

Workshop on Energy Statistics, Balances and Accounts for Informed Energy and Climate Policies

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State Statistical Committee of the Republic of Azerbaijan



Legal framework for the formation of energy statistics in official statistics



Regulatory framework for energy statistics:

- The Constitution of the Republic of Azerbaijan
- The Law of the Republic of Azerbaijan "On Official Statistics", 18 February, 1994 (last amended on 15.12.2017)

Other legislative acts of the Republic of Azerbaijan:

- Regulation on the State Statistics Committee of the Republic of Azerbaijan, June 24, 2009, No. 115
- Law of the Republic of Azerbaijan "On Energy", November 24, 1998, No. 541-IG
- Law of the Republic of Azerbaijan "On Electric Power", April 11, 2023, No. 858-VIG
- Law of the Republic of Azerbaijan "On the Use of Renewable Energy Sources in the Production of Electric Power", May 31, 2021, No. 339-VIG
- International treaties to which the Republic of Azerbaijan is a party

Classifiers and guidelines for energy statistics



Methodological documents are reviewed by the Scientific and Methodological Council of the State Statistics Committee.

Cooperation

National level

Ministry of Energy, Ministry of Economy, Ministry of Emergency Situations, Ministry of Ecology and Natural Resources, State Oil Company SOCAR", National Academy of Sciences, "Azerigas", "Azerenergy", "Azerishig", "Azeristiliktechizat", AMOK (BP), Other ministries and organizations

International level



United Nations
Statistics Division



Joint Organizations Data Initiative



IRENA

International Renewable Energy Agency



International
Energy Agency



Oslo Group on
Energy Statistics

Official statistical reports used in collecting data on energy statistics

Statistical reports

Statistical surveys

Other official statistical sources

Administrative data



Form No. 6-TG (hydro)

Form No.1-Energetics

Form No.4-Energetics (Energy of the gas supply enterprise)

Form No.5-Energetics (Energy of the oil (gas) processing enterprise)

Form No.1 Petroleum products

Form No.2-Gas

Form No.1-Balance (oil)

Form No.2-Energy

Form No.4-Energy (On movement of energy products)

Form No.1-Renewable energy

Official statistical reports used in collecting data on energy statistics

No	Indicators	Official statistical reports
1	Production	
	Primary production	Form No.1-Production (industry)/annual; Form No. 6-TG (hydro)/annual
	Oil and other energy products	Form No.1-Production (industry)/annual
2	Import and export	
	Primary energy products	State Customs Committee; Form No.4-Energy (I section)/annual; Form No.4-Energetics/annual;
	Oil and other energy products	Form No.4-Energy/annual; Form No.1 Petroleum products/monthly
3	Transfers	
	Primary energy products	Form No.5-Energetics/annual; Form No.4-Energy (III section)/annual
	Oil and other energy products	Form No.5-Energetics/annual; Form No.4-Energy (III section)/annual
4	Transformation processes	
	Primary energy products	Form No.1-Balance (oil)
	Oil and other energy products	Form No.4-Energy (II section)/annual; Form No.2-Energetics/semiannual/annual; Form No.1-Production (industry)/annual;
5	Energy industries own use	
	Primary energy products	Form No.4-Energy (III section)/annual
	Oil and other energy products	Form No.4-Energy (III section)/annual
6	Losses	
	Primary energy products	Form No.1-Balance (oil); Form No.2-Gas semiannual/annual; Form No.2-Energetics/semiannual/annual; Form No.4-Energy (I section)/annual
	Oil and other energy products	Form No.2-Energetics/semiannual/annual; Form No.4-Energy (I section)/annual
7	Final consumption	
	Final energy consumption	
	Primary energy products	Form No.5-Energetics/annual; Form No.4-Energy (II section)/annual
	Oil and other energy products	Form No.5-Energetics/annual; Form No.4-Energy (II section)/annual
	Final non-energy consumption	
	Primary energy products	Form No.5-Energetics/annual; Form No.4-Energy (II section)/annual
	Oil and other energy products	Form No.5-Energetics/annual; Form No.4-Energy (II section)/annual

