

Statistics report

Monthly OECD Electricity Statistics

Next release: 15 October 2020

Data up to June 2020



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MONTHLY ELECTRICITY STATISTICS

June 2020

HIGHLIGHTS

OECD

- In June 2020, total electricity production in the OECD was 831.0 TWh, 2.0% lower than in June 2019 and 7.8% higher than in May 2020. Total production during the first six months of 2020 was 4,974.4 TWh compared to 5,184.6 TWh during the same period in 2019. This decrease in production is due to the Covid-19 crisis and the impact of lockdown measures throughout the OECD on electricity demand and production. In June 2020, after record low levels in April and May production in the OECD recovered to being closer to historical levels as lockdown measures eased.
- Renewable production was 265.2 TWh, up by 6.2% compared to June 2019. Renewables produced 31.9% of the total OECD production, up by 2.4 percentage points compared to June 2019. In the first semester of 2020, renewable production was 1,642.8 TWh, up by 7.7% compared to the same period in 2019. This increase is driven by wind and solar, which produced 479.9 TWh and 215.5 TWh respectively and increased by 13.6% and 18.8% compared to the first semester in 2019.
- Conventional thermal production decreased significantly in the first semester of 2020, and was 2,559.0 TWh, 9.5% lower than over the same period in 2019. Nuclear production also decreased, by 5.7% compared to the first semester of 2019, and was 906.7 TWh.

OECD Americas

- In OECD Americas, net electricity production was 440.7 TWh in June 2020, 0.9% higher than in June 2019. Renewable production was 119.0 TWh in June 2020, up by 11.9% compared to June 2019. During the first six months of 2020, renewables produced 28.6% of the total electricity production compared to 26.6% over the same period in 2019. Conventional thermal production on the other hand was 1,321.4 TWh during the first semester of 2020, down by 7.2% compared to the same period in 2019. This decrease is driven by coal which, at 379.7 TWh, was 29.1% lower in the first semester of 2020 compared to the first semester of 2019.
- In Chile, hydro production continued to be low throughout the first semester of 2020 as the severe drought continued for the tenth year. Hydro production was 8.1 TWh in the first semester of 2020, down by 13.6% compared to the same period in 2019. During the second quarter of 2020, hydro production was the lowest ever recorded with an output of 3.3 TWh, 23.8% lower than during the second quarter of 2019. To compensate for that loss in production, oil production has increased significantly and was 2.4 TWh in the first semester of 2020, 104.8% higher than during the same period last year.
- In Canada, wind production increased by 24.5% in June 2020 compared to June 2019 and was 2.4 TWh. In 2019, almost 600 MW of wind capacity was installed, increasing total wind production during the first semester of 2020 to 18.5 TWh, up by 3.0% compared to the first semester of 2019. During the first six months of 2020, electricity demand was lower because of the Covid 19 crisis, down by 3.4% compared to the first semester of 2019. Net production was 319.4 TWh, 0.9% lower compared to the first semester of 2019. To meet lower demand, electricity exports increased significantly, to reach 32.3 TWh, 19.1% higher than during the first semester of 2019. Imports on the other hand decreased by 20.1% compared to the first six months of 2019, down to 5.7 TWh.

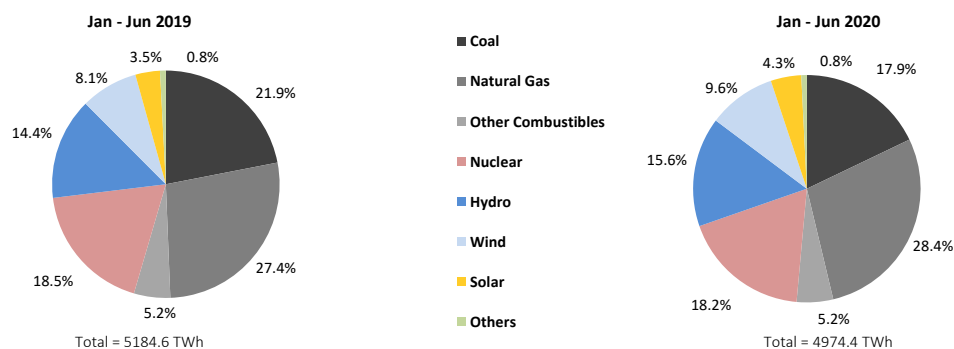
OECD Asia/Oceania

- Total net production in OECD Asia/Oceania was 139.6 TWh, 3.2% lower than in June 2019 and 5.4% higher than in May 2020. During the first semester of 2020, total production was 873.6 TWh, 4.6% lower than during the first six months of 2019. Renewable production was 170.1 TWh in the first six months of 2020, 14.3% higher than over the same period in 2019. This increase was mainly driven by solar production, which was 60.0 TWh during the first semester of 2020, 17.5% higher than over the same period in 2019.
- In Japan, nuclear power production has decreased significantly in the first semester of 2020 compared to the same period in 2019. Nuclear output was 27.48 TWh during the first six months of 2020, down by 22.0% compared to the same period in 2019. This lower production level is due to the shut down of two nuclear reactor at the Sendai power plant after the plant's operator failed to meet the deadline to complete an anti-terror safety facility. Natural gas production also decreased significantly during the first six months of 2020, with an output of 146.9 TWh compared to 170.7 TWh during the same period in 2019. The biggest decrease was recorded during the second quarter where production fell by 16.9% compared to the same period in 2019, as a result of lower demand due to the Covid 19 crisis.

OECD Europe

- Net production in OECD Europe remained low in June 2020, with an output of 250.7 TWh, 6.2% lower than in June 2019 and 0.5% higher than in May 2020. Non-renewable production increased in June 2020 for the first time in 2020, and was 135.7 TWh or 9.9% higher than in May 2020. It remained 10.5% lower than in June 2019. During the first semester of 2020, non-renewable production decreased by 15.4% down to 892.2 TWh, as a result of a milder than average winter and the Covid-19 crisis. Nuclear production was the lowest on record over the first six months of 2020, with a total production of 352.1 TWh during the first semester of 2020, 12.0% lower than over the same period in 2019.
- Lower nuclear production in OECD Europe was mainly caused by historically low nuclear production in France. Nuclear production in France is on average 49.0% of the total OECD Europe nuclear electricity output. In France, power demand was lower during the first semester of 2020 due to warmer winter temperatures and the Covid-19 crisis. As a result, nuclear outages were extended throughout the summer of 2020 in an effort to preserve fuel and to adapt to lower demand on a national scale and from neighbouring countries. In June 2020, nuclear production was 21.4 TWh, down by 25.3% compared to June 2019 and by 13.7% compared to May 2019, to reach the lowest production level on record, with a share of 60.6% of the total mix. Lower nuclear production in France in June 2020 resulted in lower exports, which were 4.6 TWh, 39.0% lower than in June 2019 and 34.6% lower than in May 2020.
- In the United Kingdom, nuclear production decreased significantly as well during the first semester of 2020. Nuclear production was 22.7 TWh, 7.4% lower than during the same period in 2019. This lower production is a consequence of several outages during the first semester of 2020. During the second semester, the electricity output of the Sizewell B power plant was curtailed to help with grid management.
- In Sweden, nuclear production also decreased substantially during the first six months of 2020 down by 22.1% compared to the same period in 2019 to reach 25.7 TWh. During the second quarter of 2020, nuclear production decreased by 35.6% compared to the second quarter in 2019. Due to lower power demand and low electricity prices, the Rignhals power plant reactors were taken offline in March and April 2020, driving the nuclear production levels down in the second quarter of 2020.

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



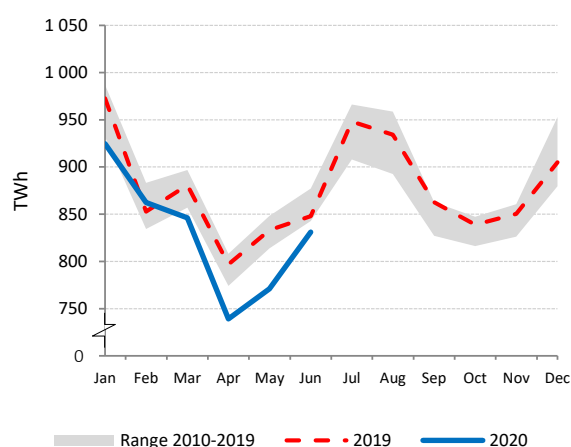
OECD Total

| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|--|--------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|-----------------|--------------|
| | TWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | TWh | share |
| CONVENTIONAL THERMAL | 446.7 | -4.0% | 20.3% | 53.7% | 2 559.0 | 2 827.4 | -9.5% | 5 915.7 | 56.2% |
| Coal ⁵ | 154.1 | -12.8% | 24.0% | 18.5% | 889.8 | 1 137.5 | -21.7% | 2 310.2 | 22.0% |
| Oil ⁵ | 14.6 | 3.0% | 18.0% | 1.8% | 81.1 | 92.5 | -12.3% | 188.9 | 1.8% |
| Natural Gas ⁵ | 251.0 | 1.6% | 22.0% | 30.2% | 1 411.4 | 1 422.0 | -0.7% | 3 065.2 | 29.1% |
| Combustible Renewables ⁵ | 22.6 | 0.8% | -5.4% | 2.7% | 147.4 | 146.4 | 0.7% | 291.5 | 2.8% |
| Other Combustibles ⁵ | 4.3 | -4.9% | -1.3% | 0.5% | 29.3 | 28.9 | 1.4% | 59.8 | 0.6% |
| Nuclear | 139.7 | -8.7% | -2.7% | 16.8% | 906.7 | 961.5 | -5.7% | 1 898.2 | 18.0% |
| Hydro | 129.3 | 2.5% | -4.3% | 15.6% | 774.2 | 749.1 | 3.4% | 1 435.8 | 13.6% |
| Wind | 63.4 | 14.3% | -5.4% | 7.6% | 479.9 | 422.4 | 13.6% | 830.5 | 7.9% |
| Solar | 45.8 | 10.3% | -4.3% | 5.5% | 215.5 | 181.4 | 18.8% | 359.8 | 3.4% |
| Geothermal | 4.0 | -0.7% | -4.7% | 0.5% | 25.2 | 25.7 | -2.2% | 50.2 | 0.5% |
| Other Renewables | 0.1 | 23.0% | -2.3% | 0.0% | 0.5 | 0.5 | 9.2% | 1.0 | 0.0% |
| Non-Specified | 2.0 | -20.4% | 5.9% | 0.2% | 13.4 | 16.6 | -19.1% | 32.8 | 0.3% |
| RENEWABLES | 265.2 | 6.2% | -4.7% | 31.9% | 1 642.8 | 1 525.5 | 7.7% | 2 968.7 | 28.2% |
| NON-RENEWABLES | 565.8 | -5.4% | 14.8% | 68.1% | 3 331.7 | 3 659.0 | -8.9% | 7 555.1 | 71.8% |
| TOTAL NET PRODUCTION | 831.0 | -2.0% | 7.8% | | 4 974.4 | 5 184.6 | -4.1% | 10 523.8 | |
| + Imports | 35.1 | -11.5% | -11.2% | | 243.2 | 248.2 | -2.0% | 491.4 | |
| - Exports | 36.3 | -5.4% | -14.2% | | 251.0 | 239.7 | 4.7% | 484.0 | |
| = ELECTRICITY SUPPLIED | 829.8 | -2.3% | 8.0% | | 4 966.5 | 5 193.0 | -4.4% | 10 531.3 | |
| - Used for pumped storage ⁴ | 7.7 | 6.4% | -1.1% | | 43.3 | 39.7 | 9.1% | 83.0 | |
| - T&D Losses ⁴ | 55.3 | 2.0% | 5.8% | | 305.1 | 317.9 | -4.0% | 633.4 | |
| = ELECTRICITY CONSUMED | 766.7 | -2.7% | 8.3% | | 4 618.1 | 4 835.4 | -4.5% | 9 814.9 | |

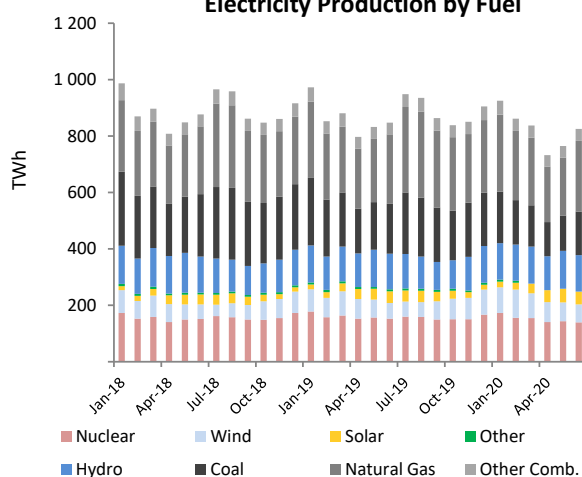
¹ current month to month of last year change⁴ estimated for certain countries² month-to-month change⁵ the breakdown of conventional thermal is estimated from annual data for³ year-to-date compared to same period last year

Canada, Estonia and Italy

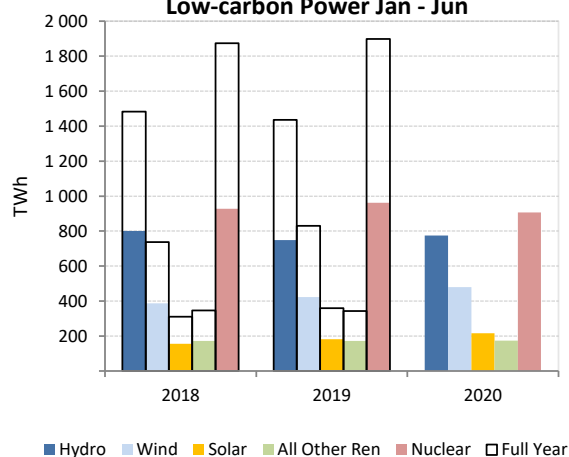
Electricity Production



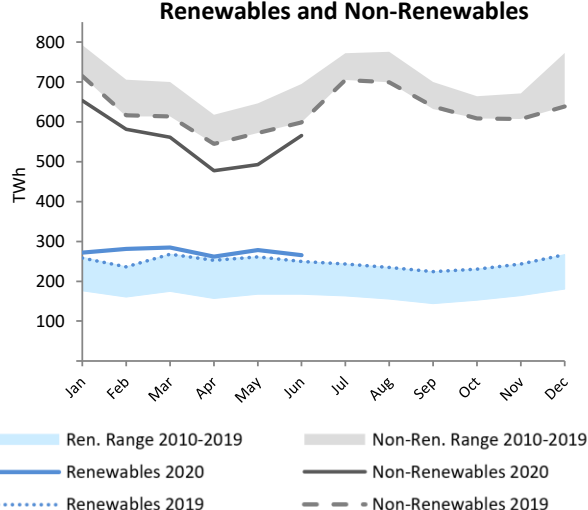
Electricity Production by Fuel



Low-carbon Power Jan - Jun



Renewables and Non-Renewables

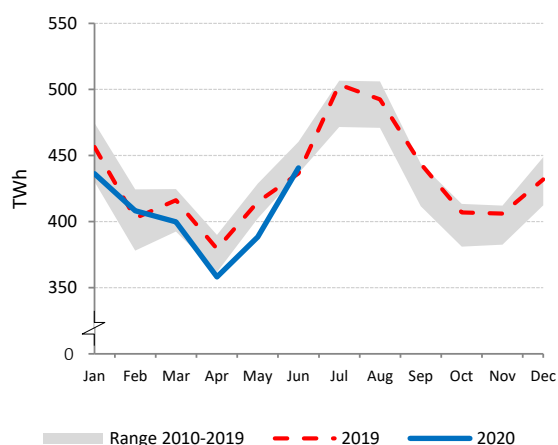


OECD Americas

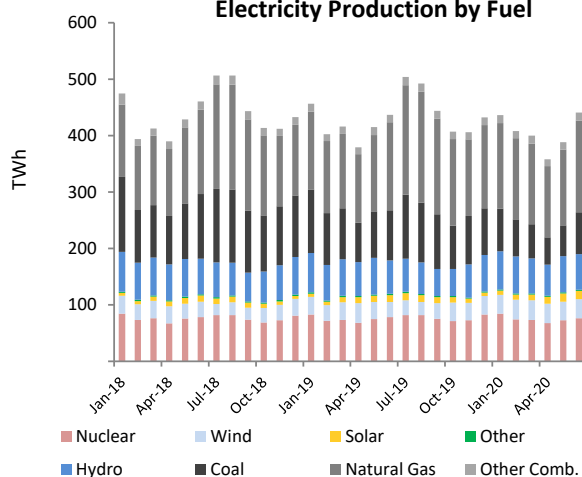
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|--|--------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | TWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | TWh | share |
| CONVENTIONAL THERMAL | 250.8 | -2.7% | 24.0% | 56.9% | 1 321.4 | 1 424.5 | -7.2% | 3 064.6 | 59.0% |
| Coal ⁵ | 74.1 | -16.6% | 35.4% | 16.8% | 379.7 | 535.4 | -29.1% | 1 097.1 | 21.1% |
| Oil ⁵ | 7.6 | 24.6% | 16.8% | 1.7% | 39.3 | 36.3 | 8.2% | 75.1 | 1.4% |
| Natural Gas ⁵ | 162.6 | 4.4% | 21.1% | 36.9% | 861.2 | 810.0 | 6.3% | 1 806.5 | 34.8% |
| Combustible Renewables ⁵ | 5.6 | -9.7% | -3.5% | 1.3% | 35.9 | 37.9 | -5.2% | 75.6 | 1.5% |
| Other Combustibles ⁵ | 0.8 | -0.2% | -6.7% | 0.2% | 5.3 | 4.9 | 8.8% | 10.4 | 0.2% |
| Nuclear | 76.1 | -2.8% | 4.5% | 17.3% | 448.5 | 449.5 | -0.2% | 915.6 | 17.6% |
| Hydro | 63.1 | 6.7% | -1.1% | 14.3% | 376.9 | 382.3 | -1.4% | 716.8 | 13.8% |
| Wind | 34.2 | 27.7% | 4.5% | 7.8% | 204.2 | 181.6 | 12.4% | 355.5 | 6.8% |
| Solar | 14.4 | 16.1% | -1.8% | 3.3% | 68.2 | 55.4 | 23.1% | 113.1 | 2.2% |
| Geothermal | 1.7 | -5.5% | -5.7% | 0.4% | 10.2 | 10.7 | -4.5% | 20.8 | 0.4% |
| Other Renewables | - | - | - | - | - | 0.0 | - | 0.0 | 0.0% |
| Non-Specified | 0.4 | -3.1% | -2.6% | 0.1% | 2.1 | 2.3 | -10.4% | 4.7 | 0.1% |
| RENEWABLES | 119.0 | 11.9% | 0.2% | 27.0% | 695.4 | 667.9 | 4.1% | 1 281.8 | 24.7% |
| NON-RENEWABLES | 321.7 | -2.6% | 19.3% | 73.0% | 1 736.1 | 1 838.3 | -5.6% | 3 909.3 | 75.3% |
| TOTAL NET PRODUCTION | 440.7 | 0.9% | 13.4% | | 2 431.5 | 2 506.2 | -3.0% | 5 191.1 | |
| + Imports | 6.6 | 0.9% | 6.0% | | 35.5 | 37.6 | -5.6% | 74.0 | |
| - Exports | 8.2 | 26.3% | -6.8% | | 45.1 | 38.5 | 17.4% | 81.3 | |
| = ELECTRICITY SUPPLIED | 439.1 | 0.6% | 13.8% | | 2 421.8 | 2 505.3 | -3.3% | 5 183.8 | |
| - Used for pumped storage ⁴ | 2.7 | 17.6% | 22.8% | | 12.0 | 12.1 | -0.2% | 26.2 | |
| - T&D Losses ⁴ | 31.2 | 4.6% | 8.6% | | 143.7 | 153.3 | -6.3% | 306.9 | |
| = ELECTRICITY CONSUMED | 405.2 | 0.2% | 14.1% | | 2 266.1 | 2 339.9 | -3.2% | 4 850.6 | |

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 Canada³ year-to-date compared to same period last year

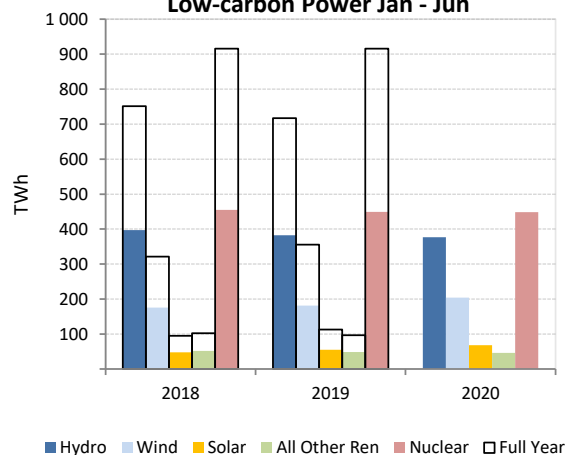
Electricity Production



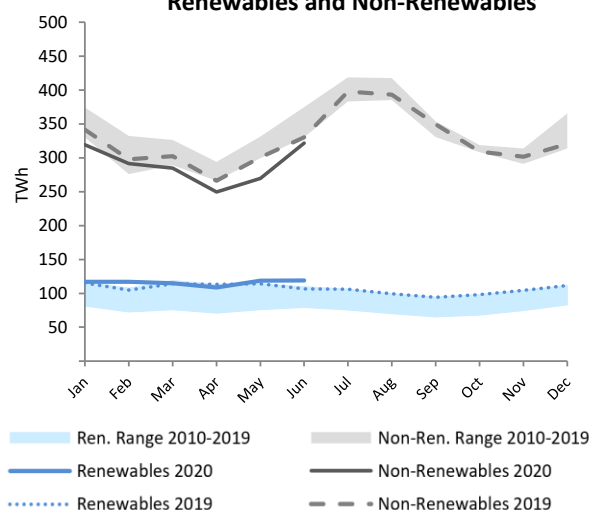
Electricity Production by Fuel



Low-carbon Power Jan - Jun

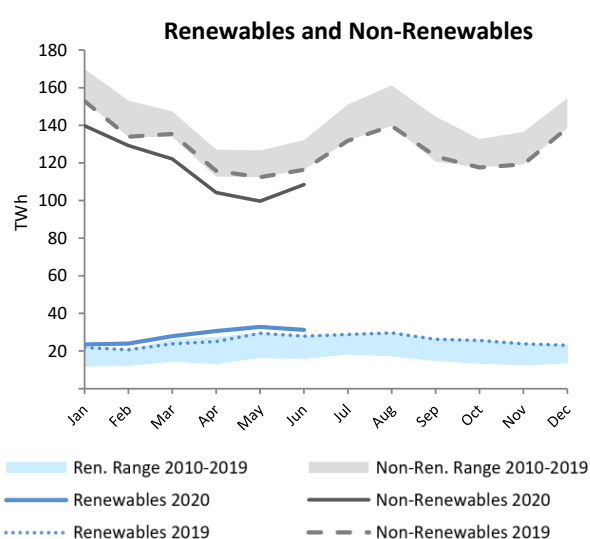
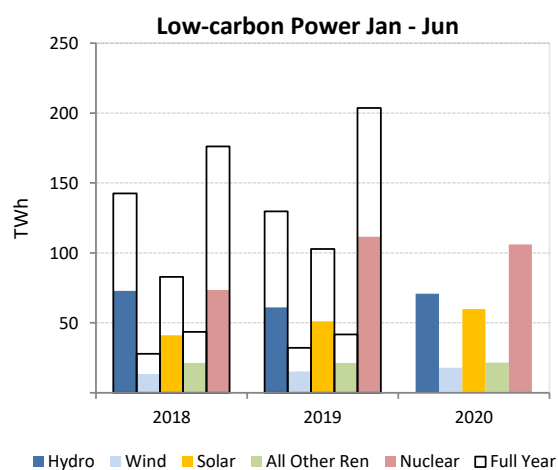
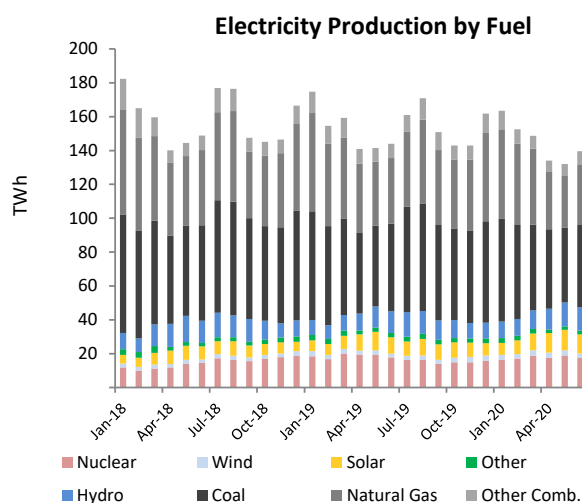
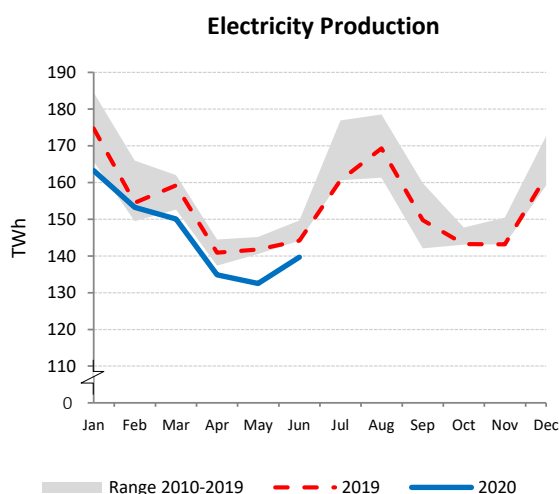


Renewables and Non-Renewables



OECD Asia Oceania

| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|--|--------------|---------------------|---------------------|--------------|--------------|--------------|---------------------|----------------|--------------|
| | TWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | TWh | share |
| CONVENTIONAL THERMAL | 92.4 | -7.0% | 12.3% | 66.1% | 604.7 | 659.5 | -8.3% | 1 341.8 | 72.8% |
| Coal | 48.7 | -6.2% | 10.3% | 34.9% | 310.4 | 327.9 | -5.2% | 676.0 | 36.7% |
| Oil | 4.0 | -11.4% | 25.6% | 2.8% | 22.8 | 33.6 | -32.2% | 68.3 | 3.7% |
| Natural Gas | 35.7 | -7.5% | 17.2% | 25.6% | 245.4 | 271.6 | -9.7% | 544.7 | 29.6% |
| Combustible Renewables | 2.6 | 11.4% | -1.2% | 1.8% | 16.1 | 16.2 | -0.9% | 31.3 | 1.7% |
| Other Combustibles | 1.4 | -16.0% | 3.1% | 1.0% | 10.1 | 10.1 | -0.7% | 21.6 | 1.2% |
| Nuclear | 17.4 | -1.6% | -8.2% | 12.5% | 106.0 | 111.7 | -5.1% | 203.7 | 11.1% |
| Hydro | 13.8 | 7.9% | -2.6% | 9.9% | 70.9 | 61.2 | 15.9% | 129.7 | 7.0% |
| Wind | 2.8 | 25.8% | -9.4% | 2.0% | 17.8 | 15.2 | 17.0% | 32.1 | 1.7% |
| Solar | 11.3 | 15.8% | -7.1% | 8.1% | 60.0 | 51.0 | 17.5% | 102.8 | 5.6% |
| Geothermal | 0.8 | -0.3% | -4.2% | 0.6% | 5.1 | 5.0 | 3.8% | 10.0 | 0.5% |
| Other Renewables | 0.1 | 50.3% | -4.0% | 0.0% | 0.3 | 0.2 | 19.3% | 0.5 | 0.0% |
| Non-Specified | 1.2 | -28.6% | 13.1% | 0.8% | 8.8 | 11.5 | -23.7% | 22.7 | 1.2% |
| RENEWABLES | 31.3 | 12.2% | -4.8% | 22.4% | 170.1 | 148.8 | 14.3% | 306.2 | 16.6% |
| NON-RENEWABLES | 108.4 | -6.8% | 8.7% | 77.6% | 703.4 | 766.5 | -8.2% | 1 536.9 | 83.4% |
| TOTAL NET PRODUCTION | 139.6 | -3.2% | 5.4% | | 873.6 | 915.4 | -4.6% | 1 843.1 | |
| + Imports | - | - | - | | - | - | - | - | |
| - Exports | - | - | - | | - | - | - | - | |
| = ELECTRICITY SUPPLIED | 139.6 | -3.2% | 5.4% | | 873.6 | 915.4 | -4.6% | 1 843.1 | |
| - Used for pumped storage ⁴ | 1.4 | 31.5% | -5.5% | | 7.8 | 7.2 | 8.4% | 15.6 | |
| - T&D Losses ⁴ | 6.0 | -2.8% | 5.6% | | 37.8 | 39.3 | -3.8% | 78.5 | |
| = ELECTRICITY CONSUMED | 132.2 | -3.4% | 5.5% | | 828.0 | 868.9 | -4.7% | 1 749.0 | |

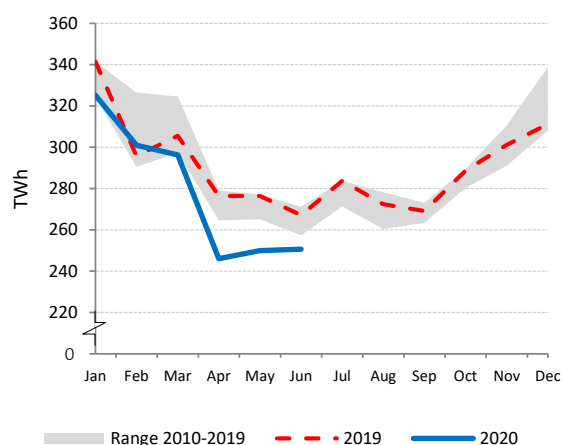
¹ current month to month of last year change⁴ estimated for certain countries² month-to-month change³ year-to-date compared to same period last year

OECD Europe

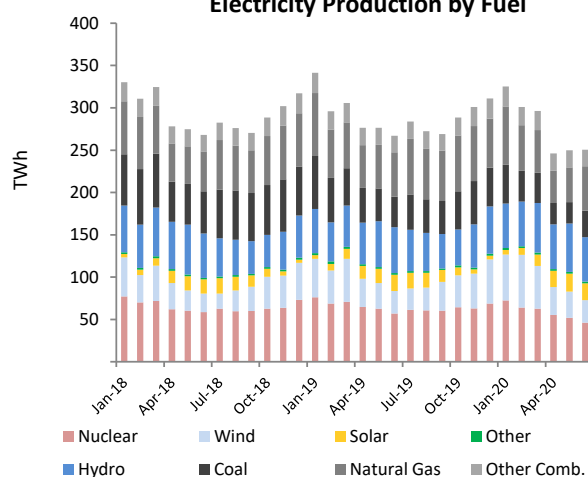
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|--|--------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | TWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | TWh | share |
| CONVENTIONAL THERMAL | 103.5 | -4.2% | 19.4% | 41.3% | 632.9 | 743.4 | -14.9% | 1 509.2 | 43.2% |
| Coal ⁵ | 31.2 | -12.9% | 23.2% | 12.4% | 199.7 | 274.2 | -27.2% | 537.1 | 15.4% |
| Oil ⁵ | 3.1 | -15.7% | 11.9% | 1.2% | 19.0 | 22.6 | -15.7% | 45.5 | 1.3% |
| Natural Gas ⁵ | 52.7 | 0.1% | 28.5% | 21.0% | 304.8 | 340.4 | -10.4% | 714.1 | 20.5% |
| Combustible Renewables ⁵ | 14.4 | 3.8% | -6.9% | 5.8% | 95.5 | 92.4 | 3.4% | 184.7 | 5.3% |
| Other Combustibles ⁵ | 2.1 | 1.8% | -1.8% | 0.9% | 13.9 | 13.9 | 0.4% | 27.9 | 0.8% |
| Nuclear | 46.2 | -19.0% | -10.8% | 18.4% | 352.1 | 400.3 | -12.0% | 778.8 | 22.3% |
| Hydro | 52.4 | -3.4% | -8.3% | 20.9% | 326.4 | 305.6 | 6.8% | 589.3 | 16.9% |
| Wind | 26.5 | -0.1% | -15.3% | 10.6% | 257.9 | 225.6 | 14.3% | 442.9 | 12.7% |
| Solar | 20.0 | 3.9% | -4.3% | 8.0% | 87.4 | 75.0 | 16.5% | 143.9 | 4.1% |
| Geothermal | 1.5 | 4.9% | -3.9% | 0.6% | 9.9 | 10.1 | -2.6% | 19.5 | 0.6% |
| Other Renewables | 0.0 | - | - | 0.0% | 0.2 | 0.2 | - | 0.5 | 0.0% |
| Non-Specified | 0.4 | -4.6% | -3.9% | 0.2% | 2.6 | 2.7 | -6.9% | 5.5 | 0.2% |
| RENEWABLES | 115.0 | -0.5% | -9.1% | 45.9% | 777.2 | 708.9 | 9.6% | 1 380.7 | 39.6% |
| NON-RENEWABLES | 135.7 | -10.5% | 9.9% | 54.1% | 892.2 | 1 054.2 | -15.4% | 2 108.9 | 60.4% |
| TOTAL NET PRODUCTION | 250.7 | -6.2% | 0.3% | | 1 669.4 | 1 763.0 | -5.3% | 3 489.6 | |
| + Imports | 28.5 | -13.9% | -14.4% | | 207.7 | 210.6 | -1.4% | 417.4 | |
| - Exports | 28.1 | -11.9% | -16.2% | | 205.9 | 201.2 | 2.3% | 402.7 | |
| = ELECTRICITY SUPPLIED | 251.1 | -6.4% | 0.5% | | 1 671.2 | 1 772.4 | -5.7% | 3 504.4 | |
| - Used for pumped storage ⁴ | 3.6 | -7.3% | -12.5% | | 23.5 | 20.5 | 14.8% | 41.2 | |
| - T&D Losses ⁴ | 18.2 | -0.5% | 1.4% | | 123.5 | 125.3 | -1.4% | 248.0 | |
| = ELECTRICITY CONSUMED | 229.3 | -6.9% | 0.7% | | 1 524.1 | 1 626.6 | -6.3% | 3 215.2 | |

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

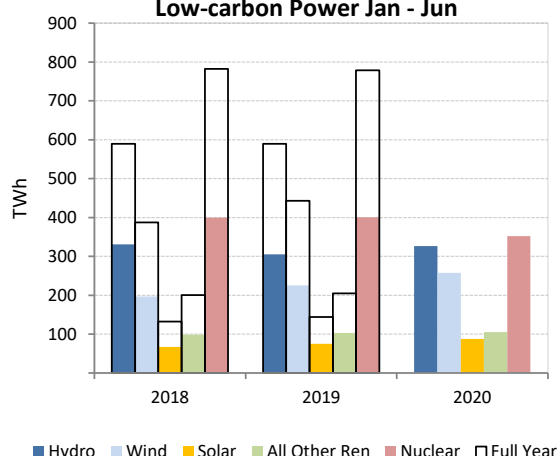
Electricity Production



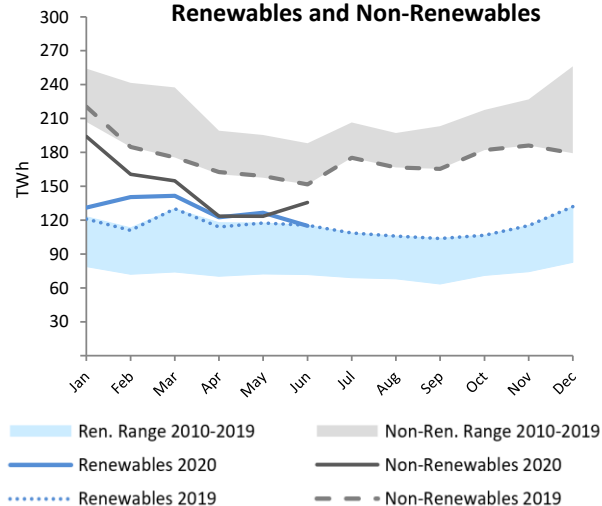
Electricity Production by Fuel



Low-carbon Power Jan - Jun



Renewables and Non-Renewables

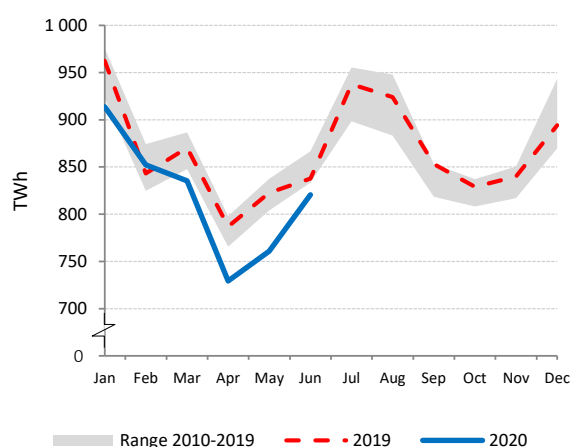


IEA Total

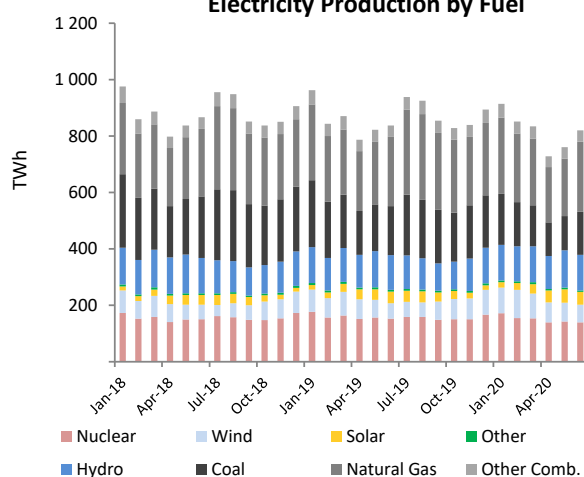
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|--|--------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|-----------------|--------------|
| | TWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | TWh | share |
| CONVENTIONAL THERMAL | 441.1 | -4.2% | 20.5% | 53.8% | 2 528.6 | 2 798.0 | -9.6% | 5 859.2 | 56.3% |
| Coal ⁵ | 151.5 | -12.8% | 24.4% | 18.5% | 875.4 | 1 122.5 | -22.0% | 2 280.7 | 21.9% |
| Oil ⁵ | 14.1 | -0.8% | 18.0% | 1.7% | 78.7 | 91.3 | -13.8% | 185.9 | 1.8% |
| Natural Gas ⁵ | 249.0 | 1.5% | 22.1% | 30.4% | 1 400.9 | 1 412.0 | -0.8% | 3 047.0 | 29.3% |
| Combustible Renewables ⁵ | 22.1 | 0.9% | -5.4% | 2.7% | 144.3 | 143.4 | 0.7% | 285.9 | 2.7% |
| Other Combustibles ⁵ | 4.3 | -5.0% | -1.4% | 0.5% | 29.3 | 28.9 | 1.4% | 59.7 | 0.6% |
| Nuclear | 139.2 | -8.7% | -2.7% | 17.0% | 903.6 | 958.5 | -5.7% | 1 892.6 | 18.2% |
| Hydro | 126.4 | 2.9% | -4.5% | 15.4% | 755.1 | 729.0 | 3.6% | 1 394.5 | 13.4% |
| Wind | 62.9 | 14.5% | -5.5% | 7.7% | 476.7 | 419.6 | 13.6% | 824.0 | 7.9% |
| Solar | 45.3 | 10.4% | -4.1% | 5.5% | 212.0 | 178.4 | 18.8% | 353.2 | 3.4% |
| Geothermal | 3.5 | -1.5% | -4.4% | 0.4% | 22.0 | 22.7 | -3.0% | 44.1 | 0.4% |
| Other Renewables | 0.1 | 23.0% | -2.3% | 0.0% | 0.5 | 0.5 | 9.2% | 1.0 | 0.0% |
| Non-Specified | 2.0 | -19.8% | 5.9% | 0.2% | 13.4 | 16.5 | -18.6% | 32.6 | 0.3% |
| RENEWABLES | 260.4 | 6.5% | -4.7% | 31.7% | 1 610.7 | 1 493.6 | 7.8% | 2 902.7 | 27.9% |
| NON-RENEWABLES | 560.2 | -5.6% | 14.9% | 68.3% | 3 301.3 | 3 629.6 | -9.0% | 7 498.5 | 72.1% |
| TOTAL NET PRODUCTION | 820.5 | -2.1% | 7.8% | | 4 912.0 | 5 123.2 | -4.1% | 10 401.2 | |
| + Imports | 33.5 | -10.0% | -11.0% | | 231.2 | 234.3 | -1.3% | 464.5 | |
| - Exports | 35.0 | -4.5% | -14.6% | | 243.3 | 230.8 | 5.4% | 467.2 | |
| = ELECTRICITY SUPPLIED | 819.0 | -2.3% | 8.1% | | 4 899.9 | 5 126.7 | -4.4% | 10 398.5 | |
| - Used for pumped storage ⁴ | 7.6 | 6.7% | -1.1% | | 42.7 | 39.4 | 8.3% | 81.9 | |
| - T&D Losses ⁴ | 54.9 | 2.2% | 5.9% | | 301.8 | 314.4 | -4.0% | 626.7 | |
| = ELECTRICITY CONSUMED | 756.5 | -2.7% | 8.4% | | 4 555.5 | 4 772.9 | -4.6% | 9 689.8 | |

