

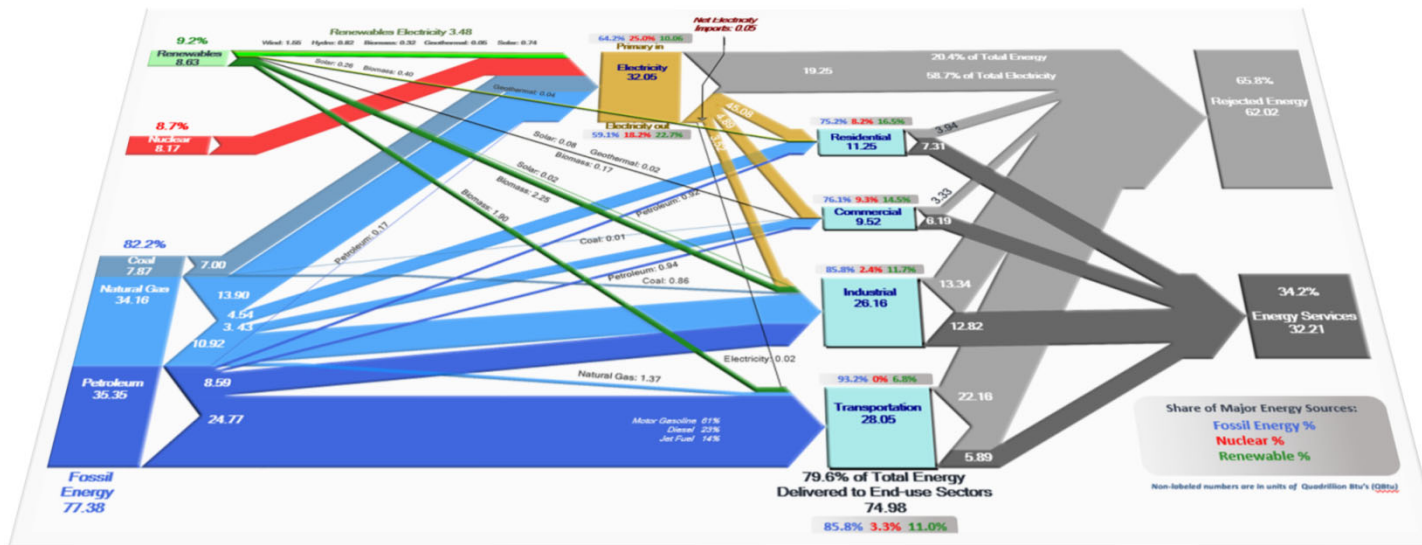
NETL Energy Related Diagrams

2024 Edition



Erik Shuster and Peter Balash

Strategic Systems Analysis & Engineering



DOE/DOE/NETL-2025/4931

U.S. Fossil Energy Production and Trade 2024

Imports

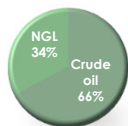
Petroleum
18 QBtu
3.0 Billion Barrels

Coal
0.04 QBtu
2.0 Million Tons

Natural Gas
3.2 QBtu
3.1 TCF

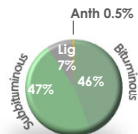
Production

Petroleum



36.5QBtu
7.4 Billion Barrels

Coal



10.3 QBtu
512 Million Tons

Natural Gas (dry)



39.2 QBtu
38 TCF

Unconventional Gas
Shale gas 85%
Tight gas 13%
Coalbed Methane 2%

Approximate
Heat Content

	Imports	Production	Exports
Petroleum			
Crude oil	6.1 mmBtu/Barrel	5.7 mmBtu/Barrel	5.7 mmBtu/Barrel
Petro. Products	5.5 mmBtu/Barrel	none	5.1 mmBtu/Barrel
NGL	none	3.7 mmBtu/Barrel	None
Coal			
	21.5 mmBtu/Ton	20.0 mmBtu/Ton	24.6 mmBtu/Ton
Natural Gas			
	1,025 Btu/ft³	1,036 Btu/ft³	1,009 Btu/ft³

Gross Heating Values

LNG	22,300 Btu/lb
Gasoline	20,500 Btu/lb
Crude Oil	18,300-19,500 Btu/lb
Coal (Bituminous)	10,200 – 14,600 Btu/lb
Ethanol	11,600 Btu/lb