Statistical reports

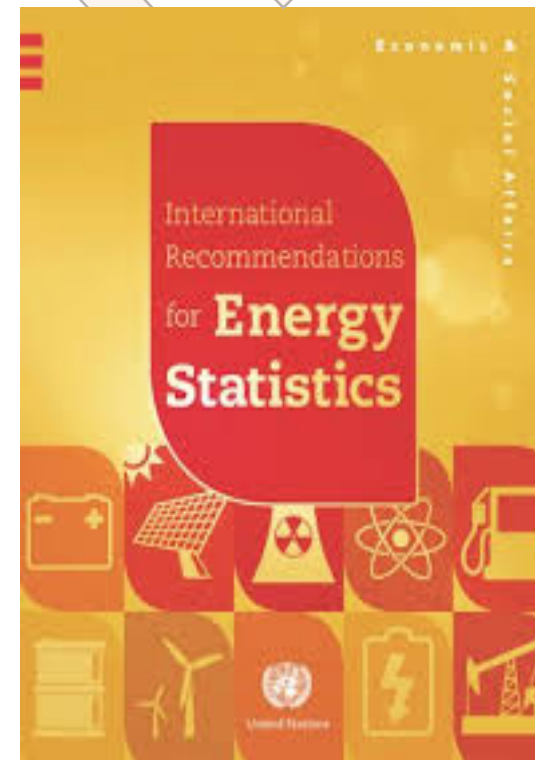
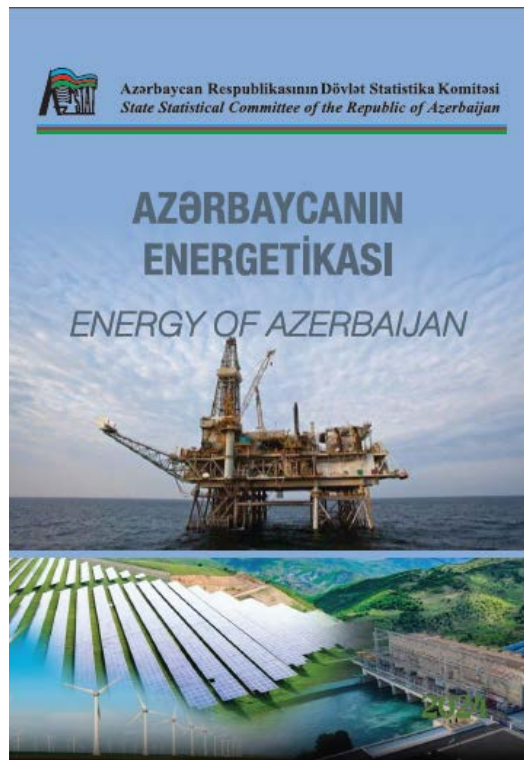


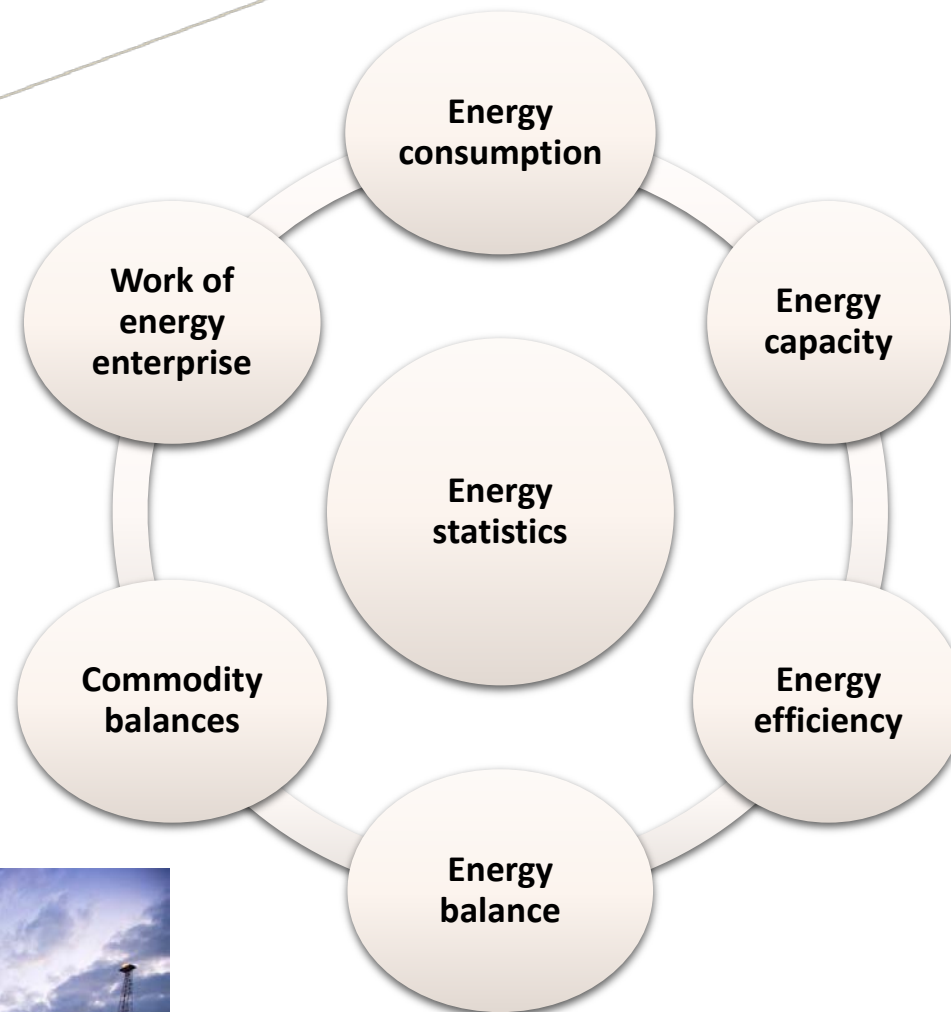
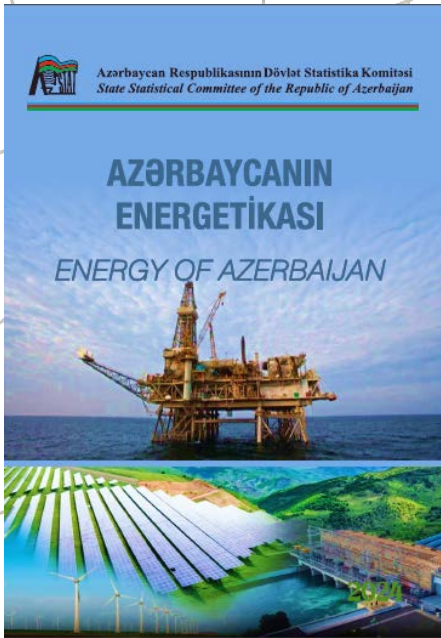
Commodity balances



