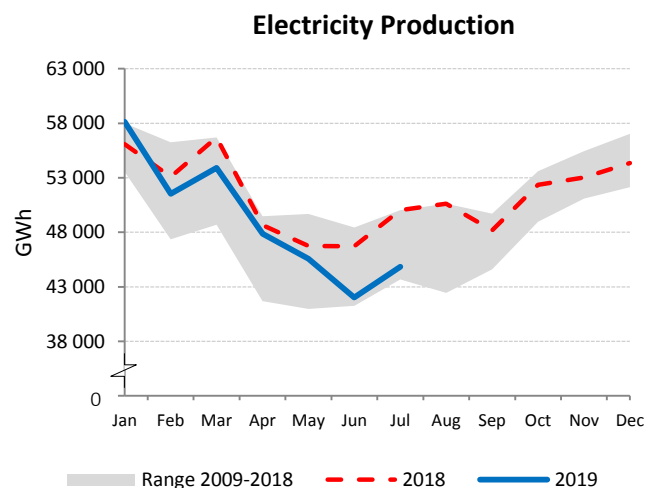
GERMANY

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	24 242	-20.4%	14.7%	54.1%	183 763	209 155	-12.1%	362 120	58.7%
Coal	12 382	-37.0%	18.4%	27.6%	100 075	130 922	-23.6%	224 160	36.4%
Oil	357	-9.2%	1.1%	0.8%	2 651	2 832	-6.4%	4 856	0.8%
Natural Gas	7 114	20.3%	19.9%	15.9%	49 924	43 979	13.5%	78 943	12.8%
Combustible Renewables	3 838	-2.1%	-0.3%	8.6%	27 368	27 598	-0.8%	47 583	7.7%
Other Combustibles	550	-1.8%	4.1%	1.2%	3 745	3 825	-2.1%	6 578	1.1%
Nuclear	5 399	-12.6%	18.9%	12.0%	39 785	40 752	-2.4%	71 859	11.7%
Hydro	2 253	25.2%	-13.9%	5.0%	16 990	15 493	9.7%	23 952	3.9%
Wind	6 569	45.7%	-0.3%	14.7%	72 056	60 836	18.4%	110 711	18.0%
Solar	6 206	-10.5%	-11.2%	13.8%	30 231	30 767	-1.7%	46 164	7.5%
Geothermal	11	18.2%	-23.5%	0.0%	104	85	22.0%	144	0.0%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	150	-7.0%	4.1%	0.3%	942	916	2.8%	1 585	0.3%
RENEWABLES	18 878	9.9%	-5.9%	42.1%	146 748	134 778	8.9%	228 554	37.1%
NON-RENEWABLES	25 953	-21.0%	18.2%	57.9%	197 122	223 225	-11.7%	387 982	62.9%
TOTAL NET PRODUCTION	44 831	-10.4%	6.7%		343 870	358 004	-3.9%	616 536	
+ Imports	4 708	99.6%	-3.9%		22 684	18 903	20.0%	31 727	
- Exports	4 661	-22.2%	16.7%		42 832	45 136	-5.1%	80 462	
= ELECTRICITY SUPPLIED	44 879	-3.3%	4.5%		323 721	331 771	-2.4%	567 801	
- Used for pumped storage	555	22.9%	-18.9%		4 690	4 762	-1.5%	8 348	
- T&D Losses	1 919	10.3%	9.3%		15 155	14 777	2.6%	26 193	
= ELECTRICITY CONSUMED	42 405	-4.1%	4.7%		303 876	312 232	-2.7%	533 259	

¹ current month to month of last year change

² month-to-month change

³ year-to-date compared to same period last year



GREECE

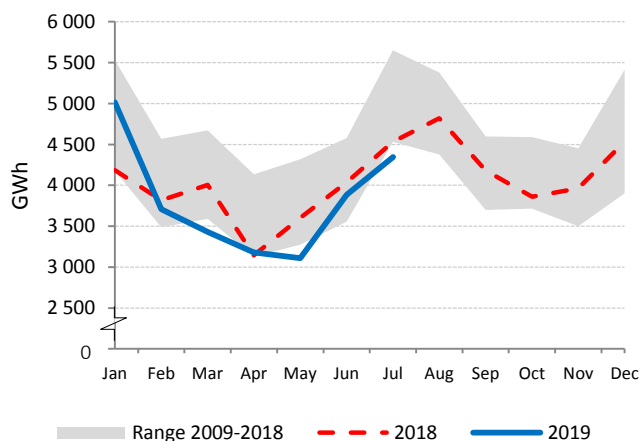
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	2 959	-10.7%	15.6%	68.1%	17 856	17 821	0.2%	32 772	67.3%
Coal	826	-49.1%	-5.5%	19.0%	6 786	8 729	-22.3%	16 004	32.9%
Oil	487	-5.7%	18.9%	11.2%	2 466	2 467	0.0%	4 279	8.8%
Natural Gas	1 623	41.0%	29.4%	37.3%	8 432	6 452	30.7%	12 198	25.1%
Combustible Renewables	24	-2.4%	2.7%	0.6%	172	173	-0.7%	290	0.6%
Other Combustibles	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	406	-18.5%	5.0%	9.3%	2 498	4 017	-37.8%	5 813	11.9%
Wind	542	86.0%	3.6%	12.5%	3 987	3 215	24.0%	6 300	12.9%
Solar	439	2.1%	6.0%	10.1%	2 332	2 268	2.9%	3 792	7.8%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	1 411	13.4%	4.7%	32.5%	8 989	9 673	-7.1%	16 196	33.3%
NON-RENEWABLES	2 935	-10.7%	15.7%	67.5%	17 684	17 647	0.2%	32 482	66.7%
TOTAL NET PRODUCTION	4 346	-4.1%	11.9%		26 673	27 321	-2.4%	48 677	
+ Imports	1 031	-1.6%	15.2%		6 580	5 449	20.7%	8 706	
- Exports	36	-79.8%	28.8%		684	971	-29.5%	2 187	
= ELECTRICITY SUPPLIED	5 341	-1.1%	12.4%		32 569	31 800	2.4%	55 196	
- Used for pumped storage	2	569.1%	-58.5%		28	23	21.4%	28	
- T&D Losses	275	-22.3%	11.6%		1 783	1 753	1.7%	3 251	
= ELECTRICITY CONSUMED	5 064	0.3%	12.5%		30 757	30 023	2.4%	51 917	

¹ current month to month of last year change

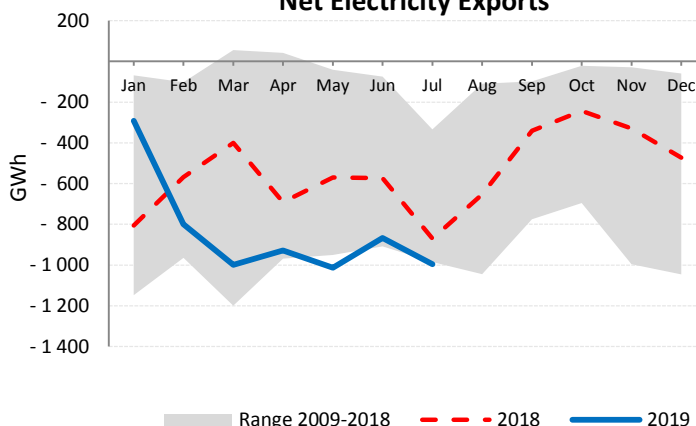
² month-to-month change

³ year-to-date compared to same period last year

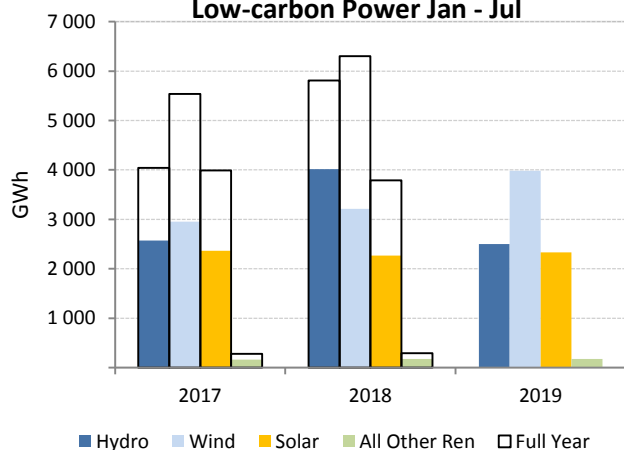
Electricity Production



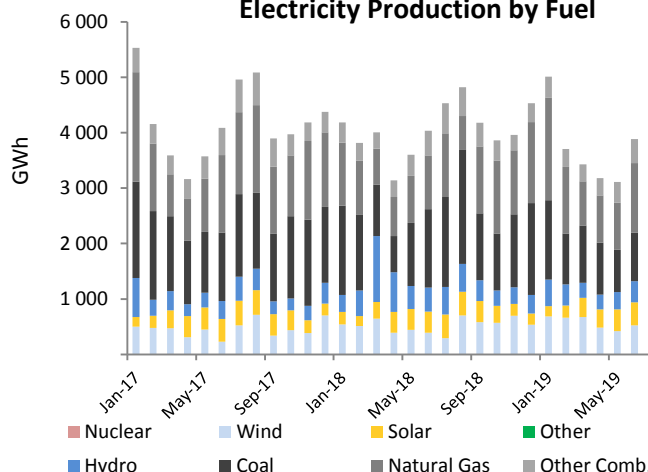
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



HUNGARY

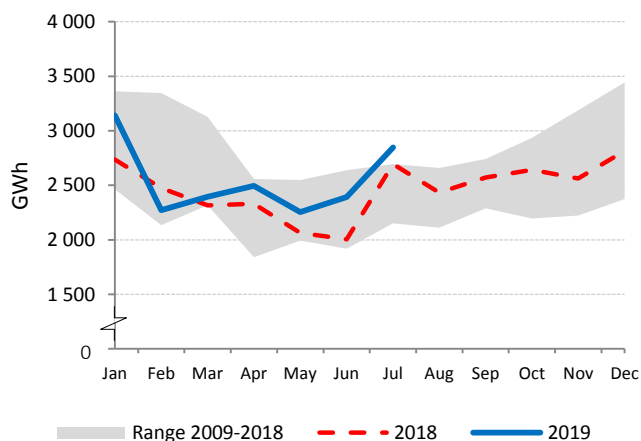
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	1 214	5.5%	27.7%	42.6%	7 596	7 172	5.9%	13 238	44.7%
Coal	375	-12.3%	28.0%	13.2%	2 197	2 354	-6.7%	4 359	14.7%
Oil	6	50.4%	-1.3%	0.2%	30	42	-29.4%	64	0.2%
Natural Gas	627	22.9%	31.6%	22.0%	4 060	3 539	14.7%	6 560	22.1%
Combustible Renewables	181	-5.2%	15.6%	6.3%	1 158	1 120	3.4%	2 056	6.9%
Other Combustibles	26	34.4%	34.2%	0.9%	151	117	28.9%	200	0.7%
Nuclear	1 392	0.4%	15.7%	48.9%	8 727	8 555	2.0%	14 860	50.1%
Hydro	18	-34.1%	-1.3%	0.6%	133	141	-6.2%	216	0.7%
Wind	34	-21.9%	7.7%	1.2%	445	343	29.6%	589	2.0%
Solar	179	134.2%	0.4%	6.3%	811	327	147.8%	600	2.0%
Geothermal	1	405.8%	11.2%	0.0%	10	7	46.7%	12	0.0%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	11	-	-	0.4%	74	74	-	127	0.4%
RENEWABLES	412	22.1%	7.1%	14.5%	2 557	1 938	31.9%	3 473	11.7%
NON-RENEWABLES	2 436	3.3%	21.3%	85.5%	15 239	14 682	3.8%	26 170	88.3%
TOTAL NET PRODUCTION	2 848	5.7%	19.1%		17 796	16 620	7.1%	29 643	
+ Imports	1 343	0.4%	-11.5%		11 948	10 813	10.5%	18 613	
- Exports	535	15.6%	99.6%		3 795	1 806	110.1%	4 265	
= ELECTRICITY SUPPLIED	3 656	2.4%	0.4%		25 950	25 627	1.3%	43 991	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses	250	2.6%	7.6%		1 994	2 007	-0.7%	3 428	
= ELECTRICITY CONSUMED	3 406	2.4%	-0.1%		23 955	23 620	1.4%	40 563	

¹ current month to month of last year change

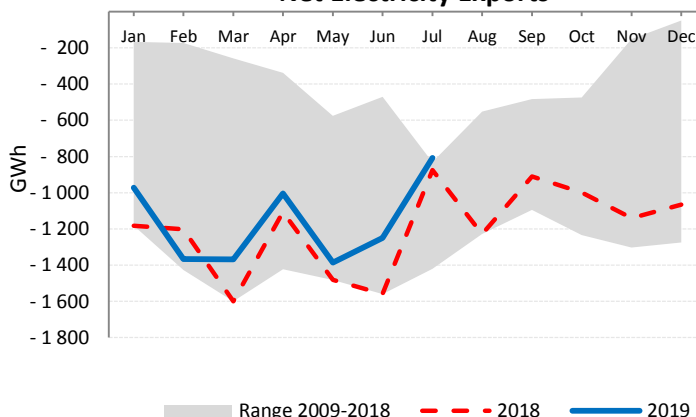
² month-to-month change

³ year-to-date compared to same period last year

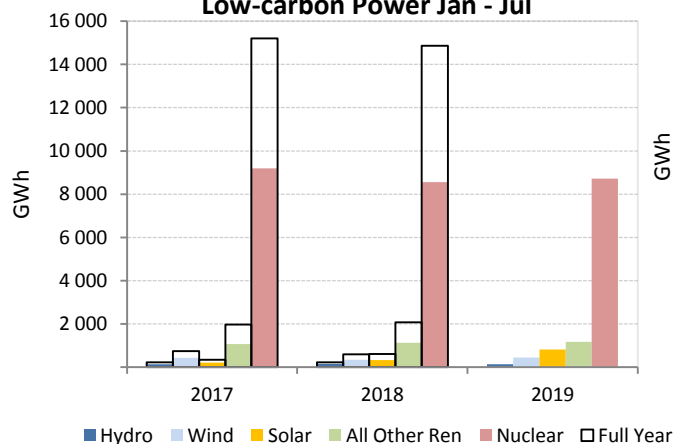
Electricity Production



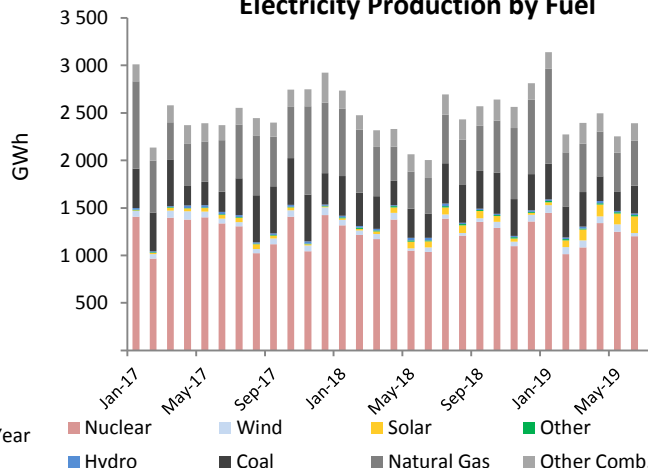
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



ICELAND

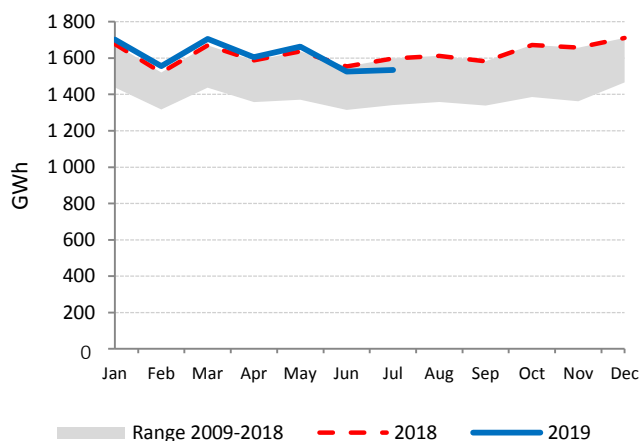
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	0	3.2%	9.4%	0.0%	1	1	-9.8%	2	0.0%
Coal	-	-	-	-	-	-	-	-	-
Oil	0	3.2%	9.4%	0.0%	1	1	-9.8%	2	0.0%
Natural Gas	-	-	-	-	-	-	-	-	-
Combustible Renewables	-	-	-	-	-	-	-	-	-
Other Combustibles	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	1 048	-6.2%	-1.7%	68.2%	7 846	7 852	-0.1%	13 547	69.5%
Wind	1	20.5%	-36.2%	0.0%	7	4	48.3%	8	0.0%
Solar	-	-	-	-	-	-	-	-	-
Geothermal	487	1.3%	5.9%	31.7%	3 441	3 386	1.6%	5 922	30.4%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	1 535	-3.9%	0.6%	100.0%	11 294	11 242	0.5%	19 477	100.0%
NON-RENEWABLES	0	3.2%	8.5%	0.0%	1	1	-9.7%	2	0.0%
TOTAL NET PRODUCTION	1 535	-3.9%	0.6%		11 295	11 242	0.5%	19 479	
+ Imports	-	-	-	-	-	-	-	-	-
- Exports	-	-	-	-	-	-	-	-	-
= ELECTRICITY SUPPLIED	1 535	-3.9%	0.6%		11 295	11 242	0.5%	19 479	
- Used for pumped storage	-	-	-	-	-	-	-	-	-
- T&D Losses	48	-1.0%	-	-	342	337	1.6%	580	-
= ELECTRICITY CONSUMED	1 487	-4.0%	0.6%		10 953	10 906	0.4%	18 899	

¹ current month to month of last year change

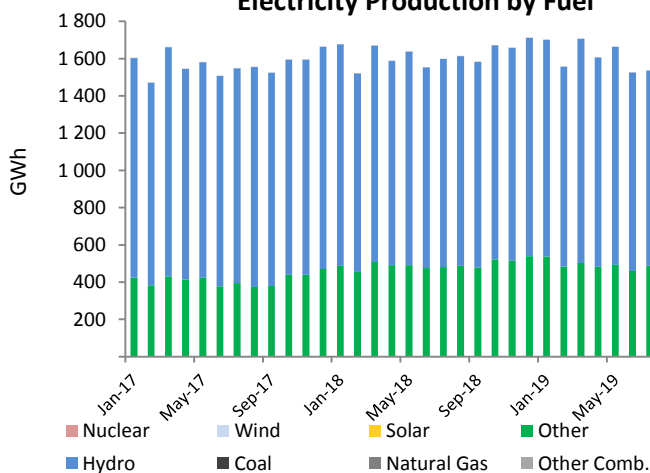
² month-to-month change

³ year-to-date compared to same period last year

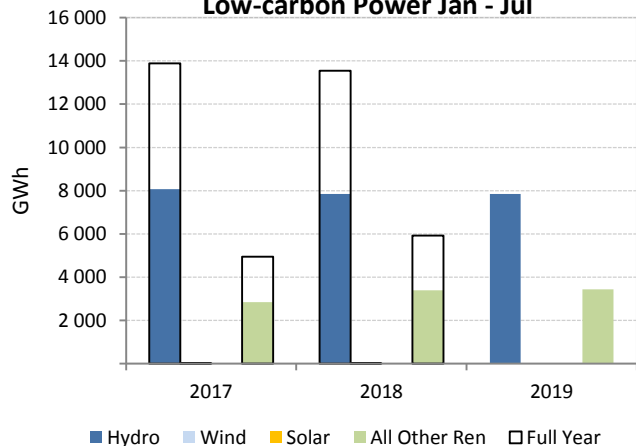
Electricity Production



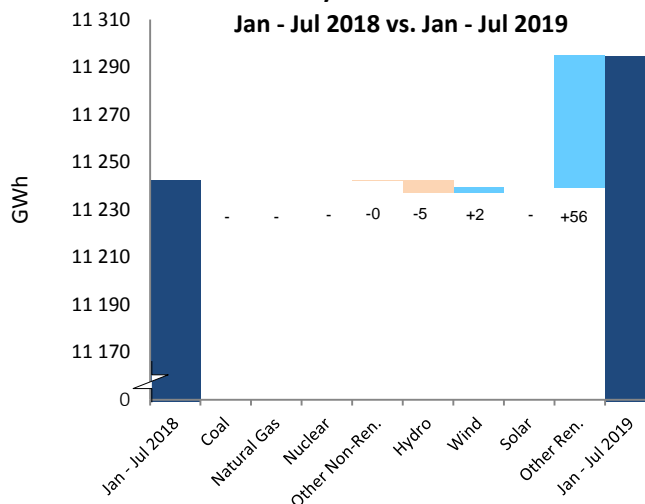
Electricity Production by Fuel



Low-carbon Power Jan - Jul



Electricity Production Variation Jan - Jul 2018 vs. Jan - Jul 2019

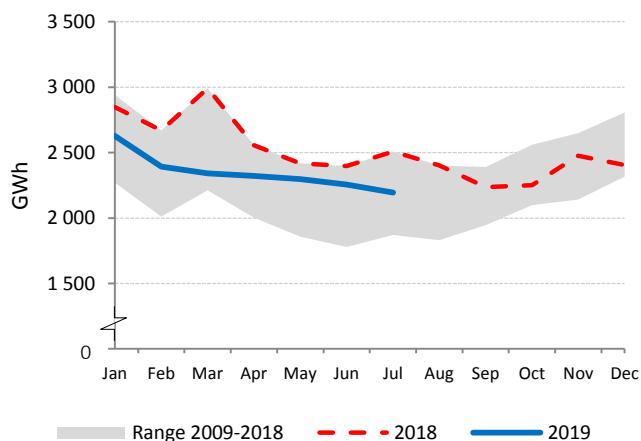


IRELAND

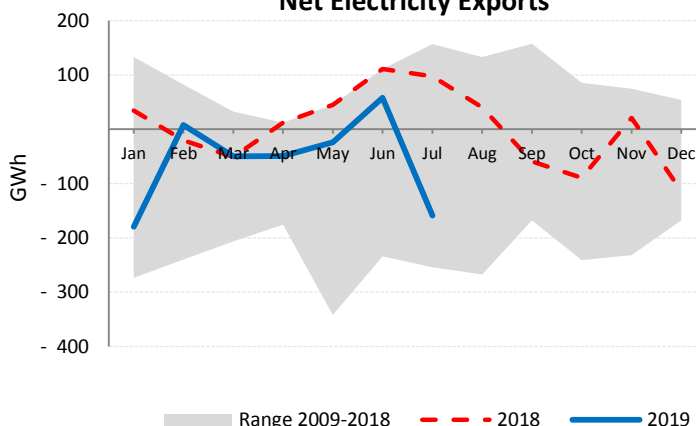
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	1 711	-20.6%	5.7%	78.0%	10 736	13 285	-19.2%	20 766	68.9%
Coal	3	-99.0%	-97.4%	0.1%	689	3 618	-81.0%	4 100	13.6%
Oil	22	717.2%	10.9%	1.0%	206	53	289.0%	136	0.5%
Natural Gas	1 603	-7.9%	12.4%	73.1%	9 274	9 015	2.9%	15 467	51.3%
Combustible Renewables	74	-7.9%	143.5%	3.4%	410	440	-6.8%	775	2.6%
Other Combustibles	9	-48.5%	-60.3%	0.4%	158	160	-1.5%	288	1.0%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	34	152.6%	-32.3%	1.6%	524	574	-8.8%	922	3.1%
Wind	447	32.2%	-23.6%	20.4%	5 163	4 520	14.2%	8 455	28.0%
Solar⁴	2	-	4.5%	0.1%	9	9	-	15	0.1%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	557	28.4%	-16.6%	25.4%	6 106	5 543	10.2%	10 167	33.7%
NON-RENEWABLES	1 637	-21.1%	3.0%	74.6%	10 326	12 845	-19.6%	19 991	66.3%
TOTAL NET PRODUCTION	2 194	-12.5%	-2.8%		16 431	18 388	-10.6%	30 158	
+ Imports	231	148.1%	124.6%		1 249	795	57.2%	1 622	
- Exports	72	-62.0%	-55.0%		853	1 024	-16.6%	1 649	
= ELECTRICITY SUPPLIED	2 352	-2.4%	7.0%		16 827	18 159	-7.3%	30 131	
- Used for pumped storage	40	23.9%	94.5%		254	287	-11.5%	499	
- T&D Losses	171	-2.2%	2.8%		1 245	1 301	-4.3%	2 237	
= ELECTRICITY CONSUMED	2 141	-2.8%	6.4%		15 328	16 571	-7.5%	27 394	

