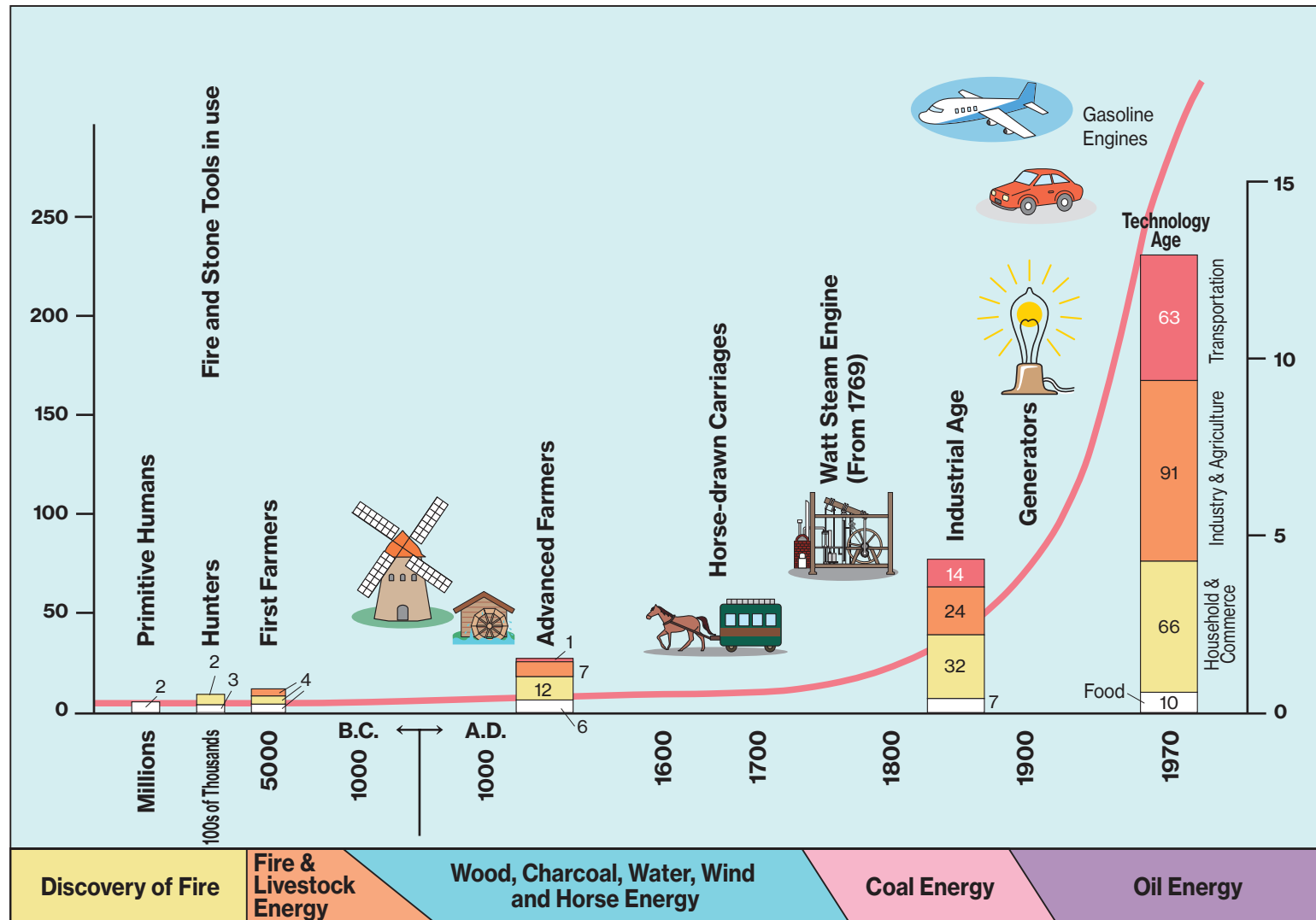


Relationship Between Humans and Energy

Consumption/Person (1,000 Kilocalories/Day)--Bar Graph



Converted to Oil Consumption
(1 Million Kiloliters/Day)--Curve Graph

Primitive Humans East Africa 1 million years ago, food only.

Hunters Europe 100,000 years ago, burned firewood for heat and cooking.

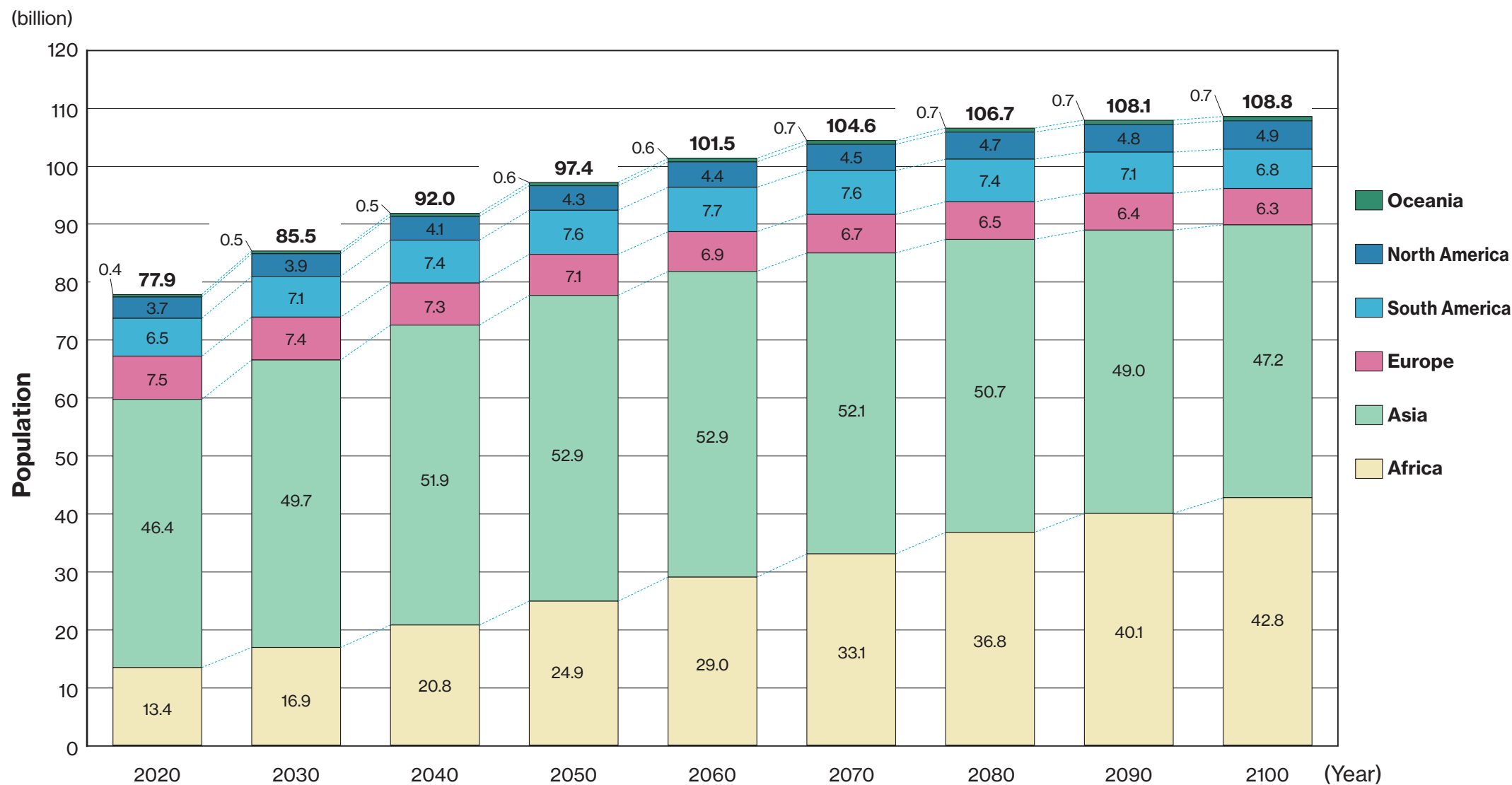
First Farmers Fertile delta region 5,000 years ago, used energy of livestock for cultivating crops.

Advanced Farmers Northwest Europe 1,400 years ago, used coal for heating, wind and water power; used livestock for transportation.

Industrial Age England in 1875, used steam engines.

Technology Age United States in 1970, used electrical power, food includes for livestock use.