<https://www.stat.gov.az/>

Energy balance





Work of energy enterprise

- Main indicators of the enterprises operating in the energy sector
- Crude oil and natural gas production, the main indicators of enterprises operating in this field
- Main indicator of manufacture of refined petroleum products
- Main indicators of electricity, gas and steam production, distribution steam of supply
 - Energy consumption and share of electricity in energy consumption
 - Energy capacity (GDP, PPP)*
 - Energy efficiency indicators
 - Renewable energy supply
- Use of fuel types in total energy supply
- Final consumption of energy by types of economic activity

Goals of energy balance

to make the energy sector more transparent and efficient by applying international statistical standards in the country

to carry out statistical research and analysis of changes and trends in the production and consumption structure of energy products

to provide the country's government with the necessary statistical information

for determining the development directions of the energy sector

for the preparation of the country's national energy balance for the following years

for making decisions in the field of energy

Increasing the importance of energy statistics by providing complete and agreed information on the country's energy situation;

Providing detailed information on the demand and supply of energy in the country for the purpose of studying the situation on energy security, effective functioning of energy markets, as well as for the purpose of formulating energy policy

Serving as a quality tool that ensures the completeness, relevance and comparability of basic statistical data

Ensuring comparability between different base periods and different countries

Provision of information in the assessment of CO₂ (carbon dioxide) emissions on the national territory

Provision of key indicators covering the role of energy in the country's economy

Calculation of the effectiveness of conversion processes taking place in the country (for example, processing, production of electricity by burning fuel, etc.)

Calculation of relative shares of supply/consumption of various products (including renewable versus non-renewable) in the total supply/consumption of the country