¹ current month to month of last year change ⁴ estimated
² month-to-month change
³ year-to-date compared to same period last year

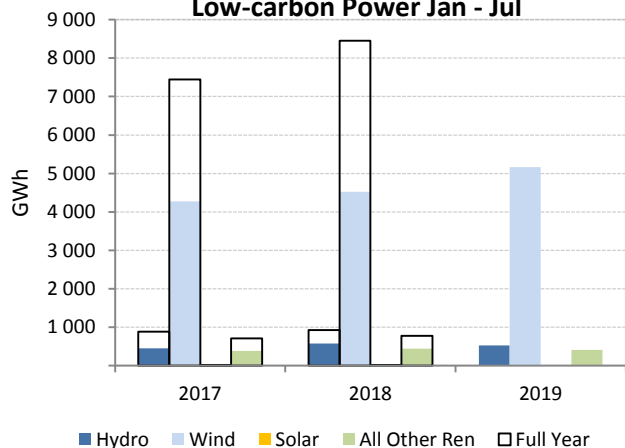
Electricity Production



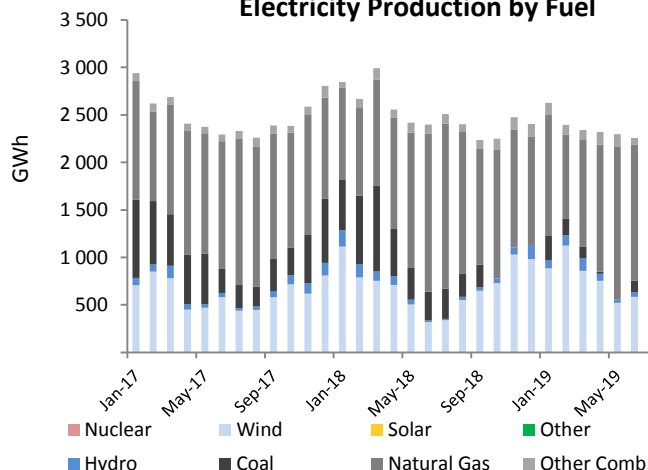
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



ITALY

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	17 821	7.9%	24.8%	63.7%	108 611	102 116	6.4%	184 075	65.6%
Coal ⁵	2 824	7.9%	24.8%	10.1%	17 213	16 184	6.4%	29 173	10.4%
Oil ⁵	995	7.9%	24.8%	3.6%	6 066	5 703	6.4%	10 280	3.7%
Natural Gas ⁵	11 998	7.9%	24.8%	42.9%	73 122	68 749	6.4%	123 928	44.2%
Combustible Renewables ⁵	1 777	7.9%	24.8%	6.3%	10 832	10 184	6.4%	18 357	6.5%
Other Combustibles ⁵	226	7.9%	24.8%	0.8%	1 379	1 296	6.4%	2 336	0.8%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	5 546	9.2%	-8.8%	19.8%	27 329	31 368	-12.9%	50 351	18.0%
Wind	1 232	0.6%	24.0%	4.4%	12 444	10 880	14.4%	17 325	6.2%
Solar	2 866	-0.9%	0.0%	10.2%	15 099	14 031	7.6%	22 306	8.0%
Geothermal	479	2.1%	2.6%	1.7%	3 323	3 325	-0.1%	5 702	2.0%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	54	-	-	0.2%	375	375	-	644	0.2%
RENEWABLES	11 900	5.2%	0.6%	42.5%	69 027	69 788	-1.1%	114 041	40.7%
NON-RENEWABLES	16 097	7.9%	24.7%	57.5%	98 155	92 307	6.3%	166 361	59.3%
TOTAL NET PRODUCTION	27 997	6.8%	13.2%		167 182	162 096	3.1%	280 403	
+ Imports	4 120	-12.1%	11.5%		26 121	30 215	-13.5%	47 179	
- Exports	588	79.8%	43.4%		3 179	2 012	58.0%	3 270	
= ELECTRICITY SUPPLIED	31 530	3.1%	12.5%		190 124	190 298	-0.1%	324 312	
- Used for pumped storage	135	-	-24.6%		1 389	1 475	-5.8%	2 233	
- T&D Losses ⁴	1 872	3.9%	13.0%		11 269	11 211	0.5%	19 097	
= ELECTRICITY CONSUMED	29 522	3.1%	12.7%		177 466	177 612	-0.1%	302 982	

¹ current month to month of last year change

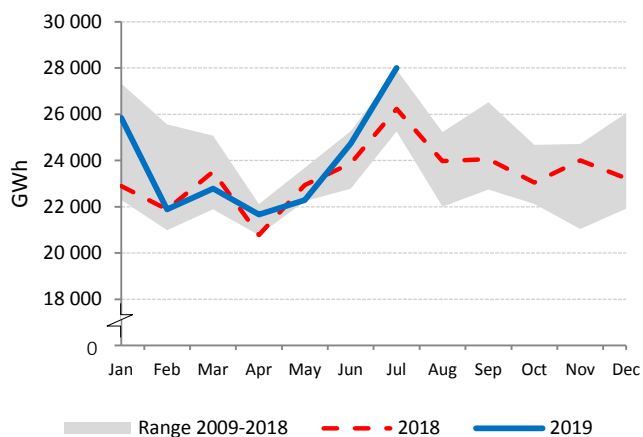
⁴ estimated

² month-to-month change

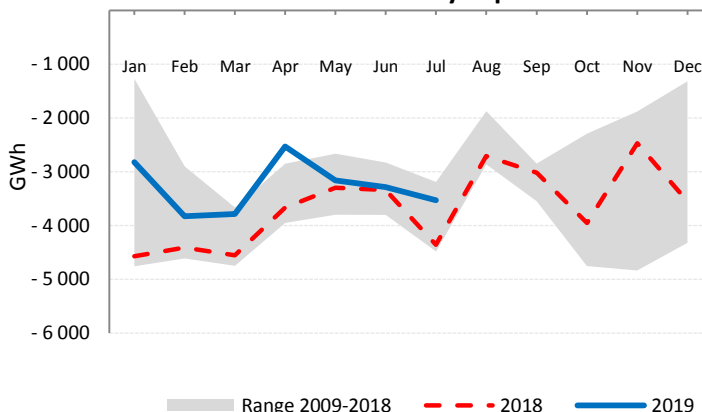
⁵ estimated from annual data

³ year-to-date compared to same period last year

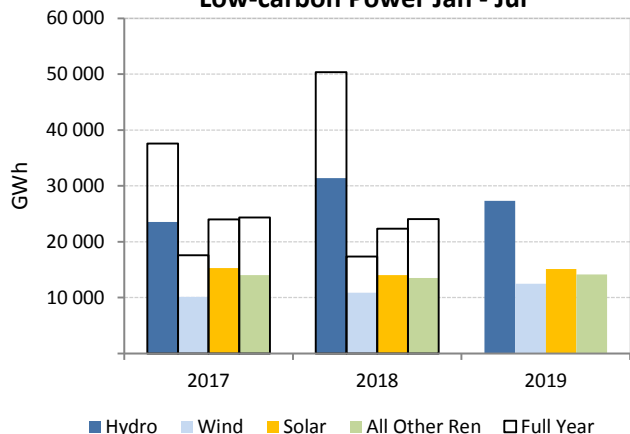
Electricity Production



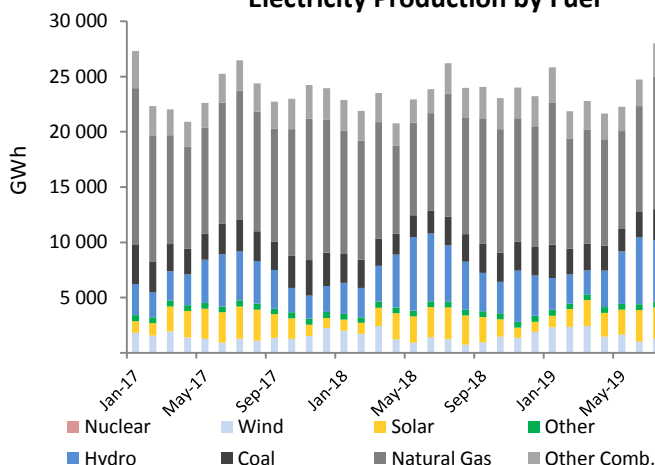
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



JAPAN

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	56 570	-23.1%	10.5%	69.3%	407 647	468 656	-13.0%	783 086	76.8%
Coal	24 344	-15.4%	9.5%	29.8%	170 454	185 307	-8.0%	318 066	31.2%
Oil	2 925	-63.9%	37.2%	3.6%	23 318	41 691	-44.1%	61 919	6.1%
Natural Gas	26 540	-20.8%	9.6%	32.5%	193 250	218 623	-11.6%	363 827	35.7%
Combustible Renewables	2 761	70.4%	4.7%	3.4%	15 913	11 707	35.9%	20 297	2.0%
Other Combustibles ⁴	-	-	-	-	4 713	11 328	-58.4%	18 977	1.9%
Nuclear	5 304	16.9%	13.6%	6.5%	39 858	20 601	93.5%	47 201	4.6%
Hydro	8 722	-10.1%	3.3%	10.7%	48 876	58 648	-16.7%	93 389	9.2%
Wind	499	19.0%	9.2%	0.6%	4 745	4 331	9.6%	7 279	0.7%
Solar	8 036	22.2%	3.8%	9.8%	46 163	38 850	18.8%	65 394	6.4%
Geothermal	204	19.5%	7.7%	0.3%	1 353	1 315	2.9%	2 257	0.2%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	2 287	65.8%	12.8%	2.8%	14 463	12 372	16.9%	20 907	2.1%
RENEWABLES	20 223	9.4%	3.9%	24.8%	117 050	114 851	1.9%	188 616	18.5%
NON-RENEWABLES	61 399	-21.2%	11.1%	75.2%	446 056	489 923	-9.0%	830 898	81.5%
TOTAL NET PRODUCTION	81 622	-15.3%	9.2%		563 107	604 774	-6.9%	1 019 514	
+ Imports	-	-	-	-	-	-	-	-	-
- Exports	-	-	-	-	-	-	-	-	-
= ELECTRICITY SUPPLIED	81 622	-15.3%	9.2%		563 107	604 774	-6.9%	1 019 514	
- Used for pumped storage ⁴	1 026	6.5%	8.7%		6 676	6 121	9.1%	10 558	
- T&D Losses ⁴	3 994	7.5%	8.7%		25 895	23 722	9.2%	40 846	
= ELECTRICITY CONSUMED	76 602	-16.4%	9.2%		530 535	574 931	-7.7%	968 109	

¹ current month to month of last year change

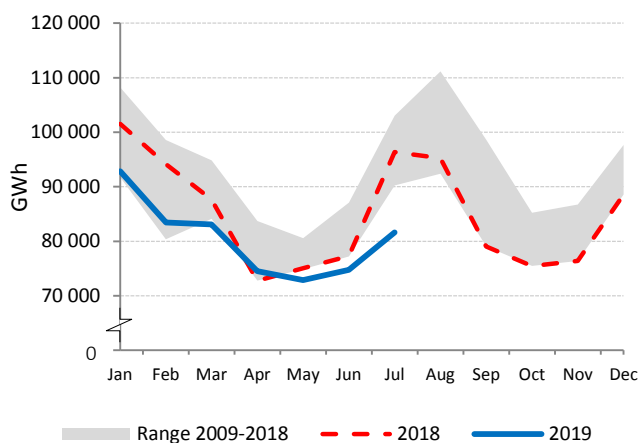
² month-to-month change

³ year-to-date compared to same period last year

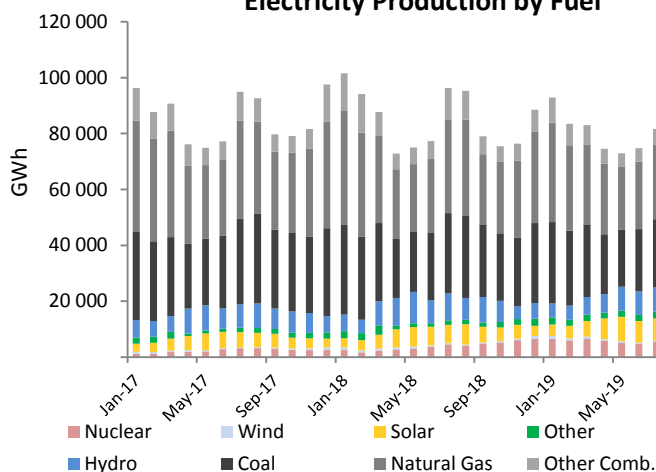
⁴ estimated from annual data

July 2019 is estimated by the IEA Secretariat

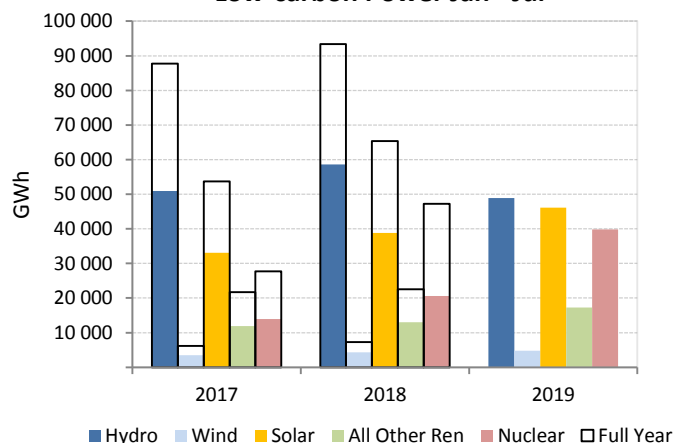
Electricity Production



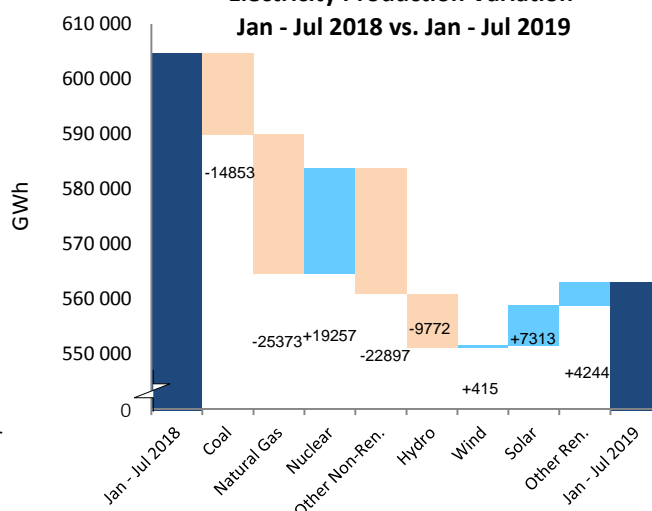
Electricity Production by Fuel



Low-carbon Power Jan - Jul



Electricity Production Variation Jan - Jul 2018 vs. Jan - Jul 2019

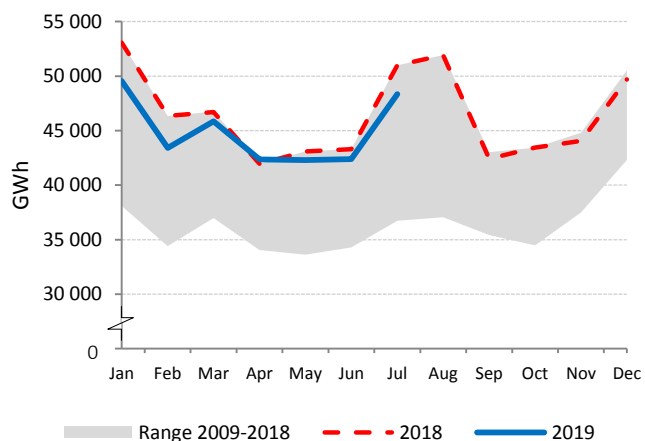


KOREA

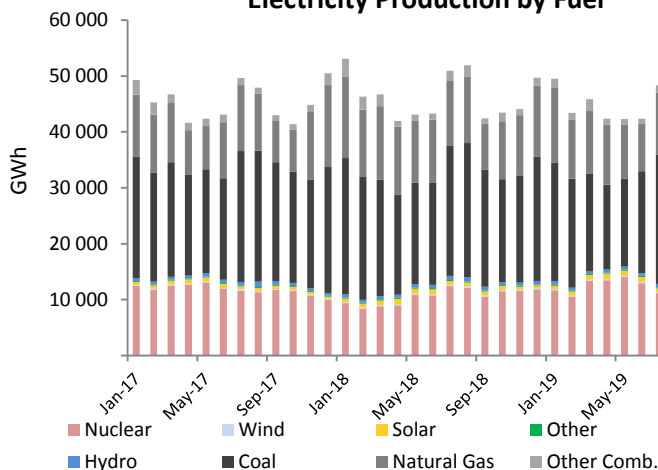
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	35 551	-3.2%	28.5%	73.5%	214 926	243 486	-11.7%	409 208	73.5%
Coal	23 136	-0.5%	26.9%	47.9%	130 611	144 824	-9.8%	249 660	44.8%
Oil	607	-45.1%	34.8%	1.3%	5 303	8 130	-34.8%	11 976	2.1%
Natural Gas	11 151	-5.1%	31.7%	23.1%	75 045	86 125	-12.9%	140 019	25.1%
Combustible Renewables	585	4.3%	28.5%	1.2%	3 537	3 928	-10.0%	6 734	1.2%
Other Combustibles	71	4.3%	28.5%	0.1%	431	478	-10.0%	820	0.1%
Nuclear	11 123	-10.5%	-14.0%	23.0%	87 106	69 541	25.3%	127 167	22.8%
Hydro	593	-18.6%	18.9%	1.2%	3 773	4 010	-5.9%	7 173	1.3%
Wind	205	-	-	0.4%	1 437	1 437	-	2 463	0.4%
Solar	682	-	-23.5%	1.4%	5 619	5 619	-	8 667	1.6%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	40	-	-	0.1%	283	283	-	485	0.1%
Non-Specified	156	-	-	0.3%	1 090	1 090	-	1 869	0.3%
RENEWABLES	2 105	-5.0%	0.7%	4.4%	14 650	15 278	-4.1%	25 523	4.6%
NON-RENEWABLES	46 245	-5.2%	14.8%	95.6%	299 586	310 189	-3.4%	531 511	95.4%
TOTAL NET PRODUCTION	48 351	-5.2%	14.1%		314 236	325 467	-3.5%	557 034	
+ Imports	-	-	-		-	-	-	-	
- Exports	-	-	-		-	-	-	-	
= ELECTRICITY SUPPLIED	48 351	-5.2%	14.1%		314 236	325 467	-3.5%	557 034	
- Used for pumped storage ⁴	-	-	-		-	3 097	-	5 539	
- T&D Losses ⁴	-	-	-		-	11 073	-	19 055	
= ELECTRICITY CONSUMED	48 351	-0.7%	14.1%		314 236	311 297	0.9%	532 439	

¹ current month to month of last year change ⁴ estimated
² month-to-month change
³ year-to-date compared to same period last year