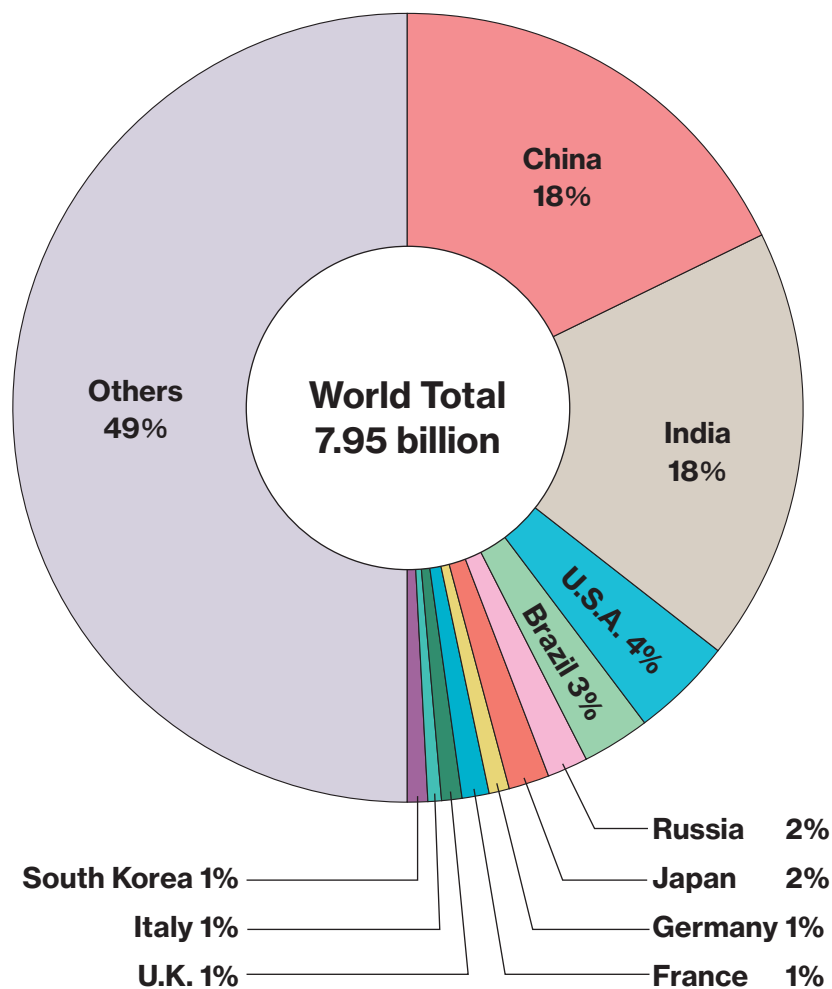
World Population Projections



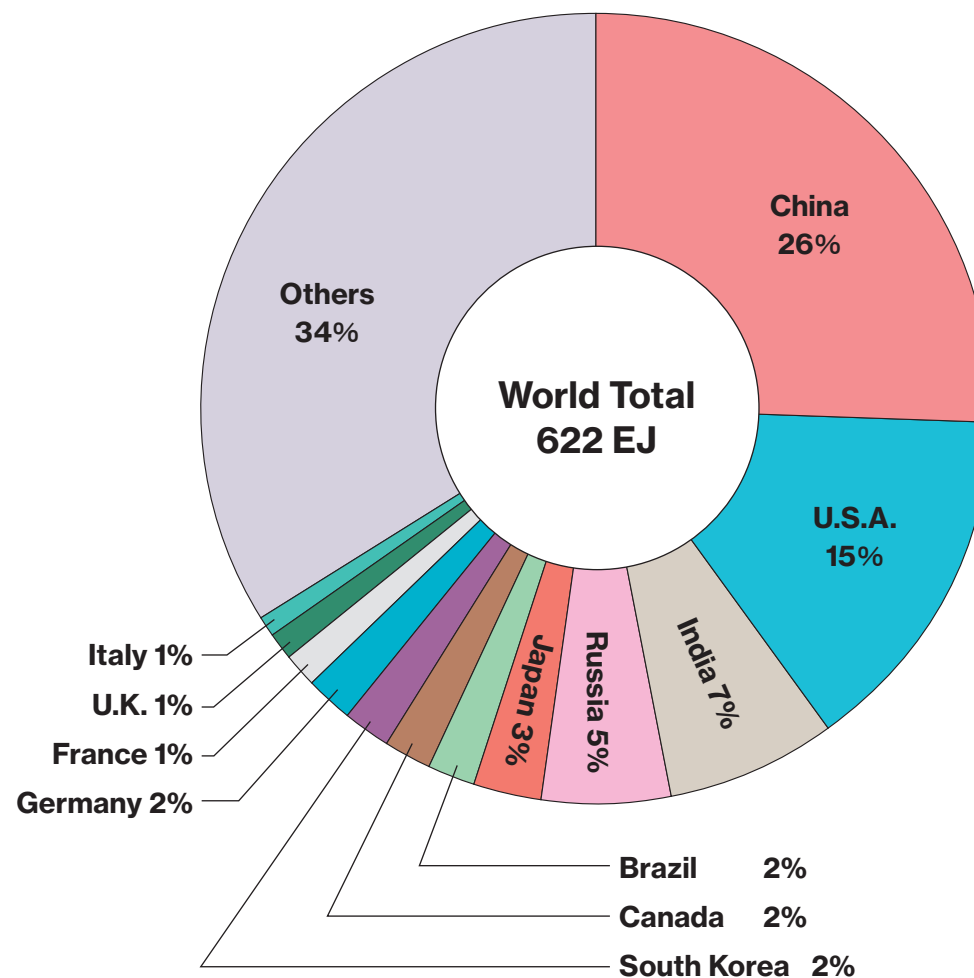
(Note) Figures may not add up to the totals due to rounding.

World Population and Energy Supply Amount

World Population by Country (2022)

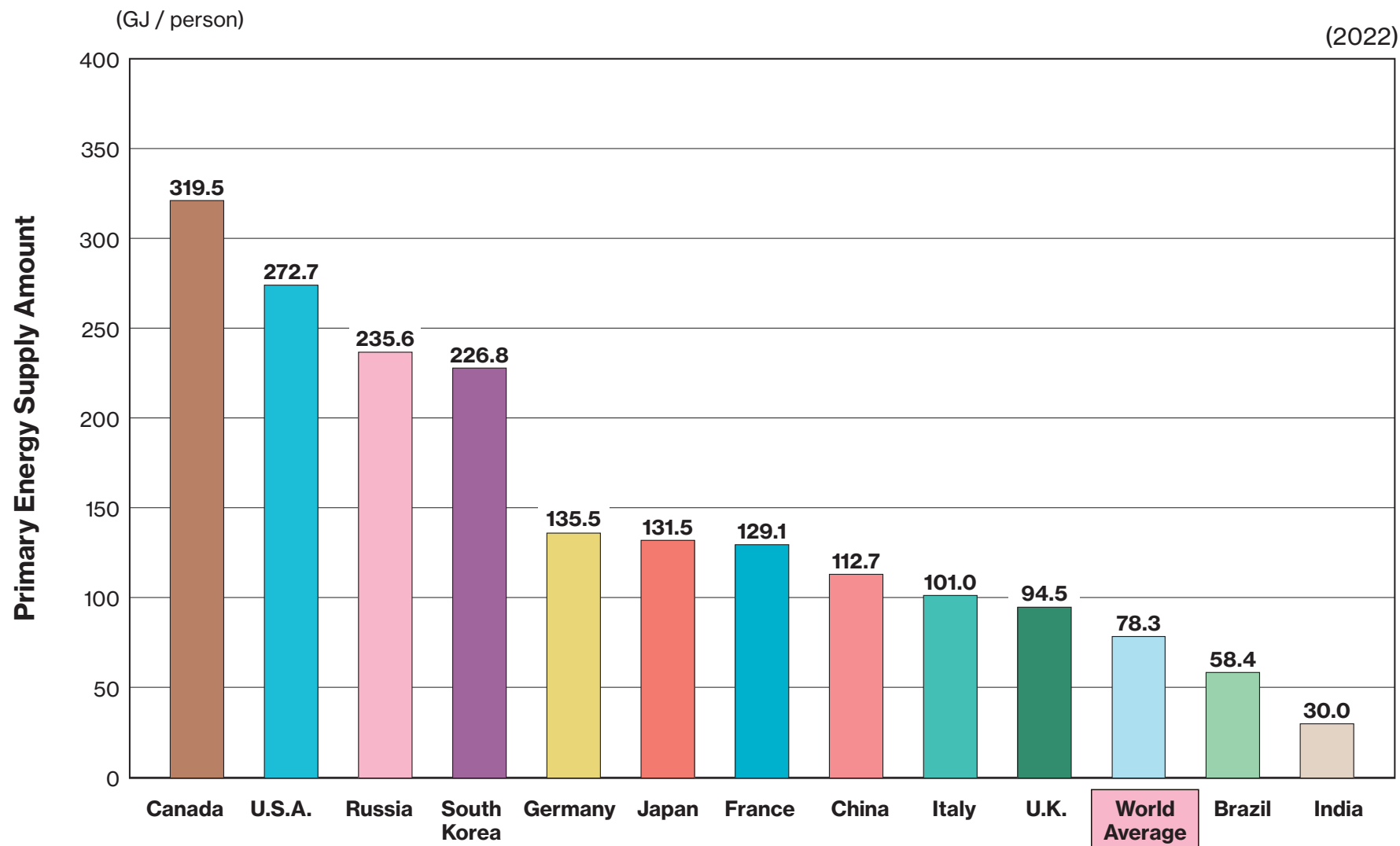


Primary Energy Supply Amount by World Population by Country (2022)

