

20 November 2023

**Environmental accounts. Physical Energy Flow Accounts
Year 2021**

Energy intensity in Spanish economy decreased by 0.2% in 2021

Household energy consumption increased by 7.9% per capita

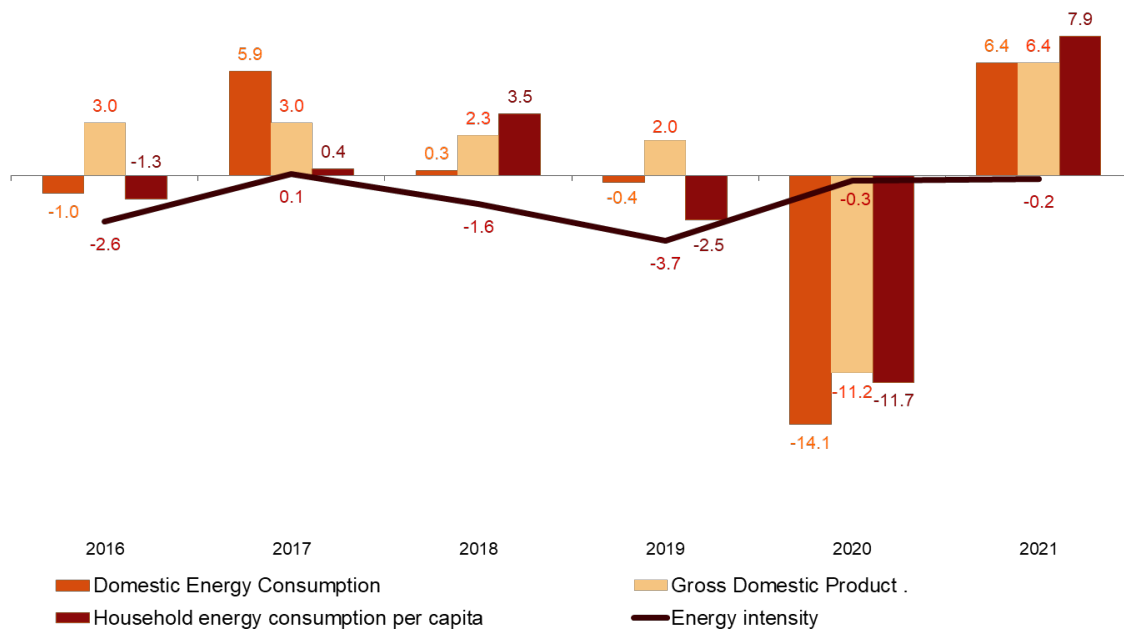
Energy intensity - or net domestic energy use per unit of Gross Domestic Product (GDP) - reached 4.4 Terajoules (TJ) per million euros in 2021, with a decrease of 0.2% in comparison to the year prior.

Domestic energy consumption—which measures the consumption of energy used by the economic sector directly—increased by 6.4% thus reaching 4,767.9 thousand TJ.

In addition, household energy consumption per capita increased by 7.9%, reaching 27.3 TJ per 1,000 inhabitants.

Main indicators

Annual variation rates



Net domestic energy use by activity sector and household

Net domestic energy use—or the amount of energy consumed per economic unit which is no longer available for later use—reached 4,971.1¹ thousand TJ in 2021. Out of this total, 3,611.2 thousand TJ corresponded to the economic activity sector and 1,293.5 thousand corresponded to households.

The most energy-intensive industries were the *Energy, water and waste sector*, with 31.3 TJ per million euros, and *Transport and storage services*, with 12.9 TJ per million euros.

Energy use by activity sector. 2021

Thousands of terajoules and terajoules per million euros

	Net domestic energy use	Over total %	Energy Intensity (EI)	Annual change %
Total branch of activity	3,661.2	100.0	3.582	-0.4
Mining and manufacturing	1,409.8	38.5	10.943	-8.6
Energy, water and waste activities	1,029.3	28.1	31.288	29.8
Transport and storage	558.8	15.3	12.918	3.4
Construction and Services	482.4	13.2	0.615	2.1
Agriculture, livestock, forestry and fishing	180.9	4.9	5.704	1.4

Household energy consumption was 27.3 TJ per 1,000 inhabitants, 7.9% more than the previous year. By type of consumption, 52.3% corresponded to Transport, 35.4% to Heating/Cooling and 12.4% to Others (lighting, household appliances, etc.).