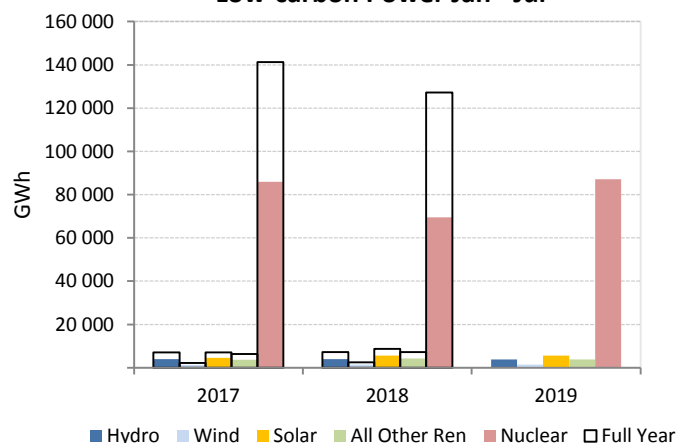
Electricity Production



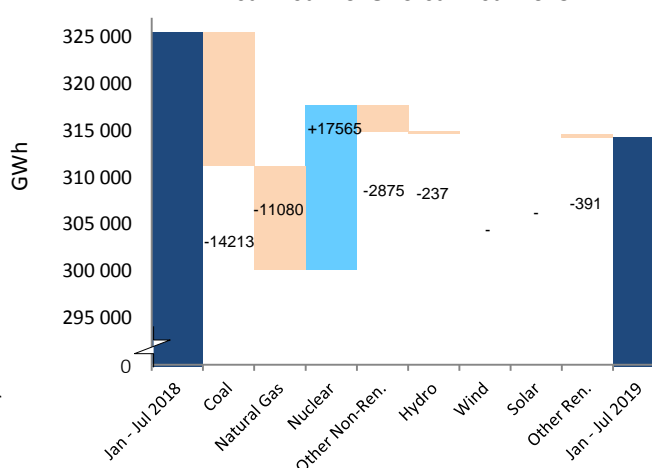
Electricity Production by Fuel



Low-carbon Power Jan - Jul



Electricity Production Variation Jan - Jul 2018 vs. Jan - Jul 2019



LATVIA

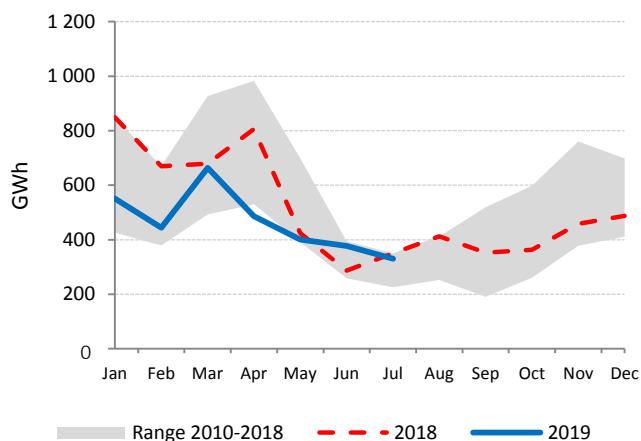
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	257	-4.3%	-12.7%	77.6%	1 933	1 919	0.8%	3 602	58.7%
Coal	0	-	-	-	0	0	-	7	0.1%
Oil	-	-	-	-	-	0	-	0	0.0%
Natural Gas	201	-2.6%	-12.6%	60.8%	1 439	1 464	-1.7%	2 780	45.3%
Combustible Renewables	55	-10.0%	-12.9%	16.8%	495	455	8.8%	815	13.3%
Other Combustibles	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	65	-14.5%	-14.5%	19.6%	1 231	2 083	-40.9%	2 416	39.4%
Wind	9	50.0%	28.6%	2.7%	89	64	39.7%	121	2.0%
Solar	0	-	5.8%	0.1%	1	1	-	1	0.0%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	130	-9.8%	-11.7%	39.2%	1 816	2 602	-30.2%	3 354	54.6%
NON-RENEWABLES	201	-2.6%	-12.6%	60.8%	1 439	1 464	-1.8%	2 787	45.4%
TOTAL NET PRODUCTION	331	-5.5%	-12.2%		3 254	4 066	-20.0%	6 141	
+ Imports	550	10.4%	7.8%		3 070	2 727	12.6%	5 174	
- Exports	351	16.6%	-3.8%		2 264	2 687	-15.7%	4 265	
= ELECTRICITY SUPPLIED	530	-3.2%	1.5%		4 060	4 106	-1.1%	7 050	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses ⁴	39	3.8%	-0.7%		280	301	-6.9%	502	
= ELECTRICITY CONSUMED	491	-3.7%	1.7%		3 779	3 805	-0.7%	6 548	

¹ current month to month of last year change ⁴ estimated

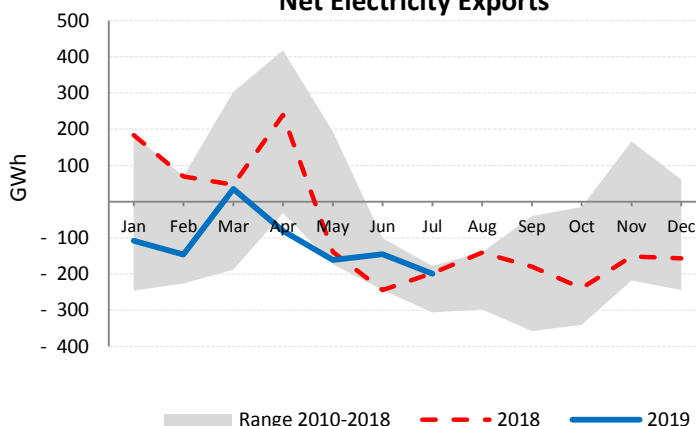
² month-to-month change

³ year-to-date compared to same period last year

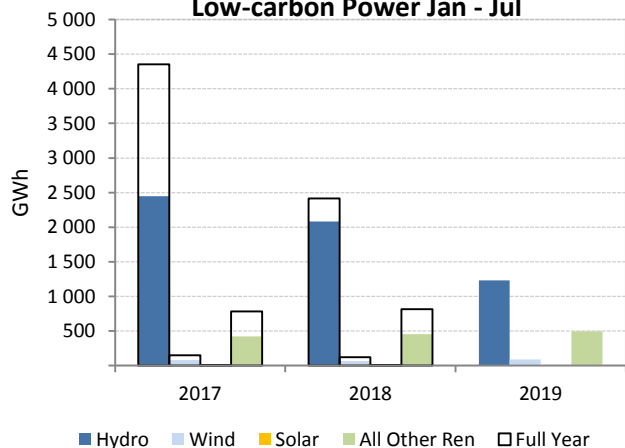
Electricity Production



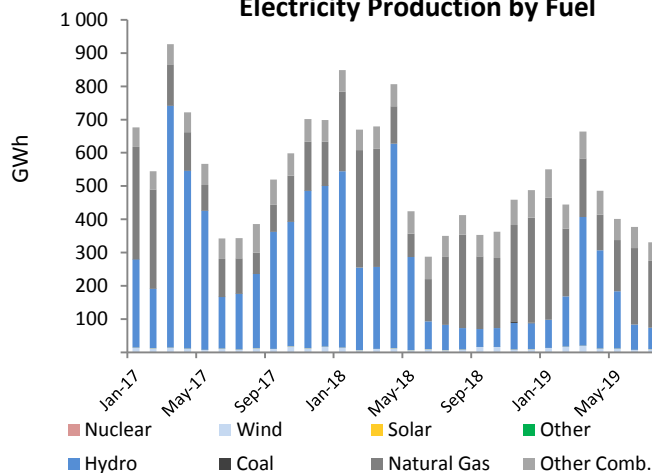
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



LITHUANIA

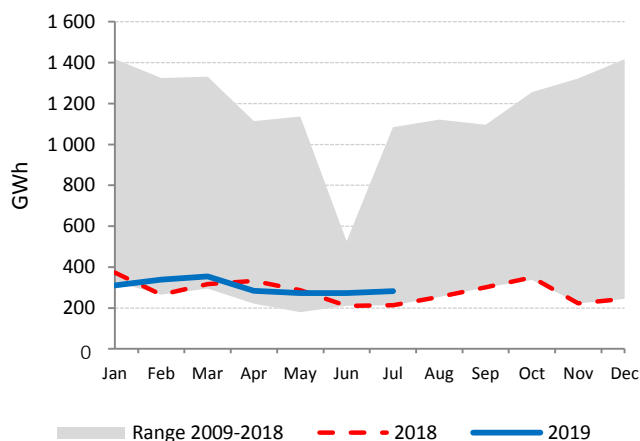
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	71	-8.8%	-8.8%	25.1%	650	622	4.5%	978	29.0%
Coal	-	-	-	-	-	-	-	-	-
Oil	6	-57.2%	-27.1%	2.1%	41	74	-44.4%	118	3.5%
Natural Gas	30	53.3%	-5.9%	10.6%	276	230	20.1%	296	8.8%
Combustible Renewables	30	-19.1%	-11.3%	10.7%	289	279	3.7%	487	14.5%
Other Combustibles	5	-30.4%	24.8%	1.8%	43	39	9.5%	76	2.2%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	101	125.2%	28.9%	35.8%	522	557	-6.3%	945	28.0%
Wind	99	61.3%	-4.2%	35.1%	888	638	39.2%	1 138	33.8%
Solar	11	1.5%	-16.8%	3.9%	57	59	-4.1%	86	2.6%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	125	-	224	6.7%
RENEWABLES	242	56.3%	5.4%	85.5%	1 755	1 532	14.6%	2 657	78.8%
NON-RENEWABLES	41	-30.4%	-6.9%	14.5%	360	468	-22.9%	714	21.2%
TOTAL NET PRODUCTION	283	32.5%	3.4%		2 115	2 000	5.8%	3 371	
+ Imports	1 086	3.2%	-7.3%		7 630	7 558	0.9%	12 847	
- Exports	317	28.6%	-18.1%		2 282	2 079	9.8%	3 215	
= ELECTRICITY SUPPLIED	1 052	3.2%	-0.5%		7 463	7 479	-0.2%	13 004	
- Used for pumped storage	120	280.7%	47.8%		387	340	13.9%	726	
- T&D Losses	77	-2.6%	-6.2%		608	624	-2.6%	1 020	
= ELECTRICITY CONSUMED	855	-6.0%	-4.4%		6 468	6 515	-0.7%	11 257	

¹ current month to month of last year change

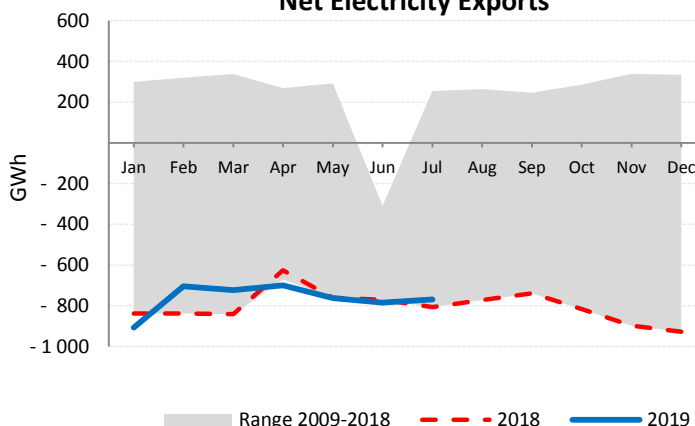
² month-to-month change

³ year-to-date compared to same period last year

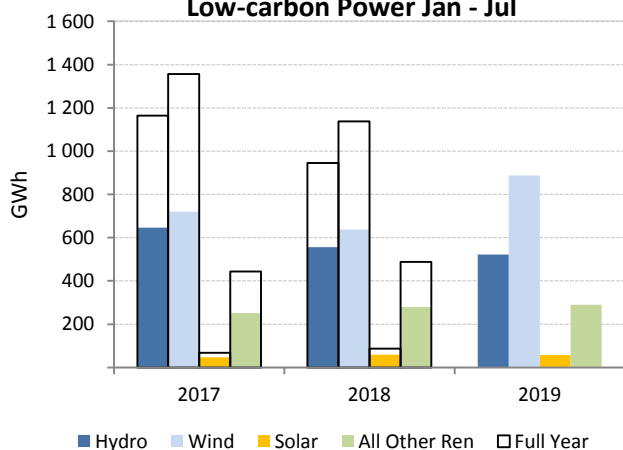
Electricity Production



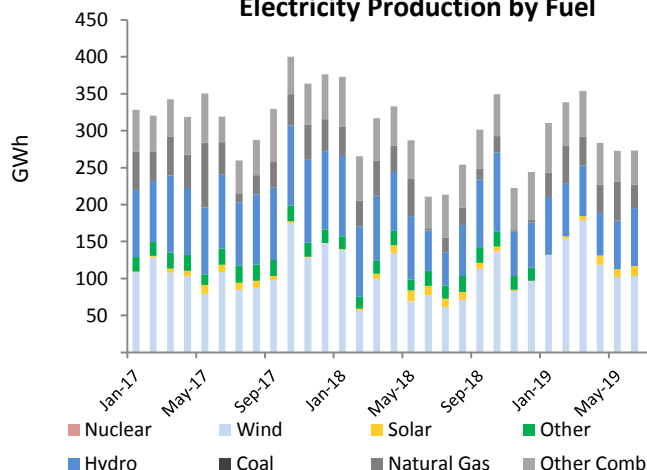
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



LUXEMBOURG

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	27	-13.4%	-7.1%	21.0%	269	272	-1.0%	472	21.9%
Coal	-	-	-	-	-	-	-	-	-
Oil	-	-	-	-	-	-	-	-	-
Natural Gas	7	3.8%	-12.1%	5.5%	109	111	-1.4%	188	8.7%
Combustible Renewables	13	-23.7%	-6.2%	10.2%	116	118	-1.8%	210	9.7%
Other Combustibles	7	-4.8%	-3.1%	5.2%	44	43	2.1%	74	3.5%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	68	34.4%	1.6%	53.0%	552	813	-32.1%	1 326	61.5%
Wind	17	66.9%	-11.2%	13.2%	161	140	14.9%	245	11.4%
Solar	16	-5.9%	-5.2%	12.8%	78	74	5.0%	112	5.2%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	114	20.0%	-2.4%	89.3%	906	1 144	-20.8%	1 893	87.8%
NON-RENEWABLES	14	-0.6%	-7.9%	10.7%	153	154	-0.4%	263	12.2%
TOTAL NET PRODUCTION	128	17.4%	-3.0%		1 059	1 298	-18.4%	2 155	
+ Imports	547	-5.2%	-0.3%		4 103	4 515	-9.1%	7 553	
- Exports	48	-25.9%	-24.1%		573	872	-34.3%	1 392	
= ELECTRICITY SUPPLIED	627	0.9%	1.6%		4 589	4 941	-7.1%	8 316	
- Used for pumped storage	93	28.8%	1.4%		709	1 030	-31.2%	1 718	
- T&D Losses	11	-8.9%	-5.0%		88	90	-1.5%	151	
= ELECTRICITY CONSUMED	523	-2.6%	1.7%		3 792	3 821	-0.8%	6 448	

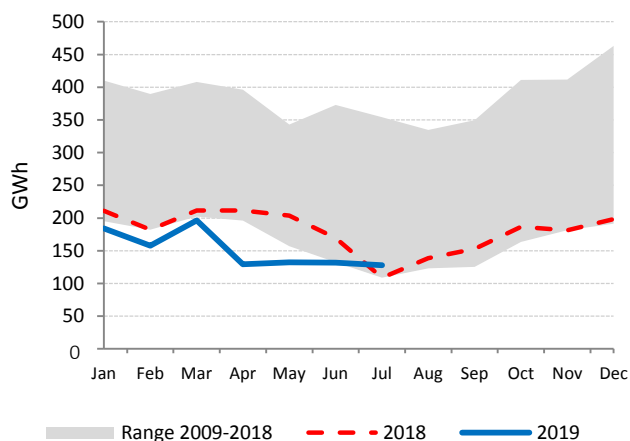
¹ current month to month of last year change

July 2019 is estimated by the IEA Secretariat

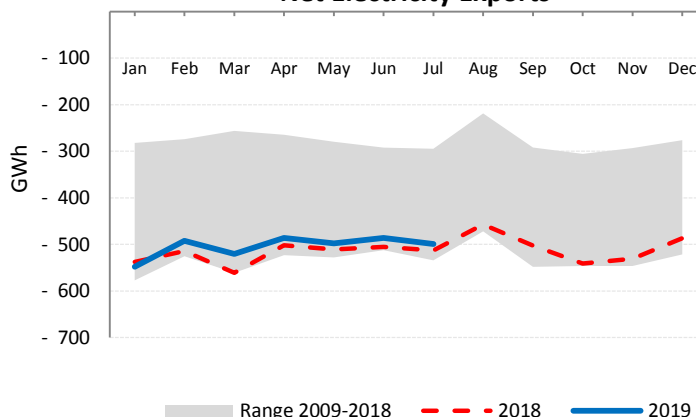
² month-to-month change

³ year-to-date compared to same period last year

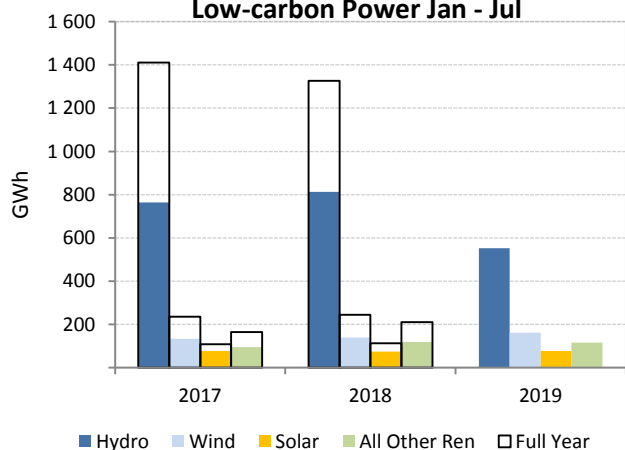
Electricity Production



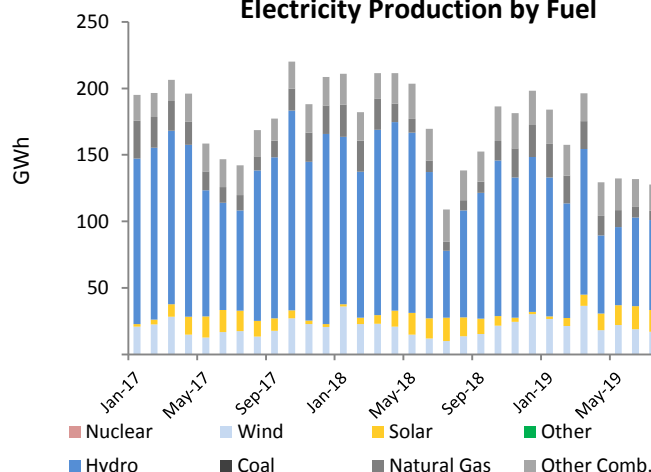
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



MEXICO

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	25 298	3.7%	3.8%	77.8%	155 820	151 359	2.9%	259 379	79.7%
Coal	1 697	-27.8%	-4.3%	5.2%	12 748	16 777	-24.0%	27 678	8.5%
Oil	3 889	5.3%	7.7%	12.0%	21 580	19 939	8.2%	34 150	10.5%
Natural Gas	19 587	7.3%	3.8%	60.2%	119 621	113 021	5.8%	195 299	60.0%
Combustible Renewables	65	72.1%	-21.5%	0.2%	1 531	1 386	10.4%	1 792	0.6%
Other Combustibles	60	12.5%	44.2%	0.2%	339	235	44.2%	460	0.1%
Nuclear	817	-28.5%	-6.1%	2.5%	5 430	7 622	-28.8%	13 260	4.1%
Hydro	2 709	-16.4%	4.8%	8.3%	15 483	19 715	-21.5%	32 036	9.8%
Wind	1 832	40.0%	62.2%	5.6%	10 151	7 003	44.9%	12 522	3.8%
Solar⁵	1 458	344.2%	9.7%	4.5%	6 998	1 343	420.9%	3 188	1.0%
Geothermal	418	0.1%	-2.2%	1.3%	3 024	2 984	1.4%	5 088	1.6%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	90	-	154	0.0%
RENEWABLES	6 482	21.5%	16.7%	19.9%	37 186	32 431	14.7%	54 627	16.8%
NON-RENEWABLES	26 051	2.1%	3.5%	80.1%	159 719	157 684	1.3%	271 001	83.2%
TOTAL NET PRODUCTION	32 533	5.5%	5.9%		196 905	190 116	3.6%	325 628	
+ Imports	191	-11.0%	3.3%		1 155	1 258	-8.3%	2 289	
- Exports	315	143.3%	24.3%		1 711	1 035	65.4%	2 114	
= ELECTRICITY SUPPLIED	32 409	4.8%	5.8%		196 348	190 339	3.2%	325 802	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses ⁴	4 333	2.9%	3.1%		26 814	25 984	3.2%	44 587	
= ELECTRICITY CONSUMED	28 077	5.1%	6.2%		169 535	164 355	3.2%	281 215	

¹ current month to month of last year change

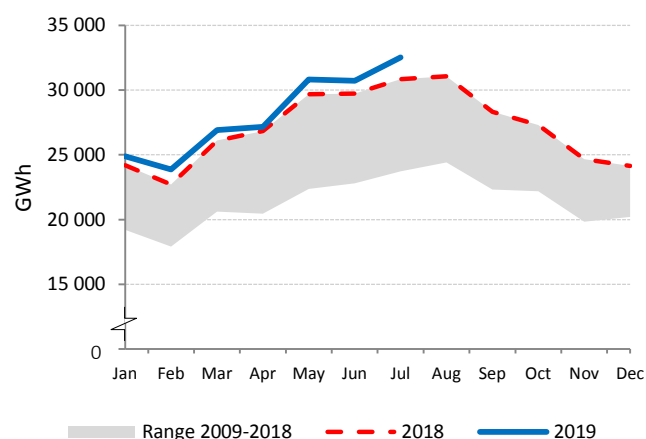
⁴ estimated

² month-to-month change

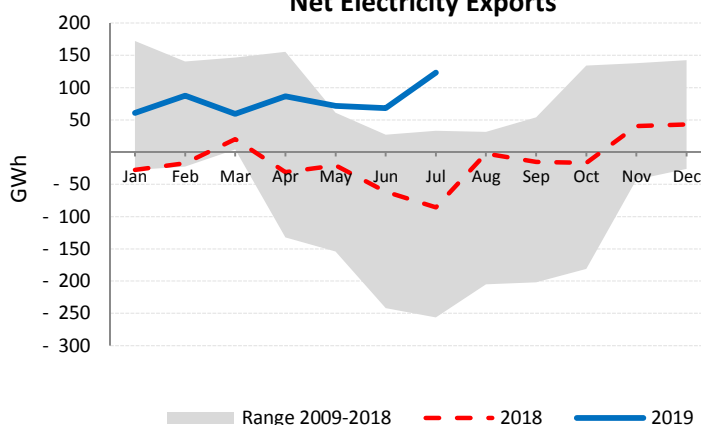
July 2019 is estimated by the IEA Secretariat

³ year-to-date compared to same period last year

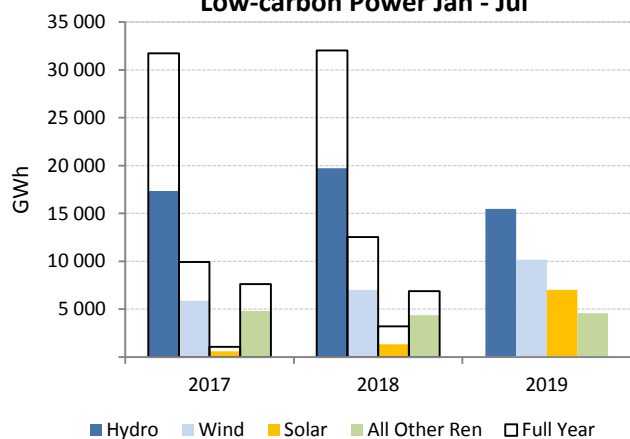
Electricity Production



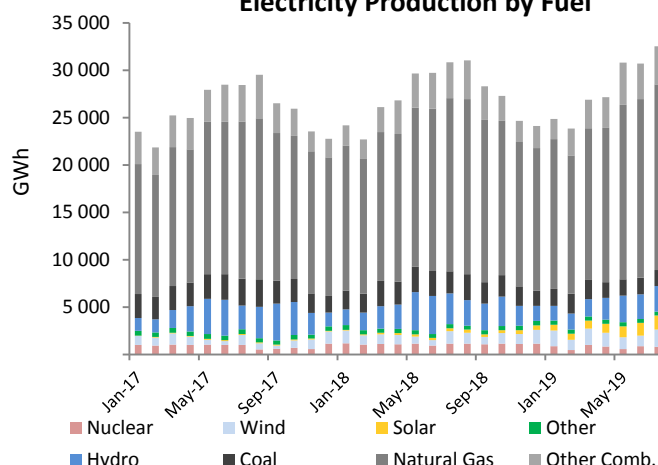
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