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

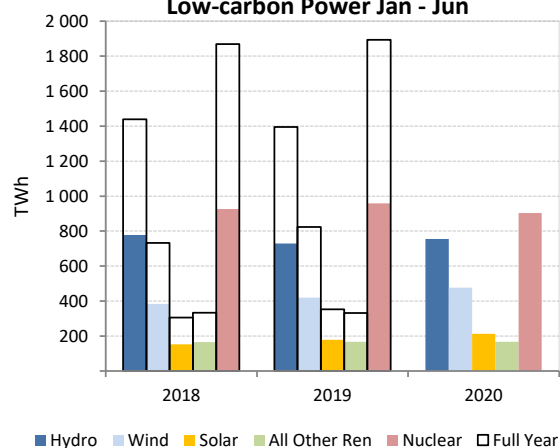
Electricity Production



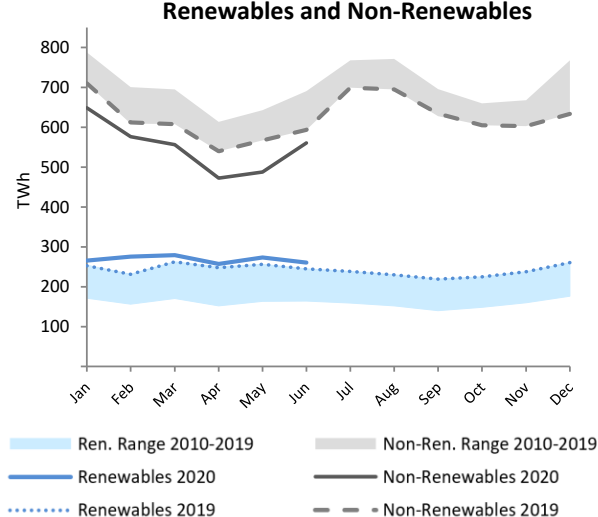
Electricity Production by Fuel



Low-carbon Power Jan - Jun



Renewables and Non-Renewables

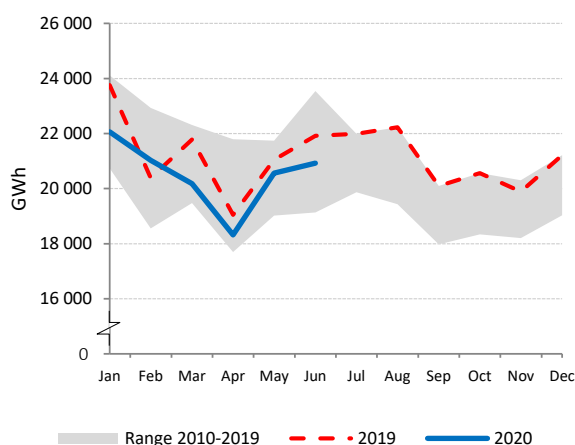


AUSTRALIA

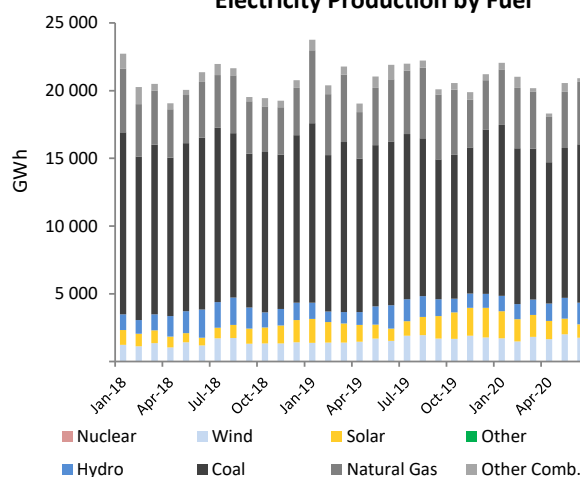
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|--|---------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 16 591 | -6.6% | 4.6% | 79.3% | 96 137 | 104 366 | -7.9% | 201 698 | 79.4% |
| Coal | 11 704 | -3.3% | 5.7% | 55.9% | 68 498 | 72 670 | -5.7% | 140 416 | 55.3% |
| Oil | 62 | -92.6% | -85.4% | 0.3% | 1 423 | 3 027 | -53.0% | 4 435 | 1.7% |
| Natural Gas | 4 607 | 0.3% | 11.2% | 22.0% | 24 838 | 27 146 | -8.5% | 53 824 | 21.2% |
| Combustible Renewables | 218 | -9.1% | -5.4% | 1.0% | 1 379 | 1 524 | -9.5% | 3 024 | 1.2% |
| Other Combustibles | - | - | - | - | - | - | - | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 1 589 | -7.9% | 3.5% | 7.6% | 7 748 | 6 868 | 12.8% | 14 345 | 5.6% |
| Wind | 1 752 | 14.2% | -12.3% | 8.4% | 10 413 | 8 858 | 17.6% | 19 718 | 7.8% |
| Solar | 995 | 12.1% | -14.0% | 4.8% | 8 773 | 7 846 | 11.8% | 18 153 | 7.1% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 4 554 | 3.8% | -7.4% | 21.8% | 28 313 | 25 095 | 12.8% | 55 239 | 21.8% |
| NON-RENEWABLES | 16 373 | -6.6% | 4.7% | 78.2% | 94 758 | 102 843 | -7.9% | 198 674 | 78.2% |
| TOTAL NET PRODUCTION | 20 927 | -4.5% | 1.8% | | 123 071 | 127 937 | -3.8% | 253 913 | |
| + Imports | - | - | - | | - | - | - | - | |
| - Exports | - | - | - | | - | - | - | - | |
| = ELECTRICITY SUPPLIED | 20 927 | -4.5% | 1.8% | | 123 071 | 127 937 | -3.8% | 253 913 | |
| - Used for pumped storage ⁴ | 46 | -7.9% | 3.5% | | 224 | 199 | 12.8% | 415 | |
| - T&D Losses ⁴ | 1 250 | -1.8% | 4.0% | | 7 203 | 7 389 | -2.5% | 14 625 | |
| = ELECTRICITY CONSUMED | 19 631 | -4.7% | 1.7% | | 115 644 | 120 350 | -3.9% | 238 873 | |

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

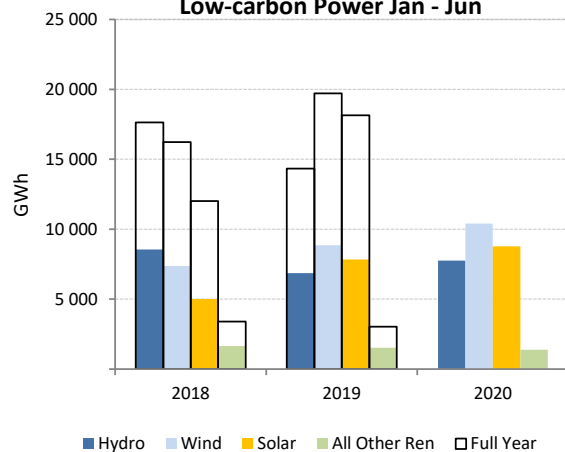
Electricity Production



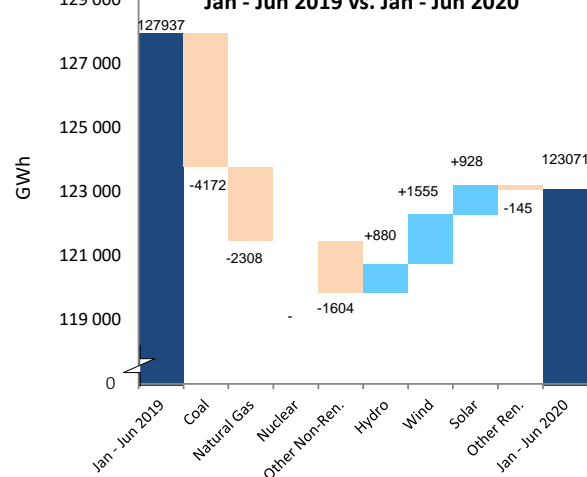
Electricity Production by Fuel



Low-carbon Power Jan - Jun



Electricity Production Variation Jan - Jun 2019 vs. Jan - Jun 2020

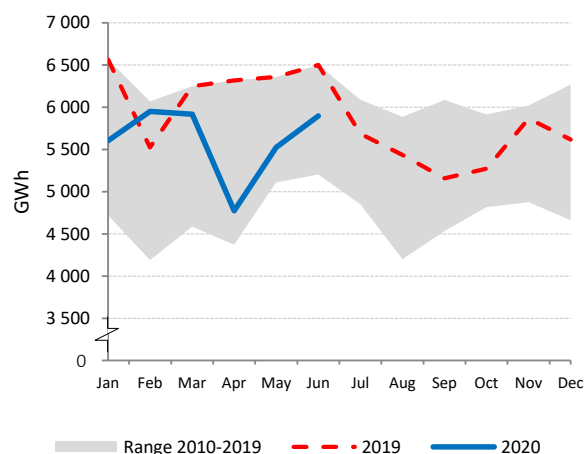


AUSTRIA

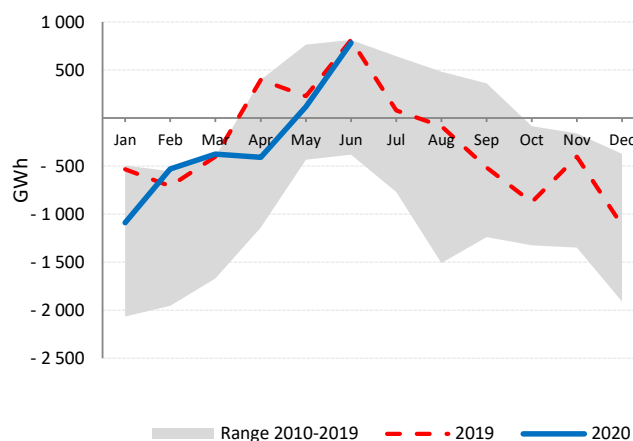
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 740 | -25.1% | -5.3% | 12.5% | 8 772 | 9 469 | -7.4% | 19 838 | 28.1% |
| Coal | 138 | -46.3% | -3.5% | 2.3% | 1 271 | 1 805 | -29.6% | 3 244 | 4.6% |
| Oil | 50 | -5.3% | 20.6% | 0.8% | 303 | 343 | -11.9% | 659 | 0.9% |
| Natural Gas | 176 | -29.1% | 5.8% | 3.0% | 4 618 | 4 659 | -0.9% | 10 759 | 15.3% |
| Combustible Renewables | 337 | -10.1% | -13.2% | 5.7% | 2 307 | 2 286 | 0.9% | 4 426 | 6.3% |
| Other Combustibles | 39 | -29.4% | -8.0% | 0.7% | 274 | 376 | -27.1% | 749 | 1.1% |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 4 375 | -11.7% | 12.2% | 74.2% | 20 200 | 23 078 | -12.5% | 42 027 | 59.6% |
| Wind | 596 | 60.6% | -7.9% | 10.1% | 3 817 | 4 091 | -6.7% | 7 053 | 10.0% |
| Solar⁴ | 186 | - | -4.6% | 3.2% | 869 | 869 | - | 1 618 | 2.3% |
| Geothermal | 0 | - | - | 0.0% | 0 | 0 | - | 0 | 0.0% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 1 | 9.6% | 1.1% | 0.0% | 7 | 6 | 5.0% | 12 | 0.0% |
| RENEWABLES | 5 494 | -6.7% | 7.1% | 93.1% | 27 194 | 30 324 | -10.3% | 55 124 | 78.1% |
| NON-RENEWABLES | 404 | -34.2% | 2.5% | 6.9% | 6 472 | 7 190 | -10.0% | 15 424 | 21.9% |
| TOTAL NET PRODUCTION | 5 898 | -9.3% | 6.8% | | 33 666 | 37 514 | -10.3% | 70 548 | |
| + Imports | 1 278 | -0.3% | -25.8% | | 12 646 | 12 738 | -0.7% | 26 047 | |
| - Exports | 2 060 | -1.6% | 11.8% | | 11 141 | 12 529 | -11.1% | 22 918 | |
| = ELECTRICITY SUPPLIED | 5 116 | -10.0% | -5.3% | | 35 171 | 37 723 | -6.8% | 73 676 | |
| - Used for pumped storage | 384 | -20.3% | -20.5% | | 2 558 | 2 494 | 2.6% | 4 826 | |
| - T&D Losses | 264 | -7.8% | -1.3% | | 1 829 | 1 901 | -3.8% | 3 767 | |
| = ELECTRICITY CONSUMED | 4 468 | -9.2% | -4.0% | | 30 784 | 33 327 | -7.6% | 65 083 | |

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

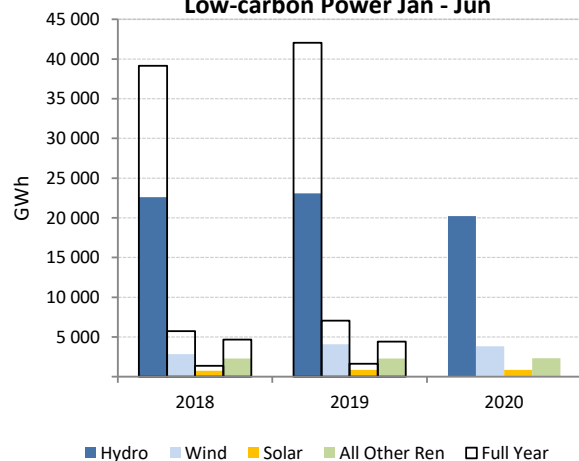
Electricity Production



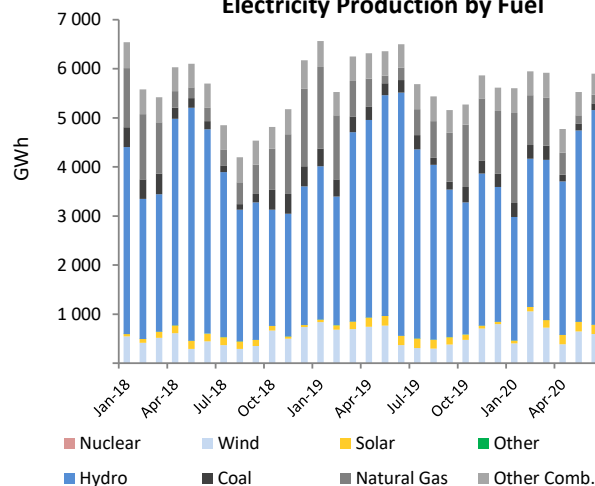
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

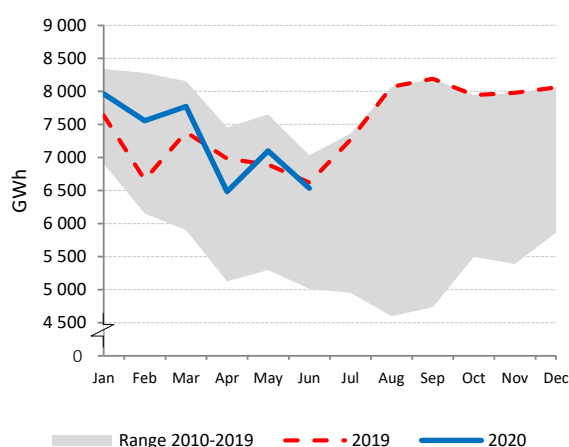


BELGIUM

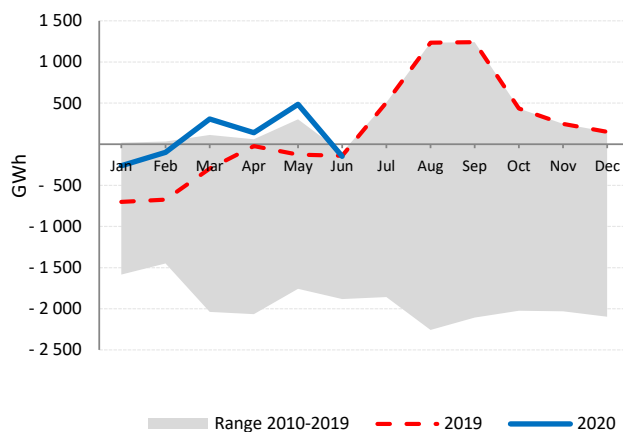
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 3 014 | 20.9% | 23.1% | 46.1% | 16 378 | 15 574 | 5.2% | 33 507 | 37.4% |
| Coal | 150 | -24.4% | -3.9% | 2.3% | 1 012 | 1 230 | -17.7% | 2 434 | 2.7% |
| Oil | 1 | -22.5% | -0.8% | 0.0% | 7 | 14 | -50.5% | 26 | 0.0% |
| Natural Gas | 2 331 | 33.6% | 36.0% | 35.7% | 12 065 | 11 293 | 6.8% | 24 729 | 27.6% |
| Combustible Renewables | 430 | -4.1% | -7.8% | 6.6% | 2 640 | 2 360 | 11.9% | 4 987 | 5.6% |
| Other Combustibles | 101 | 1.5% | -8.3% | 1.5% | 654 | 677 | -3.4% | 1 332 | 1.5% |
| Nuclear | 2 146 | -26.1% | -29.1% | 32.8% | 17 089 | 19 366 | -11.8% | 41 359 | 46.1% |
| Hydro | 85 | -6.7% | -5.7% | 1.3% | 682 | 630 | 8.2% | 1 147 | 1.3% |
| Wind | 619 | 13.8% | -15.7% | 9.5% | 6 355 | 4 333 | 46.7% | 9 369 | 10.4% |
| Solar | 641 | 14.7% | -15.5% | 9.8% | 2 717 | 2 069 | 31.3% | 3 919 | 4.4% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 28 | -10.2% | -24.6% | 0.4% | 191 | 215 | -11.4% | 408 | 0.5% |
| RENEWABLES | 1 776 | 8.1% | -13.4% | 27.2% | 12 394 | 9 393 | 32.0% | 19 421 | 21.6% |
| NON-RENEWABLES | 4 758 | -4.4% | -5.7% | 72.8% | 31 018 | 32 795 | -5.4% | 70 288 | 78.4% |
| TOTAL NET PRODUCTION | 6 534 | -1.3% | -8.0% | | 43 412 | 42 188 | 2.9% | 89 709 | |
| + Imports | 977 | -31.0% | -3.7% | | 6 266 | 8 038 | -22.1% | 12 735 | |
| - Exports | 828 | -35.0% | -44.7% | | 6 688 | 6 080 | 10.0% | 14 589 | |
| = ELECTRICITY SUPPLIED | 6 682 | -1.2% | 1.0% | | 42 990 | 44 147 | -2.6% | 87 855 | |
| - Used for pumped storage | 106 | 1.1% | 2.7% | | 695 | 606 | 14.7% | 1 162 | |
| - T&D Losses | 337 | -1.6% | 1.0% | | 2 176 | 2 247 | -3.2% | 4 472 | |
| = ELECTRICITY CONSUMED | 6 239 | -1.2% | 1.0% | | 40 118 | 41 293 | -2.8% | 82 220 | |

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

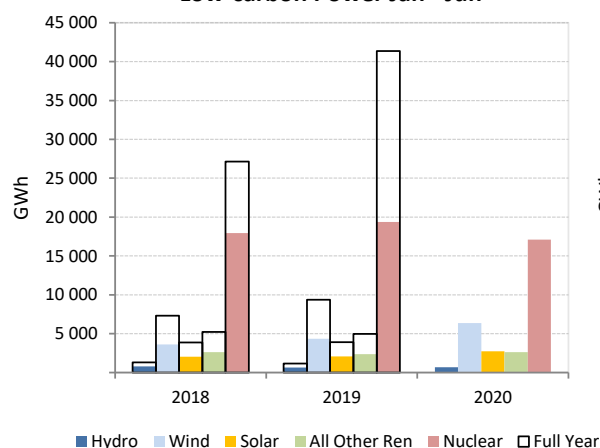
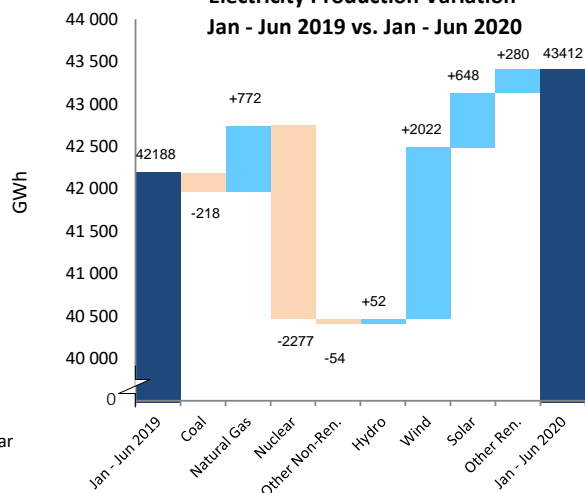
Electricity Production



Net Electricity Exports



Low-carbon Power Jan - Jun

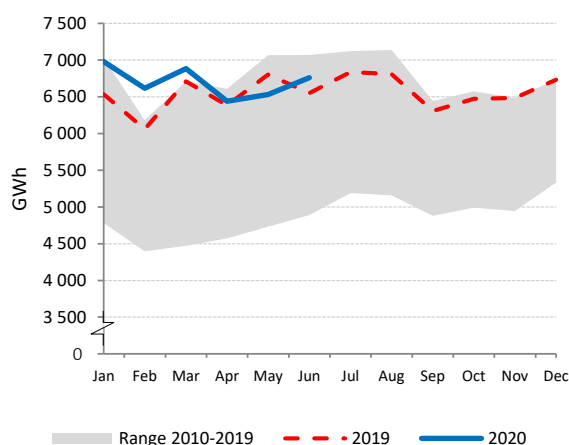
Electricity Production Variation
Jan - Jun 2019 vs. Jan - Jun 2020

CHILE

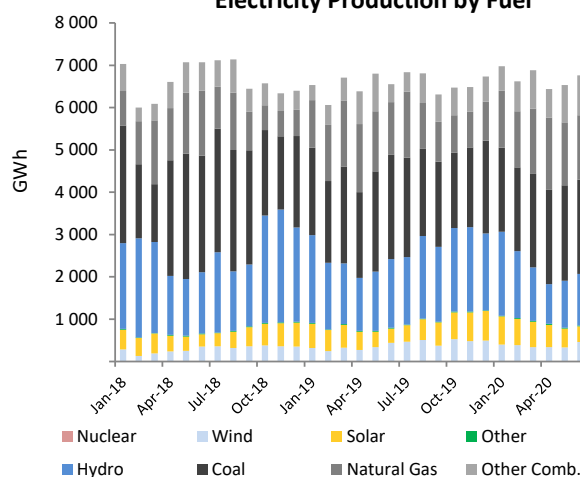
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 4 692 | 13.5% | 1.5% | 69.4% | 26 514 | 24 889 | 6.5% | 47 041 | 59.8% |
| Coal | 2 234 | -9.4% | -1.0% | 33.0% | 12 888 | 13 146 | -2.0% | 25 431 | 32.3% |
| Oil | 577 | 1155.9% | 15.7% | 8.5% | 2 380 | 1 162 | 104.8% | 2 911 | 3.7% |
| Natural Gas | 1 519 | 22.4% | 2.4% | 22.5% | 8 929 | 8 292 | 7.7% | 14 521 | 18.5% |
| Combustible Renewables | 363 | -4.5% | -5.4% | 5.4% | 2 316 | 2 289 | 1.2% | 4 177 | 5.3% |
| Other Combustibles | - | - | - | - | - | - | - | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 1 213 | -25.2% | 9.3% | 17.9% | 8 082 | 9 352 | -13.6% | 20 456 | 26.0% |
| Wind | 462 | 5.3% | 39.9% | 6.8% | 2 255 | 1 948 | 15.8% | 4 800 | 6.1% |
| Solar | 370 | 9.0% | -16.7% | 5.5% | 3 228 | 2 745 | 17.6% | 6 188 | 7.9% |
| Geothermal | 21 | 20.7% | -14.7% | 0.3% | 133 | 107 | 24.5% | 202 | 0.3% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 2 429 | -13.2% | 5.9% | 35.9% | 16 014 | 16 441 | -2.6% | 35 823 | 45.5% |
| NON-RENEWABLES | 4 330 | 15.4% | 2.2% | 64.1% | 24 198 | 22 600 | 7.1% | 42 864 | 54.5% |
| TOTAL NET PRODUCTION | 6 759 | 3.2% | 3.5% | | 40 212 | 39 041 | 3.0% | 78 686 | |
| + Imports | - | - | - | | - | - | - | - | |
| - Exports | - | - | - | | - | - | - | - | |
| = ELECTRICITY SUPPLIED | 6 759 | 3.2% | 3.5% | | 40 212 | 39 041 | 3.0% | 78 686 | |
| - Used for pumped storage | - | - | - | | - | - | - | - | |
| - T&D Losses | 278 | -0.3% | 3.3% | | 1 668 | 1 892 | -11.9% | 3 560 | |
| = ELECTRICITY CONSUMED | 6 481 | 3.3% | 3.5% | | 38 544 | 37 149 | 3.8% | 75 126 | |

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

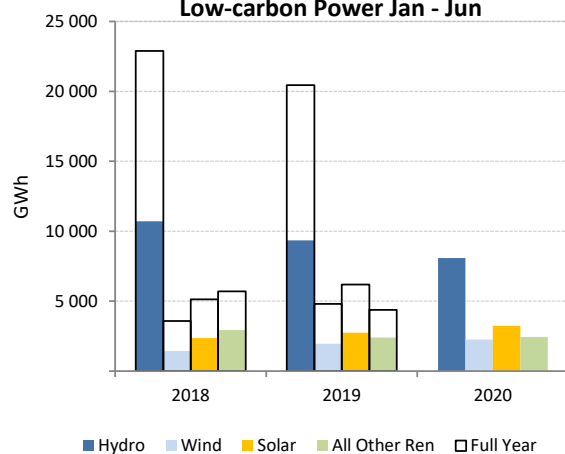
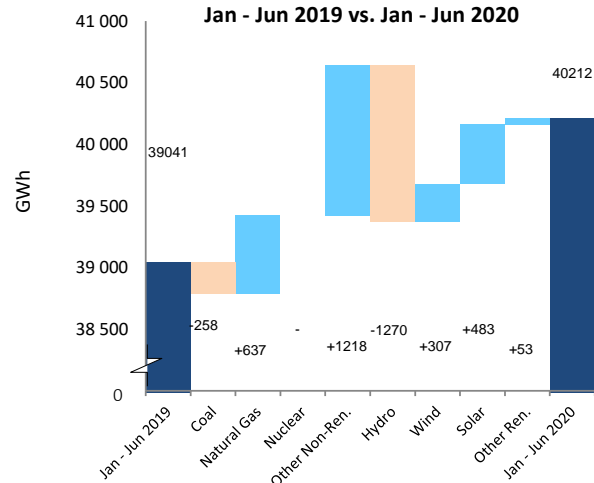
Electricity Production



Electricity Production by Fuel



Low-carbon Power Jan - Jun

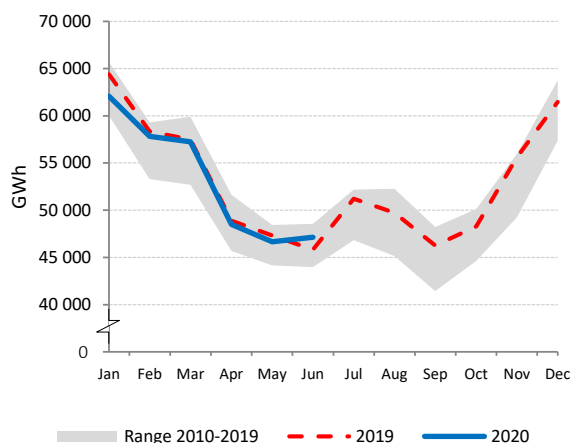
Electricity Production Variation
Jan - Jun 2019 vs. Jan - Jun 2020

CANADA

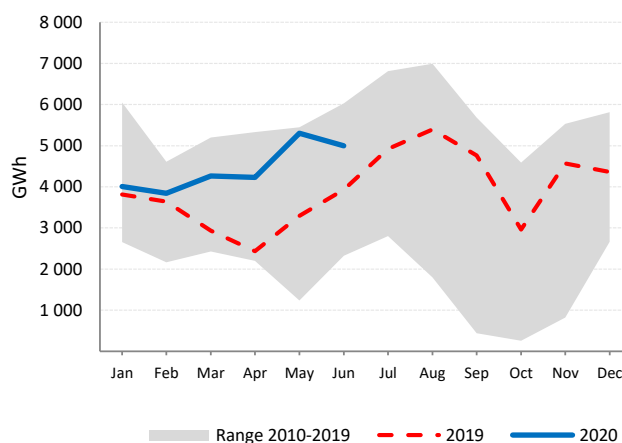
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|--|---------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 7 850 | -3.4% | 7.6% | 16.7% | 55 057 | 61 357 | -10.3% | 123 037 | 19.4% |
| Coal ⁴ | 2 908 | -3.4% | 7.6% | 6.2% | 20 392 | 22 725 | -10.3% | 45 570 | 7.2% |
| Oil ⁴ | 368 | -3.4% | 7.6% | 0.8% | 2 578 | 2 873 | -10.3% | 5 760 | 0.9% |
| Natural Gas ⁴ | 3 928 | -3.4% | 7.6% | 8.3% | 27 551 | 30 703 | -10.3% | 61 569 | 9.7% |
| Combustible Renewables ⁴ | 641 | -3.4% | 7.6% | 1.4% | 4 498 | 5 012 | -10.3% | 10 051 | 1.6% |
| Other Combustibles ⁴ | 6 | -3.4% | 7.6% | 0.0% | 39 | 44 | -10.3% | 88 | 0.0% |
| Nuclear | 7 954 | -7.7% | 6.3% | 16.9% | 47 246 | 44 852 | 5.3% | 95 461 | 15.0% |
| Hydro | 28 352 | 6.5% | -0.5% | 60.2% | 196 362 | 195 854 | 0.3% | 378 127 | 59.6% |
| Wind | 2 396 | 24.5% | -17.1% | 5.1% | 18 530 | 17 982 | 3.0% | 33 840 | 5.3% |
| Solar | 572 | 6.3% | 16.2% | 1.2% | 2 173 | 2 108 | 3.1% | 4 175 | 0.7% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | 1 | - | 1 | 0.0% |
| Non-Specified | 11 | 35.0% | 2.7% | 0.0% | 69 | 94 | -26.8% | 169 | 0.0% |
| RENEWABLES | 31 961 | 7.5% | -1.6% | 67.8% | 221 562 | 220 958 | 0.3% | 426 194 | 67.1% |
| NON-RENEWABLES | 15 174 | -5.7% | 6.9% | 32.2% | 97 874 | 101 291 | -3.4% | 208 617 | 32.9% |
| TOTAL NET PRODUCTION | 47 134 | 2.9% | 1.0% | | 319 436 | 322 248 | -0.9% | 634 811 | |
| + Imports | 782 | -16.4% | -13.6% | | 5 661 | 7 087 | -20.1% | 13 369 | |
| - Exports | 5 777 | 18.7% | -6.9% | | 32 300 | 27 129 | 19.1% | 60 376 | |
| = ELECTRICITY SUPPLIED | 42 139 | 0.6% | 1.9% | | 292 797 | 302 207 | -3.1% | 587 804 | |
| - Used for pumped storage ⁴ | 16 | 6.6% | -0.5% | | 109 | 109 | 0.3% | 210 | |
| - T&D Losses ⁴ | 2 612 | 4.6% | 0.7% | | 17 722 | 17 583 | 0.8% | 34 606 | |
| = ELECTRICITY CONSUMED | 39 511 | 0.3% | 2.0% | | 274 966 | 284 515 | -3.4% | 552 988 | |

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

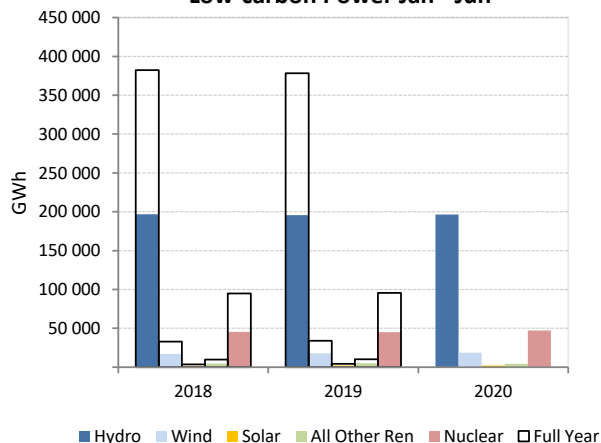
Electricity Production



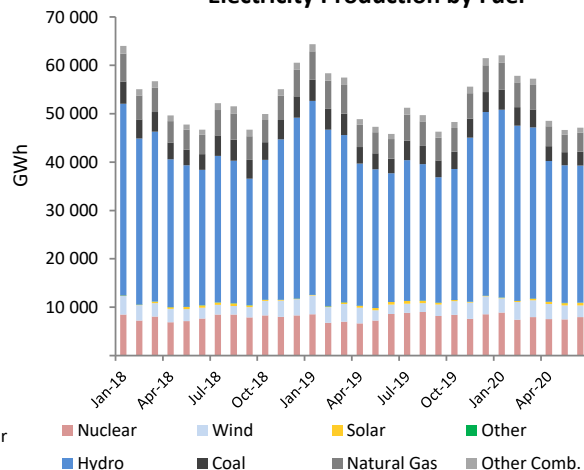
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

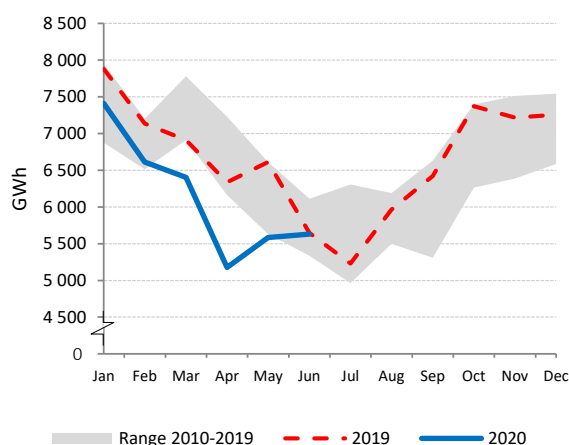


CZECH REPUBLIC

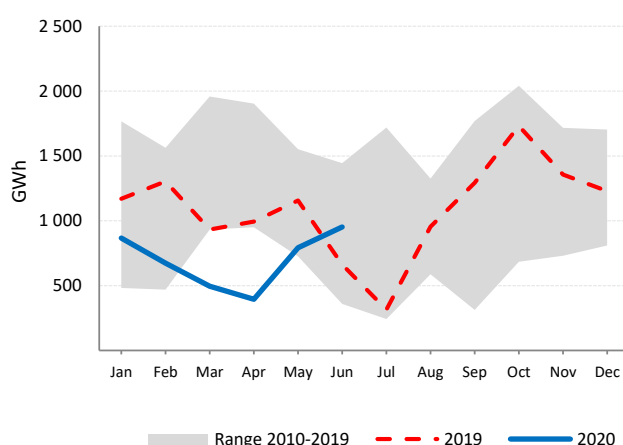
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 2 741 | -4.3% | 8.9% | 48.7% | 20 117 | 22 775 | -11.7% | 45 231 | 56.5% |
| Coal | 1 867 | -11.5% | 7.6% | 33.2% | 14 952 | 18 372 | -18.6% | 35 362 | 44.2% |
| Oil | 6 | -47.8% | 67.3% | 0.1% | 35 | 52 | -33.4% | 104 | 0.1% |
| Natural Gas | 482 | 18.9% | 24.9% | 8.6% | 2 768 | 2 122 | 30.5% | 5 180 | 6.5% |
| Combustible Renewables | 378 | 13.6% | -2.6% | 6.7% | 2 320 | 2 192 | 5.8% | 4 509 | 5.6% |
| Other Combustibles | 7 | 23.6% | 47.8% | 0.1% | 42 | 37 | 15.0% | 76 | 0.1% |
| Nuclear | 2 334 | 5.4% | -6.8% | 41.5% | 13 428 | 14 274 | -5.9% | 28 555 | 35.7% |
| Hydro | 266 | 36.7% | 16.8% | 4.7% | 1 589 | 1 833 | -13.4% | 3 142 | 3.9% |
| Wind | 40 | 11.6% | -13.0% | 0.7% | 398 | 374 | 6.4% | 689 | 0.9% |
| Solar | 240 | -27.2% | -13.8% | 4.3% | 1 227 | 1 214 | 1.1% | 2 257 | 2.8% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 9 | 27.2% | -12.3% | 0.2% | 57 | 54 | 5.4% | 112 | 0.1% |
| RENEWABLES | 924 | 3.5% | -1.7% | 16.4% | 5 534 | 5 614 | -1.4% | 10 597 | 13.2% |
| NON-RENEWABLES | 4 705 | -1.0% | 1.3% | 83.6% | 31 283 | 34 911 | -10.4% | 69 388 | 86.8% |
| TOTAL NET PRODUCTION | 5 629 | -0.3% | 0.8% | | 36 817 | 40 525 | -9.1% | 79 985 | |
| + Imports | 714 | -8.5% | -28.8% | | 7 056 | 5 474 | 28.9% | 11 026 | |
| - Exports | 1 666 | 15.5% | -7.2% | | 11 229 | 11 691 | -4.0% | 24 123 | |
| = ELECTRICITY SUPPLIED | 4 677 | -6.1% | -2.4% | | 32 644 | 34 307 | -4.8% | 66 888 | |
| - Used for pumped storage | 79 | -6.8% | -48.7% | | 846 | 686 | 23.3% | 1 508 | |
| - T&D Losses | 287 | -8.7% | 12.6% | | 2 117 | 2 240 | -5.5% | 4 460 | |
| = ELECTRICITY CONSUMED | 4 311 | -5.9% | -1.7% | | 29 681 | 31 381 | -5.4% | 60 921 | |