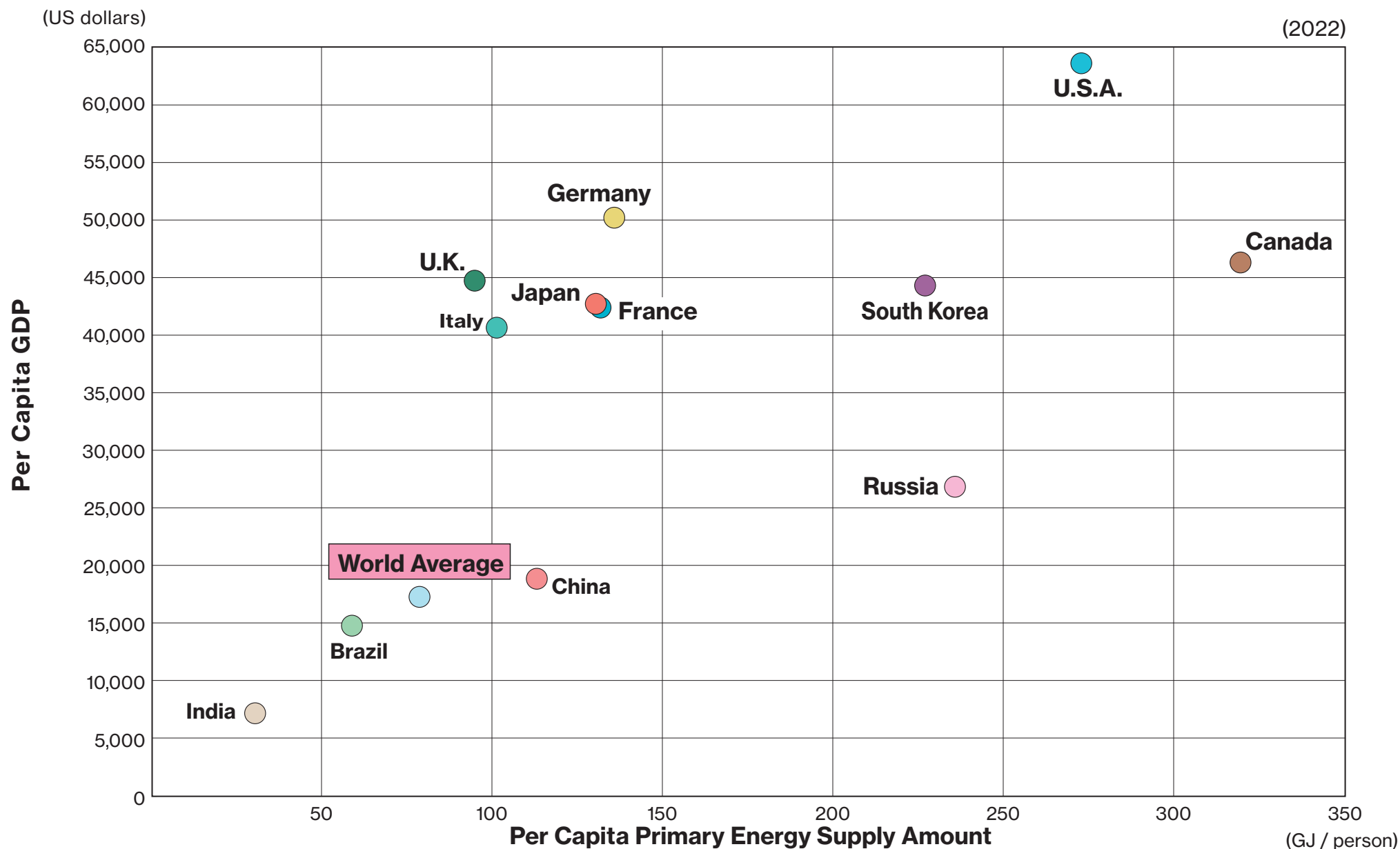


(Note) Figures may not add up to the totals due to rounding.
Btoe: billion tons of oil equivalent

Primary Energy Supply Amount Per Capita in World



Per Capita GDP and Primary Energy Supply Amount



(Note) Total domestic production based on purchasing power parity conversion (US dollars, 2015 prices)

Proven Reserves of Energy Resources

54 years

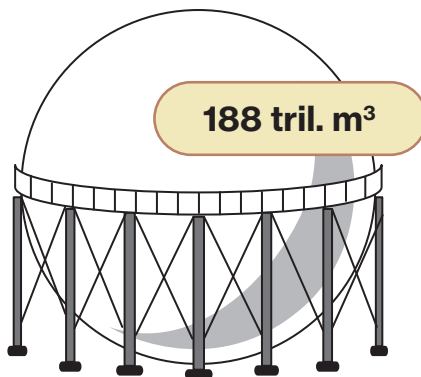
1.7324 tril.
barrels



Oil※¹
(at the end of 2020)

49 years

188 tril. m³



Natural Gas※¹
(at the end of 2020)

139 years

1,074 bil. tons



Coal※¹
(at the end of 2020)

128 years

6.08 mil. tons

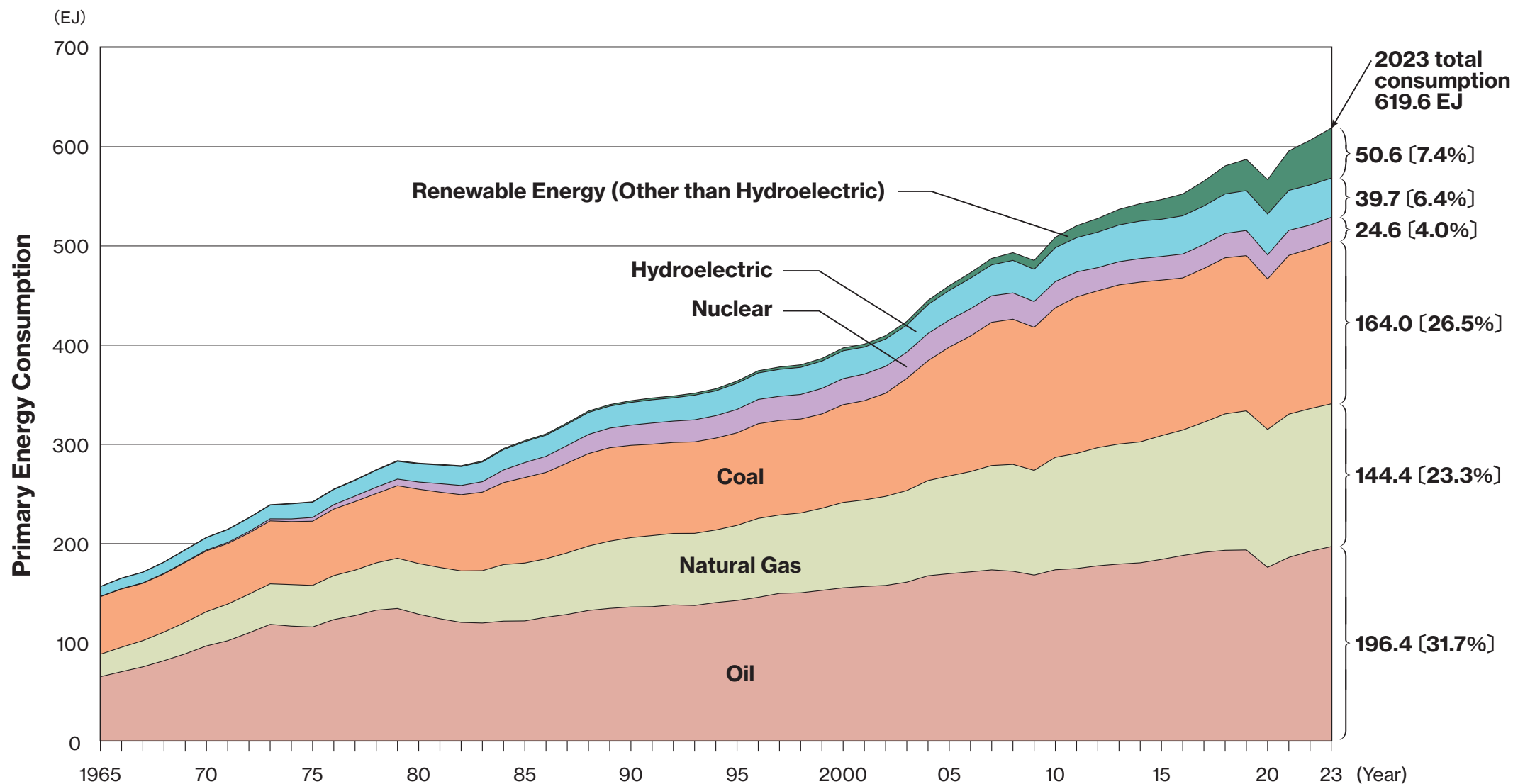


Uranium※²
(Jan. 2021)

(Note) Reserves-to-production (R/P) ratio = Proven Reserves / Annual Production

RAR (reasonably assured resources) of uranium is estimated at a production cost less than USD 130/kgU.

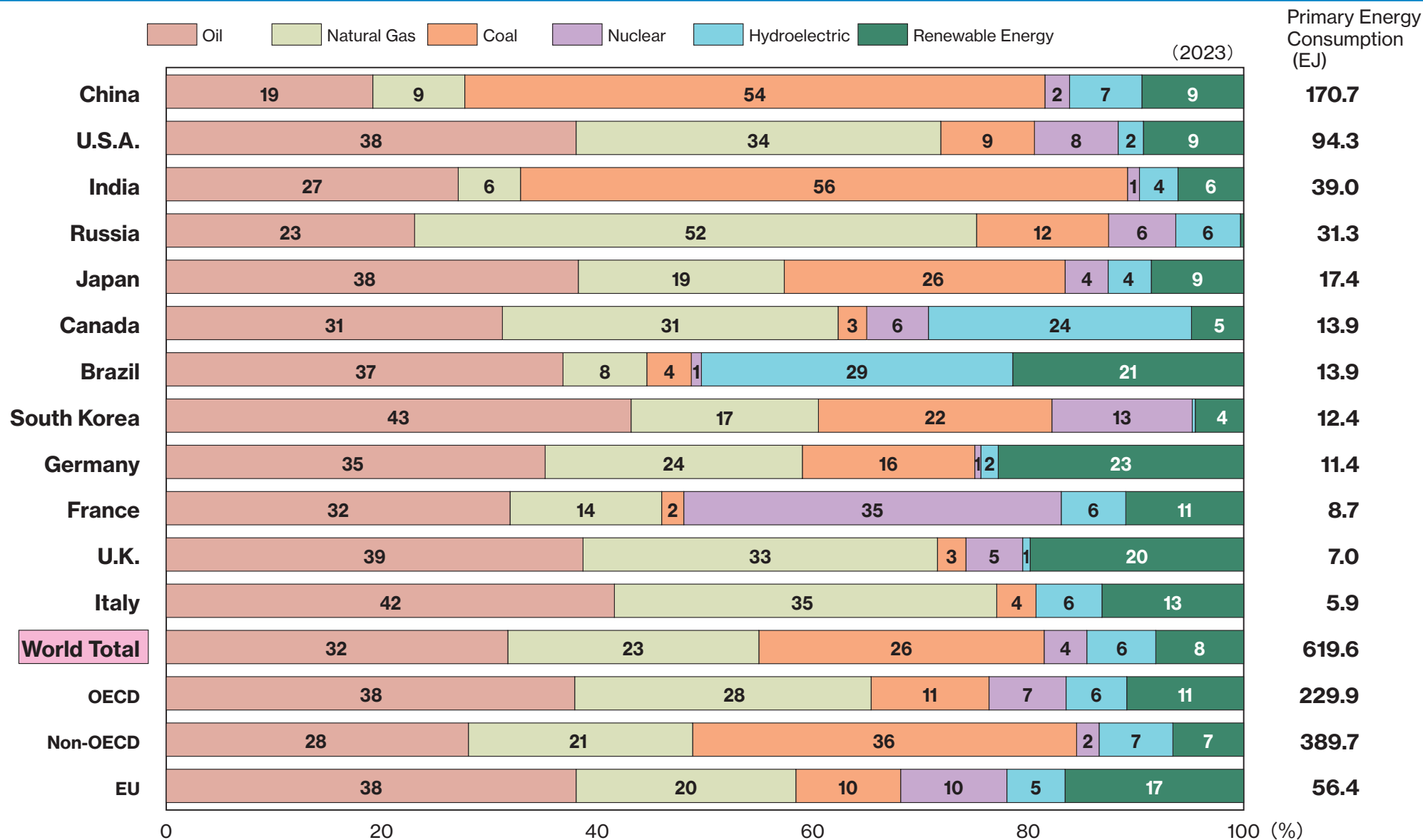
The World's Primary Energy Consumption



(Note) Figures may not add up to the totals due to rounding. The figures in parentheses are the share of the total.

