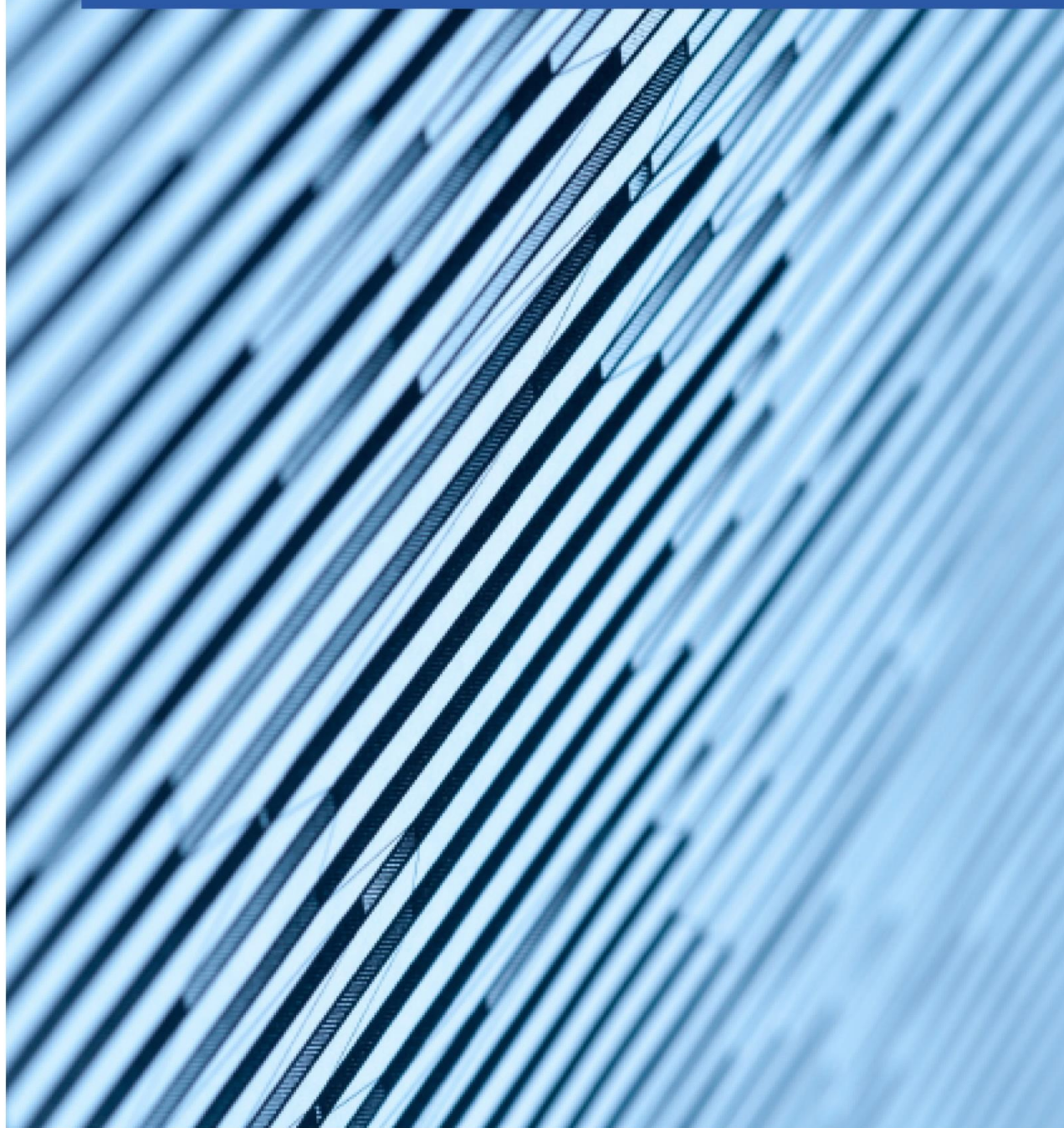


statistics

Monthly electricity statistics



iea

With data up to:
August 2019

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MONTHLY ELECTRICITY STATISTICS

August 2019

HIGHLIGHTS

OECD

- In August 2019, electricity production was 924.0 TWh and fell by 3.0% compared to July 2019 and was 3.1% lower than in August 2018.
- Renewable production increased by 4.5% compared to August 2018 and accounted for 25.6% of total net production, reaching 236.6 TWh. Over the period January-August 2019, renewable production was up by 2.5% compared to the same period in 2018.
- Conventional thermal production in the Year-to-Date was down by 4.9%, and coal production fell by 13.1%. Natural gas electricity production rose by 3.0%, reaching 2 016.2 TWh. Together coal and natural gas accounted for half of the electricity generated over the period January-August 2019.

OECD Americas

- Net production in August 2019 decreased by 1.9% compared to August 2018. Solar production increased by 21.8% compared to August 2018, reaching 13.1 TWh. Renewables accounted for one fifth of the electricity production.
- In Canada, nuclear production increased by 1 078 GWh compared to August 2018, reaching a historical maximum of 9 559 TWh, with a share of 18.7%. This increase compensated a drop of 956 GWh in hydroelectric production, down by 3.3% compared to August 2018.
- In the United States, natural gas production reached a historical maximum in August 2019, with a production of 172 003 GWh for a share of 42.3%. From January to August 2019, natural gas production increased by 6.5% whereas coal production decreased by 13.7% compared to the same period in 2018. Coal production was down by 18.0% compared to August 2018, as US power companies continue to retire coal-fired power plants and repower them with natural gas-fired technology.

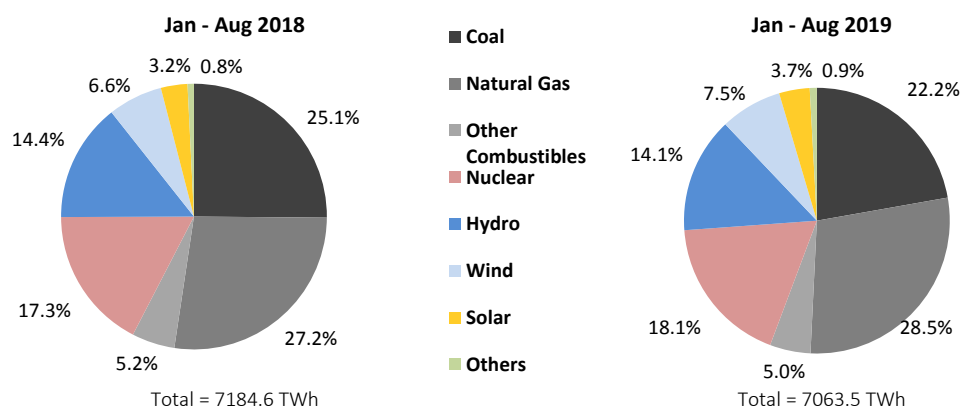
OECD Asia/Oceania

- Net electricity production was 154.8 TWh in August 2019, down by 2.5% compared to July 2019 and down by 10.2% compared to August 2018. Renewables production was 29.6 TWh, reaching 19.1% of the total electricity mix and was up by 4.3% compared to August 2018.
- In Australia, the Year-to-Date hydroelectric production decreased by 19.2% compared to 2018. Wind production on the other hand, increased by 22.8% over the same period, reaching a share of the total mix of 9.7% in August 2019, with a production of 2 080 GWh. The renewables share in the total electricity mix from January to August 2019 was 20.2%.

OECD Europe

- In August 2019, OECD Europe produced 273.2 TWh of electricity, 1.0% less than in August 2018. The total share of renewables accounted for 38.8% of the mix, with actual renewables production increasing 7.6% compared to August 2018.
- In Hungary, coal production was at a historical minimum of 301 GWh, representing a drop of 19.7% compared to July 2019 and of 25.7% compared to August 2018. Solar production more than doubled in 2019, as new capacity was added and connected. In August 2019, the solar production increase compensated the decrease in coal production.
- In the United Kingdom, wind and hydroelectric productions were up by 50.0% and 55.7% respectively compared to August 2018, due to beneficial weather conditions. The share of renewables in the electricity mix was 44.0% in August 2019, and was the highest recorded in over 2 years.
- In Lithuania, hydroelectric production peaked at 109 GWh in August 2019, with a share of 42.4% of the mix. This is due to an increase in pump storage production on the Kruonis Pumped Storage Hydroelectric Plant.

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

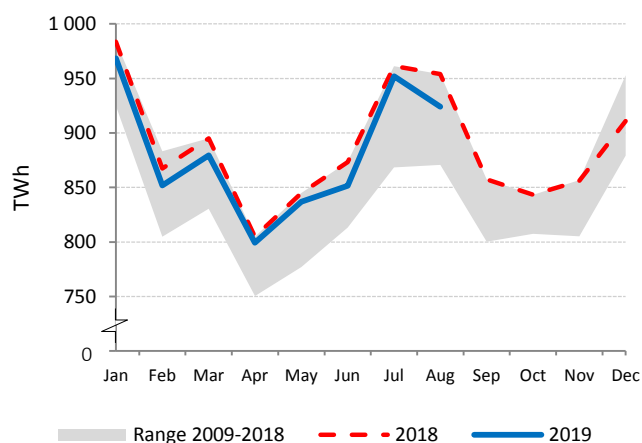


OECD Total

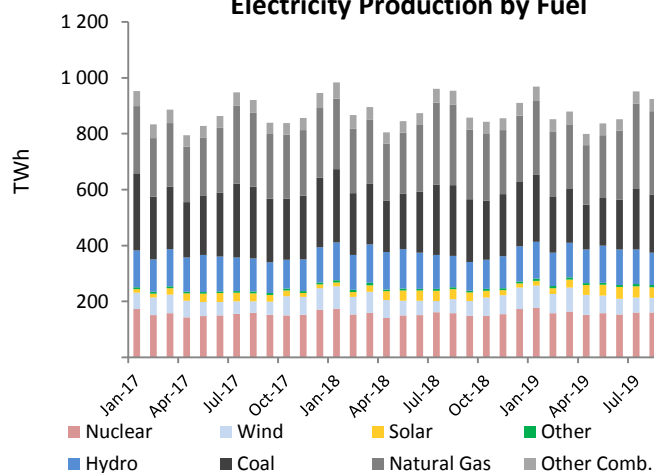
	Aug 2019				Year-to-Date			2018	
	TWh	change ¹	change ²	share	2019	2018	change ³	TWh	share
CONVENTIONAL THERMAL	549.3	-7.1%	-3.1%	59.5%	3 935.6	4 137.9	-4.9%	6 155.2	57.8%
Coal ⁵	208.5	-17.5%	-4.8%	22.6%	1 569.4	1 805.2	-13.1%	2 692.5	25.3%
Oil ⁵	15.3	-25.6%	-2.9%	1.7%	122.1	147.8	-17.4%	204.4	1.9%
Natural Gas ⁵	297.1	2.7%	-2.2%	32.2%	2 016.2	1 956.9	3.0%	2 914.0	27.4%
Combustible Renewables ⁵	25.0	5.5%	0.6%	2.7%	197.2	191.1	3.2%	289.2	2.7%
Other Combustibles ⁵	3.3	-27.8%	1.1%	0.4%	30.6	36.9	-16.9%	55.1	0.5%
Nuclear	159.5	1.2%	0.0%	17.3%	1 280.8	1 246.1	2.8%	1 869.9	17.6%
Hydro	115.9	2.7%	-5.9%	12.5%	993.0	1 035.2	-4.1%	1 483.4	13.9%
Wind	52.8	5.5%	-3.3%	5.7%	530.5	477.1	11.2%	739.1	6.9%
Solar	38.7	8.5%	-3.8%	4.2%	262.8	232.4	13.1%	319.7	3.0%
Geothermal	4.1	0.5%	-1.7%	0.4%	34.3	32.2	6.5%	49.0	0.5%
Other Renewables	0.1	-1.5%	-	0.0%	0.8	0.8	-1.5%	1.2	0.0%
Non-Specified	3.5	42.8%	-0.2%	0.4%	25.8	22.9	12.6%	34.4	0.3%
RENEWABLES	236.6	4.5%	-4.2%	25.6%	2 018.6	1 968.8	2.5%	2 881.6	27.1%
NON-RENEWABLES	687.4	-5.5%	-2.5%	74.4%	5 045.0	5 215.8	-3.3%	7 770.4	72.9%
TOTAL NET PRODUCTION	924.0	-3.1%	-3.0%		7 063.5	7 184.6	-1.7%	10 652.0	
+ Imports	39.5	-1.3%	-4.4%		327.5	329.9	-0.7%	490.2	
- Exports	39.5	3.6%	-4.1%		316.4	313.8	0.8%	473.9	
= ELECTRICITY SUPPLIED	924.0	-3.3%	-3.0%		7 074.6	7 200.8	-1.8%	10 668.3	
- Used for pumped storage ⁴	6.9	-12.3%	-1.7%		52.1	58.8	-11.3%	87.3	
- T&D Losses ⁴	57.0	-1.9%	-9.8%		457.4	470.9	-2.9%	689.3	
= ELECTRICITY CONSUMED	860.0	-3.3%	-2.5%		6 565.1	6 671.1	-1.6%	9 891.7	

¹ current month to month of last year change⁴ estimated for certain countries² month-to-month change⁵ the breakdown of conventional thermal is estimated from annual data for Canada, Estonia and Italy³ year-to-date compared to same period last year

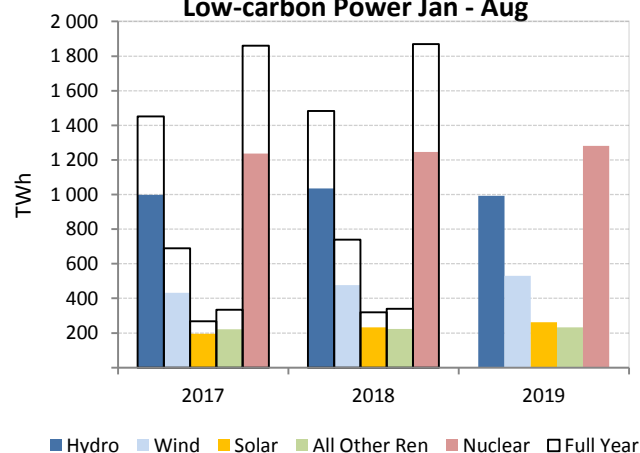
Electricity Production



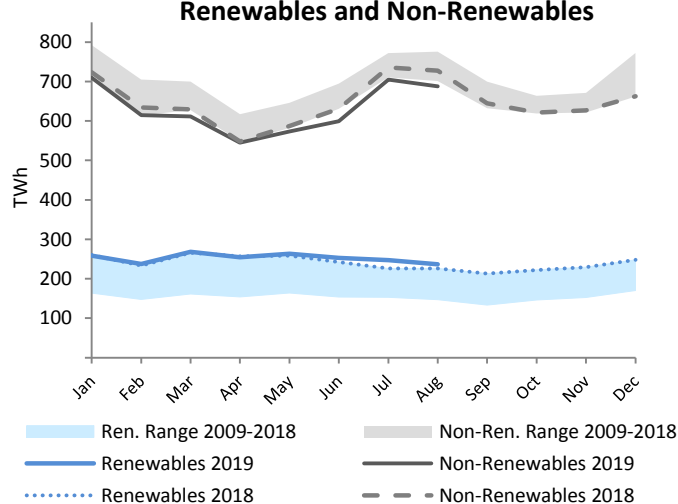
Electricity Production by Fuel



Low-carbon Power Jan - Aug



Renewables and Non-Renewables

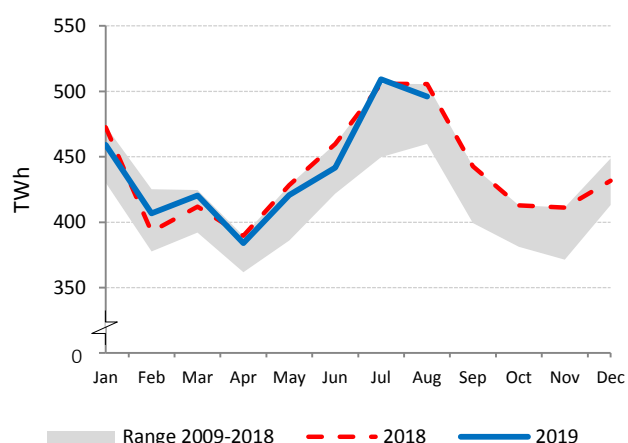


OECD Americas

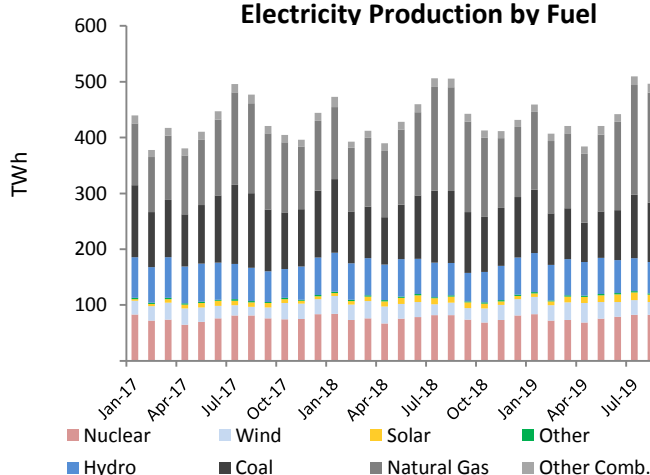
	Aug 2019				Year-to-Date			2018	
	TWh	change ¹	change ²	share	2019	2018	change ³	TWh	share
CONVENTIONAL THERMAL	318.7	-3.5%	-2.0%	64.3%	2 087.3	2 125.7	-1.8%	3 152.0	59.9%
Coal ⁵	106.0	-18.0%	-6.7%	21.4%	759.3	870.9	-12.8%	1 290.6	24.5%
Oil ⁵	8.2	2.1%	4.4%	1.6%	55.8	54.9	1.6%	79.0	1.5%
Natural Gas ⁵	197.2	6.2%	0.3%	39.8%	1 215.3	1 140.4	6.6%	1 694.8	32.2%
Combustible Renewables ⁵	6.4	-3.1%	-0.1%	1.3%	50.4	53.0	-4.9%	77.8	1.5%
Other Combustibles ⁵	0.9	8.3%	10.3%	0.2%	6.5	6.6	-0.8%	9.9	0.2%
Nuclear	82.3	0.5%	-0.1%	16.6%	617.1	618.8	-0.3%	915.7	17.4%
Hydro	56.3	-2.4%	-4.7%	11.3%	498.1	514.8	-3.2%	748.1	14.2%
Wind	23.3	3.1%	-12.1%	4.7%	231.0	217.3	6.3%	320.3	6.1%
Solar	13.1	21.8%	-4.4%	2.6%	86.6	72.1	20.1%	102.3	1.9%
Geothermal	1.8	-1.1%	-2.8%	0.4%	14.6	14.1	3.2%	21.4	0.4%
Other Renewables	-	-	-	-	0.0	0.0	-92.7%	0.0	0.0%
Non-Specified	0.5	39.9%	7.9%	0.1%	3.4	3.6	-3.8%	5.2	0.1%
RENEWABLES	100.9	1.4%	-6.1%	20.3%	880.6	871.3	1.1%	1 270.0	24.1%
NON-RENEWABLES	395.1	-2.7%	-1.6%	79.7%	2 657.5	2 695.1	-1.4%	3 995.1	75.9%
TOTAL NET PRODUCTION	496.1	-1.9%	-2.6%		3 538.1	3 566.4	-0.8%	5 265.0	
+ Imports	7.0	5.4%	-2.8%		49.9	53.3	-6.5%	73.7	
- Exports	7.6	7.6%	3.3%		50.0	53.5	-6.7%	77.6	
= ELECTRICITY SUPPLIED	495.5	-1.9%	-2.7%		3 538.0	3 566.2	-0.8%	5 261.1	
- Used for pumped storage ⁴	2.9	-16.6%	-8.9%		18.2	19.3	-5.9%	27.6	
- T&D Losses ⁴	32.9	0.7%	-13.2%		253.5	256.0	-1.0%	366.4	
= ELECTRICITY CONSUMED	459.7	-2.0%	-1.8%		3 266.3	3 290.9	-0.7%	4 867.1	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year⁴ estimated for certain countries⁵ the breakdown of conventional thermal is estimated from annual data for Canada⁶ Canadian production decreased in 2019 to reach around 1 GWh in total

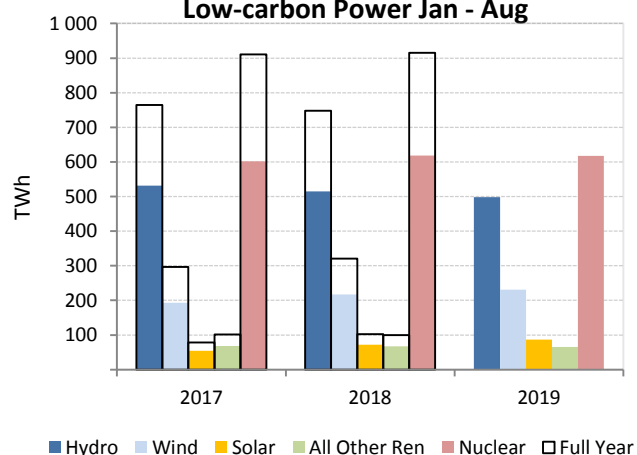
Electricity Production



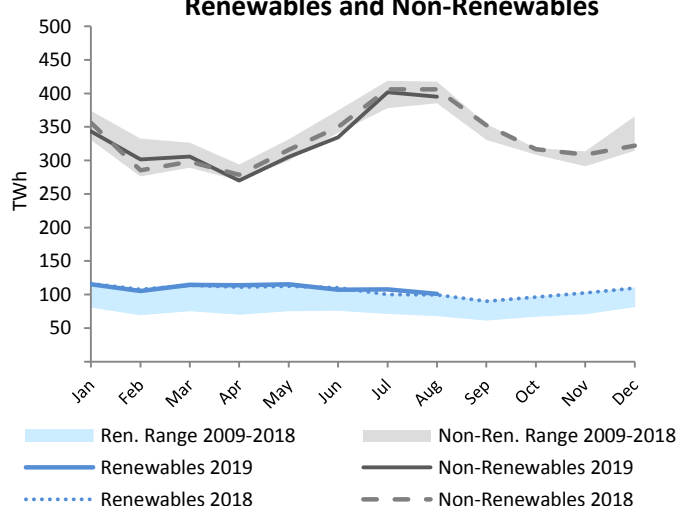
Electricity Production by Fuel



Low-carbon Power Jan - Aug



Renewables and Non-Renewables

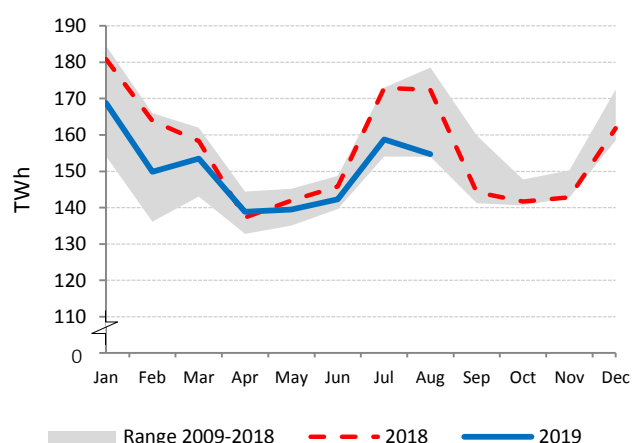


OECD Asia Oceania

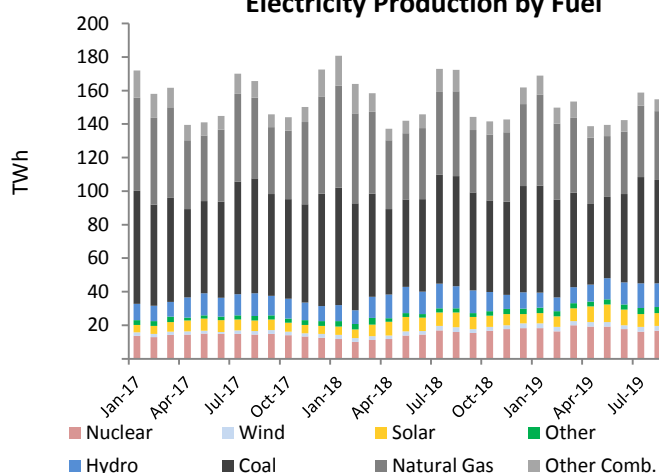
	Aug 2019				Year-to-Date			2018	
	TWh	change ¹	change ²	share	2019	2018	change ³	TWh	share
CONVENTIONAL THERMAL	109.8	-14.9%	-3.5%	71.0%	859.8	966.1	-11.0%	1 398.4	75.0%
Coal	61.7	-5.9%	-2.5%	39.9%	452.6	484.2	-6.5%	716.4	38.4%
Oil	3.1	-63.4%	-20.6%	2.0%	35.3	61.7	-42.8%	78.4	4.2%
Natural Gas	41.0	-19.0%	-3.7%	26.5%	341.2	386.2	-11.6%	553.0	29.7%
Combustible Renewables	3.9	45.0%	1.5%	2.5%	25.4	20.6	23.7%	30.8	1.7%
Other Combustibles	0.1	-95.4%	2.6%	0.0%	5.2	13.4	-61.1%	19.8	1.1%
Nuclear	16.7	3.7%	3.6%	10.8%	143.3	106.2	34.9%	174.4	9.4%
Hydro	14.1	7.0%	-4.5%	9.1%	91.4	101.4	-9.8%	144.4	7.7%
Wind	2.9	8.8%	2.1%	1.9%	21.8	18.9	15.2%	28.7	1.5%
Solar	7.7	-13.0%	-0.6%	5.0%	64.9	59.1	9.8%	85.3	4.6%
Geothermal	0.8	0.7%	0.9%	0.5%	6.5	6.4	2.1%	9.7	0.5%
Other Renewables	0.0	-	-	0.0%	0.3	0.3	-	0.5	0.0%
Non-Specified	2.6	64.7%	-1.7%	1.7%	18.3	15.1	21.8%	22.8	1.2%
RENEWABLES	29.6	4.3%	-1.9%	19.1%	210.4	206.7	1.8%	299.3	16.1%
NON-RENEWABLES	125.2	-13.1%	-2.7%	80.9%	996.0	1 066.8	-6.6%	1 564.8	83.9%
TOTAL NET PRODUCTION	154.8	-10.2%	-2.6%		1 206.4	1 273.5	-5.3%	1 864.1	
+ Imports	-	-	-		-	-	-	-	
- Exports	-	-	-		-	-	-	-	
= ELECTRICITY SUPPLIED	154.8	-10.2%	-2.6%		1 206.4	1 273.5	-5.3%	1 864.1	
- Used for pumped storage ⁴	1.0	-34.7%	-7.4%		7.9	11.0	-27.8%	16.4	
- T&D Losses ⁴	5.4	-21.2%	-5.9%		40.7	51.9	-21.5%	76.4	
= ELECTRICITY CONSUMED	148.3	-9.5%	-2.4%		1 157.8	1 210.7	-4.4%	1 771.3	

¹ current month to month of last year change⁴ estimated for certain countries² month-to-month change³ year-to-date compared to same period last year

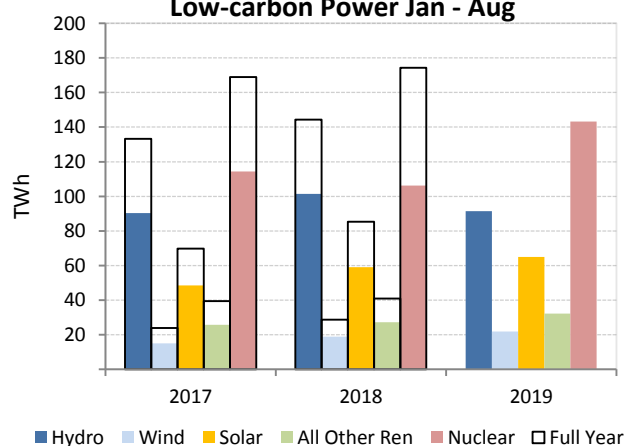
Electricity Production



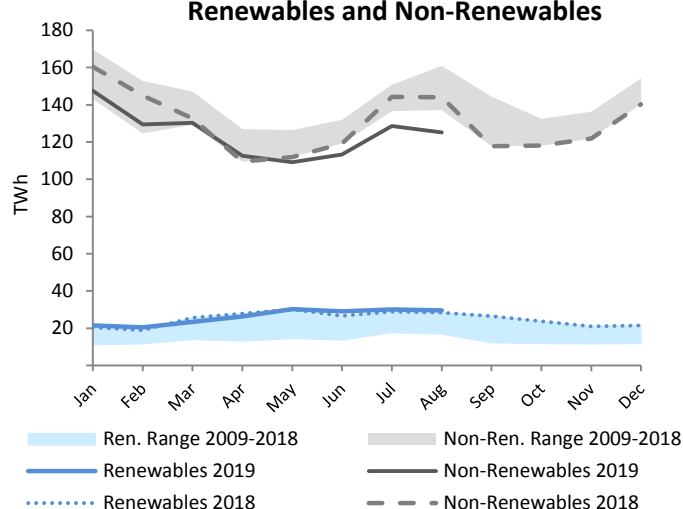
Electricity Production by Fuel



Low-carbon Power Jan - Aug



Renewables and Non-Renewables

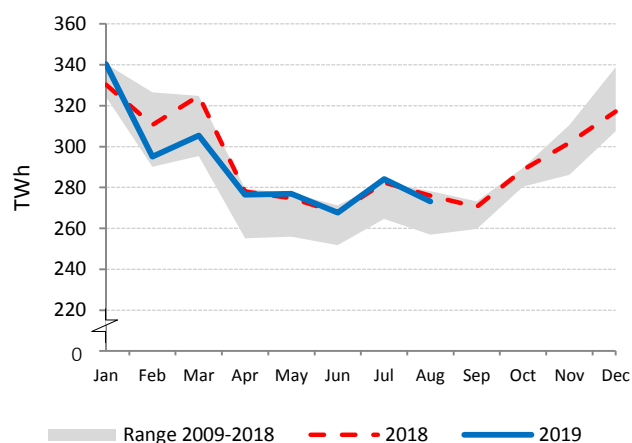


OECD Europe

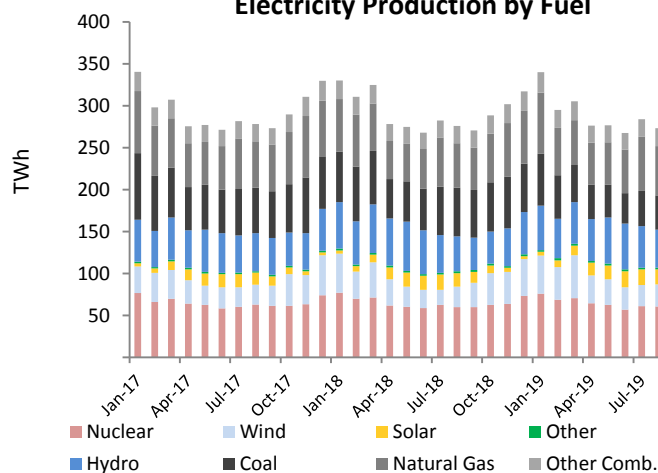
	Aug 2019				Year-to-Date			2018	
	TWh	change ¹	change ²	share	2019	2018	change ³	TWh	share
CONVENTIONAL THERMAL	120.8	-8.2%	-5.5%	44.2%	988.4	1 046.0	-5.5%	1 604.9	45.6%
Coal ⁵	40.9	-29.6%	-3.3%	15.0%	357.4	450.1	-20.6%	685.6	19.5%
Oil ⁵	4.0	-1.0%	0.4%	1.5%	31.0	31.1	-0.5%	47.0	1.3%
Natural Gas ⁵	58.9	11.1%	-8.8%	21.5%	459.7	430.3	6.8%	666.2	18.9%
Combustible Renewables ⁵	14.7	2.1%	0.7%	5.4%	121.4	117.5	3.3%	180.6	5.1%
Other Combustibles ⁵	2.3	8.0%	-2.3%	0.8%	18.9	16.9	11.9%	25.5	0.7%
Nuclear	60.5	1.4%	-0.8%	22.2%	520.4	521.1	-0.1%	779.9	22.1%
Hydro	45.5	8.5%	-7.8%	16.7%	403.5	419.0	-3.7%	590.9	16.8%
Wind	26.5	7.4%	5.4%	9.7%	277.7	241.0	15.2%	390.2	11.1%
Solar	17.8	11.4%	-4.7%	6.5%	111.3	101.1	10.0%	132.1	3.7%
Geothermal	1.5	2.5%	-1.9%	0.5%	13.2	11.7	13.1%	17.9	0.5%
Other Renewables	0.1	-	-	0.0%	0.5	0.5	-	0.7	0.0%
Non-Specified	0.5	-14.8%	0.6%	0.2%	4.0	4.3	-6.0%	6.4	0.2%
RENEWABLES	106.1	7.6%	-3.0%	38.8%	927.6	890.8	4.1%	1 312.3	37.3%
NON-RENEWABLES	167.1	-5.9%	-4.4%	61.2%	1 391.5	1 453.8	-4.3%	2 210.5	62.7%
TOTAL NET PRODUCTION	273.1	-1.0%	-3.8%		2 319.1	2 344.7	-1.1%	3 522.9	
+ Imports	32.5	-2.7%	-4.8%		277.6	276.6	0.4%	416.5	
- Exports	31.9	2.7%	-5.7%		266.4	260.2	2.4%	396.2	
= ELECTRICITY SUPPLIED	273.7	-1.6%	-3.7%		2 330.3	2 361.0	-1.3%	3 543.1	
- Used for pumped storage ⁴	3.0	6.1%	9.1%		26.0	28.5	-8.6%	43.4	
- T&D Losses ⁴	18.8	0.6%	-4.5%		163.2	163.1	0.1%	246.5	
= ELECTRICITY CONSUMED	252.0	-1.9%	-3.8%		2 141.0	2 169.5	-1.3%	3 253.3	