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

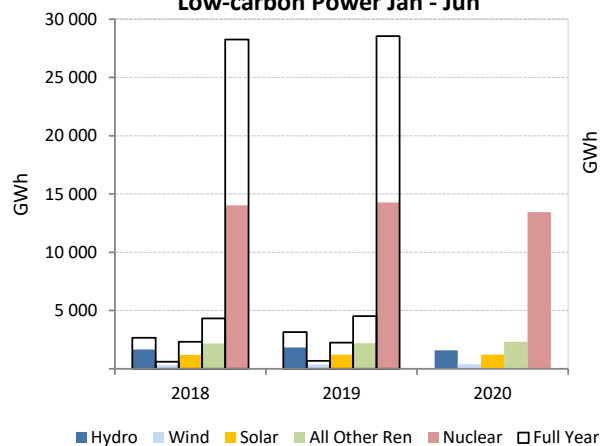
Electricity Production



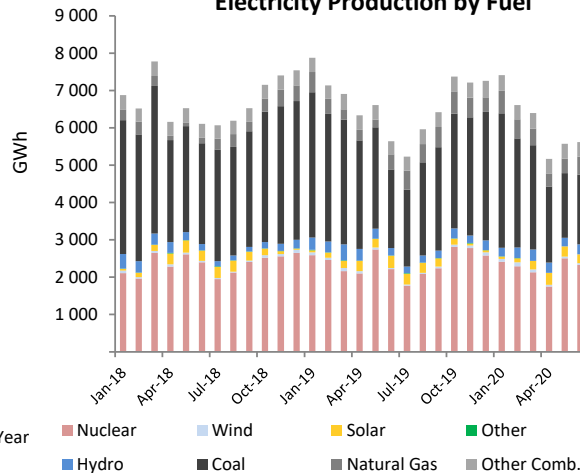
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

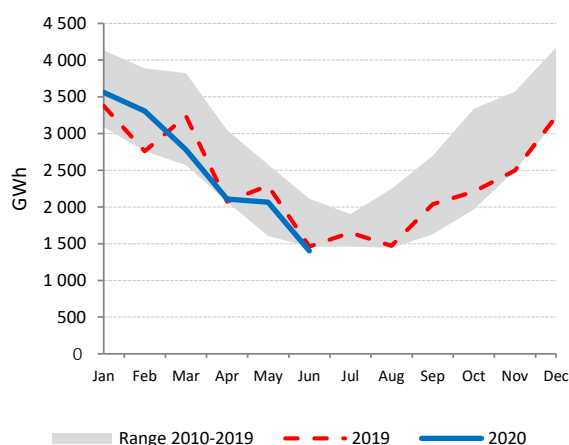


DENMARK

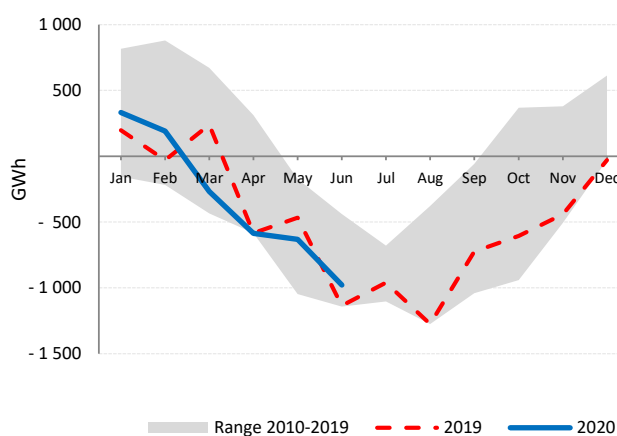
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 509 | 49.0% | -18.7% | 36.3% | 5 544 | 6 322 | -12.3% | 11 164 | 39.5% |
| Coal | 125 | 455.8% | -44.3% | 8.9% | 1 812 | 2 033 | -10.8% | 2 983 | 10.5% |
| Oil | 18 | 42.5% | 58.3% | 1.3% | 93 | 106 | -12.4% | 218 | 0.8% |
| Natural Gas | 55 | -9.9% | -8.3% | 3.9% | 528 | 954 | -44.6% | 1 702 | 6.0% |
| Combustible Renewables | 265 | 35.3% | -1.2% | 18.9% | 2 759 | 2 867 | -3.8% | 5 550 | 19.6% |
| Other Combustibles | 47 | -6.5% | -25.1% | 3.4% | 351 | 362 | -3.0% | 711 | 2.5% |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 1 | 16.7% | -22.4% | 0.1% | 10 | 8 | 29.0% | 16 | 0.1% |
| Wind | 711 | -26.8% | -43.1% | 50.7% | 8 991 | 8 314 | 8.1% | 16 150 | 57.1% |
| Solar | 181 | 22.9% | -2.7% | 12.9% | 670 | 554 | 21.1% | 963 | 3.4% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 1 158 | -12.0% | -32.1% | 82.6% | 12 431 | 11 743 | 5.9% | 22 679 | 80.2% |
| NON-RENEWABLES | 245 | 67.4% | -31.7% | 17.4% | 2 784 | 3 455 | -19.4% | 5 614 | 19.8% |
| TOTAL NET PRODUCTION | 1 402 | -4.0% | -32.0% | | 15 216 | 15 197 | 0.1% | 28 293 | |
| + Imports | 1 315 | -27.4% | -11.0% | | 8 637 | 7 651 | 12.9% | 15 982 | |
| - Exports | 337 | -50.2% | -60.2% | | 6 701 | 5 874 | 14.1% | 10 171 | |
| = ELECTRICITY SUPPLIED | 2 380 | -8.4% | -11.6% | | 17 152 | 16 974 | 1.0% | 34 105 | |
| - Used for pumped storage | - | - | - | | - | - | - | - | |
| - T&D Losses | 154 | -0.3% | -18.0% | | 1 176 | 1 027 | 14.5% | 2 042 | |
| = ELECTRICITY CONSUMED | 2 227 | -8.9% | -11.2% | | 15 976 | 15 947 | 0.2% | 32 063 | |

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

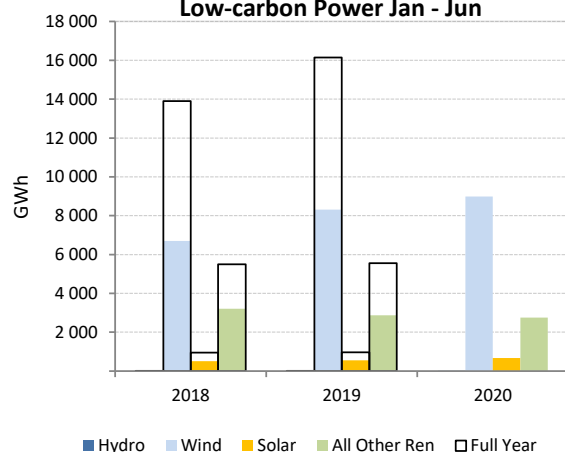
Electricity Production



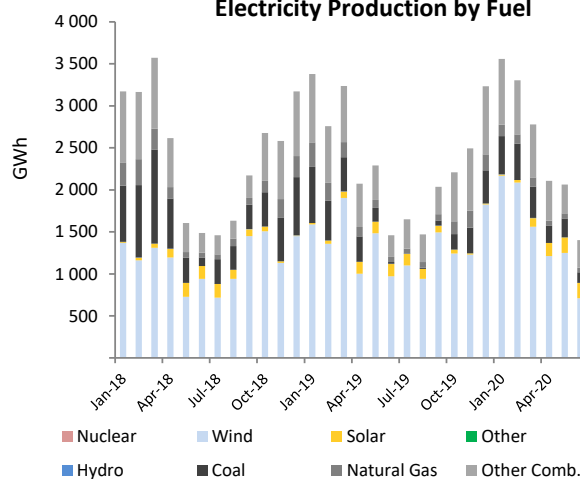
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

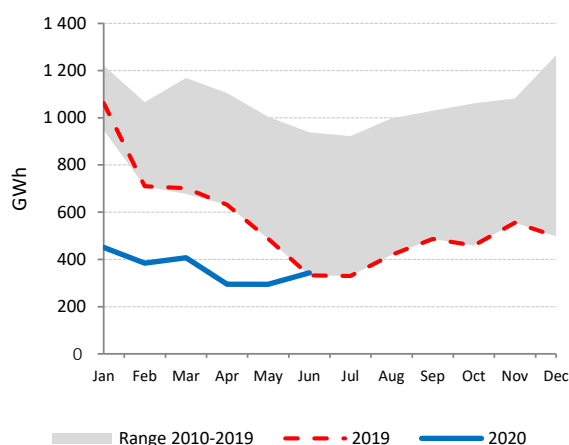


ESTONIA

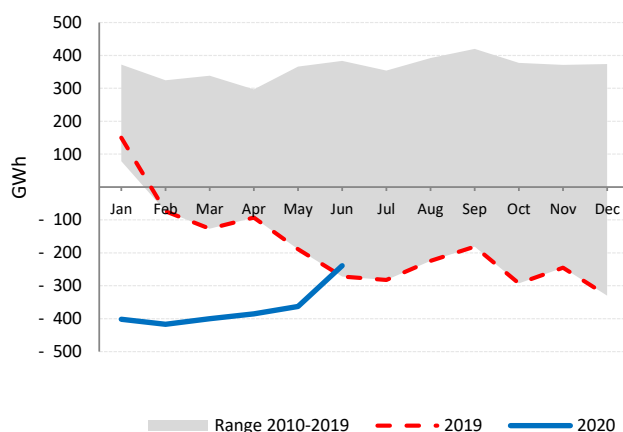
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------------|------------|---------------------|---------------------|--------------|--------------|--------------|---------------------|--------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 299 | 4.1% | 26.1% | 87.0% | 1 665 | 3 533 | -52.9% | 5 916 | 88.6% |
| Coal ⁴ | 233 | 4.1% | 26.1% | 67.9% | 1 300 | 2 759 | -52.9% | 4 619 | 69.2% |
| Oil ⁴ | 1 | 4.2% | 26.2% | 0.3% | 7 | 14 | -52.9% | 23 | 0.3% |
| Natural Gas ⁴ | 2 | 4.1% | 26.1% | 0.5% | 9 | 20 | -52.9% | 33 | 0.5% |
| Combustible Renewables ⁴ | 59 | 4.1% | 26.1% | 17.1% | 328 | 696 | -52.9% | 1 165 | 17.4% |
| Other Combustibles ⁴ | 4 | 4.2% | 26.1% | 1.1% | 21 | 45 | -52.9% | 76 | 1.1% |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 3 | 314.3% | -3.3% | 0.9% | 23 | 10 | 124.5% | 19 | 0.3% |
| Wind | 37 | -7.4% | -25.4% | 10.8% | 460 | 357 | 28.7% | 687 | 10.3% |
| Solar | 5 | - | - | 1.3% | 27 | 27 | - | 54 | 0.8% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 104 | 1.6% | -0.6% | 30.1% | 838 | 1 090 | -23.1% | 1 925 | 28.8% |
| NON-RENEWABLES | 240 | 4.1% | 26.1% | 69.9% | 1 337 | 2 838 | -52.9% | 4 751 | 71.2% |
| TOTAL NET PRODUCTION | 344 | 3.4% | 16.7% | | 2 175 | 3 928 | -44.6% | 6 676 | |
| + Imports | 545 | -6.2% | -17.9% | | 3 769 | 2 181 | 72.8% | 4 862 | |
| - Exports | 306 | -1.0% | 1.7% | | 1 563 | 1 577 | -0.9% | 2 703 | |
| = ELECTRICITY SUPPLIED | 583 | -3.6% | -11.4% | | 4 381 | 4 532 | -3.3% | 8 835 | |
| - Used for pumped storage | - | - | - | | - | - | - | - | |
| - T&D Losses ⁴ | 49 | -2.7% | -7.3% | | 325 | 334 | -2.7% | 631 | |
| = ELECTRICITY CONSUMED | 534 | -3.7% | -11.7% | | 4 056 | 4 198 | -3.4% | 8 204 | |

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

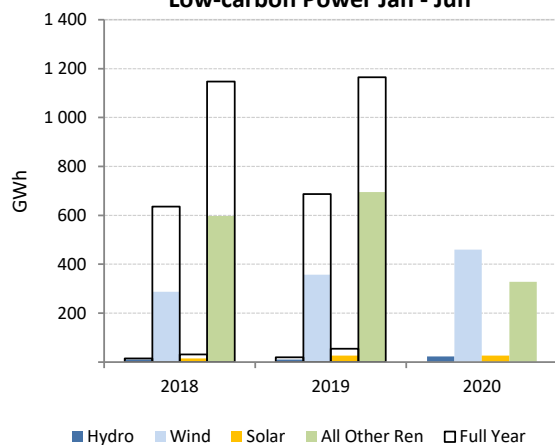
Electricity Production



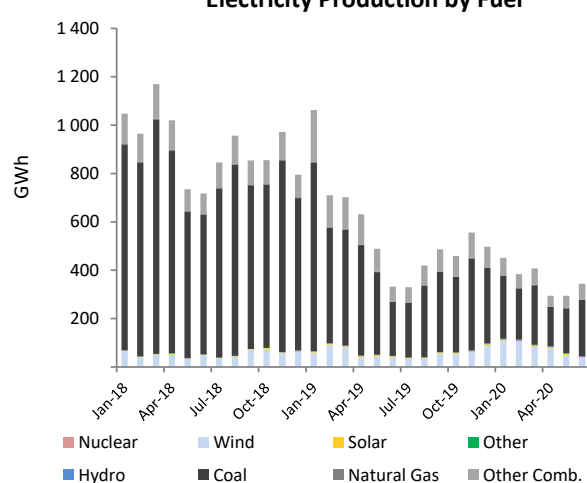
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

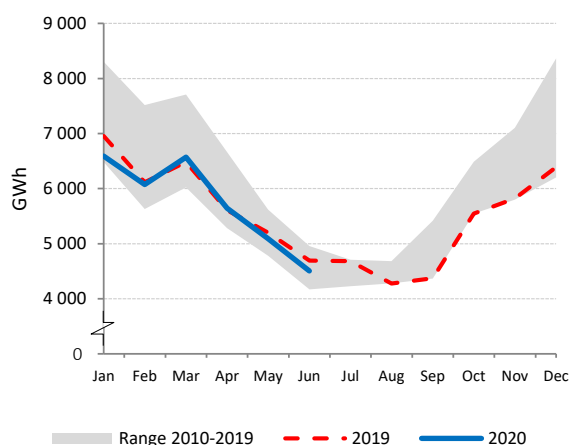


FINLAND

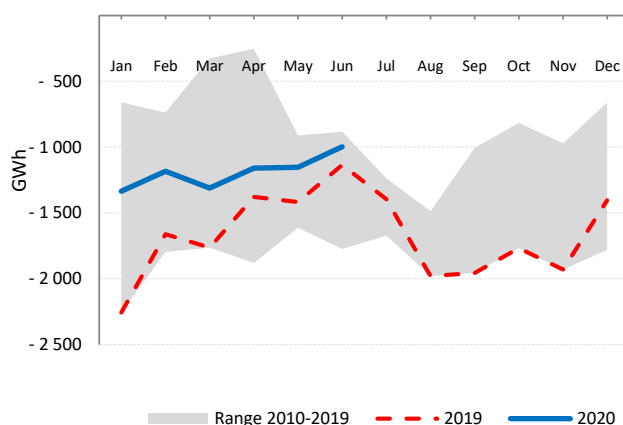
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|---------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 1 124 | -3.7% | -23.4% | 24.9% | 10 541 | 13 641 | -22.7% | 24 506 | 37.0% |
| Coal | 180 | -31.5% | -41.5% | 4.0% | 3 065 | 4 375 | -29.9% | 7 607 | 11.5% |
| Oil | 10 | -35.7% | -25.0% | 0.2% | 91 | 125 | -27.2% | 242 | 0.4% |
| Natural Gas | 249 | 256.9% | -13.5% | 5.5% | 1 860 | 2 224 | -16.4% | 3 769 | 5.7% |
| Combustible Renewables | 649 | -17.1% | -21.2% | 14.4% | 5 297 | 6 659 | -20.5% | 12 393 | 18.7% |
| Other Combustibles ⁴ | 35 | -1.7% | - | 0.8% | 228 | 257 | -11.4% | 496 | 0.7% |
| Nuclear | 1 796 | 1.4% | 11.2% | 39.9% | 11 402 | 11 283 | 1.1% | 22 927 | 34.7% |
| Hydro | 1 133 | -10.5% | -27.7% | 25.1% | 8 281 | 6 706 | 23.5% | 12 299 | 18.6% |
| Wind | 366 | -16.0% | -2.1% | 8.1% | 3 965 | 3 215 | 23.3% | 5 985 | 9.0% |
| Solar | 66 | 107.7% | 33.9% | 1.5% | 168 | 87 | 93.9% | 178 | 0.3% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 21 | - | - | 0.5% | 125 | 125 | - | 249 | 0.4% |
| RENEWABLES | 2 214 | -12.0% | -21.3% | 49.1% | 17 710 | 16 667 | 6.3% | 30 855 | 46.6% |
| NON-RENEWABLES | 2 291 | 5.3% | 0.5% | 50.9% | 16 771 | 18 389 | -8.8% | 35 290 | 53.4% |
| TOTAL NET PRODUCTION | 4 506 | -4.0% | -11.5% | | 34 481 | 35 056 | -1.6% | 66 144 | |
| + Imports | 1 488 | -10.0% | -14.6% | | 10 492 | 11 401 | -8.0% | 23 938 | |
| - Exports | 491 | -5.4% | -16.9% | | 3 354 | 1 792 | 87.2% | 3 896 | |
| = ELECTRICITY SUPPLIED | 5 503 | -5.6% | -11.9% | | 41 618 | 44 665 | -6.8% | 86 186 | |
| - Used for pumped storage | - | - | - | | - | - | - | - | |
| - T&D Losses | 178 | -9.3% | -15.9% | | 1 400 | 1 511 | -7.3% | 2 913 | |
| = ELECTRICITY CONSUMED | 5 325 | -5.5% | -11.8% | | 40 218 | 43 155 | -6.8% | 83 273 | |

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

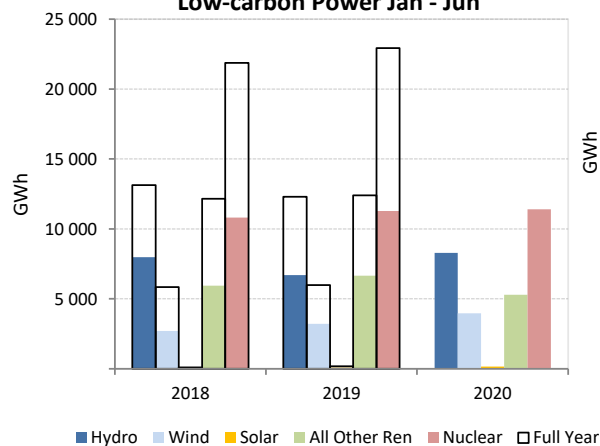
Electricity Production



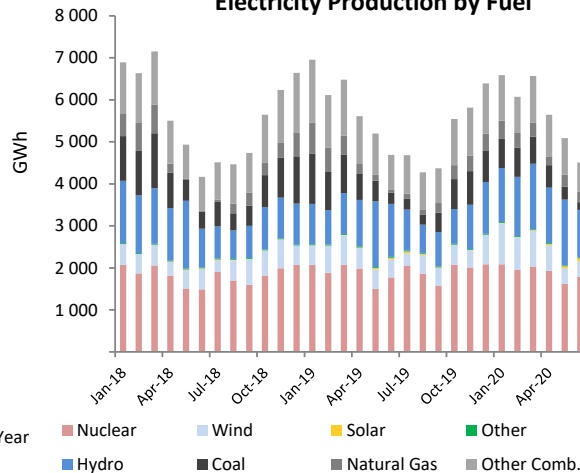
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

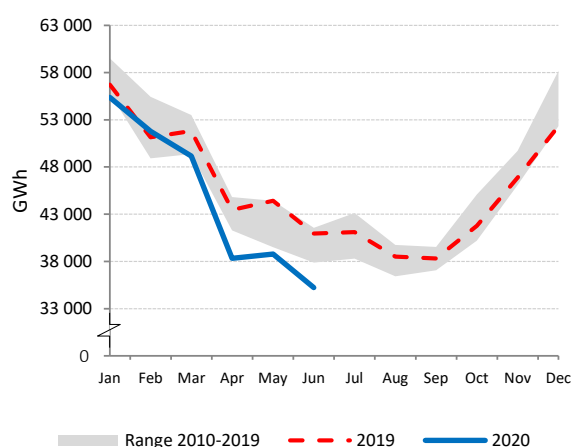


FRANCE

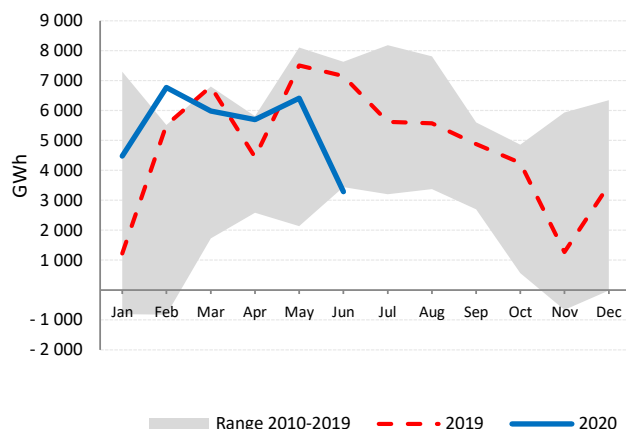
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|---------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 3 657 | 16.9% | 32.1% | 10.4% | 26 284 | 29 535 | -11.0% | 58 888 | 10.8% |
| Coal | 191 | -17.7% | -36.6% | 0.5% | 1 920 | 2 882 | -33.4% | 6 101 | 1.1% |
| Oil | 536 | 9.1% | 6.1% | 1.5% | 3 157 | 3 028 | 4.2% | 6 133 | 1.1% |
| Natural Gas | 2 324 | 34.1% | 81.0% | 6.6% | 15 864 | 17 969 | -11.7% | 36 078 | 6.6% |
| Combustible Renewables | 455 | -17.4% | -21.3% | 1.3% | 4 293 | 4 466 | -3.9% | 8 188 | 1.5% |
| Other Combustibles | 151 | 24.9% | 51.3% | 0.4% | 1 050 | 1 190 | -11.7% | 2 388 | 0.4% |
| Nuclear | 21 358 | -25.3% | -13.7% | 60.6% | 174 215 | 203 950 | -14.6% | 379 870 | 69.4% |
| Hydro | 6 439 | 9.2% | -4.7% | 18.3% | 38 490 | 31 785 | 21.1% | 61 376 | 11.2% |
| Wind | 2 066 | 7.7% | -23.5% | 5.9% | 21 852 | 16 802 | 30.1% | 34 648 | 6.3% |
| Solar | 1 605 | 21.0% | -5.5% | 4.6% | 7 186 | 5 818 | 23.5% | 11 357 | 2.1% |
| Geothermal ⁴ | 9 | -2.7% | - | 0.0% | 57 | 58 | -2.7% | 117 | 0.0% |
| Other Renewables | 40 | - | - | 0.1% | 237 | 237 | - | 474 | 0.1% |
| Non-Specified | 55 | - | - | 0.2% | 329 | 329 | - | 659 | 0.1% |
| RENEWABLES | 10 614 | 8.9% | -9.9% | 30.1% | 72 116 | 59 167 | 21.9% | 116 159 | 21.2% |
| NON-RENEWABLES | 24 615 | -21.2% | -8.8% | 69.9% | 196 535 | 229 348 | -14.3% | 431 229 | 78.8% |
| TOTAL NET PRODUCTION | 35 228 | -14.0% | -9.1% | | 268 651 | 288 514 | -6.9% | 547 388 | |
| + Imports | 1 281 | 275.4% | 119.6% | | 5 756 | 6 271 | -8.2% | 15 593 | |
| - Exports | 4 570 | -39.0% | -34.6% | | 38 389 | 38 925 | -1.4% | 73 352 | |
| = ELECTRICITY SUPPLIED | 31 939 | -5.5% | -1.3% | | 236 018 | 255 861 | -7.8% | 489 629 | |
| - Used for pumped storage | 431 | -20.2% | -24.0% | | 3 326 | 3 050 | 9.1% | 6 327 | |
| - T&D Losses | 2 486 | -1.4% | -2.4% | | 20 021 | 21 062 | -4.9% | 39 849 | |
| = ELECTRICITY CONSUMED | 29 022 | -5.6% | -0.8% | | 212 671 | 231 749 | -8.2% | 443 452 | |

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

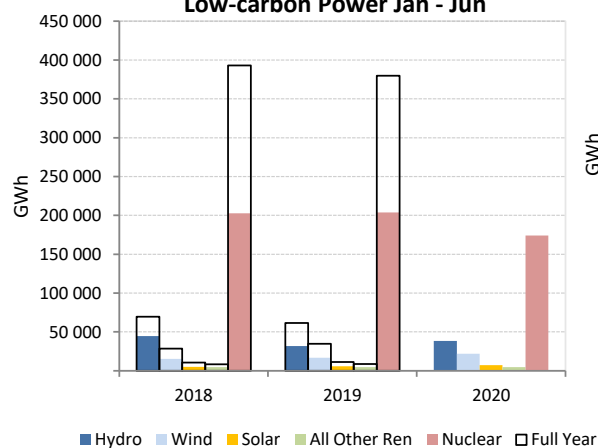
Electricity Production



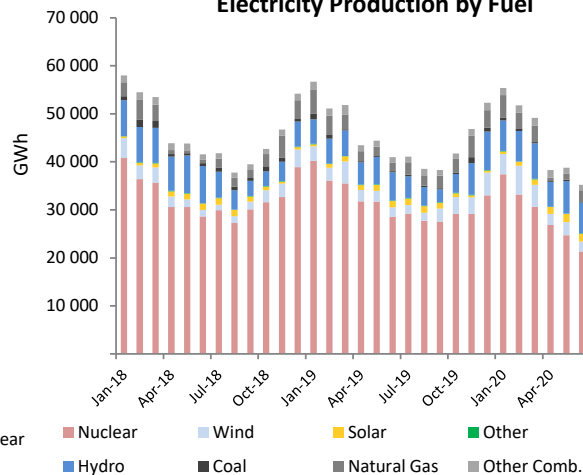
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

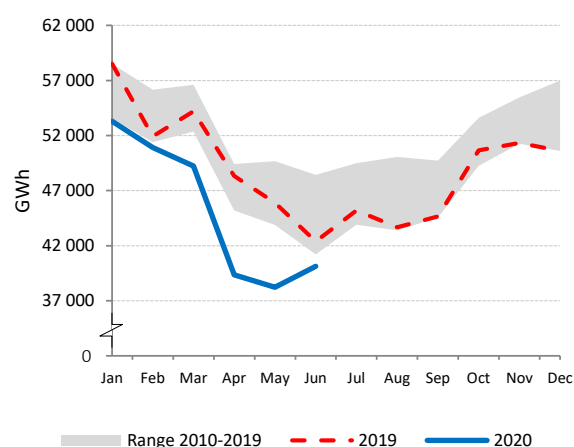


GERMANY

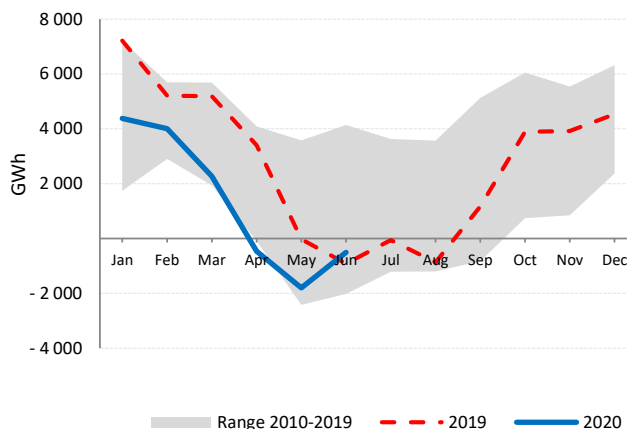
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|---------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 20 213 | -5.4% | 19.3% | 50.4% | 125 375 | 161 595 | -22.4% | 318 151 | 54.2% |
| Coal | 8 344 | -22.7% | 22.8% | 20.8% | 55 576 | 90 506 | -38.6% | 172 439 | 29.4% |
| Oil | 333 | -7.9% | 24.3% | 0.8% | 2 018 | 2 347 | -14.0% | 4 725 | 0.8% |
| Natural Gas | 7 254 | 24.3% | 30.2% | 18.1% | 41 372 | 42 111 | -1.8% | 87 812 | 15.0% |
| Combustible Renewables | 3 806 | -0.9% | -2.5% | 9.5% | 23 626 | 23 483 | 0.6% | 46 897 | 8.0% |
| Other Combustibles | 475 | -8.7% | 15.1% | 1.2% | 2 783 | 3 149 | -11.6% | 6 277 | 1.1% |
| Nuclear | 4 657 | 2.0% | 8.7% | 11.6% | 30 042 | 34 580 | -13.1% | 70 983 | 12.1% |
| Hydro | 2 158 | -10.2% | 0.5% | 5.4% | 12 901 | 13 675 | -5.7% | 25 901 | 4.4% |
| Wind | 6 393 | -2.5% | -16.2% | 15.9% | 73 367 | 65 367 | 12.2% | 123 606 | 21.0% |
| Solar | 6 613 | -10.6% | -7.1% | 16.5% | 28 909 | 25 439 | 13.6% | 47 517 | 8.1% |
| Geothermal | 15 | - | 21.4% | 0.0% | 100 | 95 | 5.0% | 170 | 0.0% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 91 | 3.0% | 12.6% | 0.2% | 453 | 485 | -6.6% | 992 | 0.2% |
| RENEWABLES | 18 985 | -6.1% | -8.8% | 47.3% | 138 903 | 128 060 | 8.5% | 244 092 | 41.6% |
| NON-RENEWABLES | 21 155 | -4.6% | 21.5% | 52.7% | 132 245 | 173 176 | -23.6% | 343 228 | 58.4% |
| TOTAL NET PRODUCTION | 40 140 | -5.3% | 5.0% | | 271 148 | 301 236 | -10.0% | 587 320 | |
| + Imports | 4 586 | -6.3% | -22.2% | | 25 730 | 17 961 | 43.3% | 40 123 | |
| - Exports | 4 085 | 2.6% | -0.2% | | 33 616 | 38 041 | -11.6% | 72 792 | |
| = ELECTRICITY SUPPLIED | 40 642 | -6.1% | 1.5% | | 263 262 | 281 156 | -6.4% | 554 651 | |
| - Used for pumped storage | 608 | -12.2% | -27.1% | | 4 658 | 4 190 | 11.2% | 8 178 | |
| - T&D Losses | 1 801 | 0.4% | 0.8% | | 13 483 | 13 518 | -0.3% | 26 548 | |
| = ELECTRICITY CONSUMED | 38 233 | -6.3% | 2.2% | | 245 121 | 263 448 | -7.0% | 519 925 | |

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

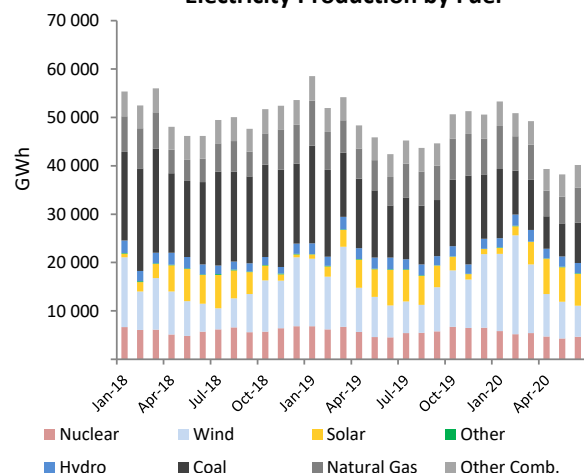
Electricity Production



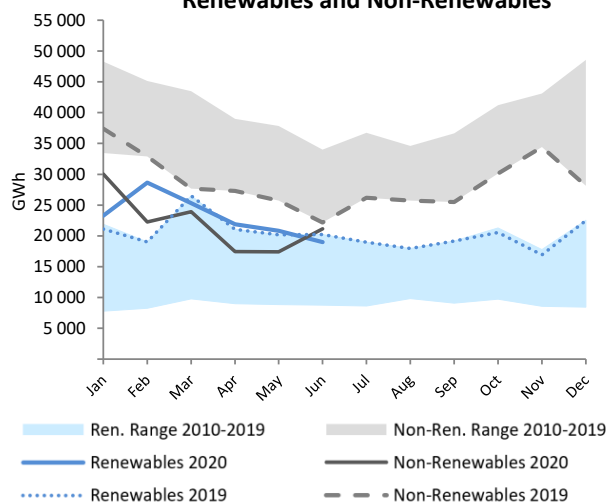
Net Electricity Exports



Electricity Production by Fuel



Renewables and Non-Renewables

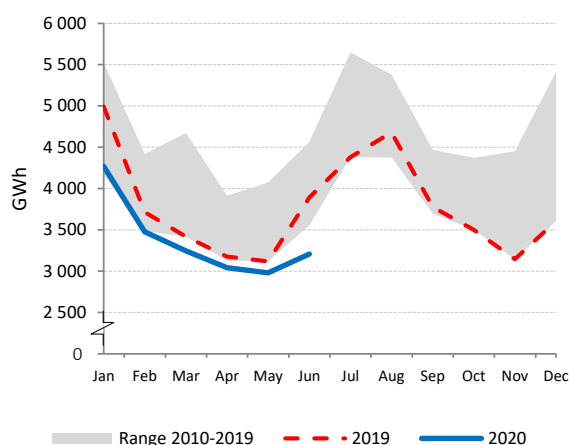


GREECE

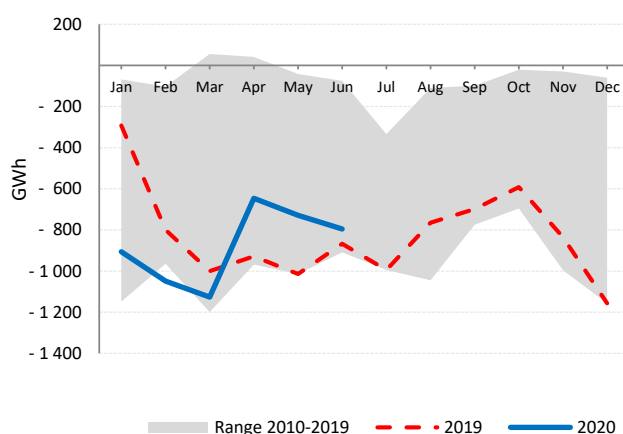
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 1 848 | -28.6% | 9.0% | 57.6% | 12 202 | 14 978 | -18.5% | 30 286 | 66.7% |
| Coal | 194 | -75.4% | -1.8% | 6.1% | 2 817 | 5 393 | -47.8% | 9 782 | 21.5% |
| Oil | 232 | -40.0% | 8.0% | 7.2% | 1 510 | 1 869 | -19.2% | 4 047 | 8.9% |
| Natural Gas | 1 284 | 1.2% | 12.5% | 40.0% | 7 025 | 6 894 | 1.9% | 14 759 | 32.5% |
| Combustible Renewables ⁴ | 115 | 0.4% | -8.9% | 3.6% | 747 | 713 | 4.8% | 1 429 | 3.1% |
| Other Combustibles ⁴ | 23 | -17.3% | 41.4% | 0.7% | 104 | 110 | -5.1% | 267 | 0.6% |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 369 | -0.3% | 30.6% | 11.5% | 1 603 | 2 005 | -20.0% | 3 892 | 8.6% |
| Wind | 535 | 2.3% | -4.1% | 16.7% | 4 277 | 3 445 | 24.1% | 7 278 | 16.0% |
| Solar | 455 | 9.9% | 2.5% | 14.2% | 2 143 | 1 893 | 13.2% | 3 961 | 8.7% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 1 474 | 3.7% | 4.5% | 46.0% | 8 769 | 8 055 | 8.9% | 16 561 | 36.5% |
| NON-RENEWABLES | 1 733 | -29.9% | 10.4% | 54.0% | 11 456 | 14 266 | -19.7% | 28 856 | 63.5% |
| TOTAL NET PRODUCTION | 3 207 | -17.7% | 7.6% | | 20 225 | 22 321 | -9.4% | 45 417 | |
| + Imports | 844 | -5.8% | 11.6% | | 5 425 | 5 548 | -2.2% | 11 067 | |
| - Exports | 48 | 73.4% | 78.1% | | 174 | 648 | -73.1% | 1 123 | |
| = ELECTRICITY SUPPLIED | 4 002 | -16.0% | 7.9% | | 25 475 | 27 221 | -6.4% | 55 361 | |
| - Used for pumped storage | 3 | -7.4% | -8.0% | | 70 | 26 | 165.2% | 56 | |
| - T&D Losses | 234 | -11.2% | 6.0% | | 1 474 | 1 606 | -8.2% | 3 260 | |
| = ELECTRICITY CONSUMED | 3 765 | -16.3% | 8.0% | | 23 931 | 25 589 | -6.5% | 52 045 | |

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

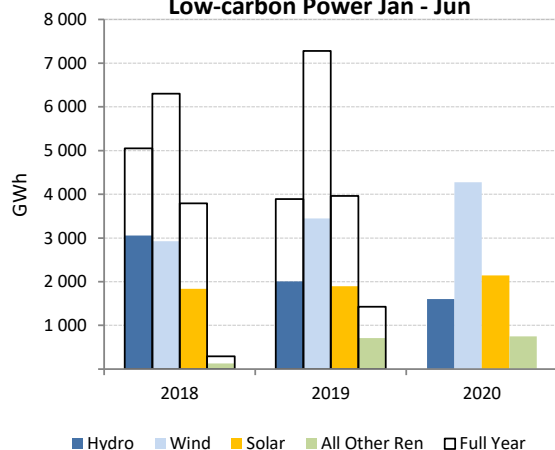
Electricity Production



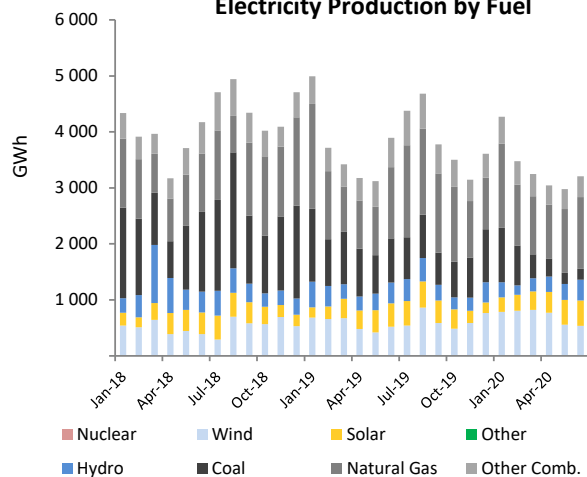
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