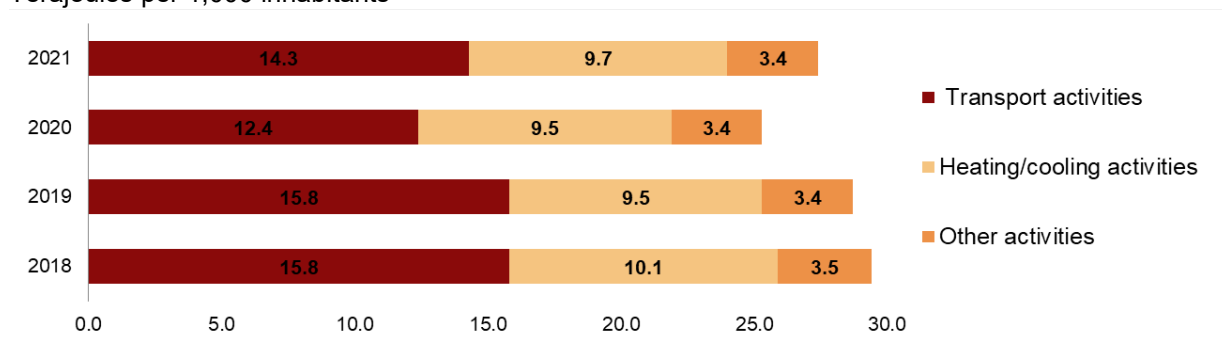
Household energy consumption. 2021

Thousands of terajoules and terajoules per 1,000 inhabitants

	Net domestic energy use	Over total %	Per 1,000 inhabitants	Annual change %
Households	1,293.5	100.0	27.3	7.9
Transport activities	676.2	52.3	14.3	14.8
Heating/cooling activities	457.3	35.4	9.7	1.7
Other activities	160.0	12.4	3.4	-0.2

Household energy consumption. 2021

Terajoules per 1,000 inhabitants



¹ Total domestic energy use corresponds to the sum of domestic energy use of industry sectors and households as final consumers plus statistical adjustments.

Domestic energy consumption components

Domestic energy consumption reached 4,767.9 thousand TJ in 2021, an increase of 6.4% as compared with the previous year. The main component was imports, which reached 4,980.9 thousand TJ, 7.5% more than in 2020.

Domestic energy consumption. 2021

Thousands of terajoules

	Total	Annual change %
Domestic energy consumption	4,767.9	6.4
Extraction of natural energy inputs	1,438.0	2.1
Physical trade balance	3,329.9	8.4
Imports	4,980.9	7.5
Exports	1,651.0	5.8

In terms of sources, renewable natural resources (biomass, wind, solar and hydro) amounted to 825.4 thousand TJ. Biomass was the main natural resource source, accounting for 33.0% of the total, followed by wind with 27.1%.

The renewable natural resources that have grown the most since 2015 were Other (heat pumps, geothermal) by 164.1%, solar-based by 34.6% and wind by 25.8%.

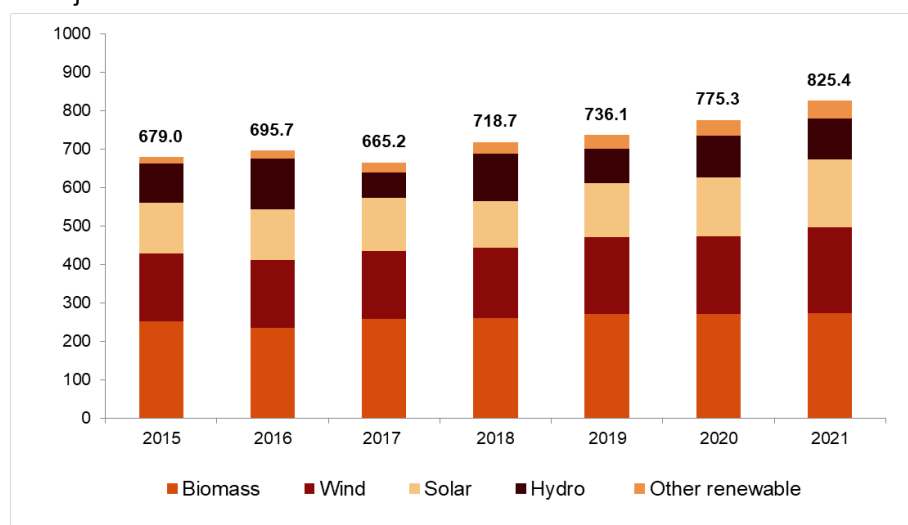
Renewable national natural resources. 2021

Thousands of terajoules

	Total	Over total %	Annual change %	2015-2021 change (%)
Total	825.4	100.0	6.5	21.6
Biomass	272.2	33.0	0.9	8.6
Wind	223.4	27.1	10.0	25.8
Solar	178.1	21.6	17.0	34.6
Hydro	106.7	12.9	-2.9	5.3
Other renewable	45.0	5.5	11.6	164.1

Extraction of natural energy inputs. 2021

Thousands of terajoules



Components of the physical trade balance of energy products

The physical trade balance of energy products (or the difference between imports and exports) was of 3,329.9 thousand TJ in 2021.