NETHERLANDS

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	6 314	-10.2%	-3.7%	80.3%	53 947	54 232	-0.5%	91 682	83.7%
Coal	987	-43.1%	3.7%	12.5%	11 009	15 851	-30.5%	28 694	26.2%
Oil	268	919.0%	-15.8%	3.4%	1 953	803	143.2%	1 241	1.1%
Natural Gas	4 501	-4.0%	-5.9%	57.2%	36 977	33 713	9.7%	55 246	50.4%
Combustible Renewables	408	-0.8%	14.7%	5.2%	2 719	2 630	3.4%	4 506	4.1%
Other Combustibles	151	-11.6%	1.6%	1.9%	1 290	1 236	4.4%	1 995	1.8%
Nuclear	48	-86.4%	50.0%	0.6%	1 740	2 078	-16.3%	3 346	3.1%
Hydro	3	284.1%	-40.0%	0.0%	45	46	-2.4%	72	0.1%
Wind	483	31.8%	-3.1%	6.1%	5 424	5 418	0.1%	10 549	9.6%
Solar	956	220.1%	-9.8%	12.2%	4 456	2 295	94.2%	3 201	2.9%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	60	-	-	0.8%	420	420	-	719	0.7%
RENEWABLES	1 849	71.7%	-3.6%	23.5%	12 643	10 389	21.7%	18 329	16.7%
NON-RENEWABLES	6 015	-14.4%	-4.4%	76.5%	53 388	54 099	-1.3%	91 242	83.3%
TOTAL NET PRODUCTION	7 864	-3.0%	-4.2%		66 032	64 489	2.4%	109 571	
+ Imports	2 215	1.4%	9.8%		12 596	15 758	-20.1%	26 755	
- Exports	1 073	-22.3%	1.1%		10 913	9 553	14.2%	18 785	
= ELECTRICITY SUPPLIED	9 006	1.1%	-1.8%		67 715	70 694	-4.2%	117 540	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses ⁴	390	-18.5%	2.3%		2 847	3 229	-11.8%	5 340	
= ELECTRICITY CONSUMED	8 617	2.2%	-1.9%		64 868	67 465	-3.8%	112 201	

¹ current month to month of last year change

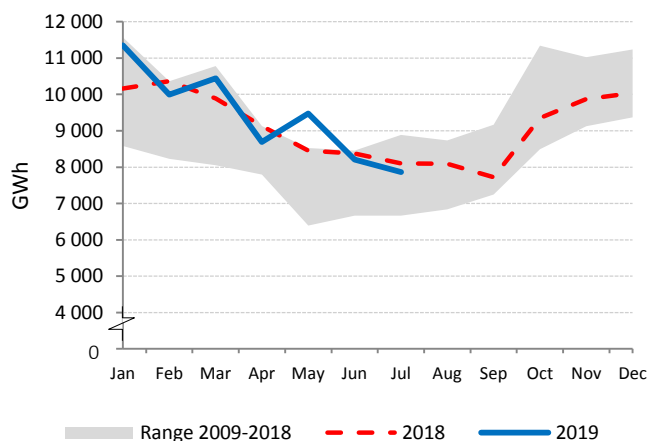
⁴ estimated

² month-to-month change

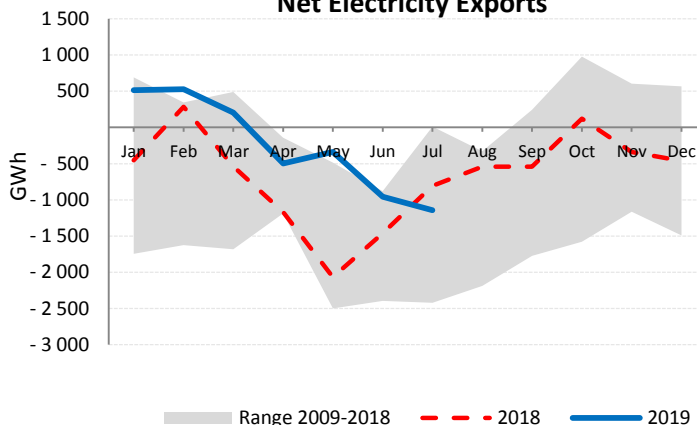
July 2019 is estimated by the IEA Secretariat

³ year-to-date compared to same period last year

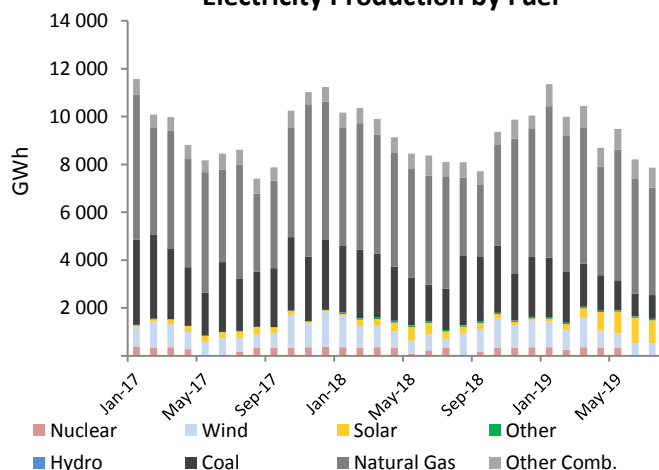
Electricity Production



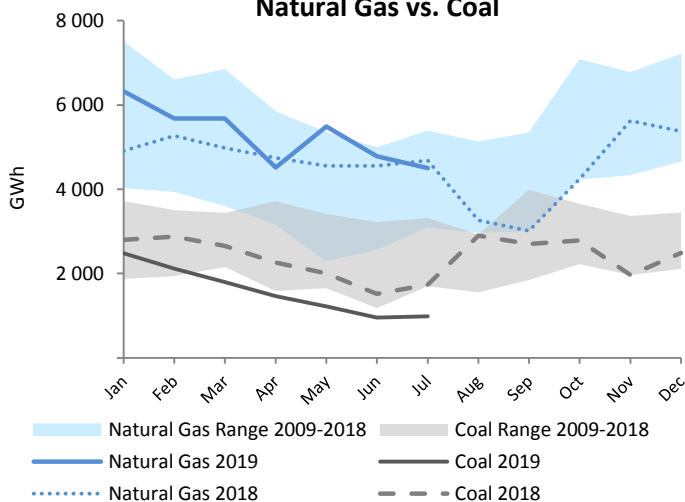
Net Electricity Exports



Electricity Production by Fuel



Natural Gas vs. Coal



NEW ZEALAND

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	730	14.0%	12.2%	18.3%	4 938	4 466	10.6%	7 460	17.3%
Coal	107	49.6%	2.0%	2.7%	1 274	656	94.1%	1 519	3.5%
Oil	0	-18.9%	-35.7%	0.0%	2	4	-43.5%	11	0.0%
Natural Gas	577	9.9%	11.6%	14.4%	3 311	3 467	-4.5%	5 391	12.5%
Combustible Renewables	47	6.0%	59.7%	1.2%	351	339	3.4%	540	1.3%
Other Combustibles	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	2 406	-2.4%	3.3%	60.2%	14 595	15 076	-3.2%	26 048	60.4%
Wind	193	-8.8%	20.0%	4.8%	1 196	1 232	-2.9%	2 047	4.7%
Solar	11	28.6%	5.0%	0.3%	68	53	28.7%	96	0.2%
Geothermal	652	-0.3%	2.4%	16.3%	4 328	4 220	2.6%	7 442	17.3%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	4	-	-	0.1%	26	26	-	45	0.1%
RENEWABLES	3 308	-2.2%	4.5%	82.8%	20 537	20 920	-1.8%	36 174	83.9%
NON-RENEWABLES	687	14.5%	9.9%	17.2%	4 614	4 153	11.1%	6 965	16.1%
TOTAL NET PRODUCTION	3 995	0.3%	5.4%		25 151	25 073	0.3%	43 140	
+ Imports	-	-	-	-	-	-	-	-	-
- Exports	-	-	-	-	-	-	-	-	-
= ELECTRICITY SUPPLIED	3 995	0.3%	5.4%		25 151	25 073	0.3%	43 140	
- Used for pumped storage	-	-	-	-	-	-	-	-	-
- T&D Losses	273	4.9%	5.4%		1 720	1 707	0.8%	2 950	
= ELECTRICITY CONSUMED	3 722	0.0%	5.4%		23 431	23 366	0.3%	40 190	

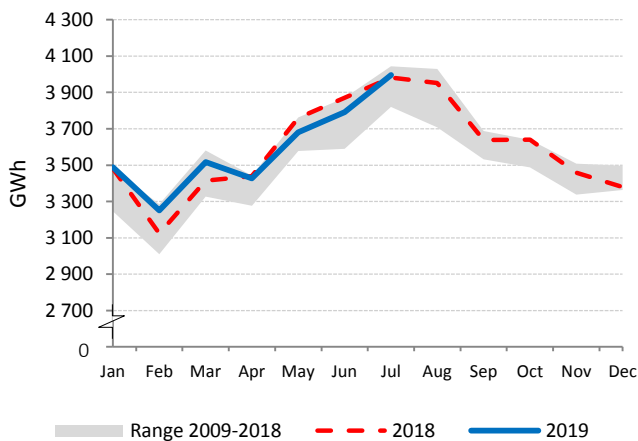
¹ current month to month of last year change

July 2019 is estimated by the IEA Secretariat

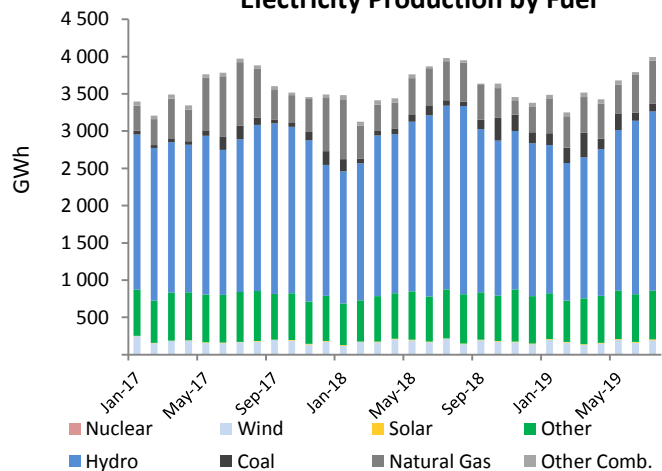
² month-to-month change

³ year-to-date compared to same period last year

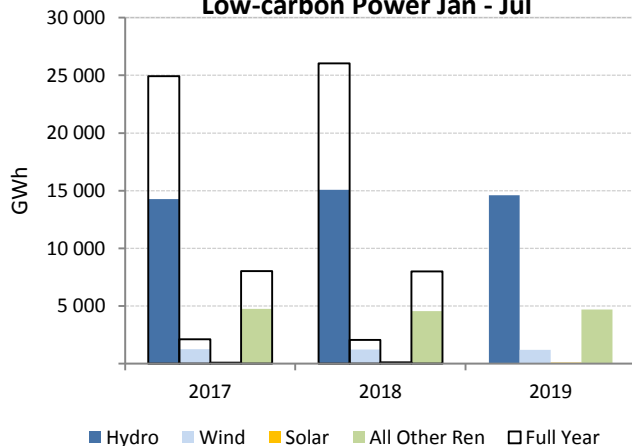
Electricity Production



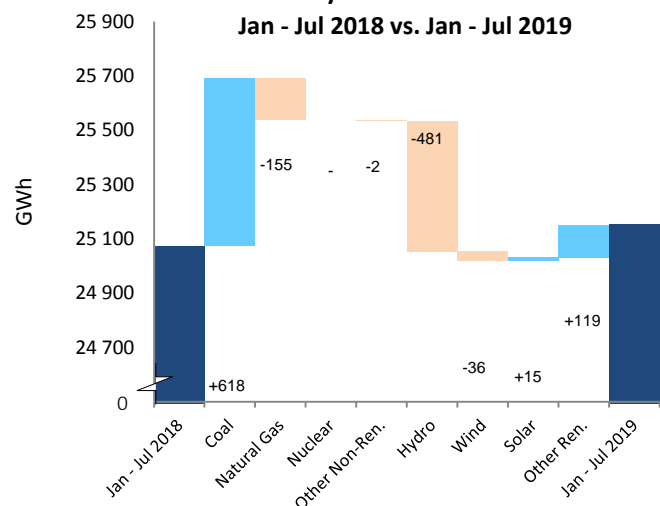
Electricity Production by Fuel



Low-carbon Power Jan - Jul



Electricity Production Variation Jan - Jul 2018 vs. Jan - Jul 2019



NORWAY

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	250	-11.1%	-2.0%	2.5%	1 816	1 845	-1.5%	3 196	2.2%
Coal ⁴	14	-12.4%	-1.5%	0.1%	101	103	-2.1%	179	0.1%
Oil ⁴	2	-12.4%	-1.4%	0.0%	16	16	-2.1%	28	0.0%
Natural Gas	191	-14.6%	-4.4%	2.0%	1 400	1 520	-7.9%	2 602	1.8%
Combustible Renewables	21	6.3%	17.4%	0.2%	138	108	27.4%	190	0.1%
Other Combustibles	21	14.1%	3.9%	0.2%	162	97	66.7%	196	0.1%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	9 231	3.8%	4.4%	94.3%	71 922	80 534	-10.7%	139 477	95.0%
Wind	291	77.4%	-17.5%	3.0%	2 927	1 801	62.5%	3 875	2.6%
Solar	-	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	23	-	-	0.2%	161	161	-	276	0.2%
RENEWABLES	9 543	5.1%	3.6%	97.4%	74 987	82 443	-9.0%	143 542	97.8%
NON-RENEWABLES	251	-11.5%	-3.2%	2.6%	1 840	1 898	-3.1%	3 282	2.2%
TOTAL NET PRODUCTION	9 795	4.6%	3.4%		76 826	84 340	-8.9%	146 824	
+ Imports	422	-32.3%	-56.1%		8 054	5 415	48.7%	8 340	
- Exports	1 577	-1.3%	30.4%		6 394	9 442	-32.3%	18 489	
= ELECTRICITY SUPPLIED	8 639	3.0%	-6.4%		78 486	80 314	-2.3%	136 675	
- Used for pumped storage	116	456.4%	-72.2%		746	505	47.6%	1 018	
- T&D Losses	567	4.6%	3.4%		4 449	4 885	-8.9%	8 504	
= ELECTRICITY CONSUMED	7 956	1.7%	-3.7%		73 291	74 923	-2.2%	127 153	

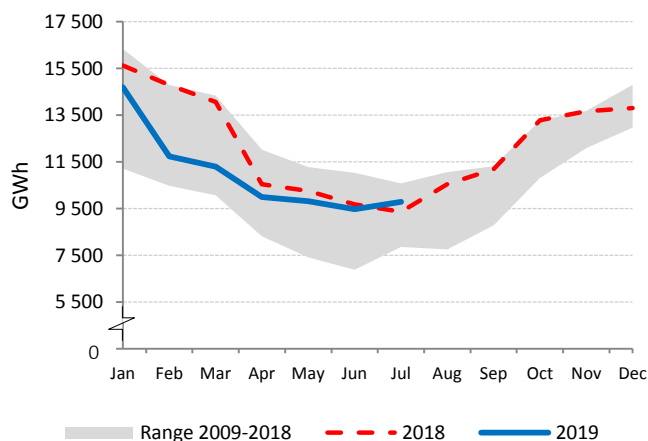
¹ current month to month of last year change

⁴ estimated from annual data

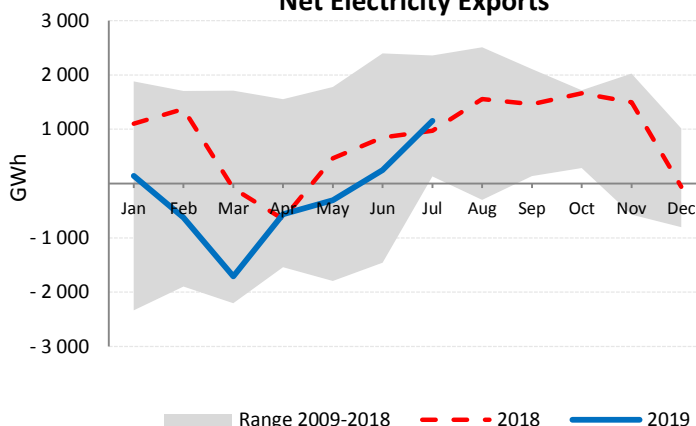
² month-to-month change

³ year-to-date compared to same period last year

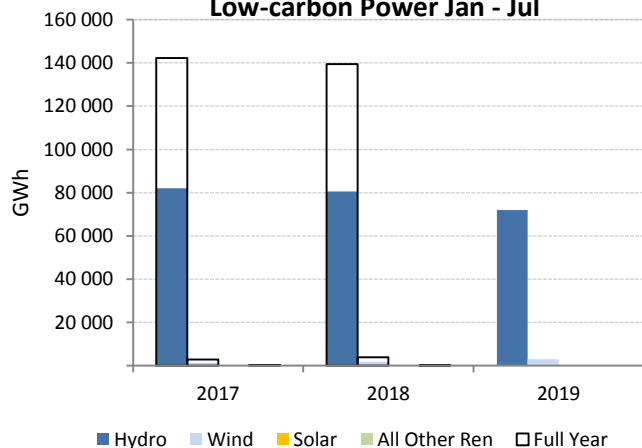
Electricity Production



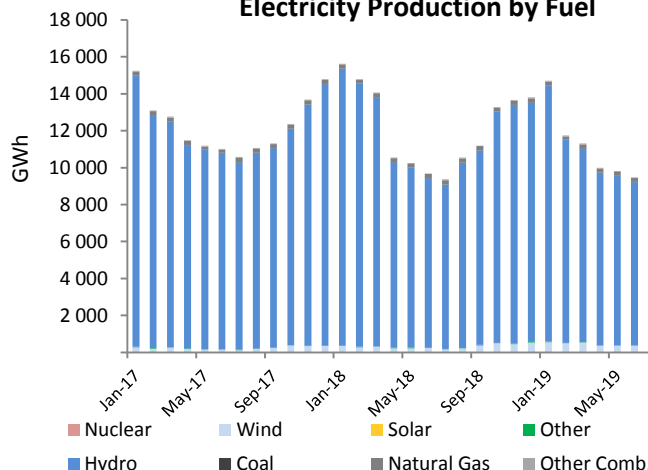
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



POLAND

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	10 830	-10.0%	2.3%	90.5%	76 526	80 237	-4.6%	139 470	90.1%
Coal	8 977	-13.5%	-0.2%	75.0%	63 964	70 148	-7.5%	120 230	77.7%
Oil ⁴	-	-	-	-	-	-	-	1 685	1.1%
Natural Gas	1 097	12.9%	18.7%	9.2%	7 680	6 695	14.7%	11 431	7.4%
Combustible Renewables	572	15.3%	11.4%	4.8%	3 699	3 169	16.7%	5 723	3.7%
Other Combustibles	184	384.3%	16.0%	1.5%	1 183	225	426.6%	400	0.3%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	135	-26.0%	-44.4%	1.1%	1 789	1 654	8.2%	2 361	1.5%
Wind	901	32.5%	20.1%	7.5%	8 775	6 968	25.9%	12 592	8.1%
Solar	95	140.6%	-24.2%	0.8%	435	184	136.8%	301	0.2%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	6	-	-	0.0%	39	39	-	66	0.0%
RENEWABLES	1 704	21.8%	4.4%	14.2%	14 698	11 976	22.7%	20 978	13.6%
NON-RENEWABLES	10 263	-11.1%	1.8%	85.8%	72 866	77 106	-5.5%	133 813	86.4%
TOTAL NET PRODUCTION	11 967	-7.5%	2.2%		87 564	89 082	-1.7%	154 790	
+ Imports	1 660	82.1%	11.5%		10 010	8 064	24.1%	13 816	
- Exports	658	-15.0%	44.9%		4 417	4 088	8.0%	8 121	
= ELECTRICITY SUPPLIED	12 969	-0.8%	1.7%		93 157	93 058	0.1%	160 485	
- Used for pumped storage	65	100.2%	-16.7%		580	378	53.5%	661	
- T&D Losses	1 090	9.2%	13.6%		6 438	5 923	8.7%	9 878	
= ELECTRICITY CONSUMED	11 814	-1.9%	0.9%		86 139	86 756	-0.7%	149 946	

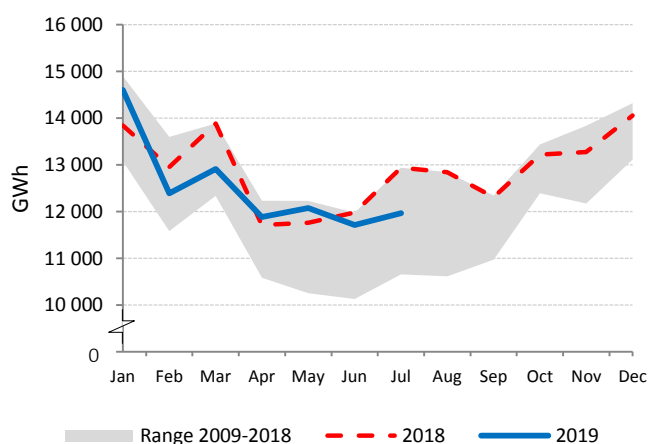
¹ current month to month of last year change