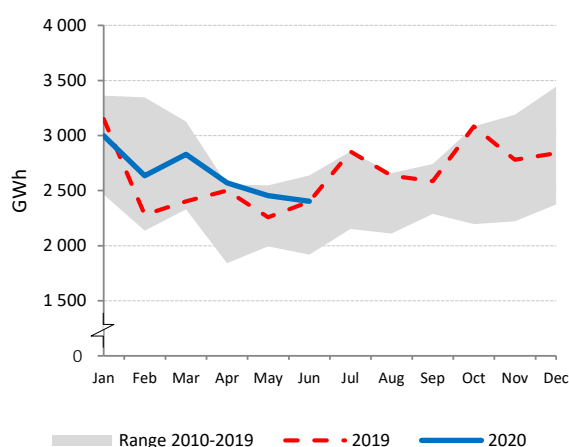


HUNGARY

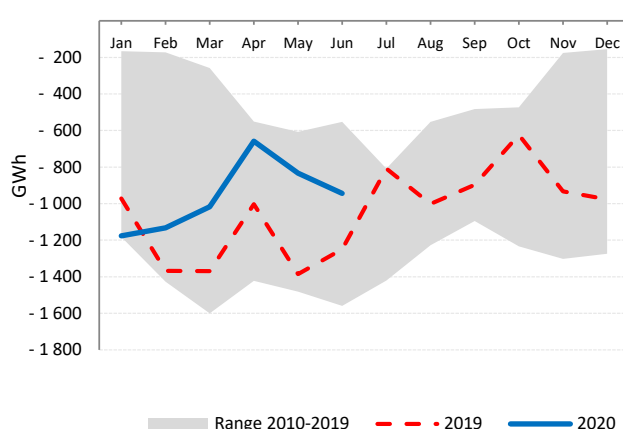
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 953 | -0.9% | 18.1% | 39.6% | 6 543 | 6 447 | 1.5% | 13 947 | 43.9% |
| Coal | 203 | -31.4% | 1.6% | 8.4% | 1 656 | 1 839 | -10.0% | 3 813 | 12.0% |
| Oil | 5 | -35.4% | 21.2% | 0.2% | 23 | 32 | -27.6% | 62 | 0.2% |
| Natural Gas | 566 | 18.3% | 32.7% | 23.6% | 3 912 | 3 445 | 13.6% | 7 815 | 24.6% |
| Combustible Renewables | 166 | 1.4% | 3.3% | 6.9% | 858 | 1 024 | -16.2% | 2 029 | 6.4% |
| Other Combustibles | 13 | -21.5% | -18.6% | 0.5% | 94 | 107 | -12.3% | 228 | 0.7% |
| Nuclear | 1 112 | -7.3% | -13.4% | 46.3% | 7 598 | 7 320 | 3.8% | 15 386 | 48.4% |
| Hydro | 16 | -8.9% | -28.0% | 0.7% | 113 | 115 | -1.4% | 213 | 0.7% |
| Wind | 59 | 85.5% | -15.2% | 2.4% | 376 | 413 | -8.9% | 708 | 2.2% |
| Solar | 251 | 42.8% | -3.1% | 10.5% | 1 187 | 626 | 89.8% | 1 373 | 4.3% |
| Geothermal | 1 | 2.2% | -12.0% | 0.0% | 7 | 7 | 7.4% | 14 | 0.0% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 11 | - | - | 0.5% | 65 | 65 | - | 130 | 0.4% |
| RENEWABLES | 493 | 26.4% | -3.8% | 20.5% | 2 542 | 2 184 | 16.4% | 4 337 | 13.7% |
| NON-RENEWABLES | 1 910 | -4.9% | -1.6% | 79.5% | 13 348 | 12 809 | 4.2% | 27 434 | 86.3% |
| TOTAL NET PRODUCTION | 2 403 | 0.2% | -2.1% | | 15 890 | 14 993 | 6.0% | 31 771 | |
| + Imports | 1 438 | -5.3% | -6.8% | | 9 677 | 10 606 | -8.8% | 19 854 | |
| - Exports | 494 | 84.3% | -30.3% | | 3 915 | 3 260 | 20.1% | 7 269 | |
| = ELECTRICITY SUPPLIED | 3 347 | -8.3% | 1.8% | | 21 652 | 22 339 | -3.1% | 44 356 | |
| - Used for pumped storage | - | - | - | | - | - | - | - | |
| - T&D Losses | 261 | -3.0% | -3.1% | | 1 862 | 2 017 | -7.7% | 3 906 | |
| = ELECTRICITY CONSUMED | 3 086 | -8.7% | 2.2% | | 19 790 | 20 322 | -2.6% | 40 450 | |

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

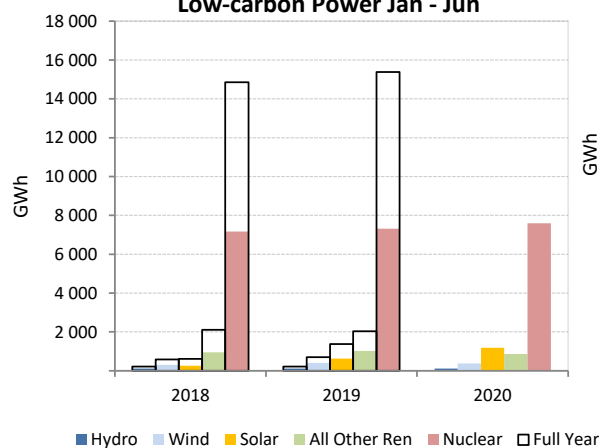
Electricity Production



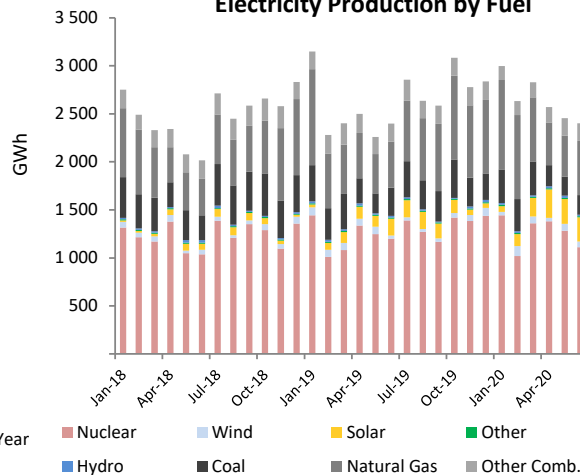
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

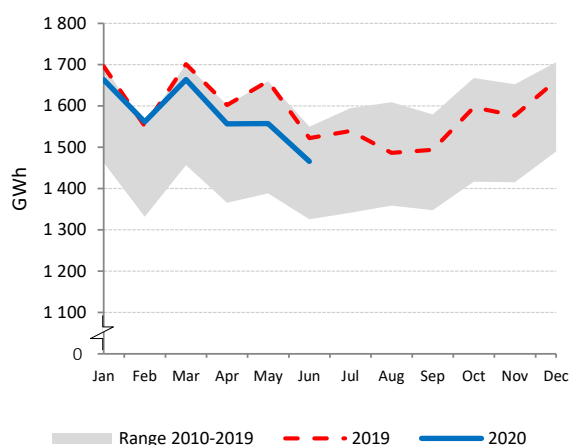


ICELAND

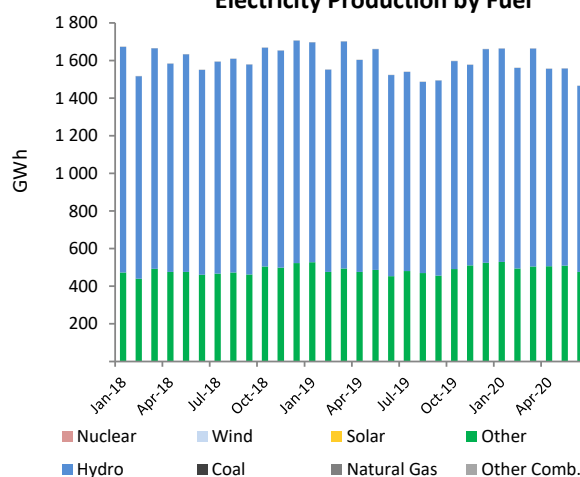
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|---------------|--------------|--------------|---------------------|---------------|---------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 0 | 5.0% | 8.1% | 0.0% | 2 | 1 | 174.4% | 3 | 0.0% |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 0 | 5.0% | 8.1% | 0.0% | 2 | 1 | 174.4% | 3 | 0.0% |
| Natural Gas | - | - | - | - | - | - | - | - | - |
| Combustible Renewables | - | - | - | - | - | - | - | - | - |
| Other Combustibles | - | - | - | - | - | - | - | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 990 | -7.3% | -5.5% | 67.5% | 6 447 | 6 818 | -5.4% | 13 236 | 69.3% |
| Wind | 0 | -33.9% | -38.6% | 0.0% | 4 | 3 | 10.4% | 7 | 0.0% |
| Solar | - | - | - | - | - | - | - | - | - |
| Geothermal | 475 | 4.9% | -6.6% | 32.4% | 3 017 | 2 912 | 3.6% | 5 843 | 30.6% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 1 466 | -3.7% | -5.9% | 100.0% | 9 467 | 9 733 | -2.7% | 19 086 | 100.0% |
| NON-RENEWABLES | 0 | 5.0% | 8.1% | 0.0% | 2 | 1 | 175.1% | 3 | 0.0% |
| TOTAL NET PRODUCTION | 1 466 | -3.7% | -5.9% | | 9 470 | 9 734 | -2.7% | 19 089 | |
| + Imports | - | - | - | | - | - | - | - | |
| - Exports | - | - | - | | - | - | - | - | |
| = ELECTRICITY SUPPLIED | 1 466 | -3.7% | -5.9% | | 9 470 | 9 734 | -2.7% | 19 089 | |
| - Used for pumped storage | - | - | - | | - | - | - | - | |
| - T&D Losses | 42 | -6.2% | -5.3% | | 270 | 278 | -2.7% | 552 | |
| = ELECTRICITY CONSUMED | 1 424 | -3.6% | -5.9% | | 9 200 | 9 456 | -2.7% | 18 537 | |

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

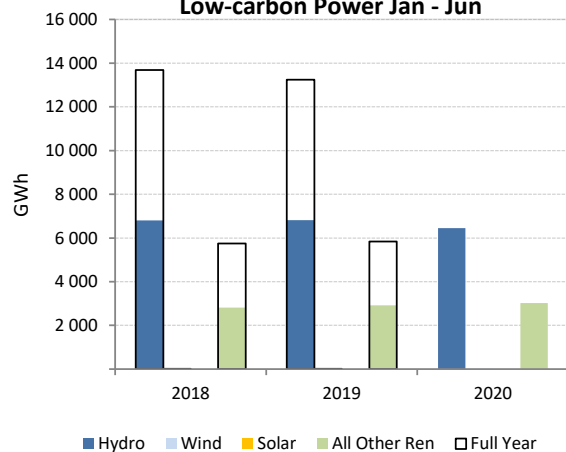
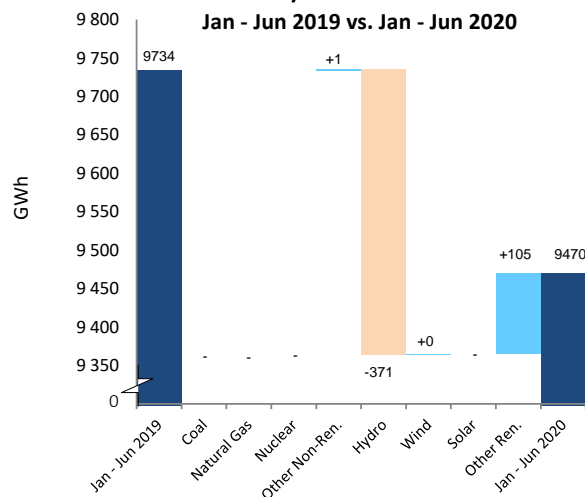
Electricity Production



Electricity Production by Fuel



Low-carbon Power Jan - Jun

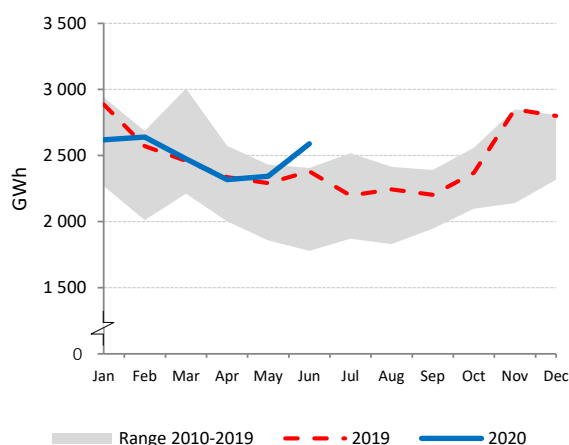
Electricity Production Variation
Jan - Jun 2019 vs. Jan - Jun 2020

IRELAND

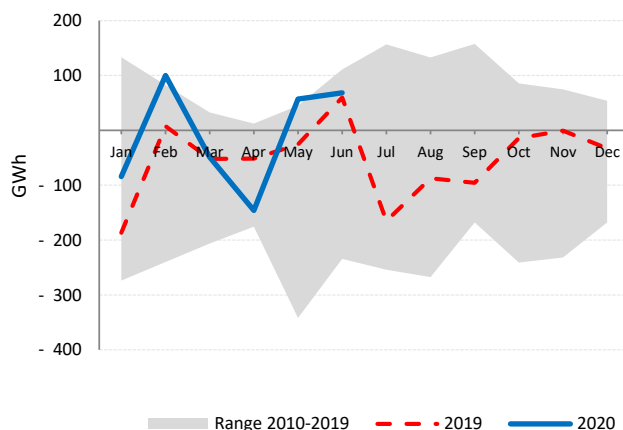
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 1 894 | 8.5% | 17.4% | 73.1% | 9 147 | 9 736 | -6.0% | 19 050 | 64.4% |
| Coal | 338 | 33.9% | 735.5% | 13.0% | 811 | 1 434 | -43.4% | 2 350 | 7.9% |
| Oil | 52 | 221.3% | 126.9% | 2.0% | 144 | 150 | -3.6% | 270 | 0.9% |
| Natural Gas | 1 416 | -0.5% | -2.3% | 54.7% | 7 532 | 7 656 | -1.6% | 15 382 | 52.0% |
| Combustible Renewables | 80 | 148.8% | -14.1% | 3.1% | 567 | 357 | 59.1% | 786 | 2.7% |
| Other Combustibles | 8 | -60.9% | -6.7% | 0.3% | 92 | 140 | -33.8% | 262 | 0.9% |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 39 | -22.7% | -3.6% | 1.5% | 555 | 489 | 13.5% | 1 120 | 3.8% |
| Wind | 654 | 12.4% | -4.6% | 25.3% | 5 272 | 4 691 | 12.4% | 9 400 | 31.8% |
| Solar | 3 | - | -11.9% | 0.1% | 12 | 12 | - | 21 | 0.1% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 776 | 16.3% | -5.7% | 30.0% | 6 406 | 5 548 | 15.5% | 11 328 | 38.3% |
| NON-RENEWABLES | 1 814 | 5.9% | 19.3% | 70.0% | 8 579 | 9 379 | -8.5% | 18 264 | 61.7% |
| TOTAL NET PRODUCTION | 2 590 | 8.8% | 10.5% | | 14 985 | 14 928 | 0.4% | 29 591 | |
| + Imports | 108 | 0.8% | -8.0% | | 994 | 1 058 | -6.0% | 2 180 | |
| - Exports | 176 | 5.8% | 1.1% | | 940 | 809 | 16.2% | 1 535 | |
| = ELECTRICITY SUPPLIED | 2 521 | 8.7% | 10.3% | | 15 039 | 15 176 | -0.9% | 30 236 | |
| - Used for pumped storage | 44 | 110.0% | -6.7% | | 281 | 213 | 31.4% | 478 | |
| - T&D Losses | 190 | 8.5% | 9.6% | | 1 123 | 1 123 | 0.0% | 2 232 | |
| = ELECTRICITY CONSUMED | 2 288 | 7.7% | 10.7% | | 13 636 | 13 839 | -1.5% | 27 525 | |

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

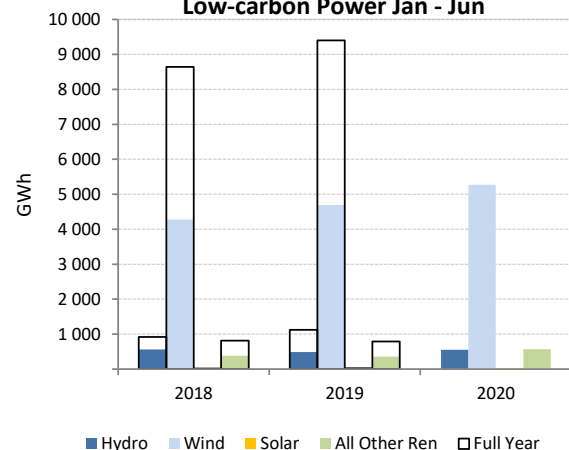
Electricity Production



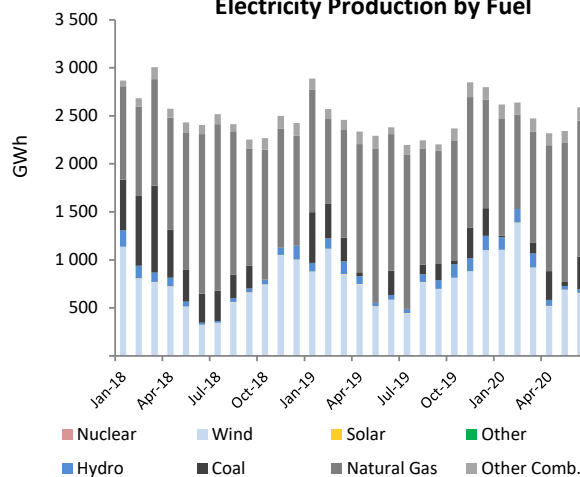
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

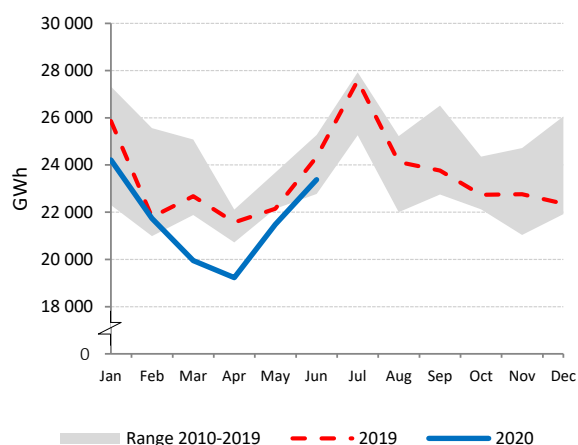


ITALY

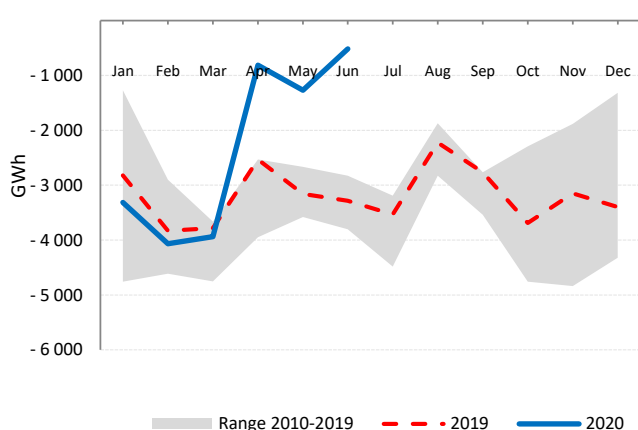
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|---------------------------------|---------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 13 039 | -7.2% | 16.4% | 55.8% | 79 983 | 90 555 | -11.7% | 185 146 | 65.7% |
| Coal ⁵ | 1 192 | -8.4% | 19.5% | 5.1% | 7 283 | 8 368 | -13.0% | 17 134 | 6.1% |
| Oil ⁵ | 722 | -8.4% | 19.5% | 3.1% | 4 413 | 5 070 | -13.0% | 10 381 | 3.7% |
| Natural Gas ⁵ | 9 533 | -8.4% | 19.5% | 40.8% | 58 233 | 66 903 | -13.0% | 136 990 | 48.6% |
| Combustible Renewables | 1 425 | 3.6% | -4.4% | 6.1% | 9 045 | 9 056 | -0.1% | 18 269 | 6.5% |
| Other Combustibles ⁵ | 165 | -8.4% | 19.5% | 0.7% | 1 009 | 1 159 | -13.0% | 2 373 | 0.8% |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 5 466 | -8.0% | 4.8% | 23.4% | 23 171 | 21 419 | 8.2% | 46 955 | 16.7% |
| Wind | 1 577 | 58.9% | -10.1% | 6.7% | 10 527 | 11 223 | -6.2% | 20 054 | 7.1% |
| Solar | 2 810 | -0.9% | 1.3% | 12.0% | 13 168 | 12 059 | 9.2% | 23 313 | 8.3% |
| Geothermal | 440 | -5.6% | -7.7% | 1.9% | 2 831 | 2 832 | 0.0% | 5 658 | 2.0% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 51 | - | - | 0.2% | 306 | 306 | - | 612 | 0.2% |
| RENEWABLES | 11 718 | 0.9% | 0.1% | 50.1% | 58 741 | 56 589 | 3.8% | 114 249 | 40.6% |
| NON-RENEWABLES | 11 664 | -8.4% | 19.4% | 49.9% | 71 244 | 81 806 | -12.9% | 167 490 | 59.4% |
| TOTAL NET PRODUCTION | 23 382 | -3.9% | 8.9% | | 129 985 | 138 394 | -6.1% | 281 738 | |
| + Imports | 1 565 | -57.6% | -32.6% | | 18 791 | 21 998 | -14.6% | 43 980 | |
| - Exports | 1 049 | 156.1% | -0.4% | | 4 875 | 2 589 | 88.3% | 5 817 | |
| = ELECTRICITY SUPPLIED | 23 898 | -13.5% | 5.1% | | 143 902 | 157 803 | -8.8% | 319 901 | |
| - Used for pumped storage | 136 | -24.0% | -46.7% | | 1 353 | 1 261 | 7.3% | 2 412 | |
| - T&D Losses ⁴ | 1 423 | -11.0% | 4.8% | | 8 486 | 9 148 | -7.2% | 18 578 | |
| = ELECTRICITY CONSUMED | 22 339 | -13.6% | 5.7% | | 134 063 | 147 394 | -9.0% | 298 911 | |

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

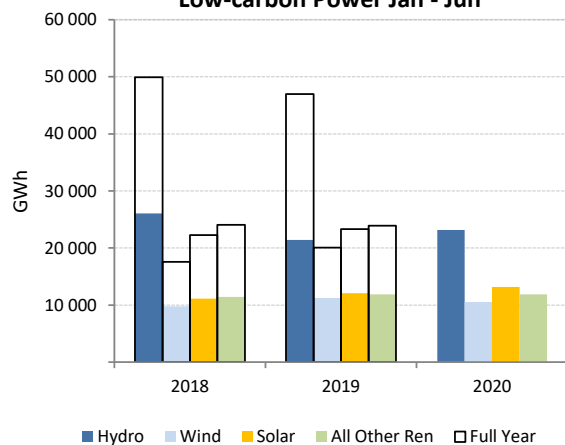
Electricity Production



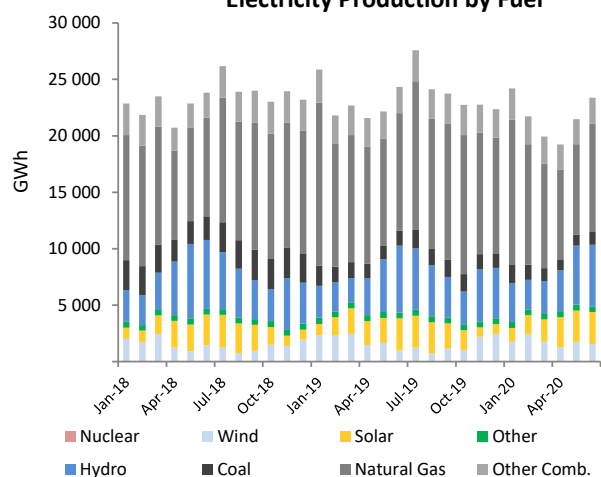
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel



JAPAN

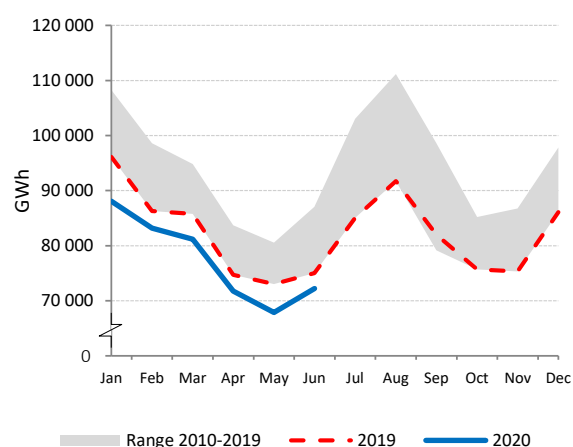
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|--|---------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 48 407 | -7.6% | 13.5% | 67.0% | 333 389 | 364 080 | -8.4% | 736 442 | 74.6% |
| Coal | 20 587 | -8.0% | 12.6% | 28.5% | 146 691 | 151 630 | -2.9% | 307 690 | 31.2% |
| Oil | 3 573 | 24.5% | 45.0% | 4.9% | 18 410 | 22 497 | -18.2% | 49 739 | 5.0% |
| Natural Gas | 20 971 | -13.0% | 15.2% | 29.0% | 146 926 | 170 703 | -13.9% | 339 604 | 34.4% |
| Combustible Renewables | 1 985 | 62.0% | 3.0% | 2.7% | 11 675 | 9 516 | 22.7% | 18 703 | 1.9% |
| Other Combustibles ⁴ | 1 290 | -16.5% | 2.6% | 1.8% | 9 688 | 9 733 | -0.5% | 20 706 | 2.1% |
| Nuclear | 4 016 | -15.8% | -9.4% | 5.6% | 27 843 | 35 716 | -22.0% | 64 805 | 6.6% |
| Hydro | 9 451 | 14.8% | -4.8% | 13.1% | 47 689 | 39 140 | 21.8% | 83 849 | 8.5% |
| Wind | 673 | 68.9% | 5.0% | 0.9% | 4 730 | 3 993 | 18.5% | 7 481 | 0.8% |
| Solar | 8 500 | 12.4% | -7.3% | 11.8% | 41 730 | 36 502 | 14.3% | 71 534 | 7.2% |
| Geothermal | 198 | 0.7% | -8.0% | 0.3% | 1 299 | 1 190 | 9.1% | 2 445 | 0.2% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 980 | -32.6% | 16.3% | 1.4% | 7 598 | 10 336 | -26.5% | 20 245 | 2.1% |
| RENEWABLES | 20 807 | 18.1% | -4.9% | 28.8% | 107 124 | 90 342 | 18.6% | 184 012 | 18.6% |
| NON-RENEWABLES | 51 418 | -10.4% | 11.8% | 71.2% | 357 156 | 400 616 | -10.8% | 802 788 | 81.4% |
| TOTAL NET PRODUCTION | 72 225 | -3.7% | 6.4% | | 464 280 | 490 958 | -5.4% | 986 800 | |
| + Imports | - | - | - | | - | - | - | - | |
| - Exports | - | - | - | | - | - | - | - | |
| = ELECTRICITY SUPPLIED | 72 225 | -3.7% | 6.4% | | 464 280 | 490 958 | -5.4% | 986 800 | |
| - Used for pumped storage ⁴ | 1 075 | 46.3% | -0.2% | | 5 258 | 4 743 | 10.9% | 10 554 | |
| - T&D Losses ⁴ | 3 061 | -3.7% | 6.4% | | 20 042 | 21 195 | -5.4% | 42 209 | |
| = ELECTRICITY CONSUMED | 68 090 | -4.3% | 6.5% | | 438 979 | 465 019 | -5.6% | 934 037 | |

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

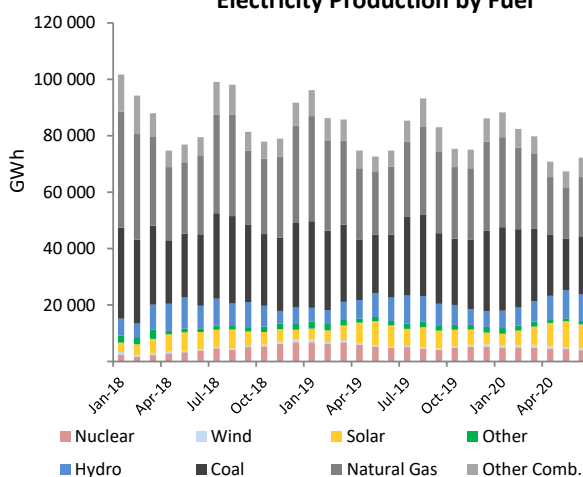
June 2020 is estimated by the IEA Secretariat using usual monthly patterns

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

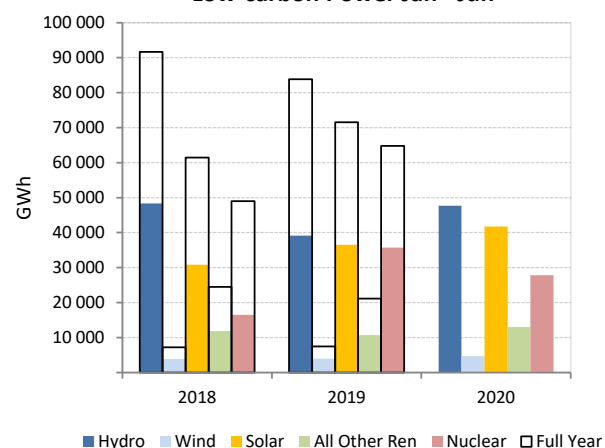
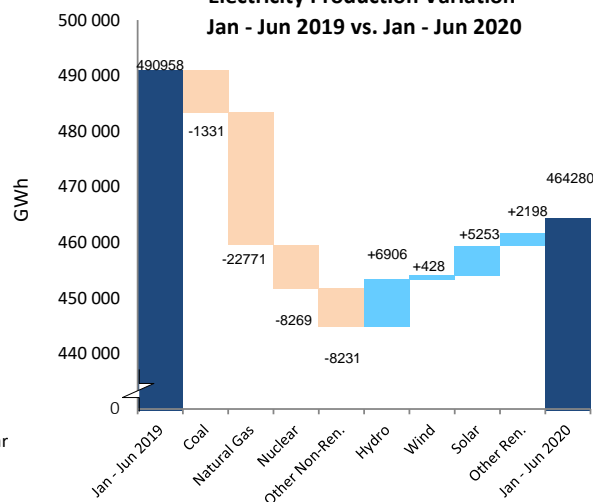
Electricity Production



Electricity Production by Fuel



Low-carbon Power Jan - Jun

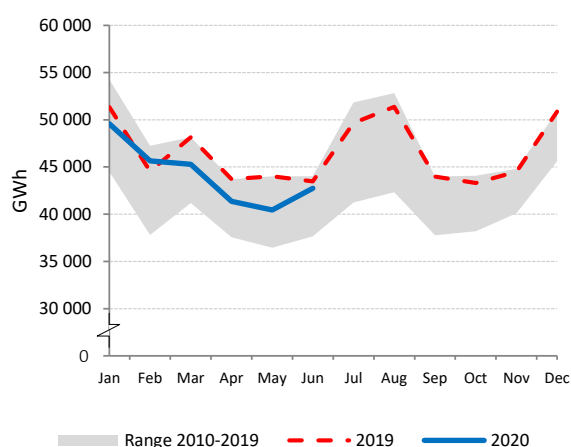
Electricity Production Variation
Jan - Jun 2019 vs. Jan - Jun 2020

KOREA

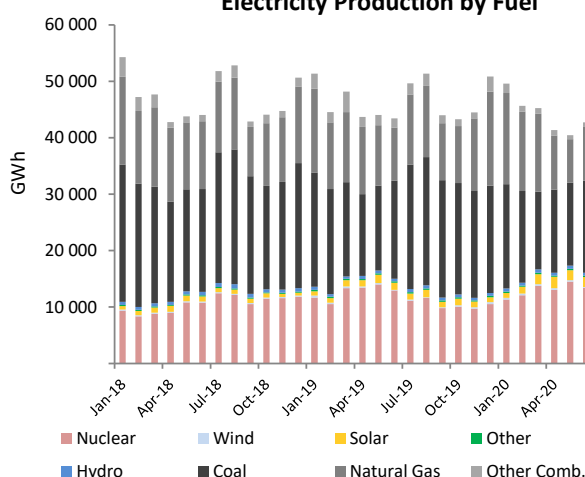
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|--|---------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 26 674 | -6.2% | 15.4% | 62.4% | 171 246 | 186 924 | -8.4% | 395 505 | 70.8% |
| Coal | 16 324 | -6.1% | 11.2% | 38.2% | 94 256 | 102 483 | -8.0% | 225 750 | 40.4% |
| Oil | 330 | -57.4% | 21.8% | 0.8% | 2 950 | 8 072 | -63.4% | 14 101 | 2.5% |
| Natural Gas | 9 639 | 2.3% | 24.9% | 22.6% | 70 941 | 71 084 | -0.2% | 145 812 | 26.1% |
| Combustible Renewables | 320 | -60.4% | -16.8% | 0.7% | 2 711 | 4 873 | -44.4% | 8 968 | 1.6% |
| Other Combustibles | 60 | -4.1% | 15.4% | 0.1% | 387 | 413 | -6.3% | 874 | 0.2% |
| Nuclear | 13 397 | 3.6% | -7.8% | 31.3% | 78 146 | 75 959 | 2.9% | 138 884 | 24.8% |
| Hydro | 502 | 7.2% | -9.2% | 1.2% | 3 245 | 2 975 | 9.1% | 6 139 | 1.1% |
| Wind | 156 | 52.8% | -28.1% | 0.4% | 1 591 | 1 389 | 14.6% | 2 665 | 0.5% |
| Solar | 1 763 | 38.5% | -1.6% | 4.1% | 9 375 | 6 618 | 41.7% | 12 974 | 2.3% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | 52 | 50.3% | -4.0% | 0.1% | 279 | 234 | 19.3% | 474 | 0.1% |
| Non-Specified | 196 | - | - | 0.5% | 1 178 | 1 178 | - | 2 355 | 0.4% |
| RENEWABLES | 2 793 | 4.0% | -6.9% | 6.5% | 17 202 | 16 088 | 6.9% | 31 220 | 5.6% |
| NON-RENEWABLES | 39 947 | -2.0% | 6.7% | 93.5% | 247 858 | 259 188 | -4.4% | 527 776 | 94.4% |
| TOTAL NET PRODUCTION | 42 740 | -1.7% | 5.7% | | 265 060 | 275 276 | -3.7% | 558 996 | |
| + Imports | - | - | - | | - | - | - | - | |
| - Exports | - | - | - | | - | - | - | - | |
| = ELECTRICITY SUPPLIED | 42 740 | -1.7% | 5.7% | | 265 060 | 275 276 | -3.7% | 558 996 | |
| - Used for pumped storage ⁴ | 297 | 1.1% | -21.5% | | 2 299 | 2 240 | 2.6% | 4 588 | |
| - T&D Losses ⁴ | 1 431 | -1.7% | 5.7% | | 8 872 | 9 214 | -3.7% | 18 711 | |
| = ELECTRICITY CONSUMED | 41 013 | -1.7% | 5.9% | | 253 889 | 263 822 | -3.8% | 535 698 | |

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

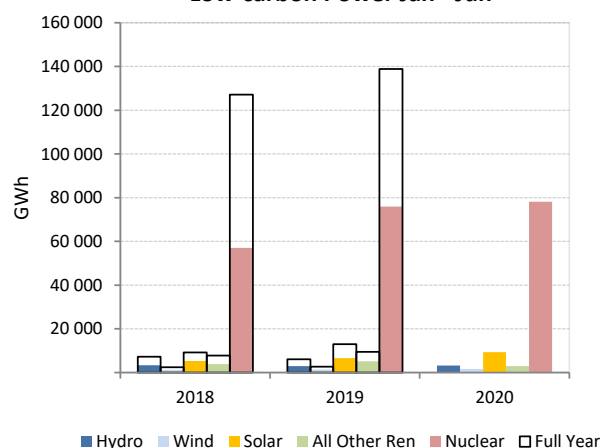
Electricity Production



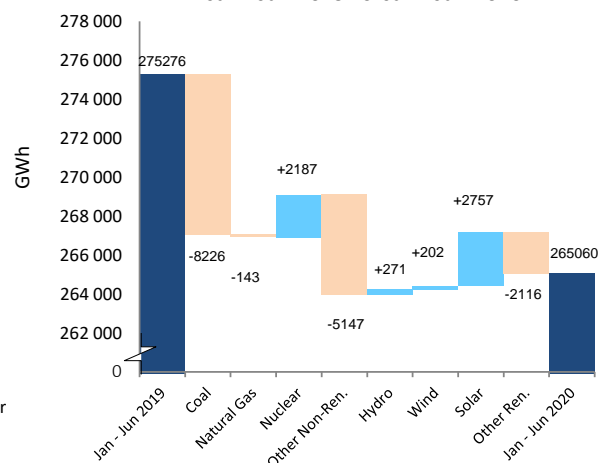
Electricity Production by Fuel



Low-carbon Power Jan - Jun



Electricity Production Variation Jan - Jun 2019 vs. Jan - Jun 2020

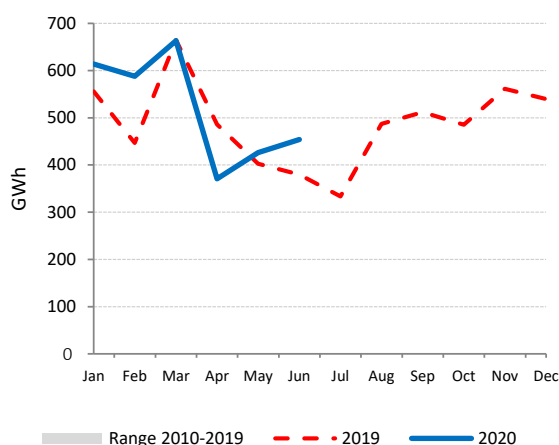


LATVIA

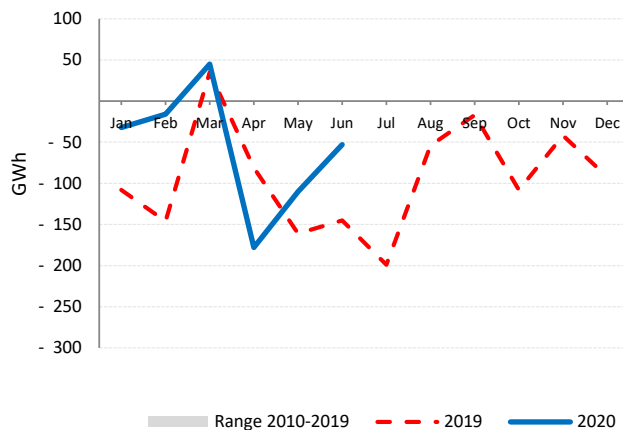
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|------------|---------------------|---------------------|--------------|--------------|--------------|---------------------|--------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 279 | -5.8% | 41.2% | 61.5% | 1 170 | 1 686 | -30.6% | 3 601 | 61.5% |
| Coal | 0 | - | - | 0.0% | 0 | 0 | - | 0 | 0.0% |
| Oil | - | - | - | - | - | - | - | - | - |
| Natural Gas | 221 | -6.5% | 66.7% | 48.7% | 769 | 1 270 | -39.5% | 2 801 | 47.8% |
| Combustible Renewables | 58 | -3.2% | -10.4% | 12.9% | 401 | 417 | -3.7% | 800 | 13.7% |
| Other Combustibles | - | - | - | - | - | - | - | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 168 | 121.1% | -21.9% | 37.0% | 1 846 | 1 168 | 58.1% | 2 097 | 35.8% |
| Wind | 6 | -14.3% | -53.8% | 1.3% | 98 | 79 | 24.0% | 153 | 2.6% |
| Solar | 0 | - | -5.6% | 0.1% | 2 | 2 | - | 3 | 0.1% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 233 | 61.9% | -20.7% | 51.3% | 2 347 | 1 665 | 40.9% | 3 053 | 52.2% |
| NON-RENEWABLES | 221 | -6.5% | 66.7% | 48.7% | 769 | 1 270 | -39.5% | 2 801 | 47.8% |
| TOTAL NET PRODUCTION | 454 | 19.4% | 6.4% | | 3 116 | 2 935 | 6.2% | 5 854 | |
| + Imports | 313 | -38.6% | -6.6% | | 1 894 | 2 518 | -24.8% | 4 611 | |
| - Exports | 260 | -28.8% | 15.6% | | 1 550 | 1 912 | -18.9% | 3 493 | |
| = ELECTRICITY SUPPLIED | 507 | -3.5% | -5.5% | | 3 460 | 3 541 | -2.3% | 6 972 | |
| - Used for pumped storage | - | - | - | | - | - | - | - | |
| - T&D Losses ⁴ | 35 | -13.8% | 0.7% | | 232 | 252 | -8.1% | 484 | |
| = ELECTRICITY CONSUMED | 471 | -2.6% | -5.9% | | 3 229 | 3 289 | -1.8% | 6 488 | |