By component, the imports with the greatest weight in imports were *Extractive industry products* (78.0% of the total) and those of *Coke and refined petroleum products* (19.3%). In exports, the main product was *Coke and refined petroleum products*, which accounted for 82.3% of the total.

The energy products that generated the largest positive trade balance were *Extractive industry products* (3,761.5 thousand TJ).

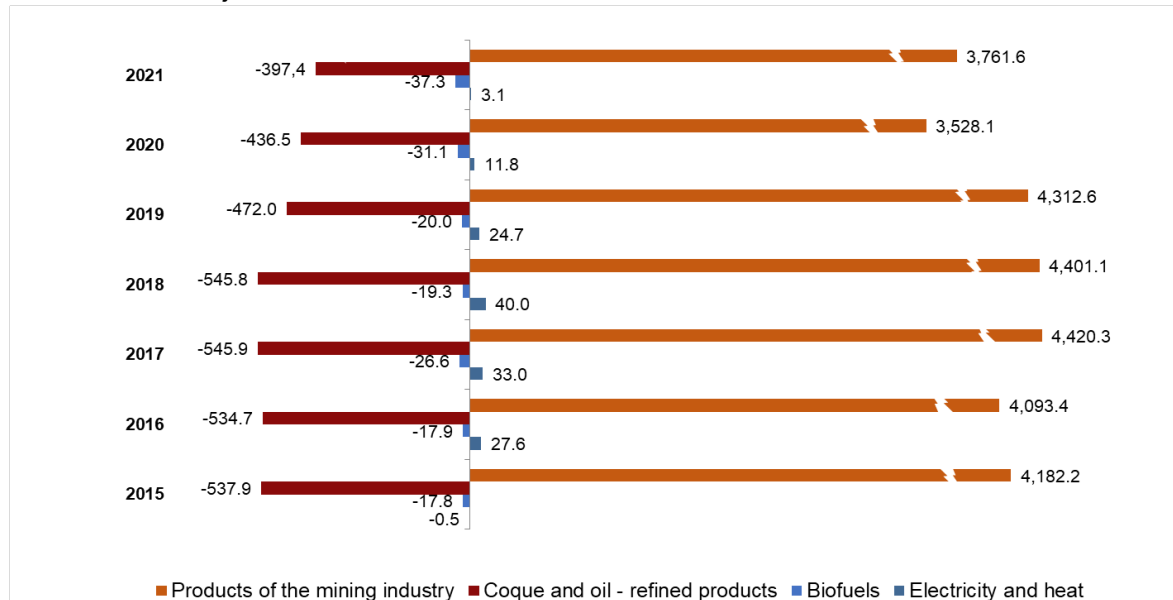
Components of the physical trade balance of energy products. 2021

Thousands of terajoules

	Physical trade balance	Imports	Over total %	Exports	Over total %
Total	3,329.9	4,980.9	100.0	1,651.0	100.0
Products of the mining industry	3,761.5	3,886.8	78.0	125.3	7.6
Coque and oil - refined products	-397.4	961.7	19.3	1,359.1	82.3
Biofuels	-37.3	69.7	1.4	107.0	6.5
Electricity and heat	3.1	62.7	1.3	59.6	3.6

Components of the physical trade balance of energy products. 2021

Thousands of terajoules



Data reviews and updates

The data published today is provisional and will be revised when next year's data is released.

Methodological note

The objective of the Environmental Accounts (EA) is to coherently integrate environmental information into the central system of National Accounts. They include a set of satellite accounts, which are transmitted annually, compiled using the accounting formats applicable to the different sectoral and territorial areas, with a strong use of physical data. They display the interactions among the economy, households and environmental factors.

The Physical Energy Flow Accounts record flows of energy from the environment to the economic system of a country, within the economic system of a country, and from the economic system to the environment. It also computes the flows of energy products with the rest of the world (imports and exports). These accounts make it possible to obtain a set of aggregate indicators on the origin and destination of natural energy resources, which enable the evaluation of energy and environmental sustainability in economic development.

For further information, the methodology can be accessed at:

https://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736177046&menu=ultiDatos&idp=1254735976603

The standardised methodological report can be found at:

<https://www.ine.es/dynt3/metadatos/es/RespuestaDatos.html?oe=30090>

INE statistics are produced in accordance with the Code of Good Practice for European Statistics, which is the basis for the institution's quality policy and strategy. For more information, see the section on [Quality in the INE and Code of Good Practices](#) on the INE website.

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