1 EJ (=10¹⁸ Joules) is equivalent to the amount of heat from approximately 25,800,000 kℓ of crude oil (EJ: exajoule).

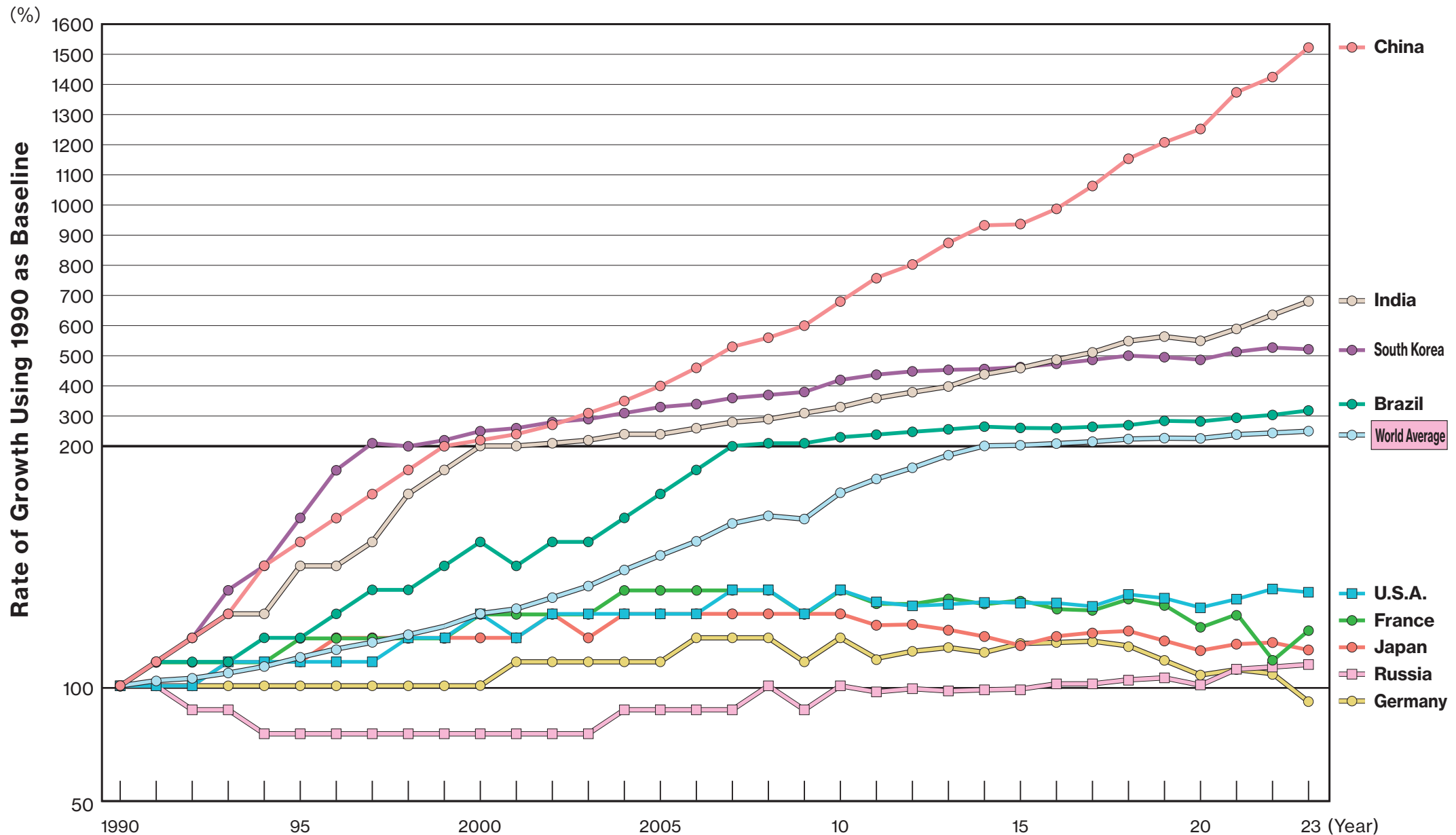
Primary Energy Consumption in Major Countries



(Note) Figures may not add up to the totals due to rounding.

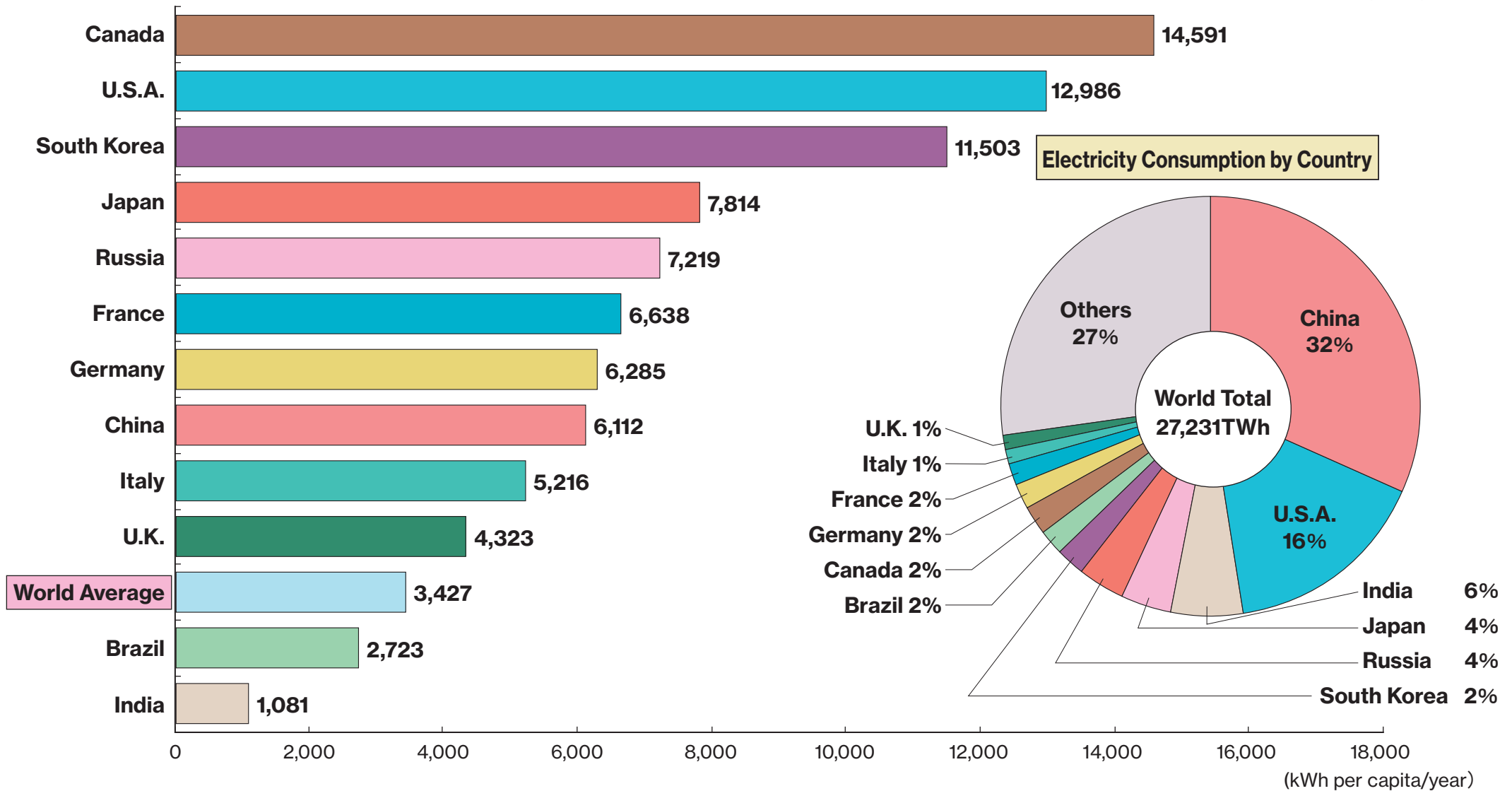
1 EJ (=10¹⁸ Joules) is equivalent to the amount of heat from approximately 25,800,000 kℓ of crude oil (EJ: exajoule).