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

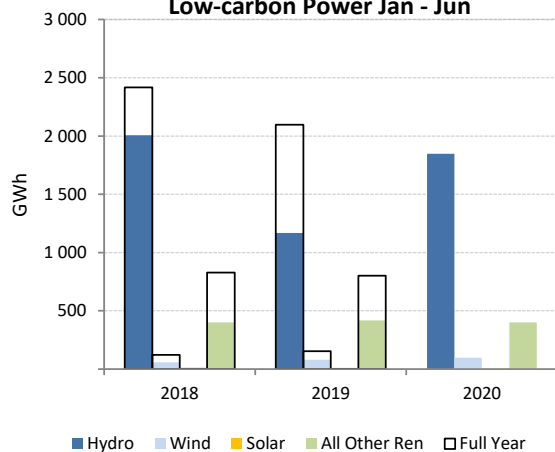
Electricity Production



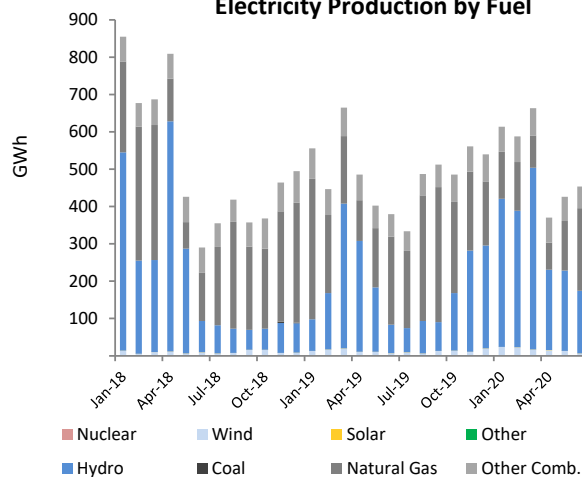
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

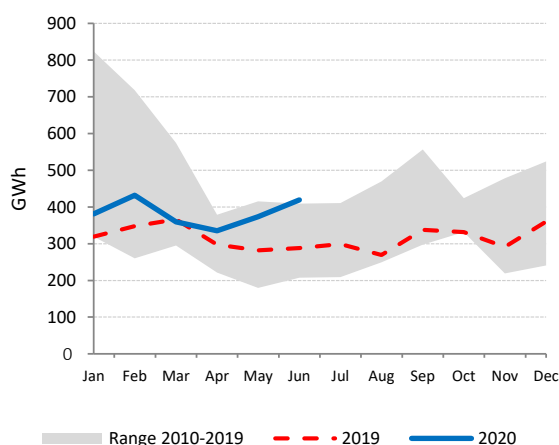


LITHUANIA

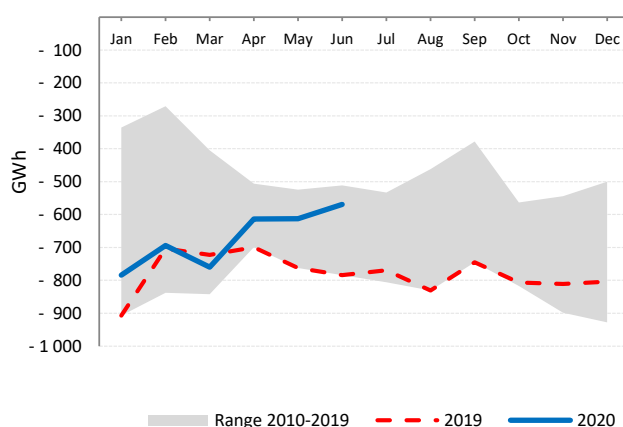
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|------------|---------------------|---------------------|--------------|--------------|--------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 255 | 262.4% | 53.0% | 60.9% | 856 | 532 | 61.1% | 1 060 | 28.0% |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 16 | 217.5% | 23.8% | 3.8% | 61 | 22 | 176.2% | 59 | 1.6% |
| Natural Gas | 198 | 515.5% | 87.5% | 47.2% | 478 | 250 | 91.4% | 459 | 12.1% |
| Combustible Renewables | 34 | 15.4% | -19.2% | 8.0% | 276 | 222 | 23.9% | 467 | 12.3% |
| Other Combustibles | 8 | 91.8% | 15.6% | 1.9% | 42 | 38 | 11.6% | 75 | 2.0% |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 88 | 11.6% | 20.4% | 21.0% | 548 | 421 | 30.1% | 932 | 24.6% |
| Wind | 63 | -39.1% | -47.4% | 15.1% | 847 | 792 | 6.9% | 1 491 | 39.4% |
| Solar | 13 | -15.7% | -4.9% | 3.0% | 50 | 51 | -2.6% | 90 | 2.4% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | 104 | - | 216 | 5.7% |
| RENEWABLES | 198 | -12.9% | -20.4% | 47.1% | 1 720 | 1 487 | 15.7% | 2 980 | 78.6% |
| NON-RENEWABLES | 222 | 263.5% | 77.0% | 52.9% | 581 | 413 | 40.5% | 809 | 21.4% |
| TOTAL NET PRODUCTION | 419 | 45.6% | 12.2% | | 2 301 | 1 900 | 21.1% | 3 789 | |
| + Imports | 846 | -27.7% | -12.0% | | 6 122 | 6 544 | -6.4% | 13 268 | |
| - Exports | 277 | -28.5% | -20.7% | | 2 090 | 1 965 | 6.4% | 3 924 | |
| = ELECTRICITY SUPPLIED | 988 | -7.8% | 0.3% | | 6 333 | 6 479 | -2.3% | 13 133 | |
| - Used for pumped storage | 88 | 8.2% | 17.7% | | 492 | 267 | 84.2% | 810 | |
| - T&D Losses | 50 | -42.9% | -37.2% | | 613 | 570 | 7.5% | 1 068 | |
| = ELECTRICITY CONSUMED | 850 | -5.8% | 2.3% | | 5 228 | 5 642 | -7.3% | 11 254 | |

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

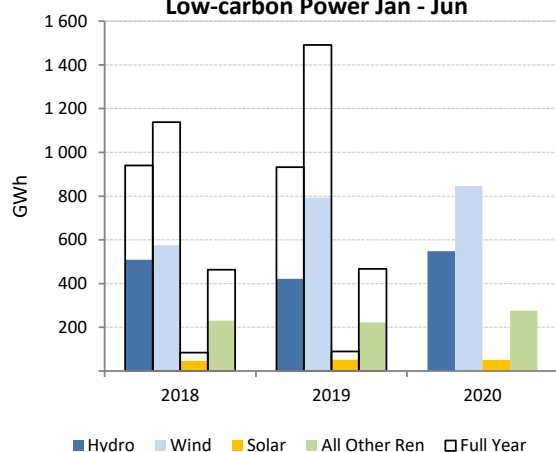
Electricity Production



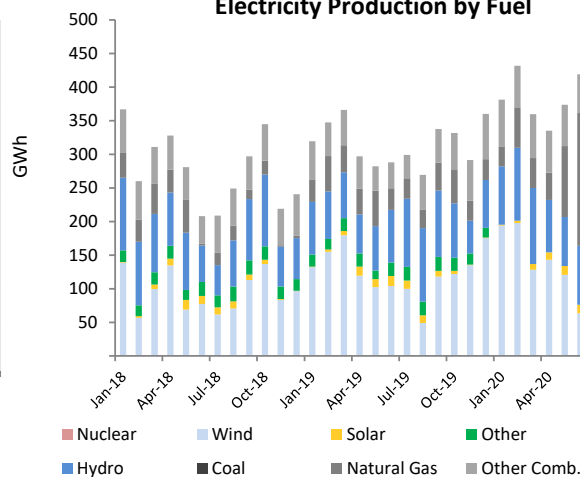
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel



LUXEMBOURG

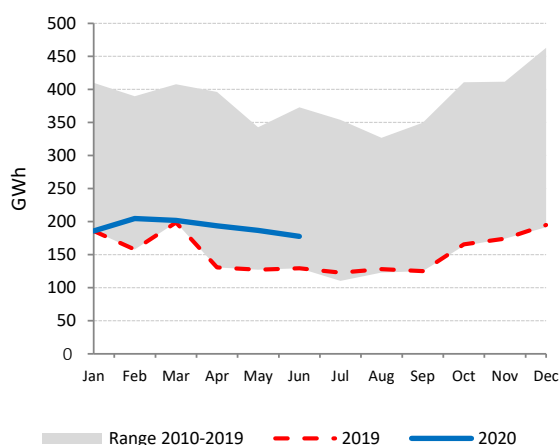
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|------------|---------------------|---------------------|--------------|--------------|--------------|---------------------|--------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 42 | 47.3% | -8.4% | 23.5% | 301 | 239 | 25.7% | 510 | 27.7% |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | - | - | - | - | - | - | - | - | - |
| Natural Gas | 7 | -11.5% | -17.9% | 3.9% | 85 | 102 | -16.2% | 170 | 9.2% |
| Combustible Renewables | 30 | 121.8% | -7.0% | 17.1% | 184 | 101 | 82.5% | 266 | 14.4% |
| Other Combustibles | 5 | -34.1% | -0.9% | 2.5% | 31 | 37 | -14.4% | 75 | 4.1% |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 93 | 36.3% | -2.2% | 52.4% | 576 | 486 | 18.5% | 942 | 51.2% |
| Wind | 15 | -3.2% | -16.7% | 8.4% | 176 | 143 | 22.5% | 276 | 15.0% |
| Solar | 28 | 60.8% | -0.1% | 15.6% | 98 | 61 | 60.3% | 112 | 6.1% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 166 | 44.9% | -4.3% | 93.5% | 1 034 | 792 | 30.6% | 1 597 | 86.7% |
| NON-RENEWABLES | 11 | -22.0% | -11.9% | 6.5% | 116 | 138 | -15.8% | 244 | 13.3% |
| TOTAL NET PRODUCTION | 178 | 37.3% | -4.8% | | 1 151 | 930 | 23.7% | 1 841 | |
| + Imports | 512 | -6.6% | -1.1% | | 3 155 | 3 556 | -11.3% | 6 818 | |
| - Exports | 82 | 30.8% | -6.3% | | 513 | 525 | -2.2% | 939 | |
| = ELECTRICITY SUPPLIED | 608 | -1.2% | -1.5% | | 3 793 | 3 961 | -4.2% | 7 720 | |
| - Used for pumped storage | 123 | 35.2% | -2.4% | | 735 | 616 | 19.4% | 1 203 | |
| - T&D Losses | 10 | -6.9% | -0.4% | | 62 | 68 | -8.6% | 132 | |
| = ELECTRICITY CONSUMED | 475 | -7.5% | -1.3% | | 2 995 | 3 277 | -8.6% | 6 385 | |

¹ current month to month of last year change

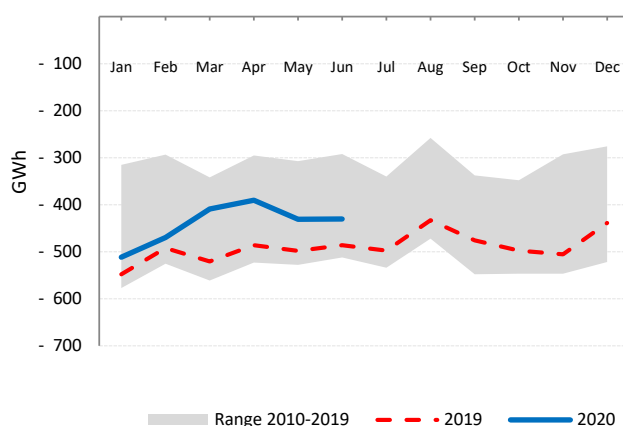
June 2020 is estimated by the IEA Secretariat

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

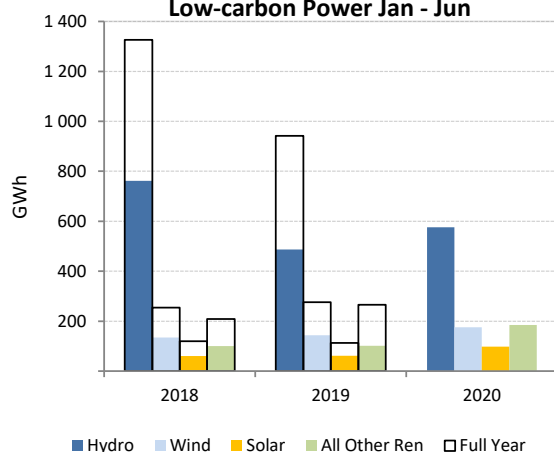
Electricity Production



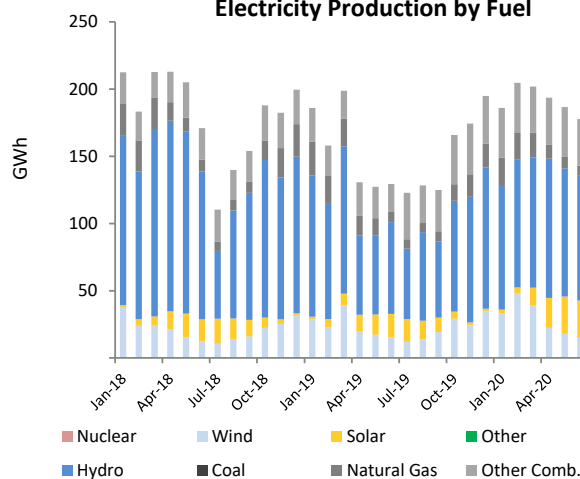
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

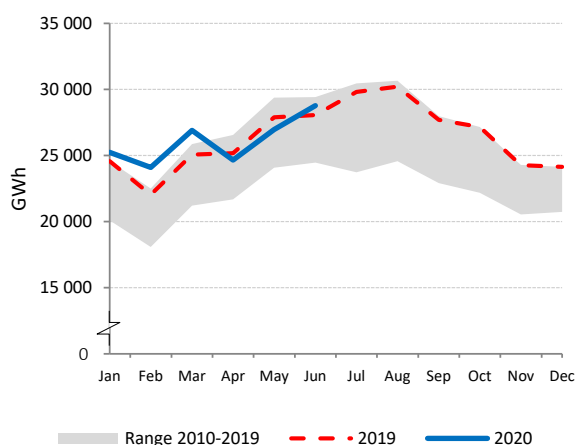


MEXICO

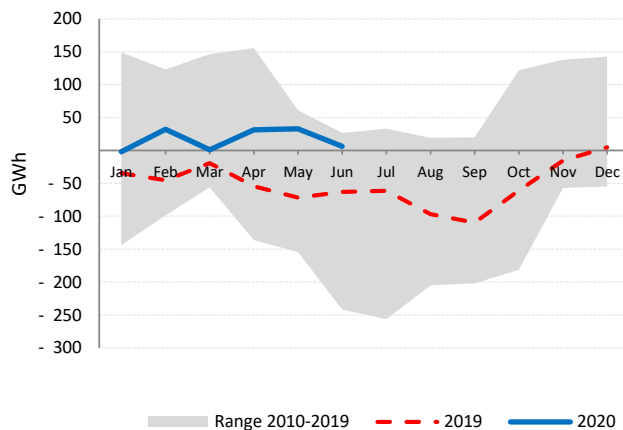
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------------|---------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 22 429 | 0.5% | 10.4% | 77.9% | 121 288 | 121 381 | -0.1% | 252 920 | 80.0% |
| Coal | 1 496 | -34.6% | 5.6% | 5.2% | 9 304 | 14 214 | -34.5% | 28 131 | 8.9% |
| Oil ⁴ | 3 027 | 4.6% | 10.8% | 10.5% | 16 192 | 15 496 | 4.5% | 32 503 | 10.3% |
| Natural Gas ⁴ | 17 642 | 4.6% | 10.8% | 61.3% | 94 374 | 90 314 | 4.5% | 189 440 | 59.9% |
| Combustible Renewables ⁴ | 221 | 4.6% | 10.8% | 0.8% | 1 181 | 1 130 | 4.5% | 2 371 | 0.7% |
| Other Combustibles ⁴ | 44 | 4.6% | 10.8% | 0.2% | 236 | 226 | 4.5% | 474 | 0.2% |
| Nuclear | 975 | 10.1% | -5.1% | 3.4% | 6 510 | 4 688 | 38.9% | 11 111 | 3.5% |
| Hydro | 2 639 | 0.9% | -7.7% | 9.2% | 11 859 | 12 914 | -8.2% | 23 713 | 7.5% |
| Wind | 1 349 | 19.8% | -7.4% | 4.7% | 9 500 | 8 284 | 14.7% | 16 763 | 5.3% |
| Solar | 998 | 41.9% | 10.3% | 3.5% | 5 044 | 2 943 | 71.4% | 6 544 | 2.1% |
| Geothermal | 385 | -9.8% | -5.7% | 1.3% | 2 437 | 2 607 | -6.5% | 5 060 | 1.6% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 5 592 | 10.1% | -4.0% | 19.4% | 30 020 | 27 878 | 7.7% | 54 450 | 17.2% |
| NON-RENEWABLES | 23 184 | 0.9% | 9.7% | 80.6% | 126 617 | 124 938 | 1.3% | 261 660 | 82.8% |
| TOTAL NET PRODUCTION | 28 776 | 2.5% | 6.7% | | 156 637 | 152 817 | 2.5% | 316 111 | |
| + Imports | 55 | -59.8% | 0.8% | | 287 | 839 | -65.8% | 1 590 | |
| - Exports | 61 | -17.0% | -30.3% | | 389 | 551 | -29.5% | 963 | |
| = ELECTRICITY SUPPLIED | 28 770 | 2.3% | 6.8% | | 156 536 | 153 105 | 2.2% | 316 738 | |
| - Used for pumped storage | - | - | - | | - | - | - | - | |
| - T&D Losses ⁴ | 3 997 | 2.2% | 6.7% | | 21 755 | 21 302 | 2.1% | 44 044 | |
| = ELECTRICITY CONSUMED | 24 773 | 2.3% | 6.8% | | 134 781 | 131 803 | 2.3% | 272 694 | |

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

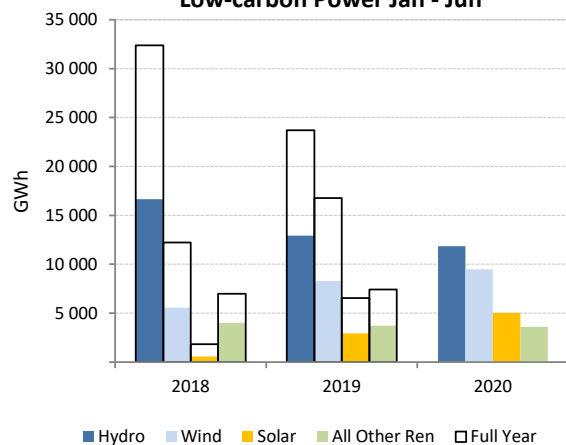
Electricity Production



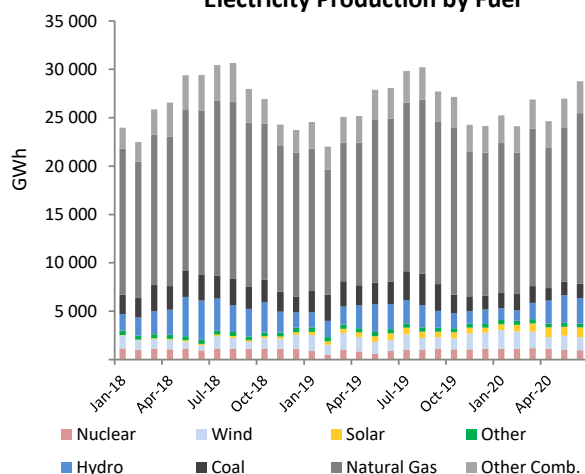
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

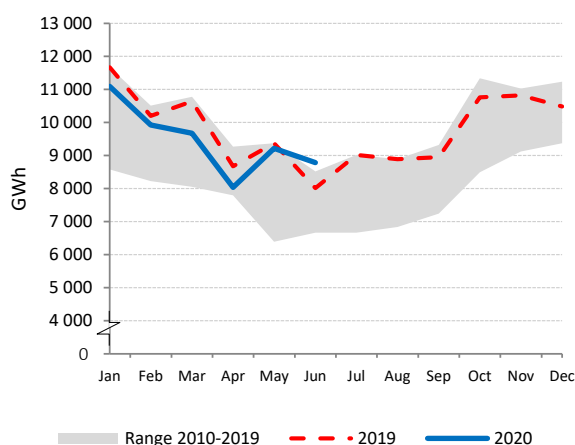


NETHERLANDS

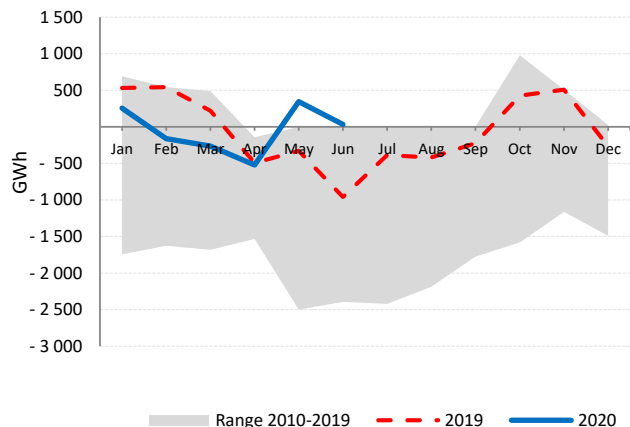
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 6 710 | 2.7% | -1.2% | 76.3% | 43 158 | 48 107 | -10.3% | 96 489 | 82.1% |
| Coal | 384 | -63.5% | -23.0% | 4.4% | 4 077 | 11 075 | -63.2% | 19 274 | 16.4% |
| Oil | 74 | -46.0% | 9.5% | 0.8% | 662 | 726 | -8.8% | 1 353 | 1.2% |
| Natural Gas | 5 642 | 16.5% | 5.9% | 64.2% | 33 852 | 32 903 | 2.9% | 68 634 | 58.4% |
| Combustible Renewables | 492 | 31.9% | -29.9% | 5.6% | 3 639 | 2 427 | 50.0% | 5 413 | 4.6% |
| Other Combustibles | 117 | -8.2% | -40.2% | 1.3% | 927 | 976 | -5.0% | 1 815 | 1.5% |
| Nuclear | 158 | 396.0% | -49.8% | 1.8% | 1 889 | 1 697 | 11.3% | 3 749 | 3.2% |
| Hydro | 3 | -54.8% | -21.7% | 0.0% | 32 | 50 | -36.4% | 74 | 0.1% |
| Wind | 748 | 28.8% | -6.0% | 8.5% | 7 071 | 5 753 | 22.9% | 11 508 | 9.8% |
| Solar | 1 126 | 37.7% | -10.9% | 12.8% | 4 315 | 2 699 | 59.9% | 5 159 | 4.4% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 46 | - | - | 0.5% | 274 | 274 | - | 547 | 0.5% |
| RENEWABLES | 2 368 | 33.3% | -14.3% | 26.9% | 15 057 | 10 929 | 37.8% | 22 155 | 18.9% |
| NON-RENEWABLES | 6 422 | 2.9% | -0.5% | 73.1% | 41 681 | 47 651 | -12.5% | 95 371 | 81.1% |
| TOTAL NET PRODUCTION | 8 790 | 9.7% | -4.6% | | 56 738 | 58 580 | -3.1% | 117 526 | |
| + Imports | 1 353 | -33.5% | -28.8% | | 10 726 | 10 475 | 2.4% | 20 403 | |
| - Exports | 1 386 | 28.7% | -38.2% | | 10 411 | 9 982 | 4.3% | 19 548 | |
| = ELECTRICITY SUPPLIED | 8 757 | -2.4% | -1.3% | | 57 053 | 59 073 | -3.4% | 118 381 | |
| - Used for pumped storage | - | - | - | | - | - | - | - | |
| - T&D Losses ⁴ | 441 | -1.1% | -2.1% | | 2 834 | 2 875 | -1.4% | 5 731 | |
| = ELECTRICITY CONSUMED | 8 317 | -2.5% | -1.2% | | 54 219 | 56 198 | -3.5% | 112 650 | |

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

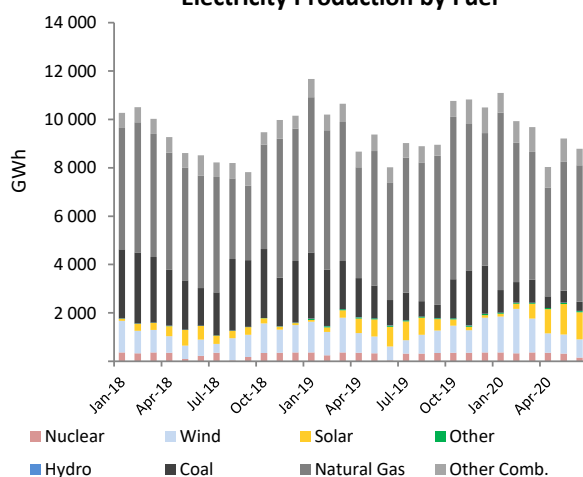
Electricity Production



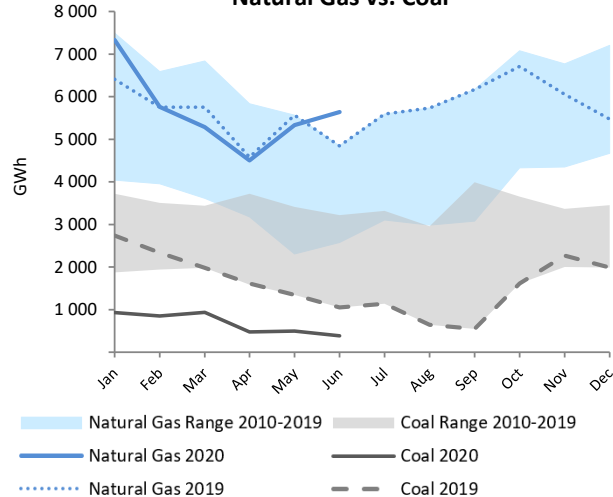
Net Electricity Exports



Electricity Production by Fuel



Natural Gas vs. Coal



NEW ZEALAND

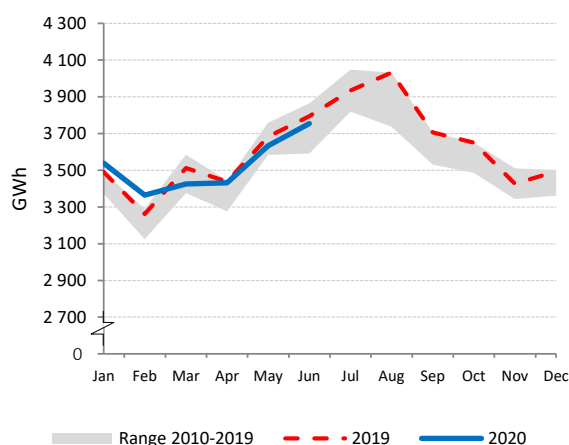
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 689 | 8.0% | 8.0% | 18.3% | 3 923 | 4 138 | -5.2% | 8 175 | 18.8% |
| Coal | 134 | 34.3% | -11.8% | 3.6% | 949 | 1 155 | -17.8% | 2 159 | 5.0% |
| Oil | 1 | -6.7% | 280.3% | 0.0% | 1 | 2 | -47.7% | 4 | 0.0% |
| Natural Gas | 515 | 1.0% | 18.8% | 13.7% | 2 681 | 2 697 | -0.6% | 5 445 | 12.5% |
| Combustible Renewables | 39 | 44.4% | -24.8% | 1.0% | 293 | 284 | 3.2% | 567 | 1.3% |
| Other Combustibles | - | - | - | - | - | - | - | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 2 220 | -4.7% | 4.8% | 59.1% | 12 188 | 12 192 | 0.0% | 25 330 | 58.3% |
| Wind | 179 | 12.9% | -6.1% | 4.8% | 1 088 | 994 | 9.4% | 2 233 | 5.1% |
| Solar | 13 | 29.0% | 1.2% | 0.3% | 73 | 58 | 26.5% | 125 | 0.3% |
| Geothermal | 649 | -0.6% | -3.0% | 17.3% | 3 850 | 3 772 | 2.1% | 7 509 | 17.3% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 4 | - | - | 0.1% | 25 | 25 | - | 51 | 0.1% |
| RENEWABLES | 3 101 | -2.5% | 1.9% | 82.6% | 17 492 | 17 300 | 1.1% | 35 763 | 82.4% |
| NON-RENEWABLES | 654 | 6.4% | 10.8% | 17.4% | 3 656 | 3 879 | -5.8% | 7 659 | 17.6% |
| TOTAL NET PRODUCTION | 3 754 | -1.0% | 3.3% | | 21 148 | 21 179 | -0.1% | 43 421 | |
| + Imports | - | - | - | | - | - | - | - | |
| - Exports | - | - | - | | - | - | - | - | |
| = ELECTRICITY SUPPLIED | 3 754 | -1.0% | 3.3% | | 21 148 | 21 179 | -0.1% | 43 421 | |
| - Used for pumped storage | - | - | - | | - | - | - | - | |
| - T&D Losses | 259 | -2.0% | 3.3% | | 1 690 | 1 510 | 11.9% | 2 995 | |
| = ELECTRICITY CONSUMED | 3 495 | -1.0% | 3.3% | | 19 457 | 19 669 | -1.1% | 40 426 | |

¹ current month to month of last year change

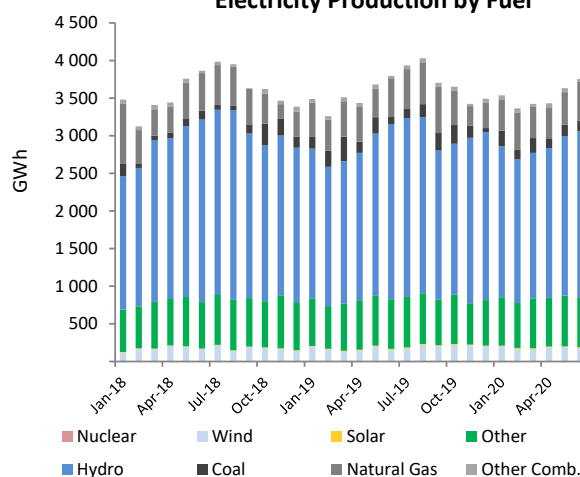
June 2020 is estimated by the IEA Secretariat using usual monthly patterns

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

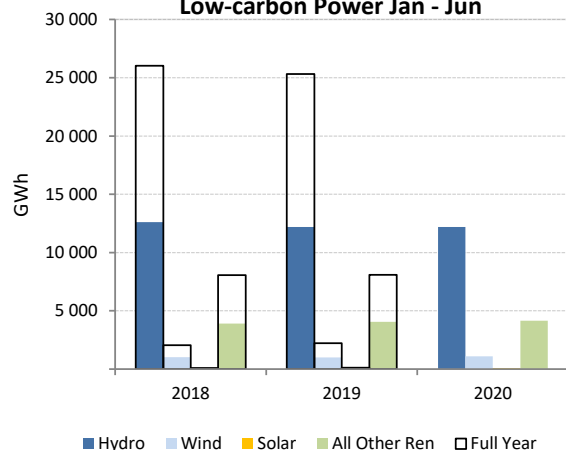
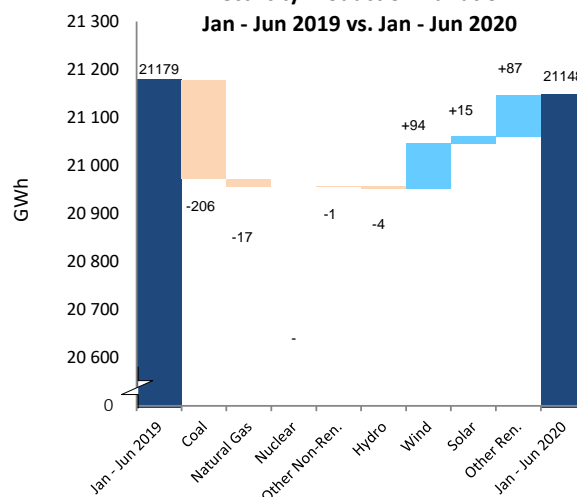
Electricity Production



Electricity Production by Fuel

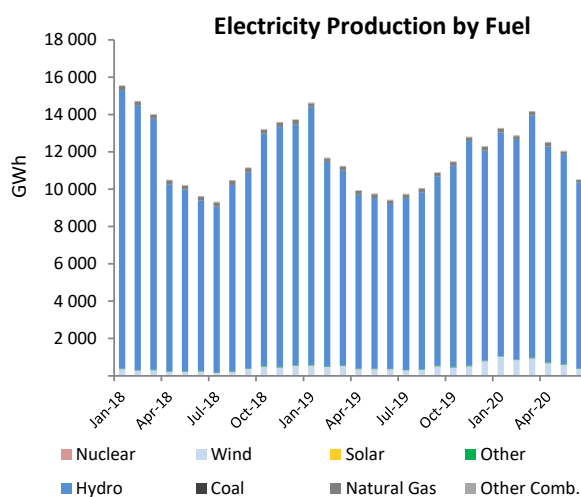
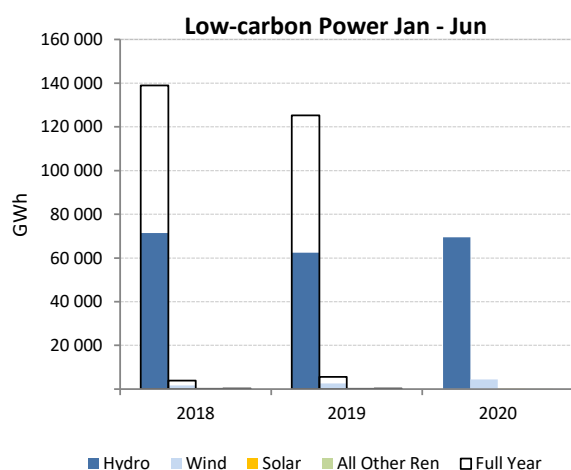
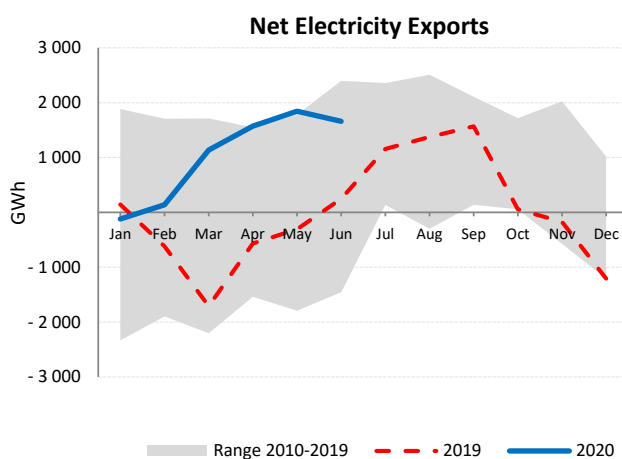
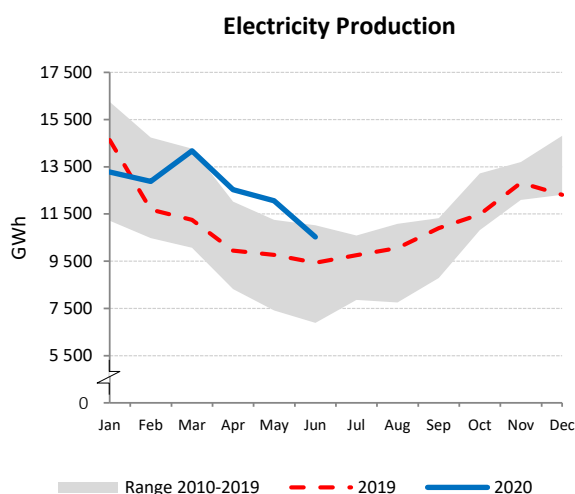


Low-carbon Power Jan - Jun

Electricity Production Variation
Jan - Jun 2019 vs. Jan - Jun 2020

NORWAY

| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|---------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 175 | -28.5% | -10.4% | 1.7% | 1 382 | 1 489 | -7.2% | 2 943 | 2.2% |
| Coal ⁴ | 10 | -24.4% | -9.3% | 0.1% | 77 | 83 | -7.3% | 162 | 0.1% |
| Oil ⁴ | 1 | -24.4% | -9.3% | 0.0% | 8 | 9 | -7.3% | 17 | 0.0% |
| Natural Gas | 127 | -35.0% | -10.6% | 1.2% | 1 065 | 1 177 | -9.5% | 2 317 | 1.7% |
| Combustible Renewables | 21 | 17.2% | -14.2% | 0.2% | 129 | 116 | 11.7% | 241 | 0.2% |
| Other Combustibles | 16 | -5.4% | -3.9% | 0.2% | 103 | 105 | -1.5% | 205 | 0.2% |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 9 952 | 13.0% | -11.4% | 94.5% | 69 425 | 62 431 | 11.2% | 125 243 | 93.4% |
| Wind | 372 | 5.5% | -38.0% | 3.5% | 4 478 | 2 636 | 69.9% | 5 535 | 4.1% |
| Solar | 2 | - | -0.6% | 0.0% | 7 | 7 | - | 13 | 0.0% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 27 | - | - | 0.3% | 164 | 164 | - | 328 | 0.2% |
| RENEWABLES | 10 347 | 12.7% | -12.8% | 98.3% | 74 040 | 65 191 | 13.6% | 131 033 | 97.7% |
| NON-RENEWABLES | 181 | -28.7% | -8.5% | 1.7% | 1 417 | 1 537 | -7.8% | 3 030 | 2.3% |
| TOTAL NET PRODUCTION | 10 528 | 11.6% | -12.7% | | 75 456 | 66 728 | 13.1% | 134 062 | |
| + Imports | 52 | -94.6% | -80.4% | | 3 335 | 7 632 | -56.3% | 12 353 | |
| - Exports | 1 713 | 41.6% | -18.9% | | 9 570 | 4 817 | 98.7% | 12 309 | |
| = ELECTRICITY SUPPLIED | 8 868 | -3.5% | -13.2% | | 69 222 | 69 543 | -0.5% | 134 106 | |
| - Used for pumped storage | 476 | -4.3% | 729.3% | | 696 | 752 | -7.4% | 1 262 | |
| - T&D Losses | 678 | 11.6% | -12.7% | | 4 857 | 4 297 | 13.0% | 8 631 | |
| = ELECTRICITY CONSUMED | 7 714 | -4.6% | -17.8% | | 63 668 | 64 494 | -1.3% | 124 213 | |

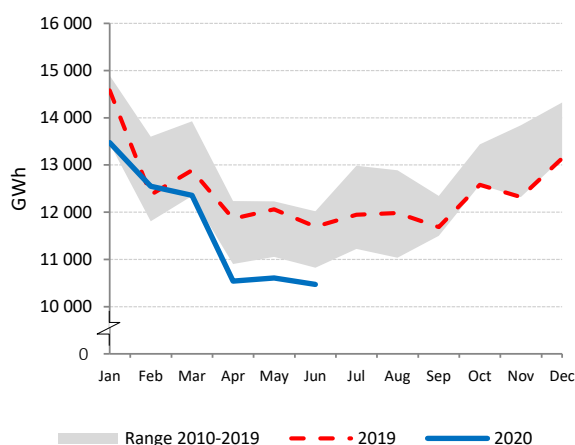
¹ current month to month of last year change⁴ estimated from annual data² month-to-month change³ year-to-date compared to same period last year

