



# Statistical Review of World Energy – 2022

## The Indian energy system in 2021

India's primary energy consumption bounced back in 2021 – at 3.7% above its pre-pandemic level in 2019. Except for nuclear and hydro, all fuels saw their consumption increase in 2021

1. Economic recovery post-Covid saw GDP increase by 8.8%
2. Coal was the fastest-growing fuel, at 8.1% above its pre-pandemic level
3. The share of renewables (excluding hydro) in power reached 10% for the first time

### 10%

Increase in India's primary energy consumption

### 12%

Increase in carbon emissions

### 4%

Increase in oil consumption

### 13%

Increase in renewable primary energy

- ▶ Primary energy consumption increased from 32 to 35 EJ – a 10% annual increase.
- ▶ The combined share of energy consumption from oil, gas and coal stood at 90%, similar to its pre-pandemic level.
- ▶ Coal was the fastest-growing fuel, increasing 16%, and 8% above its 2019 level.
- ▶ The share of coal in primary energy was 57%, compared to 24% at a global level; India accounts for 12.5% of global coal consumption.
- ▶ India was the second-largest producer of coal in the world (behind China).
- ▶ Natural gas consumption increased to 62 bcm (a 3.1% increase). However, the share of natural gas in primary energy decreased from 6.8% to 6.3%.
- ▶ Natural gas production increased by 20% to 29 bcm, still below the peak of 47 bcm in 2010. LNG imports decreased by 8.1% to 33.6 bcm, with Qatar providing the largest share (41%).
- ▶ Renewables grew by 13.2%, but their share of primary energy increased only by 0.1 percentage points to 5%.
- ▶ India installed 10.3 GW of solar and 1.5 GW of onshore wind, with the solar additions being a record amount for India. The total installed capacity at the end of 2021 amounts to 49.3 GW for solar and 40.1 GW for onshore wind.
- ▶ Total electricity generation increased from 1,563 TWh to 1,715 TWh, an increase of 10%. Coal's share in power generation increased from 72% in 2019 to 74%. Renewables (excluding hydro) generation increased from 152 to 172 TWh, reaching the 10% share threshold for the first time, and surpassing hydro.
- ▶ Indian biofuels production went from 23 to 37 kboe/d, an increase of 60%; biofuel consumption increased from 36 to 43 kboe/d, so India's reliance on biofuels imports decreased.
- ▶ CO<sub>2</sub> emissions from energy use increased by 12% to over 2.5 Gt, exceeding its pre-pandemic level.





Units in EJ unless otherwise stated	Level			Growth rate per annum				Share		
				(%)		(EJ)		(%)		
	2010	2020	2021	2010-20	2021	2010-20	2021	2010	2020	2021
<b>Consumption</b>										
Primary energy	23	32	35	3.6	10	9.6	3.2	100	100	100
Oil	6.6	9.1	9.4	3.2	3.9	2.5	0.3	29	28	27
Natural gas	2.1	2.2	2.2	0.2	3.1	0.1	0.1	9.4	6.8	6.3
Coal	12	17	20	3.6	16	5.3	2.7	54	54	57
Nuclear	0.2	0.4	0.4	6.2	-1.6	0.2	0	1.0	1.3	1.1
Hydro	1.1	1.5	1.5	3.6	-2.2	0.5	0	4.8	4.8	4.3
Renewables	0.4	1.6	1.8	14.7	13.2	1.2	0.2	1.8	4.9	5.0
Wind	0.2	0.6	0.6	11.4	12.6	0.4	0.1	0.9	1.8	1.8
Solar	0.0	0.6	0.6	85.8	16.3	0.6	0.1	0.0	1.7	1.8
Other renewables*	0.2	0.5	0.5	8.4	10.2	0.3	0.0	0.9	1.4	1.4
<b>Native units</b>										
Oil (Mb/d)	3,308	4,701	4,878	3.5	4.0	1,393	177			
Natural gas (bcm)	59	60	62	0.2	3.1	1.5	1.7			
<b>Electricity generation (TWh)</b>										
Total	937	1,563	1,715	5.2	10	626	151	100	100	100
Oil	11	2.1	2.3	-15	9.6	-8.7	0.2	1.1	0.1	0.1
Natural gas	118	74	64	-4.5	-14	-44	-10	13	4.8	3.7
Coal	643	1,126	1,271	5.7	13	483	145	69	72	74
Nuclear	23	45	44	6.8	-1.3	22	-0.7	2.5	2.9	2.6
Hydro	109	164	160	4.1	-1.8	55	-3.4	12	10	9.3
Renewables	34	152	172	16	13	118	20	3.6	9.7	10
Other †	0	0.6	1.1	0	79	0.6	0.5	0	0	0.1
<b>Production</b>										
Oil (Mb/d)	901	771	746	-1.6	-2.9	-131	-25			
Biofuels (Kboe/d)	3.4	23	37	21	60	20	14			
Natural gas (bcm)	47	24	29	-6.7	20	-24	4.8			
Coal (Mt)	573	759	811	2.8	7.1	187	52			
<b>Emissions</b>										
Total CO <sub>2</sub> e (Mt) ‡	1,813	2,494	2,797	3.2	12	681	303			
CO <sub>2</sub> from energy (Mt)	1,648	2,281	2,553	3.3	12	633	272			
<b>Macro</b>										
Population (millions)	1,236	1,382	1,395	1.1	1.2	145	13			
GDP (USD billion – PPP, 2015)	5,223	8,633	9,369	5.1	8.8	3,410	736			

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 CO<sub>2</sub> 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 CO<sub>2</sub> equivalent terms.