⁴ monthly figures are confidential

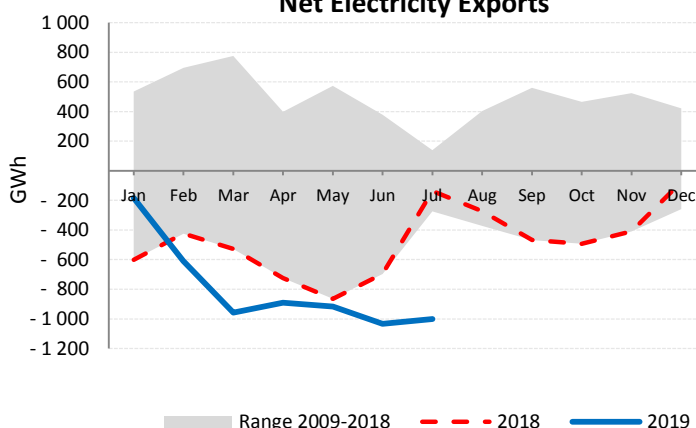
² month-to-month change

³ year-to-date compared to same period last year

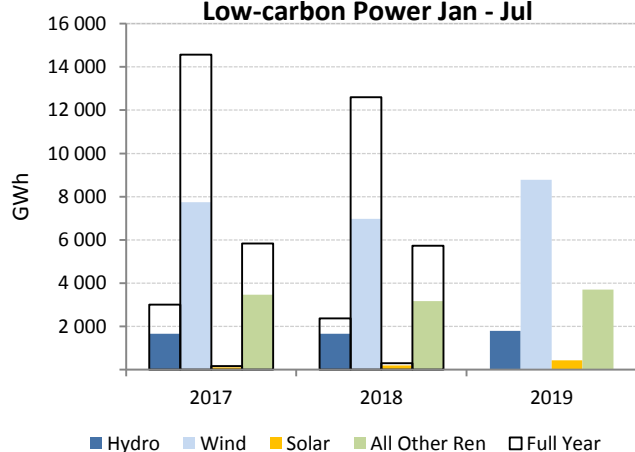
Electricity Production



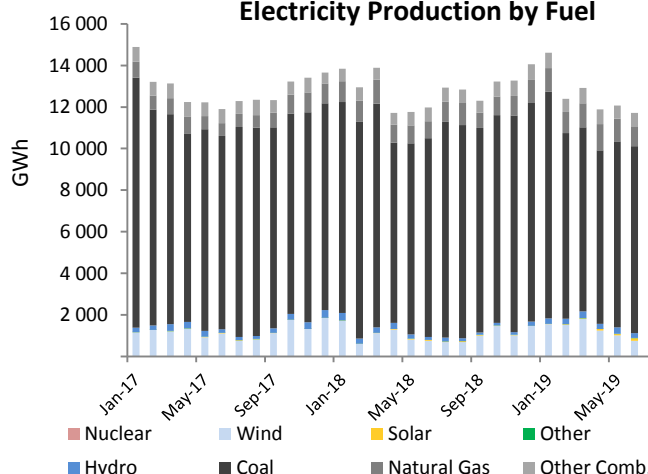
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



PORTUGAL

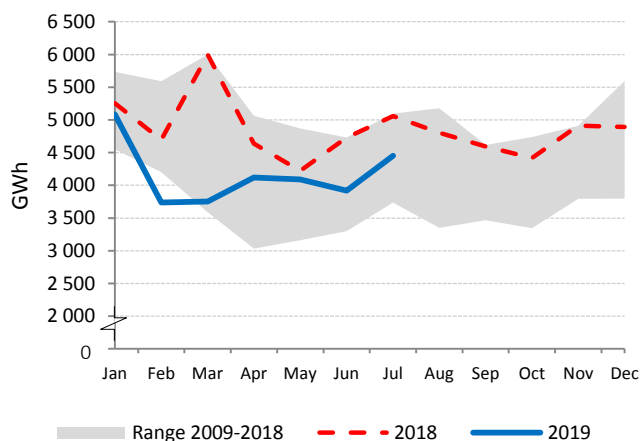
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	3 114	-9.7%	18.1%	70.0%	15 747	16 846	-6.5%	30 863	53.0%
Coal	787	-38.5%	43.4%	17.7%	4 483	6 092	-26.4%	11 576	19.9%
Oil	104	2.9%	12.7%	2.3%	604	600	0.7%	1 120	1.9%
Natural Gas	1 929	8.8%	13.1%	43.3%	8 740	8 138	7.4%	14 832	25.5%
Combustible Renewables	271	-0.7%	1.6%	6.1%	1 765	1 851	-4.6%	3 075	5.3%
Other Combustibles	24	3.0%	3.4%	0.5%	154	166	-7.0%	260	0.4%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	455	-47.6%	42.1%	10.2%	5 158	9 408	-45.2%	13 609	23.4%
Wind	714	16.5%	-10.6%	16.0%	7 302	7 633	-4.3%	12 513	21.5%
Solar	153	38.9%	2.6%	3.4%	830	584	42.1%	1 020	1.8%
Geothermal	16	-6.8%	5.6%	0.4%	117	119	-1.9%	204	0.3%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	1 608	-14.5%	3.8%	36.1%	15 173	19 595	-22.6%	30 421	52.3%
NON-RENEWABLES	2 843	-10.5%	20.0%	63.9%	13 981	14 995	-6.8%	27 787	47.7%
TOTAL NET PRODUCTION	4 451	-12.0%	13.6%		29 154	34 590	-15.7%	58 208	
+ Imports	494	112.8%	-5.8%		4 891	3 089	58.4%	5 668	
- Exports	333	-59.9%	63.2%		2 041	5 208	-60.8%	8 325	
= ELECTRICITY SUPPLIED	4 612	3.5%	8.8%		32 004	32 471	-1.4%	55 551	
- Used for pumped storage	77	221.7%	-21.2%		917	989	-7.4%	1 564	
- T&D Losses	431	1.8%	9.4%		2 958	3 016	-1.9%	5 149	
= ELECTRICITY CONSUMED	4 104	2.3%	9.5%		28 129	28 466	-1.2%	48 838	

¹ current month to month of last year change

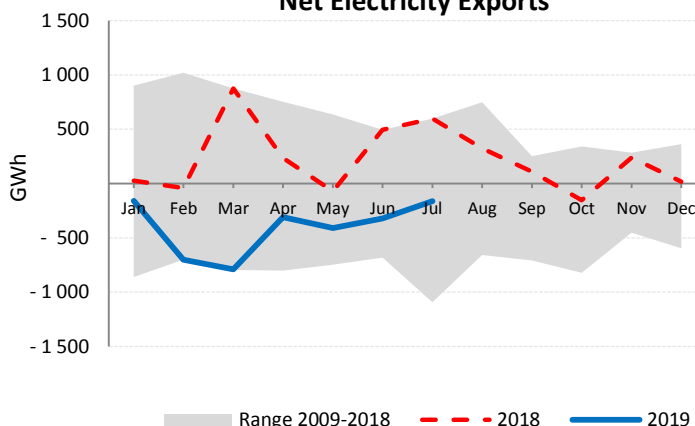
² month-to-month change

³ year-to-date compared to same period last year

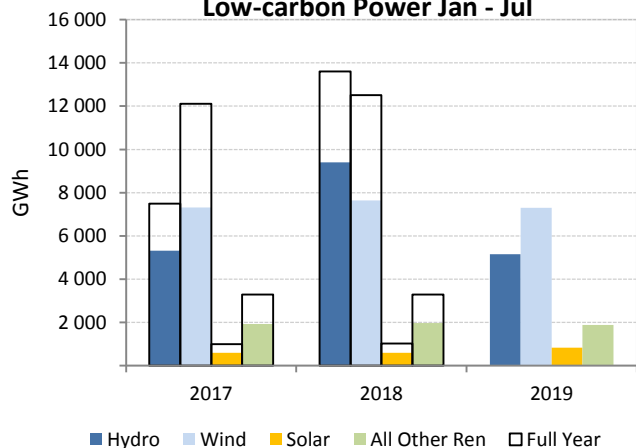
Electricity Production



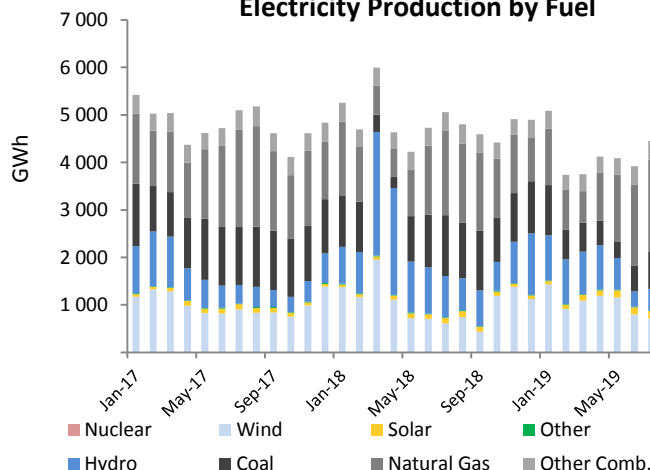
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel

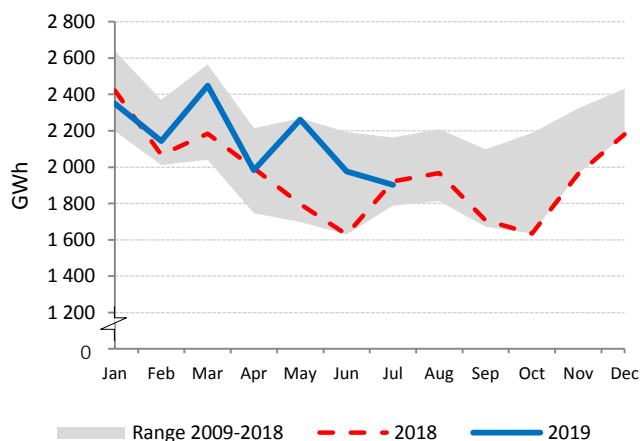


SLOVAK REPUBLIC

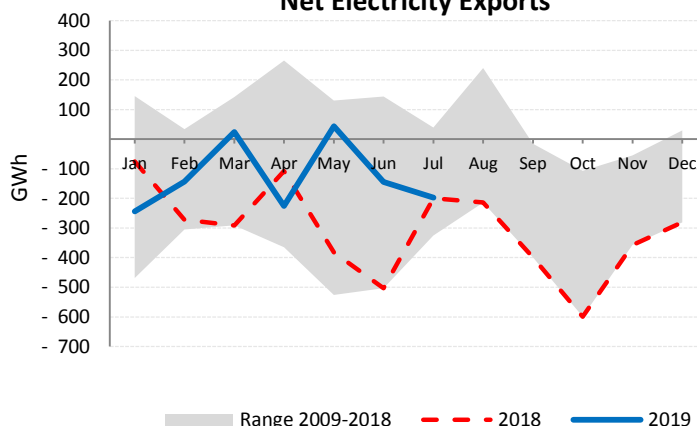
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	460	3.0%	3.2%	24.2%	3 551	2 941	20.7%	5 189	22.1%
Coal	138	-39.2%	-15.4%	7.3%	1 393	1 436	-3.1%	2 456	10.5%
Oil	29	-5.6%	88.9%	1.5%	169	205	-17.5%	338	1.4%
Natural Gas	205	153.8%	17.9%	10.8%	1 337	560	138.8%	1 144	4.9%
Combustible Renewables	87	-18.8%	-5.8%	4.6%	643	730	-11.9%	1 235	5.3%
Other Combustibles	1	13.9%	5.1%	0.1%	10	10	-2.9%	17	0.1%
Nuclear	1 086	-4.2%	15.9%	57.1%	8 034	8 020	0.2%	13 797	58.8%
Hydro	276	6.9%	-46.0%	14.5%	3 071	2 650	15.9%	3 834	16.3%
Wind	-	-	-	-	1	2	-50.0%	6	0.0%
Solar	76	-	-1.3%	4.0%	376	369	1.9%	585	2.5%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	4	-33.3%	-	0.2%	28	35	-18.7%	60	0.3%
RENEWABLES	439	-0.5%	-35.5%	23.1%	4 092	3 751	9.1%	5 660	24.1%
NON-RENEWABLES	1 464	-1.1%	13.0%	76.9%	10 970	10 266	6.9%	17 810	75.9%
TOTAL NET PRODUCTION	1 902	-1.0%	-3.7%		15 062	14 017	7.5%	23 470	
+ Imports	1 050	12.2%	16.9%		7 733	6 150	25.7%	12 427	
- Exports	853	15.9%	13.1%		6 846	4 319	58.5%	8 746	
= ELECTRICITY SUPPLIED	2 099	-1.0%	-1.0%		15 949	15 848	0.6%	27 151	
- Used for pumped storage	24	84.6%	-7.7%		173	254	-31.9%	401	
- T&D Losses ⁴	94	3.6%	2.7%		726	642	13.1%	1 143	
= ELECTRICITY CONSUMED	1 981	-1.8%	-1.0%		15 050	14 953	0.7%	25 608	

¹ current month to month of last year change ⁴ estimated
² month-to-month change
³ year-to-date compared to same period last year

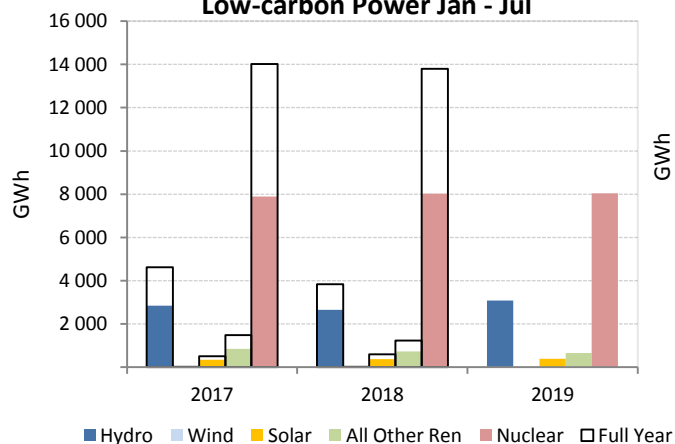
Electricity Production



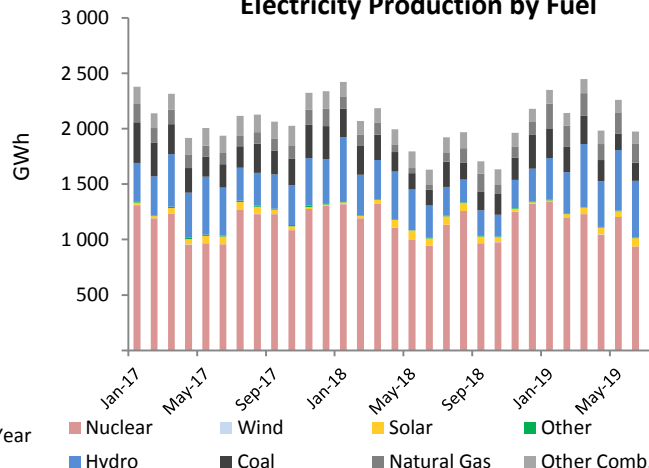
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



SLOVENIA

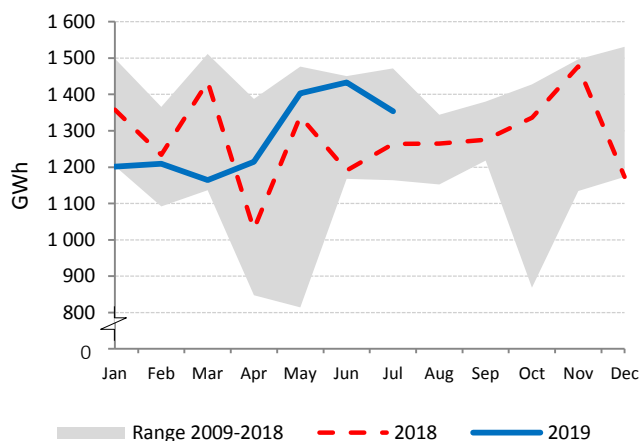
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	466	16.0%	40.7%	34.4%	2 710	2 535	6.9%	4 801	31.2%
Coal	433	17.8%	43.5%	32.0%	2 323	2 136	8.8%	4 131	26.9%
Oil	0	-99.3%	-91.8%	0.0%	3	11	-72.8%	15	0.1%
Natural Gas	21	18.8%	12.8%	1.6%	255	249	2.5%	413	2.7%
Combustible Renewables	11	-23.5%	12.4%	0.8%	123	134	-8.2%	233	1.5%
Other Combustibles	1	-	4.3%	0.0%	5	5	2.6%	9	0.1%
Nuclear	504	1.2%	2.0%	37.2%	3 512	2 968	18.3%	5 489	35.7%
Hydro	348	4.2%	-38.9%	25.7%	2 583	3 187	-18.9%	4 826	31.4%
Wind	0	81.8%	14.3%	0.0%	3	3	13.2%	6	0.0%
Solar	36	18.1%	-6.9%	2.6%	171	158	8.6%	255	1.7%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	395	4.3%	-36.0%	29.2%	2 881	3 482	-17.2%	5 320	34.6%
NON-RENEWABLES	959	8.3%	17.6%	70.8%	6 098	5 368	13.6%	10 057	65.4%
TOTAL NET PRODUCTION	1 354	7.1%	-5.5%		8 980	8 850	1.5%	15 377	
+ Imports	761	0.3%	1.4%		5 583	5 614	-0.6%	8 930	
- Exports	900	11.5%	-7.3%		5 959	5 718	4.2%	9 432	
= ELECTRICITY SUPPLIED	1 214	0.0%	0.2%		8 603	8 746	-1.6%	14 875	
- Used for pumped storage	24	-4.0%	-38.6%		109	156	-29.9%	252	
- T&D Losses	57	18.0%	-15.7%		527	509	3.6%	889	
= ELECTRICITY CONSUMED	1 133	-0.7%	2.5%		7 966	8 081	-1.4%	13 733	

¹ current month to month of last year change

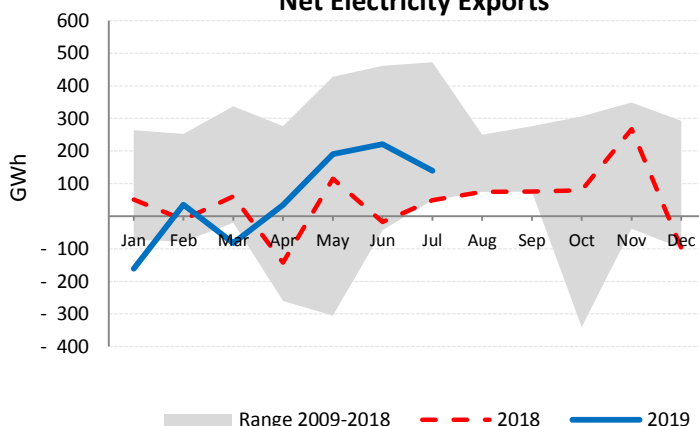
² month-to-month change

³ year-to-date compared to same period last year

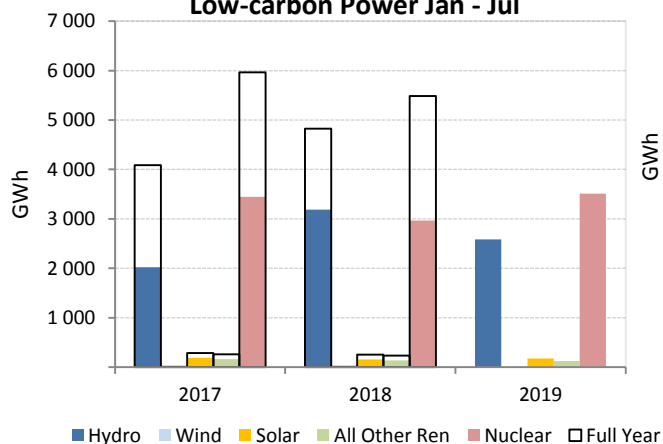
Electricity Production



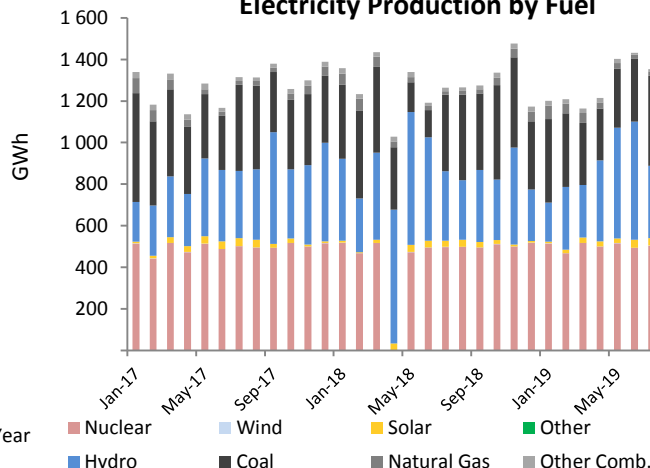
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel

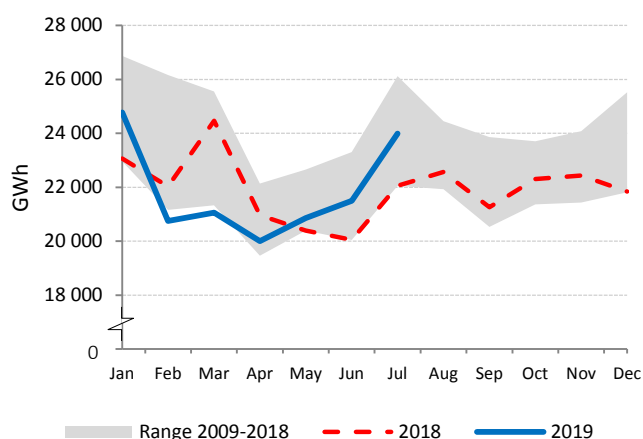


SPAIN

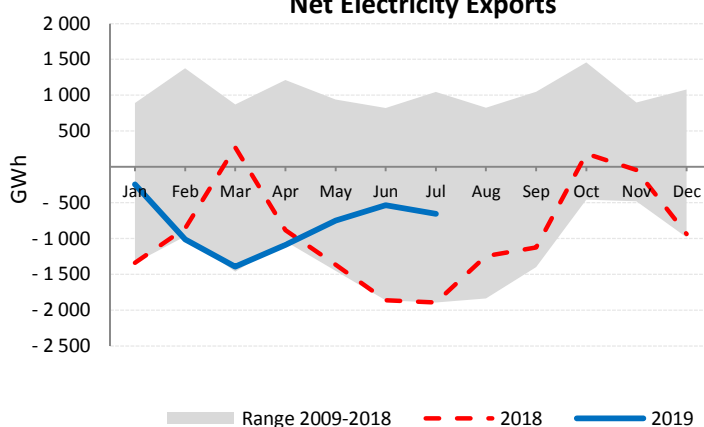
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	12 057	19.4%	24.0%	50.3%	64 471	59 412	8.5%	112 196	42.6%
Coal	836	-77.6%	62.0%	3.5%	9 334	18 735	-50.2%	37 430	14.2%
Oil	1 083	-8.6%	1.8%	4.5%	7 380	7 824	-5.7%	13 750	5.2%
Natural Gas	9 540	108.5%	25.5%	39.8%	43 913	29 075	51.0%	54 356	20.6%
Combustible Renewables	546	0.8%	12.1%	2.3%	3 457	3 364	2.7%	5 941	2.3%
Other Combustibles	52	-17.9%	3.2%	0.2%	387	414	-6.5%	719	0.3%
Nuclear	5 117	14.6%	10.2%	21.3%	33 410	29 816	12.1%	53 203	20.2%
Hydro	1 609	-47.5%	-4.4%	6.7%	14 706	25 374	-42.0%	36 116	13.7%
Wind	3 447	33.6%	-6.8%	14.4%	31 169	30 718	1.5%	49 571	18.8%
Solar	1 743	-5.0%	0.3%	7.3%	9 088	7 611	19.4%	12 182	4.6%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	10	-	-	0.0%	71	71	-	121	0.0%
RENEWABLES	7 345	-8.4%	-3.5%	30.6%	58 419	67 067	-12.9%	103 810	39.4%
NON-RENEWABLES	16 638	18.6%	19.8%	69.4%	94 495	85 935	10.0%	159 578	60.6%
TOTAL NET PRODUCTION	23 983	8.8%	11.6%		152 914	153 002	-0.1%	263 389	
+ Imports	1 246	-51.9%	11.4%		11 828	15 492	-23.6%	24 018	
- Exports	589	-15.5%	1.3%		6 145	7 560	-18.7%	12 916	
= ELECTRICITY SUPPLIED	24 640	2.9%	11.8%		158 597	160 934	-1.5%	274 491	
- Used for pumped storage	109	84.2%	50.8%		1 659	2 330	-28.8%	3 254	
- T&D Losses	2 400	2.3%	11.7%		15 410	15 617	-1.3%	26 694	
= ELECTRICITY CONSUMED	22 132	2.7%	11.7%		141 528	142 986	-1.0%	244 543	