Electricity Generated by Major Countries (Growth Rate)



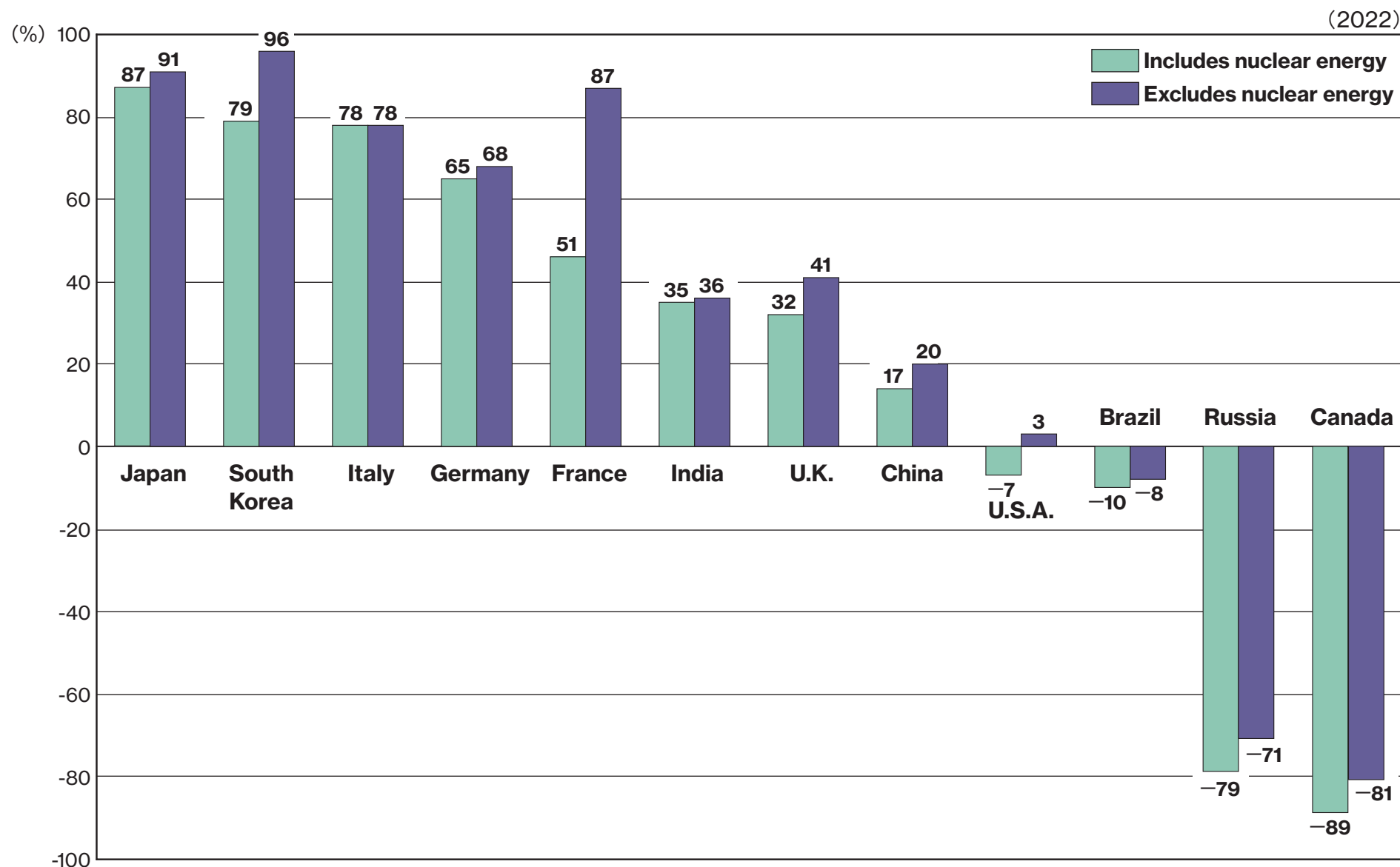
Electricity Consumption Per Capita in Major Countries

(2022)



(Note) Figures may not add up to the totals due to rounding.

Dependence on Imported Energy Sources in Major Countries

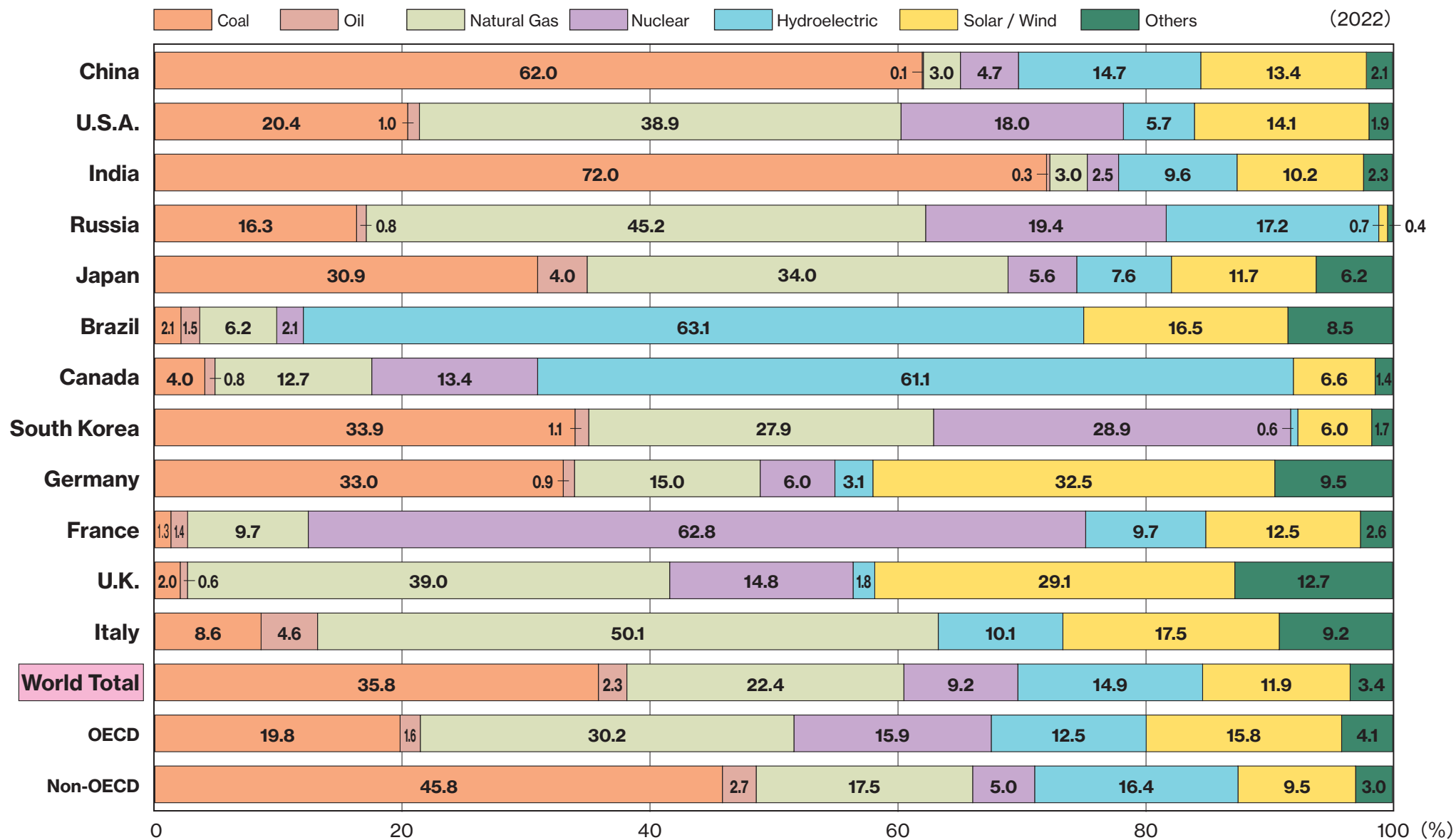


(Note) Canada and Russia are net-exporting countries.