1 ton LNG ~ 44,192 ft³ ~ 47 million Btu

Exports

Petroleum
20.6 QBtu
3.9 Billion Barrels

Coal
2.6 QBtu
108 Million Tons

Natural Gas
7.8 QBtu
7.7 TCF

Legend

- Eastern Coal
- Interior Coal
- Western Coal
- Major Shale Play
- Oil/Gas Field
- Shale-Coal Overlap
- Shale-Oil/Gas Overlap

Data Sources: EIA Monthly Energy Review (March 2025)
EIA Annual Energy Outlook 2024

Petroleum = Crude Oil + Petroleum Products + Natural Gas Liquids (NGL)

Anth = Anthracite, Lig = Lignite, TCF = Trillion Cubic Feet, QBtu = Quadrillion British Thermal Units, Mtoe = Million Tonnes Oil Equivalent

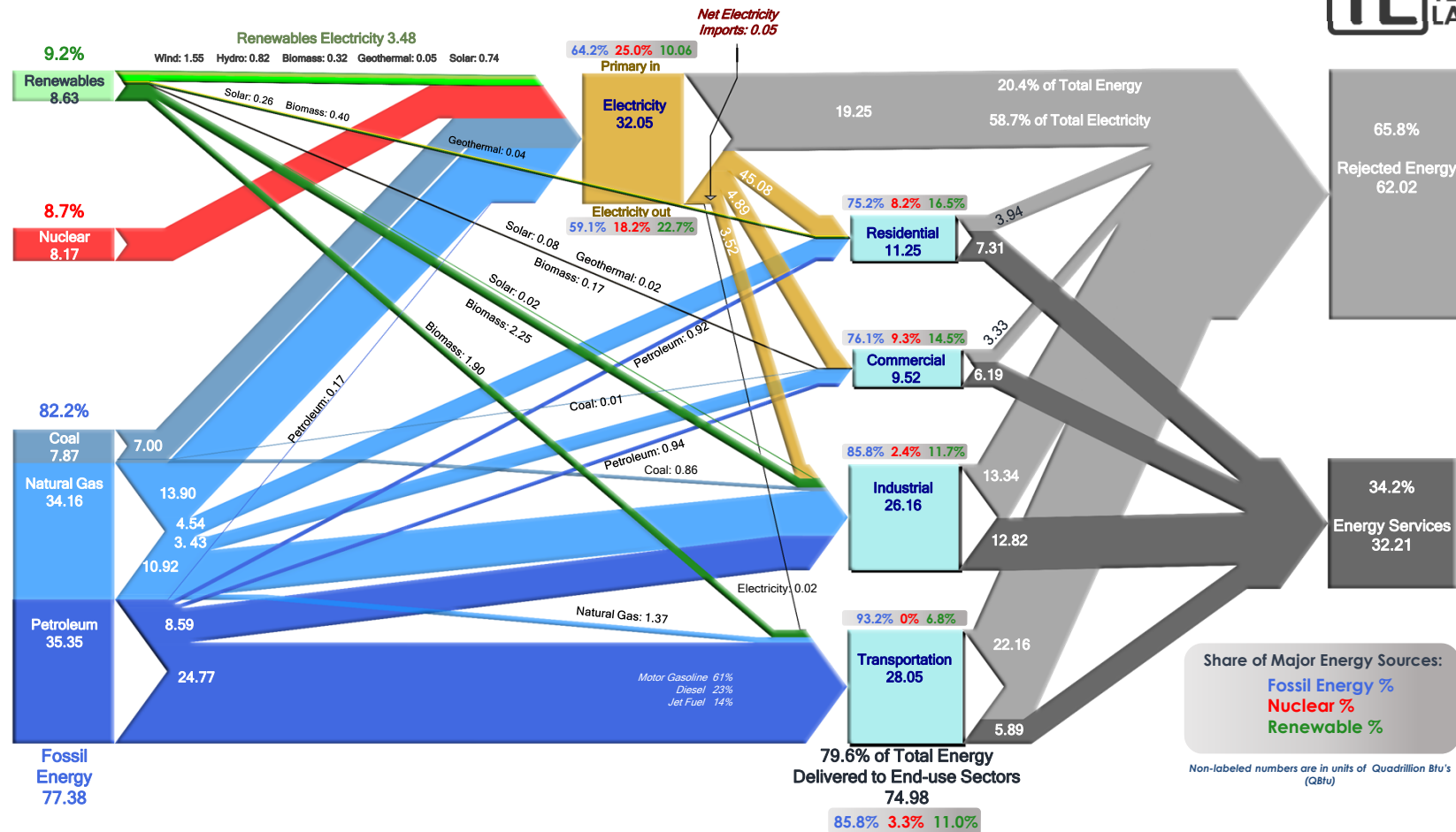
All percent values are based off specific fuel units (not QBtu) | Crude Oil/Petro Products percentages based on Barrels | Metallurgical/Steam Coal percentages based on Tons