¹ current month to month of last year change⁴ estimated for certain countries² month-to-month change⁵ the breakdown of conventional thermal is estimated from annual data for Estonia and Italy³ year-to-date compared to same period last year

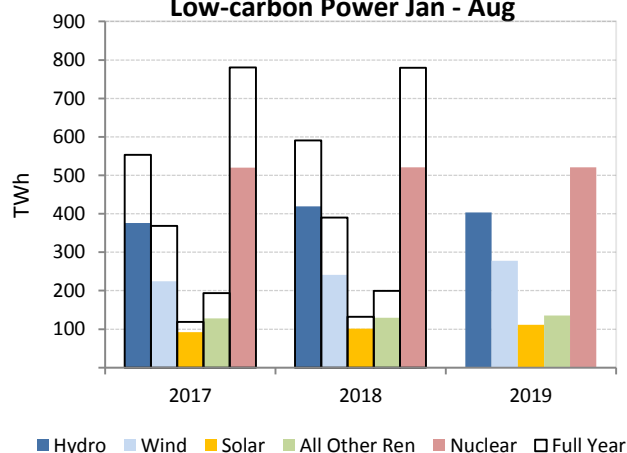
Electricity Production



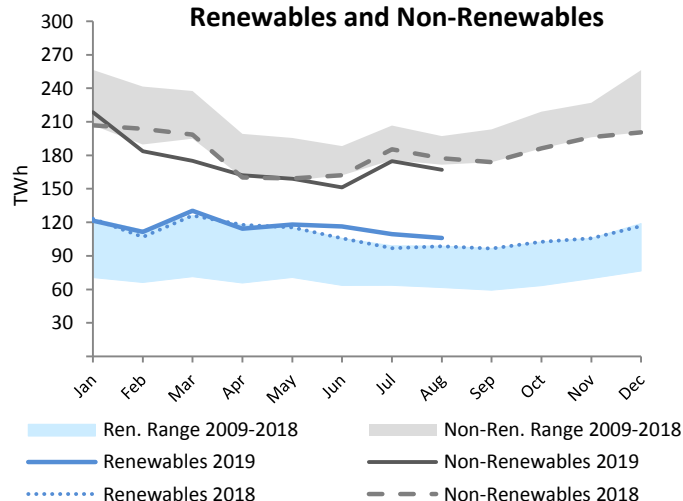
Electricity Production by Fuel



Low-carbon Power Jan - Aug



Renewables and Non-Renewables

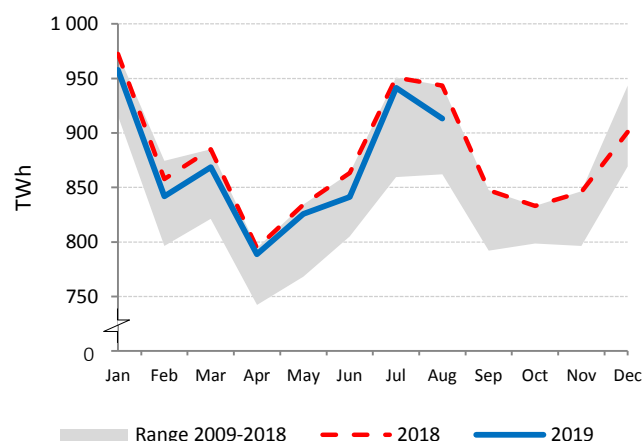


IEA Total

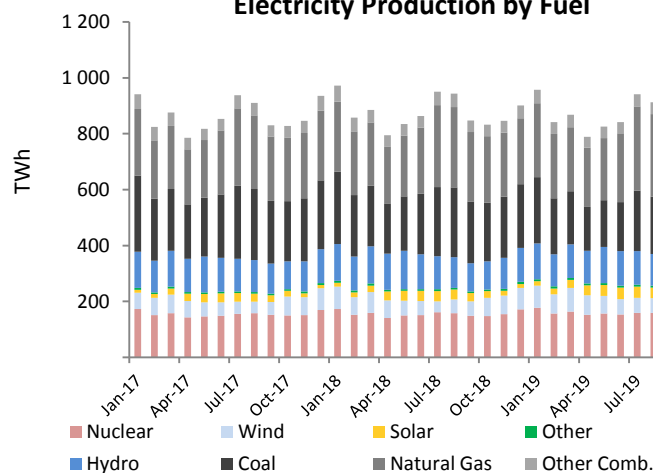
	Aug 2019				Year-to-Date			2018	
	TWh	change ¹	change ²	share	2019	2018	change ³	TWh	share
CONVENTIONAL THERMAL	544.0	-7.1%	-3.1%	59.6%	3 892.4	4 098.2	-5.0%	6 099.2	57.9%
Coal ⁵	206.0	-17.4%	-4.7%	22.6%	1 547.9	1 783.3	-13.2%	2 660.8	25.3%
Oil ⁵	14.5	-28.5%	-6.5%	1.6%	118.4	146.7	-19.3%	202.9	1.9%
Natural Gas ⁵	295.6	2.7%	-2.1%	32.4%	2 002.7	1 945.2	3.0%	2 898.5	27.5%
Combustible Renewables ⁵	24.5	6.3%	0.6%	2.7%	192.8	186.1	3.6%	282.0	2.7%
Other Combustibles ⁵	3.3	-27.8%	1.1%	0.4%	30.6	36.8	-16.9%	55.1	0.5%
Nuclear	159.0	1.2%	0.0%	17.4%	1 276.8	1 242.6	2.7%	1 864.4	17.7%
Hydro	112.5	2.4%	-6.3%	12.3%	967.0	1 006.0	-3.9%	1 438.8	13.7%
Wind	52.2	5.2%	-3.3%	5.7%	526.3	474.2	11.0%	734.3	7.0%
Solar	38.2	8.2%	-4.1%	4.2%	258.9	229.1	13.0%	314.3	3.0%
Geothermal	3.6	1.1%	-1.7%	0.4%	30.2	28.2	7.3%	42.9	0.4%
Other Renewables	0.1	-1.5%	-	0.0%	0.8	0.8	-1.5%	1.2	0.0%
Non-Specified	3.5	44.0%	-0.2%	0.4%	25.8	22.8	13.4%	34.2	0.3%
RENEWABLES	231.1	4.3%	-4.5%	25.3%	1 976.1	1 924.4	2.7%	2 813.5	26.7%
NON-RENEWABLES	682.1	-5.5%	-2.5%	74.7%	5 002.2	5 177.5	-3.4%	7 715.8	73.3%
TOTAL NET PRODUCTION	913.2	-3.2%	-3.0%		6 978.3	7 101.9	-1.7%	10 529.3	
+ Imports	37.3	-1.8%	-4.2%		309.0	312.0	-1.0%	463.3	
- Exports	38.2	3.4%	-3.6%		304.5	302.1	0.8%	457.0	
= ELECTRICITY SUPPLIED	912.3	-3.4%	-3.0%		6 982.7	7 111.8	-1.8%	10 535.7	
- Used for pumped storage ⁴	6.8	-13.2%	-2.0%		51.5	58.2	-11.5%	86.4	
- T&D Losses ⁴	56.6	-1.8%	-9.9%		453.1	466.4	-2.8%	682.6	
= ELECTRICITY CONSUMED	849.0	-3.4%	-2.5%		6 478.1	6 587.2	-1.7%	9 766.7	

¹ current month to month of last year change⁴ estimated for certain countries² month-to-month change⁵ the breakdown of conventional thermal is estimated from annual data for Canada, Estonia, and Italy³ year-to-date compared to same period last year

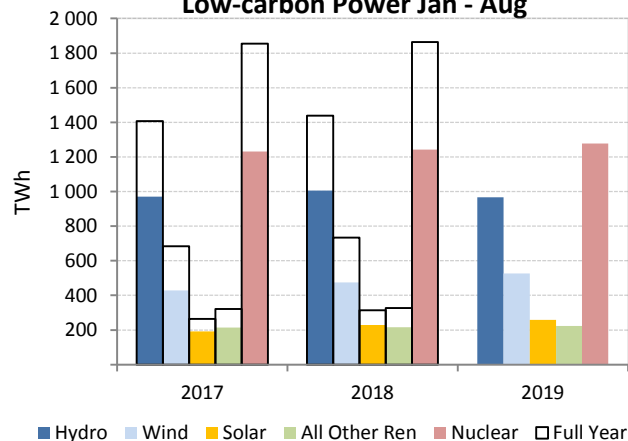
Electricity Production



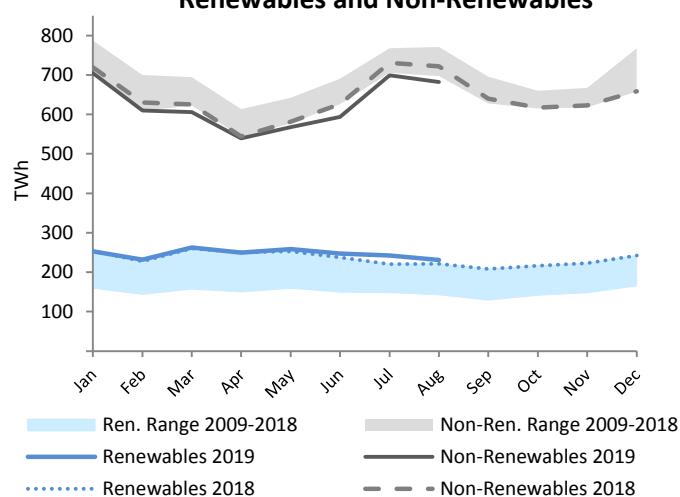
Electricity Production by Fuel



Low-carbon Power Jan - Aug



Renewables and Non-Renewables

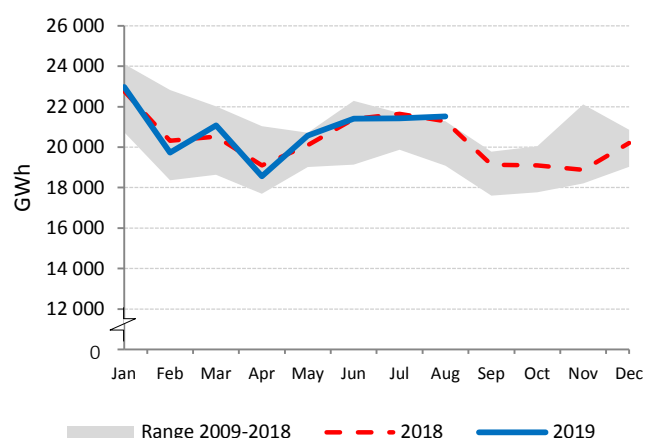


AUSTRALIA

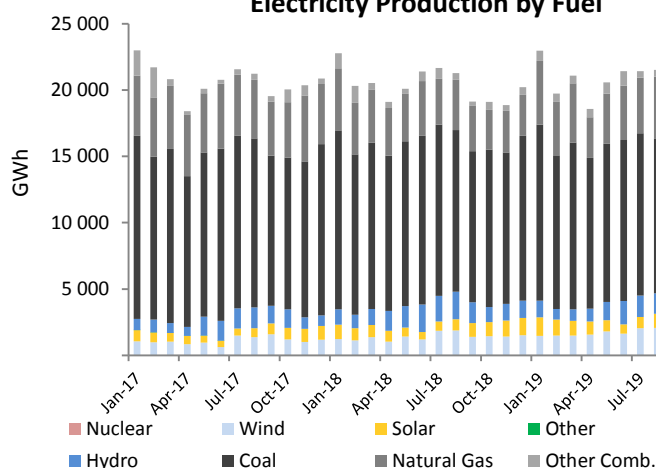
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	16 857	2.3%	-0.3%	78.3%	135 368	136 926	-1.1%	198 606	81.3%
Coal	11 687	-4.0%	-4.5%	54.3%	96 799	100 027	-3.2%	147 143	60.2%
Oil	278	15.4%	5.7%	1.3%	3 693	3 601	2.6%	4 484	1.8%
Natural Gas	4 662	22.8%	11.6%	21.7%	33 065	31 114	6.3%	43 778	17.9%
Combustible Renewables	230	-13.5%	-	1.1%	1 811	2 184	-17.1%	3 201	1.3%
Other Combustibles	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	1 523	-26.6%	-6.4%	7.1%	10 152	12 560	-19.2%	17 819	7.3%
Wind	2 080	11.5%	2.2%	9.7%	13 615	11 084	22.8%	16 870	6.9%
Solar	1 062	22.6%	25.1%	4.9%	8 129	6 534	24.4%	11 123	4.6%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	4 895	-3.5%	3.2%	22.7%	33 707	32 362	4.2%	49 013	20.1%
NON-RENEWABLES	16 627	2.6%	-0.3%	77.3%	133 557	134 742	-0.9%	195 405	79.9%
TOTAL NET PRODUCTION	21 522	1.1%	0.5%		167 264	167 104	0.1%	244 418	
+ Imports	-	-	-	-	-	-	-	-	-
- Exports	-	-	-	-	-	-	-	-	-
= ELECTRICITY SUPPLIED	21 522	1.1%	0.5%		167 264	167 104	0.1%	244 418	
- Used for pumped storage ⁴	39	30.0%	-7.1%		182	181	0.6%	257	
- T&D Losses ⁴	1 202	10.7%	-1.6%		8 666	9 624	-10.0%	13 581	
= ELECTRICITY CONSUMED	20 281	0.6%	0.6%		158 416	157 299	0.7%	230 580	

¹ current month to month of last year change⁴ estimated² month-to-month change³ year-to-date compared to same period last year

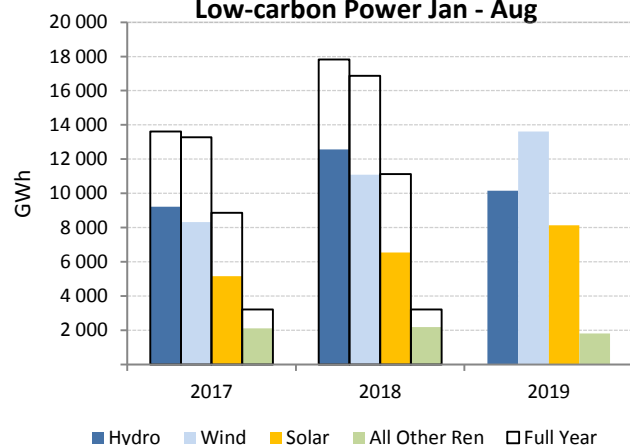
Electricity Production



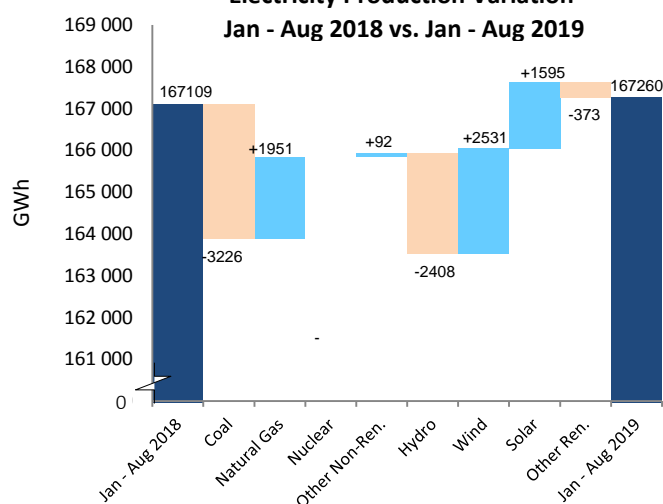
Electricity Production by Fuel



Low-carbon Power Jan - Aug



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

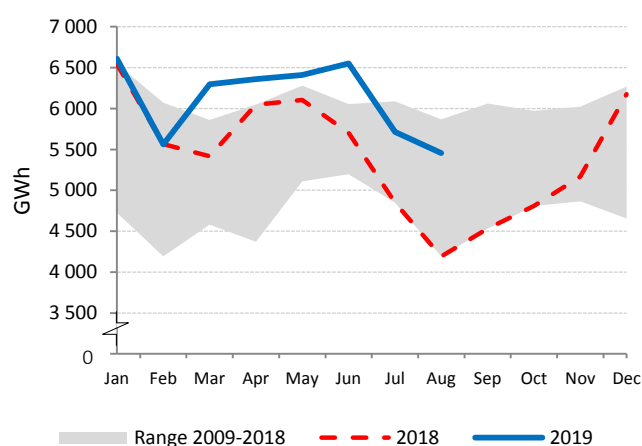


AUSTRIA

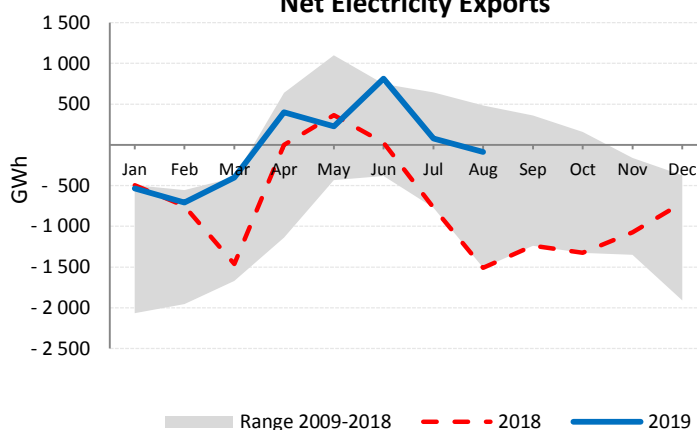
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	1 400	30.9%	4.4%	25.6%	12 268	11 238	9.2%	18 884	29.0%
Coal	140	28.1%	-52.3%	2.6%	2 244	2 049	9.6%	3 436	5.3%
Oil	61	-3.6%	3.9%	1.1%	462	484	-4.7%	681	1.0%
Natural Gas	751	68.3%	42.6%	13.8%	5 938	5 176	14.7%	9 409	14.5%
Combustible Renewables	389	-1.6%	-2.1%	7.1%	3 123	3 050	2.4%	4 656	7.2%
Other Combustibles	58	6.4%	-8.7%	1.1%	502	480	4.6%	702	1.1%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	3 603	34.6%	-7.5%	66.0%	30 927	28 642	8.0%	39 115	60.1%
Wind	296	2.8%	-4.7%	5.4%	4 704	3 477	35.3%	5 723	8.8%
Solar⁴	157	-	-3.9%	2.9%	1 054	1 054	-	1 364	2.1%
Geothermal	0	-	-	0.0%	0	0	-	0	0.0%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	1	-1.0%	-11.2%	0.0%	9	9	0.0%	12	0.0%
RENEWABLES	4 446	26.4%	-6.8%	81.5%	39 808	36 223	9.9%	50 859	78.1%
NON-RENEWABLES	1 011	50.0%	7.1%	18.5%	9 154	8 197	11.7%	14 241	21.9%
TOTAL NET PRODUCTION	5 457	30.2%	-4.5%		48 962	44 419	10.2%	65 100	
+ Imports	1 718	-33.6%	-6.3%		16 290	16 869	-3.4%	28 076	
- Exports	1 633	51.2%	-14.6%		16 075	12 271	31.0%	19 129	
= ELECTRICITY SUPPLIED	5 543	-2.8%	-1.6%		49 177	49 017	0.3%	74 046	
- Used for pumped storage	259	-28.9%	5.3%		2 999	3 125	-4.0%	5 116	
- T&D Losses	260	3.6%	-2.2%		2 198	2 219	-0.9%	3 348	
= ELECTRICITY CONSUMED	5 024	-1.2%	-1.9%		43 980	43 673	0.7%	65 582	

¹ current month to month of last year change⁴ estimated by the IEA secretariat² month-to-month change³ year-to-date compared to same period last year

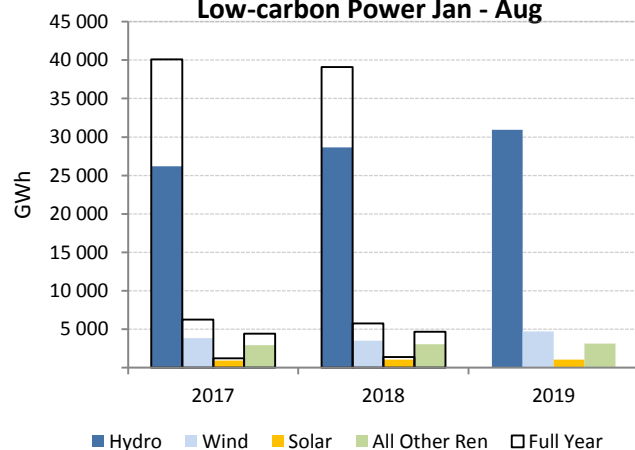
Electricity Production



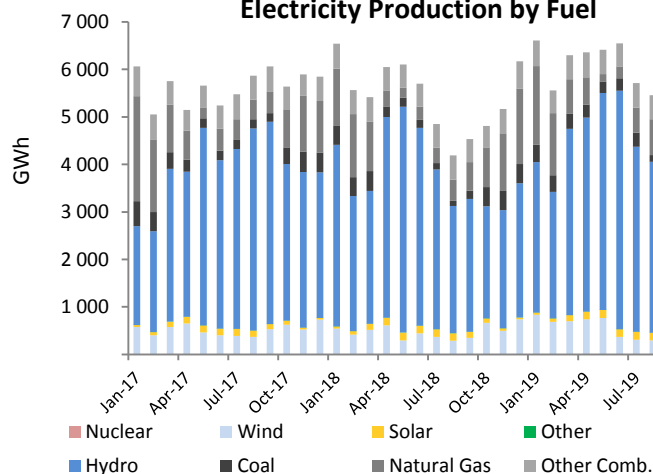
Net Electricity Exports



Low-carbon Power Jan - Aug

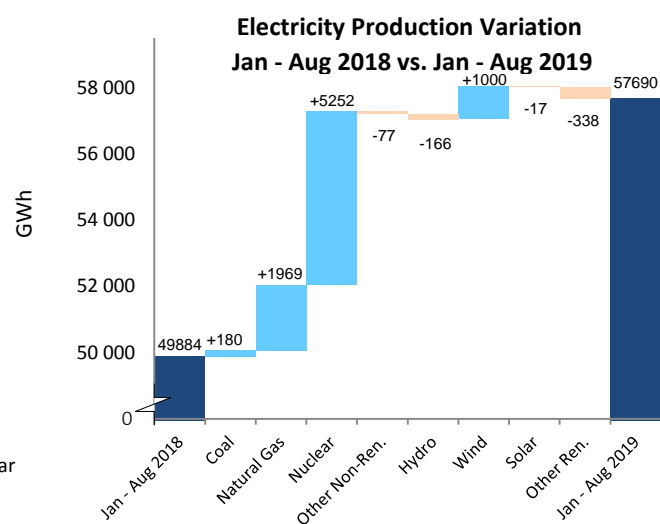
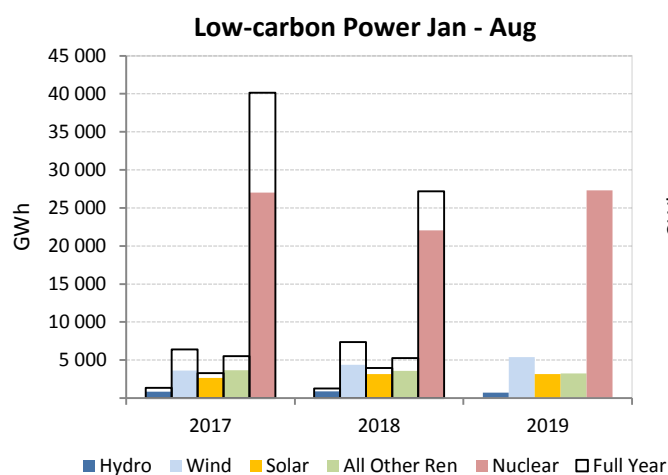
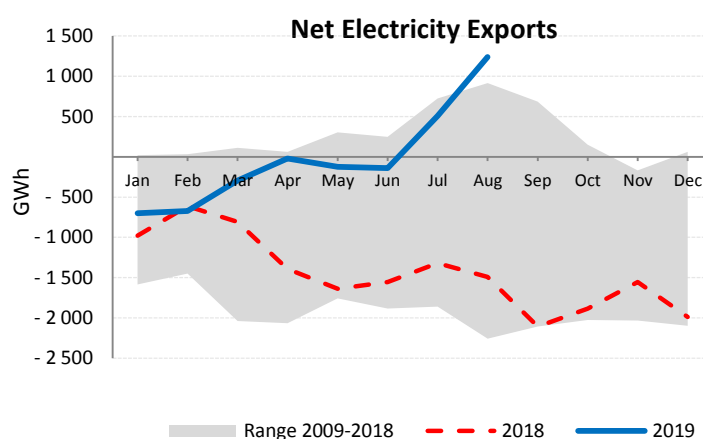
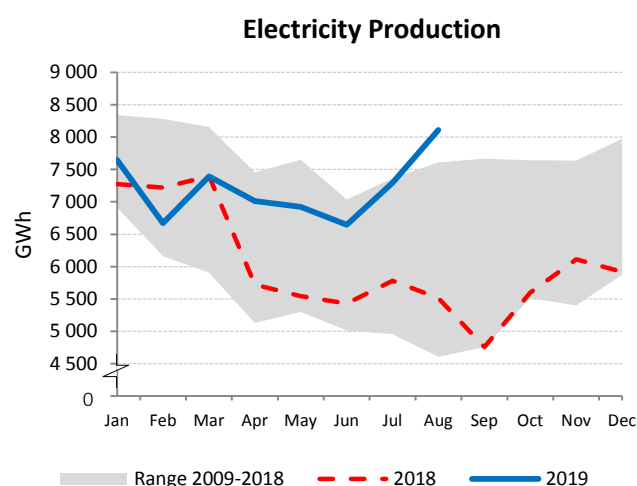


Electricity Production by Fuel



BELGIUM

	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	2 639	0.4%	-0.5%	32.6%	20 793	19 039	9.2%	31 924	44.2%
Coal	218	7.4%	1.4%	2.7%	1 663	1 483	12.0%	2 256	3.1%
Oil	2	-33.3%	-	0.0%	19	99	-80.8%	160	0.2%
Natural Gas	1 861	-0.2%	-2.1%	23.0%	14 995	13 026	15.1%	22 939	31.7%
Combustible Renewables	445	-	1.6%	5.5%	3 222	3 560	-9.5%	5 273	7.3%
Other Combustibles	113	-0.9%	14.1%	1.4%	894	871	2.6%	1 296	1.8%
Nuclear	4 222	123.7%	17.5%	52.1%	27 301	22 049	23.8%	27 198	37.6%
Hydro	55	17.0%	-5.2%	0.7%	733	899	-18.5%	1 284	1.8%
Wind	651	53.2%	57.2%	8.0%	5 377	4 377	22.8%	7 370	10.2%
Solar	502	5.2%	-6.9%	6.2%	3 146	3 163	-0.5%	3 944	5.5%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	38	-17.4%	2.7%	0.5%	337	357	-5.6%	552	0.8%
RENEWABLES	1 653	18.6%	14.1%	20.4%	12 478	11 999	4.0%	17 871	24.7%
NON-RENEWABLES	6 454	56.7%	10.4%	79.6%	45 209	37 885	19.3%	54 401	75.3%
TOTAL NET PRODUCTION	8 107	47.1%	11.1%		57 687	49 884	15.6%	72 272	
+ Imports	551	-69.0%	-32.2%		9 401	13 464	-30.2%	21 635	
- Exports	1 787	527.0%	35.5%		9 185	3 671	150.2%	4 309	
= ELECTRICITY SUPPLIED	6 871	-1.9%	1.2%		57 903	59 677	-3.0%	89 598	
- Used for pumped storage	67	13.6%	-6.9%		745	903	-17.5%	1 347	
- T&D Losses	283	-2.1%	1.1%		2 387	2 453	-2.7%	3 685	
= ELECTRICITY CONSUMED	6 521	-2.0%	1.3%		54 771	56 321	-2.8%	84 566	

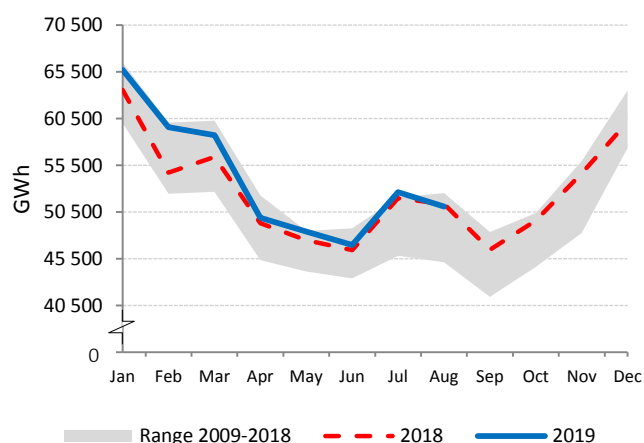
¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

CANADA

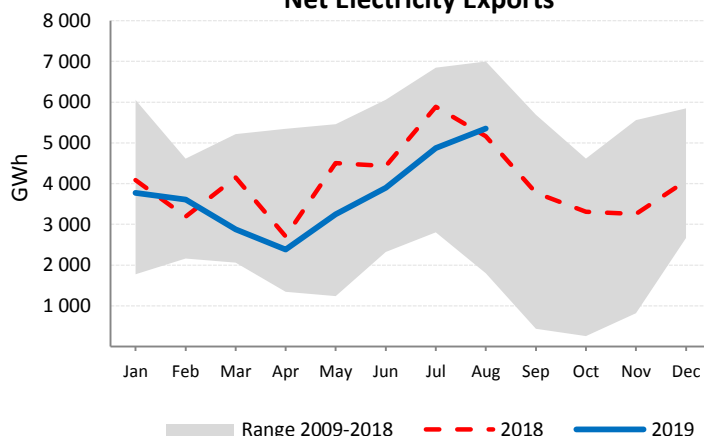
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	11 019	-3.6%	-6.6%	21.6%	89 582	82 007	9.2%	123 978	19.6%
Coal ⁴	4 548	-3.6%	-6.6%	8.9%	36 976	33 849	9.2%	51 173	8.1%
Oil ⁴	609	-3.6%	-6.6%	1.2%	4 949	4 531	9.2%	6 849	1.1%
Natural Gas ⁴	5 249	-3.6%	-6.6%	10.3%	42 671	39 063	9.2%	59 056	9.3%
Combustible Renewables ⁴	606	-3.6%	-6.6%	1.2%	4 923	4 506	9.2%	6 813	1.1%
Other Combustibles ⁴	8	-3.6%	-6.6%	0.0%	63	58	9.2%	87	0.0%
Nuclear	9 559	12.7%	1.9%	18.7%	66 485	62 526	6.3%	95 037	15.0%
Hydro	28 336	-3.3%	-2.9%	55.5%	254 074	254 886	-0.3%	379 691	60.1%
Wind	1 642	2.6%	-2.2%	3.2%	19 551	18 743	4.3%	29 358	4.6%
Solar	533	-2.3%	-9.7%	1.0%	3 279	2 946	11.3%	3 816	0.6%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	1	13	-92.7%	20	0.0%
Non-Specified	11	-32.9%	2.8%	0.0%	128	153	-16.4%	231	0.0%
RENEWABLES	31 117	-3.0%	-3.1%	60.9%	281 828	281 094	0.3%	419 697	66.4%
NON-RENEWABLES	19 983	3.5%	-2.7%	39.1%	151 272	140 179	7.9%	212 434	33.6%
TOTAL NET PRODUCTION	51 100	-0.5%	-2.9%		433 100	421 273	2.8%	632 131	
+ Imports	1 144	58.7%	-15.4%		9 820	9 048	8.5%	13 188	
- Exports	6 498	10.4%	4.4%		39 836	43 167	-7.7%	61 712	
= ELECTRICITY SUPPLIED	45 747	-1.0%	-4.2%		403 084	387 154	4.1%	583 606	
- Used for pumped storage ⁴	16	-3.3%	-2.9%		141	141	-0.3%	210	
- T&D Losses ⁴	5 499	2.4%	-3.2%		46 622	44 370	5.1%	66 538	
= ELECTRICITY CONSUMED	40 232	-1.4%	-4.4%		356 322	342 643	4.0%	516 858	

¹ current month to month of last year change⁴ estimated from annual data² month-to-month change³ year-to-date compared to same period last year