¹ current month to month of last year change
² month-to-month change
³ year-to-date compared to same period last year

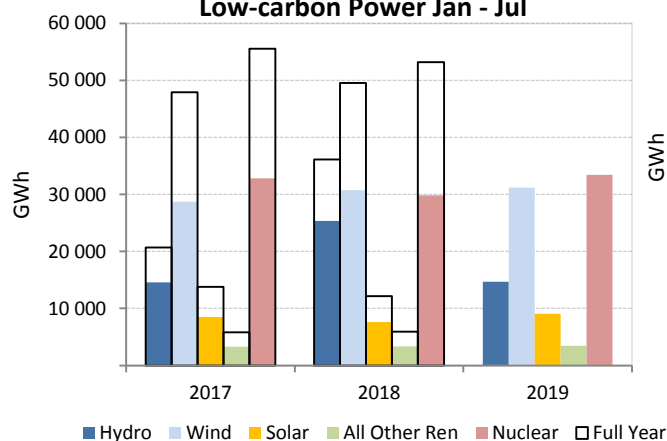
Electricity Production



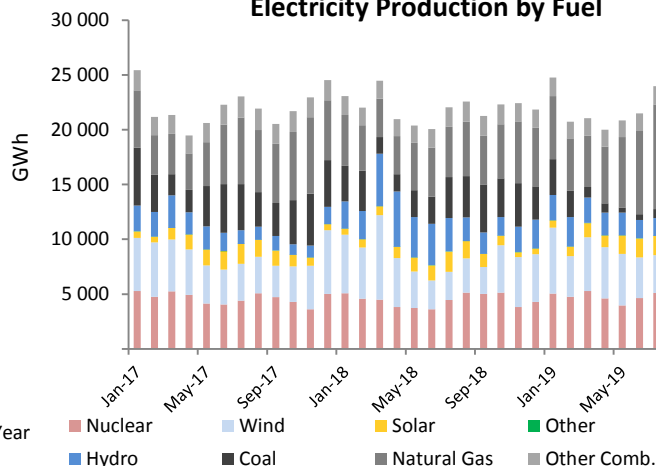
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



SWEDEN

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	720	14.3%	3.4%	6.2%	9 428	8 546	10.3%	14 335	9.2%
Coal	0	-	-	-	1 215	1 370	-11.3%	1 964	1.3%
Oil	14	-34.0%	44.7%	0.1%	257	262	-2.1%	366	0.2%
Natural Gas	3	-10.7%	-23.1%	0.0%	421	371	13.6%	544	0.3%
Combustible Renewables	596	16.8%	-2.7%	5.1%	6 877	5 865	17.2%	10 269	6.6%
Other Combustibles	107	12.5%	52.1%	0.9%	659	678	-2.9%	1 193	0.8%
Nuclear	4 839	-6.8%	-12.7%	41.6%	36 760	37 955	-3.1%	63 229	40.6%
Hydro	4 966	58.4%	1.3%	42.7%	38 337	38 059	0.7%	61 169	39.3%
Wind	1 054	61.7%	-22.2%	9.1%	11 437	8 099	41.2%	16 623	10.7%
Solar⁴	52	-	-7.0%	0.4%	282	282	-	404	0.3%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	6 668	53.3%	-3.8%	57.3%	56 932	52 304	8.8%	88 465	56.8%
NON-RENEWABLES	4 963	-6.6%	-11.8%	42.7%	39 312	40 637	-3.3%	67 295	43.2%
TOTAL NET PRODUCTION	11 632	20.4%	-7.4%		96 244	92 941	3.6%	155 760	
+ Imports	692	-38.5%	127.2%		4 544	6 892	-34.1%	12 202	
- Exports	3 484	52.9%	-8.1%		20 455	17 629	16.0%	29 431	
= ELECTRICITY SUPPLIED	8 840	3.9%	-2.6%		80 332	82 204	-2.3%	138 531	
- Used for pumped storage	-	-	-		23	43	-47.4%	56	
- T&D Losses	433	-0.8%	-1.1%		4 259	4 282	-0.5%	7 450	
= ELECTRICITY CONSUMED	8 407	4.3%	-2.6%		76 050	77 879	-2.3%	131 025	

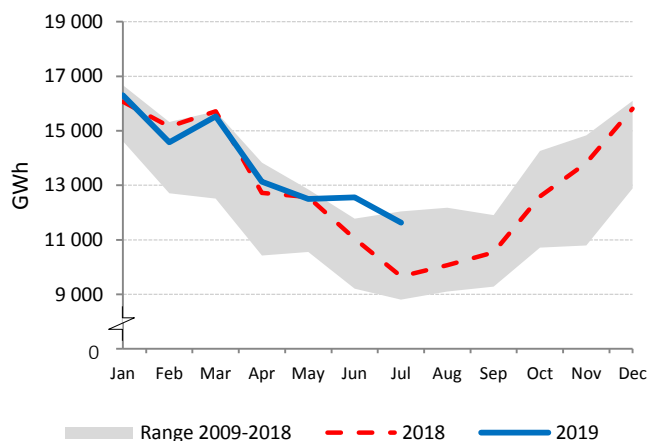
¹ current month to month of last year change

⁴ estimated by the IEA secretariat

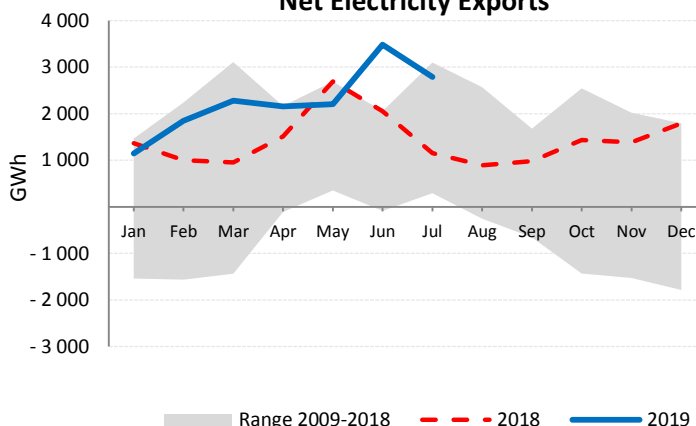
² month-to-month change

³ year-to-date compared to same period last year

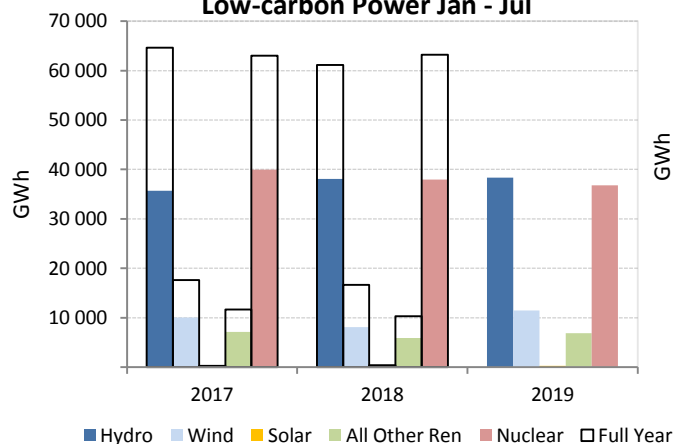
Electricity Production



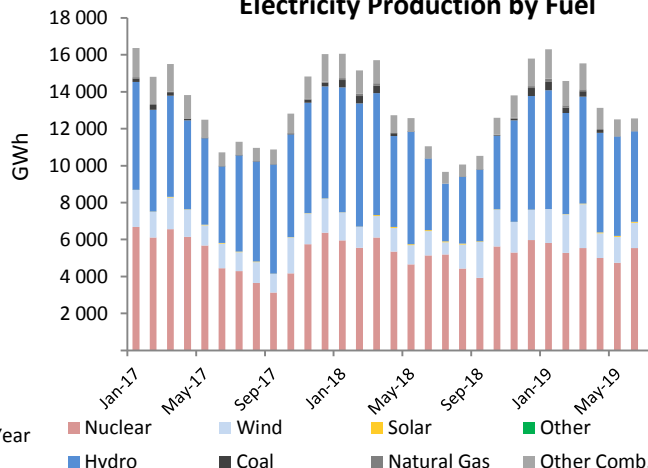
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel



SWITZERLAND

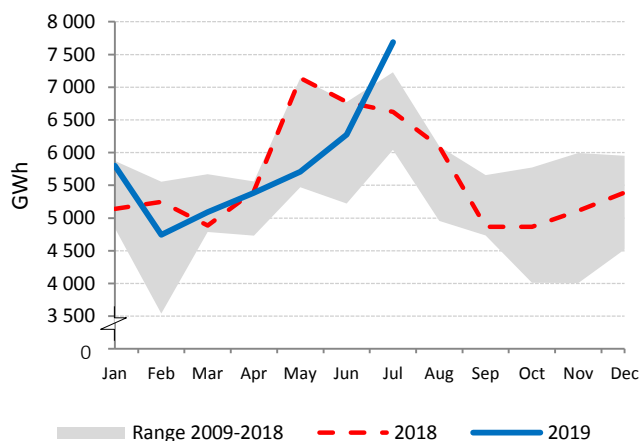
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	308	8.5%	2.6%	4.0%	2 195	2 095	4.8%	3 701	5.5%
Coal	-	-	-	-	-	-	-	-	-
Oil	3	33.3%	-	0.0%	21	19	12.5%	34	0.1%
Natural Gas	49	-8.1%	1.5%	0.6%	352	393	-10.3%	693	1.0%
Combustible Renewables	157	15.3%	3.0%	2.0%	1 115	1 005	11.0%	1 776	2.6%
Other Combustibles	99	7.5%	2.7%	1.3%	706	678	4.1%	1 198	1.8%
Nuclear	2 032	-5.9%	122.7%	26.4%	13 995	14 320	-2.3%	24 414	36.1%
Hydro	5 040	28.6%	5.5%	65.6%	23 076	23 514	-1.9%	37 428	55.4%
Wind	7	40.0%	-	0.1%	82	73	12.5%	121	0.2%
Solar	299	17.6%	7.5%	3.9%	1 344	1 217	10.4%	1 884	2.8%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	5 503	27.5%	5.5%	71.6%	25 617	25 808	-0.7%	41 209	61.0%
NON-RENEWABLES	2 183	-5.4%	105.9%	28.4%	15 074	15 410	-2.2%	26 339	39.0%
TOTAL NET PRODUCTION	7 686	16.1%	22.5%		40 691	41 218	-1.3%	67 548	
+ Imports	1 272	-25.1%	-29.9%		18 400	18 085	1.7%	31 020	
- Exports	4 030	18.3%	35.1%		20 186	20 501	-1.5%	32 607	
= ELECTRICITY SUPPLIED	4 928	0.3%	-3.5%		38 905	38 803	0.3%	65 961	
- Used for pumped storage	411	35.0%	-28.8%		2 379	2 255	5.5%	3 987	
- T&D Losses	361	-1.5%	12.7%		2 699	2 707	-0.3%	4 574	
= ELECTRICITY CONSUMED	4 157	-2.0%	-1.3%		33 827	33 840	0.0%	57 399	

¹ current month to month of last year change

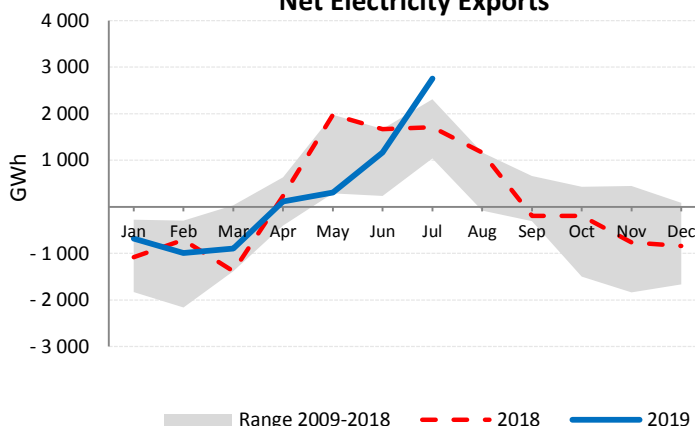
² month-to-month change

³ year-to-date compared to same period last year

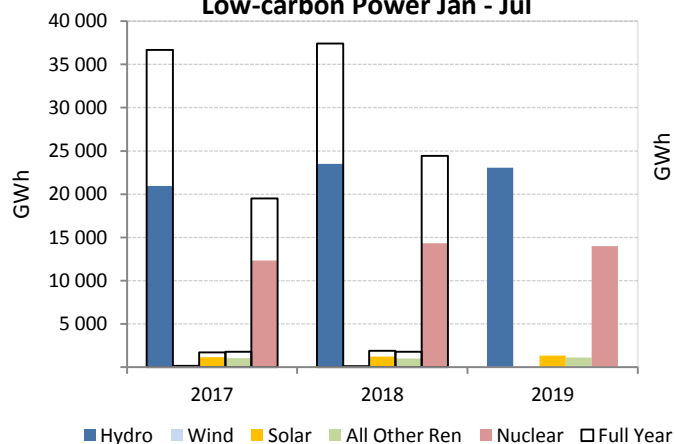
Electricity Production



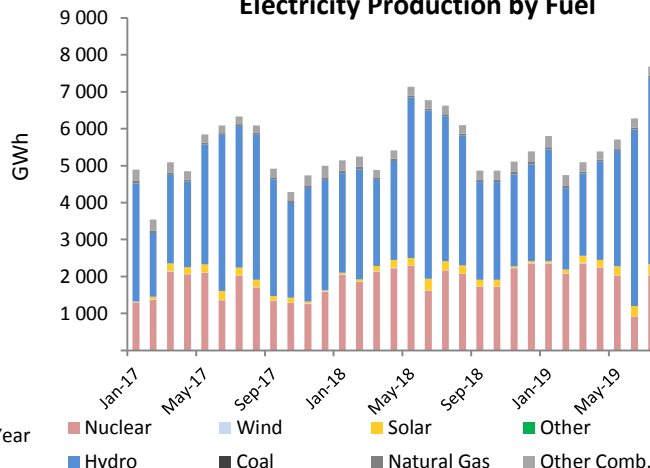
Net Electricity Exports



Low-carbon Power Jan - Jul



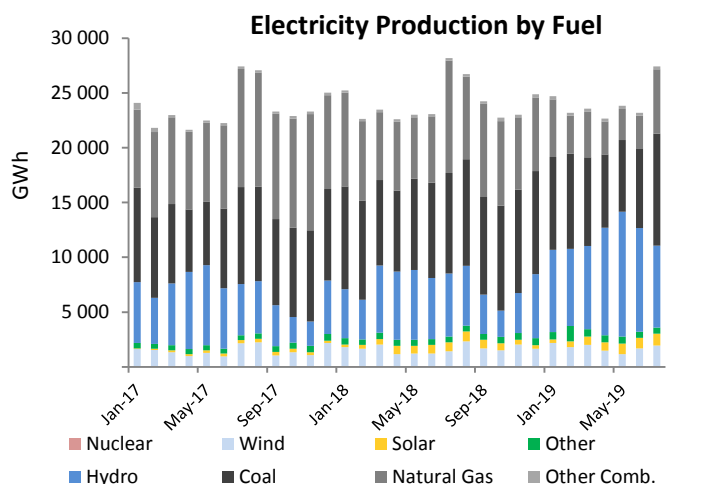
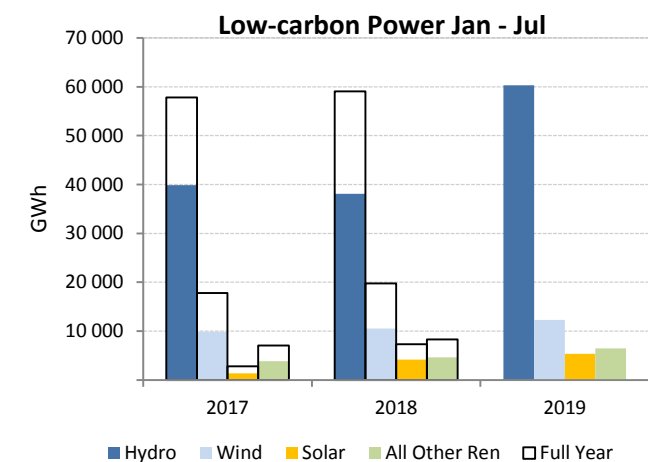
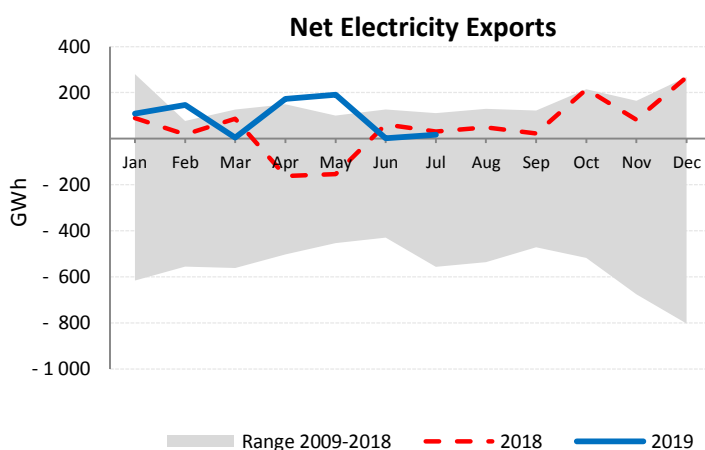
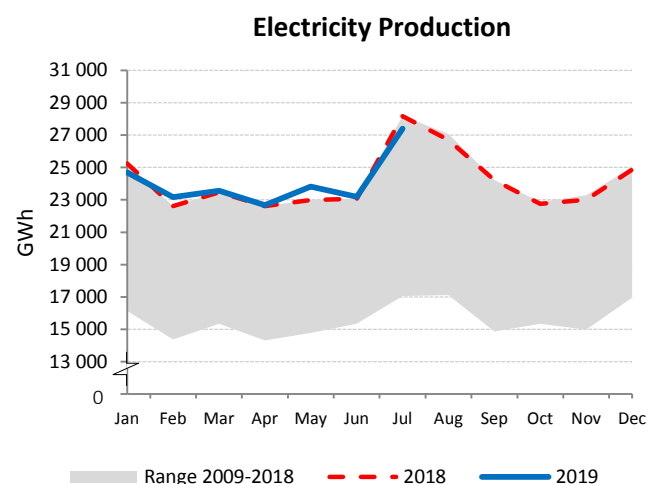
Electricity Production by Fuel



TURKEY

	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	16 333	-16.9%	55.1%	59.6%	85 431	111 523	-23.4%	196 932	68.0%
Coal	10 212	11.3%	40.3%	37.3%	55 960	59 820	-6.5%	106 878	36.9%
Oil	14	-49.2%	6.6%	0.1%	160	169	-4.9%	311	0.1%
Natural Gas	5 857	-42.9%	96.8%	21.4%	27 540	50 157	-45.1%	87 234	30.1%
Combustible Renewables	249	28.1%	-5.4%	0.9%	1 767	1 360	29.9%	2 488	0.9%
Other Combustibles	0	-79.8%	-2.4%	0.0%	4	18	-78.0%	22	0.0%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	7 500	30.5%	-20.6%	27.4%	60 274	38 126	58.1%	59 076	20.4%
Wind	1 955	37.8%	14.7%	7.1%	12 295	10 516	16.9%	19 748	6.8%
Solar	1 075	27.9%	12.6%	3.9%	5 363	4 191	28.0%	7 305	2.5%
Geothermal	502	17.7%	1.7%	1.8%	4 667	3 271	42.7%	5 797	2.0%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	46	-42.9%	-32.8%	0.2%	492	549	-10.5%	890	0.3%
RENEWABLES	11 280	30.7%	-12.3%	41.2%	84 366	57 465	46.8%	94 414	32.6%
NON-RENEWABLES	16 130	-17.5%	56.1%	58.8%	84 156	110 712	-24.0%	195 334	67.4%
TOTAL NET PRODUCTION	27 410	-2.7%	18.2%		168 522	168 177	0.2%	289 748	
+ Imports	164	-39.8%	6.1%		1 154	1 506	-23.4%	2 466	
- Exports	181	-40.5%	15.9%		1 795	1 476	21.6%	3 074	
= ELECTRICITY SUPPLIED	27 393	-2.7%	18.1%		167 881	168 207	-0.2%	289 140	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses ⁴	3 639	-3.3%	18.1%		22 392	22 404	-0.1%	38 564	
= ELECTRICITY CONSUMED	23 754	-2.6%	18.1%		145 489	145 803	-0.2%	250 576	

¹ current month to month of last year change ⁴ estimated
² month-to-month change
³ year-to-date compared to same period last year



