



# Statistical Review of World Energy – 2021

## The global energy market in 2020

World primary energy consumption and global carbon emissions from energy use both witnessed annual decreases in 2020, their largest since WWII

1. Primary energy consumption fell by 4.5% in 2020 with oil demand accounting for 73% of the decrease
2. Renewables power grew by a record 358 TWh and increased its share of total generation to 12%
3. Carbon emissions fell by 6.3% and the carbon intensity of the energy mix (the average carbon emitted per unit of energy used) declined by 1.8%

### -4.5%

Decline in primary energy consumption in 2020

### -6.3%

Decline in CO<sub>2</sub> emissions in 2020

### +9.7%

Growth in renewables consumption in 2020

### -9.7%

Decline in oil consumption in 2020

- ▶ Energy consumption decreased by 4.5% in 2020, falling across all regions.
- ▶ CO<sub>2</sub> emissions from energy use decreased by 6.3% to their lowest level since 2011.
- ▶ Both energy consumption and carbon emissions declined for the first time since 2009 and saw their largest decrease since World War II.
- ▶ The fall in oil demand accounted for 63% of the decrease in carbon emissions.
- ▶ Oil demand declined by 9.7% (-18 EJ), making up 73% of the decrease in total primary energy consumption in 2020. While its share decreased to 31%, oil continues to make up the largest share of the energy mix.
- ▶ Gas consumption declined by 2.3% (-81 bcm). Against global decline in gas demand, China's gas consumption increased in 2020, growing by 6.9% (22 bcm).
- ▶ Coal consumption declined by 4.2%, but its share of energy consumption was stable vs 2019 levels at 27%.
- ▶ Renewables consumption increased 9.7%, raising the share of renewables in the energy mix to 5.7%, from 5.0% in 2019.
- ▶ Electricity generation declined by 0.9% in 2020 (-178 TWh). The largest generation decrease came from coal, which fell by 4.4% (-405 TWh).
- ▶ Renewables power grew by a record 358 TWh and increased its share of total generation to 12%, from 10% in 2019 – the largest ever expansion in its share of power generation.
- ▶ Wind and solar generation capacity increased by a record 238 GW in 2020, 52% more than the previous record increment in 2019.
- ▶ Global oil production declined 6.6 Mb/d, driven by both OPEC (-4.3 Mb/d) and non-OPEC (-2.3 Mb/d).
- ▶ Gas production decreased by 123 bcm (-3.3%), with the largest drops seen in Russia (-41 bcm) and the US (-15 bcm).





Units in EJ unless otherwise stated	Level			Growth rate per annum				Share		
				(%)		(EJ)		(%)		
	2009	2019	2020	2009-19	2020	2009-19	2020	2009	2019	2020
<b>Consumption</b>										
Primary energy	482	582	557	1.9	-4.5	10	-25	100	100	100
Oil	167	192	174	1.4	-9.7	2.5	-18	35	33	31
Natural gas	106	141	138	2.9	-2.3	3.5	-2.9	22	24	25
Coal	145	158	151	0.9	-4.2	1.3	-6.2	30	27	27
Nuclear	25	25	24	-0.2	-4.1	-0.1	-0.9	5.3	4.3	4.3
Hydro	31	38	38	2.1	1.0	0.7	0.5	6.4	6.5	6.9
Renewables	8.2	29	32	13	9.7	2.1	2.9	1.7	5.0	5.7
Wind	2.6	13	14	17	11	1.0	1.5	0.5	2.2	2.5
Solar	0.2	6.3	7.6	41	20	0.6	1.3	0.0	1.1	1.4
Other renewables*	5.4	9.9	10	6.3	0.8	0.5	0.1	1.1	1.7	1.8
<b>Native units</b>										
Oil (Mb/d)	84	98	88	1.5	-9.3	1.4	-9.1			
Natural gas (bcm)	2,942	3,904	3,823	2.9	-2.3	96	-81			
<b>Electricity generation (TWh)</b>										
Total	20,041	25,675	26,615	2.9	-0.9	674	-178	100	100	100
Oil	994	821	758	-1.9	-7.9	-17	-62	4.9	3.0	2.8
Natural gas	4,452	6,324	6,268	3.6	-1.2	187	-56	22	23	23
Coal	8,115	9,826	9,421	1.9	-4.4	171	-405	40	36	35
Nuclear	2,699	2,797	2,700	0.4	-3.7	9.8	-96	13	10	10
Hydro	3,252	4,228	4,297	2.7	1.4	98	69	16	16	16
Renewables	636	2,789	3,147	16	13	215	358	3.1	10	12
<b>Production</b>										
Oil (Mb/d)	81	95	88	1.5	-6.9	1.3	-6.6			
Biofuels (Kboe/d)	978	1,790	1,677	6.2	-6.3	81	-113			
Natural gas (bcm)	2,941	3,976	3,854	3.1	-3.3	103	-123			
Coal	143	168	160	1.6	-5.2	2.5	-8.3			
<b>Carbon</b>										
CO <sub>2</sub> emissions (billion tonnes)	30	34	32	1.4	-6.3	0.4	-2.1			
<b>Macro</b>										
Population (millions)	6,874	7,715	7,796	1.2	1.1	84	81			
GDP (USD billion – PPP, 2015)	89,854	127,453	123,182	3.6	-3.4	3,760	-4,272			

EJ = exajoules

\*includes biomass, geothermal and biofuels