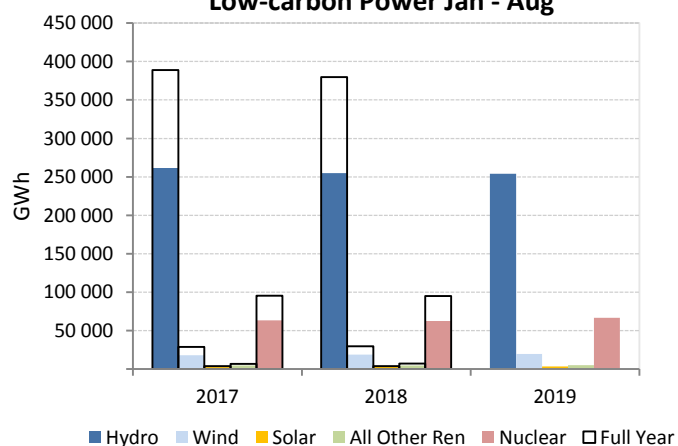
Electricity Production



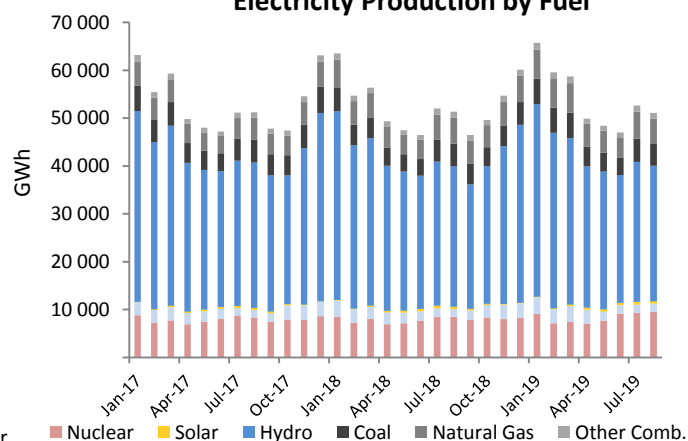
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

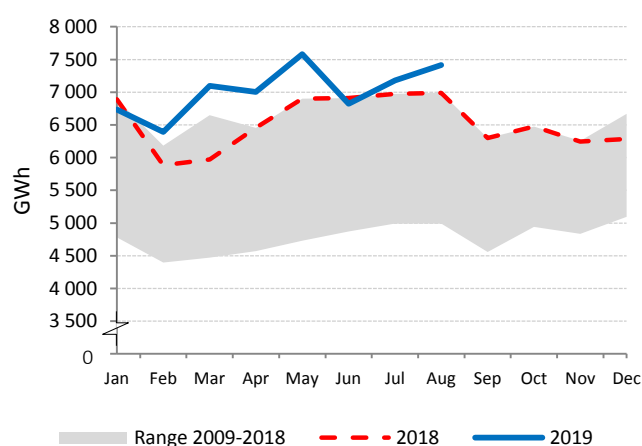


CHILE

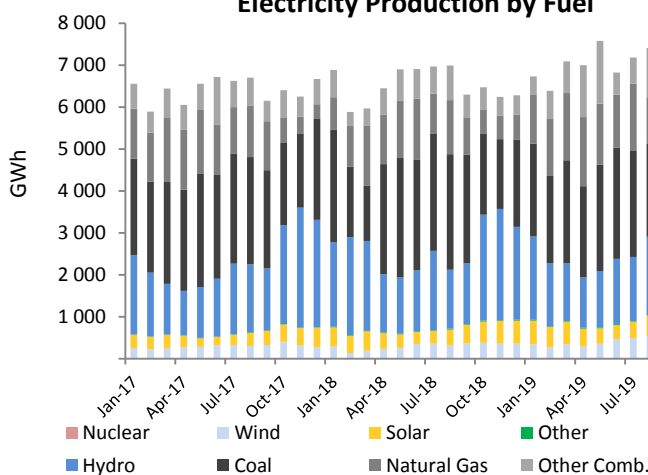
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	4 505	-7.5%	-5.2%	60.7%	37 024	33 746	9.7%	46 616	59.5%
Coal	2 214	-19.7%	-12.3%	29.9%	18 864	19 354	-2.5%	27 634	35.3%
Oil	795	192.3%	238.3%	10.7%	3 617	952	279.9%	1 342	1.7%
Natural Gas	1 114	-13.6%	-30.4%	15.0%	11 216	9 439	18.8%	12 026	15.4%
Combustible Renewables	382	-30.8%	-2.6%	5.2%	3 327	4 001	-16.8%	5 614	7.2%
Other Combustibles	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	1 871	33.3%	22.0%	25.2%	12 378	13 978	-11.4%	22 843	29.2%
Wind	539	67.9%	9.1%	7.3%	3 096	2 129	45.4%	3 580	4.6%
Solar	486	30.6%	25.9%	6.6%	3 594	2 991	20.2%	5 027	6.4%
Geothermal	15	-34.8%	-11.8%	0.2%	139	132	5.3%	215	0.3%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	3 293	23.2%	16.7%	44.4%	22 534	23 231	-3.0%	37 279	47.6%
NON-RENEWABLES	4 123	-4.5%	-5.4%	55.6%	33 697	29 745	13.3%	41 002	52.4%
TOTAL NET PRODUCTION	7 416	6.1%	3.3%		56 231	52 976	6.1%	78 281	
+ Imports	-	-	-	-	-	-	-	-	-
- Exports	-	-	-	-	-	-	-	-	-
= ELECTRICITY SUPPLIED	7 416	6.1%	3.3%		56 231	52 976	6.1%	78 281	
- Used for pumped storage	-	-	-	-	-	-	-	-	-
- T&D Losses	274	-14.6%	-1.8%		2 373	2 514	-5.6%	3 738	
= ELECTRICITY CONSUMED	7 142	7.1%	3.5%		53 858	50 462	6.7%	74 543	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

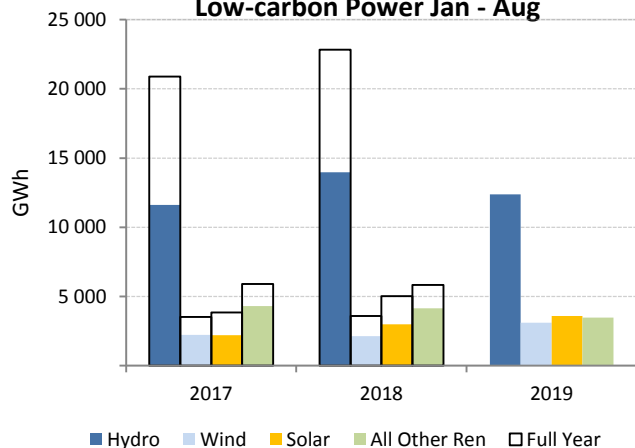
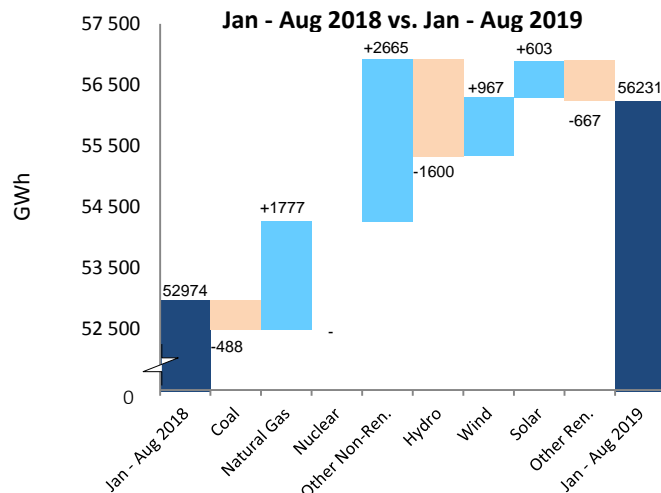
Electricity Production



Electricity Production by Fuel



Low-carbon Power Jan - Aug

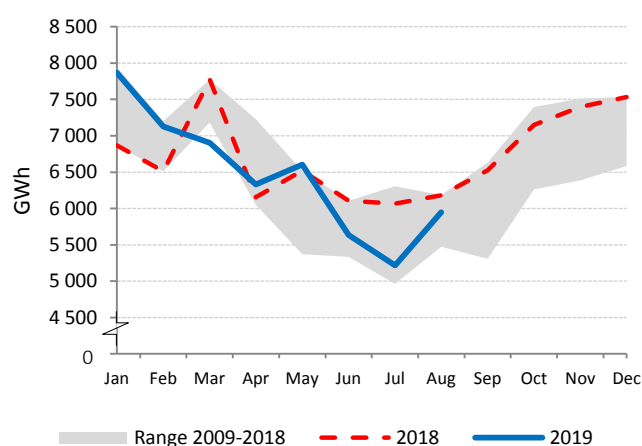
Electricity Production Variation
Jan - Aug 2018 vs. Jan - Aug 2019

CZECH REPUBLIC

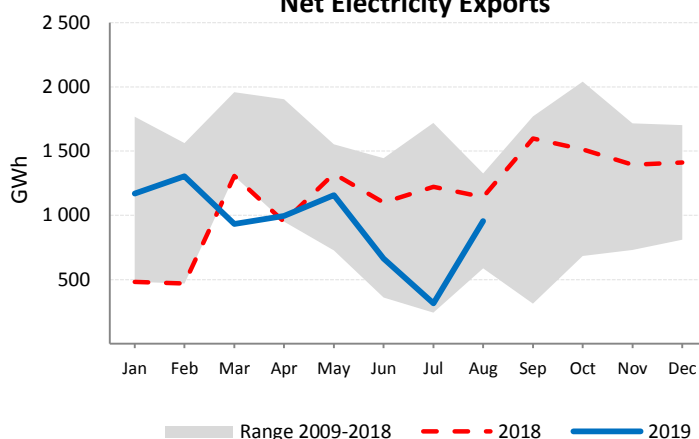
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	3 367	-6.5%	14.9%	56.6%	28 991	29 918	-3.1%	46 878	58.0%
Coal	2 480	-14.6%	21.2%	41.7%	22 822	25 068	-9.0%	39 034	48.3%
Oil	7	-31.7%	-22.6%	0.1%	68	56	21.7%	94	0.1%
Natural Gas	492	43.6%	-4.6%	8.3%	3 130	1 883	66.2%	3 356	4.2%
Combustible Renewables	381	12.9%	7.4%	6.4%	2 921	2 860	2.1%	4 322	5.4%
Other Combustibles	7	2.8%	20.3%	0.1%	50	52	-3.2%	72	0.1%
Nuclear	2 091	-1.6%	17.8%	35.2%	18 149	18 101	0.3%	28 245	35.0%
Hydro	189	45.6%	5.1%	3.2%	2 221	1 935	14.8%	2 651	3.3%
Wind	27	3.3%	-3.0%	0.5%	429	358	20.0%	599	0.7%
Solar	264	-10.1%	-9.5%	4.4%	1 768	1 800	-1.8%	2 316	2.9%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	9	5.5%	-17.3%	0.1%	72	70	4.1%	98	0.1%
RENEWABLES	861	9.4%	0.8%	14.5%	7 339	6 953	5.6%	9 889	12.2%
NON-RENEWABLES	5 086	-5.7%	16.6%	85.5%	44 291	45 229	-2.1%	70 898	87.8%
TOTAL NET PRODUCTION	5 947	-3.8%	14.0%		51 630	52 182	-1.1%	80 787	
+ Imports	734	-24.0%	-45.2%		7 546	7 222	4.5%	11 573	
- Exports	1 688	-19.9%	2.1%		15 033	15 214	-1.2%	25 481	
= ELECTRICITY SUPPLIED	4 993	-1.0%	1.8%		44 143	44 191	-0.1%	66 880	
- Used for pumped storage	129	139.4%	13.4%		933	922	1.3%	1 373	
- T&D Losses	299	0.0%	1.3%		2 669	2 623	1.8%	4 102	
= ELECTRICITY CONSUMED	4 565	-2.6%	1.6%		40 541	40 645	-0.3%	61 405	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

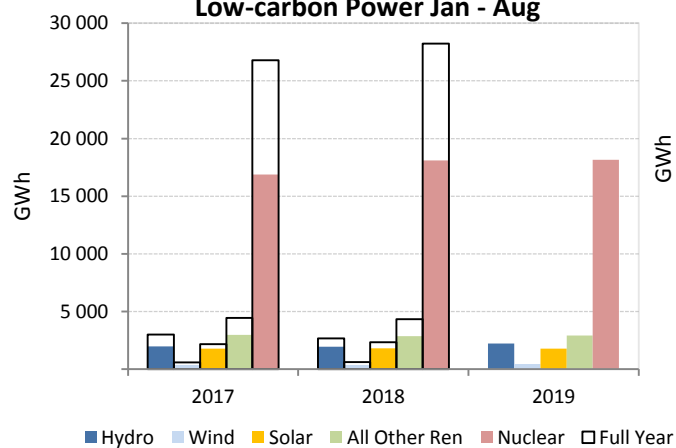
Electricity Production



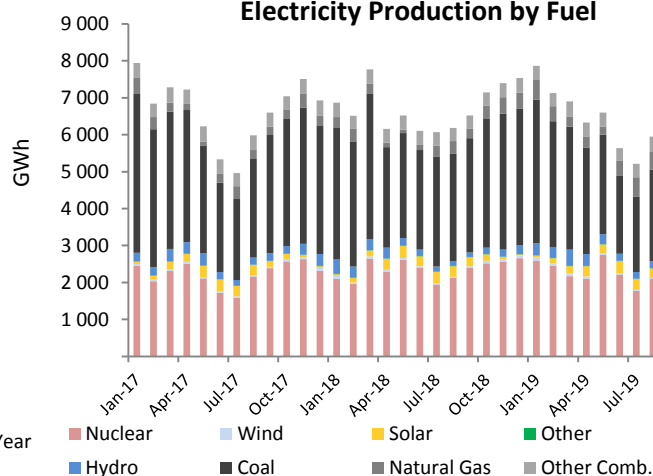
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

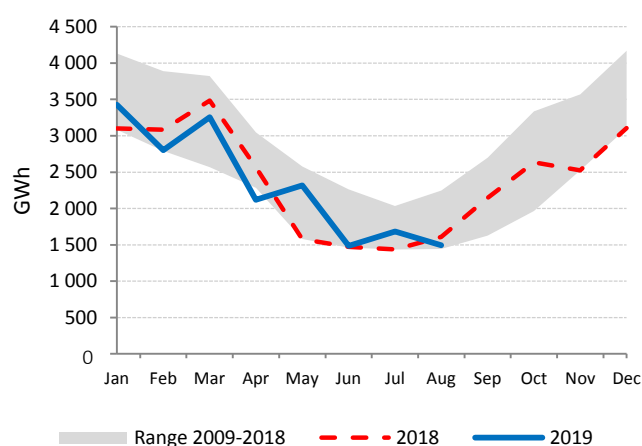


DENMARK

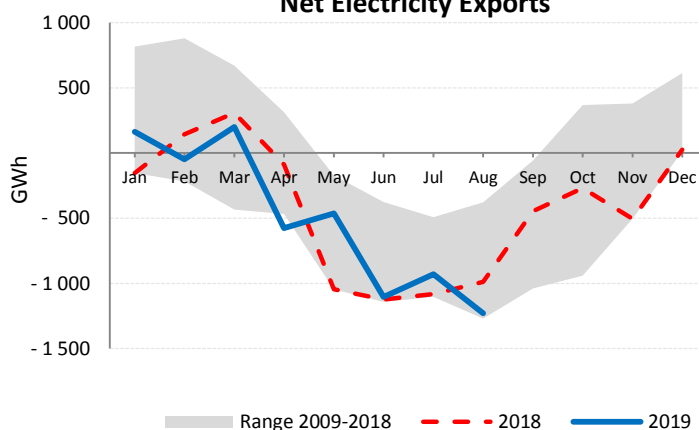
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	427	-23.5%	0.4%	28.6%	7 471	9 176	-18.6%	13 879	48.3%
Coal	13	-95.0%	60572.7%	0.9%	2 226	4 054	-45.1%	5 880	20.5%
Oil	16	14.5%	2.4%	1.1%	142	144	-1.5%	236	0.8%
Natural Gas	64	-18.3%	13.9%	4.3%	1 028	1 094	-6.1%	1 711	6.0%
Combustible Renewables	276	87.2%	-6.5%	18.5%	3 559	3 462	2.8%	5 422	18.9%
Other Combustibles	57	14.5%	-0.6%	3.8%	517	422	22.6%	630	2.2%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	1	4.3%	41.9%	0.1%	9	10	-7.9%	14	0.0%
Wind	947	0.6%	-15.1%	63.4%	10 284	8 359	23.0%	13 899	48.4%
Solar	119	8.9%	-15.1%	8.0%	813	788	3.1%	953	3.3%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	1 344	12.0%	-13.5%	90.0%	14 665	12 620	16.2%	20 288	70.6%
NON-RENEWABLES	150	-63.4%	16.4%	10.0%	3 912	5 714	-31.5%	8 458	29.4%
TOTAL NET PRODUCTION	1 494	-7.2%	-11.2%		18 577	18 334	1.3%	28 746	
+ Imports	1 577	1.3%	2.6%		10 453	10 681	-2.1%	15 634	
- Exports	347	-39.1%	-43.0%		6 463	6 650	-2.8%	10 409	
= ELECTRICITY SUPPLIED	2 724	4.9%	4.3%		22 567	22 365	0.9%	33 970	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses	128	-1.8%	-7.7%		1 261	1 148	9.8%	1 790	
= ELECTRICITY CONSUMED	2 596	5.2%	5.0%		21 306	21 216	0.4%	32 180	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

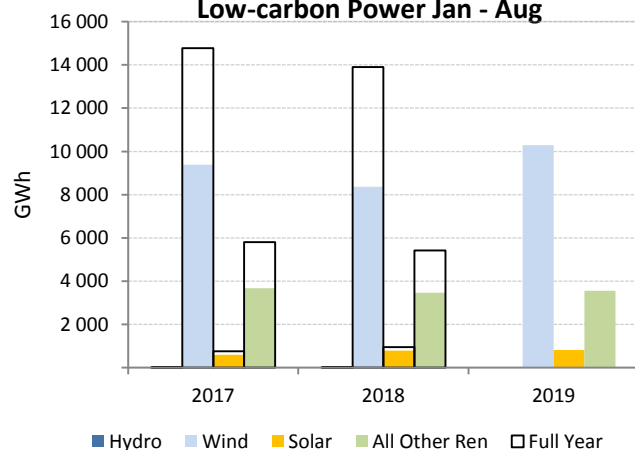
Electricity Production



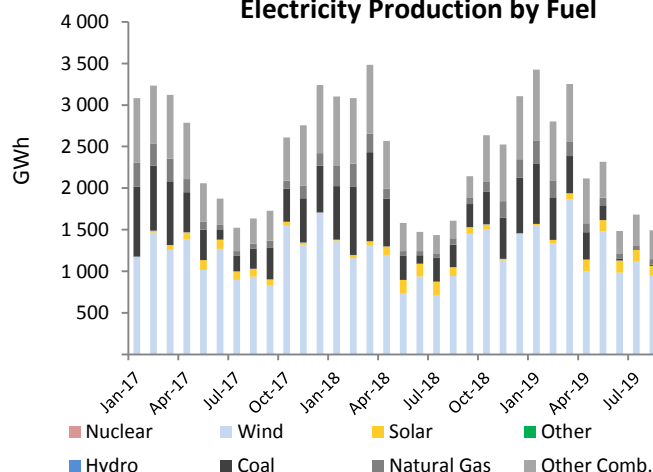
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

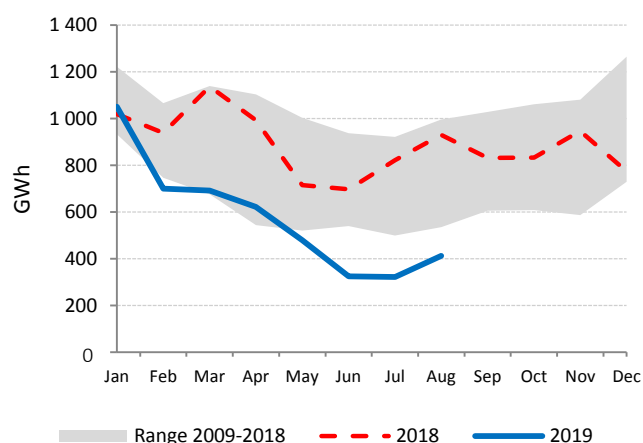


ESTONIA

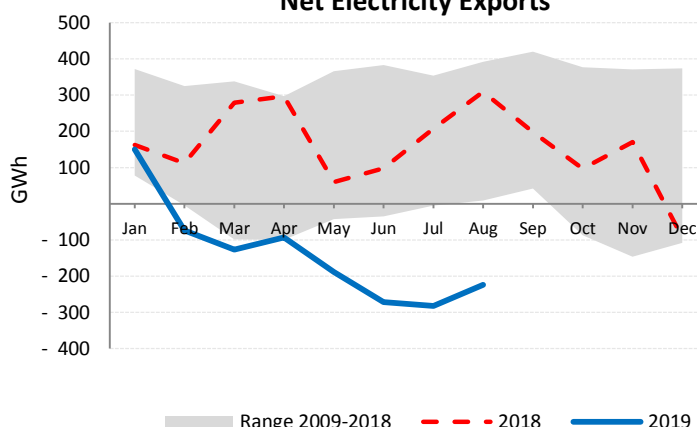
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	377	-57.5%	30.4%	91.5%	4 178	6 877	-39.3%	9 989	93.9%
Coal ⁴	327	-57.5%	30.4%	79.3%	3 620	5 959	-39.3%	8 655	81.3%
Oil ⁴	4	-57.5%	30.4%	0.9%	43	70	-39.3%	102	1.0%
Natural Gas ⁴	2	-57.5%	30.5%	0.5%	21	34	-39.2%	50	0.5%
Combustible Renewables ⁴	41	-57.5%	30.4%	9.9%	450	741	-39.3%	1 076	10.1%
Other Combustibles ⁴	4	-57.5%	30.4%	1.0%	45	73	-39.2%	107	1.0%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	0	-	-40.0%	0.1%	10	11	-16.7%	16	0.1%
Wind	35	-18.7%	4.5%	8.4%	420	367	14.4%	636	6.0%
Solar	-	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	76	-45.4%	16.6%	18.3%	880	1 119	-21.4%	1 728	16.2%
NON-RENEWABLES	337	-57.5%	30.4%	81.7%	3 728	6 137	-39.3%	8 914	83.8%
TOTAL NET PRODUCTION	412	-55.7%	27.6%		4 608	7 256	-36.5%	10 641	
+ Imports	385	121.3%	-35.5%		3 163	1 699	86.2%	3 053	
- Exports	161	-66.7%	-48.9%		2 053	3 223	-36.3%	4 950	
= ELECTRICITY SUPPLIED	636	2.3%	5.2%		5 718	5 732	-0.3%	8 745	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses ⁴	41	-27.8%	-13.3%		396	456	-13.2%	698	
= ELECTRICITY CONSUMED	596	5.4%	6.7%		5 322	5 276	0.9%	8 047	

¹ current month to month of last year change⁴ estimated from annual data² month-to-month change³ year-to-date compared to same period last year

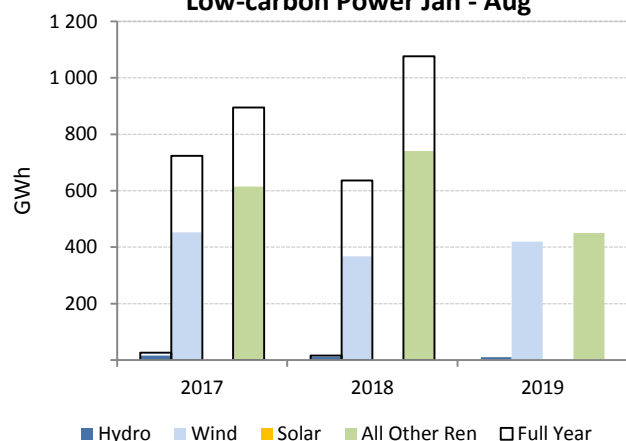
Electricity Production



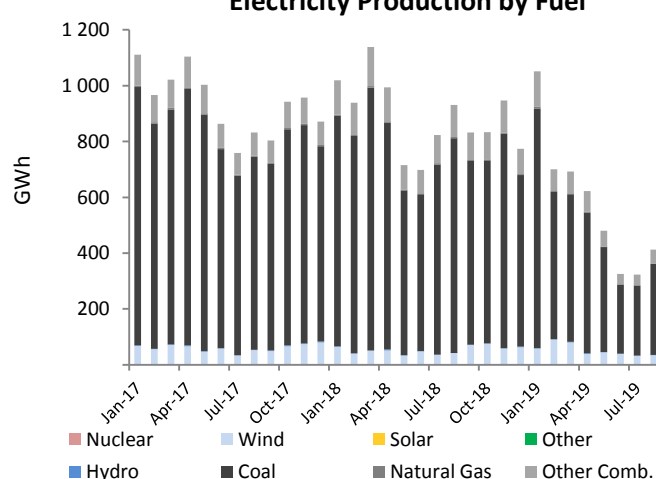
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

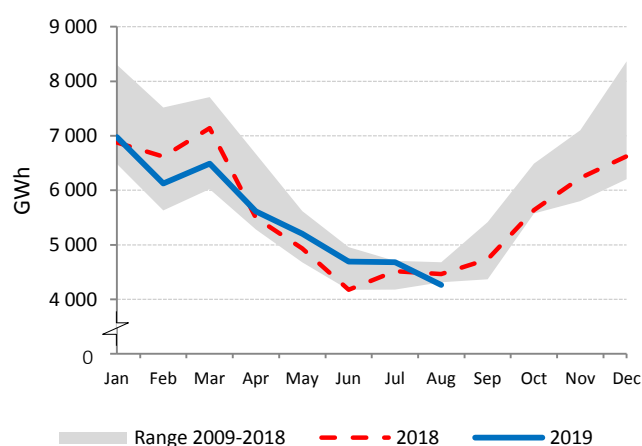


FINLAND

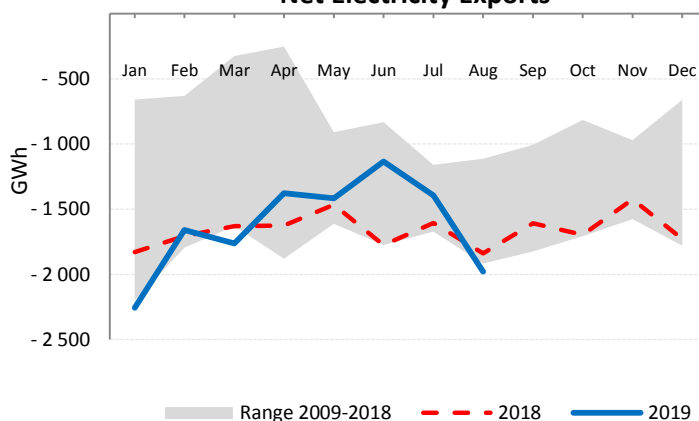
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	1 212	-22.0%	-3.8%	28.4%	16 066	16 561	-3.0%	26 091	38.7%
Coal	263	-35.1%	-7.7%	6.2%	5 268	6 116	-13.9%	9 418	14.0%
Oil	20	-5.6%	6.2%	0.5%	176	147	19.5%	240	0.4%
Natural Gas	109	-52.8%	-6.8%	2.6%	2 507	2 439	2.8%	3 954	5.9%
Combustible Renewables	789	-8.3%	-2.1%	18.5%	7 845	7 558	3.8%	12 020	17.8%
Other Combustibles ⁴	31	-13.7%	-7.4%	0.7%	270	302	-10.7%	460	0.7%
Nuclear	1 861	9.7%	-9.1%	43.6%	15 187	14 417	5.3%	21 885	32.4%
Hydro	668	-1.5%	-31.6%	15.7%	8 339	9 429	-11.6%	13 146	19.5%
Wind	447	-8.1%	46.8%	10.5%	3 963	3 483	13.8%	5 857	8.7%
Solar⁵	53	107.1%	-23.7%	1.2%	280	133	111.0%	162	0.2%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	27	-	-	0.6%	212	212	-	318	0.5%
RENEWABLES	1 956	-4.5%	-9.2%	45.9%	20 427	20 602	-0.8%	31 185	46.2%
NON-RENEWABLES	2 310	-4.4%	-8.6%	54.1%	23 620	23 632	-0.1%	36 274	53.8%
TOTAL NET PRODUCTION	4 267	-4.5%	-8.9%		44 047	44 234	-0.4%	67 459	
+ Imports	2 282	14.7%	16.5%		15 642	14 827	5.5%	22 548	
- Exports	303	102.0%	-46.2%		2 659	1 348	97.3%	2 612	
= ELECTRICITY SUPPLIED	6 246	-1.0%	2.7%		57 030	57 714	-1.2%	87 395	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses	192	-1.0%	3.0%		1 752	1 773	-1.2%	2 686	
= ELECTRICITY CONSUMED	6 053	-1.0%	2.7%		55 278	55 940	-1.2%	84 709	

¹ current month to month of last year change⁴ includes generation from peat² month-to-month change³ year-to-date compared to same period last year

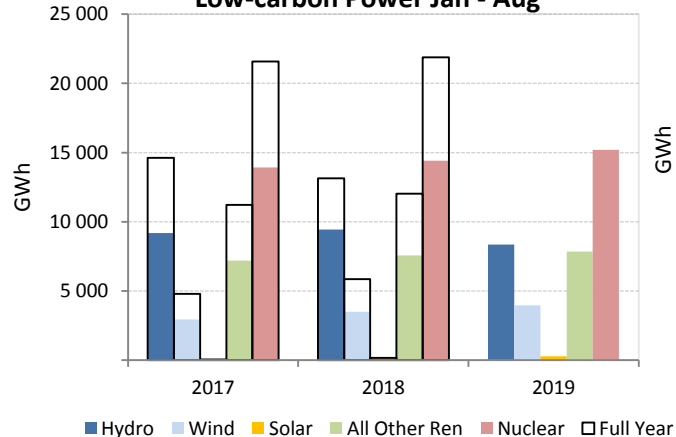
Electricity Production



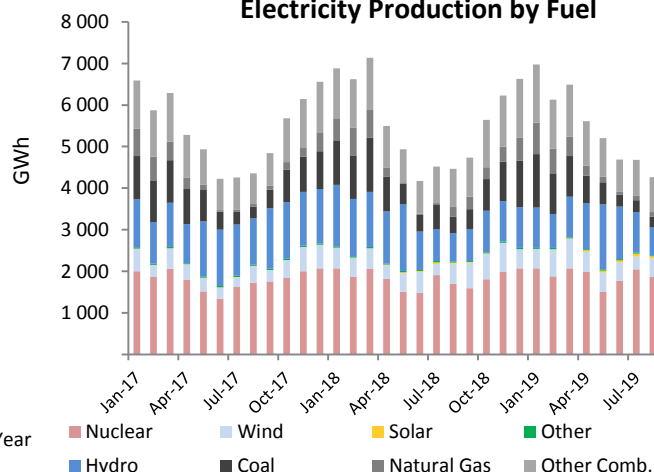
Net Electricity Exports



Low-carbon Power Jan - Aug

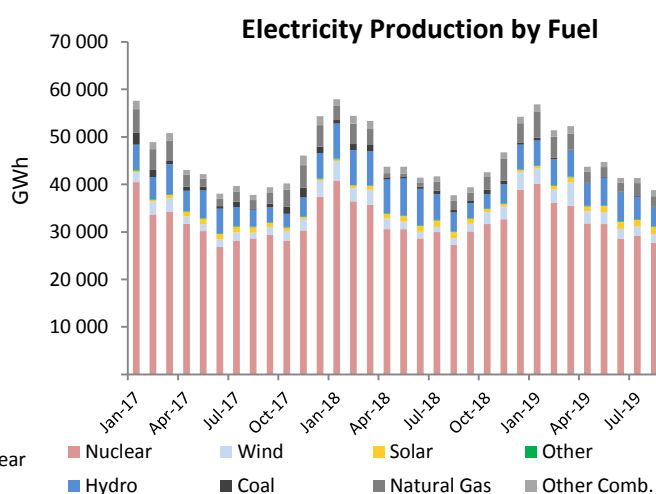
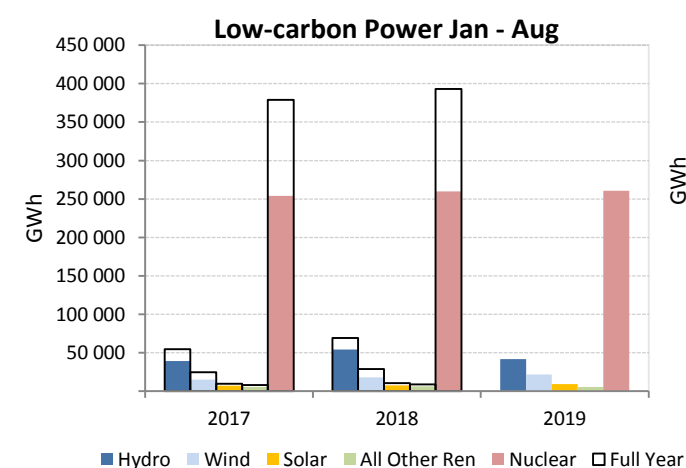
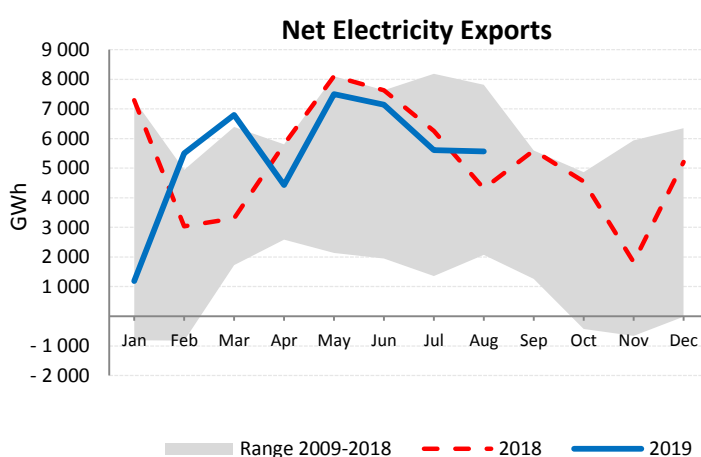
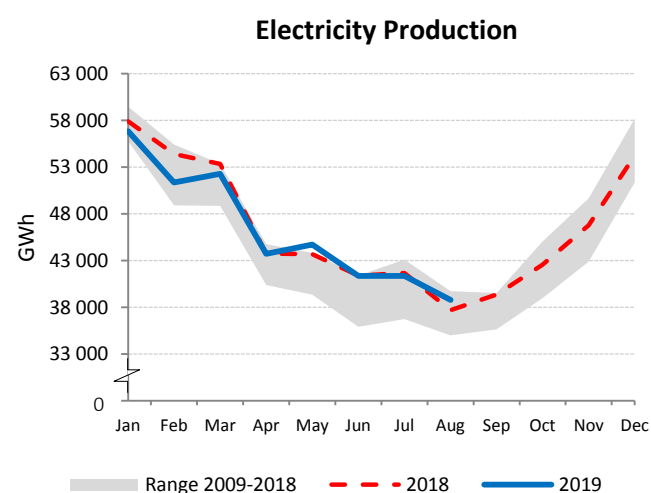