UNITED KINGDOM

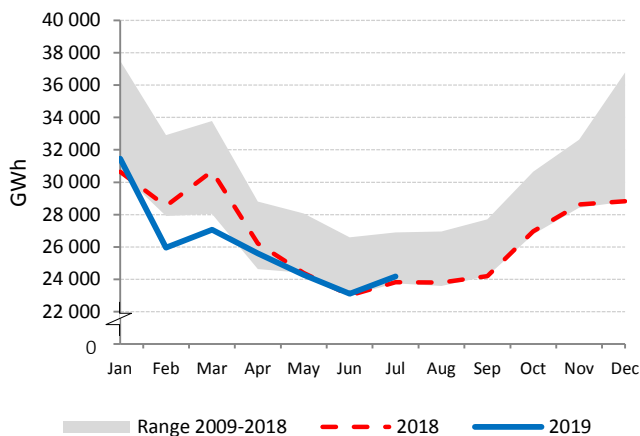
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	14 703	1.6%	6.0%	60.8%	106 395	109 381	-2.7%	182 651	57.1%
Coal	135	-29.0%	37.6%	0.6%	3 633	10 103	-64.0%	16 815	5.3%
Oil	156	59.2%	40.3%	0.6%	940	932	0.9%	1 610	0.5%
Natural Gas	11 004	-1.3%	7.9%	45.5%	77 994	77 200	1.0%	125 839	39.4%
Combustible Renewables	2 964	10.0%	-1.8%	12.3%	20 765	18 620	11.5%	34 120	10.7%
Other Combustibles	444	30.0%	0.1%	1.8%	3 062	2 526	21.2%	4 268	1.3%
Nuclear	3 708	-28.3%	21.6%	15.3%	28 207	35 392	-20.3%	59 098	18.5%
Hydro	488	50.9%	-0.4%	2.0%	4 112	4 268	-3.7%	7 902	2.5%
Wind	3 485	66.9%	-14.7%	14.4%	34 042	29 723	14.5%	57 116	17.9%
Solar	1 795	2.0%	11.9%	7.4%	8 866	8 515	4.1%	12 922	4.0%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	1	-	-	0.0%	5	5	-	8	0.0%
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	8 733	27.2%	-5.1%	36.1%	67 789	61 130	10.9%	112 068	35.1%
NON-RENEWABLES	15 447	-8.9%	11.1%	63.9%	113 837	126 153	-9.8%	207 629	64.9%
TOTAL NET PRODUCTION	24 180	1.5%	4.7%		181 627	187 283	-3.0%	319 697	
+ Imports	1 972	-5.6%	-0.6%		14 877	13 451	10.6%	21 332	
- Exports	354	226.3%	114.8%		1 586	945	67.9%	2 225	
= ELECTRICITY SUPPLIED	25 797	0.0%	3.5%		194 917	199 790	-2.4%	338 804	
- Used for pumped storage	144	-44.1%	-21.6%		1 375	2 165	-36.5%	3 391	
- T&D Losses	1 778	8.3%	-12.6%		16 209	16 389	-1.1%	26 894	
= ELECTRICITY CONSUMED	23 876	-0.1%	5.2%		177 333	181 235	-2.2%	308 520	

¹ current month to month of last year change

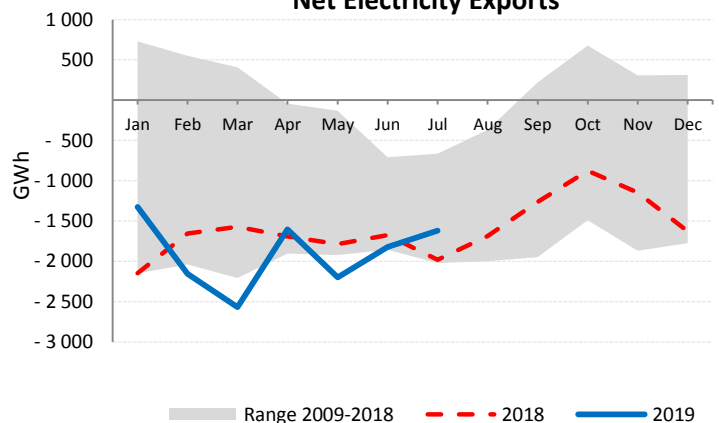
² month-to-month change

³ year-to-date compared to same period last year

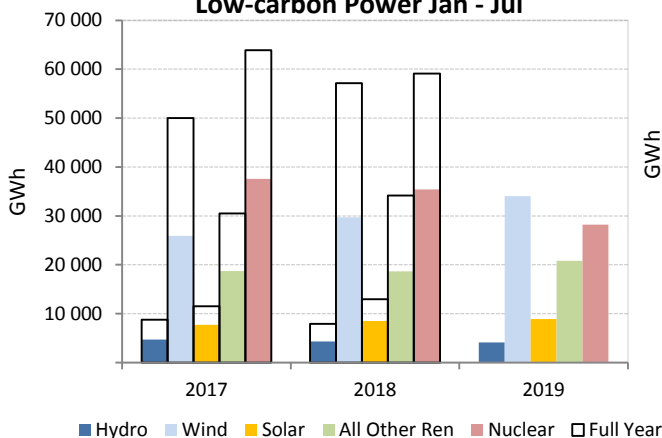
Electricity Production



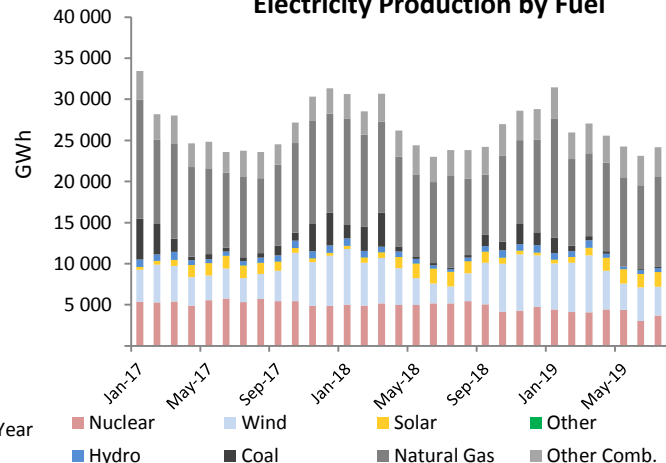
Net Electricity Exports



Low-carbon Power Jan - Jul



Electricity Production by Fuel

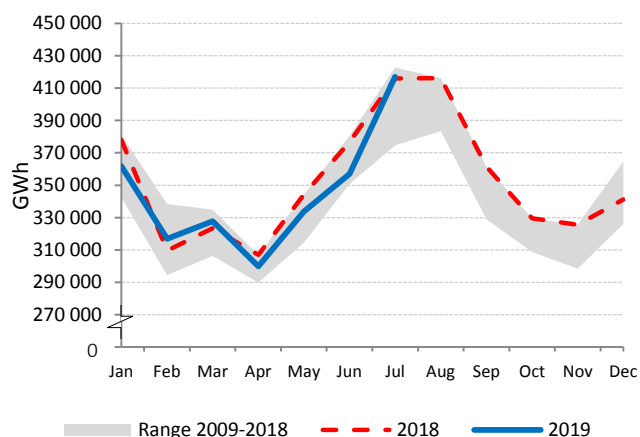


UNITED STATES

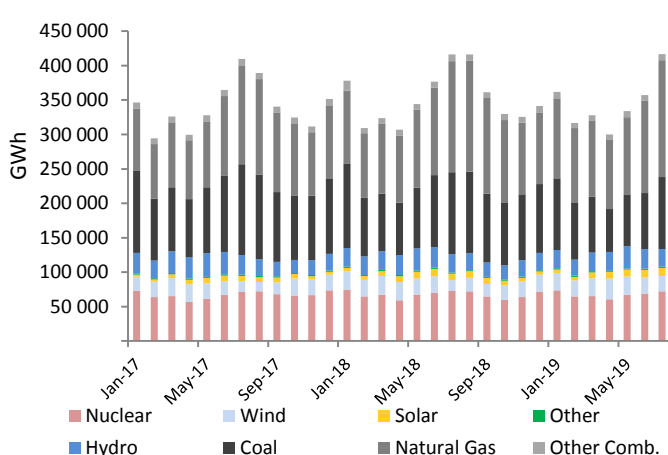
	Jul 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	283 410	-2.3%	26.8%	68.0%	1 501 664	1 544 518	-2.8%	2 722 002	64.4%
Coal	104 485	-12.4%	28.4%	25.1%	591 534	679 206	-12.9%	1 184 075	28.0%
Oil	3 046	-6.1%	15.4%	0.7%	18 899	22 399	-15.6%	36 644	0.9%
Natural Gas	169 762	5.4%	27.0%	40.7%	850 885	799 844	6.4%	1 428 406	33.8%
Combustible Renewables	5 329	-4.2%	5.9%	1.3%	35 166	37 651	-6.6%	63 569	1.5%
Other Combustibles	788	-3.6%	4.0%	0.2%	5 180	5 417	-4.4%	9 308	0.2%
Nuclear	72 230	-0.4%	4.9%	17.3%	472 408	475 228	-0.6%	807 381	19.1%
Hydro	25 583	-3.3%	-9.8%	6.1%	190 077	199 227	-4.6%	313 544	7.4%
Wind	22 509	41.3%	-4.0%	5.4%	177 066	168 704	5.0%	274 819	6.5%
Solar	11 298	20.4%	0.5%	2.7%	60 657	54 993	10.3%	90 286	2.1%
Geothermal	1 424	4.5%	3.9%	0.3%	9 600	9 188	4.5%	16 131	0.4%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	420	-0.8%	6.1%	0.1%	2 841	2 999	-5.3%	4 813	0.1%
RENEWABLES	66 144	12.7%	-4.8%	15.9%	472 565	469 763	0.6%	758 349	17.9%
NON-RENEWABLES	350 731	-1.9%	21.9%	84.1%	1 941 747	1 985 094	-2.2%	3 470 627	82.1%
TOTAL NET PRODUCTION	416 875	0.2%	16.7%		2 414 312	2 454 857	-1.7%	4 228 976	
+ Imports	5 664	-1.2%	12.6%		33 025	37 117	-11.0%	58 274	
- Exports	867	-7.3%	-9.2%		7 421	8 183	-9.3%	13 804	
= ELECTRICITY SUPPLIED	421 673	0.2%	16.7%		2 439 917	2 483 792	-1.8%	4 273 445	
- Used for pumped storage	3 181	-2.9%	38.1%		15 126	15 693	-3.6%	27 407	
- T&D Losses	27 552	-0.4%	9.1%		150 613	156 161	-3.6%	251 569	
= ELECTRICITY CONSUMED	390 940	0.3%	17.2%		2 274 178	2 311 938	-1.6%	3 994 469	

¹ current month to month of last year change
² month-to-month change
³ year-to-date compared to same period last year

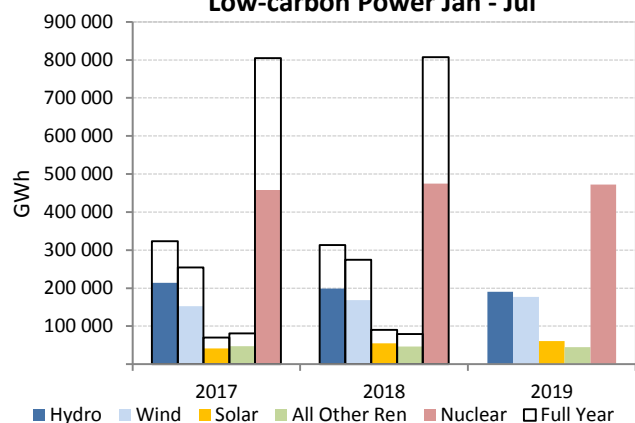
Electricity Production



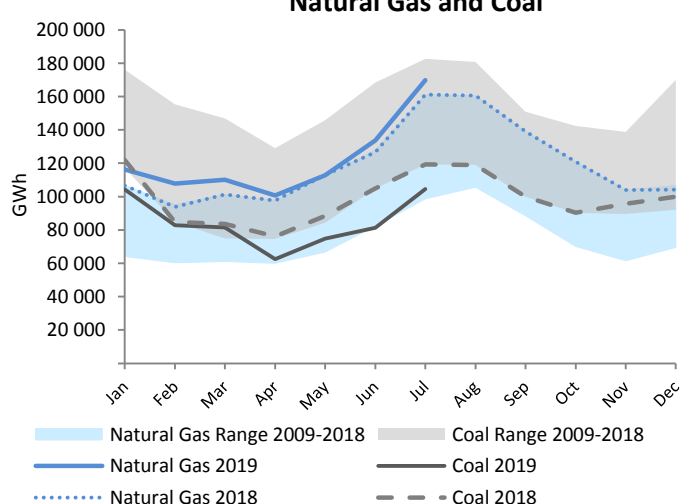
Electricity Production by Fuel



Low-carbon Power Jan - Jul

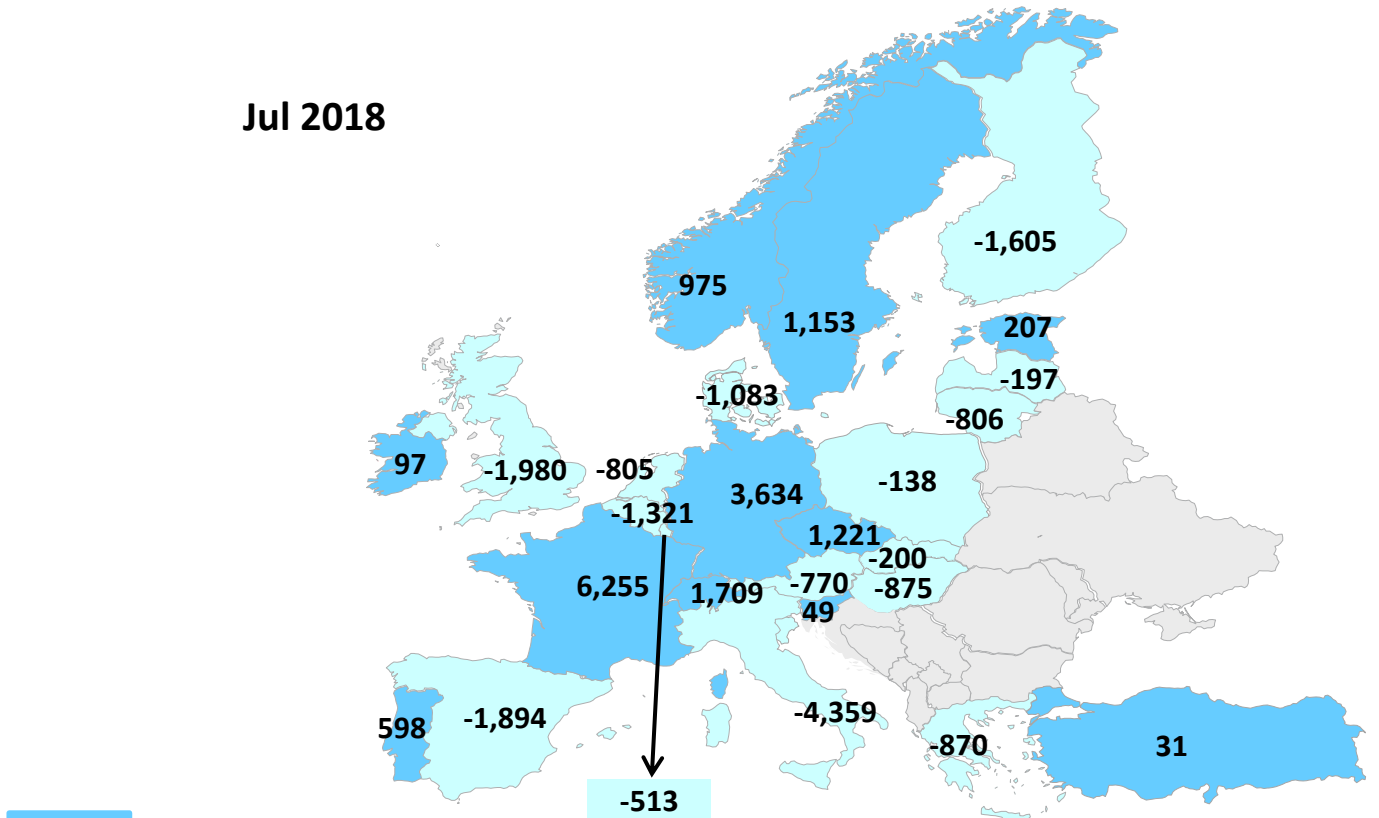


Natural Gas and Coal

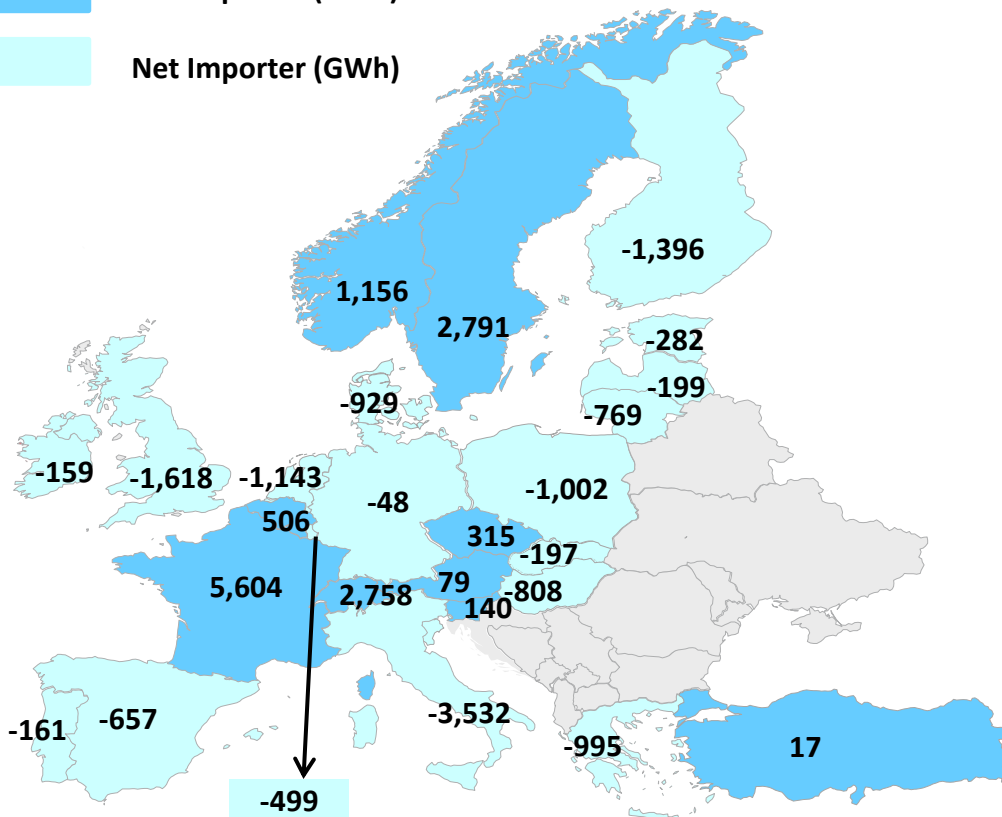


NET ELECTRICITY EXPORTS OECD EUROPE MAP 1

Jul 2018

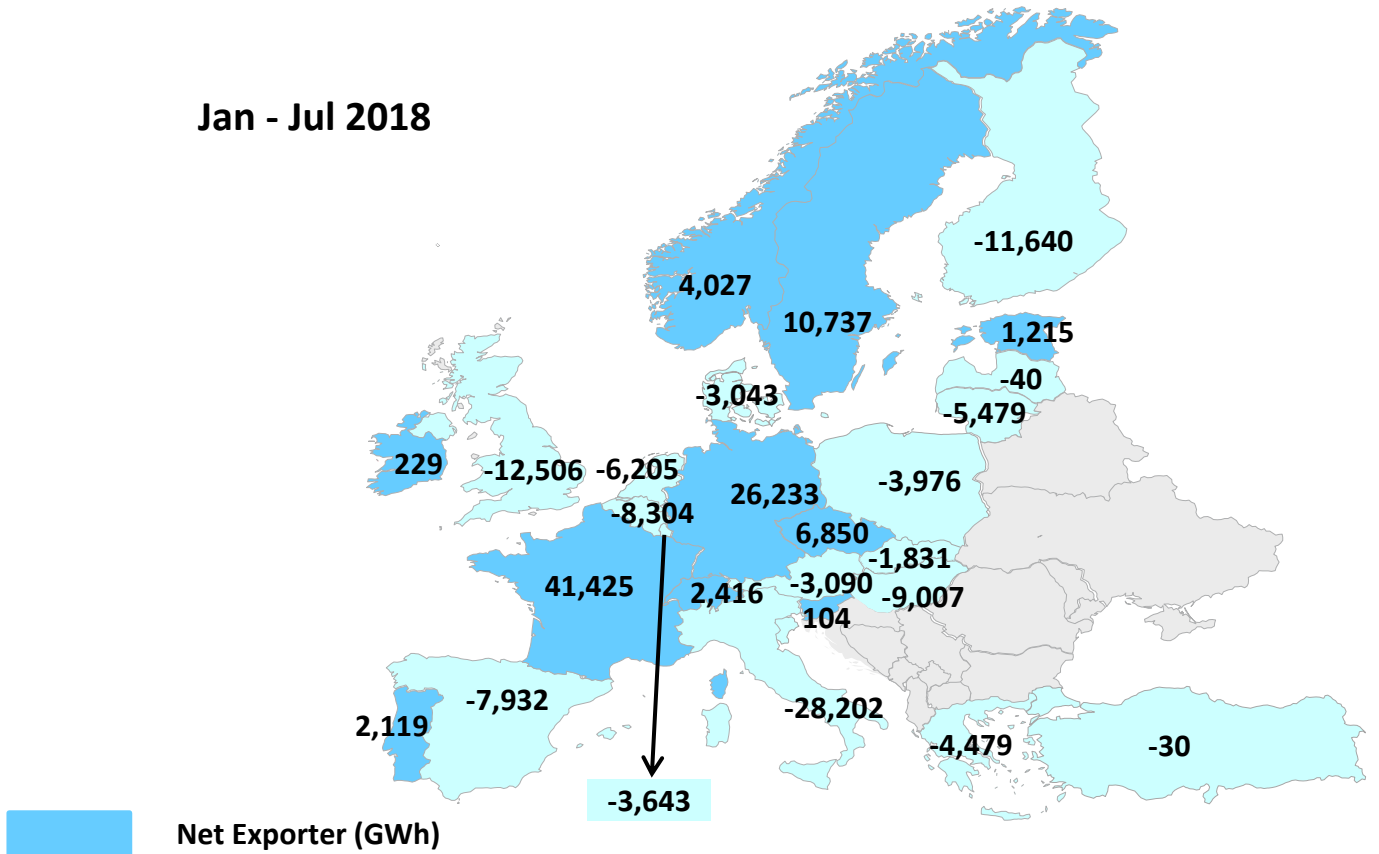


Jul 2019

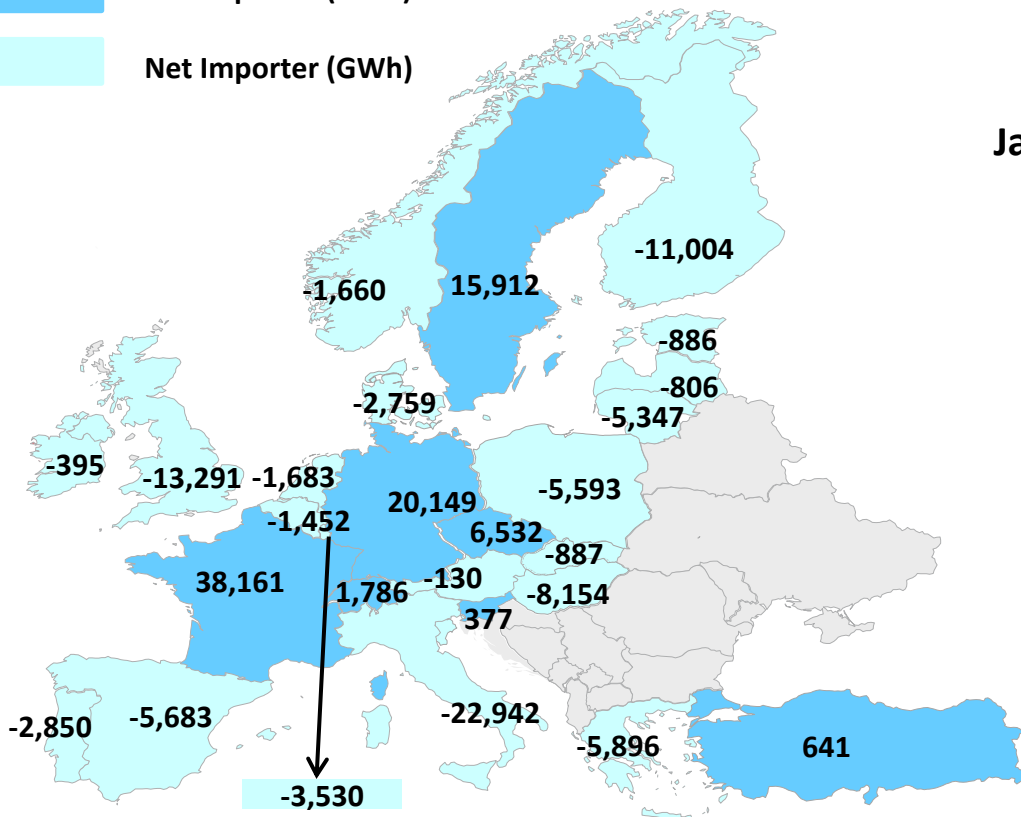


NET ELECTRICITY EXPORTS OECD EUROPE MAP 2

Jan - Jul 2018



Jan - Jul 2019



PRINCIPLES AND DEFINITIONS

The IEA's Monthly Electricity Statistics provides timely electricity production and trade data for member countries of the Organisation for Economic Co-operation and Development (OECD). It aims to report as up-to-date and consistent information as possible for the last three months. It also provides previous annual data and year-to-date indicators.