National Gas Pipeline Network in Europe

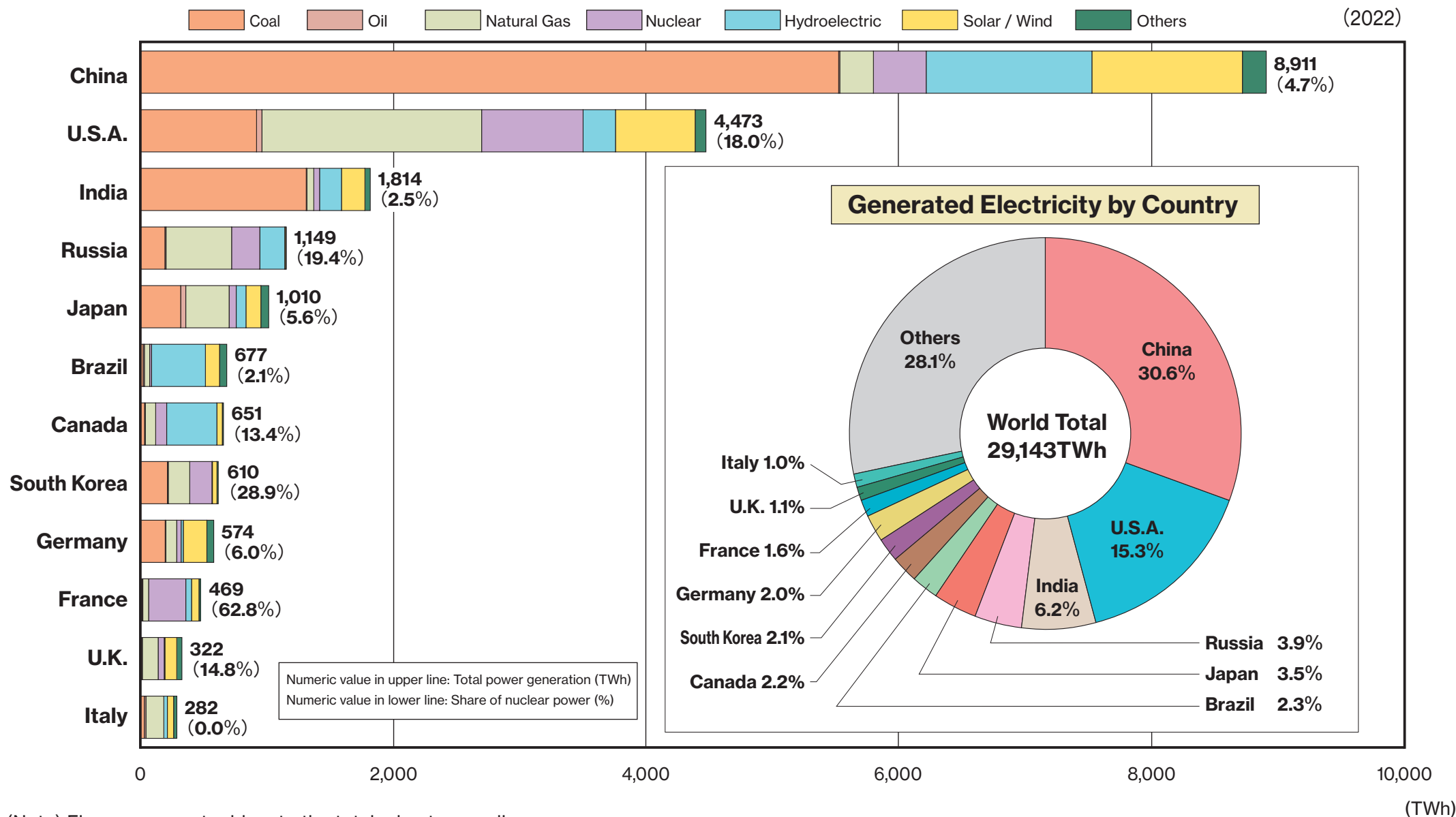


Power Generation Composition by Source in Major Countries



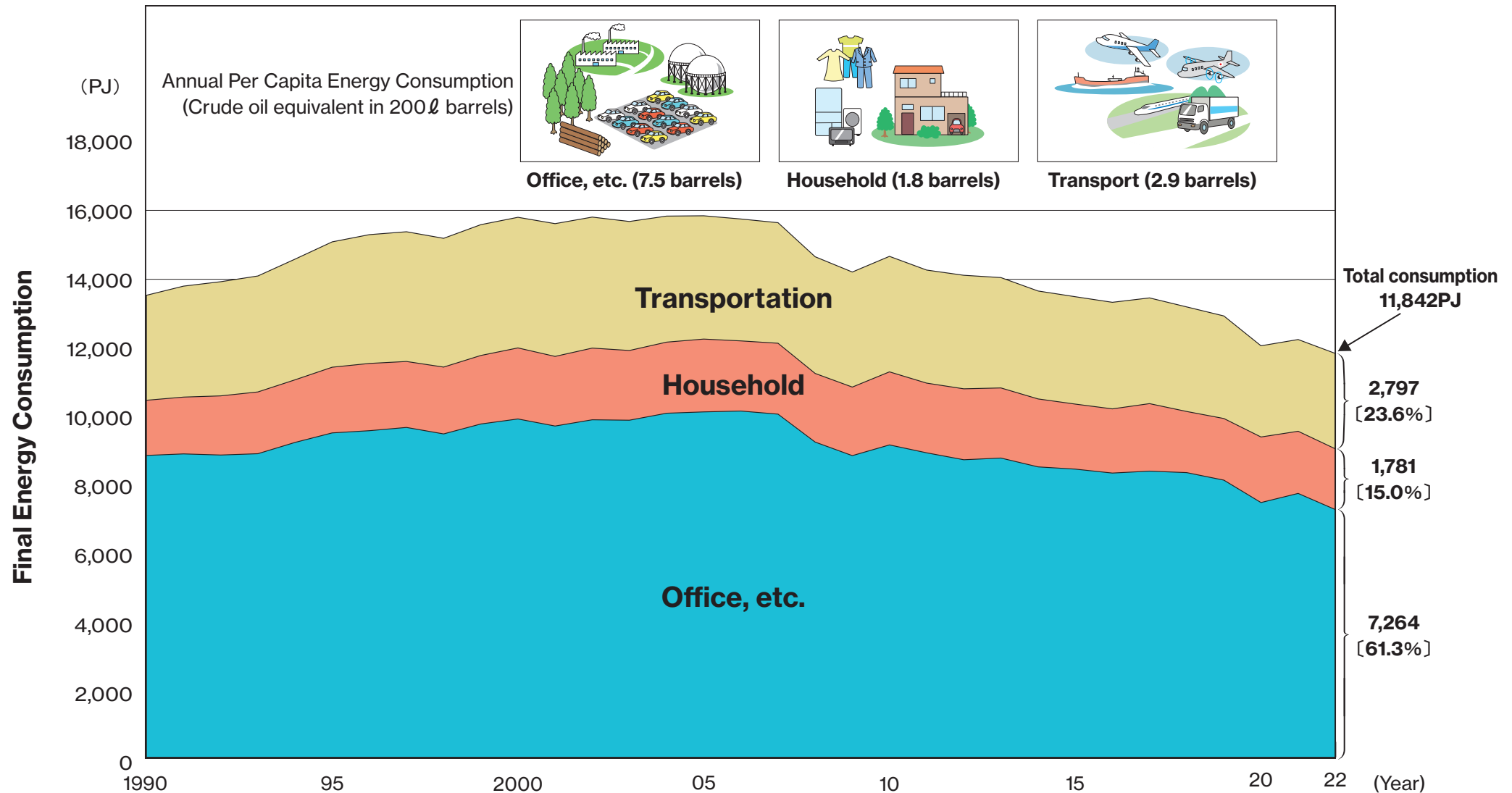
(Note) Figures may not add up to the totals due to rounding.

Electricity Generated and Share of Nuclear Power in Major Countries



(Note) Figures may not add up to the totals due to rounding.

How Energy is Used in Japan



(Note) Figures may not add up to the totals due to rounding.

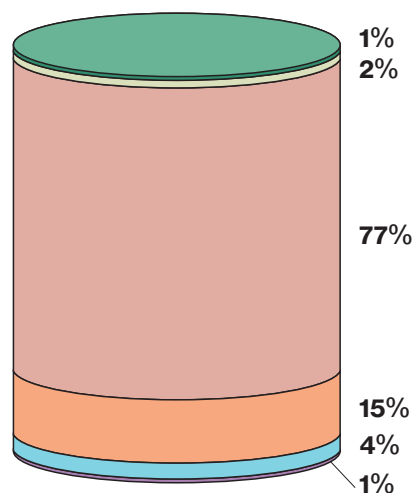
1 PJ (=10¹⁵ Joules) is equivalent to the amount of heat from approximately 25,800 kℓ of crude oil (PJ: petajoule).

Content of parentheses is the percentage of the total.

The calculation method of Total Energy Statistics has been changed since FY1990.

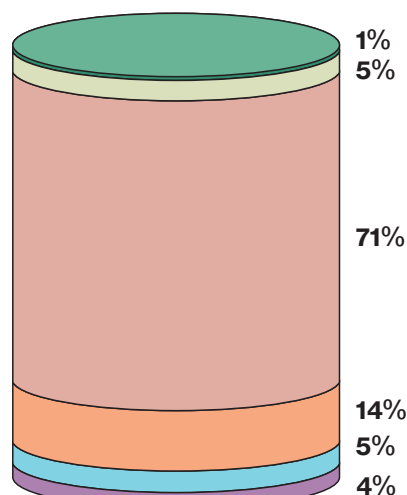
Changes in Japan's Primary Energy Supply Structure

Total Primary Energy Supply 16,133PJ



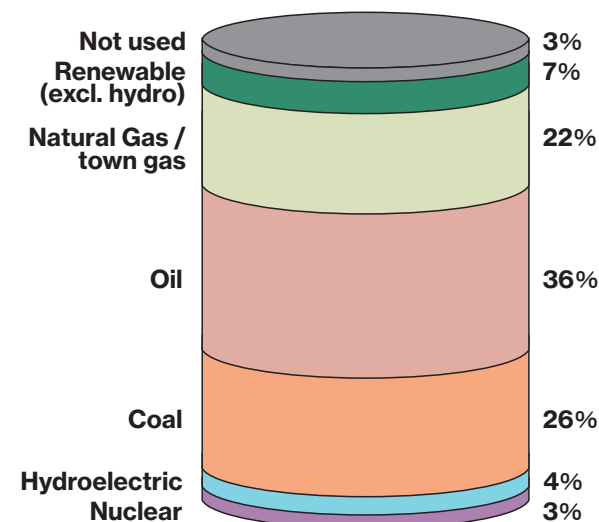
FY1973
(The first oil crisis)

17,210PJ



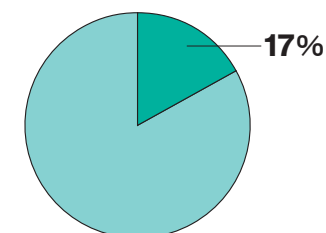
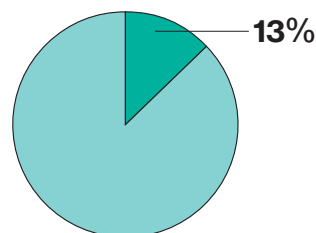
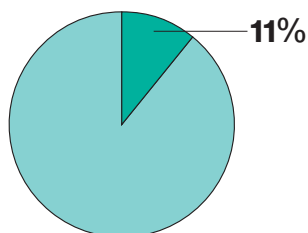
FY1979
(The second oil crisis)