Electricity Production by Fuel



FRANCE

	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	3 607	-0.7%	-10.7%	9.3%	36 293	33 567	8.1%	54 205	9.7%
Coal	146	-78.3%	-21.5%	0.4%	1 892	6 092	-68.9%	8 746	1.6%
Oil	450	11.3%	-1.5%	1.2%	3 697	3 578	3.3%	5 277	0.9%
Natural Gas	2 189	16.0%	-21.6%	5.6%	24 457	16 935	44.4%	30 058	5.4%
Combustible Renewables	672	32.4%	57.6%	1.7%	4 655	5 504	-15.4%	7 731	1.4%
Other Combustibles	150	-6.5%	-16.3%	0.4%	1 592	1 457	9.2%	2 393	0.4%
Nuclear	27 729	1.6%	-5.1%	71.5%	260 720	259 986	0.3%	393 261	70.6%
Hydro	3 997	0.0%	-14.5%	10.3%	41 603	53 929	-22.9%	69 277	12.4%
Wind	1 797	27.9%	-5.5%	4.6%	21 777	17 879	21.8%	28 501	5.1%
Solar	1 539	24.6%	9.2%	4.0%	9 105	7 569	20.3%	10 196	1.8%
Geothermal ⁴	13	33.4%	-	0.0%	107	80	33.4%	120	0.0%
Other Renewables	56	-	-	0.1%	447	447	-	671	0.1%
Non-Specified	56	-	-	0.1%	449	449	-	674	0.1%
RENEWABLES	8 073	12.0%	-4.8%	20.8%	77 694	85 409	-9.0%	116 497	20.9%
NON-RENEWABLES	30 720	0.8%	-6.6%	79.2%	292 807	288 498	1.5%	440 408	79.1%
TOTAL NET PRODUCTION	38 793	2.9%	-6.2%		370 501	373 907	-0.9%	556 905	
+ Imports	843	-32.2%	-10.6%		8 112	8 227	-1.4%	13 576	
- Exports	6 406	15.2%	-2.2%		51 835	53 967	-4.0%	76 488	
= ELECTRICITY SUPPLIED	33 231	-0.4%	-7.0%		326 777	328 166	-0.4%	493 993	
- Used for pumped storage	516	1.3%	34.7%		3 975	4 752	-16.4%	7 392	
- T&D Losses	2 361	-6.4%	-9.0%		25 673	25 435	0.9%	38 609	
= ELECTRICITY CONSUMED	30 354	0.0%	-7.4%		297 130	297 979	-0.3%	447 993	

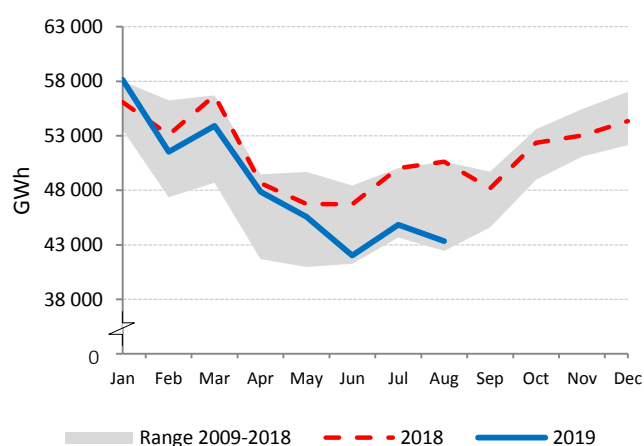
¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

GERMANY

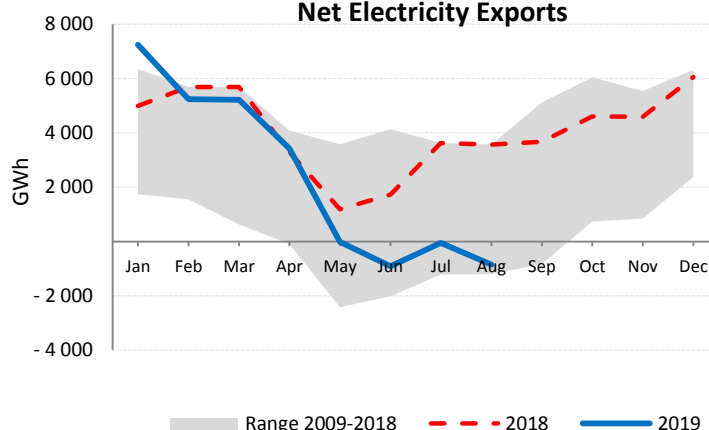
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	23 825	-21.1%	-1.7%	55.0%	207 588	239 364	-13.3%	362 120	58.7%
Coal	11 750	-37.5%	-5.1%	27.1%	111 826	149 720	-25.3%	224 160	36.4%
Oil	391	-1.2%	9.2%	0.9%	3 042	3 227	-5.7%	4 856	0.8%
Natural Gas	7 229	12.6%	1.6%	16.7%	57 153	50 399	13.4%	78 943	12.8%
Combustible Renewables	3 907	-3.0%	1.8%	9.0%	31 275	31 624	-1.1%	47 583	7.7%
Other Combustibles	548	-3.6%	-0.3%	1.3%	4 293	4 394	-2.3%	6 578	1.1%
Nuclear	5 439	-17.3%	0.7%	12.6%	45 224	47 327	-4.4%	71 859	11.7%
Hydro	2 414	49.0%	7.2%	5.6%	19 404	17 113	13.4%	23 952	3.9%
Wind	5 800	-6.5%	-11.7%	13.4%	77 855	67 039	16.1%	110 711	18.0%
Solar	5 709	-2.0%	-8.0%	13.2%	35 939	36 594	-1.8%	46 164	7.5%
Geothermal	10	-14.3%	-7.7%	0.0%	114	97	17.5%	144	0.0%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	139	-21.6%	-7.8%	0.3%	1 081	1 093	-1.1%	1 585	0.3%
RENEWABLES	17 840	0.9%	-5.5%	41.2%	164 588	152 467	7.9%	228 554	37.1%
NON-RENEWABLES	25 496	-22.6%	-1.8%	58.8%	222 618	256 161	-13.1%	387 982	62.9%
TOTAL NET PRODUCTION	43 336	-14.4%	-3.3%		387 206	408 628	-5.2%	616 536	
+ Imports	5 236	112.3%	11.2%		27 920	21 369	30.7%	31 727	
- Exports	4 381	-27.5%	-6.0%		47 213	51 175	-7.7%	80 462	
= ELECTRICITY SUPPLIED	44 192	-6.1%	-1.5%		367 913	378 822	-2.9%	567 801	
- Used for pumped storage	640	5.6%	15.3%		5 330	5 368	-0.7%	8 348	
- T&D Losses	1 811	1.9%	-5.6%		16 966	16 554	2.5%	26 193	
= ELECTRICITY CONSUMED	41 741	-6.6%	-1.6%		345 617	356 901	-3.2%	533 259	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

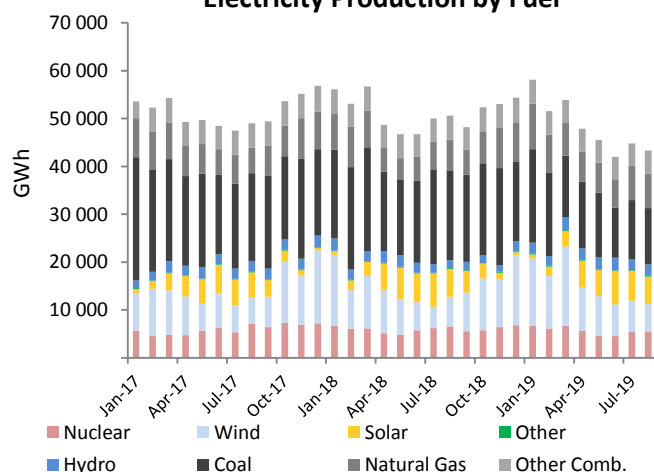
Electricity Production



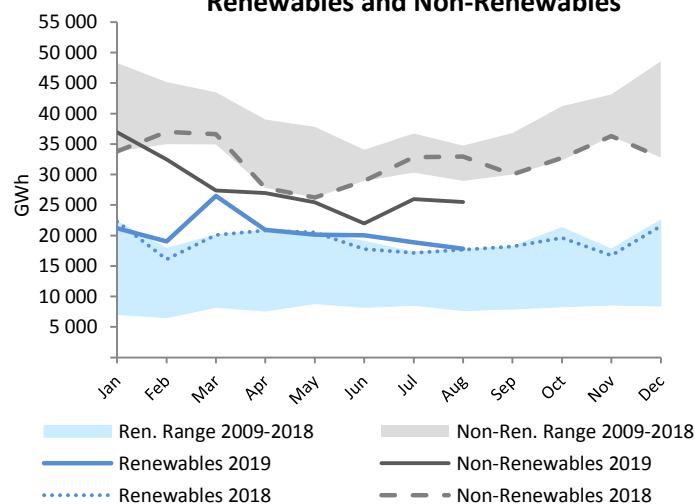
Net Electricity Exports



Electricity Production by Fuel



Renewables and Non-Renewables

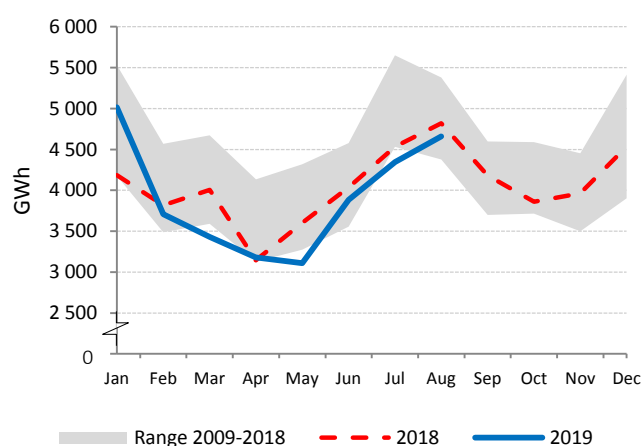


GREECE

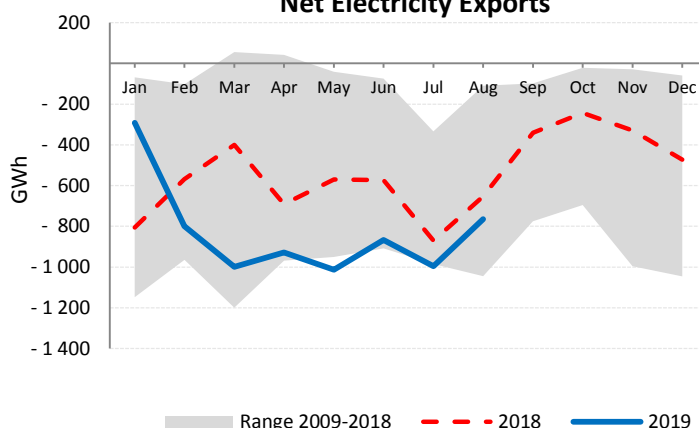
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	2 894	-9.2%	-2.2%	62.1%	20 750	21 008	-1.2%	32 772	67.3%
Coal	851	-58.7%	3.1%	18.3%	7 637	10 789	-29.2%	16 004	32.9%
Oil	503	1.0%	3.3%	10.8%	2 969	2 965	0.2%	4 279	8.8%
Natural Gas	1 517	150.1%	-6.5%	32.6%	9 949	7 058	41.0%	12 198	25.1%
Combustible Renewables	23	2.6%	-4.5%	0.5%	195	196	-0.3%	290	0.6%
Other Combustibles	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	434	-13.9%	6.9%	9.3%	2 932	4 521	-35.2%	5 813	11.9%
Wind	864	23.4%	59.5%	18.5%	4 850	3 916	23.9%	6 300	12.9%
Solar	466	9.0%	6.2%	10.0%	2 799	2 695	3.8%	3 792	7.8%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	1 787	8.0%	26.7%	38.4%	10 776	11 328	-4.9%	16 196	33.3%
NON-RENEWABLES	2 871	-9.3%	-2.2%	61.6%	20 555	20 812	-1.2%	32 482	66.7%
TOTAL NET PRODUCTION	4 658	-3.3%	7.2%		31 331	32 140	-2.5%	48 677	
+ Imports	870	-7.5%	-15.6%		7 450	6 390	16.6%	8 706	
- Exports	105	-63.5%	191.2%		789	1 258	-37.3%	2 187	
= ELECTRICITY SUPPLIED	5 424	-0.9%	1.6%		37 992	37 272	1.9%	55 196	
- Used for pumped storage	2	-40.1%	10.1%		30	26	14.6%	28	
- T&D Losses	270	-16.2%	-2.1%		2 053	2 075	-1.1%	3 251	
= ELECTRICITY CONSUMED	5 152	0.1%	1.7%		35 910	35 171	2.1%	51 917	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

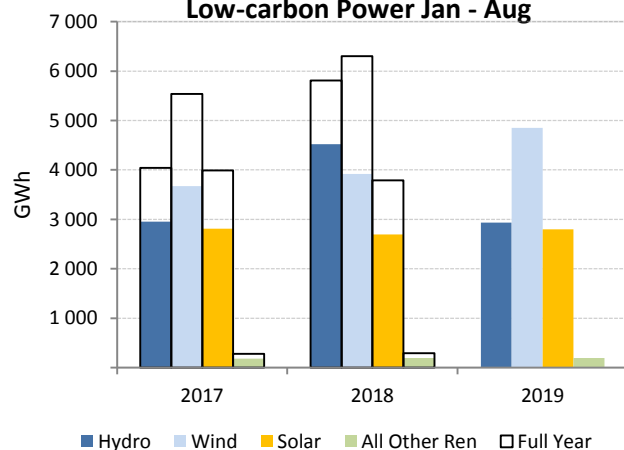
Electricity Production



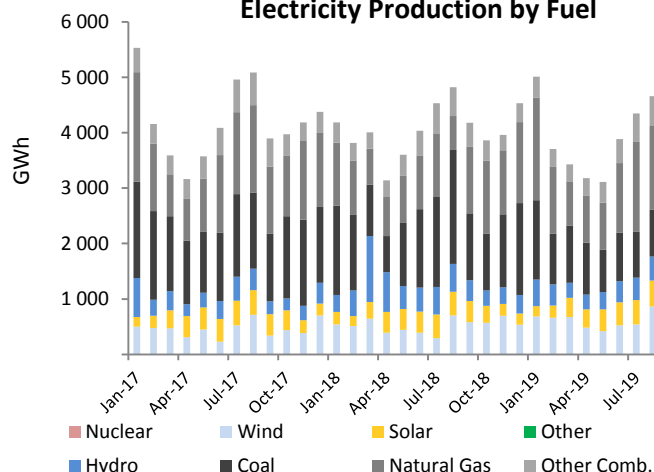
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

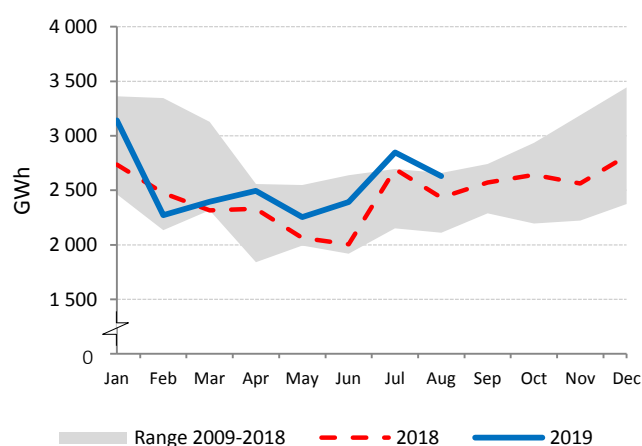


HUNGARY

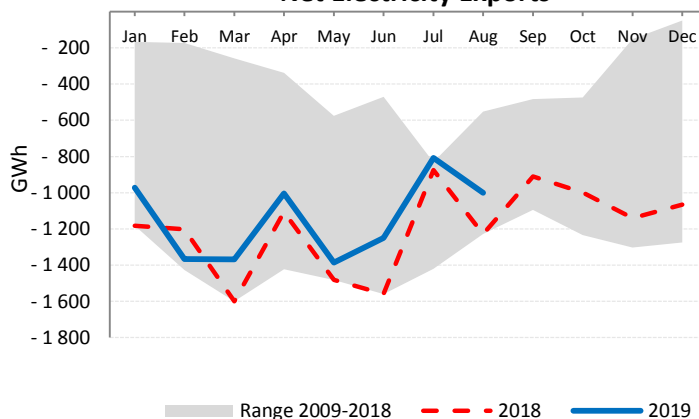
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	1 119	2.8%	-7.9%	42.6%	8 715	8 261	5.5%	13 238	44.7%
Coal	300	-25.8%	-19.8%	11.4%	2 498	2 760	-9.5%	4 359	14.7%
Oil	4	-13.1%	-22.0%	0.2%	34	47	-27.6%	64	0.2%
Natural Gas	642	36.9%	2.4%	24.4%	4 702	4 008	17.3%	6 560	22.1%
Combustible Renewables	148	-22.2%	-18.1%	5.6%	1 306	1 310	-0.3%	2 056	6.9%
Other Combustibles	24	24.0%	-9.4%	0.9%	175	136	28.2%	200	0.7%
Nuclear	1 273	5.3%	-8.5%	48.4%	10 000	9 764	2.4%	14 860	50.1%
Hydro	15	0.0%	-14.6%	0.6%	148	157	-5.6%	216	0.7%
Wind	30	6.3%	-12.8%	1.1%	474	371	27.9%	589	2.0%
Solar	181	124.5%	1.3%	6.9%	992	408	143.2%	600	2.0%
Geothermal	1	52.2%	-4.6%	0.0%	11	8	47.2%	12	0.0%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	11	-	-	0.4%	85	85	-	127	0.4%
RENEWABLES	375	19.1%	-9.0%	14.3%	2 932	2 253	30.1%	3 473	11.7%
NON-RENEWABLES	2 254	6.4%	-7.5%	85.7%	17 494	16 800	4.1%	26 170	88.3%
TOTAL NET PRODUCTION	2 629	8.1%	-7.7%		20 425	19 053	7.2%	29 643	
+ Imports	1 623	3.6%	20.9%		13 571	12 380	9.6%	18 613	
- Exports	622	83.4%	16.2%		4 416	2 145	105.9%	4 265	
= ELECTRICITY SUPPLIED	3 631	-0.8%	-0.7%		29 580	29 288	1.0%	43 991	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses	261	2.8%	4.4%		2 255	2 261	-0.3%	3 428	
= ELECTRICITY CONSUMED	3 370	-1.1%	-1.1%		27 325	27 027	1.1%	40 563	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

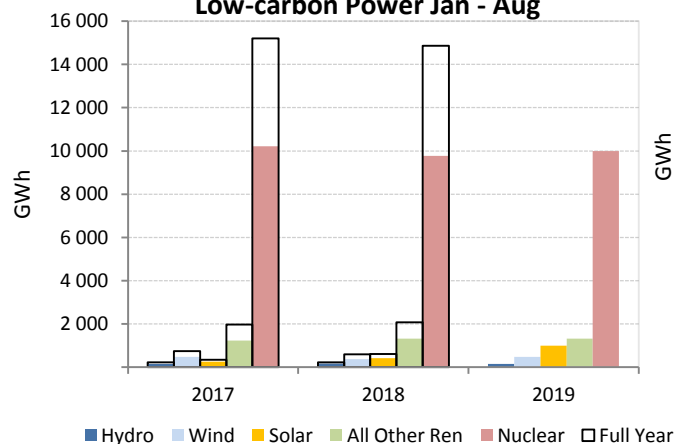
Electricity Production



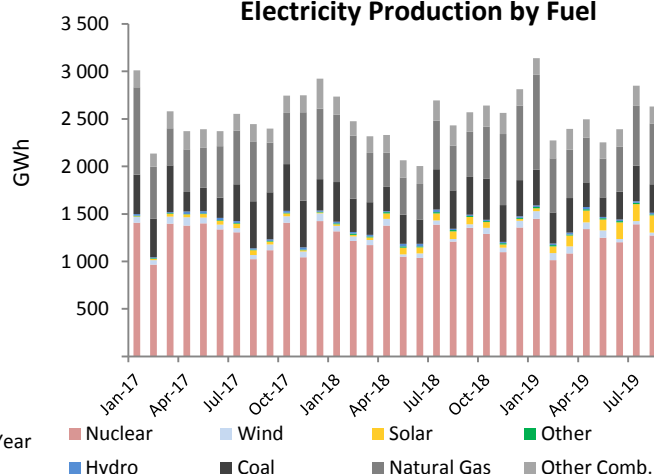
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

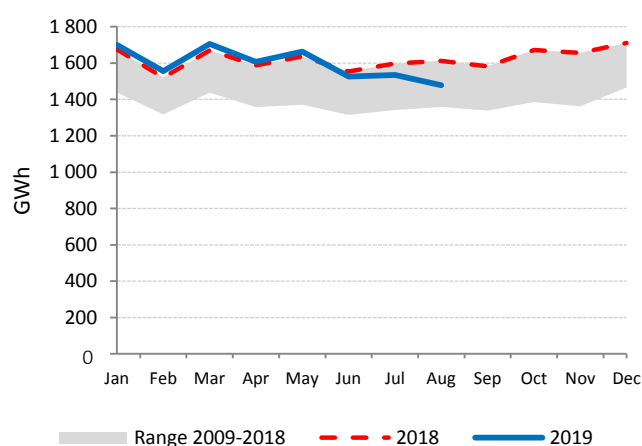


ICELAND

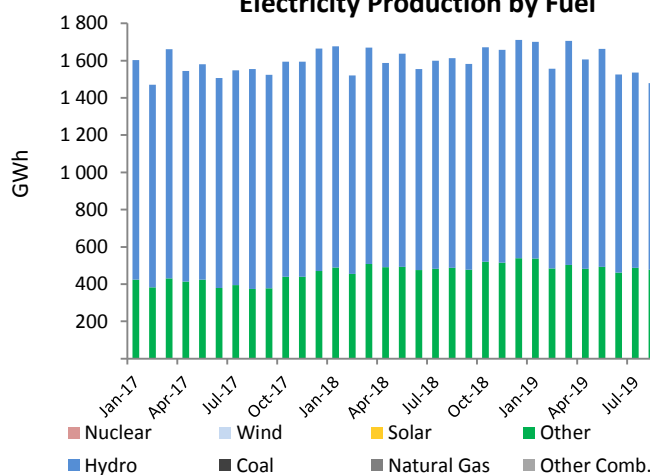
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	-	-	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-	-	-
Oil	-	-	-	-	-	-	-	-	-
Natural Gas	-	-	-	-	-	-	-	-	-
Combustible Renewables	-	-	-	-	-	-	-	-	-
Other Combustibles	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	1 001	-11.0%	-4.5%	67.7%	8 847	8 977	-1.4%	13 547	69.5%
Wind	1	-	-	0.1%	8	7	14.3%	9	0.0%
Solar	-	-	-	-	-	-	-	-	-
Geothermal	477	-2.1%	-2.1%	32.3%	3 918	3 874	1.1%	5 924	30.4%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	1 479	-8.3%	-3.7%	100.0%	12 773	12 858	-0.7%	19 480	100.0%
NON-RENEWABLES	0	-	-100.0%	-	0	0	-100.0%	0	-
TOTAL NET PRODUCTION	1 479	-8.3%	-3.6%		12 773	12 858	-0.6%	19 480	
+ Imports	-	-	-	-	-	-	-	-	-
- Exports	-	-	-	-	-	-	-	-	-
= ELECTRICITY SUPPLIED	1 479	-8.3%	-3.6%		12 773	12 858	-0.6%	19 480	
- Used for pumped storage	-	-	-	-	-	-	-	-	-
- T&D Losses	48	-	-	-	389	384	1.3%	578	
= ELECTRICITY CONSUMED	1 431	-8.5%	-3.8%		12 384	12 474	-0.7%	18 902	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

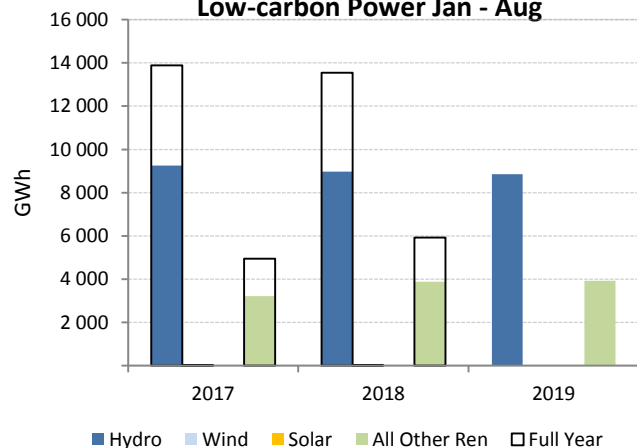
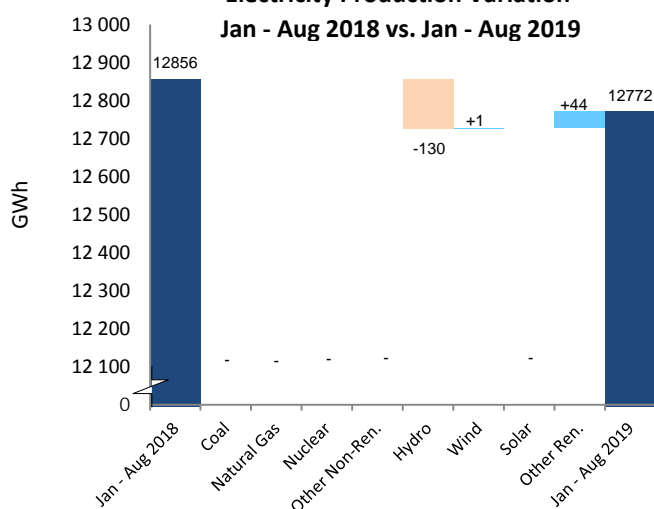
Electricity Production



Electricity Production by Fuel



Low-carbon Power Jan - Aug

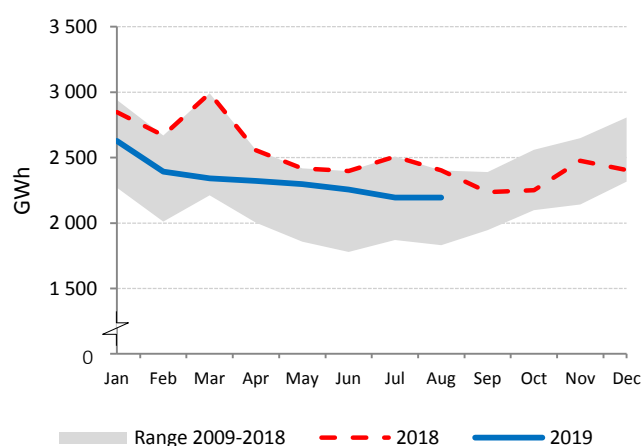
Electricity Production Variation
Jan - Aug 2018 vs. Jan - Aug 2019

IRELAND

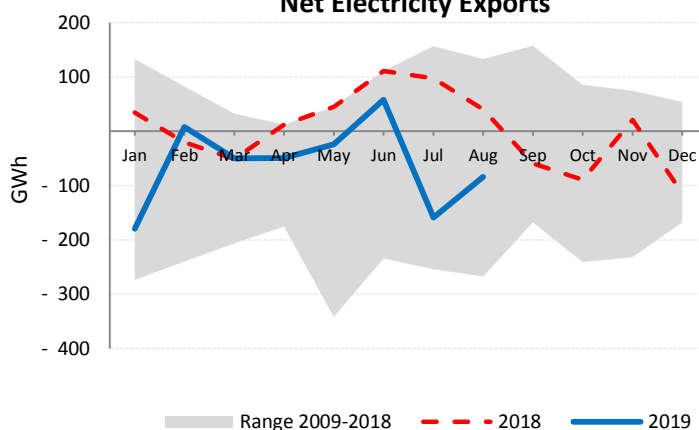
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	1 344	-26.0%	-21.5%	61.2%	12 079	15 100	-20.0%	20 766	68.9%
Coal	48	-80.2%	1462.2%	2.2%	737	3 862	-80.9%	4 100	13.6%
Oil	15	107.0%	-32.1%	0.7%	221	60	267.1%	136	0.5%
Natural Gas	1 211	-19.1%	-24.5%	55.1%	10 484	10 511	-0.3%	15 467	51.3%
Combustible Renewables	52	7.1%	-29.0%	2.4%	463	489	-5.4%	775	2.6%
Other Combustibles	17	-4.7%	94.7%	0.8%	175	178	-1.8%	288	1.0%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	78	114.5%	128.4%	3.6%	602	610	-1.4%	922	3.1%
Wind	772	40.8%	72.8%	35.2%	5 935	5 068	17.1%	8 455	28.0%
Solar	2	-	-0.5%	0.1%	11	11	-	15	0.1%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	904	42.3%	62.5%	41.2%	7 010	6 178	13.5%	10 167	33.7%
NON-RENEWABLES	1 291	-26.9%	-21.1%	58.8%	11 617	14 611	-20.5%	19 991	66.3%
TOTAL NET PRODUCTION	2 195	-8.6%	0.1%		18 627	20 790	-10.4%	30 158	
+ Imports	127	8.3%	-45.0%		1 376	912	50.9%	1 622	
- Exports	43	-72.7%	-40.5%		896	1 181	-24.1%	1 649	
= ELECTRICITY SUPPLIED	2 280	-3.5%	-3.1%		19 106	20 520	-6.9%	30 131	
- Used for pumped storage	44	4.6%	8.5%		298	329	-9.5%	499	
- T&D Losses	164	-6.7%	-4.2%		1 408	1 477	-4.6%	2 237	
= ELECTRICITY CONSUMED	2 072	-3.4%	-3.2%		17 400	18 715	-7.0%	27 394	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

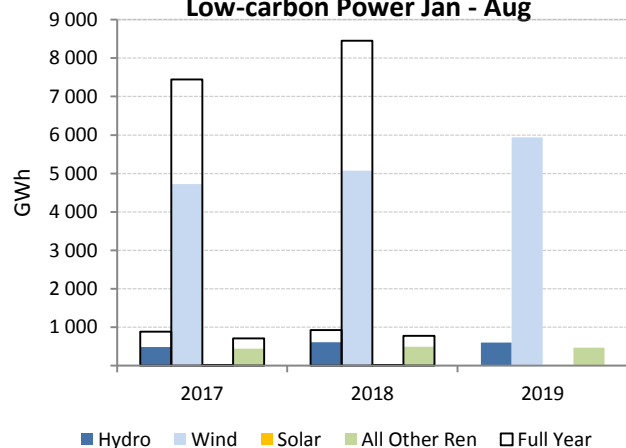
Electricity Production



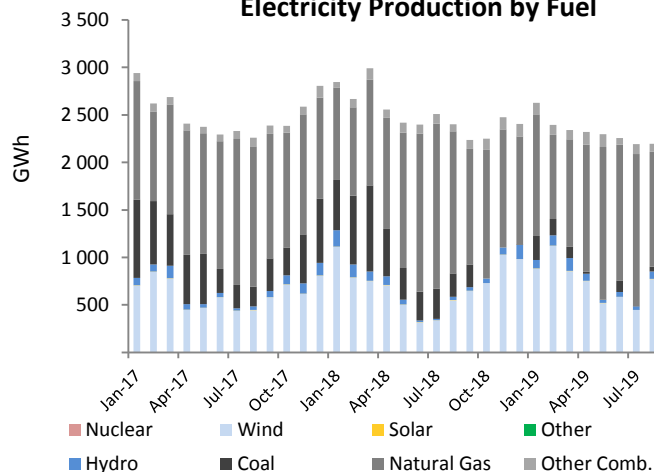
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