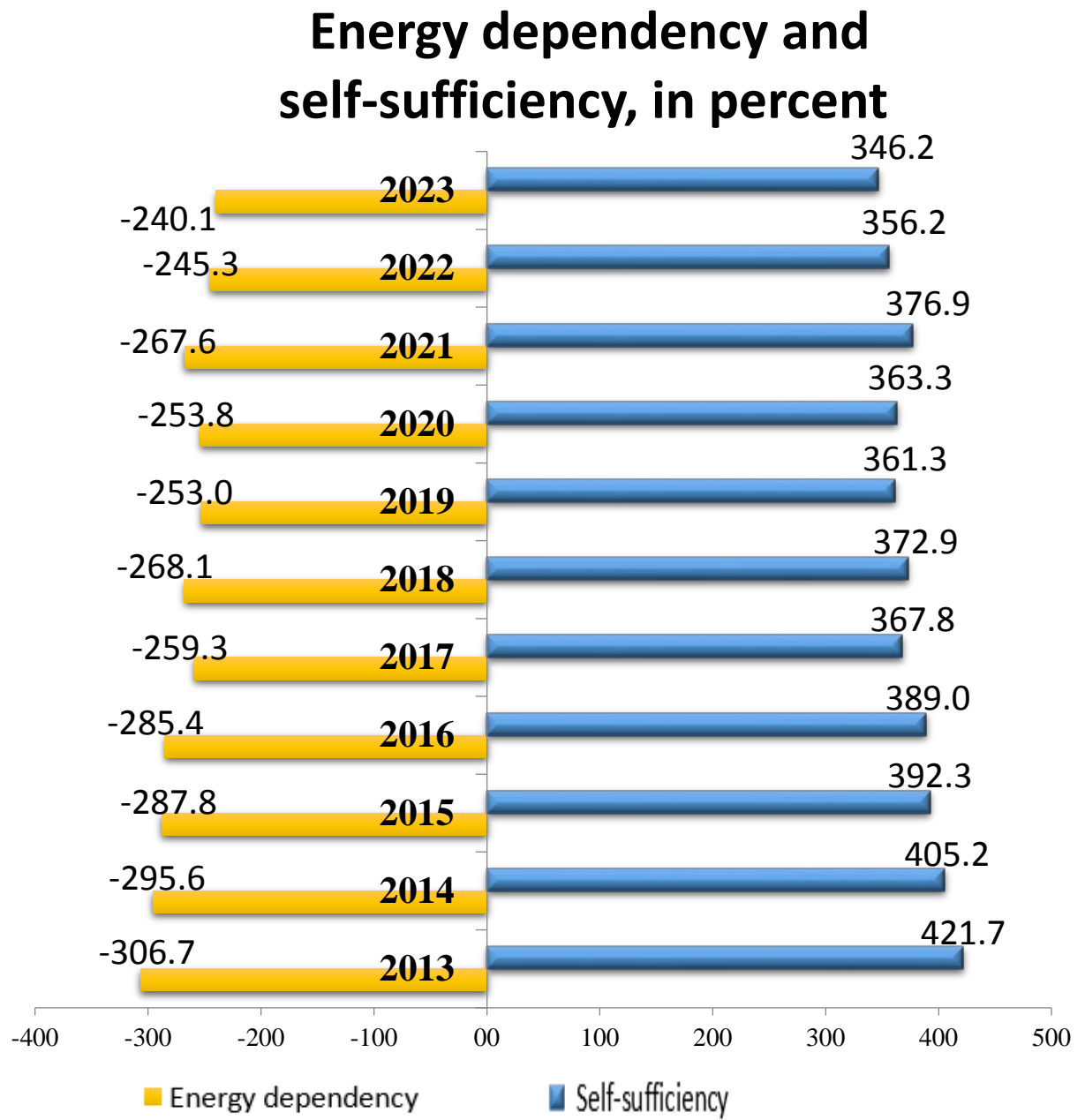
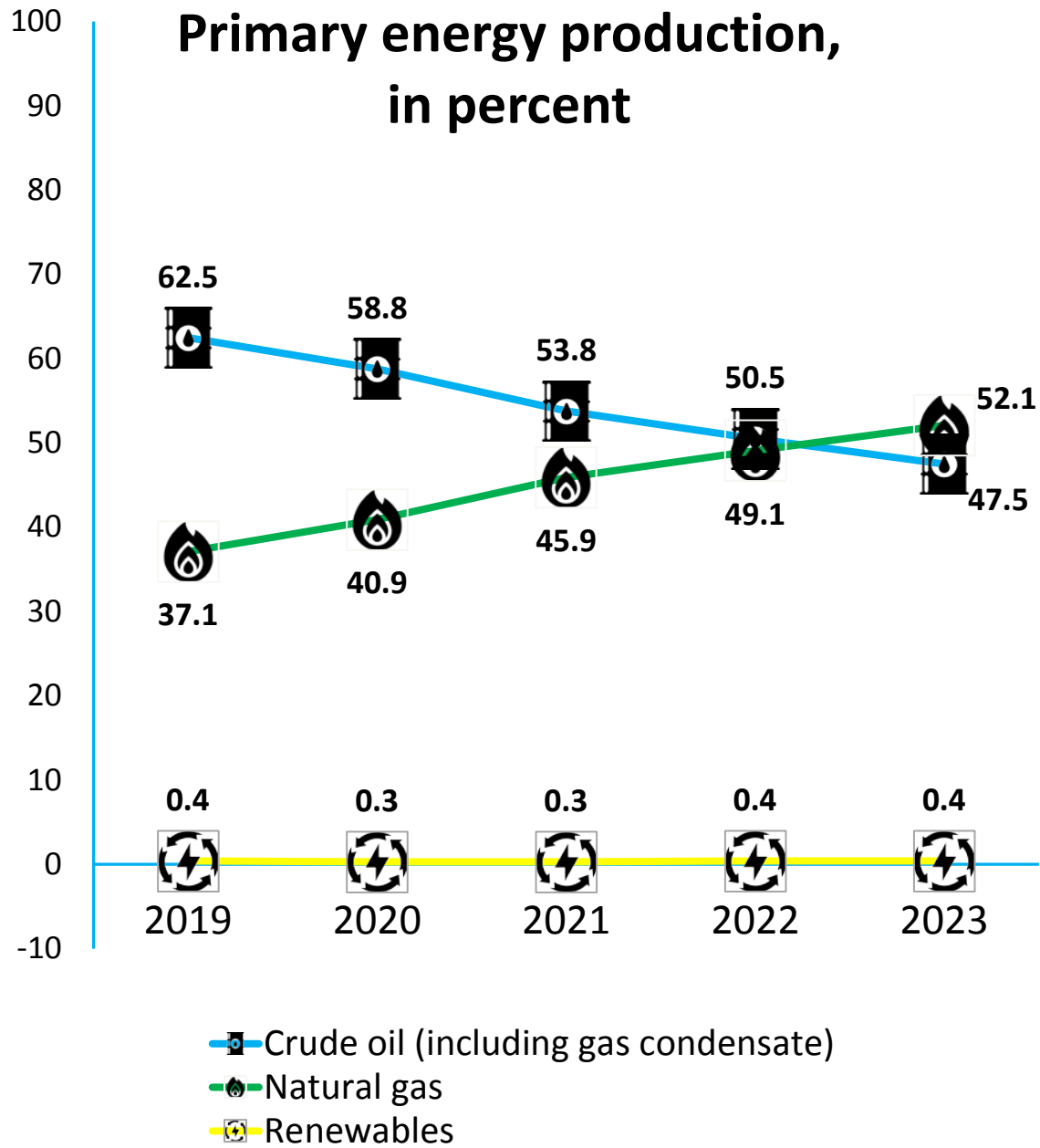
Providing costs for modeling and forecasting