SSAE 4/12/2025



Estimated U.S. Energy Consumption in 2024: 94.2 QBtu

Contributions of Major Energy Sources



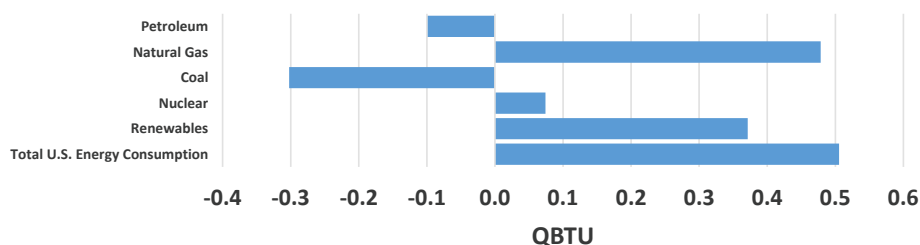
Changes in Energy Consumption

2023 - 2024

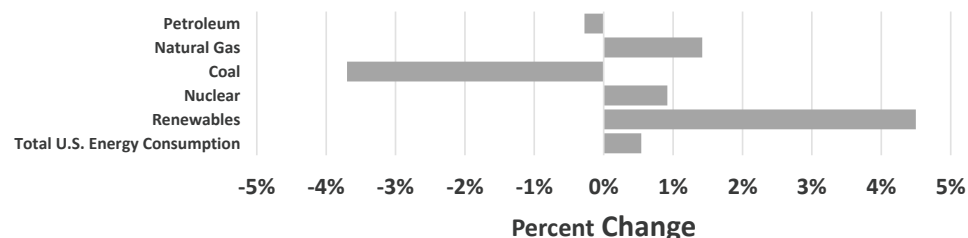


Energy - Primary Fuel Consumption

Change in Primary Energy Consumption
2023 - 2024

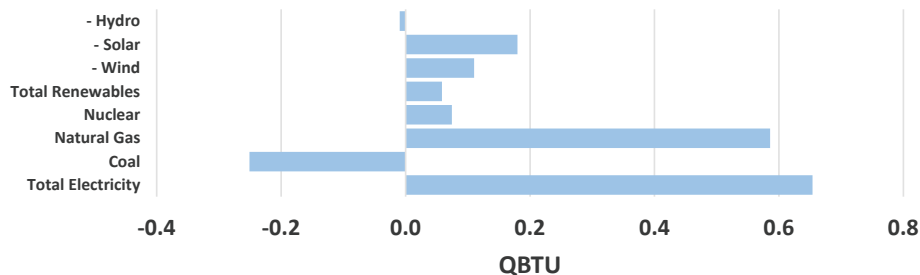


% Change in Primary Energy Consumption
2023 - 2024

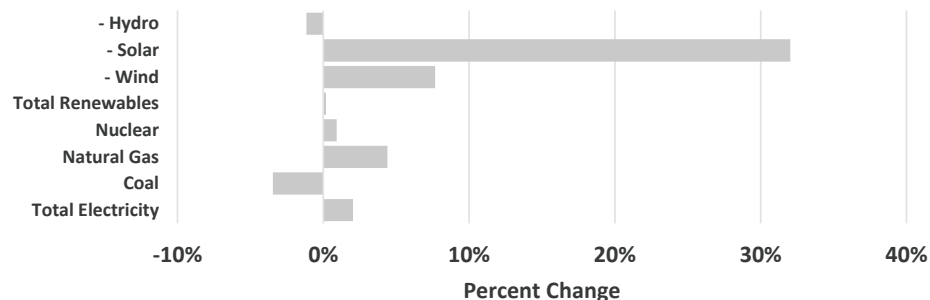


Electricity – Fuel Consumption

Change in Fuel Consumption for
Electricity Generation 2023 - 2024



% Change in Fuel Consumption for
Electricity Generation 2023 - 2024



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CONTACT:

Erik Shuster

Erik.Shuster@netl.doe.gov