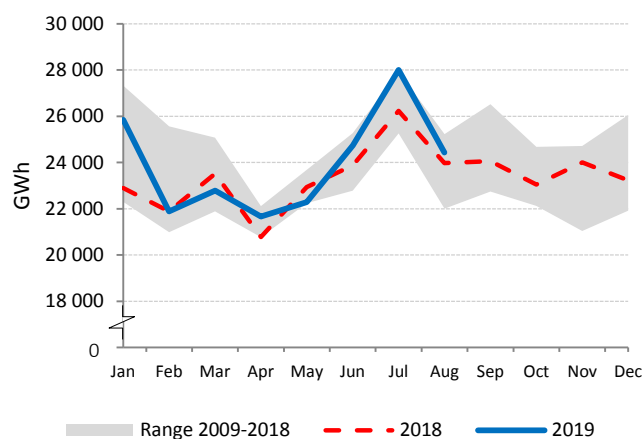


ITALY

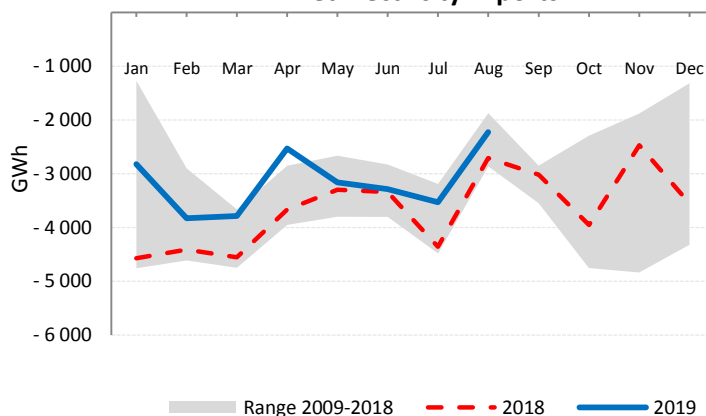
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	15 774	0.4%	-11.5%	64.6%	124 385	117 825	5.6%	184 075	65.6%
Coal ⁵	2 500	0.4%	-11.5%	10.2%	19 713	18 674	5.6%	29 173	10.4%
Oil ⁵	881	0.4%	-11.5%	3.6%	6 946	6 580	5.6%	10 280	3.7%
Natural Gas ⁵	10 620	0.4%	-11.5%	43.5%	83 742	79 325	5.6%	123 928	44.2%
Combustible Renewables ⁵	1 573	0.4%	-11.5%	6.4%	12 405	11 750	5.6%	18 357	6.5%
Other Combustibles ⁵	200	0.4%	-11.5%	0.8%	1 579	1 496	5.6%	2 336	0.8%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	4 573	4.7%	-17.5%	18.7%	31 902	35 735	-10.7%	50 351	18.0%
Wind	744	-0.8%	-39.6%	3.0%	13 188	11 631	13.4%	17 325	6.2%
Solar	2 801	6.9%	-2.3%	11.5%	17 900	16 650	7.5%	22 306	8.0%
Geothermal	483	2.5%	0.8%	2.0%	3 807	3 797	0.3%	5 702	2.0%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	54	-	-	0.2%	429	429	-	644	0.2%
RENEWABLES	10 175	4.1%	-14.5%	41.6%	79 201	79 563	-0.5%	114 041	40.7%
NON-RENEWABLES	14 254	0.4%	-11.4%	58.4%	112 409	106 503	5.5%	166 361	59.3%
TOTAL NET PRODUCTION	24 429	1.9%	-12.7%		191 611	186 066	3.0%	280 403	
+ Imports	2 783	-7.0%	-32.5%		28 904	33 207	-13.0%	47 179	
- Exports	559	95.9%	-4.9%		3 738	2 298	62.7%	3 270	
= ELECTRICITY SUPPLIED	26 653	-0.1%	-15.5%		216 777	216 976	-0.1%	324 312	
- Used for pumped storage	126	15.6%	-6.7%		1 515	1 584	-4.4%	2 233	
- T&D Losses ⁴	1 586	0.9%	-15.3%		12 855	12 783	0.6%	19 097	
= ELECTRICITY CONSUMED	24 941	-0.2%	-15.5%		202 407	202 609	-0.1%	302 982	

¹ current month to month of last year change⁴ estimated² month-to-month change⁵ estimated from annual data³ year-to-date compared to same period last year

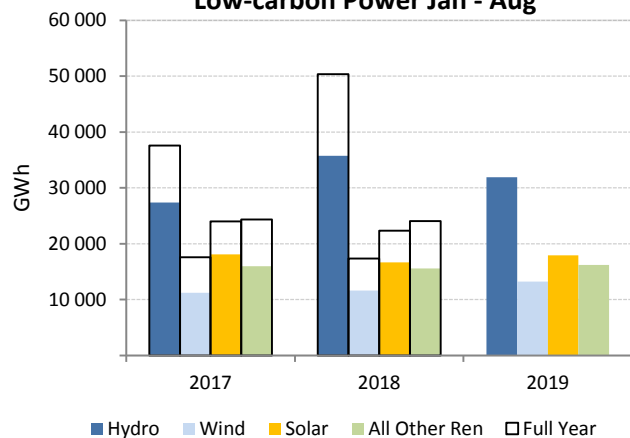
Electricity Production



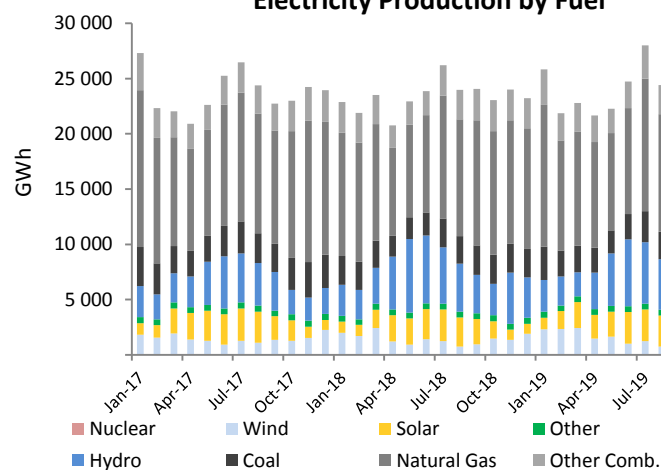
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel



JAPAN

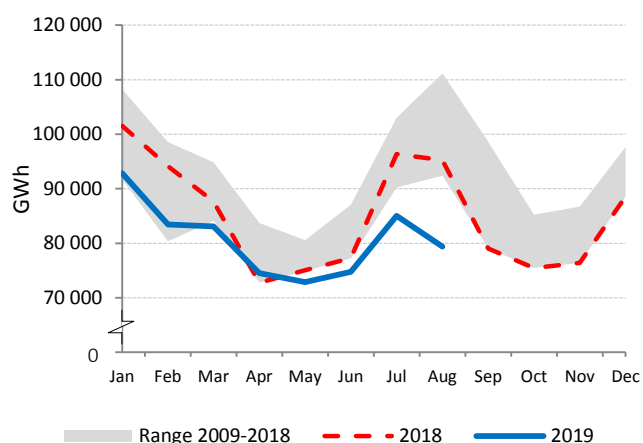
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	55 747	-24.7%	-7.9%	70.2%	467 385	542 729	-13.9%	783 086	76.8%
Coal	26 069	-11.2%	-6.3%	32.8%	200 011	214 676	-6.8%	318 067	31.2%
Oil	2 207	-68.1%	-28.1%	2.8%	25 671	48 620	-47.2%	61 919	6.1%
Natural Gas	24 484	-28.9%	-8.4%	30.8%	217 910	253 074	-13.9%	363 827	35.7%
Combustible Renewables	2 987	66.0%	1.5%	3.8%	19 080	13 506	41.3%	20 297	2.0%
Other Combustibles ⁴	-	-	-	-	4 713	12 853	-63.3%	18 976	1.9%
Nuclear	5 039	28.4%	1.6%	6.3%	44 556	24 525	81.7%	47 202	4.6%
Hydro	9 567	22.3%	-5.9%	12.0%	59 885	66 467	-9.9%	93 388	9.2%
Wind	481	-0.6%	9.3%	0.6%	5 164	4 814	7.3%	7 282	0.7%
Solar	5 982	-18.4%	-4.3%	7.5%	50 360	46 182	9.0%	65 394	6.4%
Geothermal	181	-	-2.2%	0.2%	1 515	1 497	1.2%	2 260	0.2%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	2 425	72.1%	-1.8%	3.1%	17 071	13 782	23.9%	20 908	2.1%
RENEWABLES	19 198	9.0%	-3.9%	24.2%	136 004	132 466	2.7%	188 621	18.5%
NON-RENEWABLES	60 224	-22.4%	-7.4%	75.8%	509 932	567 530	-10.1%	830 899	81.5%
TOTAL NET PRODUCTION	79 422	-16.6%	-6.6%		645 936	699 996	-7.7%	1 019 520	
+ Imports	-	-	-		-	-	-	-	
- Exports	-	-	-		-	-	-	-	
= ELECTRICITY SUPPLIED	79 422	-16.6%	-6.6%		645 936	699 996	-7.7%	1 019 520	
- Used for pumped storage ⁴	1 005	4.5%	-7.5%		7 741	7 084	9.3%	10 559	
- T&D Losses ⁴	3 912	5.3%	-7.5%		30 041	27 435	9.5%	40 846	
= ELECTRICITY CONSUMED	74 505	-17.7%	-6.5%		608 154	665 477	-8.6%	968 115	

¹ current month to month of last year change⁴ estimated from annual data² month-to-month change

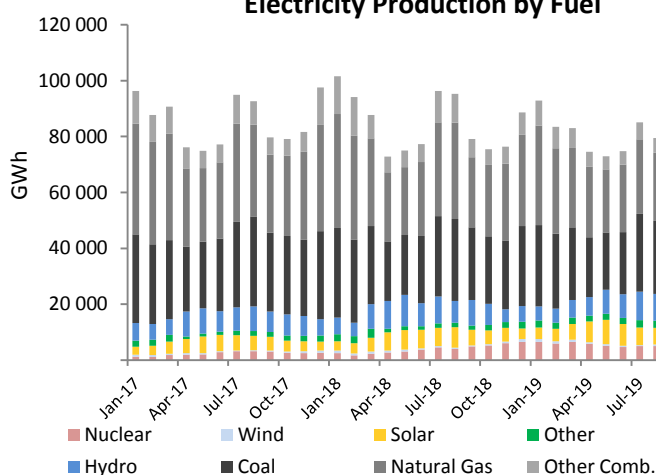
August 2019 is estimated by the IEA Secretariat

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

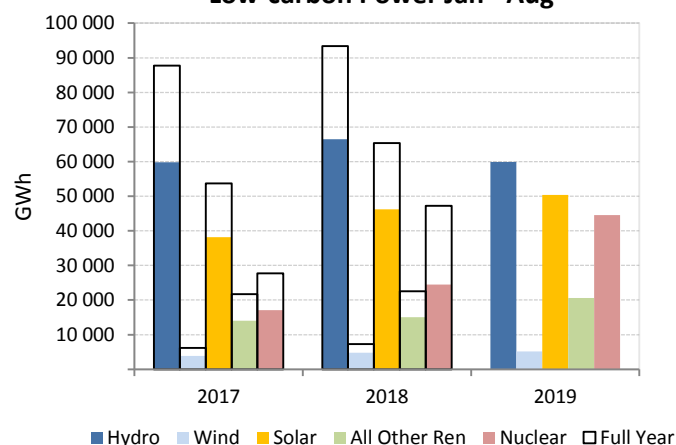
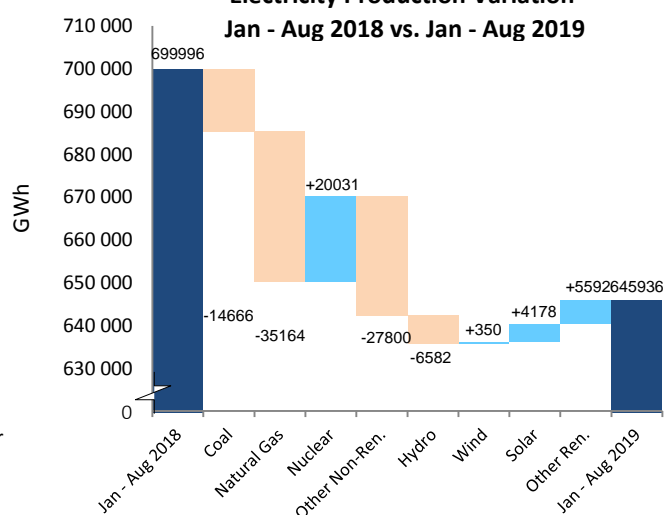
Electricity Production



Electricity Production by Fuel



Low-carbon Power Jan - Aug

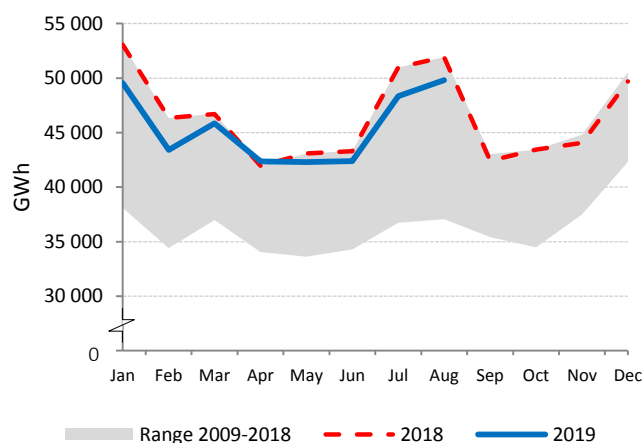
Electricity Production Variation
Jan - Aug 2018 vs. Jan - Aug 2019

KOREA

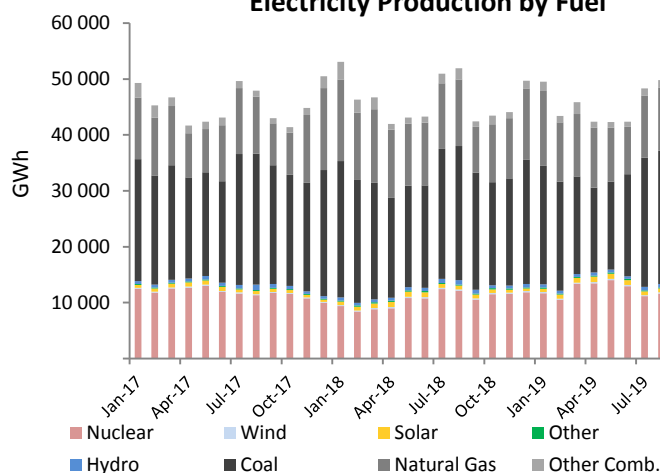
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	36 465	-3.8%	2.6%	73.2%	251 392	281 391	-10.7%	409 209	73.5%
Coal	23 832	-0.6%	3.0%	47.9%	154 445	168 807	-8.5%	249 667	44.8%
Oil	644	-53.2%	6.1%	1.3%	5 946	9 507	-37.5%	11 975	2.1%
Natural Gas	11 316	-5.1%	1.5%	22.7%	86 361	98 045	-11.9%	140 019	25.1%
Combustible Renewables	600	7.0%	2.6%	1.2%	4 136	4 488	-7.8%	6 732	1.2%
Other Combustibles	73	7.4%	2.8%	0.1%	504	544	-7.4%	816	0.1%
Nuclear	11 618	-4.4%	4.5%	23.3%	98 723	81 687	20.9%	127 165	22.8%
Hydro	627	-20.2%	5.7%	1.3%	4 400	4 796	-8.3%	7 172	1.3%
Wind	205	-	-	0.4%	1 640	1 640	-	2 460	0.4%
Solar	692	-	1.5%	1.4%	6 312	6 312	-	8 668	1.6%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	40	-	-	0.1%	320	320	-	480	0.1%
Non-Specified	156	-	-	0.3%	1 248	1 248	-	1 872	0.3%
RENEWABLES	2 164	-5.3%	2.8%	4.3%	16 808	17 556	-4.3%	25 512	4.6%
NON-RENEWABLES	47 639	-4.0%	3.0%	95.7%	347 227	359 838	-3.5%	531 514	95.4%
TOTAL NET PRODUCTION	49 803	-4.1%	3.0%		364 035	377 394	-3.5%	557 026	
+ Imports	-	-	-		-	-	-	-	
- Exports	-	-	-		-	-	-	-	
= ELECTRICITY SUPPLIED	49 803	-4.1%	3.0%		364 035	377 394	-3.5%	557 026	
- Used for pumped storage ⁴	-	-	-		-	3 703	-	5 537	
- T&D Losses ⁴	-	-	-		-	12 852	-	19 057	
= ELECTRICITY CONSUMED	49 803	0.5%	3.0%		364 035	360 839	0.9%	532 432	

¹ current month to month of last year change⁴ estimated² month-to-month change³ year-to-date compared to same period last year

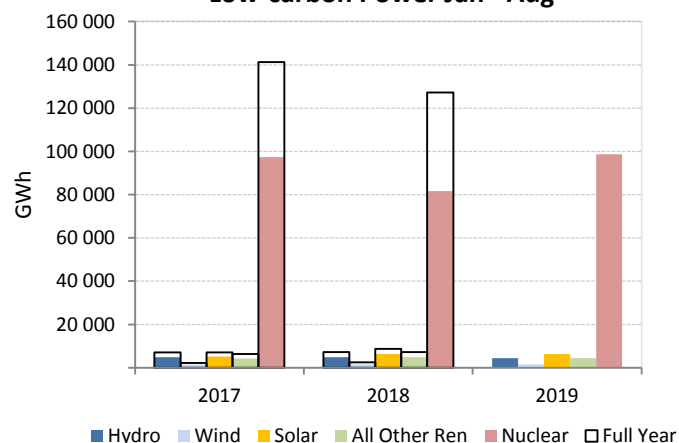
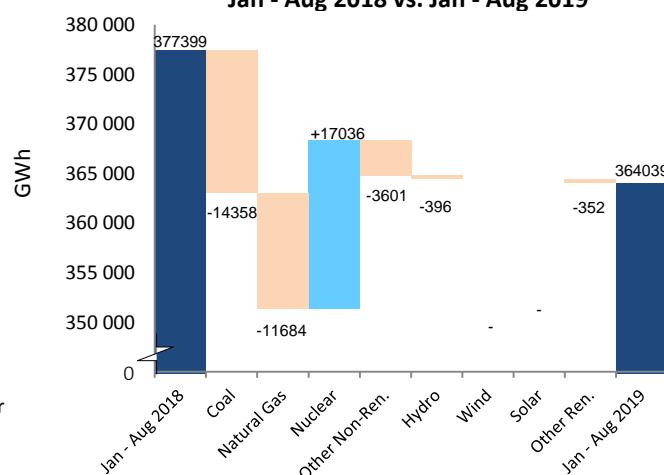
Electricity Production



Electricity Production by Fuel



Low-carbon Power Jan - Aug

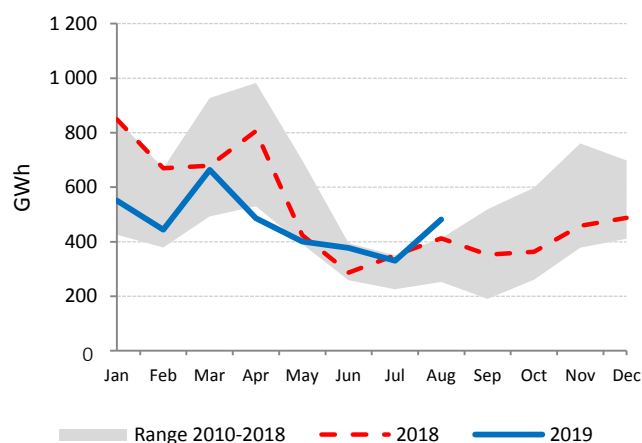
Electricity Production Variation
Jan - Aug 2018 vs. Jan - Aug 2019

LATVIA

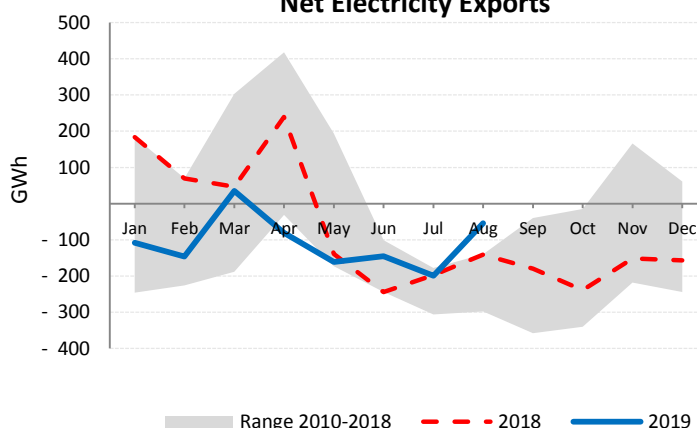
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	388	14.3%	51.3%	80.6%	2 322	2 259	2.8%	3 602	58.7%
Coal	0	-	-	0.0%	0	0	-	7	0.1%
Oil	-	-	-	-	-	0	-	0	0.0%
Natural Gas	328	16.6%	62.9%	68.1%	1 766	1 745	1.2%	2 780	45.3%
Combustible Renewables	61	3.5%	9.3%	12.6%	555	513	8.2%	815	13.3%
Other Combustibles	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	87	33.8%	33.8%	18.1%	1 318	2 148	-38.6%	2 416	39.4%
Wind	6	-25.0%	-33.3%	1.3%	95	72	32.4%	121	2.0%
Solar	0	-	-8.3%	0.0%	1	1	-	1	0.0%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	154	16.7%	18.6%	31.9%	1 969	2 733	-28.0%	3 354	54.6%
NON-RENEWABLES	328	16.6%	62.9%	68.1%	1 766	1 745	1.2%	2 787	45.4%
TOTAL NET PRODUCTION	481	16.6%	45.5%		3 736	4 479	-16.6%	6 141	
+ Imports	366	-26.7%	-33.5%		3 436	3 226	6.5%	5 174	
- Exports	312	-12.8%	-11.1%		2 576	3 045	-15.4%	4 265	
= ELECTRICITY SUPPLIED	535	-3.3%	1.0%		4 595	4 660	-1.4%	7 050	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses ⁴	38	-7.1%	-3.8%		318	342	-6.9%	502	
= ELECTRICITY CONSUMED	498	-3.0%	1.4%		4 277	4 319	-1.0%	6 548	

¹ current month to month of last year change⁴ estimated² month-to-month change³ year-to-date compared to same period last year

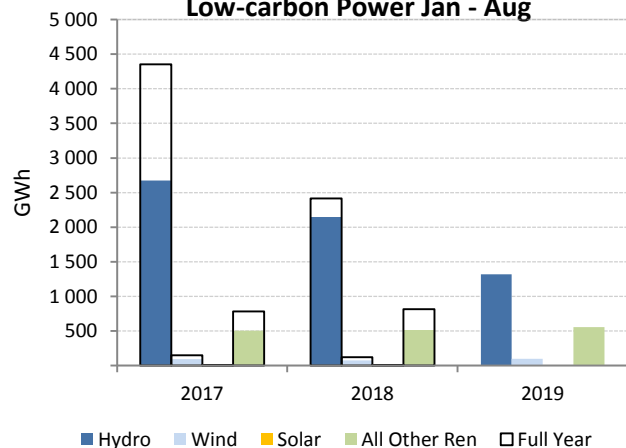
Electricity Production



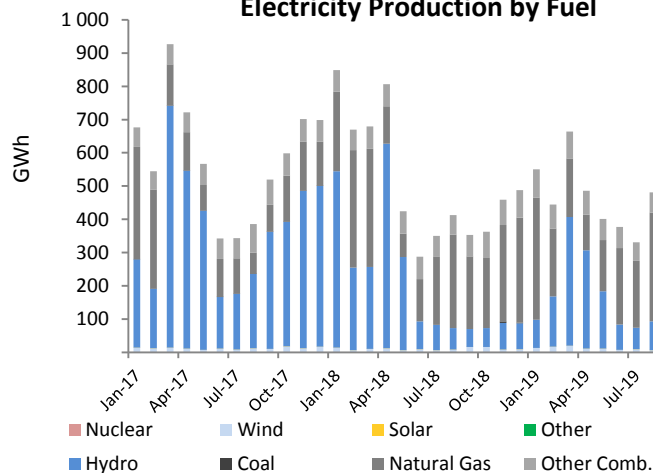
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

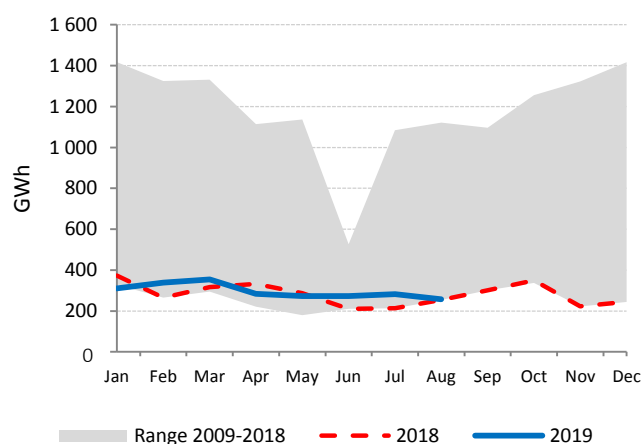


LITHUANIA

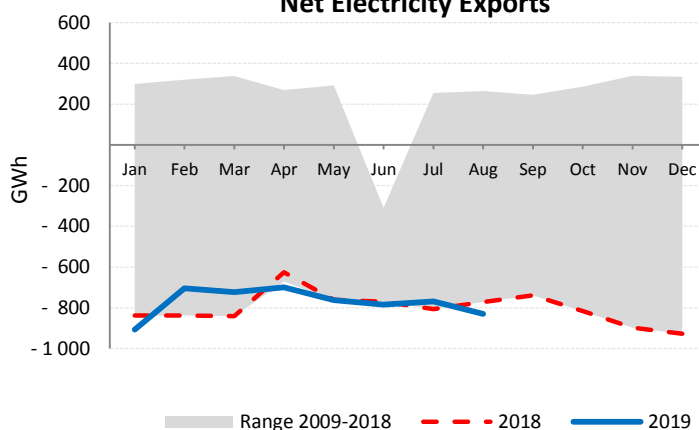
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	89	9.1%	25.1%	34.6%	739	703	5.0%	978	29.0%
Coal	-	-	-	-	-	-	-	-	-
Oil	10	-23.2%	78.1%	4.1%	51	87	-41.1%	118	3.5%
Natural Gas	27	13.9%	-10.9%	10.4%	303	254	19.6%	296	8.8%
Combustible Renewables	45	22.8%	49.1%	17.5%	334	316	5.9%	487	14.5%
Other Combustibles	7	-12.9%	33.2%	2.7%	50	47	5.8%	76	2.2%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	109	58.5%	7.7%	42.5%	631	625	0.8%	945	28.0%
Wind	49	-31.4%	-51.1%	18.9%	936	708	32.2%	1 138	33.8%
Solar	10	-3.6%	-6.4%	4.0%	67	70	-4.0%	86	2.6%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	147	-	224	6.7%
RENEWABLES	213	13.9%	-11.9%	82.9%	1 968	1 719	14.5%	2 657	78.8%
NON-RENEWABLES	44	-34.4%	7.4%	17.1%	404	535	-24.4%	714	21.2%
TOTAL NET PRODUCTION	257	1.2%	-9.1%		2 372	2 254	5.3%	3 371	
+ Imports	1 185	17.2%	9.2%		8 815	8 570	2.9%	12 847	
- Exports	355	47.8%	12.0%		2 637	2 319	13.7%	3 215	
= ELECTRICITY SUPPLIED	1 088	6.0%	3.4%		8 550	8 505	0.5%	13 004	
- Used for pumped storage	131	93.7%	8.9%		518	407	27.1%	726	
- T&D Losses	88	15.7%	14.1%		696	700	-0.6%	1 020	
= ELECTRICITY CONSUMED	869	-1.5%	1.7%		7 337	7 398	-0.8%	11 257	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

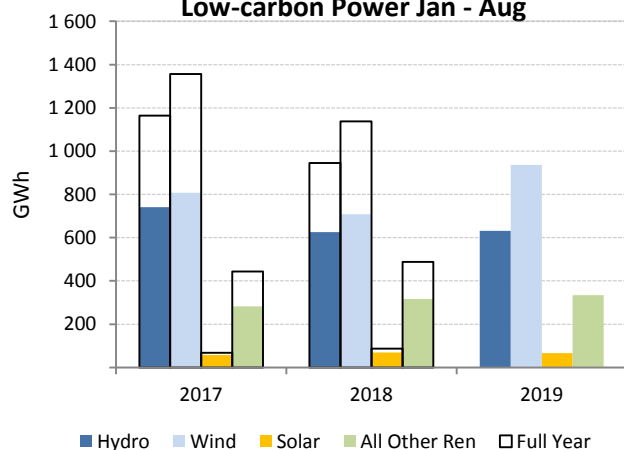
Electricity Production



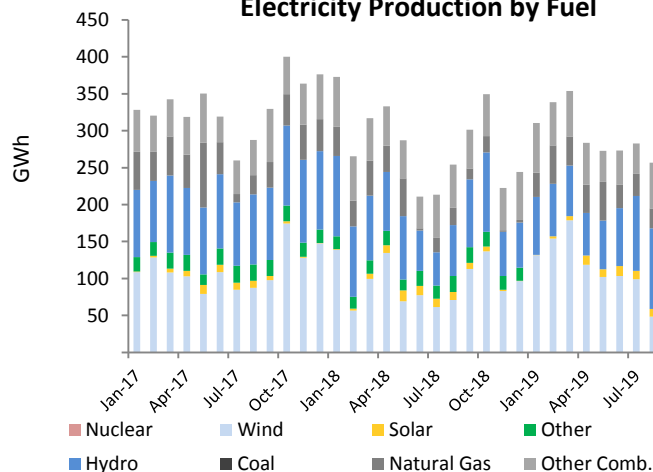
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel



LUXEMBOURG

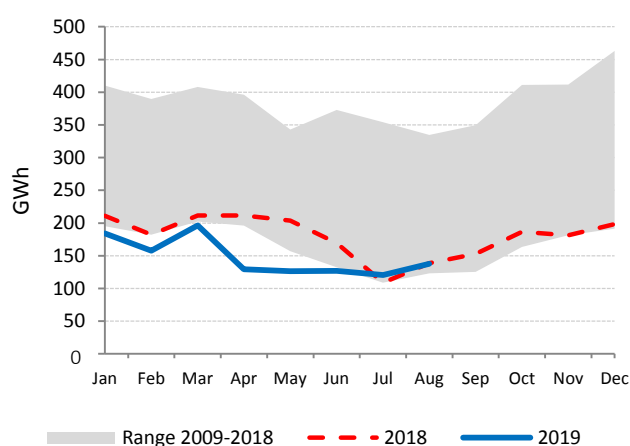
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	39	29.0%	-7.6%	28.4%	324	302	7.1%	472	21.9%
Coal	-	-	-	-	-	-	-	-	-
Oil	-	-	-	-	-	-	-	-	-
Natural Gas	8	5.4%	15.2%	5.9%	118	119	-0.9%	188	8.7%
Combustible Renewables	26	61.5%	-7.1%	18.9%	157	134	16.9%	210	9.7%
Other Combustibles	5	-23.7%	-31.6%	3.6%	49	49	-0.2%	74	3.5%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	72	-10.9%	41.8%	52.0%	606	893	-32.1%	1 326	61.5%
Wind	13	-2.3%	19.2%	9.6%	157	153	2.7%	245	11.4%
Solar	14	-3.4%	-18.4%	10.1%	92	88	4.4%	112	5.2%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	125	0.3%	17.0%	90.5%	1 013	1 269	-20.2%	1 893	87.8%
NON-RENEWABLES	13	-7.8%	-8.5%	9.5%	167	168	-0.7%	263	12.2%
TOTAL NET PRODUCTION	138	-0.6%	14.0%		1 179	1 436	-17.9%	2 155	
+ Imports	494	-9.6%	-9.6%		4 596	5 061	-9.2%	7 553	
- Exports	59	-33.6%	21.1%		633	961	-34.1%	1 392	
= ELECTRICITY SUPPLIED	572	-3.9%	-7.5%		5 142	5 537	-7.1%	8 316	
- Used for pumped storage	90	-20.5%	22.6%		778	1 143	-31.9%	1 718	
- T&D Losses	13	15.8%	2.7%		102	101	1.1%	151	
= ELECTRICITY CONSUMED	470	-0.4%	-11.8%		4 262	4 293	-0.7%	6 448	

¹ current month to month of last year change

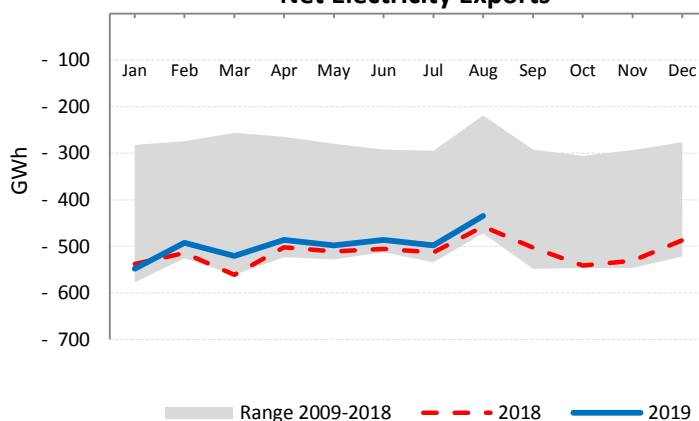
August 2019 is estimated by the IEA Secretariat