General goals of energy balance

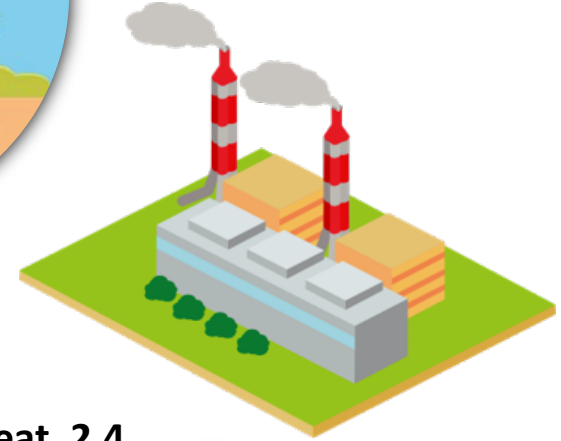
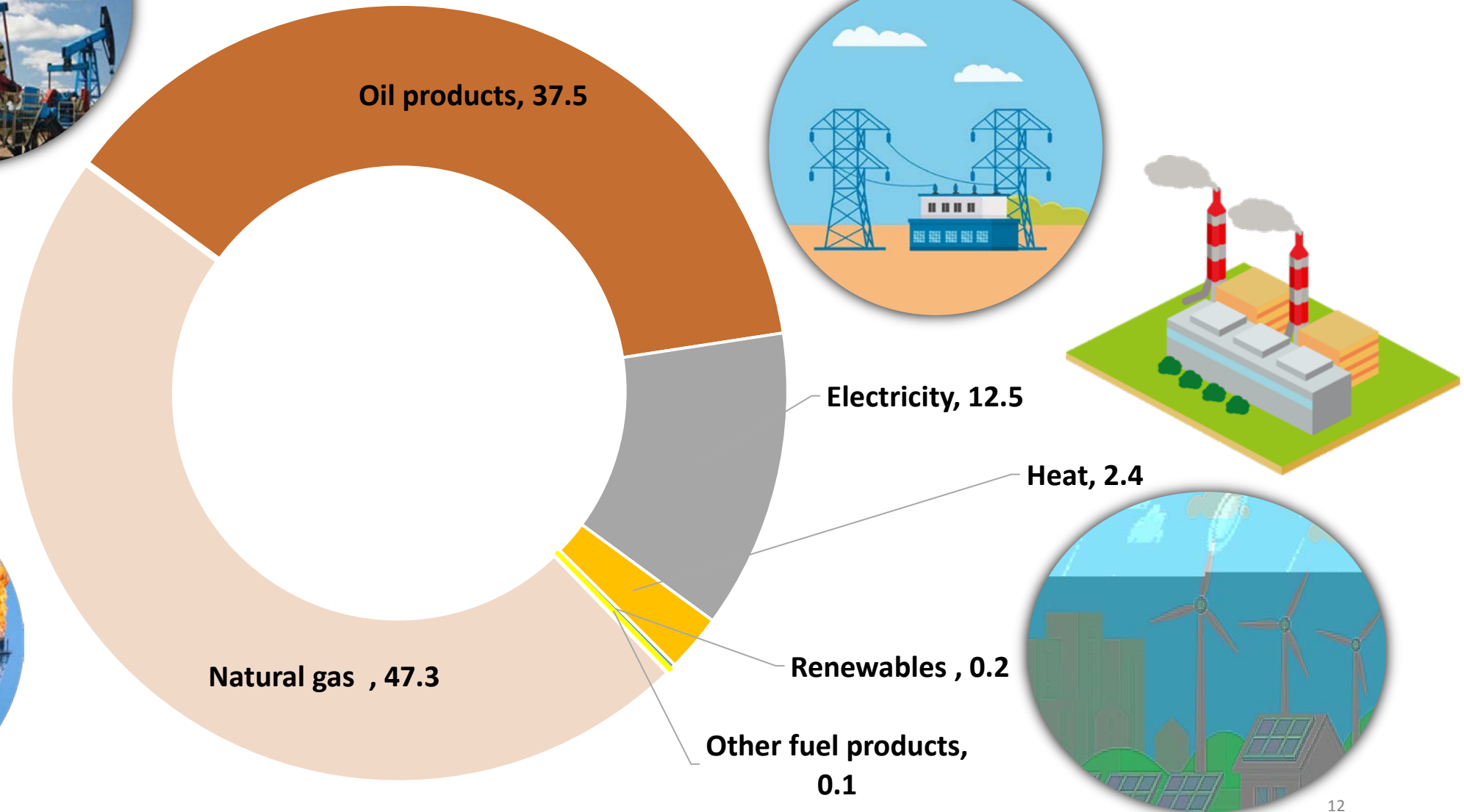