POLAND

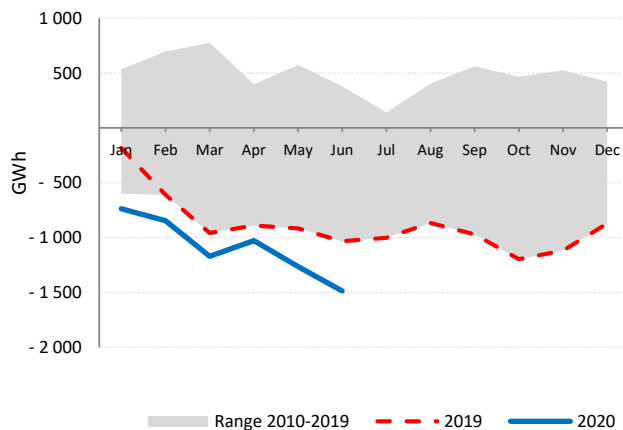
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|---------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 9 224 | -12.8% | 1.6% | 88.1% | 59 000 | 65 639 | -10.1% | 131 012 | 87.9% |
| Coal | 7 585 | -16.1% | 6.3% | 72.4% | 47 229 | 55 854 | -14.2% | 108 915 | 73.0% |
| Oil ⁴ | - | - | - | - | - | - | - | 1 617 | 1.1% |
| Natural Gas | 973 | 6.2% | -16.0% | 9.3% | 7 006 | 6 523 | 7.4% | 13 566 | 9.1% |
| Combustible Renewables | 526 | 5.2% | -8.6% | 5.0% | 3 509 | 3 040 | 15.4% | 6 453 | 4.3% |
| Other Combustibles | 141 | 270.2% | -31.1% | 1.3% | 1 255 | 222 | 466.0% | 461 | 0.3% |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 282 | 16.0% | 39.9% | 2.7% | 1 499 | 1 652 | -9.2% | 2 633 | 1.8% |
| Wind | 733 | -1.3% | -34.3% | 7.0% | 8 532 | 7 795 | 9.5% | 14 677 | 9.8% |
| Solar | 225 | 83.4% | 9.3% | 2.1% | 930 | 331 | 180.8% | 712 | 0.5% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 7 | - | - | 0.1% | 42 | 42 | - | 85 | 0.1% |
| RENEWABLES | 1 765 | 9.8% | -15.9% | 16.9% | 14 471 | 12 818 | 12.9% | 24 475 | 16.4% |
| NON-RENEWABLES | 8 705 | -13.7% | 2.3% | 83.1% | 55 533 | 62 641 | -11.3% | 124 643 | 83.6% |
| TOTAL NET PRODUCTION | 10 470 | -10.5% | -1.3% | | 70 004 | 75 459 | -7.2% | 149 118 | |
| + Imports | 1 812 | 21.8% | 5.7% | | 10 542 | 8 350 | 26.3% | 17 868 | |
| - Exports | 326 | -28.2% | -27.6% | | 4 006 | 3 759 | 6.6% | 7 245 | |
| = ELECTRICITY SUPPLIED | 11 957 | -6.1% | 0.7% | | 76 540 | 80 050 | -4.4% | 159 741 | |
| - Used for pumped storage | 68 | -12.6% | -23.1% | | 583 | 515 | 13.0% | 1 033 | |
| - T&D Losses | 973 | 30.6% | -7.9% | | 5 478 | 4 154 | 31.9% | 9 463 | |
| = ELECTRICITY CONSUMED | 10 916 | -8.3% | 1.8% | | 70 479 | 75 381 | -6.5% | 149 246 | |

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

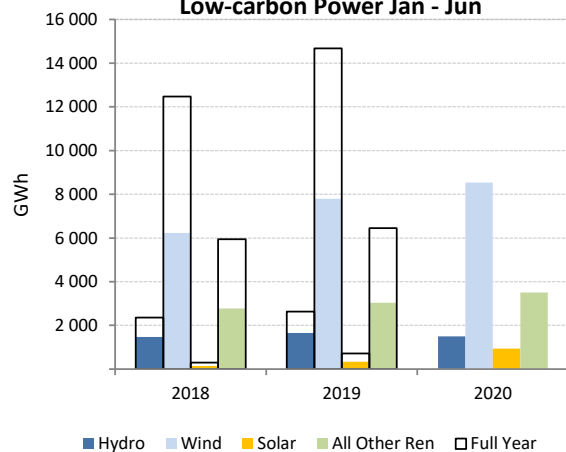
Electricity Production



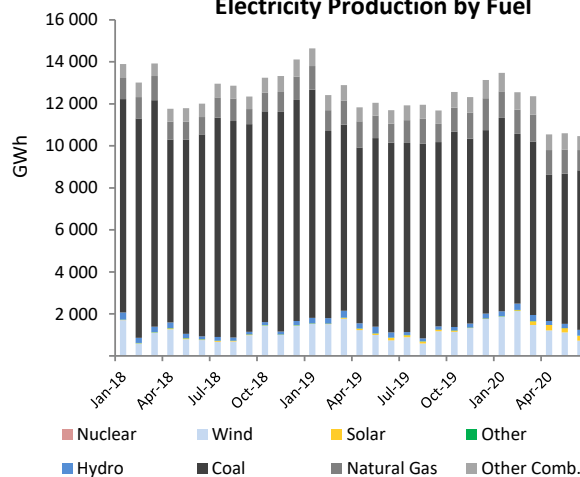
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

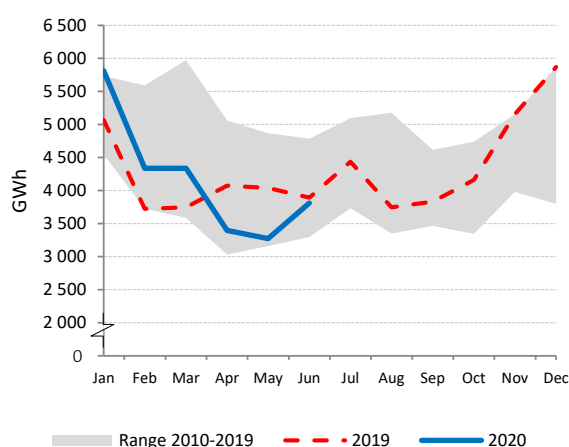


PORTUGAL

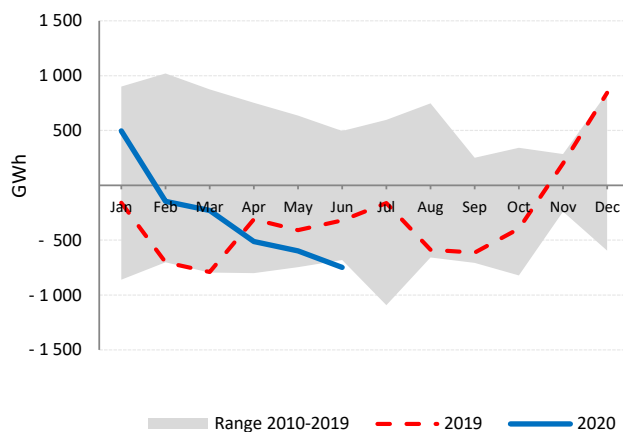
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 2 397 | -9.2% | 82.6% | 62.9% | 10 135 | 12 687 | -20.1% | 26 621 | 51.4% |
| Coal | 48 | -91.4% | 165.9% | 1.3% | 214 | 3 756 | -94.3% | 5 378 | 10.4% |
| Oil | 95 | 2.3% | 25.1% | 2.5% | 563 | 506 | 11.2% | 1 163 | 2.2% |
| Natural Gas | 1 972 | 16.3% | 112.6% | 51.7% | 7 509 | 6 773 | 10.9% | 16 582 | 32.0% |
| Combustible Renewables | 261 | -3.1% | -1.8% | 6.8% | 1 709 | 1 510 | 13.2% | 3 222 | 6.2% |
| Other Combustibles | 21 | -17.8% | -16.4% | 0.6% | 139 | 143 | -2.8% | 276 | 0.5% |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 474 | 59.5% | -56.4% | 12.4% | 8 149 | 4 502 | 81.0% | 10 054 | 19.4% |
| Wind | 734 | -8.4% | 6.7% | 19.3% | 5 785 | 6 619 | -12.6% | 13 605 | 26.3% |
| Solar | 196 | 39.5% | 16.8% | 5.1% | 812 | 638 | 27.3% | 1 274 | 2.5% |
| Geothermal | 11 | -29.3% | -38.4% | 0.3% | 95 | 102 | -6.1% | 192 | 0.4% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 1 676 | 10.0% | -24.7% | 44.0% | 16 551 | 13 371 | 23.8% | 28 346 | 54.8% |
| NON-RENEWABLES | 2 136 | -9.9% | 104.0% | 56.0% | 8 425 | 11 178 | -24.6% | 23 399 | 45.2% |
| TOTAL NET PRODUCTION | 3 812 | -2.2% | 16.4% | | 24 976 | 24 548 | 1.7% | 51 745 | |
| + Imports | 922 | 76.0% | 5.1% | | 4 407 | 4 398 | 0.2% | 8 099 | |
| - Exports | 175 | -14.4% | -37.4% | | 2 670 | 1 709 | 56.2% | 4 700 | |
| = ELECTRICITY SUPPLIED | 4 560 | 8.2% | 17.8% | | 26 712 | 27 237 | -1.9% | 55 144 | |
| - Used for pumped storage | 134 | 37.1% | -10.3% | | 1 022 | 840 | 21.6% | 1 827 | |
| - T&D Losses | 421 | 17.2% | 18.2% | | 2 450 | 2 306 | 6.2% | 4 668 | |
| = ELECTRICITY CONSUMED | 4 004 | 6.5% | 19.0% | | 23 240 | 24 091 | -3.5% | 48 649 | |

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

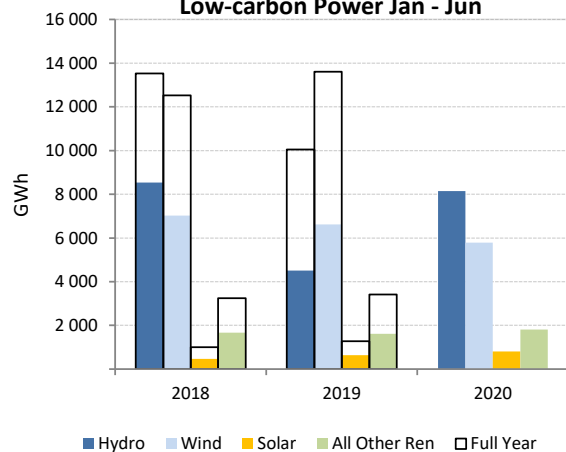
Electricity Production



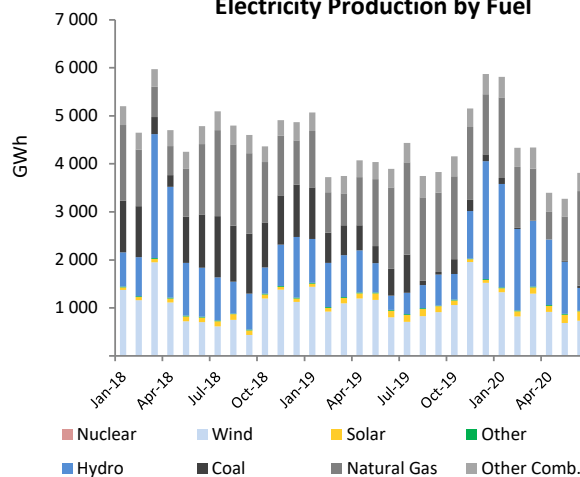
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

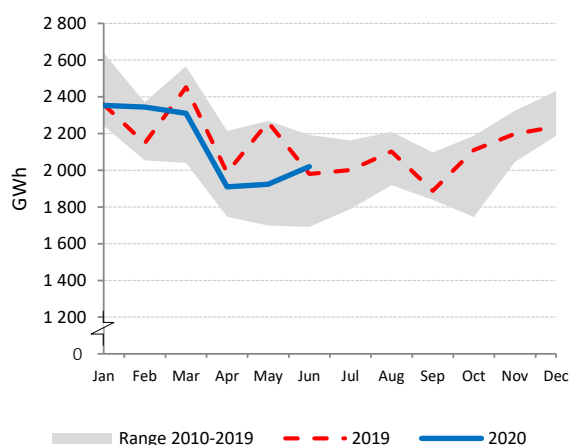


SLOVAK REPUBLIC

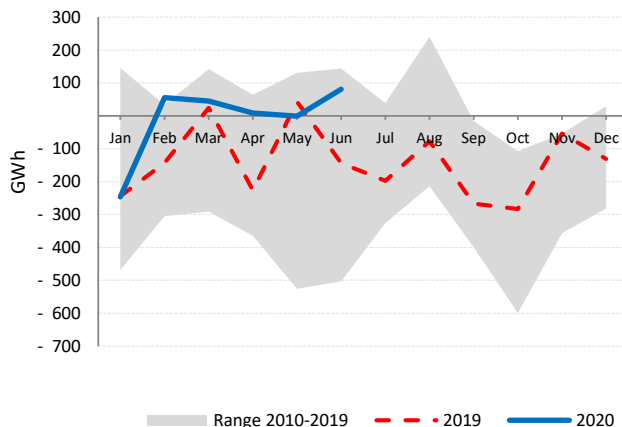
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 443 | -1.7% | 7.4% | 21.9% | 3 019 | 3 121 | -3.3% | 6 174 | 24.0% |
| Coal | 77 | -51.3% | 1.3% | 3.8% | 832 | 1 215 | -31.5% | 2 233 | 8.7% |
| Oil | 33 | 83.3% | 26.9% | 1.6% | 188 | 165 | 13.4% | 399 | 1.6% |
| Natural Gas | 254 | 44.4% | 8.4% | 12.6% | 1 503 | 1 148 | 30.8% | 2 478 | 9.6% |
| Combustible Renewables | 77 | -20.3% | 3.8% | 3.8% | 490 | 586 | -16.3% | 1 052 | 4.1% |
| Other Combustibles | 1 | -2.6% | -2.6% | 0.1% | 6 | 6 | 4.4% | 11 | 0.0% |
| Nuclear | 1 009 | 7.6% | -10.4% | 50.0% | 7 102 | 6 953 | 2.1% | 14 407 | 56.0% |
| Hydro | 493 | -3.2% | 63.5% | 24.4% | 2 347 | 2 785 | -15.7% | 4 489 | 17.5% |
| Wind | - | - | - | - | - | 2 | - | 5 | 0.0% |
| Solar | 69 | -10.4% | -12.7% | 3.4% | 365 | 301 | 21.3% | 589 | 2.3% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 6 | 25.0% | 25.0% | 0.3% | 28 | 27 | 4.5% | 59 | 0.2% |
| RENEWABLES | 639 | -6.4% | 40.5% | 31.6% | 3 202 | 3 673 | -12.8% | 6 135 | 23.9% |
| NON-RENEWABLES | 1 381 | 6.5% | -6.0% | 68.4% | 9 659 | 9 515 | 1.5% | 19 588 | 76.1% |
| TOTAL NET PRODUCTION | 2 020 | 2.0% | 5.0% | | 12 861 | 13 188 | -2.5% | 25 723 | |
| + Imports | 798 | -11.1% | -16.4% | | 6 832 | 6 684 | 2.2% | 13 538 | |
| - Exports | 879 | 16.6% | -7.8% | | 6 775 | 5 994 | 13.0% | 11 838 | |
| = ELECTRICITY SUPPLIED | 1 939 | -8.7% | 0.7% | | 12 919 | 13 879 | -6.9% | 27 423 | |
| - Used for pumped storage | 31 | 19.2% | 29.2% | | 177 | 149 | 18.8% | 295 | |
| - T&D Losses ⁴ | 104 | -2.1% | -2.1% | | 725 | 731 | -0.9% | 1 445 | |
| = ELECTRICITY CONSUMED | 1 804 | -9.4% | 0.5% | | 12 017 | 12 998 | -7.5% | 25 683 | |

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

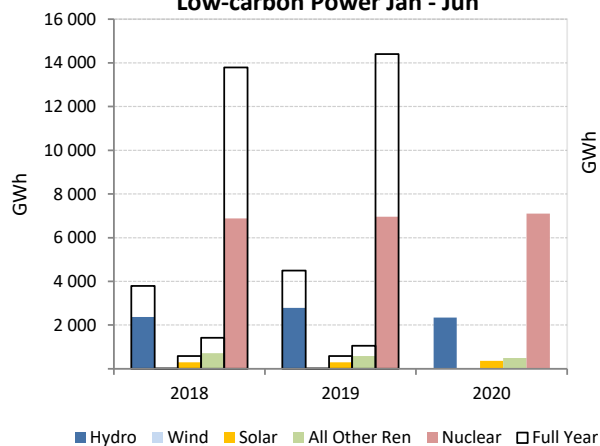
Electricity Production



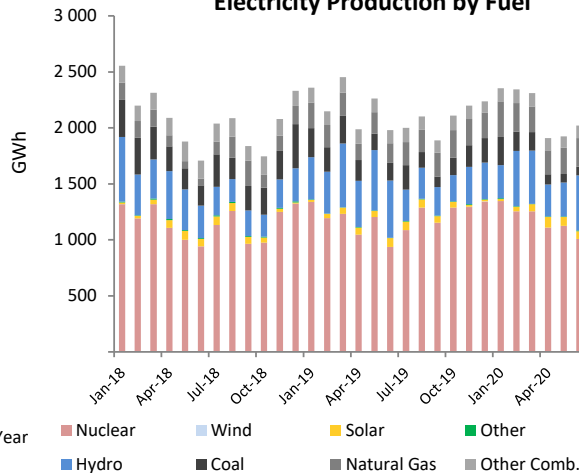
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

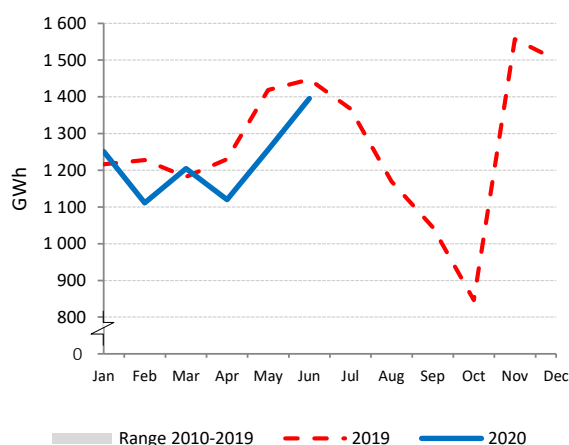


SLOVENIA

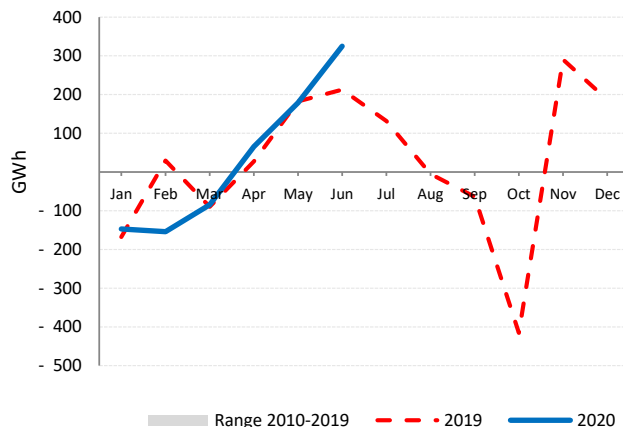
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|--------------|--------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 350 | 4.5% | 52.5% | 25.1% | 1 900 | 2 272 | -16.4% | 4 747 | 31.2% |
| Coal | 318 | 4.4% | 80.1% | 22.8% | 1 512 | 1 904 | -20.6% | 4 028 | 26.5% |
| Oil | 0 | -42.0% | -35.6% | 0.0% | 1 | 5 | -72.3% | 7 | 0.0% |
| Natural Gas | 17 | -14.2% | -48.3% | 1.2% | 260 | 240 | 8.3% | 482 | 3.2% |
| Combustible Renewables | 14 | 39.8% | -29.1% | 1.0% | 122 | 119 | 2.6% | 221 | 1.5% |
| Other Combustibles | 1 | 61.0% | 215.9% | 0.1% | 5 | 5 | 5.9% | 9 | 0.1% |
| Nuclear | 496 | 0.5% | -3.4% | 35.5% | 3 025 | 3 007 | 0.6% | 5 531 | 36.4% |
| Hydro | 514 | -10.8% | 8.0% | 36.8% | 2 237 | 2 287 | -2.2% | 4 622 | 30.4% |
| Wind | 0 | -46.4% | -74.7% | 0.0% | 3 | 3 | -1.4% | 6 | 0.0% |
| Solar | 36 | -17.2% | -1.8% | 2.6% | 174 | 153 | 13.8% | 303 | 2.0% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 564 | -10.4% | 5.8% | 40.4% | 2 536 | 2 562 | -1.0% | 5 152 | 33.9% |
| NON-RENEWABLES | 832 | 1.6% | 15.1% | 59.6% | 4 803 | 5 160 | -6.9% | 10 056 | 66.1% |
| TOTAL NET PRODUCTION | 1 396 | -3.6% | 11.1% | | 7 338 | 7 722 | -5.0% | 15 208 | |
| + Imports | 434 | -42.2% | -23.5% | | 3 925 | 4 822 | -18.6% | 9 021 | |
| - Exports | 758 | -21.2% | 1.8% | | 4 108 | 5 016 | -18.1% | 9 340 | |
| = ELECTRICITY SUPPLIED | 1 071 | -13.3% | -0.6% | | 7 156 | 7 528 | -5.0% | 14 889 | |
| - Used for pumped storage | 21 | -47.1% | -41.0% | | 200 | 85 | 135.4% | 272 | |
| - T&D Losses | 43 | -43.9% | -21.4% | | 469 | 536 | -12.4% | 987 | |
| = ELECTRICITY CONSUMED | 1 006 | -10.0% | 2.0% | | 6 486 | 6 908 | -6.1% | 13 630 | |

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

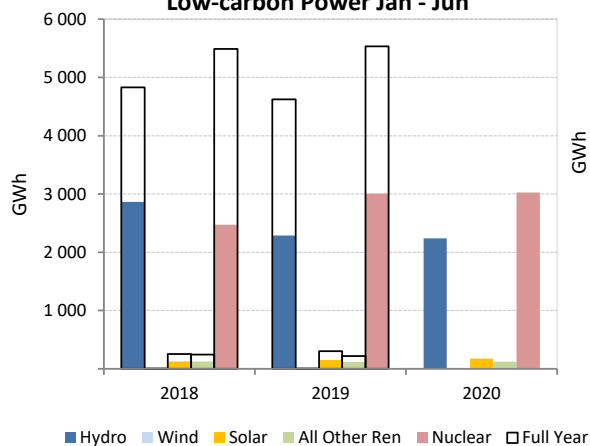
Electricity Production



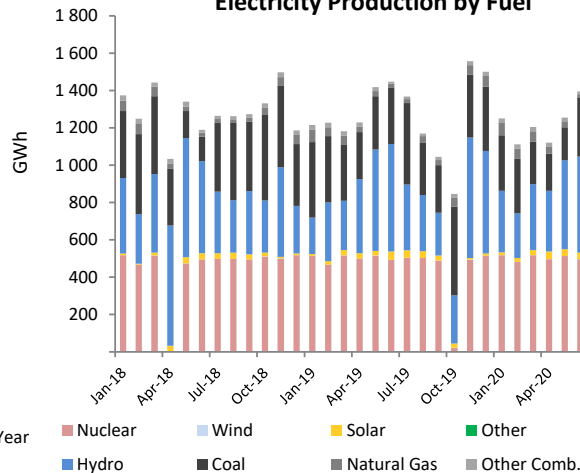
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

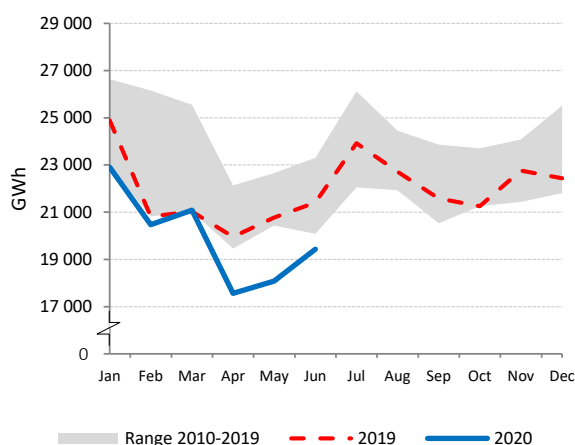


SPAIN

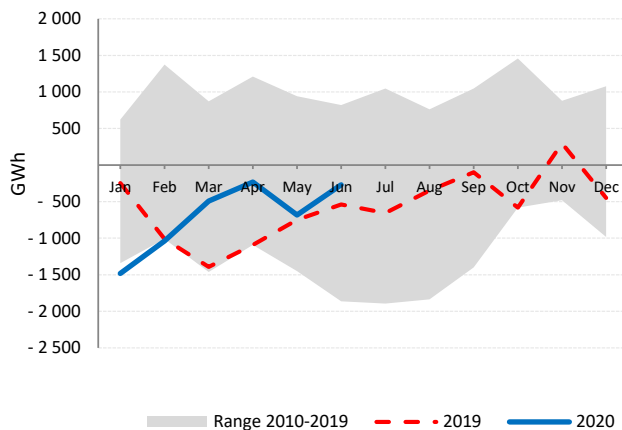
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|---------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 7 573 | -21.7% | 30.8% | 39.0% | 39 761 | 52 555 | -24.3% | 112 593 | 42.7% |
| Coal | 387 | -29.9% | 48.9% | 2.0% | 3 287 | 9 095 | -63.9% | 13 562 | 5.1% |
| Oil | 780 | -22.7% | 0.8% | 4.0% | 5 111 | 5 967 | -14.3% | 12 056 | 4.6% |
| Natural Gas | 5 822 | -23.3% | 39.5% | 30.0% | 27 970 | 34 328 | -18.5% | 80 466 | 30.5% |
| Combustible Renewables | 517 | 16.2% | -0.2% | 2.7% | 2 972 | 2 662 | 11.6% | 5 523 | 2.1% |
| Other Combustibles | 66 | -12.7% | 2.6% | 0.3% | 420 | 503 | -16.6% | 985 | 0.4% |
| Nuclear | 3 625 | -22.1% | 17.6% | 18.7% | 26 163 | 28 359 | -7.7% | 55 883 | 21.2% |
| Hydro | 2 413 | 43.5% | -22.2% | 12.4% | 19 121 | 13 078 | 46.2% | 26 349 | 10.0% |
| Wind | 3 317 | -9.6% | -15.6% | 17.1% | 25 296 | 27 482 | -8.0% | 54 235 | 20.6% |
| Solar | 2 492 | 44.3% | 15.0% | 12.8% | 9 139 | 7 344 | 24.4% | 14 399 | 5.5% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 9 | - | - | 0.0% | 56 | 56 | - | 112 | 0.0% |
| RENEWABLES | 8 739 | 16.2% | -10.1% | 45.0% | 56 529 | 50 566 | 11.8% | 100 507 | 38.1% |
| NON-RENEWABLES | 10 690 | -23.0% | 27.8% | 55.0% | 63 008 | 78 308 | -19.5% | 163 064 | 61.9% |
| TOTAL NET PRODUCTION | 19 429 | -9.3% | 7.5% | | 119 536 | 128 874 | -7.2% | 263 571 | |
| + Imports | 1 324 | 18.4% | -24.2% | | 10 315 | 10 582 | -2.5% | 18 720 | |
| - Exports | 1 055 | 81.5% | -0.9% | | 6 118 | 5 556 | 10.1% | 11 858 | |
| = ELECTRICITY SUPPLIED | 19 698 | -10.3% | 5.0% | | 123 733 | 133 900 | -7.6% | 270 433 | |
| - Used for pumped storage | 258 | 285.4% | -34.2% | | 2 655 | 1 439 | 84.5% | 3 025 | |
| - T&D Losses | 1 818 | -11.1% | 5.6% | | 11 343 | 12 378 | -8.4% | 24 991 | |
| = ELECTRICITY CONSUMED | 17 622 | -11.2% | 5.8% | | 109 735 | 120 083 | -8.6% | 242 417 | |

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

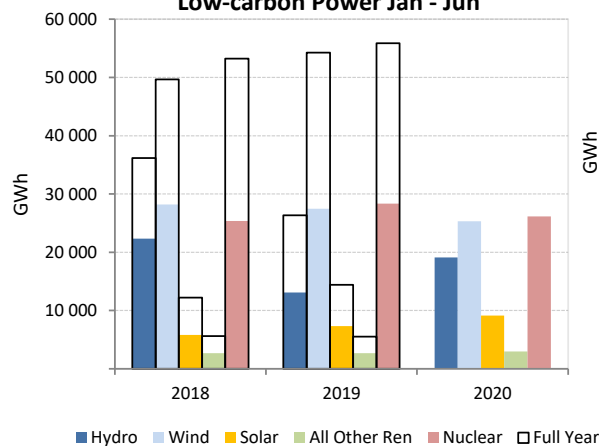
Electricity Production



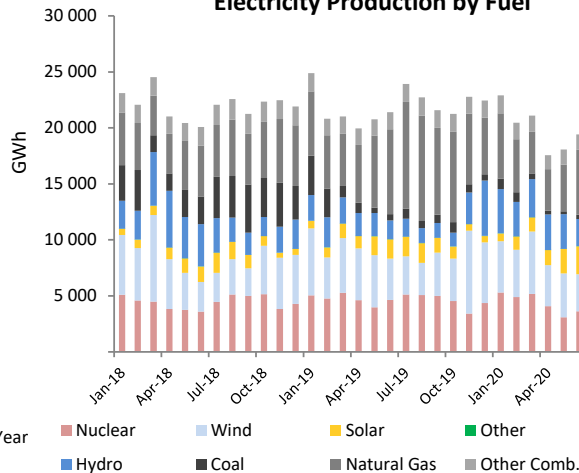
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

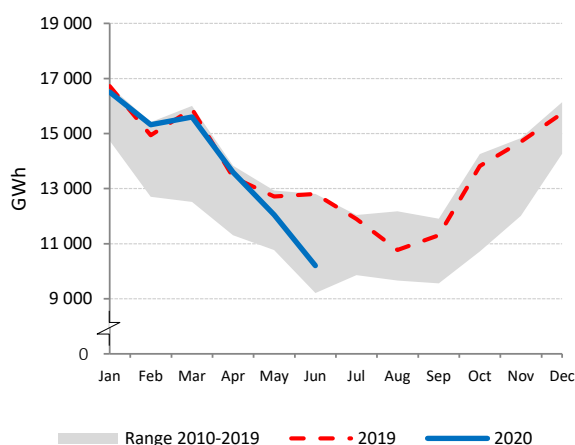


SWEDEN

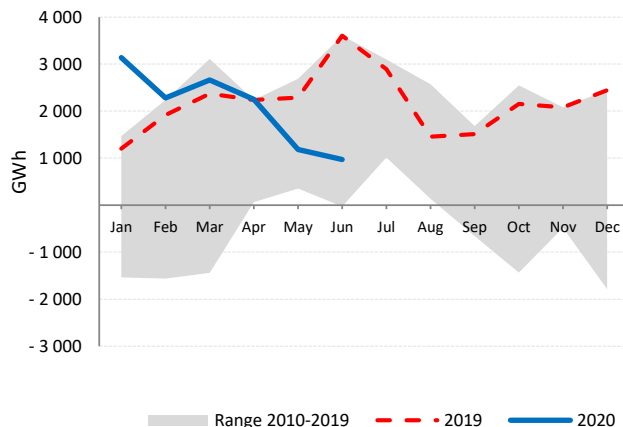
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|---------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 746 | 1.1% | -11.0% | 7.3% | 6 043 | 9 455 | -36.1% | 15 640 | 9.5% |
| Coal | 0 | - | - | - | 7 | 1 558 | -99.5% | 1 579 | 1.0% |
| Oil | 19 | 167.5% | 69.0% | 0.2% | 65 | 170 | -61.9% | 265 | 0.2% |
| Natural Gas | 0 | -94.6% | -93.3% | 0.0% | 44 | 649 | -93.3% | 728 | 0.4% |
| Combustible Renewables | 603 | 4.7% | -13.7% | 5.9% | 5 133 | 5 908 | -13.1% | 10 640 | 6.5% |
| Other Combustibles | 124 | -17.2% | 0.2% | 1.2% | 795 | 1 169 | -32.0% | 2 427 | 1.5% |
| Nuclear | 2 870 | -49.9% | -14.9% | 28.1% | 25 684 | 32 986 | -22.1% | 63 881 | 38.8% |
| Hydro | 5 347 | 9.2% | -12.1% | 52.4% | 36 352 | 33 305 | 9.2% | 64 698 | 39.3% |
| Wind | 1 148 | -15.1% | -31.0% | 11.3% | 14 821 | 10 363 | 43.0% | 19 846 | 12.0% |
| Solar⁴ | 92 | - | -2.3% | 0.9% | 377 | 377 | - | 663 | 0.4% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 7 191 | 4.0% | -15.8% | 70.5% | 56 684 | 49 953 | 13.5% | 95 847 | 58.2% |
| NON-RENEWABLES | 3 012 | -48.9% | -14.2% | 29.5% | 26 594 | 36 532 | -27.2% | 68 880 | 41.8% |
| TOTAL NET PRODUCTION | 10 204 | -20.3% | -15.4% | | 83 278 | 86 485 | -3.7% | 164 728 | |
| + Imports | 1 019 | 229.8% | 30.3% | | 3 797 | 3 904 | -2.7% | 9 070 | |
| - Exports | 1 990 | -49.2% | 1.1% | | 16 293 | 17 522 | -7.0% | 35 231 | |
| = ELECTRICITY SUPPLIED | 9 232 | 0.3% | -15.1% | | 70 782 | 72 867 | -2.9% | 138 567 | |
| - Used for pumped storage | - | - | - | | 13 | 32 | -59.9% | 32 | |
| - T&D Losses | 610 | -3.5% | -18.6% | | 5 443 | 5 530 | -1.6% | 10 477 | |
| = ELECTRICITY CONSUMED | 8 622 | 0.7% | -14.8% | | 65 327 | 67 304 | -2.9% | 128 058 | |

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

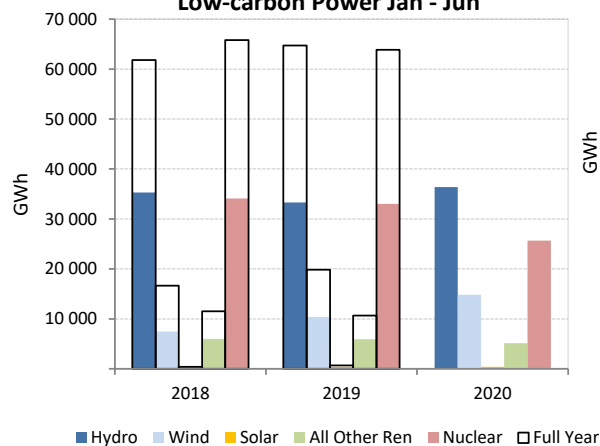
Electricity Production



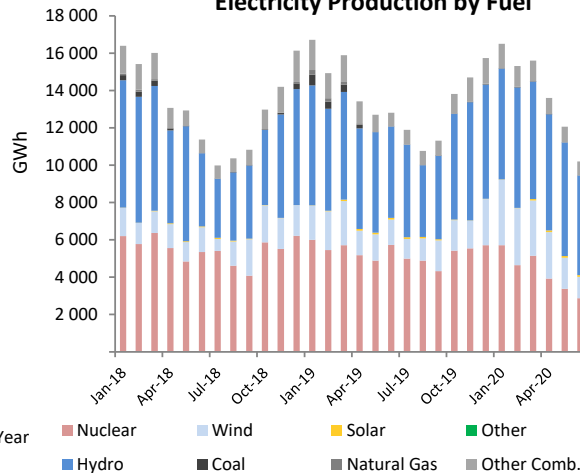
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

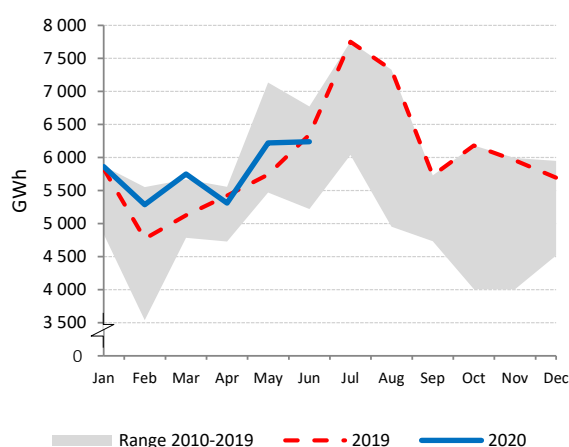


SWITZERLAND

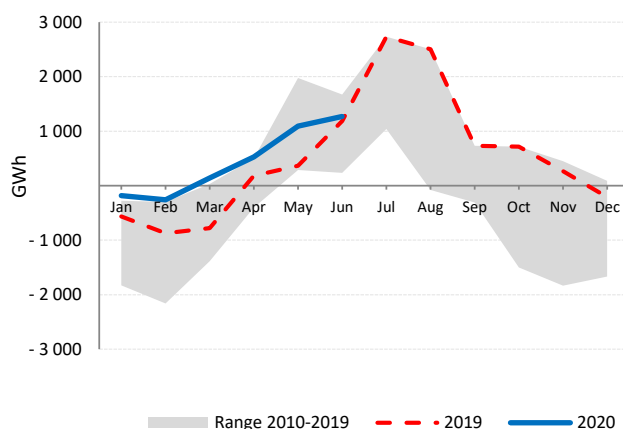
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 296 | -0.6% | 3.2% | 4.7% | 1 895 | 1 842 | 2.8% | 3 791 | 5.3% |
| Coal | - | - | - | - | - | - | - | - | - |
| Oil | 1 | -33.3% | - | 0.0% | 6 | 12 | -50.0% | 24 | 0.0% |
| Natural Gas | 42 | -14.7% | 3.6% | 0.7% | 271 | 307 | -11.7% | 632 | 0.9% |
| Combustible Renewables | 147 | 0.6% | 3.0% | 2.4% | 942 | 903 | 4.3% | 1 859 | 2.6% |
| Other Combustibles | 106 | 5.3% | 3.4% | 1.7% | 675 | 621 | 8.8% | 1 277 | 1.8% |
| Nuclear | 1 477 | 60.7% | -24.0% | 23.7% | 11 814 | 12 052 | -2.0% | 25 280 | 35.2% |
| Hydro | 4 181 | -13.1% | 13.9% | 67.0% | 19 592 | 18 165 | 7.9% | 40 556 | 56.4% |
| Wind | 8 | 14.3% | -20.0% | 0.1% | 80 | 73 | 9.5% | 146 | 0.2% |
| Solar | 278 | -10.9% | -10.1% | 4.5% | 1 291 | 1 107 | 16.7% | 2 111 | 2.9% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 4 614 | -12.5% | 11.6% | 73.9% | 21 906 | 20 248 | 8.2% | 44 672 | 62.1% |
| NON-RENEWABLES | 1 626 | 51.9% | -22.1% | 26.1% | 12 766 | 12 991 | -1.7% | 27 212 | 37.9% |
| TOTAL NET PRODUCTION | 6 240 | -1.7% | 0.3% | | 34 672 | 33 240 | 4.3% | 71 884 | |
| + Imports | 1 255 | -27.2% | -21.8% | | 13 686 | 16 290 | -16.0% | 29 505 | |
| - Exports | 2 525 | -13.3% | -6.5% | | 16 277 | 15 807 | 3.0% | 35 765 | |
| = ELECTRICITY SUPPLIED | 4 970 | -3.6% | -3.1% | | 32 081 | 33 723 | -4.9% | 65 624 | |
| - Used for pumped storage | 487 | -19.0% | -18.8% | | 2 254 | 2 052 | 9.8% | 4 133 | |
| - T&D Losses | 357 | -0.7% | -6.9% | | 2 466 | 2 625 | -6.1% | 5 153 | |
| = ELECTRICITY CONSUMED | 4 126 | -1.7% | -0.4% | | 27 361 | 29 046 | -5.8% | 56 338 | |