² month-to-month change³ year-to-date compared to same period last year

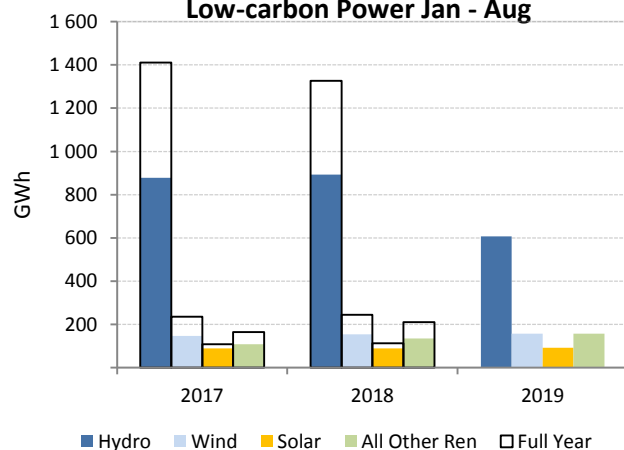
Electricity Production



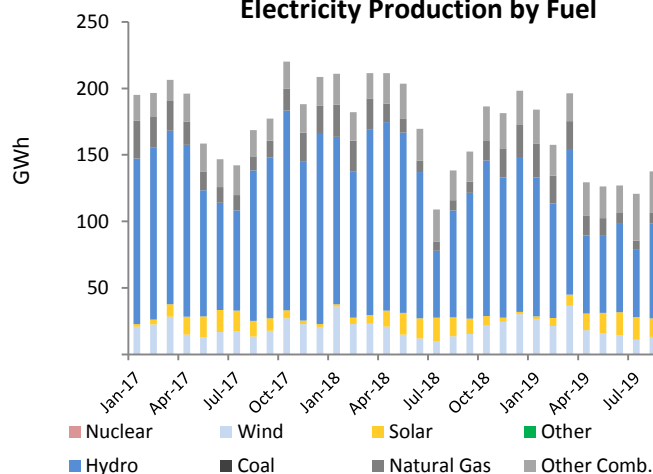
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel



MEXICO

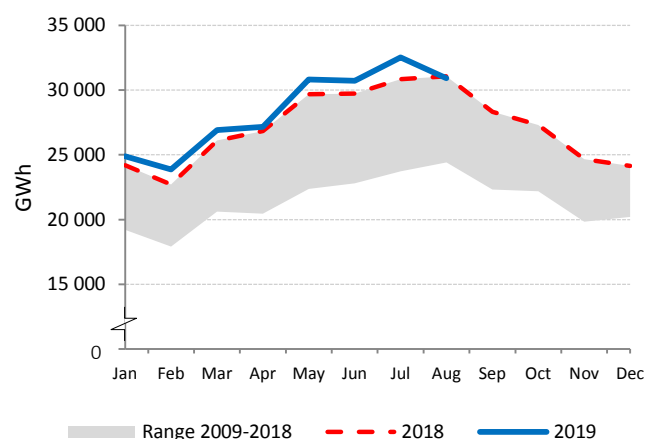
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	24 180	-4.5%	-4.4%	78.2%	179 999	176 676	1.9%	259 379	79.7%
Coal	1 642	-39.7%	-3.3%	5.3%	14 390	19 501	-26.2%	27 678	8.5%
Oil	3 540	-11.7%	-9.0%	11.4%	25 120	23 947	4.9%	34 150	10.5%
Natural Gas	18 878	2.0%	-3.6%	61.1%	138 499	131 526	5.3%	195 299	60.0%
Combustible Renewables	62	81.8%	-4.8%	0.2%	1 593	1 420	12.2%	1 792	0.6%
Other Combustibles	58	23.7%	-3.9%	0.2%	397	282	40.8%	460	0.1%
Nuclear	849	-25.6%	3.9%	2.7%	6 280	8 763	-28.3%	13 260	4.1%
Hydro	2 848	5.6%	5.2%	9.2%	18 331	22 412	-18.2%	32 036	9.8%
Wind	1 238	7.8%	-32.4%	4.0%	11 389	8 152	39.7%	12 522	3.8%
Solar	1 385	315.2%	-5.0%	4.5%	8 383	1 677	399.9%	3 188	1.0%
Geothermal	418	1.9%	0.1%	1.4%	3 443	3 394	1.4%	5 088	1.6%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	103	-	154	0.0%
RENEWABLES	5 952	28.7%	-8.2%	19.3%	43 139	37 056	16.4%	54 627	16.8%
NON-RENEWABLES	24 967	-5.6%	-4.2%	80.7%	184 686	184 122	0.3%	271 001	83.2%
TOTAL NET PRODUCTION	30 919	-0.5%	-5.0%		227 824	221 178	3.0%	325 628	
+ Imports	194	-11.7%	1.3%		1 348	1 478	-8.8%	2 289	
- Exports	309	42.2%	27.2%		1 949	1 252	55.6%	2 114	
= ELECTRICITY SUPPLIED	30 804	-0.8%	-5.2%		227 224	221 403	2.6%	325 802	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses ⁴	4 195	-0.8%	-3.2%		31 009	30 212	2.6%	44 587	
= ELECTRICITY CONSUMED	26 609	-0.8%	-5.5%		196 215	191 191	2.6%	281 215	

¹ current month to month of last year change⁴ estimated² month-to-month change

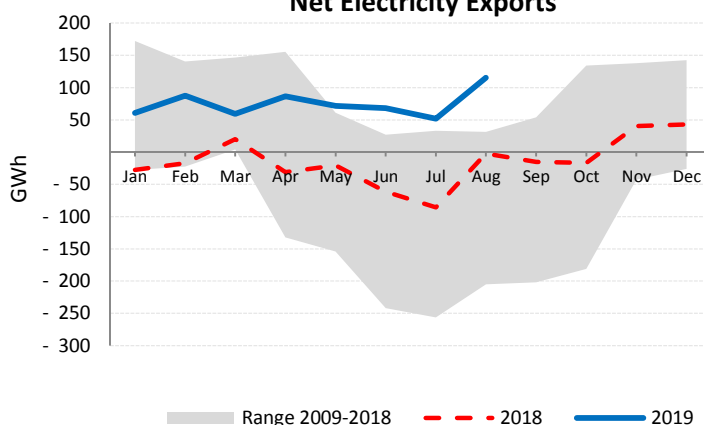
August 2019 is estimated by the IEA Secretariat

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

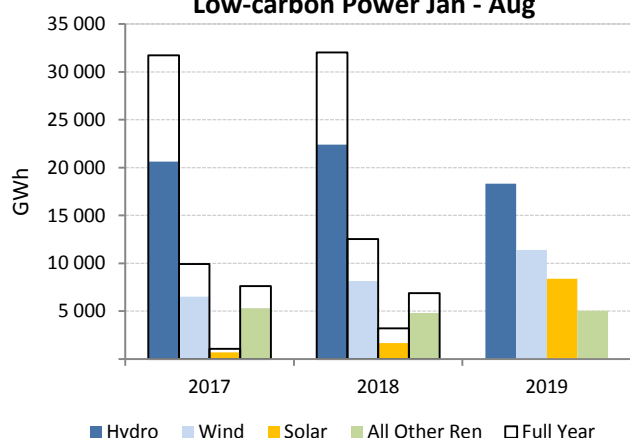
Electricity Production



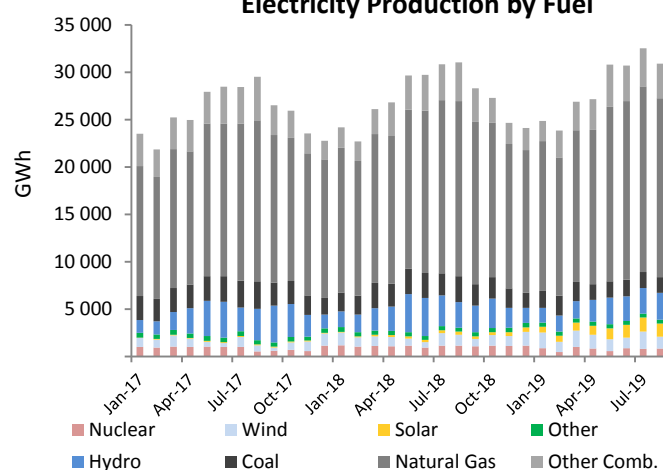
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

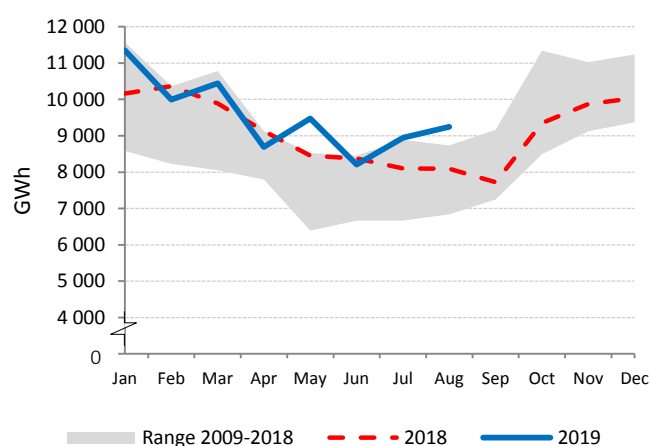


NETHERLANDS

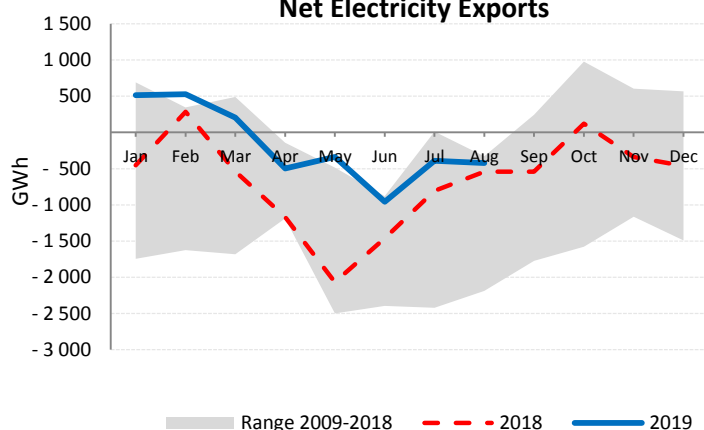
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	7 664	12.4%	5.1%	82.9%	62 588	61 050	2.5%	91 682	83.7%
Coal	1 250	-56.9%	21.2%	13.5%	12 303	18 752	-34.4%	28 694	26.2%
Oil	265	269.8%	39.1%	2.9%	2 141	875	144.7%	1 241	1.1%
Natural Gas	5 631	72.3%	1.7%	60.9%	43 642	36 980	18.0%	55 246	50.4%
Combustible Renewables	363	-8.2%	-4.0%	3.9%	3 051	3 025	0.9%	4 506	4.1%
Other Combustibles	155	-15.0%	-1.2%	1.7%	1 451	1 418	2.3%	1 995	1.8%
Nuclear	224	453.8%	-28.2%	2.4%	2 228	2 118	5.2%	3 346	3.1%
Hydro	2	-47.9%	166.7%	0.0%	45	50	-10.9%	72	0.1%
Wind	411	-55.1%	53.7%	4.4%	5 620	6 333	-11.3%	10 549	9.6%
Solar	888	244.5%	-12.3%	9.6%	5 400	2 553	111.6%	3 201	2.9%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	60	-	-	0.6%	480	480	-	719	0.7%
RENEWABLES	1 663	5.8%	0.3%	18.0%	14 116	11 961	18.0%	18 329	16.7%
NON-RENEWABLES	7 585	16.3%	4.1%	82.0%	62 244	60 622	2.7%	91 242	83.3%
TOTAL NET PRODUCTION	9 248	14.2%	3.4%		76 360	72 583	5.2%	109 571	
+ Imports	1 827	-23.8%	4.5%		13 955	18 156	-23.1%	26 755	
- Exports	1 403	-24.4%	3.4%		12 601	11 408	10.5%	18 785	
= ELECTRICITY SUPPLIED	9 671	12.0%	3.6%		77 714	79 331	-2.0%	117 540	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses ⁴	373	-21.6%	-5.5%		3 224	3 704	-13.0%	5 340	
= ELECTRICITY CONSUMED	9 299	13.9%	4.0%		74 490	75 627	-1.5%	112 201	

¹ current month to month of last year change⁴ estimated² month-to-month change³ year-to-date compared to same period last year

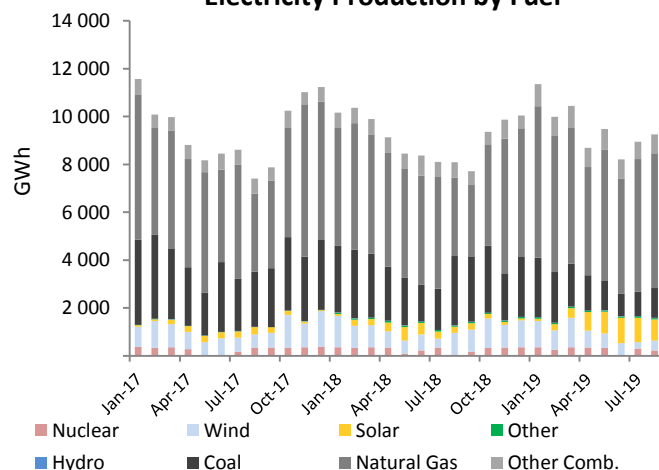
Electricity Production



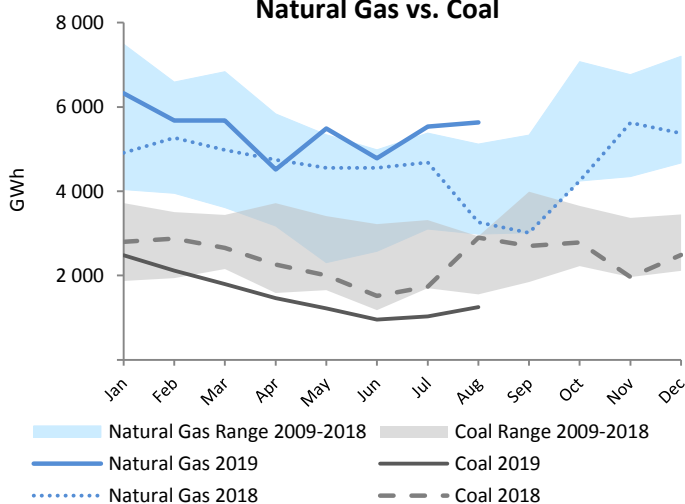
Net Electricity Exports



Electricity Production by Fuel



Natural Gas vs. Coal



NEW ZEALAND

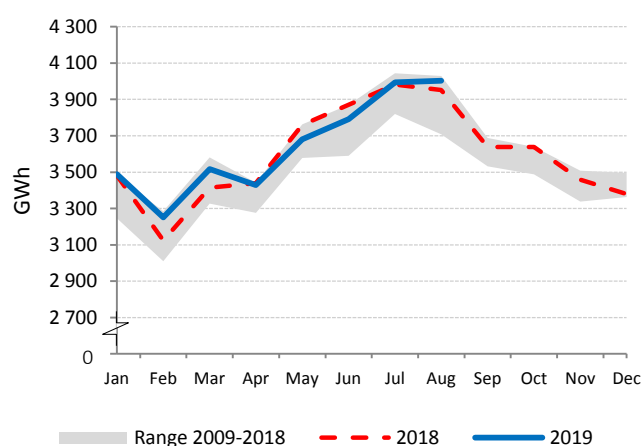
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	747	21.5%	2.3%	18.7%	5 686	5 081	11.9%	7 460	17.3%
Coal	120	100.0%	12.1%	3.0%	1 395	716	94.8%	1 519	3.5%
Oil	-	-	-	-	1	3	-66.7%	10	0.0%
Natural Gas	583	12.3%	1.0%	14.6%	3 895	3 986	-2.3%	5 390	12.5%
Combustible Renewables	44	22.2%	-6.4%	1.1%	395	376	5.1%	541	1.3%
Other Combustibles	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	2 410	-4.6%	0.2%	60.2%	17 004	17 601	-3.4%	26 050	60.4%
Wind	168	18.3%	-13.0%	4.2%	1 365	1 375	-0.7%	2 047	4.7%
Solar	11	37.5%	-	0.3%	80	61	31.1%	96	0.2%
Geothermal	664	1.1%	1.8%	16.6%	4 991	4 877	2.3%	7 443	17.3%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	4	-	-	0.1%	32	32	-	48	0.1%
RENEWABLES	3 297	-2.1%	-0.4%	82.3%	23 835	24 290	-1.9%	36 177	83.9%
NON-RENEWABLES	707	21.3%	3.1%	17.7%	5 323	4 737	12.4%	6 967	16.1%
TOTAL NET PRODUCTION	4 004	1.3%	0.2%		29 158	29 027	0.5%	43 144	
+ Imports	-	-	-	-	-	-	-	-	-
- Exports	-	-	-	-	-	-	-	-	-
= ELECTRICITY SUPPLIED	4 004	1.3%	0.2%		29 158	29 027	0.5%	43 144	
- Used for pumped storage	-	-	-	-	-	-	-	-	-
- T&D Losses	274	5.4%	0.4%		1 992	1 969	1.2%	2 952	
= ELECTRICITY CONSUMED	3 730	1.1%	0.2%		27 166	27 058	0.4%	40 192	

¹ current month to month of last year change

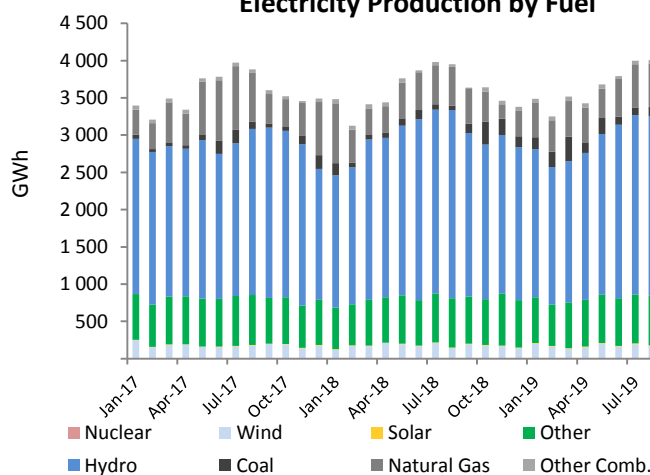
August 2019 is estimated by the IEA Secretariat

² month-to-month change³ year-to-date compared to same period last year

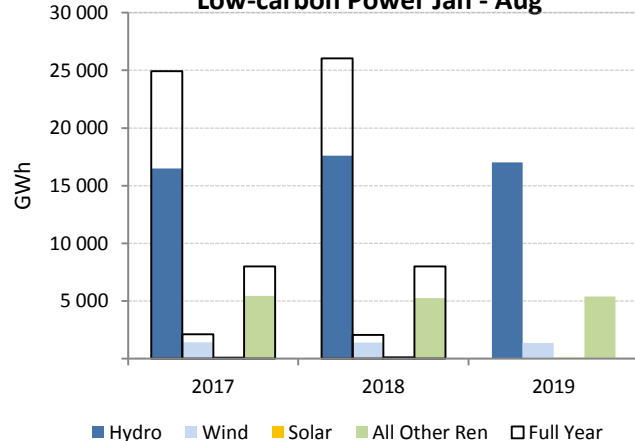
Electricity Production



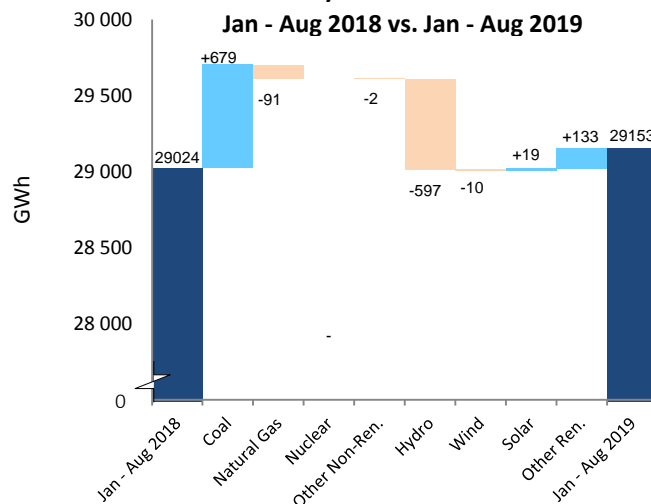
Electricity Production by Fuel



Low-carbon Power Jan - Aug



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

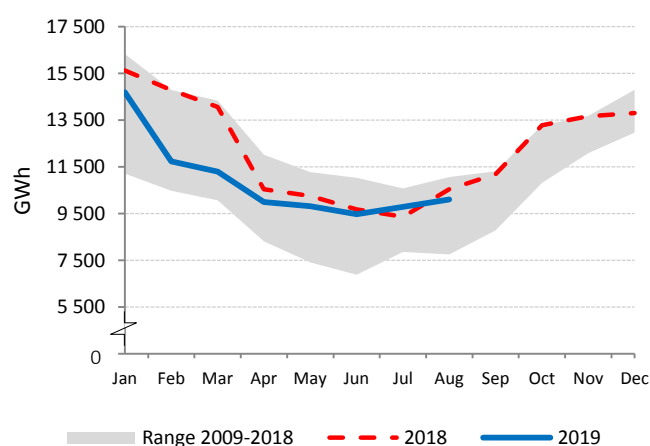


NORWAY

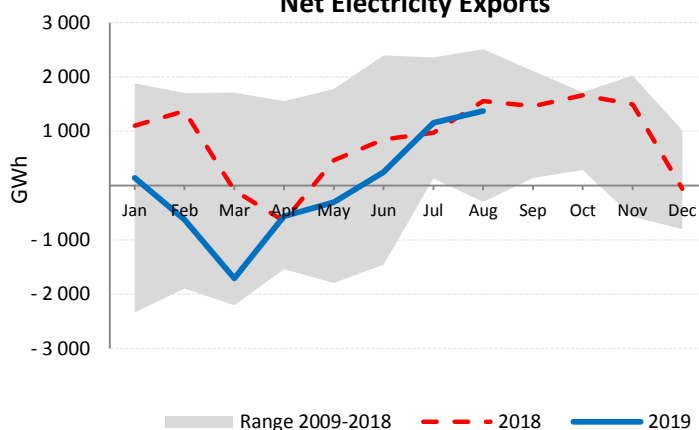
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	246	-12.9%	-1.4%	2.4%	2 062	2 127	-3.1%	3 196	2.2%
Coal ⁴	14	-13.5%	-0.6%	0.1%	115	119	-3.6%	179	0.1%
Oil ⁴	2	-13.5%	-0.6%	0.0%	18	19	-3.6%	28	0.0%
Natural Gas	186	-16.1%	-3.0%	1.8%	1 585	1 741	-8.9%	2 602	1.8%
Combustible Renewables	23	21.5%	6.5%	0.2%	160	127	26.5%	190	0.1%
Other Combustibles	22	-10.3%	5.2%	0.2%	183	121	51.2%	196	0.1%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	9 509	-5.1%	3.0%	94.1%	81 431	90 559	-10.1%	139 477	95.0%
Wind	326	54.3%	12.2%	3.2%	3 253	2 012	61.7%	3 875	2.6%
Solar	-	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	23	-	-	0.2%	184	184	-	276	0.2%
RENEWABLES	9 858	-3.9%	3.3%	97.6%	84 845	92 697	-8.5%	143 542	97.8%
NON-RENEWABLES	246	-14.1%	-1.9%	2.4%	2 086	2 184	-4.5%	3 282	2.2%
TOTAL NET PRODUCTION	10 104	-4.2%	3.2%		86 930	94 882	-8.4%	146 824	
+ Imports	332	-3.9%	-21.3%		8 386	5 761	45.6%	8 340	
- Exports	1 708	-10.2%	8.3%		8 102	11 343	-28.6%	18 489	
= ELECTRICITY SUPPLIED	8 728	-2.9%	1.0%		87 214	89 299	-2.3%	136 675	
- Used for pumped storage	93	115.8%	-19.8%		839	548	52.9%	1 018	
- T&D Losses	585	-4.2%	3.2%		5 034	5 496	-8.4%	8 504	
= ELECTRICITY CONSUMED	8 050	-3.4%	1.2%		81 341	83 255	-2.3%	127 153	

¹ current month to month of last year change⁴ estimated from annual data² month-to-month change³ year-to-date compared to same period last year

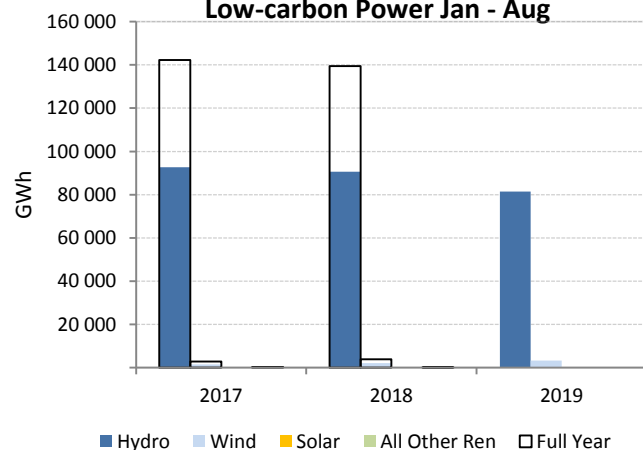
Electricity Production



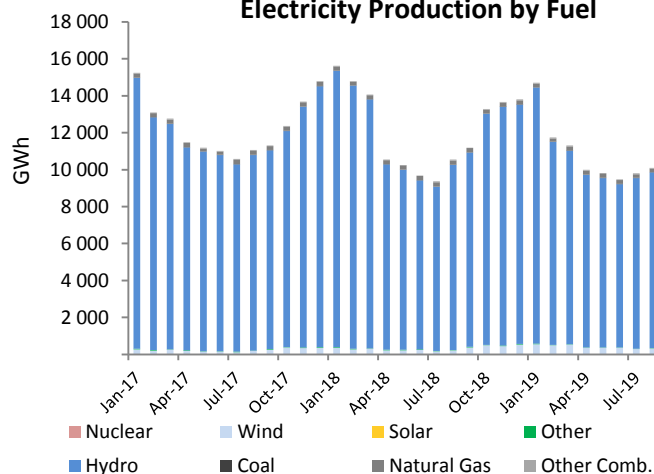
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

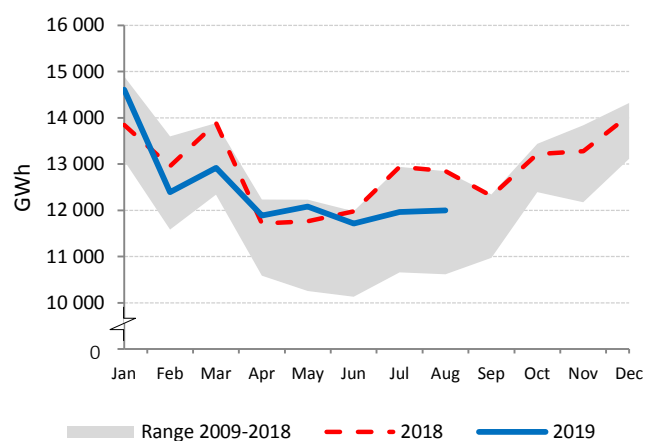


POLAND

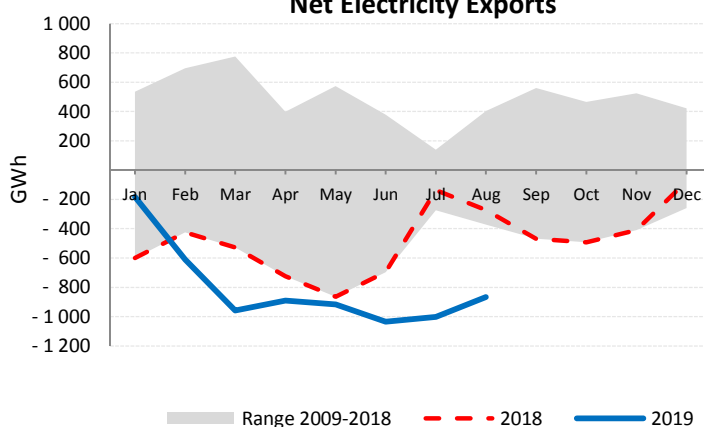
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	11 161	-6.8%	3.1%	93.0%	87 686	92 207	-4.9%	139 470	90.1%
Coal	9 212	-10.1%	2.6%	76.8%	73 176	80 552	-7.9%	120 230	77.7%
Oil ⁴	-	-	-	-	-	-	-	1 685	1.1%
Natural Gas	1 204	13.6%	9.7%	10.0%	8 883	7 754	14.6%	11 431	7.4%
Combustible Renewables	560	18.8%	-2.1%	4.7%	4 259	3 641	17.0%	5 723	3.7%
Other Combustibles	185	420.1%	0.4%	1.5%	1 368	260	425.7%	400	0.3%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	139	-2.0%	2.7%	1.2%	1 928	1 796	7.4%	2 361	1.5%
Wind	593	-13.8%	-34.2%	4.9%	9 368	7 657	22.4%	12 592	8.1%
Solar	102	144.9%	6.9%	0.8%	537	225	138.3%	301	0.2%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	6	-	-	0.0%	44	44	-	66	0.0%
RENEWABLES	1 394	3.8%	-18.2%	11.6%	16 092	13 319	20.8%	20 978	13.6%
NON-RENEWABLES	10 606	-7.8%	3.3%	88.4%	83 472	88 611	-5.8%	133 813	86.4%
TOTAL NET PRODUCTION	12 000	-6.6%	0.3%		99 564	101 929	-2.3%	154 790	
+ Imports	1 374	5.5%	-17.2%		11 384	9 366	21.5%	13 816	
- Exports	506	-50.8%	-23.0%		4 923	5 118	-3.8%	8 121	
= ELECTRICITY SUPPLIED	12 867	-1.9%	-0.8%		106 025	106 177	-0.1%	160 485	
- Used for pumped storage	64	41.9%	-1.1%		644	423	52.3%	661	
- T&D Losses	935	57.8%	-14.2%		7 373	6 516	13.2%	9 878	
= ELECTRICITY CONSUMED	11 868	-4.9%	0.5%		98 007	99 238	-1.2%	149 946	

¹ current month to month of last year change⁴ monthly figures are confidential² month-to-month change³ year-to-date compared to same period last year

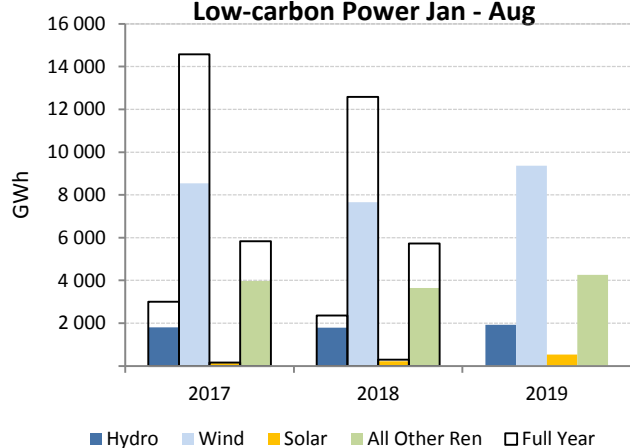
Electricity Production



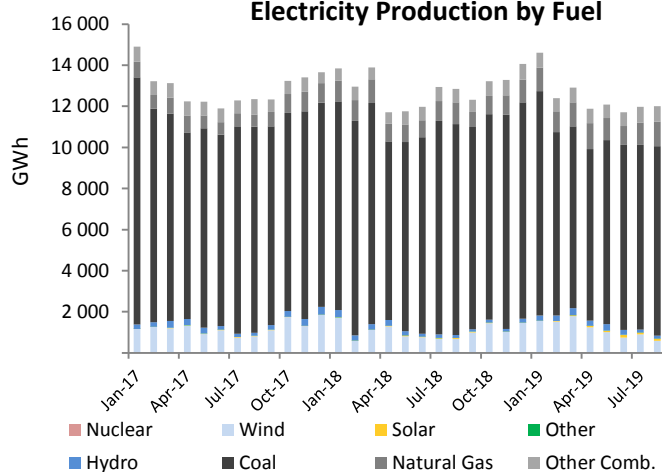
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