General notes

- Electricity production and trade data are reported at the individual country level as well as in organisational and regional groupings. These groupings include: OECD Total, OECD Americas, OECD Asia Oceania, OECD Europe and IEA Total.
- The units are terawatt hours (TWh) for the regional groupings and gigawatt hours (GWh) for the individual countries.
- The grouping of electricity generation by source reflects available monthly data and/or small individual quantities.
- Definitions are consistent with the IEA's "Electricity and Heat" annual questionnaire. Statistics are subject to revision on official receipt of the annual questionnaire from national administrations or on improved data becoming available.
- To enable timely publication, the IEA may supplement national statistics with data from other sources.
- Where adequate information is not available from external sources, estimates have been made by the IEA. Methodological notes are provided in individual country pages or the country notes section.
- Monthly data are consistent with those provided in the quarterly "Oil, Gas, Coal and Electricity" book published by the IEA.
- All figures for individual countries are reported to the nearest whole number and totals may not equal the sum of components due to rounding.
- Note that historic data are often recalculated. Therefore, the latest publication should be considered the most accurate. Regional and organisational summaries may also change based on country recalculations.
- Countries' submitted monthly data is adjusted proportionately to maintain consistency with the most recent annual data for each generation source.

Basic definitions

<i>Net Production</i>	Net generation excludes power station own use.
<i>Combustible Fuels/ Conventional Thermal</i>	Production from fossil fuels (primary coal, coal products, peat and peat products, oil shale and oil sands, crude oil, NGL, oil products, natural gas) and combustible renewables and wastes (solid biofuels, biogases, liquid biofuels, industrial and municipal waste).
<i>Coal</i>	Production from primary coal, coal products, peat and peat products, oil shale and oil sands, and manufactured gas (such as coke-oven gas, blast-furnace gas and gas works gas).
<i>Oil</i>	Production from crude oil, natural gas liquids, refinery feedstocks, and petroleum products (such as refinery gases and fuel oil).
<i>Natural Gas</i>	Production from natural gas (including gas distributed via the grid that may contain very little amounts of blended other gases).
<i>Combustible Renewables</i>	Production from combustible renewables (such as solid biofuels, biogases, liquid biofuels, municipal renewable waste).
<i>Other Combustible Fuels (non-renewables)</i>	Production from all other combustible fuels (such as industrial and non-renewable municipal solid waste).
<i>Nuclear</i>	Electricity produced using heat generated from nuclear fission.
<i>Hydro</i>	Net generation from hydro facilities including pumped storage production.
<i>Wind</i>	Electricity generated in on-shore and off-shore wind turbines using kinetic energy of wind.
<i>Solar</i>	Electricity generated using solar radiation. Includes thermal and photovoltaic.
<i>Geothermal</i>	Electricity generated using heat emitted from within the earth's crust, usually in the form of hot water or steam.
<i>Other Renewables</i>	Electricity generated from tide, wave, ocean and other non-combustible sources.
<i>Non-Specified</i>	Not elsewhere reported electricity generation.

<i>Renewables</i>	Includes electricity generation from Hydro, Wind, Solar, Geothermal, Other Renewables and Combustible Renewables
<i>Non-Renewables</i>	Includes electricity generation from Coal, Oil, Natural Gas, Other Combustibles, Nuclear and Non-specified sources.
<i>Total Net Production</i>	The sum of indigenous net electricity production by energy source.
<i>Imports/ Exports</i>	Amounts of electricity that have crossed political boundaries of the country, a.k.a. physical flows, whether customs clearance has taken place or not.
<i>Net Exports</i>	Exports minus imports
<i>Electricity supplied</i>	Indigenous production + Imports - Exports. It includes Transmission and Distribution losses.
<i>Used for Pumped Storage</i>	Electricity consumed by pumping water into a reservoir in mixed and pure pumped storage hydro plants.
<i>Transmission and Distribution Losses/ T&D Losses</i>	All losses due to transport and distribution of electrical energy. Losses in transformers which are not considered as integral parts of the power plants are also included.
<i>Electricity consumed</i>	Electricity available (calculated as: Indigenous production + Imports - Exports - used for pumped storage - Transmission and distribution losses)
<i>Low-carbon Power Generation</i>	Renewables plus Nuclear electricity generation.
<i>Year</i>	Calendar year (January to December) unless otherwise stated.
<i>Year-to-Date</i>	The sum of all months from the start of the calendar year to the latest month.

Regional Groupings

- OECD Total includes Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, the Slovak Republic, Slovenia, Switzerland, Turkey, the United Kingdom and the United States.
- Israel is not included in this report.
- OECD Americas includes Canada, Chile, Mexico and the United States.
- OECD Asia Oceania includes Australia, Japan, Korea and New Zealand.
- OECD Europe includes Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.
- IEA includes all countries included in OECD Total except Chile, Iceland, Latvia, Lithuania and Slovenia.

Publication details and further information

- This publication is released in the middle of each month onto the IEA's Website:
<http://www.iea.org/statistics/topics/Electricity/>
- Subscriptions to this publication are available at <http://mailing.iea.org>
- Data should not be reproduced for publication without permission of the IEA.
- Please note that all IEA data are subject to the following Terms and Conditions found on the IEA's website:
<http://www.iea.org/t&c/termsandconditions/>

NOTES ON CHARTS AND MAPS

Tables

- The share of fuels in power generation for the previous year corresponds to the latest available year of annual data for the given granularity.

Chart Types

Electricity Production Chart

- Compares the evolution of total electricity production against the latest decade of historical data as well as the previous year.

Net Exports Chart

- Compares the evolution of net exports (exports - imports) of electricity against the latest decade of historical data as well as the previous year.

Electricity Production by Fuel Chart

- Shows the power fuel mix since January two years before the current year (25-36 months depending on the publication month).
- In this context, "Other Comb." includes Other Combustibles, Combustible Renewables and Oil.
- In this context, "Other" includes Geothermal, Other Renewables, Non Specified.
- Countries with an estimated combustibles' breakdown have a generic "Combustibles" category in this chart.

Low-carbon Power Chart

- Depicts low-carbon power generation for the year-to-date, the same period the last year as well as two years before. Also shows full year figures for the previous two years.
- When relevant, nuclear generation will be shown.
- In this context, "All Other Ren" includes Geothermal, Other Renewables and Combustible Renewables.

Electricity Production Variation Chart

- A waterfall chart showing how one can reach the electricity generation of the year-to-date having as a starting point the electricity generation of the same period in the previous year.
- In the case that coal and natural gas are only estimated, the waterfall chart for these categories will show no change and they will be aggregated under Other Non-Ren.

Fuel Switching Chart

- A chart comparing head-to-head two fuels (e.g. Natural Gas vs. Coal) or fuel categories (e.g. Renewables vs. Non-Renewables) and their 10 year ranges as well as the previous year.

Maps

- The maps in this report are solely for illustrative purposes and currently cover OECD Europe.
- No electricity trade takes place in OECD Asia Oceania countries.
- **Map 1:** Electricity Trade by country in the current month year versus the same month last year.
- **Map 2:** Electricity Trade by country Year-to-Date versus the same period last year.
- Iceland is not displayed in the OECD Europe maps as it does not trade electricity.

COUNTRY NOTES

Monthly Electricity Statistics is consistent with historical annual data.

Please refer to Principles and Definitions.

For certain countries the most recent data may be estimated. See below for details.

Please note that all IEA data are subject to the following Terms and Conditions found on the IEA's website: <http://www.iea.org/t&c/termsandconditions/>

AUSTRALIA

Excludes the overseas territories.

Monthly data are adjusted according to data submitted on a fiscal year basis beginning 1st of July and ending 31st of June.

Monthly reporting did not include production from other combustible fuels, therefore it is estimated by the IEA Secretariat based on annual submission since January 2009.

Monthly reporting did not include production from solar, therefore it is estimated by the IEA Secretariat based on annual submission since January 2004 until December 2015.

Monthly reporting did not include production from wind, therefore it was estimated by the IEA Secretariat based on annual submission from January until December 2004 until December 2015.

Annual data shown are the sum of months and may differ from publications referring to Australian fiscal year (July-June).

AUSTRIA

Monthly reporting does not include production from geothermal, therefore it is estimated by the IEA Secretariat based on annual submission since January 2003.

Monthly reporting does not include production from solar, therefore it is estimated by the IEA Secretariat based on annual submission since January 2003.

Monthly reporting does not include production from other non combustible fuels, therefore it is estimated by the IEA Secretariat based on annual submission since January 2003.

BELGIUM

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2005 until December 2005.

Monthly reporting did not include production from other non combustible fuels, therefore it is estimated by the IEA Secretariat based on annual submission from January 2005 to December 2013.

CANADA

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2000 until August 2011.

Monthly reporting did not include production from wind, therefore it was estimated by the IEA Secretariat based on annual submission from January 2000 until December 2007.

Monthly reporting did not include production from other non combustible fuels, therefore it was estimated by the IEA Secretariat based on annual submission from January 2000 until December 2007.

Continually increasing levels of wind and solar coverage since January 2017 until December 2018.

New methodology and higher coverage since April 2019 (starting with MES January 2019 publication). Reviewed data back to January 2016.

CHILE

Net production is estimated from monthly submission of gross production until December 2010.

Monthly reporting does not include trade data, therefore they are estimated by the IEA Secretariat based on annual submission.

Annual data for 2014 were estimated by the IEA Secretariat.

Chile was added to the MES report in February 2011. Historical data are available only from January 2006.

CZECH REPUBLIC

Monthly reporting did not include production from other non combustible fuels, therefore it was estimated by the IEA Secretariat based on annual submission from January 2004 until December 2008.

DENMARK

Excludes the Faroe Islands and Greenland.

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2003 until December 2010.

Monthly reporting did not include production from other non combustible fuels, therefore it was estimated by the IEA Secretariat based on annual submission from January 2003 until December 2004.

ESTONIA

Net production is estimated from monthly submission of gross production by the IEA Secretariat.

Estonia was added to the MES report in April 2011. Historical data are available only from January 2006.

FINLAND

Monthly reporting does not include production from solar, therefore it is estimated by the IEA Secretariat based on annual submission since January 2000.

Monthly reporting does not include production from other non combustible fuels, therefore it is estimated by the IEA Secretariat based on annual submission from January 2000.

FRANCE

Includes Monaco. Since January 2018 it includes the French overseas territories: French Polynesia, Guadeloupe, Guyane, Martinique, New Caledonia, Reunion, Saint Pierre and Miquelon.

Monthly reporting does not include production from solar, therefore it is estimated by the IEA Secretariat based on annual submission since January 2000.

Monthly reporting does not include production from other non combustible fuels, therefore it is estimated by the IEA Secretariat based on annual submission since January 2000.

Monthly reporting did not include production from wind, therefore it was estimated by the IEA Secretariat based on annual submission from January 2000 until December 2004.

GERMANY

Combustible Fuels production is estimated from monthly submissions of production from main electricity producers.

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2000 until December 2001.

Monthly reporting did not include production from wind, therefore it was estimated by the IEA Secretariat based on annual submission from January 2000 until December 2001.

Due to an increase in survey coverage since January 2017, the level of production and the growth rate shown may be different than actual.

GREECE

Monthly reporting did not include production from other combustible fuels, therefore it was estimated by the IEA Secretariat based on annual submission from January 2008 until December 2009.

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2004 until December 2010.

Monthly reporting did not include production from wind, therefore it was estimated by the IEA Secretariat based on annual submission from January 2003 until December 2007.

HUNGARY

Net production was estimated from monthly submission of gross production through December 2015.

Monthly reporting does not include production from oil, therefore it is estimated by the IEA Secretariat based on annual submission since January 2009.

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2008 until December 2010.

Monthly reporting did not include production from wind, therefore it was estimated by the IEA Secretariat based on annual submission from January 2003 until December 2005.

ICELAND

Net production has been estimated from monthly submission of gross production through December 2015 by the IEA Secretariat.

IRELAND

Monthly reporting did not include production from wind, therefore it was estimated by the IEA Secretariat based on annual submission from January until December 2001.

ITALY

Includes San Marino and the Vatican.

Monthly reporting does not include production from other non combustible fuels, therefore it is estimated by the IEA Secretariat based on annual submission since January 2005.

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2005 until December 2009.

Monthly reporting did not include production from wind, therefore it was estimated by the IEA Secretariat based on annual submission from January 2005 until December 2009.

JAPAN

Monthly data are adjusted according to data submitted on a fiscal year basis beginning 1st of April and ending 31st of March.

Net production is estimated from monthly submission of gross production of main electricity producers.

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2000 until December 2002.

Annual data shown are the sum of months and may differ from publications referring to Japanese fiscal year (April-March).

Since April 2017 electricity generation from biomass and was reported in the coal category if it's co-fired with this fuel, and in combustible renewables if the combustion is mono-fuel.

Since April 2017 coal category included coal, bituminous mixture, natural gas (other than LNG), coke-oven gas and city gas.

Hydro generation includes plants with capacity of 1MW and over.

KOREA

Net production is estimated from monthly submission of gross production by the IEA Secretariat.

Monthly reporting of electricity production does not include autoproducers, therefore it is estimated by the IEA Secretariat based on annual submission.

Monthly reporting does not include production from wind, therefore it is estimated by the IEA Secretariat based on annual submission since January 2004.

Monthly reporting does not include production from solar, therefore it is estimated by the IEA Secretariat based on annual submission since January 2004.

Monthly reporting does not include production from other non combustible fuels, therefore it is estimated by the IEA Secretariat based on annual submission since January 2004.

LATVIA

Latvia was added to the MES report in January 2017. Historical data are available only from January 2010.

The strong hydro performance in 2017-2018 agrees with historical patterns and is due to environmental reasons, most notably the increased inflow in the Daugava River.

LITHUANIA

Monthly data available since January 2008.

LUXEMBOURG

Monthly reporting does not include production from solar, therefore it is estimated by the IEA Secretariat based on annual submission since January 2003.

Production data for March 2018 are estimated by the IEA Secretariat.

The Twinerg CCGT plant has been idle since April 2016 and was decommissioned in October 2016. This has caused decreased production from combustible fuels and, consequently, a decrease in exports.

MEXICO

Monthly reporting of electricity production does not include autoproducers, therefore it is estimated by the IEA Secretariat based on annual submission.

Monthly reporting does not include production from solar, therefore it is estimated by the IEA Secretariat based on annual submission from January 2003 - December 2013.

Monthly reporting does not include production from wind, therefore it is estimated by the IEA Secretariat based on annual submission from January 2003 - December 2013. Since December 2018 the data submission includes wind data, so it is no longer estimated.

Installations under 500 kW are not included in the reporting data, therefore it is estimated by the IEA Secretariat based on annual submission.

Electricity trade data is estimated by Mexico administration. It may be inconsistent with US data flows. This data is currently under review.

In December 2018 a new data source was used by Mexico and some data are under review and improvement, therefore 2017 and 2018 data may be inconsistent with previous publications.

NETHERLANDS

Excludes Suriname and the territory of the Former Netherlands Antilles.

Monthly reporting does not include production from other non combustible fuels, therefore it is estimated by the IEA Secretariat based on annual submission since January 2000.

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2000 until December 2009.

There was no nuclear production in May and June 2017 due to plant maintenance. The nuclear production resumed in July 2017.

NEW ZEALAND

Monthly submissions only include main electricity producers, which supposes a 95% coverage. The rest of the electricity generation is estimated by the IEA Secretariat based on the annual submissions.

Monthly reporting does not include production from other non combustible fuels, therefore it is estimated by the IEA Secretariat based on annual submission since January 2002.

NORWAY

Net production is estimated from monthly submission of gross production through December 2015 by the IEA Secretariat.

Monthly reporting does not include production from other non combustible fuels, therefore it is estimated by the IEA Secretariat based on annual submission since January 2003.

Natural gas figures for May and June 2018 are confidential.

POLAND

Monthly reporting does not include production from oil, therefore it is estimated by the IEA Secretariat based on annual submission since January 2009 until December 2016.

Oil figures are confidential since January 2017.

PORTUGAL

Includes the Açores and Madeira since January 2015.

Monthly reporting did not include production from geothermal, therefore it is estimated by the IEA Secretariat based on annual submission since January 2004 until December 2014.

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2004 until December 2008.

Monthly reporting did not include production from wind, therefore it was estimated by the IEA Secretariat based on annual submission from January 2004 until December 2008.

SLOVAK REPUBLIC

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission since January 2010 until December 2016.

Monthly reporting does not include production from wind, therefore it is estimated by the IEA Secretariat based on annual submission since January 2003.

Monthly reporting does not include production from other non combustible fuels, therefore it is estimated by the IEA Secretariat based on annual submission since January 2003.

SLOVENIA

Slovenia was added to the MES report in April 2011. Historical data are available only from January 2009.

SPAIN

Includes the Canary Islands, Balear Islands, Ceuta and Melilla.

Monthly reporting did not include production from other non combustible fuels, therefore it was estimated by the IEA Secretariat based on annual submission since January 2004 until December 2015.

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2004 until December 2008.

SWEDEN

Monthly reporting does not include production from solar, therefore it is estimated by the IEA Secretariat based on annual submission since January 2000.

SWITZERLAND

Excludes Liechtenstein.

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2003 until December 2009.

Monthly reporting did not include production from wind, therefore it was estimated by the IEA Secretariat based on annual submission from January 2003 until December 2009.

In 2016 and 2017 a small nuclear power plant was out-of-order in the second half of the year, and restarted in March 2018. In addition, a big nuclear power plant had in the second half of 2016 and 2017 a longer revision period in contrast to the normal revision in 2018.

TURKEY

Monthly submission does not include production from other non combustible fuels, therefore it is estimated by the IEA Secretariat.

UNITED KINGDOM

Monthly reporting does not include production from other combustible fuels, therefore it is estimated by the IEA Secretariat based on annual submission since January 2001.

Monthly reporting did not include production from solar, therefore it is estimated by the IEA Secretariat based on annual submission from January 2001 until December 2009.

Monthly reporting did not include production from wind, therefore it was estimated by the IEA Secretariat based on annual submission from January 2001 until December 2006.

Monthly reporting did not include exports, therefore they were estimated by the IEA Secretariat based on annual submission from January 2001 until December 2002.

UNITED STATES

Includes the 50 States, the District of Columbia and Puerto Rico.

Monthly reporting did not include production from geothermal, therefore it was estimated by the IEA Secretariat based on annual submission from January 2003 until December 2005.

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2003 until December 2005.

Monthly reporting did not include production from wind, therefore it was estimated by the IEA Secretariat based on annual submission from January 2003 until December 2005.

Monthly reporting did not include production from other non combustible fuels, therefore it was estimated by the IEA Secretariat based on annual submission from January 2003 until December 2005.

Electricity trade data has been estimated by the U.S. administration since July 2017. It may be inconsistent with the trade data from Mexico. This data is currently under review.

Overall responsibility

Mr. Julian Prime

Statistics

Ms. Laura Mari Martínez
Ms. Mathilde Daugy

Contacts:

International Energy Agency
Energy Data Centre
Coal, Renewables, Electricity & Heat Statistics Section
31-35, rue de la Fédération
75739 PARIS Cedex 15
France

☎ +33 (0)1 40 57 65 88

✉ CES@iea.org

Media Enquiries:

IEA Press Office

☎ +33 (0)1 40 57 65 54

✉ ieapressoffice@iea.org

This document can be downloaded free of charge at:
<https://www.iea.org/statistics/monthly/>

Published on the 15th of each month.

2019