



Statistical Review of World Energy – 2022

The US energy system in 2021

US oil consumption grew 1.5 Mb/d in 2021, the most of any country, still 4% below 2019 levels, while refining capacity was 1 Mb/d lower than 2019. Emissions bounced back as well in 2021 but remain 6% below 2019 levels at 5.2 GtCO_{2e}

1. The US remained the world's largest oil and gas producer, accounting for almost 20% and almost 23% of the world's output of those fuels, respectively
2. LNG exports increased by more than 50% and accounted for almost 20% of global LNG trade
3. Renewables' share (excluding hydro) in the power mix increased to 14% last year as solar and wind generation increased by 25% and 12%, respectively

5.3%

Increase in US primary energy consumption

18%

Share of global LNG exports

-1.1%

Decrease in refining capacity

-22%

Decrease in natural gas flaring

- ▶ Primary energy consumption increased by 5.3%. The largest absolute increase was in oil at 2.8 EJ. Despite the increase in energy use, natural gas consumption stayed roughly flat.
- ▶ Energy consumption per capita increased from 2020 but fell over 3% since 2019. The rate of decline over the past decade has been around half the rate of decline seen during the previous decade to 2011.
- ▶ Renewables (including hydro) accounted for 11% of primary energy consumption.
- ▶ Electricity generation bounced back to levels of 2019, but the fossil fuel share declined 2pp to 61%.
- ▶ Gas's share of the power mix fell to below 40%, while coal's share increased 3 percentage points to 22%, the second largest increase in coal-fired generation globally.
- ▶ Oil production rebounded only slightly in 2021, still 3% below 2019 levels, as producers retained capital discipline.
- ▶ US refining capacity has fallen by 1 Mb/d since 2019, with most of the closures taking place in 2020.
- ▶ Production of natural gas increased by 2% to over 90 Bcf/d (934 Bcm) as the US remains the world's largest producer.
- ▶ Despite the increase in gas production, gas flaring fell sharply by 22% to around 1 Bcf/d (9.7 Bcm).
- ▶ Renewable energy generation grew by 77 TWh in 2021, three times as much as in Europe, but less than a third of the growth seen in China.
- ▶ Net LNG exports increased to 9.1 Bcf/d (94 Bcm) in 2021, 50% higher than 2020. US LNG exports now account for 18.4% of global LNG trade, up from 1% just five years ago.
- ▶ Net CO_{2e} emissions from energy, methane, flaring, and industrial processes rose by 6.1% to 5.2 billion tonnes in 2021 but remain 6% lower than 2019 levels.





Units in EJ unless otherwise stated	Level			Growth rate per annum				Share		
	2010	2020	2021	(%)		(EJ)		(%)		
				2010-20	2021	2010-20	2021	2010	2020	2021
Consumption										
Primary energy	93	89	93	-0.6	5.3	-4.9	4.4	100	100	100
Oil	36	33	35	-0.9	8.9	-3.1	2.8	38	37	38
Natural gas	23	30	30	2.5	-0.4	6.6	-0.2	25	34	32
Coal	21	9.2	11	-7.9	15	-12	1.4	22	10	11
Nuclear	8.1	7.5	7.4	-0.8	-1.6	-0.6	-0.1	8.7	8.5	8.0
Hydro	2.6	2.7	2.4	0.4	-9.0	0.1	-0.2	2.8	3.0	2.6
Renewables	2.9	6.7	7.5	8.7	12.8	3.8	0.8	3.1	7.5	8.0
Wind	1.0	3.2	3.6	12.9	12.3	2.3	0.4	1.0	3.6	3.9
Solar	0.0	1.2	1.6	45.1	25.1	1.2	0.3	0.0	1.4	1.7
Other renewables*	1.9	2.2	2.3	1.3	6.4	0.3	0.1	2.0	2.5	2.5
Native units										
Oil (Mb/d)	18,322	17,183	18,684	-0.7	9.0	-1,138	1,501			
Natural gas (bcm)	648	832	827	2.5	-0.4	184	-5.2			
Electricity generation (TWh)										
Total	4,394	4,285	4,406	-0.3	3.1	-109	122	100	100	100
Oil	40	19	20	-7.3	8.6	-21	1.5	0.9	0.4	0.5
Natural gas	1,062	1,746	1,694	5.1	-2.7	684	-53	24	41	38
Coal	1,998	844	978	-8.3	16	-1,154	134	45	20	22
Nuclear	849	831	819	-0.2	-1.2	-18	-12	19	19	19
Hydro	257	283	258	0.9	-8.6	26	-25	5.9	6.6	5.8
Renewables	174	548	624	12	14	374	77	4.0	13	14
Other †	13	13	13	0	-5.3	0	-0.8	0.3	0.3	0.3
Production										
Oil (Mb/d)	7,559	16,458	16,585	8.1	1.1	8,899	128			
Biofuels (Kboe/d)	499	602	643	1.9	7.1	103	41			
Natural gas (bcm)	575	916	934	4.7	2.3	341	18			
Coal (Mt)	984	486	524	-6.8	8.3	-498	39			
Emissions										
Total CO ₂ e (Mt) ‡	5,815	4,884	5,168	-1.8	6.1	-932	284			
CO ₂ from energy (Mt)	5,486	4,421	4,701	-2.2	6.6	-1,065	280			
Macro										
Population (millions)	309	331	332	0.7	0.5	22	0.7			
GDP (USD billion – PPP, 2015)	16,383	19,247	20,339	1.6	6.0	2,864	1,091			

EJ = exajoules

* Includes biomass, geothermal and biofuels

† Includes sources not specified elsewhere, e.g. pumped hydro, non-renewable waste and statistical discrepancies.

‡ Total emissions include CO₂ emissions from energy use, most non-energy related industrial processes, and natural gas flaring, plus methane emissions associated with the production, transmission and distribution of fossil fuels, expressed in CO₂ equivalent terms.