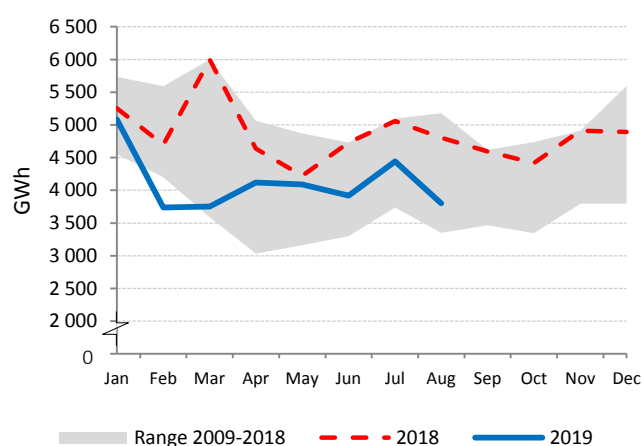


PORTUGAL

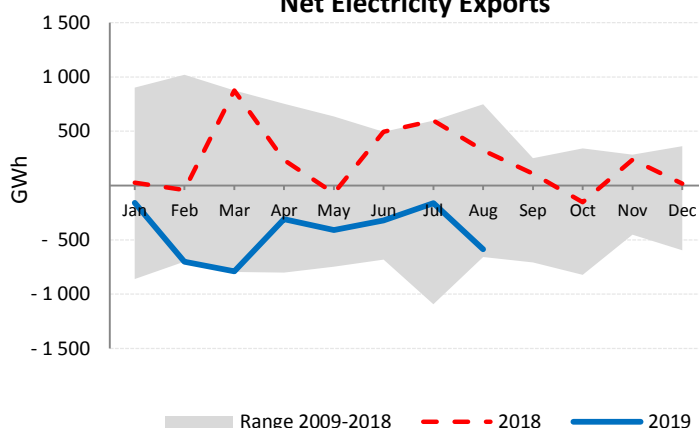
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	2 273	-29.9%	-27.0%	59.8%	18 019	20 088	-10.3%	30 863	53.0%
Coal	85	-92.8%	-89.2%	2.2%	4 568	7 263	-37.1%	11 576	19.9%
Oil	111	-1.9%	7.2%	2.9%	715	713	0.2%	1 120	1.9%
Natural Gas	1 750	4.9%	-9.3%	46.0%	10 490	9 806	7.0%	14 832	25.5%
Combustible Renewables	305	15.6%	12.7%	8.0%	2 070	2 115	-2.1%	3 075	5.3%
Other Combustibles	22	-16.3%	-9.7%	0.6%	176	192	-8.3%	260	0.4%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	530	-21.4%	16.4%	13.9%	5 688	10 082	-43.6%	13 609	23.4%
Wind	827	10.5%	17.1%	21.7%	8 121	8 381	-3.1%	12 513	21.5%
Solar	157	30.0%	2.5%	4.1%	987	705	40.1%	1 020	1.8%
Geothermal	15	-11.1%	-4.6%	0.4%	132	136	-3.1%	204	0.3%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	1 833	0.5%	14.5%	48.2%	16 999	21 418	-20.6%	30 421	52.3%
NON-RENEWABLES	1 968	-33.9%	-30.8%	51.8%	15 949	17 974	-11.3%	27 787	47.7%
TOTAL NET PRODUCTION	3 801	-20.8%	-14.5%		32 948	39 392	-16.4%	58 208	
+ Imports	764	128.8%	54.8%		5 656	3 423	65.2%	5 668	
- Exports	177	-73.0%	-46.7%		2 219	5 866	-62.2%	8 325	
= ELECTRICITY SUPPLIED	4 388	-2.0%	-4.7%		36 384	36 949	-1.5%	55 551	
- Used for pumped storage	110	74.9%	42.4%		1 027	1 052	-2.4%	1 564	
- T&D Losses	408	-2.6%	-5.3%		3 365	3 434	-2.0%	5 149	
= ELECTRICITY CONSUMED	3 870	-3.2%	-5.5%		31 992	32 462	-1.4%	48 838	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

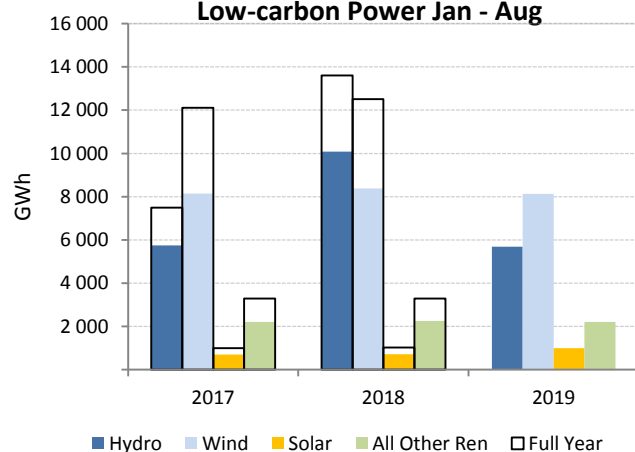
Electricity Production



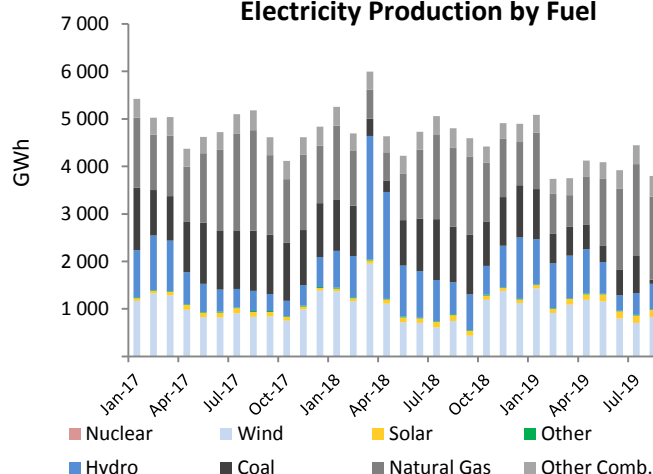
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

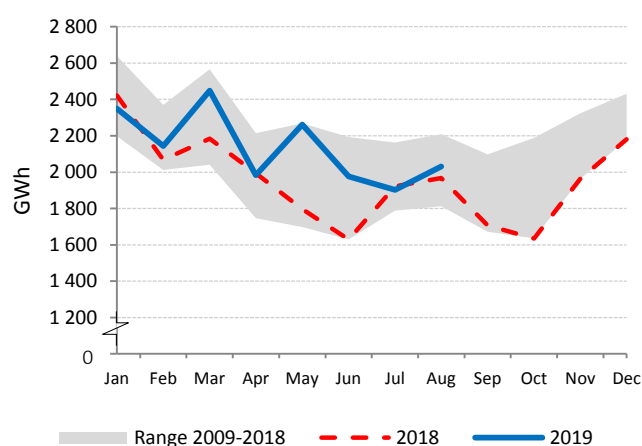


SLOVAK REPUBLIC

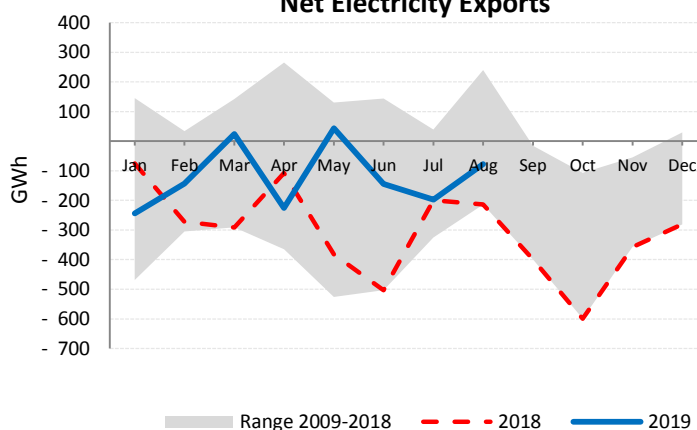
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	391	-8.2%	-15.0%	19.3%	3 942	3 367	17.1%	5 189	22.1%
Coal	86	-43.1%	-37.9%	4.2%	1 478	1 587	-6.9%	2 456	10.5%
Oil	33	11.4%	14.7%	1.6%	203	235	-13.8%	338	1.4%
Natural Gas	196	48.3%	-4.3%	9.6%	1 532	692	121.5%	1 144	4.9%
Combustible Renewables	75	-33.3%	-13.8%	3.7%	718	842	-14.8%	1 235	5.3%
Other Combustibles	1	-4.8%	-2.5%	0.1%	11	11	-3.1%	17	0.1%
Nuclear	1 288	2.3%	18.6%	63.4%	9 322	9 279	0.5%	13 797	58.8%
Hydro	275	33.8%	-0.3%	13.6%	3 347	2 855	17.2%	3 834	16.3%
Wind	-	-	-	-	1	2	-50.0%	6	0.0%
Solar	72	-	-5.3%	3.5%	448	441	1.6%	585	2.5%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	4	-20.0%	-	0.2%	32	40	-18.9%	60	0.3%
RENEWABLES	422	8.2%	-3.8%	20.8%	4 514	4 141	9.0%	5 660	24.1%
NON-RENEWABLES	1 609	1.9%	9.9%	79.2%	12 579	11 845	6.2%	17 810	75.9%
TOTAL NET PRODUCTION	2 031	3.2%	6.7%		17 093	15 985	6.9%	23 470	
+ Imports	1 039	-9.9%	-1.0%		8 772	7 303	20.1%	12 427	
- Exports	962	2.4%	12.8%		7 808	5 258	48.5%	8 746	
= ELECTRICITY SUPPLIED	2 108	-3.4%	0.4%		18 057	18 030	0.1%	27 151	
- Used for pumped storage	23	76.9%	-4.2%		196	267	-26.6%	401	
- T&D Losses ⁴	98	-1.9%	4.0%		823	741	11.1%	1 143	
= ELECTRICITY CONSUMED	1 987	-4.0%	0.3%		17 037	17 022	0.1%	25 608	

¹ current month to month of last year change⁴ estimated² month-to-month change³ year-to-date compared to same period last year

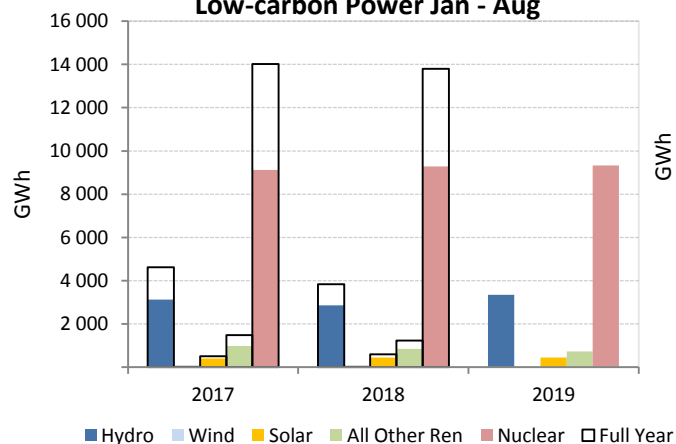
Electricity Production



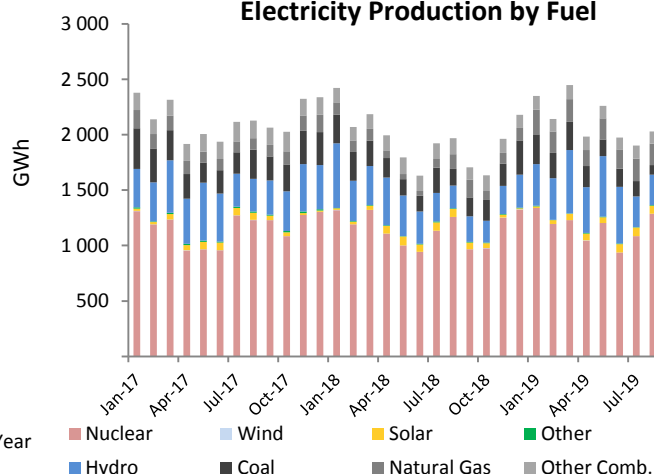
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

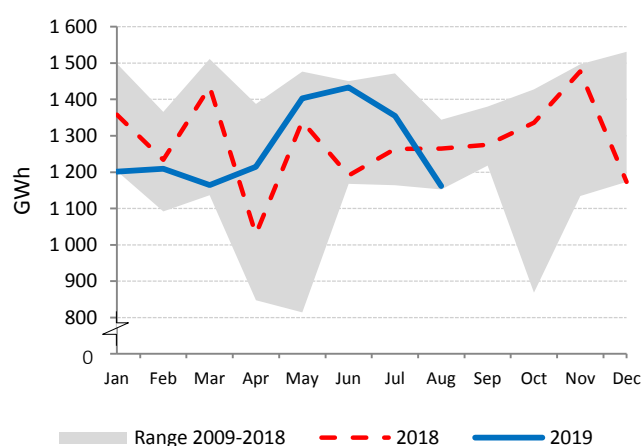


SLOVENIA

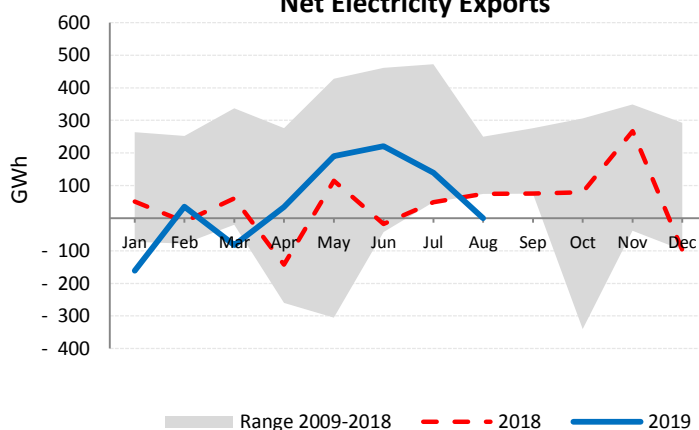
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	326	-26.9%	-30.2%	28.0%	3 035	2 980	1.9%	4 801	31.2%
Coal	277	-32.5%	-36.1%	23.8%	2 600	2 546	2.1%	4 131	26.9%
Oil	1	-5.5%	7900.0%	0.1%	4	11	-68.3%	15	0.1%
Natural Gas	35	87.6%	65.5%	3.0%	291	268	8.5%	413	2.7%
Combustible Renewables	12	-19.1%	9.1%	1.0%	135	149	-9.3%	233	1.5%
Other Combustibles	1	-5.6%	-10.0%	0.1%	6	6	6.4%	9	0.1%
Nuclear	502	0.9%	-0.2%	43.2%	4 014	3 466	15.8%	5 489	35.7%
Hydro	301	4.8%	-13.5%	25.9%	2 884	3 474	-17.0%	4 826	31.4%
Wind	1	-	88.8%	0.0%	4	4	10.1%	6	0.0%
Solar	32	-4.0%	-10.8%	2.8%	204	192	6.6%	255	1.7%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	346	2.9%	-12.5%	29.8%	3 227	3 818	-15.5%	5 320	34.6%
NON-RENEWABLES	816	-12.1%	-14.9%	70.2%	6 915	6 297	9.8%	10 057	65.4%
TOTAL NET PRODUCTION	1 162	-8.1%	-14.2%		10 142	10 115	0.3%	15 377	
+ Imports	648	20.9%	-14.7%		6 231	6 151	1.3%	8 930	
- Exports	649	6.2%	-27.9%		6 608	6 329	4.4%	9 432	
= ELECTRICITY SUPPLIED	1 162	-2.4%	-4.4%		9 765	9 937	-1.7%	14 875	
- Used for pumped storage	30	4.4%	22.7%		139	185	-24.6%	252	
- T&D Losses	35	-31.5%	-20.5%		549	560	-1.9%	889	
= ELECTRICITY CONSUMED	1 097	-1.3%	-4.3%		9 077	9 192	-1.3%	13 733	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

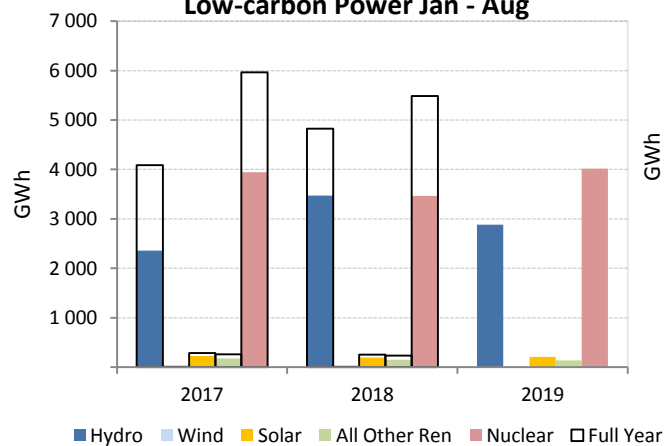
Electricity Production



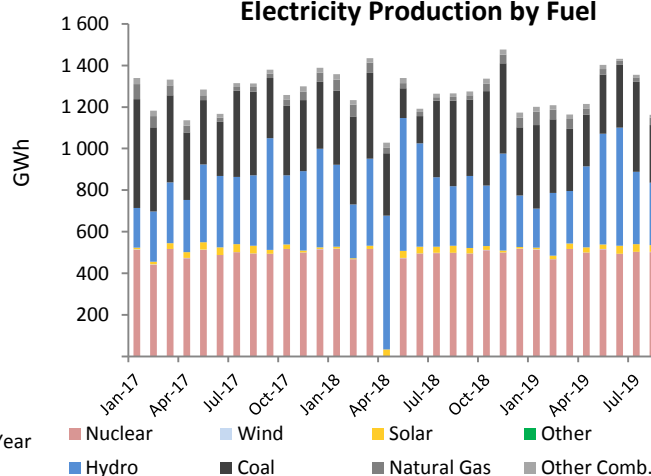
Net Electricity Exports



Low-carbon Power Jan - Aug

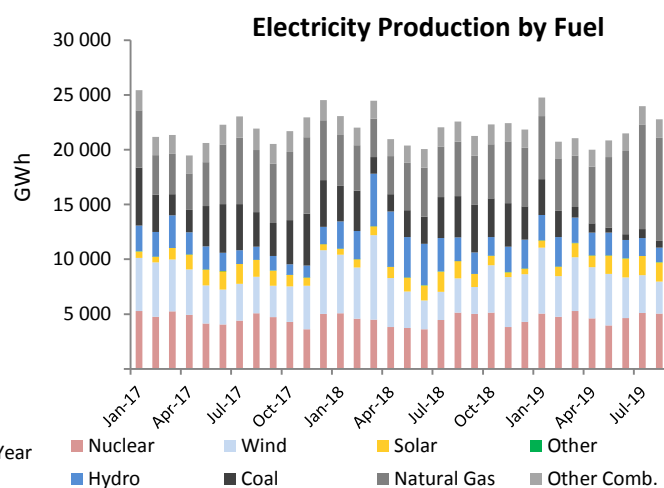
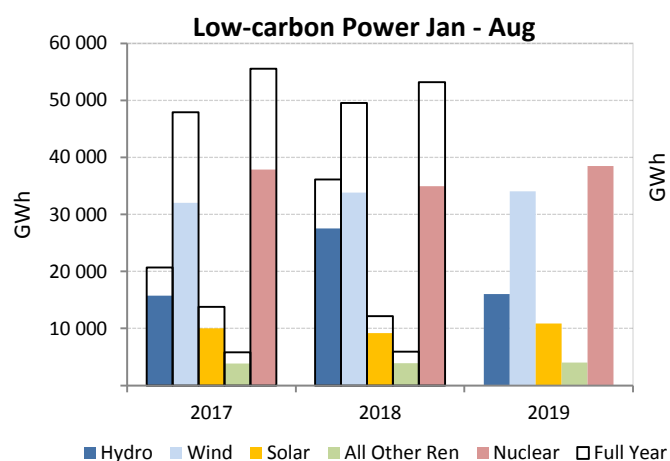
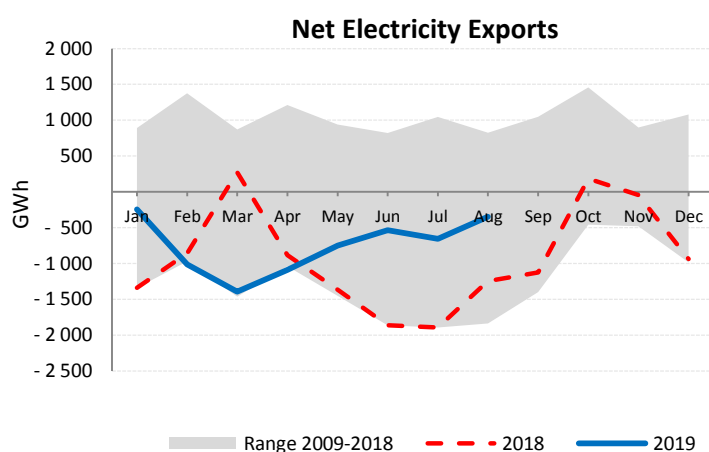
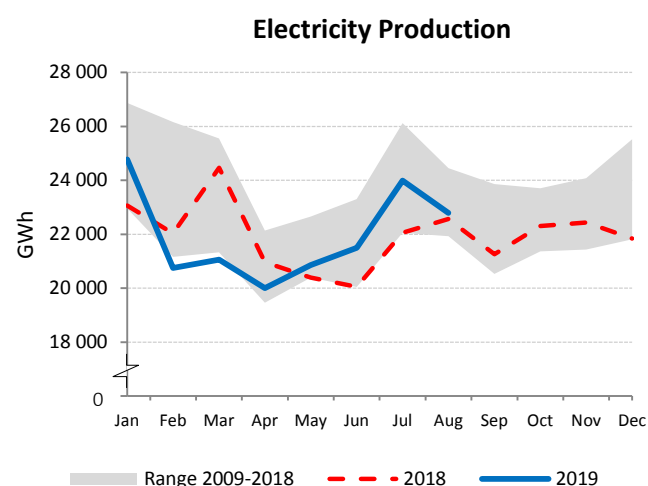


Electricity Production by Fuel



SPAIN

	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	11 716	11.0%	-2.8%	51.4%	76 188	69 970	8.9%	112 196	42.6%
Coal	599	-84.0%	-28.3%	2.6%	9 933	22 490	-55.8%	37 430	14.2%
Oil	1 100	-11.7%	1.5%	4.8%	8 480	9 070	-6.5%	13 750	5.2%
Natural Gas	9 423	89.9%	-1.2%	41.3%	53 336	34 036	56.7%	54 356	20.6%
Combustible Renewables	537	0.5%	-1.6%	2.4%	3 994	3 899	2.4%	5 941	2.3%
Other Combustibles	58	-7.1%	10.8%	0.3%	445	476	-6.5%	719	0.3%
Nuclear	5 062	-1.3%	-1.1%	22.2%	38 471	34 946	10.1%	53 203	20.2%
Hydro	1 328	-38.7%	-17.5%	5.8%	16 034	27 542	-41.8%	36 116	13.7%
Wind	2 897	-7.6%	-16.0%	12.7%	34 066	33 853	0.6%	49 571	18.8%
Solar	1 776	13.8%	1.9%	7.8%	10 863	9 171	18.5%	12 182	4.6%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	10	-	-	0.0%	81	81	-	121	0.0%
RENEWABLES	6 537	-11.6%	-11.0%	28.7%	64 956	74 464	-12.8%	103 810	39.4%
NON-RENEWABLES	16 251	7.2%	-2.3%	71.3%	110 746	101 098	9.5%	159 578	60.6%
TOTAL NET PRODUCTION	22 789	1.0%	-5.0%		175 703	175 563	0.1%	263 389	
+ Imports	1 278	-34.9%	2.6%		13 106	17 455	-24.9%	24 018	
- Exports	929	29.2%	57.8%		7 074	8 279	-14.5%	12 916	
= ELECTRICITY SUPPLIED	23 137	-2.8%	-6.1%		181 735	184 739	-1.6%	274 491	
- Used for pumped storage	135	92.3%	24.2%		1 794	2 401	-25.3%	3 254	
- T&D Losses	2 250	-3.5%	-6.3%		17 660	17 949	-1.6%	26 694	
= ELECTRICITY CONSUMED	20 752	-3.0%	-6.2%		162 281	164 389	-1.3%	244 543	

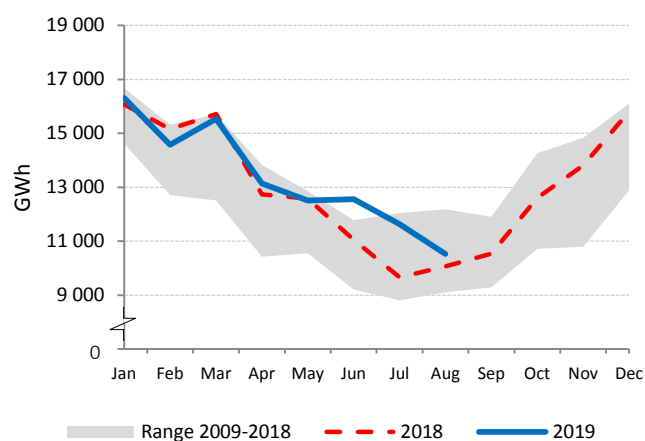
¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

SWEDEN

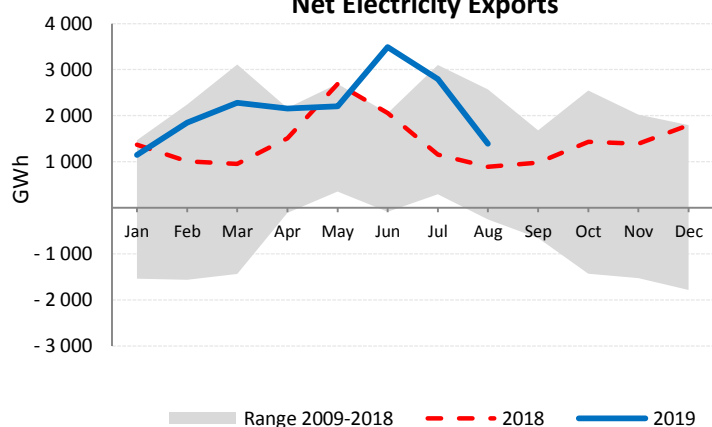
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	710	7.2%	-1.3%	6.7%	10 138	9 209	10.1%	14 335	9.2%
Coal	0	-100.0%	-	0.0%	1 215	1 374	-11.5%	1 964	1.3%
Oil	18	-17.8%	28.8%	0.2%	275	284	-3.4%	366	0.2%
Natural Gas	3	13.6%	28.1%	0.0%	425	374	13.6%	544	0.3%
Combustible Renewables	596	10.3%	0.0%	5.7%	7 473	6 405	16.7%	10 269	6.6%
Other Combustibles	92	-0.9%	-13.8%	0.9%	751	771	-2.7%	1 193	0.8%
Nuclear	4 737	6.8%	-2.1%	45.0%	41 498	42 393	-2.1%	63 229	40.6%
Hydro	3 839	5.8%	-22.7%	36.5%	42 176	41 687	1.2%	61 169	39.3%
Wind	1 196	-7.5%	13.4%	11.4%	12 633	9 391	34.5%	16 623	10.7%
Solar⁴	46	-	-10.9%	0.4%	328	328	-	404	0.3%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	5 678	3.1%	-14.9%	53.9%	62 610	57 812	8.3%	88 465	56.8%
NON-RENEWABLES	4 851	6.4%	-2.3%	46.1%	44 163	45 196	-2.3%	67 295	43.2%
TOTAL NET PRODUCTION	10 529	4.6%	-9.5%		106 773	103 009	3.7%	155 760	
+ Imports	1 143	-6.2%	65.1%		5 687	8 111	-29.9%	12 202	
- Exports	2 532	20.0%	-27.3%		22 988	19 740	16.5%	29 431	
= ELECTRICITY SUPPLIED	9 140	-0.4%	3.4%		89 472	91 380	-2.1%	138 531	
- Used for pumped storage	-	-	-		23	48	-52.3%	56	
- T&D Losses	422	-12.5%	-2.4%		4 682	4 765	-1.7%	7 450	
= ELECTRICITY CONSUMED	8 717	0.3%	3.7%		84 767	86 567	-2.1%	131 025	

¹ current month to month of last year change⁴ estimated by the IEA secretariat² month-to-month change³ year-to-date compared to same period last year

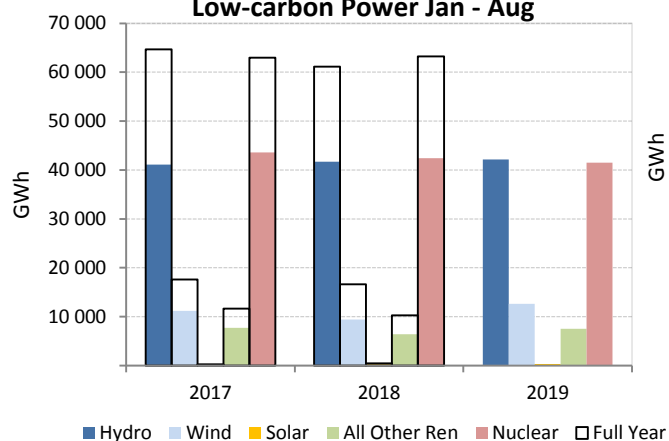
Electricity Production



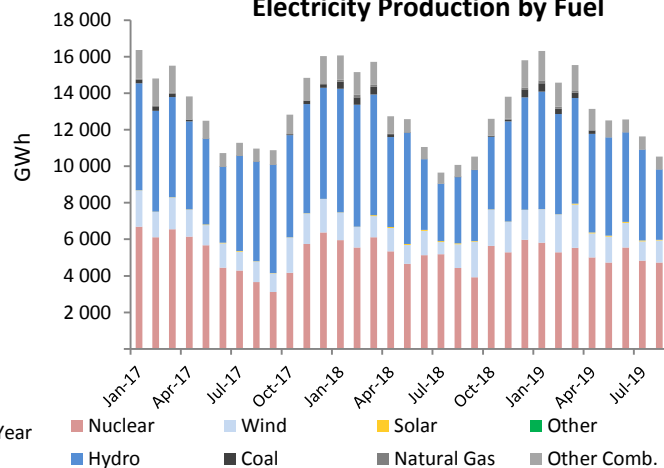
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

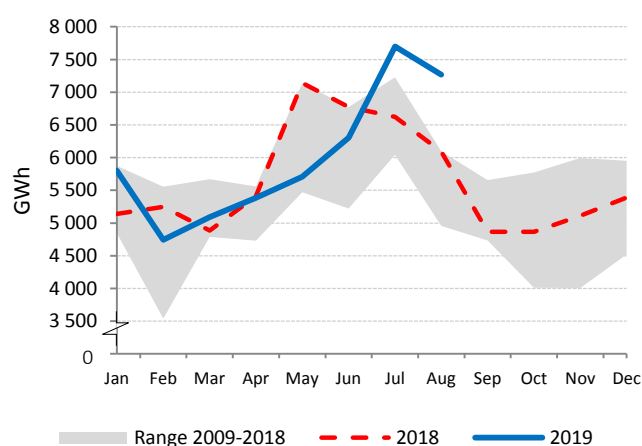


SWITZERLAND

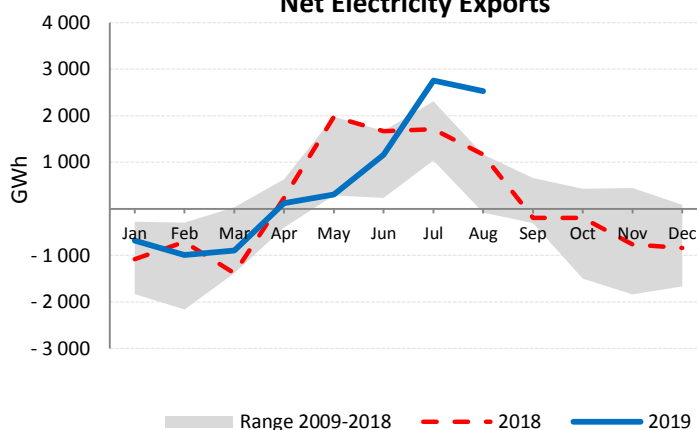
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	290	3.1%	-5.3%	4.0%	2 485	2 376	4.6%	3 701	5.5%
Coal	-	-	-	-	-	-	-	-	-
Oil	2	-	-25.0%	0.0%	23	21	7.4%	34	0.1%
Natural Gas	46	-12.3%	-5.9%	0.6%	399	446	-10.4%	693	1.0%
Combustible Renewables	148	9.4%	-5.2%	2.0%	1 263	1 140	10.8%	1 776	2.6%
Other Combustibles	94	2.8%	-4.4%	1.3%	800	769	3.9%	1 198	1.8%
Nuclear	1 940	-6.4%	-4.5%	26.7%	15 934	16 393	-2.8%	24 414	36.1%
Hydro	4 787	36.1%	-5.0%	65.9%	27 867	27 030	3.1%	37 428	55.4%
Wind	8	14.3%	14.3%	0.1%	90	80	12.7%	121	0.2%
Solar	244	11.6%	-22.0%	3.4%	1 622	1 435	13.0%	1 884	2.8%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	5 187	33.8%	-6.0%	71.4%	30 842	29 685	3.9%	41 209	61.0%
NON-RENEWABLES	2 082	-6.2%	-4.6%	28.6%	17 156	17 629	-2.7%	26 339	39.0%
TOTAL NET PRODUCTION	7 269	19.2%	-5.6%		47 998	47 314	1.4%	67 548	
+ Imports	1 246	-23.4%	-2.1%		19 643	19 712	-0.4%	31 020	
- Exports	3 775	35.1%	-6.3%		23 951	23 296	2.8%	32 607	
= ELECTRICITY SUPPLIED	4 740	-3.8%	-4.1%		43 689	43 731	-0.1%	65 961	
- Used for pumped storage	324	-5.1%	-21.0%		2 703	2 597	4.1%	3 987	
- T&D Losses	349	-3.0%	-3.5%		3 049	3 067	-0.6%	4 574	
= ELECTRICITY CONSUMED	4 066	-3.8%	-2.5%		37 937	38 067	-0.3%	57 399	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