Azerbaijan`s Energy balance by products in 2023, (NET)

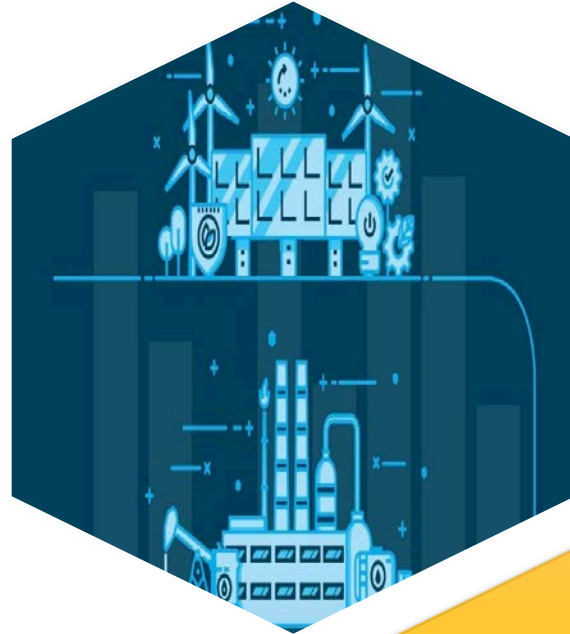
	Total all products	Crude oil (including gas condensate)	Petroleum products, total	Natural gas	Renewables and wastes	Heat	Electricity	Other fuel products
Primary production	65 257,6	31 021,7	-	33 974,6	261,3	-	-	-
Import	5 352,3	2 084,5	561,2	2 679,6	-	-	18,2	8,8
Export	-51 637,0	-26 824,0	-1 271,0	-23 262,9	-	-	-279,1	-
International bunkers	-429,9	-	-429,9	-	-	-	-	-
Stock changes	307,2	265,9	50,8	-11,1	-0,1	-	-	1,7
Total energy supply	18 850,2	6 548,1	-1 088,9	13 380,2	261,2	-	-260,9	10,5
Statistical difference	27,6	-	19,4	7,2	-	-	1,0	-
Transfers	0,0	-	-	-	-	-	-	-
Transformation processes	-3 356,8	-6 457,1	6 615,6	-6 162,6	-239,5	366,5	2 520,3	-
Energy industries own use	982,6	13,5	307,0	317,4	-	12,3	332,4	-
Losses	630,8	77,5	-	340,8	-	20,0	192,5	-
Final consumption	13 852,4	-	5 200,3	6 552,2	21,7	334,2	1 733,5	10,5
Final energy consumption	11 696,1	-	3 675,6	5 931,0	21,7	334,2	1 733,5	0,1
Industry and construction	1 810,4	-	128,7	1 091,9	6,1	191,2	392,5	-
Transport	3 302,6	-	3 257,0	13,8	-	-	31,7	0,1
Other fields of economy	6 583,1	-	289,9	4 825,3	15,6	143,0	1 309,3	-
Non-energy use	2 156,3	-	1 524,7	621,2	-	-	-	10,4



Final consumption of energy products in 2023, in percent



Energy accounts



**Resources
of energy
products
(terajoule)**

**Use of
energy
products
(terajoule)**



Resources of energy products (terajoule 2023)