18,314PJ



FY2022

Domestic Energy Ratio



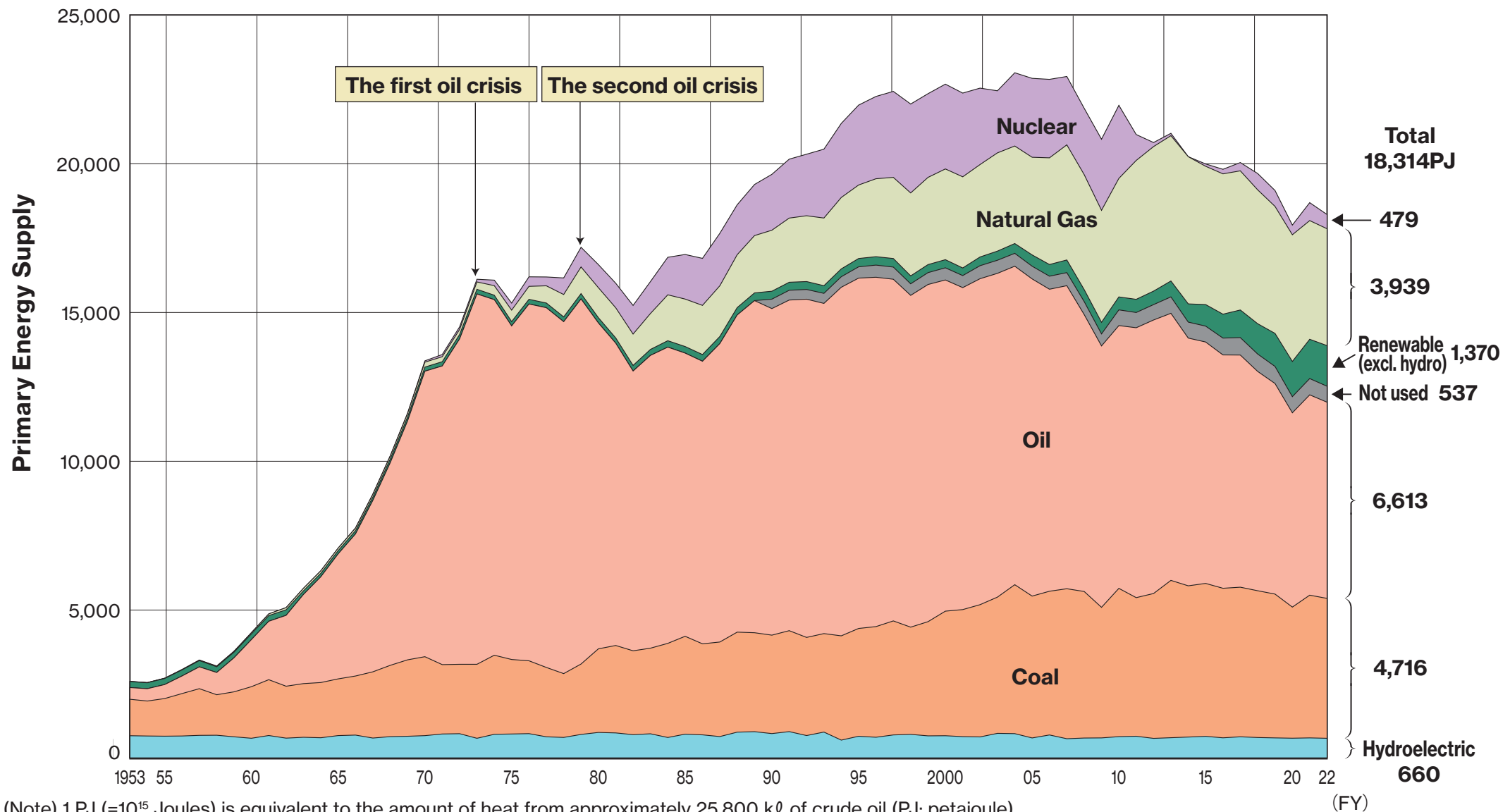
(Note) Figures may not add up to the totals due to rounding.

1 PJ (=10¹⁵ Joules) is equivalent to the amount of heat from approximately 25,800 kℓ of crude oil (PJ: petajoule).

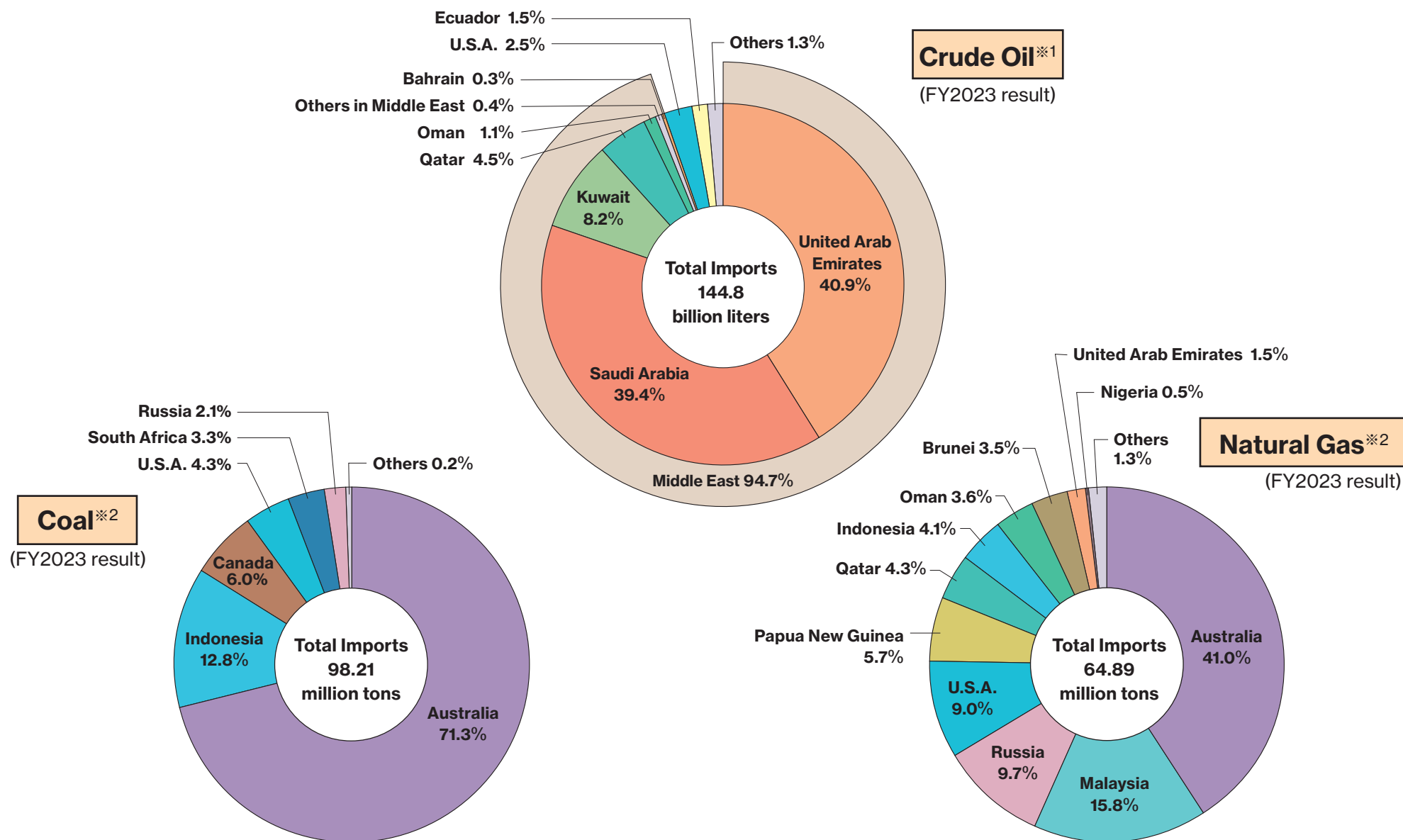
Nuclear energy is classified into semi-domestic energy due to its characteristics.

The calculation method of Total Energy Statistics has been changed since FY1990.