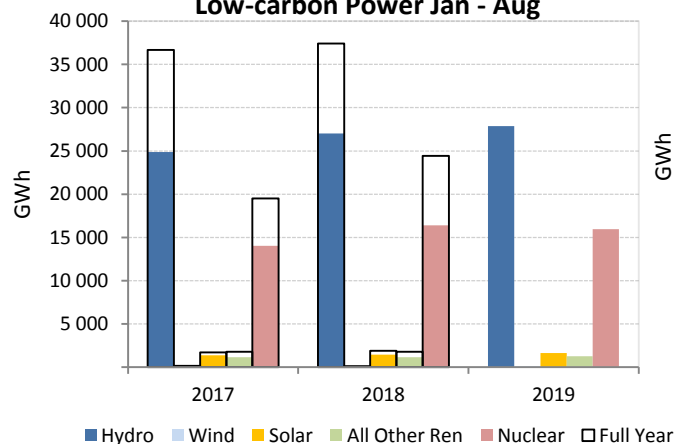
Electricity Production



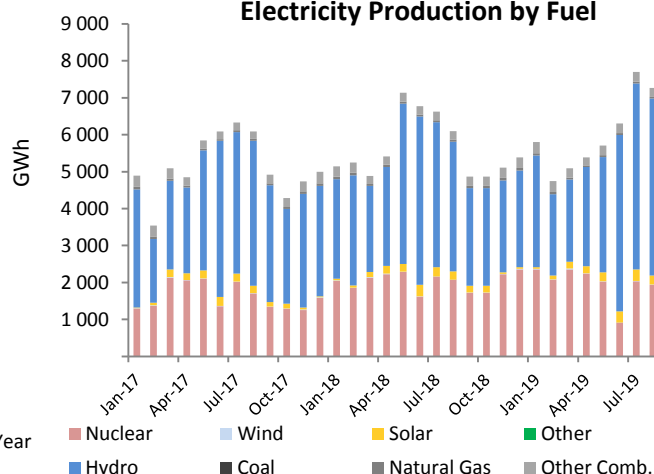
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

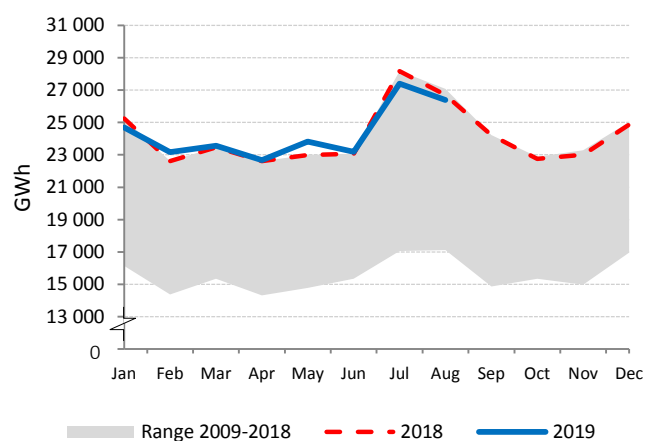


TURKEY

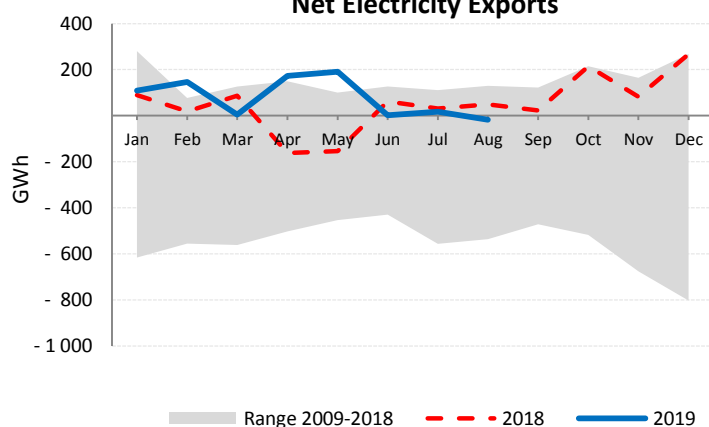
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	15 334	-12.3%	-6.1%	58.1%	100 765	129 002	-21.9%	196 932	68.0%
Coal	9 940	2.2%	-2.7%	37.7%	65 900	69 543	-5.2%	106 878	36.9%
Oil	14	-41.1%	1.0%	0.1%	175	193	-9.5%	311	0.1%
Natural Gas	5 105	-32.3%	-12.8%	19.3%	32 645	57 698	-43.4%	87 234	30.1%
Combustible Renewables	274	45.1%	10.1%	1.0%	2 041	1 549	31.8%	2 488	0.9%
Other Combustibles	0	-78.1%	-10.6%	0.0%	4	20	-78.0%	22	0.0%
Nuclear	-	-	-	-	-	-	-	-	-
Hydro	6 832	24.8%	-8.9%	25.9%	67 107	43 603	53.9%	59 076	20.4%
Wind	2 643	13.3%	35.2%	10.0%	14 938	12 849	16.3%	19 748	6.8%
Solar	1 033	15.3%	-3.9%	3.9%	6 396	5 087	25.7%	7 305	2.5%
Geothermal	481	7.8%	-4.2%	1.8%	5 148	3 718	38.5%	5 797	2.0%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	61	-22.8%	32.5%	0.2%	552	628	-12.0%	890	0.3%
RENEWABLES	11 264	20.6%	-0.1%	42.7%	95 630	66 806	43.1%	94 414	32.6%
NON-RENEWABLES	15 120	-12.9%	-6.3%	57.3%	99 276	128 081	-22.5%	195 334	67.4%
TOTAL NET PRODUCTION	26 384	-1.2%	-3.7%		194 906	194 887	0.0%	289 748	
+ Imports	193	-16.0%	17.7%		1 347	1 736	-22.4%	2 466	
- Exports	176	-36.8%	-2.7%		1 971	1 755	12.3%	3 074	
= ELECTRICITY SUPPLIED	26 401	-1.0%	-3.6%		194 283	194 868	-0.3%	289 140	
- Used for pumped storage	-	-	-		-	-	-	-	
- T&D Losses ⁴	3 507	-1.3%	-3.6%		25 900	25 958	-0.2%	38 564	
= ELECTRICITY CONSUMED	22 894	-0.9%	-3.6%		168 383	168 910	-0.3%	250 576	

¹ current month to month of last year change⁴ estimated² month-to-month change³ year-to-date compared to same period last year

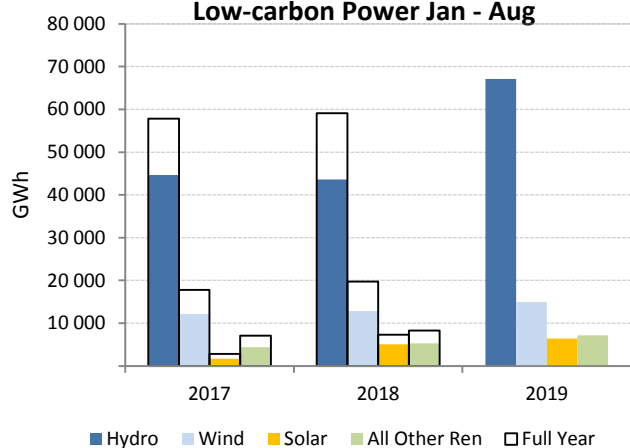
Electricity Production



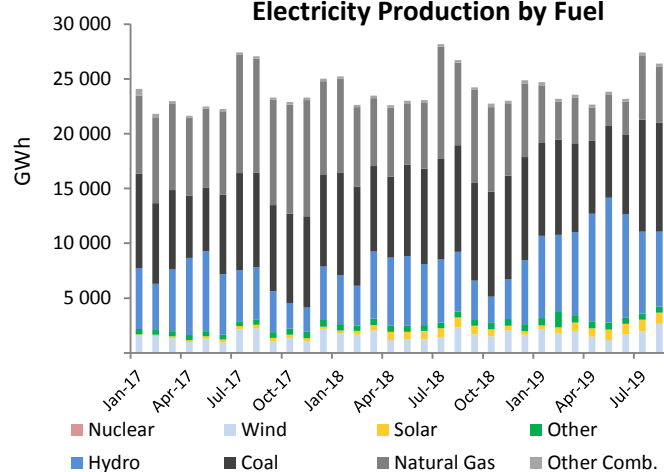
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

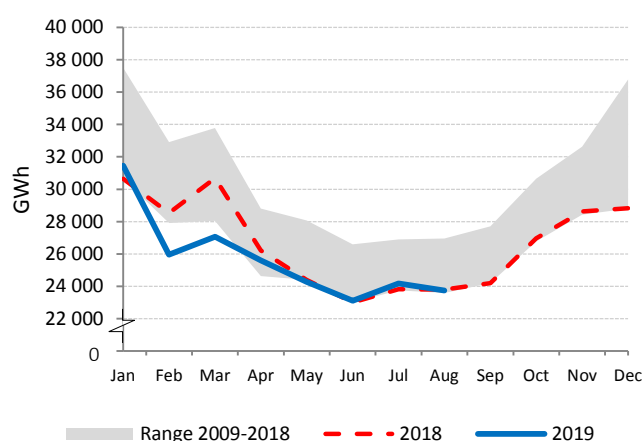


UNITED KINGDOM

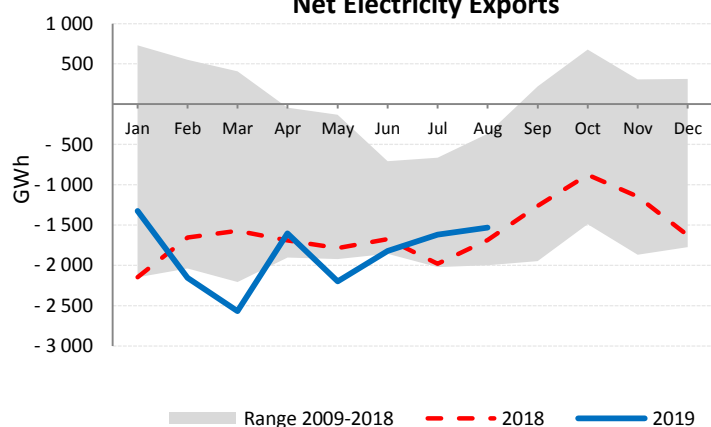
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	12 153	-6.9%	-17.3%	51.2%	118 548	122 437	-3.2%	182 651	57.1%
Coal	351	17.7%	159.7%	1.5%	3 985	10 401	-61.7%	16 815	5.3%
Oil	137	32.9%	-12.4%	0.6%	1 077	1 035	4.1%	1 610	0.5%
Natural Gas	8 228	-11.7%	-25.2%	34.6%	86 222	86 523	-0.3%	125 839	39.4%
Combustible Renewables	2 986	0.5%	0.7%	12.6%	23 751	21 592	10.0%	34 120	10.7%
Other Combustibles	450	24.8%	1.3%	1.9%	3 513	2 887	21.7%	4 268	1.3%
Nuclear	4 140	-23.8%	11.6%	17.4%	32 347	40 824	-20.8%	59 098	18.5%
Hydro	685	55.8%	40.4%	2.9%	4 797	4 708	1.9%	7 902	2.5%
Wind	5 121	50.0%	48.0%	21.6%	39 139	33 136	18.1%	57 116	17.9%
Solar	1 651	12.7%	-8.6%	7.0%	10 528	9 980	5.5%	12 922	4.0%
Geothermal	-	-	-	-	-	-	-	-	-
Other Renewables	1	-	-	0.0%	6	6	-	8	0.0%
Non-Specified	-	-	-	-	-	-	-	-	-
RENEWABLES	10 444	26.0%	19.8%	44.0%	78 221	69 420	12.7%	112 068	35.1%
NON-RENEWABLES	13 306	-14.2%	-13.9%	56.0%	127 144	141 669	-10.3%	207 629	64.9%
TOTAL NET PRODUCTION	23 751	-0.2%	-1.7%		205 365	211 090	-2.7%	319 697	
+ Imports	1 879	1.9%	-4.9%		16 759	15 295	9.6%	21 332	
- Exports	347	123.6%	-2.3%		1 935	1 100	75.9%	2 225	
= ELECTRICITY SUPPLIED	25 282	-0.8%	-2.0%		220 190	225 285	-2.3%	338 804	
- Used for pumped storage	174	-30.5%	21.3%		1 549	2 416	-35.9%	3 391	
- T&D Losses	1 998	18.2%	12.7%		18 202	18 079	0.7%	26 894	
= ELECTRICITY CONSUMED	23 110	-1.9%	-3.2%		200 439	204 790	-2.1%	308 520	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

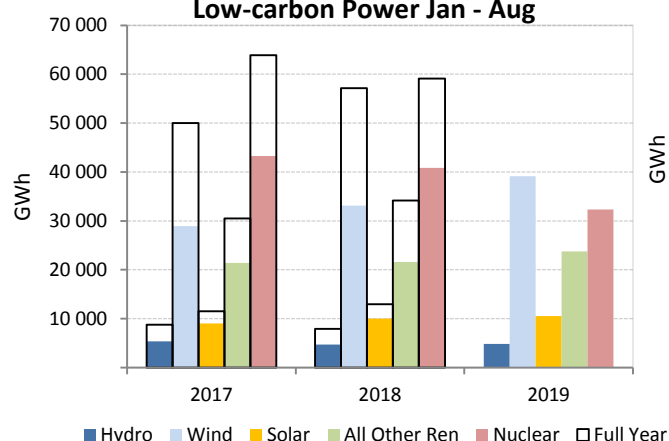
Electricity Production



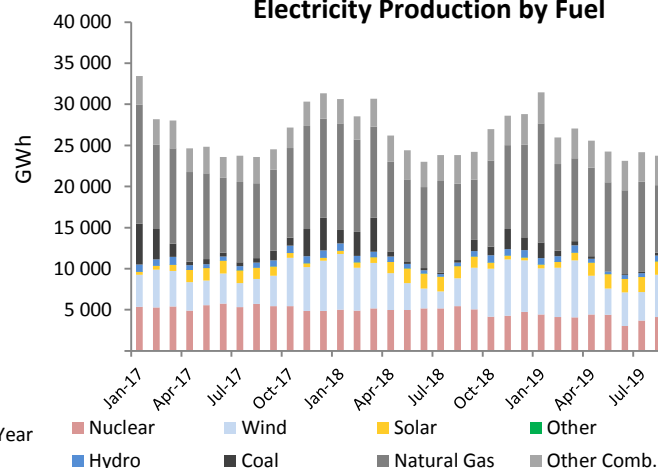
Net Electricity Exports



Low-carbon Power Jan - Aug



Electricity Production by Fuel

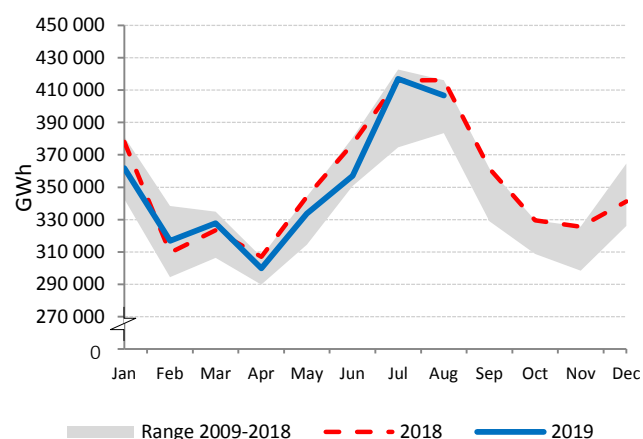


UNITED STATES

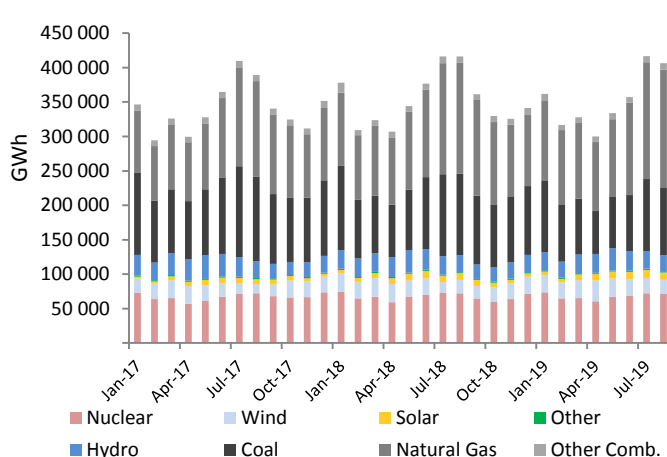
	Aug 2019				Year-to-Date			2018	
	GWh	change ¹	change ²	share	2019	2018	change ³	GWh	share
CONVENTIONAL THERMAL	279 034	-3.4%	-1.5%	68.6%	1 780 698	1 833 306	-2.9%	2 722 002	64.4%
Coal	97 552	-18.0%	-6.6%	24.0%	689 087	798 157	-13.7%	1 184 075	28.0%
Oil	3 224	4.4%	5.8%	0.8%	22 123	25 486	-13.2%	36 644	0.9%
Natural Gas	172 003	7.2%	1.3%	42.3%	1 022 887	960 357	6.5%	1 428 406	33.8%
Combustible Renewables	5 376	-0.8%	0.9%	1.3%	40 542	43 071	-5.9%	63 569	1.5%
Other Combustibles	879	7.5%	11.5%	0.2%	6 059	6 235	-2.8%	9 308	0.2%
Nuclear	71 942	-0.5%	-0.4%	17.7%	544 350	547 542	-0.6%	807 381	19.1%
Hydro	23 199	-4.3%	-9.3%	5.7%	213 275	223 479	-4.6%	313 544	7.4%
Wind	19 900	1.8%	-11.6%	4.9%	196 966	188 245	4.6%	274 819	6.5%
Solar	10 730	12.5%	-5.0%	2.6%	71 387	64 528	10.6%	90 286	2.1%
Geothermal	1 374	-1.5%	-3.5%	0.3%	10 974	10 583	3.7%	16 131	0.4%
Other Renewables	-	-	-	-	-	-	-	-	-
Non-Specified	454	49.9%	8.0%	0.1%	3 295	3 302	-0.2%	4 813	0.1%
RENEWABLES	60 579	0.7%	-8.4%	14.9%	533 144	529 906	0.6%	758 349	17.9%
NON-RENEWABLES	346 054	-2.8%	-1.3%	85.1%	2 287 801	2 341 079	-2.3%	3 470 627	82.1%
TOTAL NET PRODUCTION	406 633	-2.3%	-2.5%		2 820 945	2 870 984	-1.7%	4 228 976	
+ Imports	5 666	-0.6%	0.0%		38 691	42 819	-9.6%	58 274	
- Exports	774	-17.9%	-10.7%		8 195	9 125	-10.2%	13 804	
= ELECTRICITY SUPPLIED	411 525	-2.2%	-2.4%		2 851 442	2 904 678	-1.8%	4 273 445	
- Used for pumped storage	2 898	-16.7%	-8.9%		18 024	19 171	-6.0%	27 407	
- T&D Losses	22 892	0.7%	-16.9%		173 505	178 885	-3.0%	251 569	
= ELECTRICITY CONSUMED	385 734	-2.3%	-1.3%		2 659 912	2 706 622	-1.7%	3 994 469	

¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

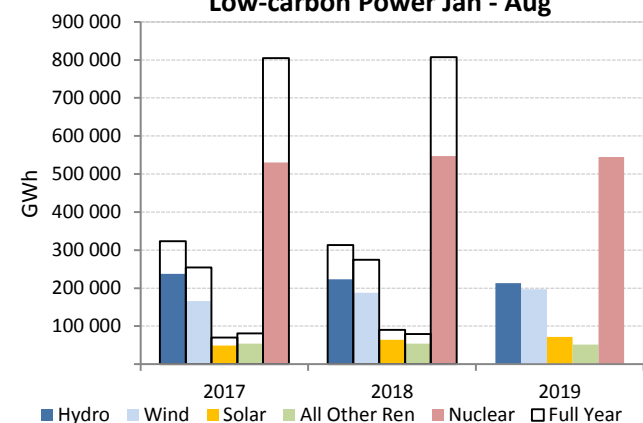
Electricity Production



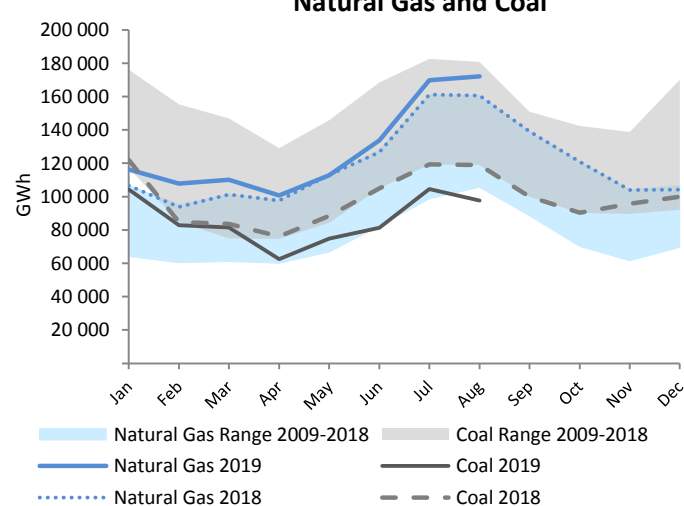
Electricity Production by Fuel



Low-carbon Power Jan - Aug

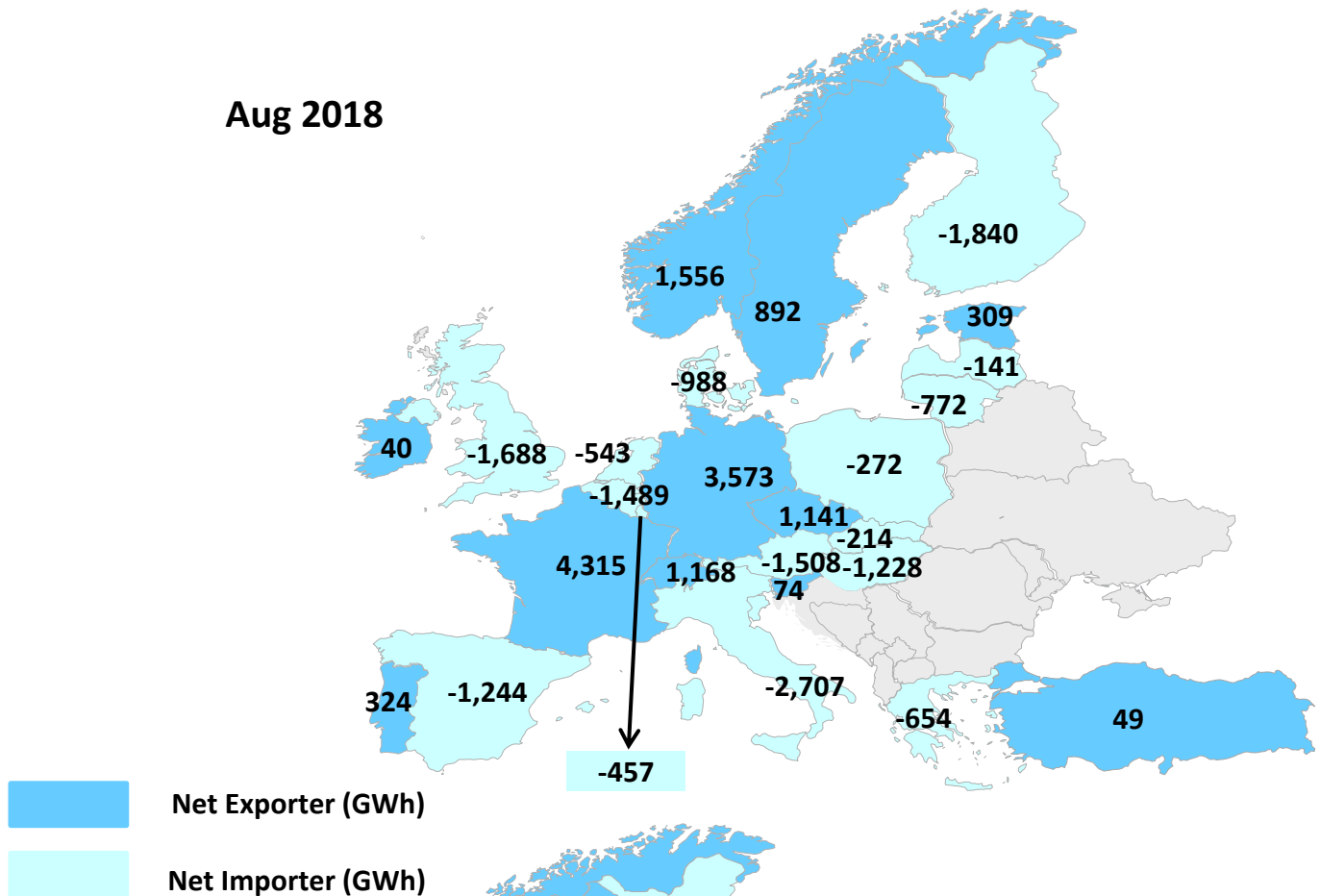


Natural Gas and Coal

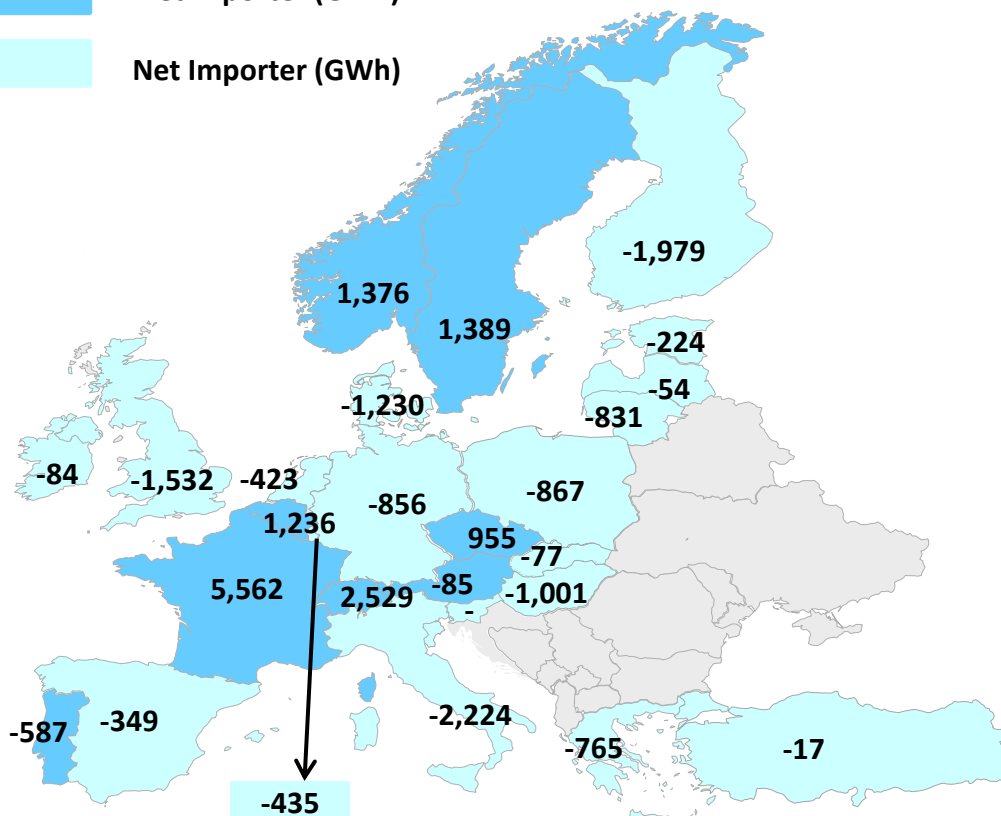


NET ELECTRICITY EXPORTS OECD EUROPE MAP 1

Aug 2018

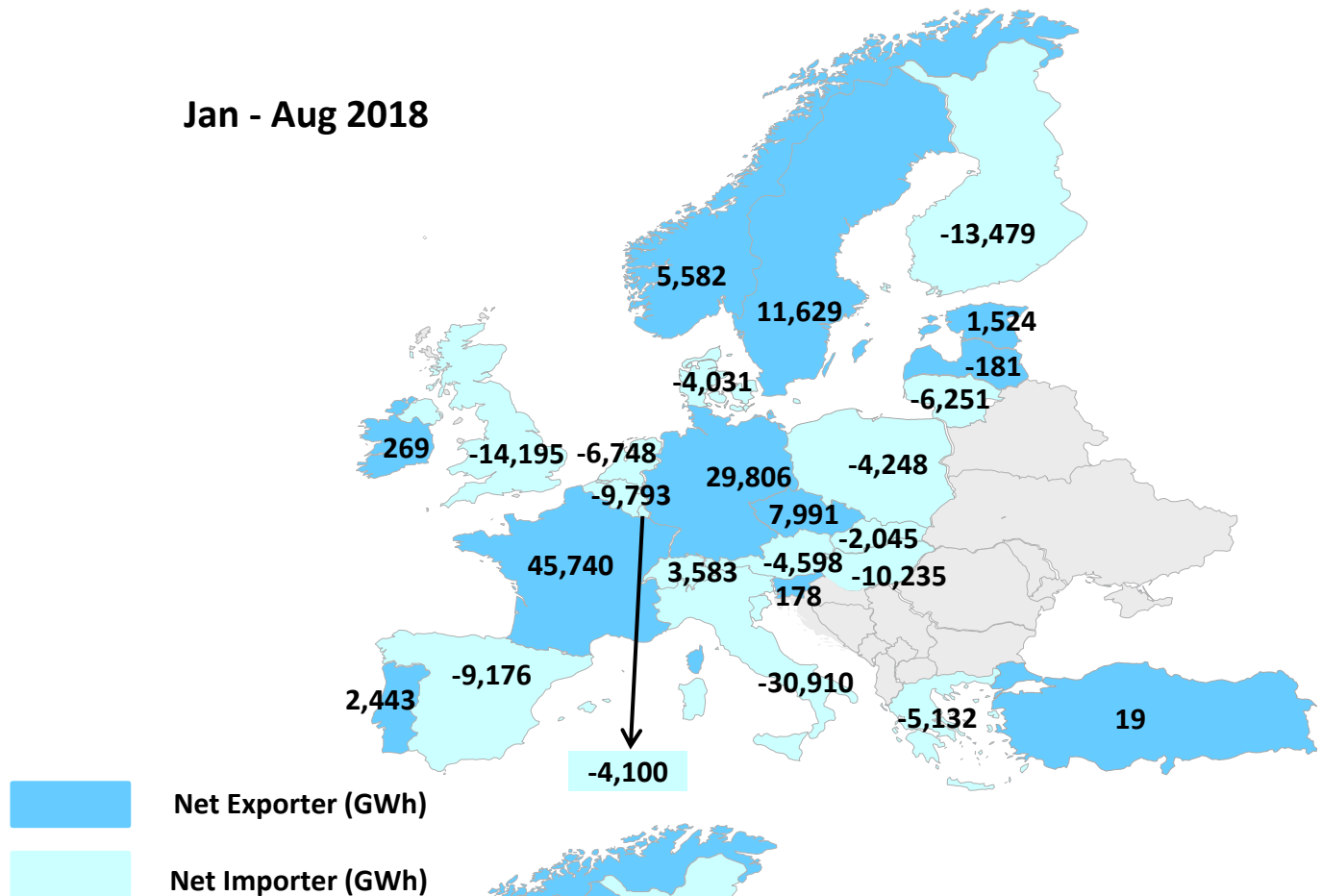


Aug 2019

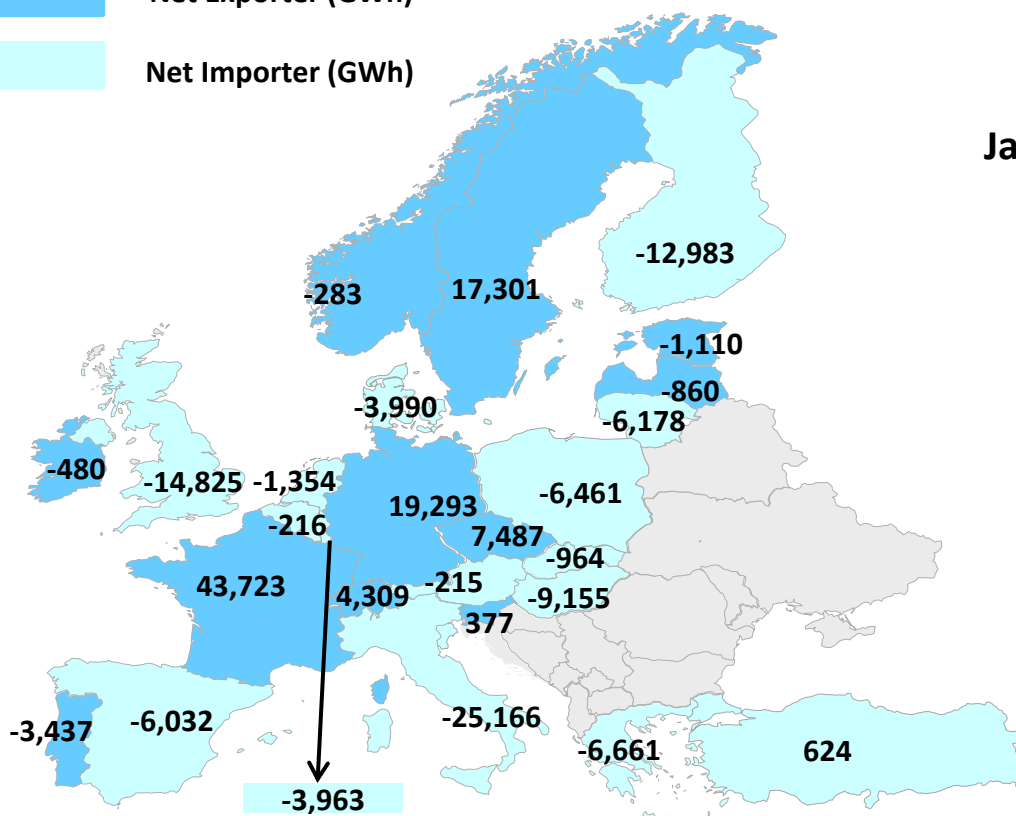


NET ELECTRICITY EXPORTS OECD EUROPE MAP 2

Jan - Aug 2018



Jan - Aug 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 solar, 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 is 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

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