A	Production and generation of residuals							Stock changes	Import	Flows from the environment	Total supply
	1	2	3	4	5	6	7				
	Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas, steam and air conditioning supply	Transportation and storage	Other economic areas	Households				
Energy resources from the environment - total	-	-	-	-	-	-	-	-	-	2 732 464,0	2 732 464,0
Natural resource inputs	-	-	-	-	-	-	-	-	-	2 722 184,7	2 722 184,7
mineral and energy resources	-	-	-	-	-	-	-	-	-	2 721 518,5	2 721 518,5
reserve of trees	-	-	-	-	-	-	-	-	-	666,2	666,2
Inputs of energy from renewable sources	-	-	-	-	-	-	-	-	-	6 838,1	6 838,1
solar	-	-	-	-	-	-	-	-	-	290,5	290,5
hydro	-	-	-	-	-	-	-	-	-	6 348,2	6 348,2
wind	-	-	-	-	-	-	-	-	-	199,4	199,4
wave and tidal	-	-	-	-	-	-	-	-	-	-	-
geothermal	-	-	-	-	-	-	-	-	-	-	-
other electrical and heat	-	-	-	-	-	-	-	-	-	-	-
Other natural inputs	-	-	-	-	-	-	-	-	-	3 441,2	3 441,2
obtaining biomass energy from yeast	-	-	-	-	-	-	-	-	-	3 441,2	3 441,2
Production of energy products - total	-	2 721 518,5	-	-	-	-	-	10 670,7	199 475,8	-	2 931 665,0
coal	-	-	-	-	-	-	-	-	-	-	-
peat and peat products	-	-	-	-	-	-	-	-	-	-	-
bitumen schist	-	-	-	-	-	-	-	-	-	-	-
natural gas	-	1 422 348,4	-	-	-	-	-	-481,8	112 180,3	-	1 334 046,9
crude oil	-	1 299 172,1	-	-	-	-	-	11 135,5	87 295,3	-	1 397 603,1
Processed oil products - total	-	-	277 264,3	1 548,1	-	-	-	2 125,6	23 496,8	-	304 434,8
refinery gas	-	-	9 349,1	-	-	-	-	-	-	-	9 349,1
liquefied gases	-	-	11 308,1	531,2	-	-	-	-137,5	871,6	-	12 572,4
motor gasoline	-	-	84 670,2	-	-	-	-	-540,0	8 609,1	-	70 739,3
kerosene - type jet fuel	-	-	26 707,4	-	-	-	-	647,8	1 823,3	-	28 978,5
other kerosene	-	-	-	-	-	-	-	-	766,4	-	766,4
diesel fuel (gas oil)	-	-	106 814,9	-	-	-	-	-673,9	1 181,6	-	107 322,6
fuel oil	-	-	42,5	-	-	-	-	2 098,5	5 598,8	-	7 739,8
bitumen	-	-	11 375,4	-	-	-	-	233,4	-	-	11 608,8
other petroleum products	-	-	46 998,7	1 016,9	-	-	-	497,5	6 845,0	-	55 358,1
Renewable energy sources and waste - total	670,4	-	224,9	6 838,1	-	-	3 216,3	-4,1	-	-	10 945,6
waste	-	-	224,9	-	-	-	3 216,3	-	-	-	3 441,2
solar	-	-	-	290,5	-	-	-	-	-	-	290,5
wind	-	-	-	6 348,2	-	-	-	-	-	-	6 348,2
hydro	-	-	-	199,4	-	-	-	-	-	-	199,4
biofuels	670,4	-	-	-	-	-	-	-4,1	-	-	666,3
electricity	-	-	-	98 663,1	-	-	-	-	763,2	-	99 426,3
heat	-	-	-	15 195,1	-	-	-	-	-	-	15 195,1
other fuels	-	-	-	-	-	-	-	69,2	370,6	-	439,8
Total supply	670,4	2 721 518,5	277 489,2	122 244,4	-	3 216,3	-	12 861,4	224 106,4	2 732 464,0	6 094 570,6