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

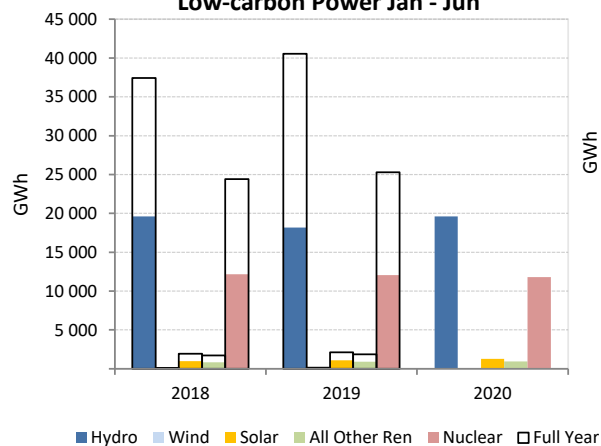
Electricity Production



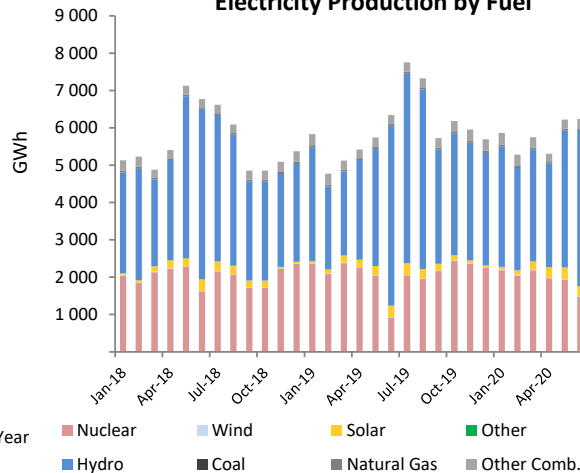
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

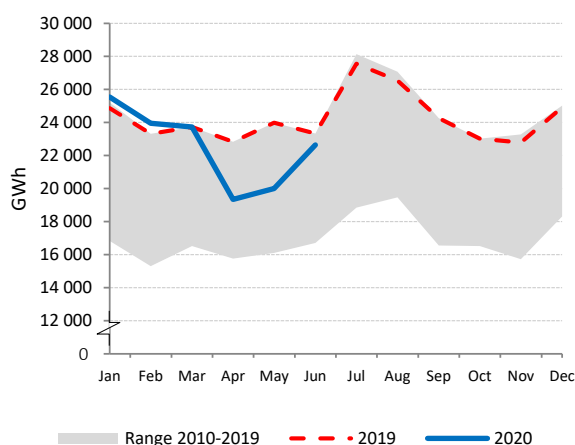


TURKEY

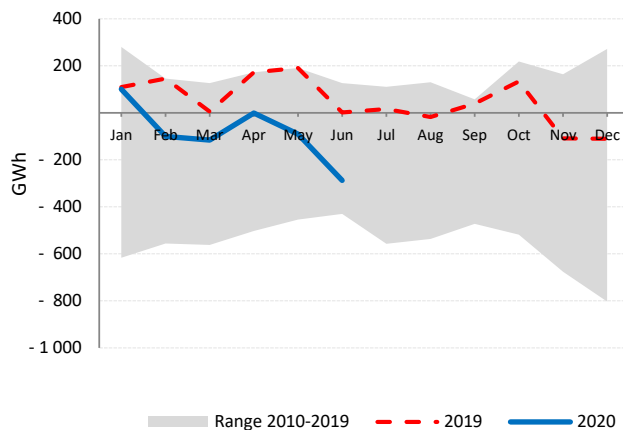
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|---------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 12 906 | 22.1% | 66.5% | 57.0% | 67 510 | 69 500 | -2.9% | 164 146 | 56.4% |
| Coal | 9 098 | 24.7% | 57.2% | 40.2% | 45 069 | 45 878 | -1.8% | 106 744 | 36.7% |
| Oil | 45 | 13.7% | -3.0% | 0.2% | 287 | 435 | -34.0% | 692 | 0.2% |
| Natural Gas | 3 446 | 15.6% | 116.8% | 15.2% | 20 252 | 21 705 | -6.7% | 53 615 | 18.4% |
| Combustible Renewables | 314 | 23.4% | -3.7% | 1.4% | 1 884 | 1 469 | 28.3% | 3 069 | 1.1% |
| Other Combustibles | 3 | 24.4% | 7.0% | 0.0% | 18 | 14 | 26.6% | 26 | 0.0% |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 6 652 | -30.0% | -25.4% | 29.4% | 46 552 | 53 142 | -12.4% | 87 697 | 30.1% |
| Wind | 1 280 | -25.9% | -17.1% | 5.7% | 11 680 | 10 479 | 11.5% | 21 630 | 7.4% |
| Solar | 1 174 | 21.3% | 2.1% | 5.2% | 5 283 | 4 348 | 21.5% | 9 286 | 3.2% |
| Geothermal | 567 | 16.4% | 2.3% | 2.5% | 3 746 | 4 106 | -8.8% | 7 475 | 2.6% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 71 | -5.3% | -20.7% | 0.3% | 459 | 493 | -6.9% | 929 | 0.3% |
| RENEWABLES | 9 987 | -22.8% | -20.0% | 44.1% | 69 144 | 73 544 | -6.0% | 129 157 | 44.4% |
| NON-RENEWABLES | 12 663 | 21.8% | 68.5% | 55.9% | 66 085 | 68 524 | -3.6% | 162 007 | 55.6% |
| TOTAL NET PRODUCTION | 22 650 | -2.9% | 13.2% | | 135 229 | 142 068 | -4.8% | 291 164 | |
| + Imports | 344 | 122.1% | 63.1% | | 1 436 | 989 | 45.2% | 2 212 | |
| - Exports | 56 | -63.9% | -53.4% | | 943 | 1 614 | -41.6% | 2 789 | |
| = ELECTRICITY SUPPLIED | 22 938 | -1.7% | 14.1% | | 135 723 | 141 443 | -4.0% | 290 587 | |
| - Used for pumped storage | - | - | - | | - | - | - | - | |
| - T&D Losses ⁴ | 2 778 | -2.1% | 13.7% | | 16 509 | 17 281 | -4.5% | 35 439 | |
| = ELECTRICITY CONSUMED | 20 160 | -1.6% | 14.2% | | 119 214 | 124 162 | -4.0% | 255 148 | |

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

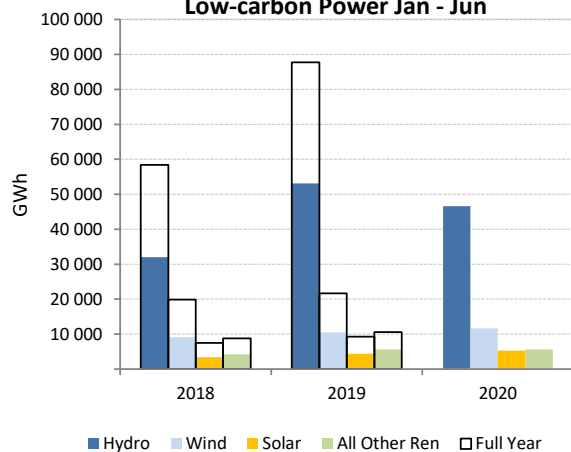
Electricity Production



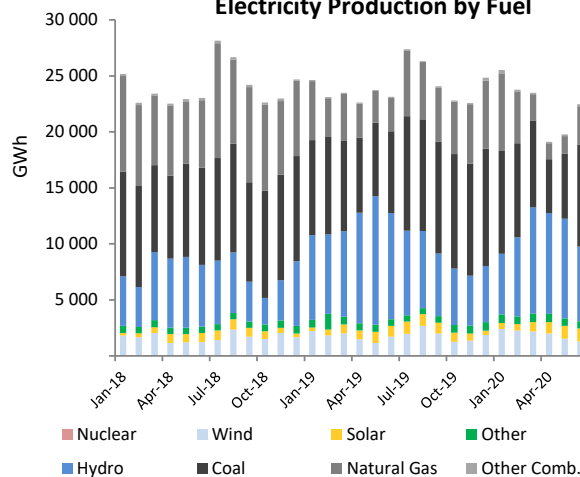
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

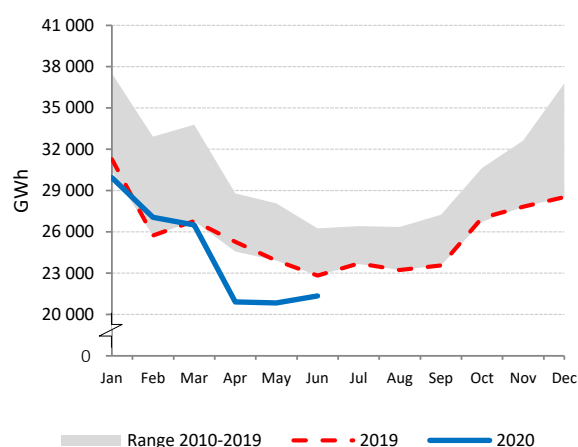


UNITED KINGDOM

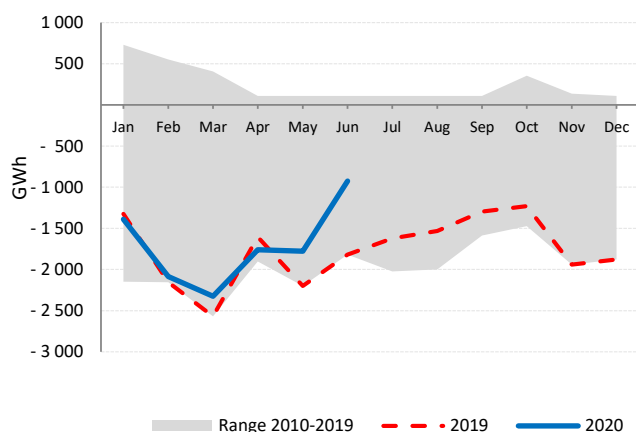
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|---------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 12 065 | -11.2% | 15.1% | 56.5% | 74 240 | 90 157 | -17.7% | 174 277 | 56.3% |
| Coal | 146 | 38.9% | 91.3% | 0.7% | 3 885 | 3 727 | 4.2% | 7 326 | 2.4% |
| Oil | 22 | -68.6% | 9.8% | 0.1% | 266 | 496 | -46.3% | 991 | 0.3% |
| Natural Gas | 8 282 | -18.6% | 24.5% | 38.8% | 47 995 | 66 786 | -28.1% | 126 155 | 40.7% |
| Combustible Renewables | 3 158 | 11.7% | -3.1% | 14.8% | 19 286 | 16 720 | 15.3% | 34 813 | 11.2% |
| Other Combustibles | 457 | 11.4% | -3.6% | 2.1% | 2 809 | 2 428 | 15.7% | 4 992 | 1.6% |
| Nuclear | 3 162 | 3.7% | -20.3% | 14.8% | 22 687 | 24 499 | -7.4% | 51 032 | 16.5% |
| Hydro | 445 | -7.3% | -1.3% | 2.1% | 4 063 | 3 556 | 14.2% | 7 576 | 2.4% |
| Wind | 4 418 | 6.2% | 3.5% | 20.7% | 39 399 | 30 747 | 28.1% | 64 134 | 20.7% |
| Solar | 1 260 | -18.8% | -24.5% | 5.9% | 6 224 | 6 867 | -9.4% | 12 677 | 4.1% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | 1 | - | - | 0.0% | 6 | 6 | - | 13 | 0.0% |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 9 283 | 2.9% | -3.8% | 43.5% | 68 978 | 57 897 | 19.1% | 119 213 | 38.5% |
| NON-RENEWABLES | 12 069 | -12.6% | 7.9% | 56.5% | 77 642 | 97 936 | -20.7% | 190 496 | 61.5% |
| TOTAL NET PRODUCTION | 21 352 | -6.5% | 2.5% | | 146 619 | 155 833 | -5.9% | 309 709 | |
| + Imports | 1 423 | -28.3% | -30.9% | | 12 254 | 12 906 | -5.0% | 24 556 | |
| - Exports | 498 | 202.3% | 74.7% | | 1 991 | 1 232 | 61.6% | 3 385 | |
| = ELECTRICITY SUPPLIED | 22 278 | -9.6% | -1.5% | | 156 882 | 167 507 | -6.3% | 330 880 | |
| - Used for pumped storage | 116 | -36.4% | 3.4% | | 923 | 1 232 | -25.1% | 2 360 | |
| - T&D Losses | 2 174 | 13.1% | 7.6% | | 14 323 | 13 638 | 5.0% | 26 070 | |
| = ELECTRICITY CONSUMED | 19 987 | -11.3% | -2.4% | | 141 637 | 152 637 | -7.2% | 302 449 | |

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

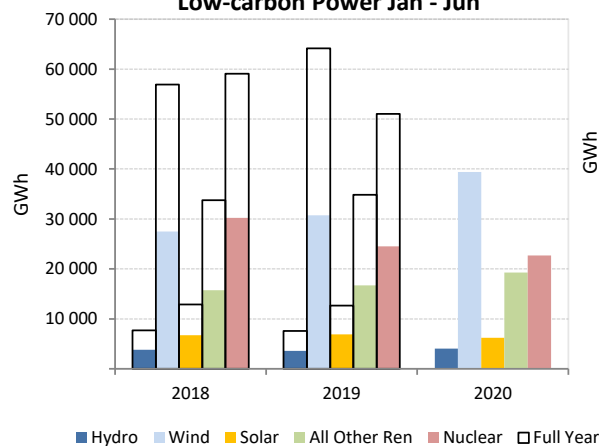
Electricity Production



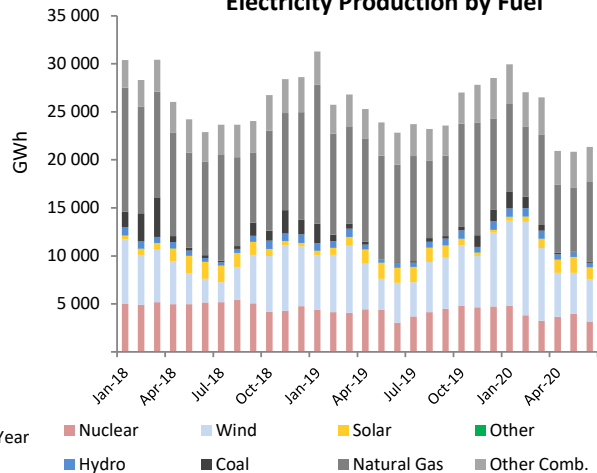
Net Electricity Exports



Low-carbon Power Jan - Jun



Electricity Production by Fuel

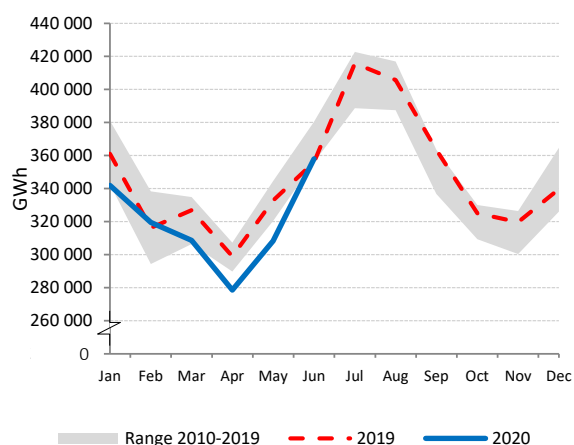


UNITED STATES

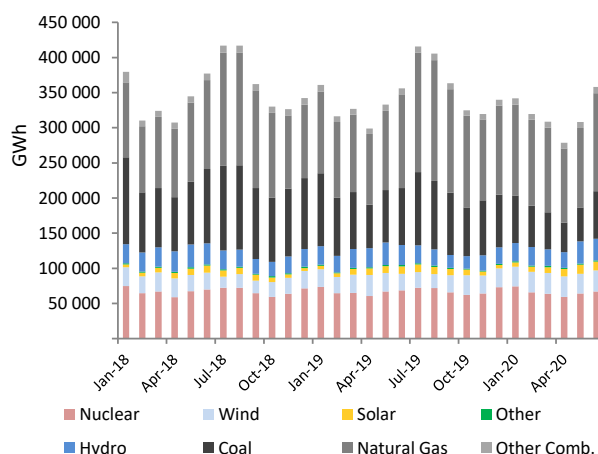
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------|----------------|---------------------|---------------------|--------------|------------------|------------------|---------------------|------------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 215 835 | -3.3% | 26.9% | 60.3% | 1 118 566 | 1 216 835 | -8.1% | 2 641 607 | 63.5% |
| Coal | 67 496 | -16.8% | 39.5% | 18.9% | 337 129 | 485 292 | -30.5% | 997 975 | 24.0% |
| Oil | 3 655 | 30.6% | 23.5% | 1.0% | 18 164 | 16 799 | 8.1% | 33 903 | 0.8% |
| Natural Gas | 139 498 | 4.5% | 23.2% | 39.0% | 730 297 | 680 675 | 7.3% | 1 540 929 | 37.0% |
| Combustible Renewables | 4 391 | -11.6% | -5.4% | 1.2% | 27 927 | 29 445 | -5.2% | 59 007 | 1.4% |
| Other Combustibles | 794 | -0.5% | -7.6% | 0.2% | 5 048 | 4 624 | 9.2% | 9 793 | 0.2% |
| Nuclear | 67 191 | -2.3% | 4.5% | 18.8% | 394 783 | 399 922 | -1.3% | 809 070 | 19.4% |
| Hydro | 30 927 | 9.2% | -1.5% | 8.6% | 160 637 | 164 183 | -2.2% | 294 530 | 7.1% |
| Wind | 29 956 | 28.8% | 7.0% | 8.4% | 173 884 | 153 398 | 13.4% | 300 089 | 7.2% |
| Solar | 12 493 | 15.1% | -2.8% | 3.5% | 57 732 | 47 594 | 21.3% | 96 195 | 2.3% |
| Geothermal | 1 274 | -4.4% | -5.5% | 0.4% | 7 616 | 7 953 | -4.2% | 15 492 | 0.4% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | 345 | -3.9% | -2.8% | 0.1% | 1 983 | 2 196 | -9.7% | 4 497 | 0.1% |
| RENEWABLES | 79 042 | 15.0% | 1.0% | 22.1% | 427 797 | 402 573 | 6.3% | 765 312 | 18.4% |
| NON-RENEWABLES | 278 980 | -2.9% | 21.2% | 77.9% | 1 487 404 | 1 589 508 | -6.4% | 3 396 166 | 81.6% |
| TOTAL NET PRODUCTION | 358 022 | 0.5% | 16.1% | | 1 915 201 | 1 992 081 | -3.9% | 4 161 478 | |
| + Imports | 5 745 | 5.4% | 9.4% | | 29 541 | 29 652 | -0.4% | 59 052 | |
| - Exports | 2 384 | 51.7% | -5.6% | | 12 457 | 10 787 | 15.5% | 20 008 | |
| = ELECTRICITY SUPPLIED | 361 383 | 0.4% | 16.2% | | 1 932 285 | 2 010 946 | -3.9% | 4 200 523 | |
| - Used for pumped storage | 2 712 | 17.7% | 22.9% | | 11 918 | 11 944 | -0.2% | 26 033 | |
| - T&D Losses | 24 265 | 5.0% | 9.9% | | 102 570 | 112 548 | -8.9% | 224 697 | |
| = ELECTRICITY CONSUMED | 334 406 | -0.1% | 16.6% | | 1 817 797 | 1 886 454 | -3.6% | 3 949 792 | |

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

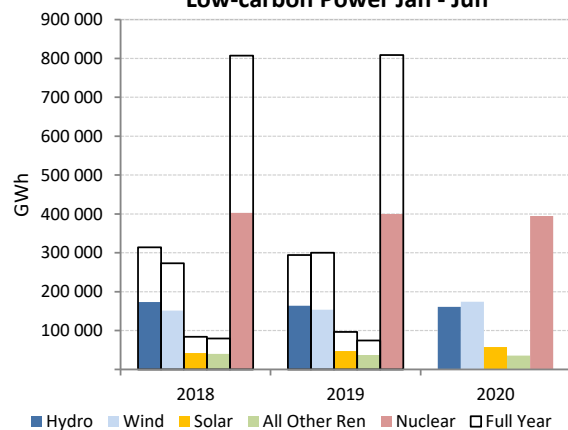
Electricity Production



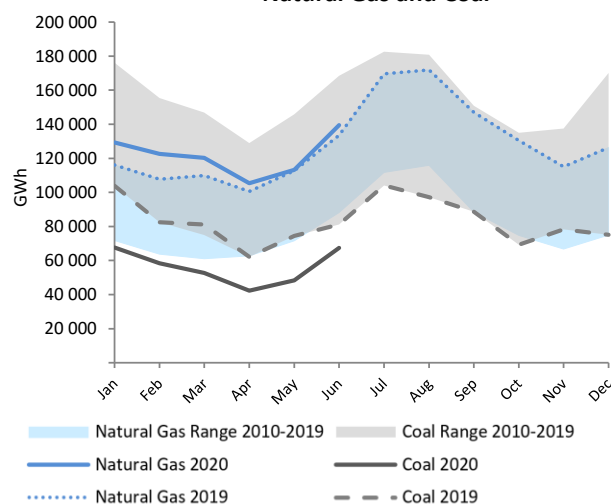
Electricity Production by Fuel



Low-carbon Power Jan - Jun

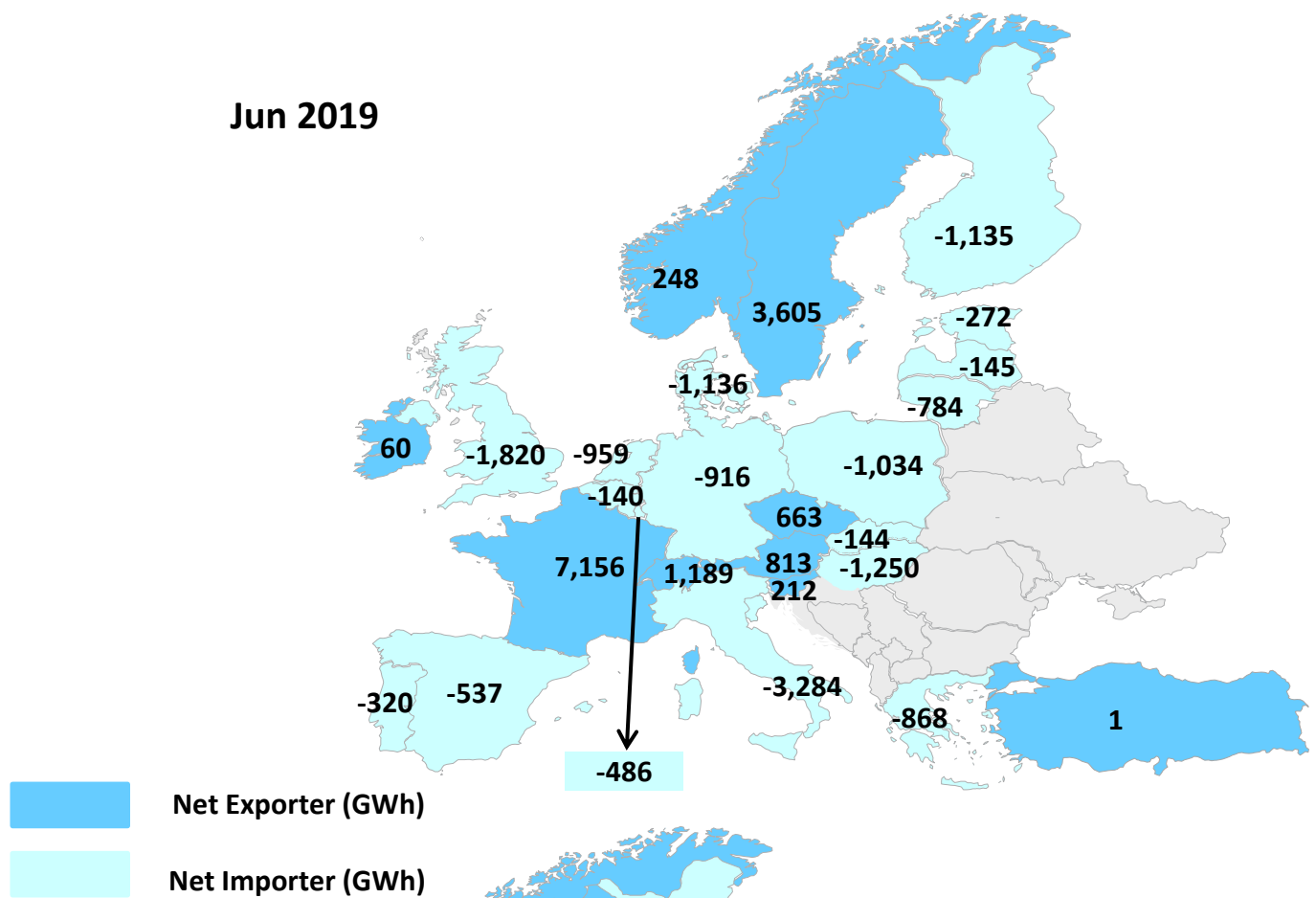


Natural Gas and Coal

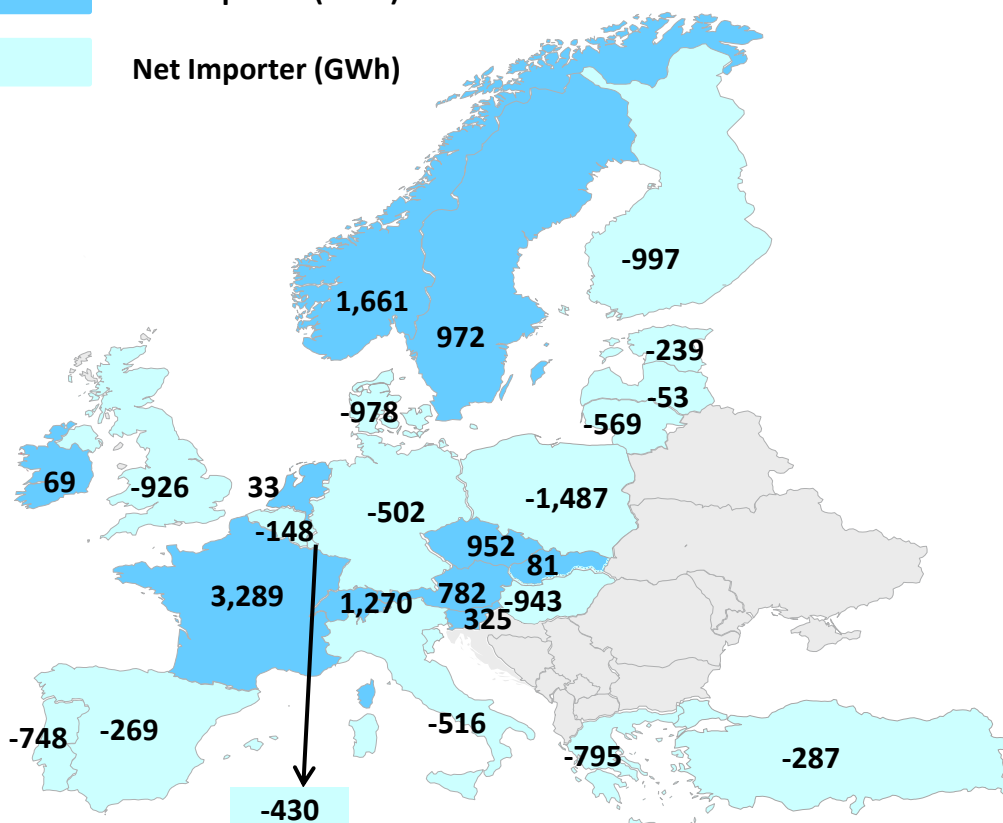


NET ELECTRICITY EXPORTS OECD EUROPE MAP 1

Jun 2019

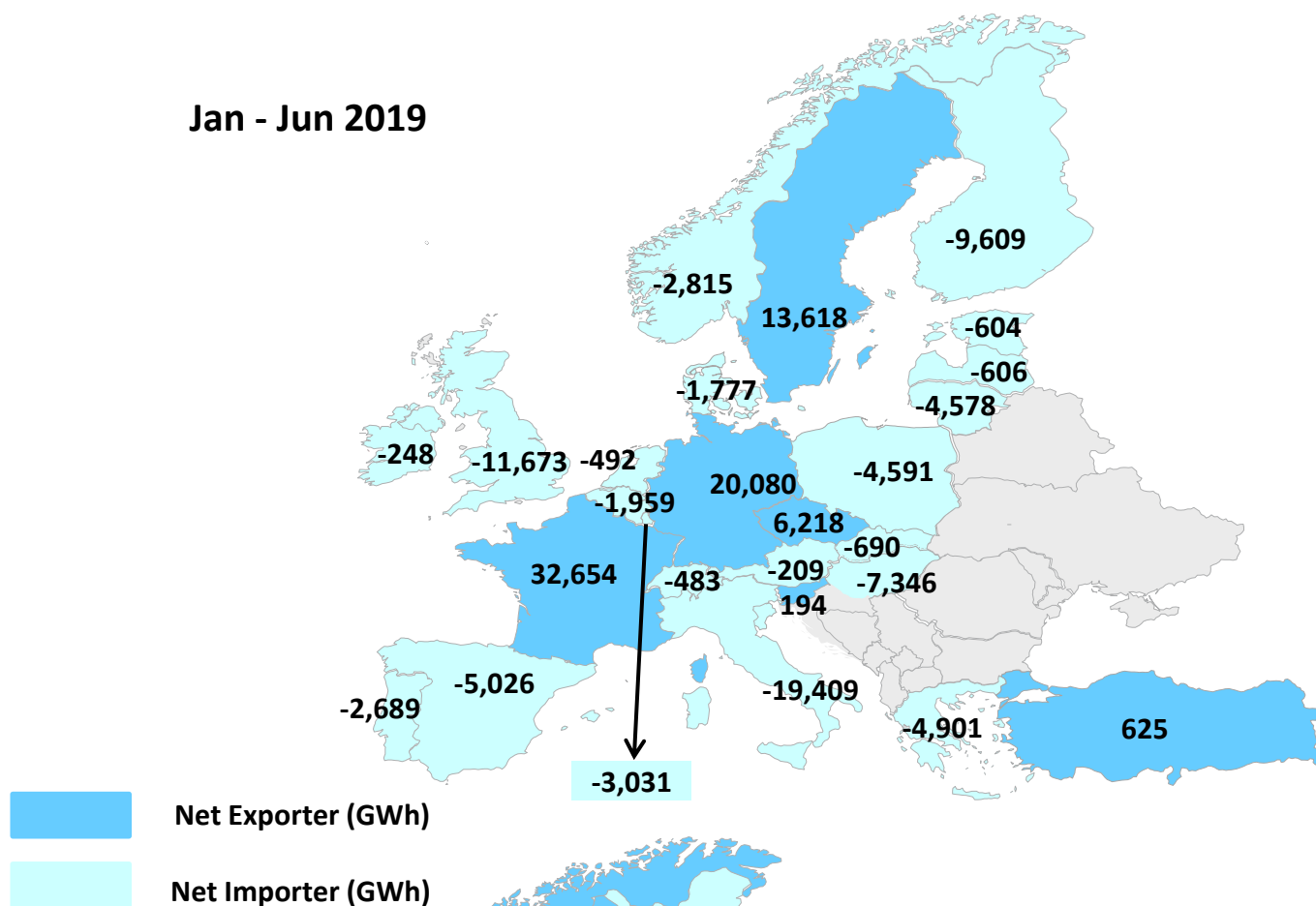


Jun 2020

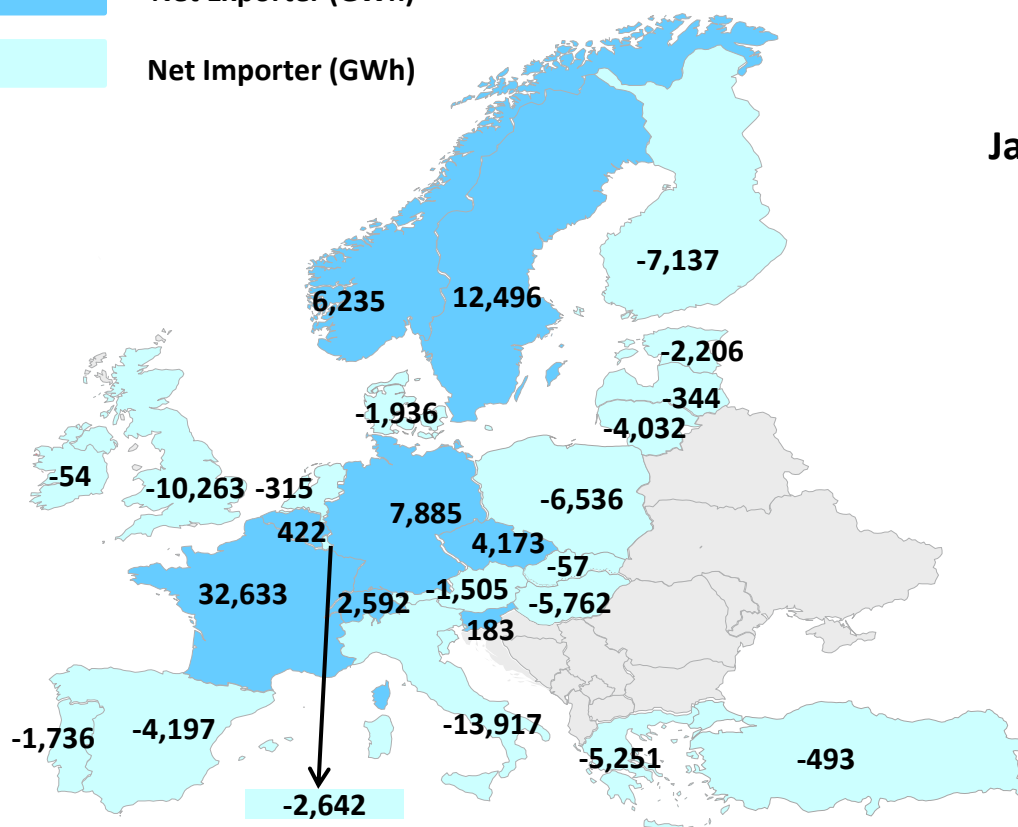


NET ELECTRICITY EXPORTS OECD EUROPE MAP 2

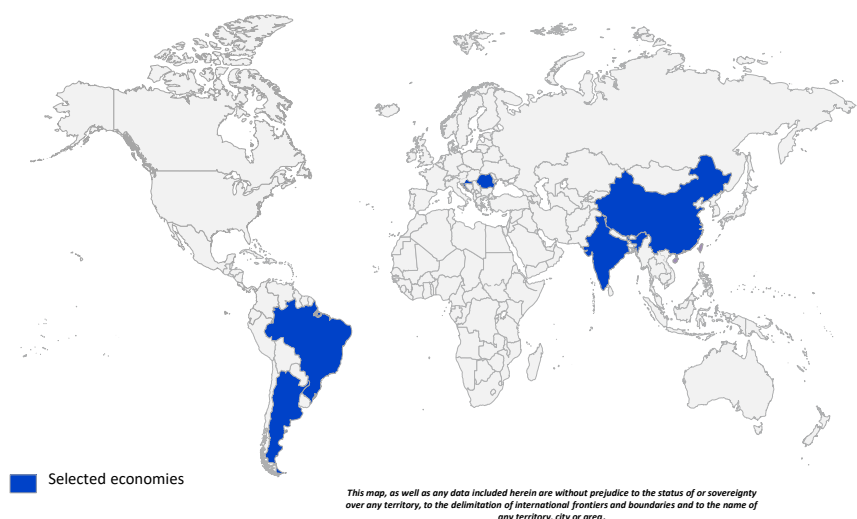
Jan - Jun 2019



Jan - Jun 2020



Annex 1 - Monthly Electricity Statistics for selected non-OECD economies



HIGHLIGHTS

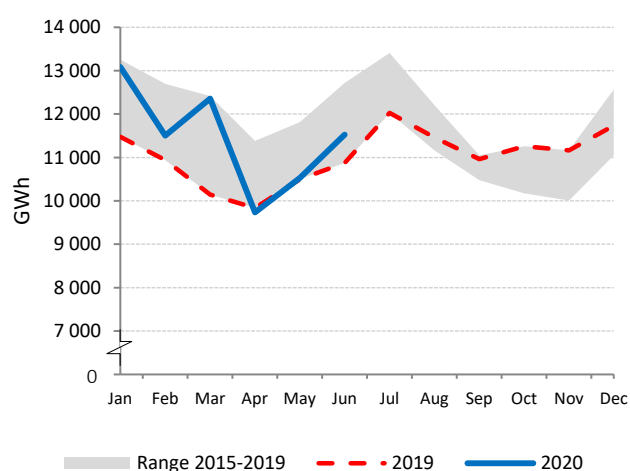
- Hydro production in Argentina has been historically low during the first six months of 2020 as a result of a severe drought. Hydro production was 11.2 TWh during the first semester of 2020, 14.1% lower than during the same period last year. Production in June 2020 increased compared to May 2020 by 33.9%, up to 2.1 TWh after being at record low levels since September 2019. Wind production was 725.9 GWh in June 2020, 78.3% higher than in June 2019. During the first six months of 2020, wind production increased by 114.7% compared to the same period in 2019, to reach 4.1 TWh, highlighting the rapid development of the wind industry in Argentina.
- Chinese net electricity production was 631.2 TWh in June 2020, up by 7.0% compared to June 2019 and by 6.5% compared to May 2020. Since February 2020, during which lockdown measures were implemented, electricity production has increased significantly to reach the highest seasonal electricity output recorded. Solar production has increased during the first six months of 2020, to reach 126.8 TWh, up by 20.5 TWh compared to the same period in 2019.
- Net electricity production in India was also greatly impacted by the Covid 19 crisis in April 2020. Since then, production remains low, at 123.0 TWh for June 2020, 9.9% lower than in June 2019. Lower coal production is responsible for this, as coal production was 78.1 TWh in June 2020, 18.7% lower than in June 2019. In the first six months of 2020, coal production decreased to 490.7 TWh, down by 13.4% compared to the same period in 2019. Renewables on the other hand increased, by 10.8% compared to the first semester of 2019. Solar production was 31.4 TWh during the first semester of 2020, up by 31.8% compared to the first semester of 2019 and wind production was 30.0 TWh, up by 15.8% compared to the same period in 2019, highlighting a dynamic trend.