Resources of energy products (terajoule), 2023

Use of energy products (teracoul) 2023

	Use of energy resources and energy losses							Statistical difference	Export	Flow: from the environment	Total use
	Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas, steam and air conditioning supply	Transportation and storage	Other economic areas	Households				
A	1	2	3	4	5	6	7	8	9	10	11
Energy resources from the environment - total	666.2	2 721 518.5	252.2	6 838.1	-	3 189.0	-	-	-	-	2 732 464.0
primary natural resources	-	2 721 518.5	-	-	-	-	-	-	-	-	2 721 518.5
other natural sources	666.2	-	252.2	6 838.1	-	3 189.0	-	-	-	-	7 504.3
Energy products of the transformation sector - total	12.6	-	271 185.6	261 951.3	-	-	-	-	-	-	533 149.5
coal	-	-	-	-	-	-	-	-	-	-	-
bituminous schist	-	-	-	-	-	-	-	-	-	-	-
natural gas	-	-	-	257 997.2	-	-	-	-	-	-	257 997.2
crude oil	-	-	270 419.2	-	-	-	-	-	-	-	270 419.2
refined petroleum products	-	-	-	720.9	-	-	-	-	-	-	720.9
including:	-	-	-	720.9	-	-	-	-	-	-	720.9
diesel fuel (gas oil)	-	-	-	720.9	-	-	-	-	-	-	720.9
fuel oil	-	-	-	-	-	-	-	-	-	-	-
biofuels	12.6	-	-	-	-	-	-	-	-	-	12.6
electricity	-	-	-	5 189.0	-	-	-	-	-	-	5 189.0
heat	-	-	-	44.2	-	-	-	-	-	-	44.2
other fuels	-	-	766.4	-	-	-	-	-	-	-	766.4
The final consumption of energy products - total	26 178.6	10 382.6	94 547.5	6 415.2	138 240.5	70 289.6	184 900.9	1 155.3	2 180 161.5	-	2 712 271.7
coal	-	-	-	-	-	-	-	-	-	-	-
bituminous schist	-	-	-	-	-	-	-	-	-	-	-
natural gas	7 394.1	490.5	57 056.3	1 707.4	578.1	38 756.9	135 603.3	300.8	973 902.5	-	1 235 789.9
crude oil	-	384.3	-	-	-	-	-	-	1 123 374.2	-	1 123 374.2
Processed oil products - total	11 622.4	337.0	12 717.1	811.3	136 331.2	4 871.6	956.7	813.1	71 200.1	-	239 060.5
refinery gas	-	-	7 381.5	-	-	-	-	-	-	-	7 381.5
liquefied gases	4.7	-	19.0	-	621.3	52.2	322.5	-	-	-	1 019.7
motor gasoline	194.4	-	-	-	6 879.5	-	12.9	306.7	1 429.8	-	70 739.3
kerosene - type jet fuel	-	-	-	-	8 159.9	-	-	-	20 818.4	-	28 978.3
other kerosene	-	-	-	-	-	-	-	-	-	-	-
diesel fuel (gas oil)	11 423.3	337.0	93.8	-	58 754.5	4 670.8	21.3	486.3	30 603.5	-	106 392.7
fuel oil	-	-	46.8	-	811.3	148.6	-	-	6 733.1	-	7 739.8
bitumen	-	-	-	-	-	-	-	-	24.6	-	24.6
other petroleum products	-	-	3 176.0	-	-	-	-	-	11 588.5	-	16 764.6
biofuels	2.1	-	-	-	-	456.1	195.5	-	-	-	653.7
waste	-	-	252.2	-	-	-	-	-	-	-	252.2
electricity	7 160.0	8 990.6	16 594.2	3 386.5	1 328.4	25 169.1	23 832.9	41.4	11 684.5	-	98 207.6
heat	-	-	7 927.7	510.0	-	1 035.9	4 892.5	-	-	-	14 366.1
other fuels	-	-	-	-	-	-	-	-	-	-	-
Final consumption for non-energy purposes	-	26 064.2	63 842.8	-	-	457.0	-	-	-	-	90 284.0
Total energy losses	-	-	-	-	-	-	-	-	-	26 399.4	26 399.4
Losses (losses in production, processing)	-	-	-	-	-	-	-	-	-	26 399.4	26 399.4
losses of distribution	-	-	-	-	-	-	-	-	-	-	-
losses of storage	-	-	-	-	-	-	-	-	-	-	-
replacement costs	-	-	-	-	-	-	-	-	-	-	-
other energy losses	-	-	-	-	-	-	-	-	-	-	-
Other energy streams - total	-	-	-	-	-	-	-	-	-	-	-
waste for final consumption for non-energy	-	-	-	-	-	-	-	-	-	-	-
statistical difference	-	-	-	-	-	-	-	-	-	-	-
Total use	26 857.4	2 757 907.3	429 828.1	175 104.6	138 240.5	73 915.6	184 900.9	1 155.3	2 180 161.5	26 399.4	6 094 570.6

Use of energy products (terajoule), 2023

Implemented actions

According to the State Program for the Development of Official Statistics in the Republic of Azerbaijan, the Department of Energy and Environment Statistics developed the SEEA Physical Energy Flow Accounts for the first time in 2016.



The specified material is posted on the website in Azerbaijani and English.
http://www.stat.gov.az/source/balance_fuel/



The accounts were developed based on the results of the Energy Balance of the Republic for 2015. Two tables were compiled: “Production of Energy Resources” and “Use of Energy Products” (in terajoules).

Auxiliary energy account

In March 2012, at the 43rd session of the UN Statistical Commission, the "Central Framework of the System of Environmental-Economic Accounting" was adopted as an international standard.

Energy accounts are developed within the framework of the "System of Environmental-Economic Accounting".

Energy accounts reflect the flows of energy resources from the environment to the economy and back from the economy to the environment.

Next steps



- Compilation of water accounts
- Conducting statistics of new indicators related to energy efficiency
- Conducting statistics of energy used by vehicles using natural gas, compressed gas, and electricity





THANK YOU FOR YOUR ATTENTION