ARGENTINA

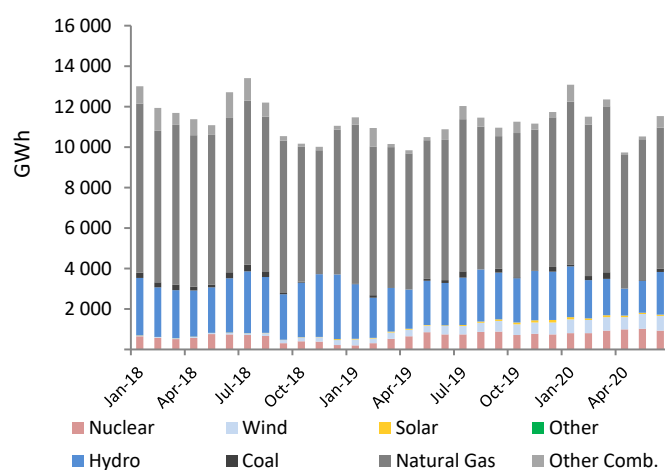
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-----------------------------|---------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 7 706 | 1.5% | 7.9% | 66.9% | 47 504 | 45 303 | 4.9% | 91 369 | 69.0% |
| Coal | 161 | 7.9% | 303.2% | 1.4% | 816 | 383 | 113.1% | 1 187 | 0.9% |
| Oil | 371 | 5.9% | 2083.7% | 3.2% | 1 649 | 1 586 | 4.0% | 3 282 | 2.5% |
| Natural Gas | 6 983 | 0.8% | 0.4% | 60.6% | 44 271 | 42 680 | 3.7% | 85 282 | 64.4% |
| Combustible Renewables | 191 | 17.7% | 45.8% | 1.7% | 768 | 653 | 17.6% | 1 618 | 1.2% |
| Other Combustibles | - | - | - | - | - | - | - | - | - |
| Nuclear | 936 | 24.9% | -8.6% | 8.1% | 5 491 | 3 278 | 67.5% | 8 002 | 6.0% |
| Hydro | 2 100 | 0.8% | 33.9% | 18.2% | 11 192 | 13 033 | -14.1% | 27 253 | 20.6% |
| Wind | 726 | 78.3% | 0.3% | 6.3% | 4 054 | 1 888 | 114.7% | 4 960 | 3.7% |
| Solar | 60 | 47.1% | -17.2% | 0.5% | 500 | 267 | 87.1% | 795 | 0.6% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 3 077 | 14.2% | 23.3% | 26.7% | 16 514 | 15 842 | 4.2% | 34 625 | 26.2% |
| NON-RENEWABLES | 8 451 | 3.3% | 5.2% | 73.3% | 52 227 | 47 928 | 9.0% | 97 754 | 73.8% |
| TOTAL NET PRODUCTION | 11 528 | 6.0% | 9.5% | | 68 742 | 63 770 | 7.8% | 132 379 | |

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

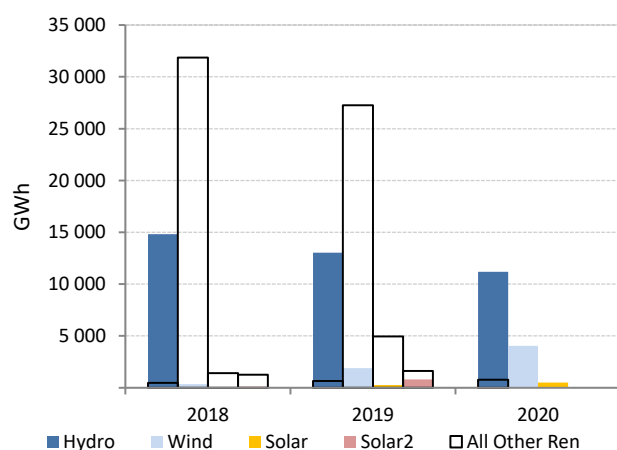
Electricity Production



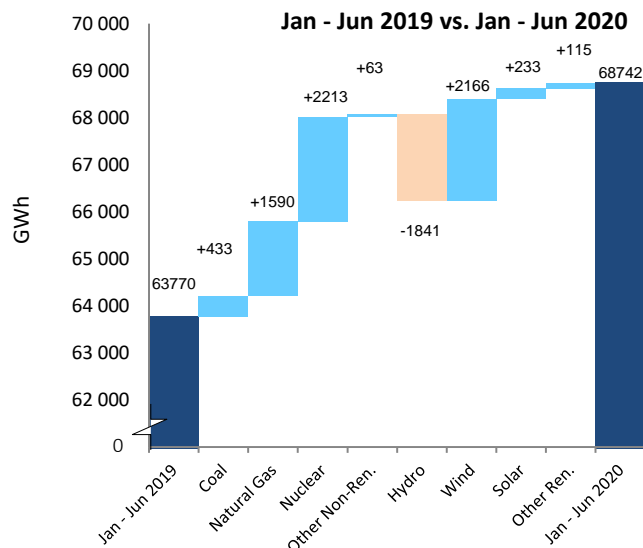
Electricity Production by Fuel



Low-carbon Power Jan - Jun

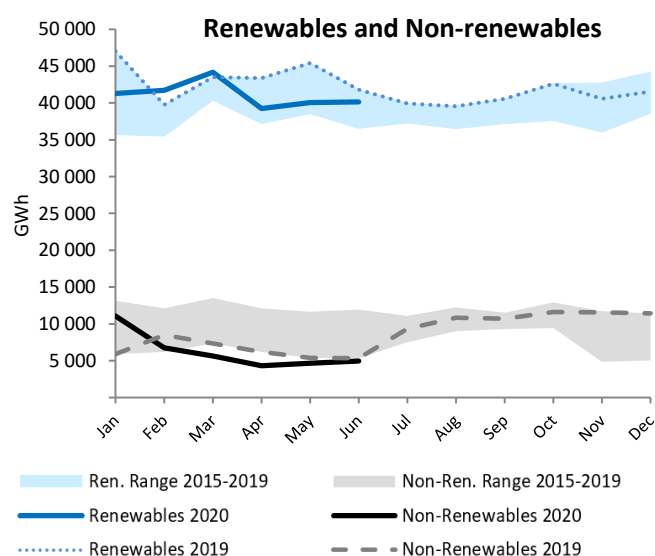
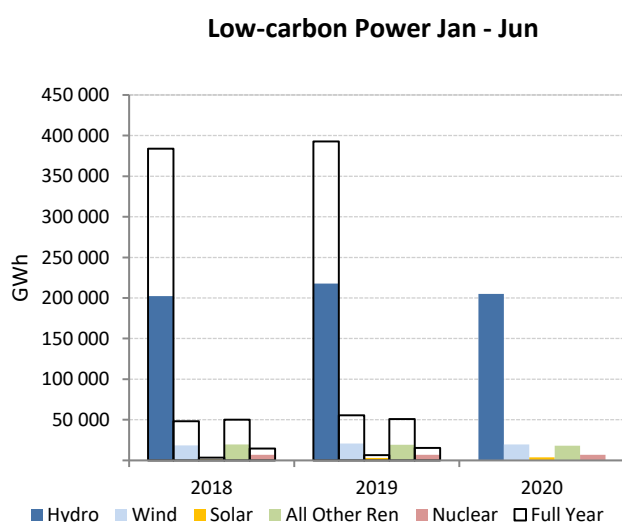
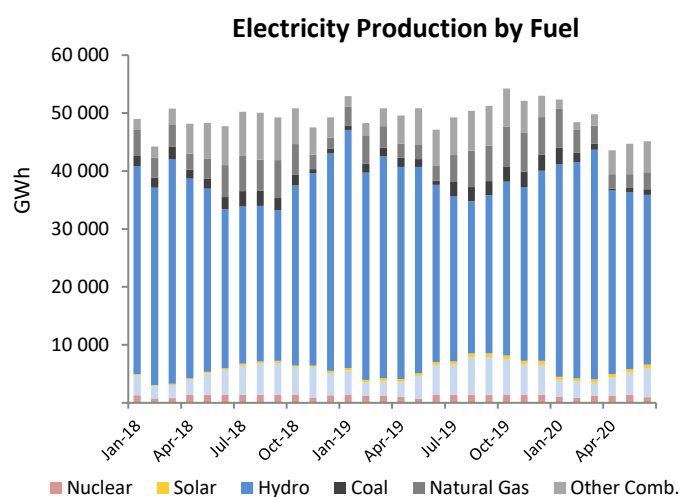
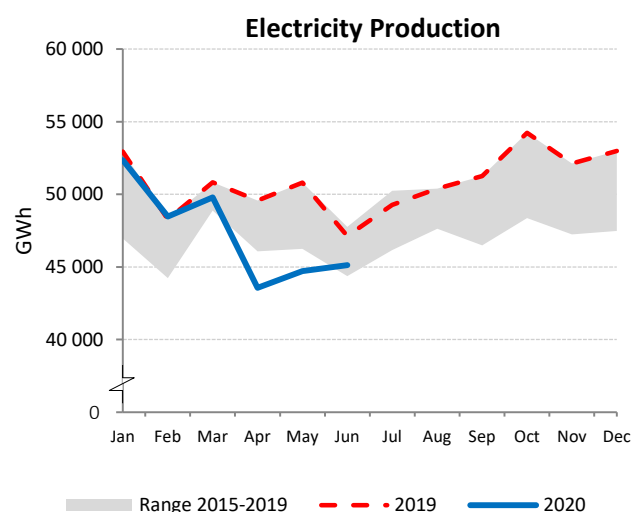


Electricity Production Variation Jan - Jun 2019 vs. Jan - Jun 2020



BRAZIL

| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-----------------------------|---------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|----------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 9 242 | -2.7% | 9.7% | 20.5% | 48 798 | 51 137 | -4.6% | 139 682 | 22.9% |
| Coal | 985 | 46.1% | 28.5% | 2.2% | 7 594 | 7 269 | 4.5% | 22 606 | 3.7% |
| Oil | 113 | -85.1% | -8.7% | 0.3% | 1 493 | 5 084 | -70.6% | 9 595 | 1.6% |
| Natural Gas | 2 904 | 13.1% | 21.7% | 6.4% | 21 509 | 19 463 | 10.5% | 56 727 | 9.3% |
| Combustible Renewables | 5 240 | -4.8% | 1.8% | 11.6% | 18 202 | 19 320 | -5.8% | 50 753 | 8.3% |
| Other Combustibles | - | - | - | - | - | - | - | - | - |
| Nuclear | 971 | -27.6% | -30.0% | 2.2% | 6 796 | 6 854 | -0.8% | 15 224 | 2.5% |
| Hydro | 29 301 | -4.2% | -3.7% | 64.9% | 205 007 | 217 900 | -5.9% | 392 716 | 64.4% |
| Wind | 4 936 | -5.1% | 29.5% | 10.9% | 19 610 | 20 816 | -5.8% | 55 571 | 9.1% |
| Solar | 667 | 34.8% | 0.5% | 1.5% | 3 808 | 2 842 | 34.0% | 6 615 | 1.1% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 40 144 | -3.9% | 0.2% | 89.0% | 246 627 | 260 878 | -5.5% | 505 656 | 82.9% |
| NON-RENEWABLES | 4 973 | -6.9% | 6.6% | 11.0% | 37 392 | 38 670 | -3.3% | 104 153 | 17.1% |
| TOTAL NET PRODUCTION | 45 117 | -4.3% | 0.9% | | 284 019 | 299 549 | -5.2% | 609 808 | |

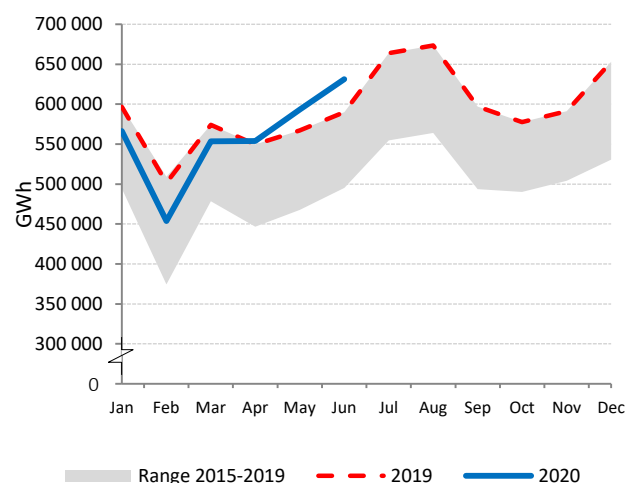
¹ current month to month of last year change² month-to-month change³ year-to-date compared to same period last year

CHINA

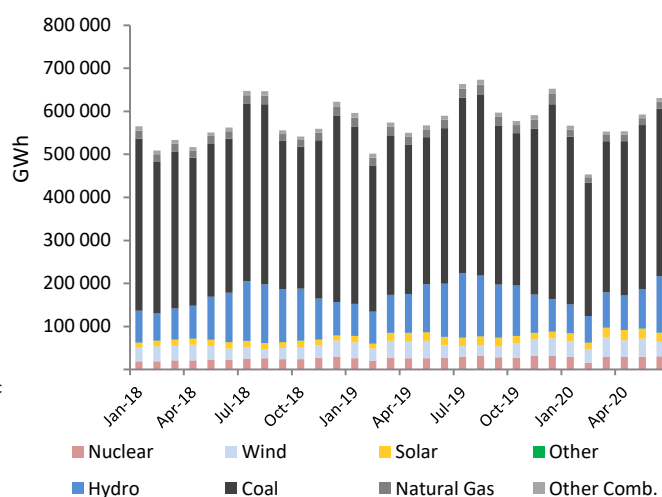
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-------------------------------------|----------------|---------------------|---------------------|--------------|------------------|------------------|---------------------|------------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 414 949 | 6.3% | 2.2% | 65.7% | 2 322 224 | 2 346 242 | -1.0% | 4 929 609 | 69.1% |
| Coal ⁴ | 389 762 | 7.8% | 2.2% | 61.7% | 2 182 163 | 2 173 824 | 0.4% | 4 567 347 | 64.0% |
| Oil ⁴ | 867 | 7.2% | 2.2% | 0.1% | 4 828 | 4 861 | -0.7% | 10 213 | 0.1% |
| Natural Gas ⁴ | 16 255 | -14.7% | 2.2% | 2.6% | 90 077 | 114 476 | -21.3% | 240 522 | 3.4% |
| Combustible Renewables ⁴ | 6 902 | -10.3% | 2.2% | 1.1% | 38 643 | 46 228 | -16.4% | 97 127 | 1.4% |
| Other Combustibles ⁴ | 1 163 | 2.0% | 2.2% | 0.2% | 6 512 | 6 853 | -5.0% | 14 399 | 0.2% |
| Nuclear | 30 328 | 14.0% | 2.2% | 4.8% | 163 770 | 152 173 | 7.6% | 331 265 | 4.6% |
| Hydro | 130 111 | 5.3% | 41.9% | 20.6% | 511 571 | 560 383 | -8.7% | 1 254 465 | 17.6% |
| Wind⁵ | 34 164 | 13.5% | -18.7% | 5.4% | 227 389 | 214 006 | 6.3% | 401 643 | 5.6% |
| Solar⁵ | 21 722 | 12.0% | -7.4% | 3.4% | 126 772 | 106 235 | 19.3% | 217 377 | 3.0% |
| Geothermal | 10 | - | - | 0.0% | 58 | 59 | -1.1% | 118 | 0.0% |
| Other Renewables | 1 | - | - | 0.0% | 5 | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 192 909 | 6.7% | 17.7% | 30.6% | 904 439 | 926 911 | -2.4% | 1 970 730 | 27.6% |
| NON-RENEWABLES | 438 375 | 7.1% | 2.2% | 69.4% | 2 447 351 | 2 452 187 | -0.2% | 5 163 747 | 72.4% |
| TOTAL NET PRODUCTION | 631 284 | 7.0% | 6.5% | | 3 351 790 | 3 379 098 | -0.8% | 7 134 477 | |

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

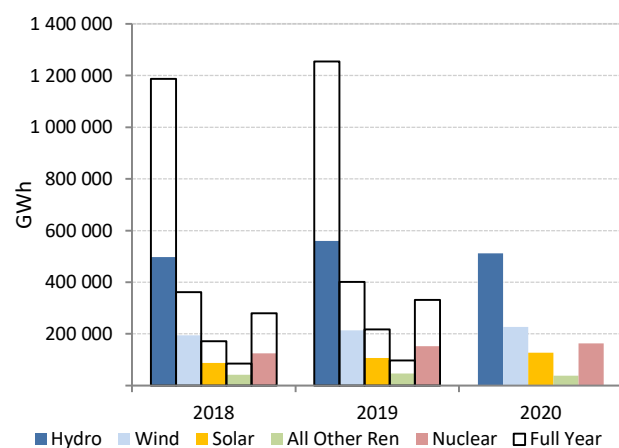
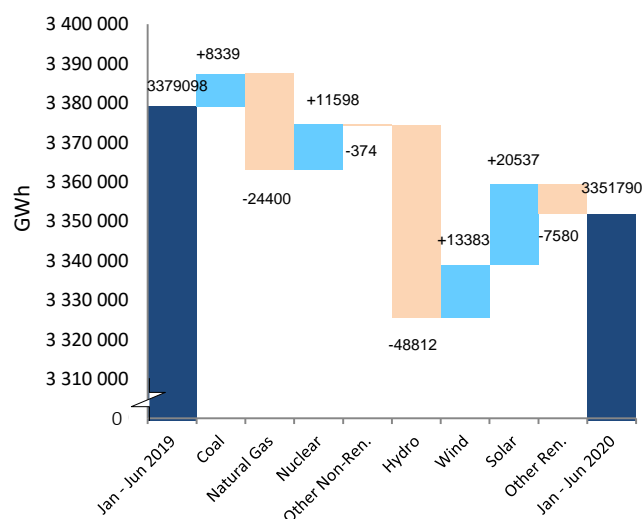
Electricity Production



Electricity Production by Fuel



Low-carbon Power Jan - Jun

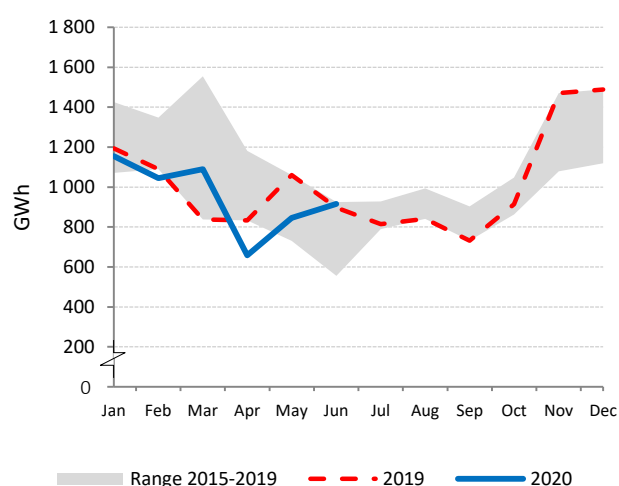
Electricity Production Variation
Jan - Jun 2019 vs. Jan - Jun 2020

CROATIA

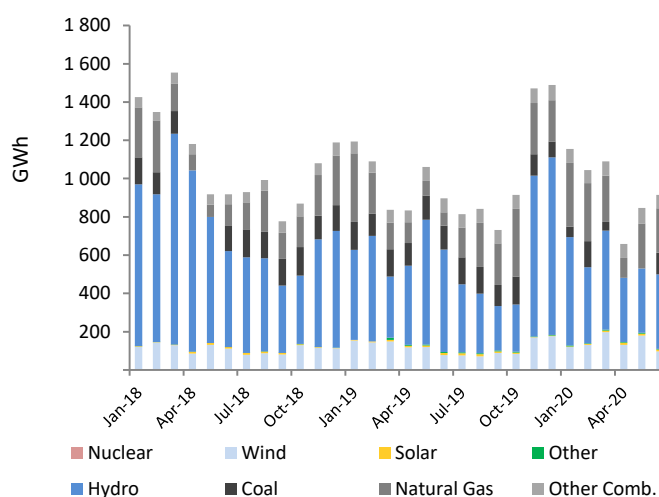
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-----------------------------|------------|---------------------|---------------------|--------------|--------------|--------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 416 | 56.0% | 31.7% | 45.4% | 2 238 | 2 135 | 4.8% | 4 749 | 39.0% |
| Coal | 113 | -8.9% | - | 12.4% | 351 | 774 | -54.6% | 1 507 | 12.4% |
| Oil | 0 | -90.6% | -43.6% | 0.0% | 3 | 8 | -55.1% | 32 | 0.3% |
| Natural Gas | 232 | 235.2% | -1.6% | 25.4% | 1 447 | 966 | 49.8% | 2 405 | 19.8% |
| Combustible Renewables | 70 | 1.5% | -11.5% | 7.6% | 437 | 387 | 12.9% | 804 | 6.6% |
| Other Combustibles | - | - | - | - | - | - | - | - | - |
| Nuclear | - | - | - | - | - | - | - | - | - |
| Hydro | 389 | -27.6% | 15.5% | 42.5% | 2 541 | 2 946 | -13.7% | 5 859 | 48.1% |
| Wind | 96 | 24.2% | -46.2% | 10.5% | 855 | 764 | 12.0% | 1 431 | 11.8% |
| Solar | 10 | -16.9% | 0.3% | 1.1% | 46 | 43 | 6.8% | 83 | 0.7% |
| Geothermal | 5 | 13.8% | -5.1% | 0.5% | 28 | 25 | 13.9% | 51 | 0.4% |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 569 | -18.5% | -6.6% | 62.2% | 3 907 | 4 164 | -6.2% | 8 229 | 67.6% |
| NON-RENEWABLES | 346 | 75.0% | 46.2% | 37.8% | 1 801 | 1 748 | 3.1% | 3 944 | 32.4% |
| TOTAL NET PRODUCTION | 915 | 2.1% | 8.2% | | 5 709 | 5 912 | -3.4% | 12 173 | |

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

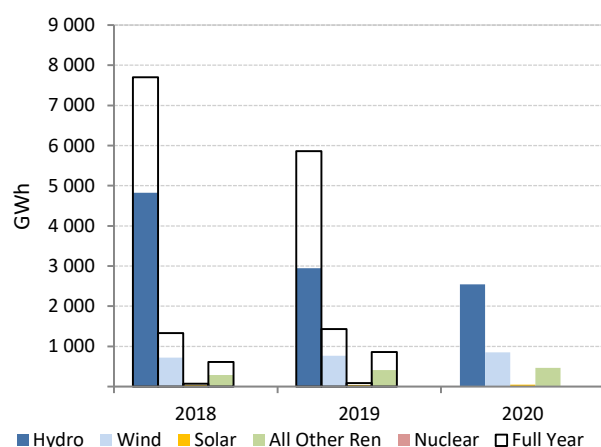
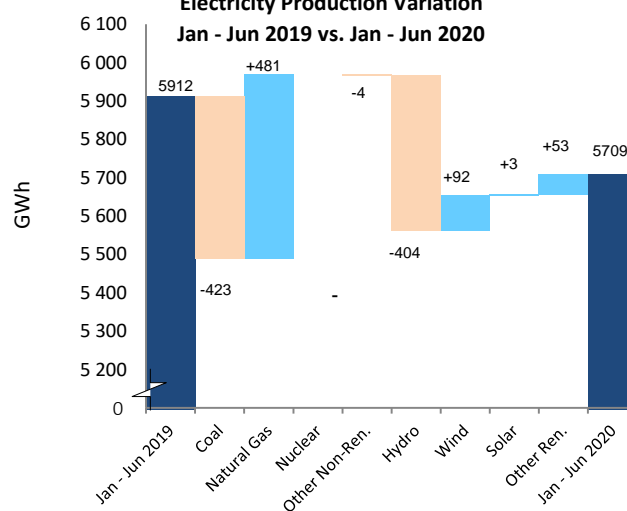
Electricity Production



Electricity Production by Fuel



Low-carbon Power Jan - Jun

Electricity Production Variation
Jan - Jun 2019 vs. Jan - Jun 2020

INDIA

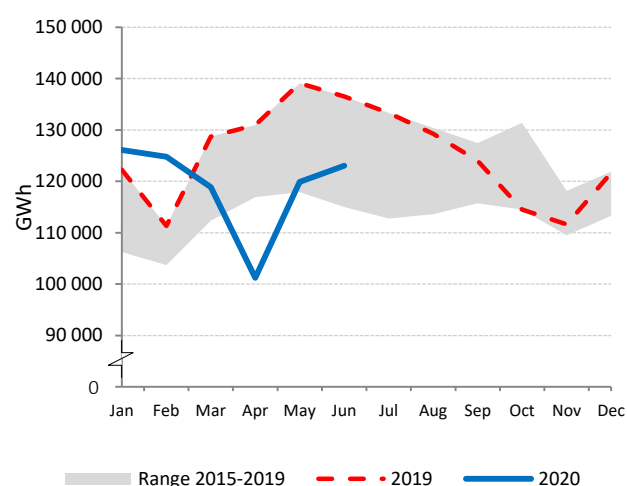
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|---------------------------------|----------------|---------------------|---------------------|--------------|----------------|----------------|---------------------|------------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 87 651 | -15.8% | -1.0% | 71.2% | 557 402 | 631 567 | -11.7% | 1 183 019 | 78.7% |
| Coal | 78 061 | -18.7% | 0.6% | 63.5% | 490 672 | 566 790 | -13.4% | 1 066 480 | 70.9% |
| Oil ⁴ | 708 | 52.1% | -3.2% | 0.6% | 4 004 | 3 747 | 6.8% | 6 900 | 0.5% |
| Natural Gas | 7 048 | 17.4% | -2.8% | 5.7% | 36 720 | 33 126 | 10.8% | 66 588 | 4.4% |
| Combustible Renewables | 1 775 | 16.8% | -37.2% | 1.4% | 25 653 | 27 552 | -6.9% | 42 347 | 2.8% |
| Other Combustibles ⁴ | 59 | - | - | 0.0% | 352 | 352 | - | 703 | 0.0% |
| Nuclear | 3 564 | -7.1% | -0.9% | 2.9% | 20 911 | 19 360 | 8.0% | 42 599 | 2.8% |
| Hydro | 18 522 | 18.8% | 20.5% | 15.1% | 74 194 | 68 217 | 8.8% | 167 836 | 11.2% |
| Wind | 8 516 | -6.5% | 26.6% | 6.9% | 30 006 | 25 912 | 15.8% | 63 537 | 4.2% |
| Solar | 4 766 | 23.0% | -16.1% | 3.9% | 31 355 | 23 789 | 31.8% | 46 226 | 3.1% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 33 579 | 11.6% | 9.7% | 27.3% | 161 208 | 145 470 | 10.8% | 319 945 | 21.3% |
| NON-RENEWABLES | 89 440 | -15.9% | 0.2% | 72.7% | 552 659 | 623 375 | -11.3% | 1 183 271 | 78.7% |
| TOTAL NET PRODUCTION | 123 019 | -9.9% | 2.6% | | 713 867 | 768 844 | -7.2% | 1 503 216 | |

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

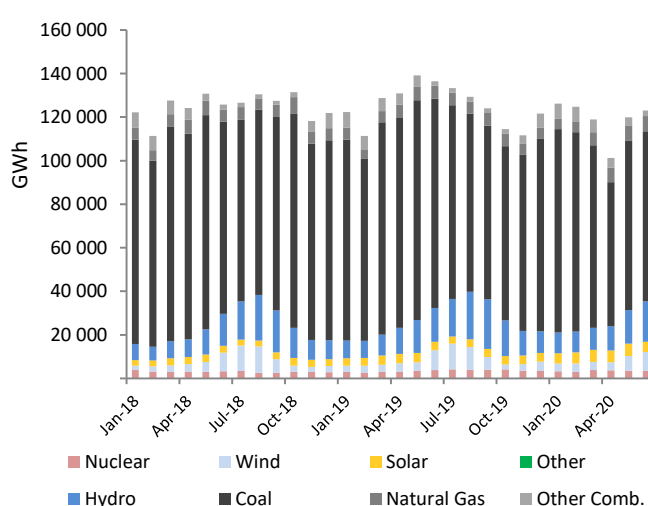
Distributed generation is estimated by the IEA Secretariat

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

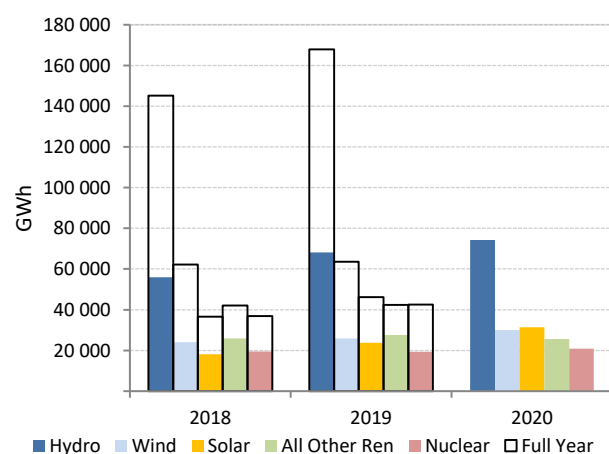
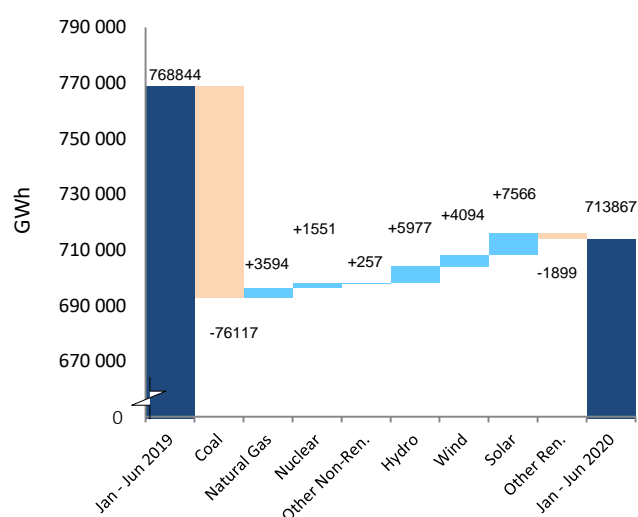
Electricity Production



Electricity Production by Fuel



Low-carbon Power Jan - Jun

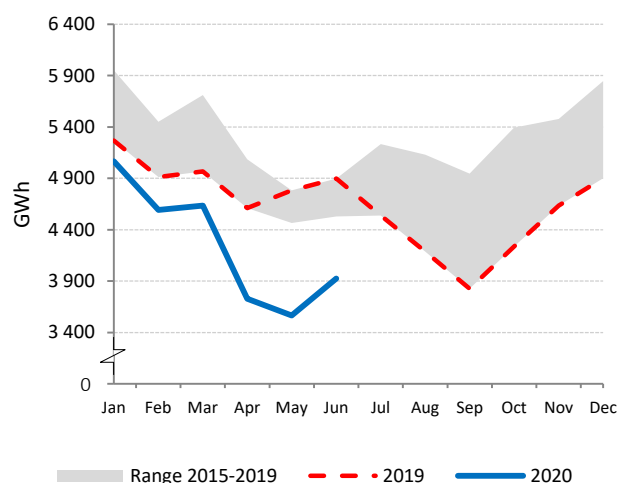
Electricity Production Variation
Jan - Jun 2019 vs. Jan - Jun 2020

ROMANIA

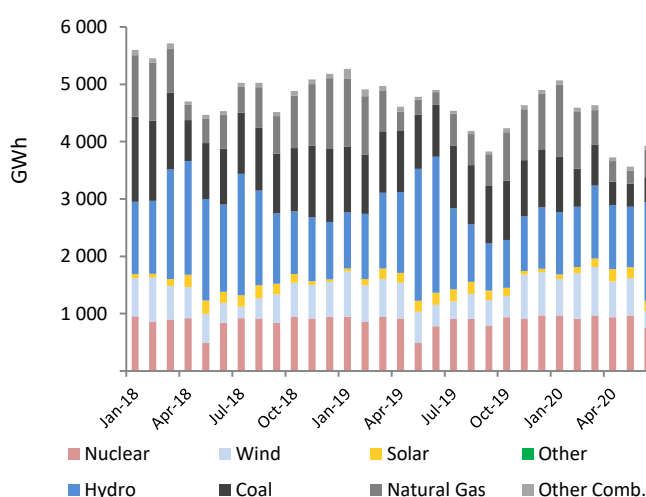
| | Jun 2020 | | | | Year-to-Date | | | 2019 | |
|-----------------------------|--------------|---------------------|---------------------|--------------|---------------|---------------|---------------------|---------------|--------------|
| | GWh | change ¹ | change ² | share | 2020 | 2019 | change ³ | GWh | share |
| CONVENTIONAL THERMAL | 977 | -16.0% | 39.5% | 24.9% | 7 940 | 10 443 | -24.0% | 21 307 | 38.2% |
| Coal | 433 | -52.0% | 8.7% | 11.0% | 3 588 | 6 149 | -41.6% | 12 303 | 22.1% |
| Oil | 37 | 66.7% | - | 1.0% | 194 | 351 | -44.7% | 508 | 0.9% |
| Natural Gas | 482 | 117.3% | 110.2% | 12.3% | 3 914 | 3 748 | 4.4% | 8 089 | 14.5% |
| Combustible Renewables | 25 | 60.0% | -30.4% | 0.6% | 243 | 195 | 24.6% | 407 | 0.7% |
| Other Combustibles | - | - | - | - | - | - | - | - | - |
| Nuclear | 754 | -3.0% | -21.6% | 19.2% | 5 501 | 4 922 | 11.8% | 10 354 | 18.6% |
| Hydro | 1 723 | -27.3% | 63.3% | 43.9% | 7 304 | 9 519 | -23.3% | 15 619 | 28.0% |
| Wind | 283 | -24.9% | -57.0% | 7.2% | 3 843 | 3 642 | 5.5% | 6 705 | 12.0% |
| Solar | 186 | -11.5% | -1.6% | 4.7% | 921 | 915 | 0.7% | 1 777 | 3.2% |
| Geothermal | - | - | - | - | - | - | - | - | - |
| Other Renewables | - | - | - | - | - | - | - | - | - |
| Non-Specified | - | - | - | - | - | - | - | - | - |
| RENEWABLES | 2 217 | -25.5% | 14.4% | 56.5% | 12 311 | 14 271 | -13.7% | 24 508 | 44.0% |
| NON-RENEWABLES | 1 707 | -11.3% | 4.9% | 43.5% | 13 198 | 15 170 | -13.0% | 31 254 | 56.0% |
| TOTAL NET PRODUCTION | 3 924 | -19.9% | 10.1% | | 25 509 | 29 441 | -13.4% | 55 763 | |

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

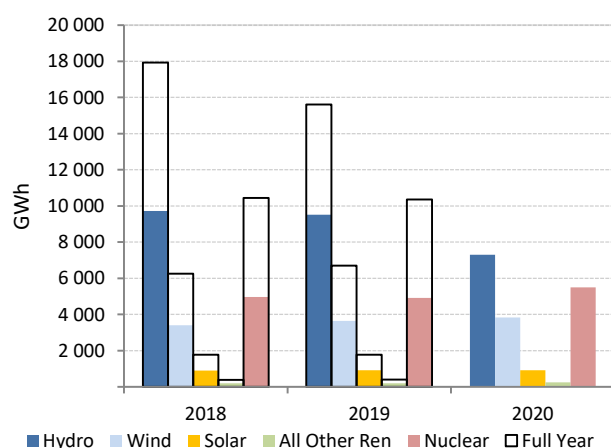
Electricity Production



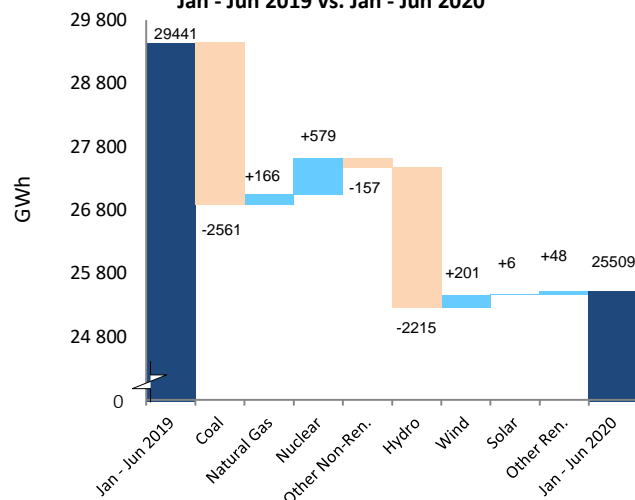
Electricity Production by Fuel



Low-carbon Power Jan - Jun



Electricity Production Variation Jan - Jun 2019 vs. Jan - Jun 2020



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.

Starting in April 2020, the Monthly Electricity Statistics include a separate annex containing a selection of 6 additional economies, including 3 IEA Association countries. This addition provides production data for the selected countries with the same aim of reporting 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. The countries shown in this annex are not included in the aggregate totals in other

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.
- 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/</i> | |
| <i>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:
<https://www.iea.org/reports/monthly-oecd-electricity-statistics/>
- 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/terms>

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 the main report are solely for illustrative purposes and currently cover trade in 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.

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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.

The last coal power plant in Austria closed in April 2020. From then on, coal production comes from autoproducer CHP plants and is mainly from coal products.

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.

The last main activity coal power plant closed in March 2016. From then on, coal production in Belgium is mainly from manufactured gases.

CANADA

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

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

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

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

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

CHILE

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

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

Annual data for 2014 were estimated by the IEA Secretariat.

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

CZECH REPUBLIC

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

DENMARK

Excludes the Faroe Islands and Greenland.

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

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

ESTONIA

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

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

FINLAND

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

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

FRANCE

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

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

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

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

GERMANY

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

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

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

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

GREECE

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

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

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

HUNGARY

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

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

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

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

ICELAND

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

IRELAND

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

ITALY

Includes San Marino and the Vatican.

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

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

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

JAPAN

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

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

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

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

Since April 2017 electricity generation from biomass and was 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.

Monthly electricity production data does not include trade data and transmission and distribution losses which are estimated by the IEA Secretariat.

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.

The last coal-fired power plant in Sweden closed in April 2020.

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.

Selected Association countries and other non-OECD Economies

Monthly Electricity Statistics is consistent with historical annual data.

Monthly Electricity Statistics for this annex only cover production data, as trade data is not available for all considered countries

ARGENTINA

Monthly production data only include main electricity producers. The rest of the electricity generation is estimated by the IEA Secretariat based on the annual submissions.

Monthly reporting includes Paraguayan hydro production from the Yacyreta binational dam. The Paraguayan share is estimated by the IEA Secretariat then discounted from the total Argentinian hydro production.

BRAZIL

Monthly production data only include main electricity producers. The rest of the electricity generation is estimated by the IEA Secretariat based on the annual submissions.

Monthly reporting includes Paraguayan hydro production from the Itaipu binational dam. The Paraguayan share is estimated by the IEA Secretariat then discounted from the total Brazilian hydro production.

CHINA

Raw monthly production data is collected from the National Bureau of Statistics in gross values. All the data in the MES Report is presented in net values, therefore Chinese net production data is calculated based on IEA Secretariat estimates.

Raw production data for the months of January and February is reported combined. The IEA Secretariat have estimated production data for these two months based on annual data and the FGE China Gas Monthly Report.

Monthly reporting did not include disaggregated production from combustible fuels, therefore it is estimated by the IEA Secretariat based on annual data.

Monthly reporting did not include production from geothermal, therefore it is estimated by the IEA Secretariat based on annual data.

Monthly reporting did not include production from other renewables sources, therefore it is estimated by the IEA Secretariat based on annual data.

CROATIA

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2015 until December 2016.

From January 2016 onwards, solar production was included in the monthly reporting.

INDIA

Raw monthly production data is collected from the Central Electricity Authority in gross values. All the data in the MES Report is presented in net values, therefore Indian net production data is calculated based on IEA Secretariat estimates.

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

Monthly production data only include main electricity producers. The rest of the electricity generation is estimated by the IEA Secretariat based on the annual submissions.

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

ROMANIA

Monthly reporting did not include production from solar, therefore it was estimated by the IEA Secretariat based on annual submission from January 2015 until December 2016.

From January 2016 onwards, solar production was included in the monthly reporting.

Statistics report

Overall responsibility

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