Historical Trends in Japan's Primary Energy Supply

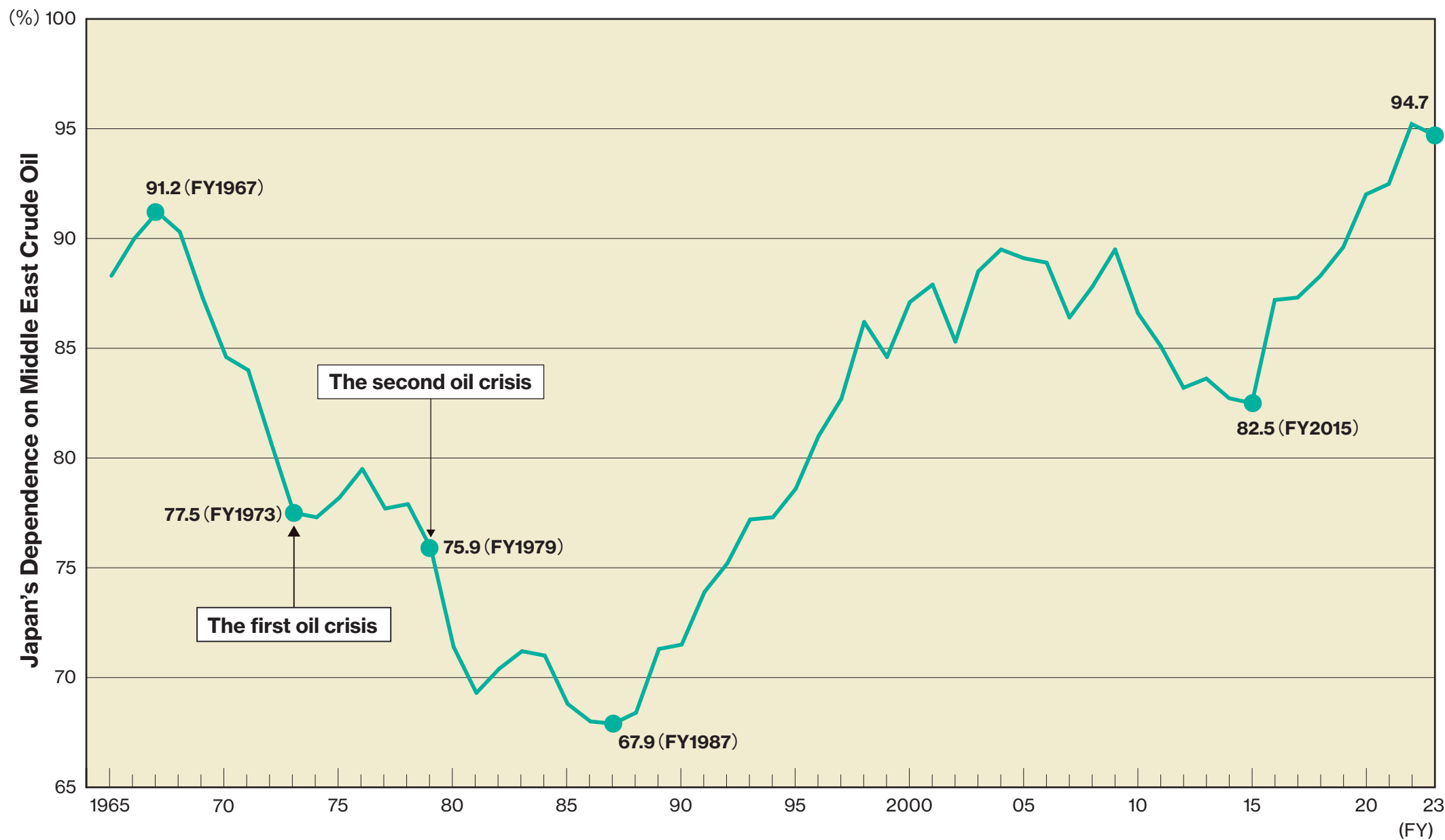


Japan's Fossil Fuel Imports by Country of Origin

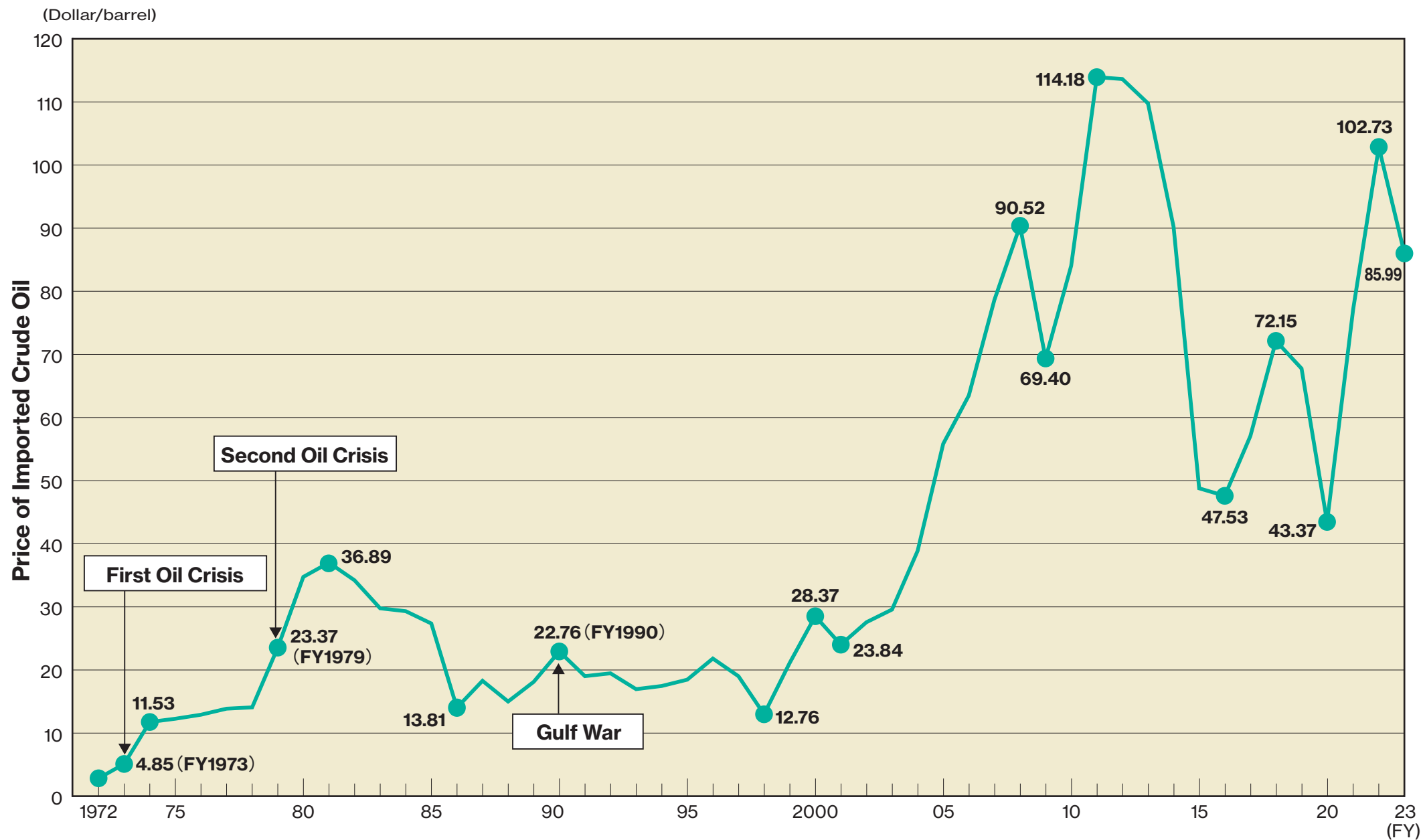


(Note) Figures may not add up to the totals due to rounding.

Japan's Dependence on Middle East Crude Oil Imports

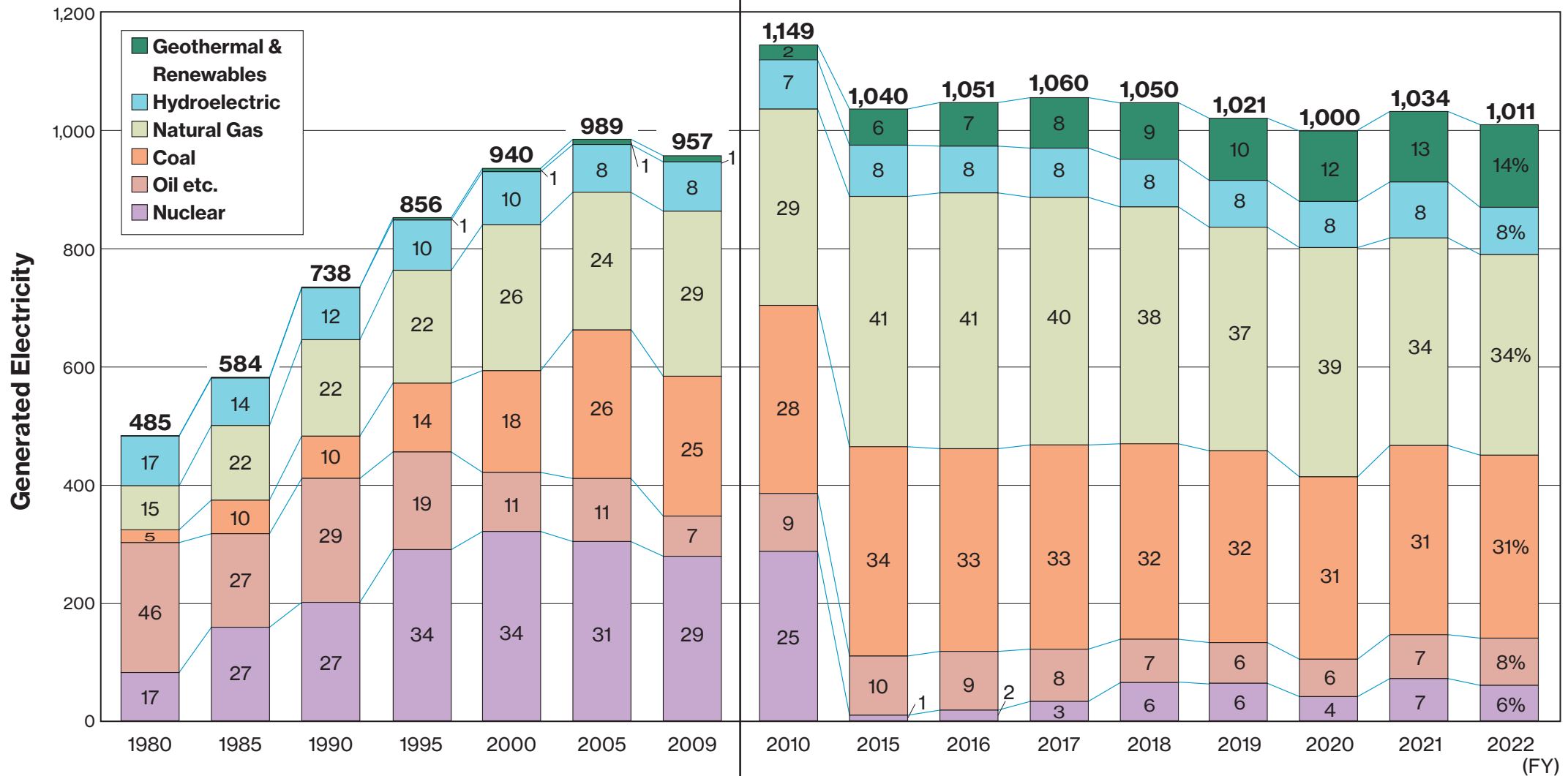


Changes in the Price of Imported Crude Oil



Japan Power Generation and Purchase Volume by Source

(TWh / year)



Created based on the Agency for Natural Resources and Energy's "Overview of Electric Power Development" and "Overview of Electricity Supply Plan"

Created based on the Agency for Natural Resources and Energy's "General Energy Statistics"

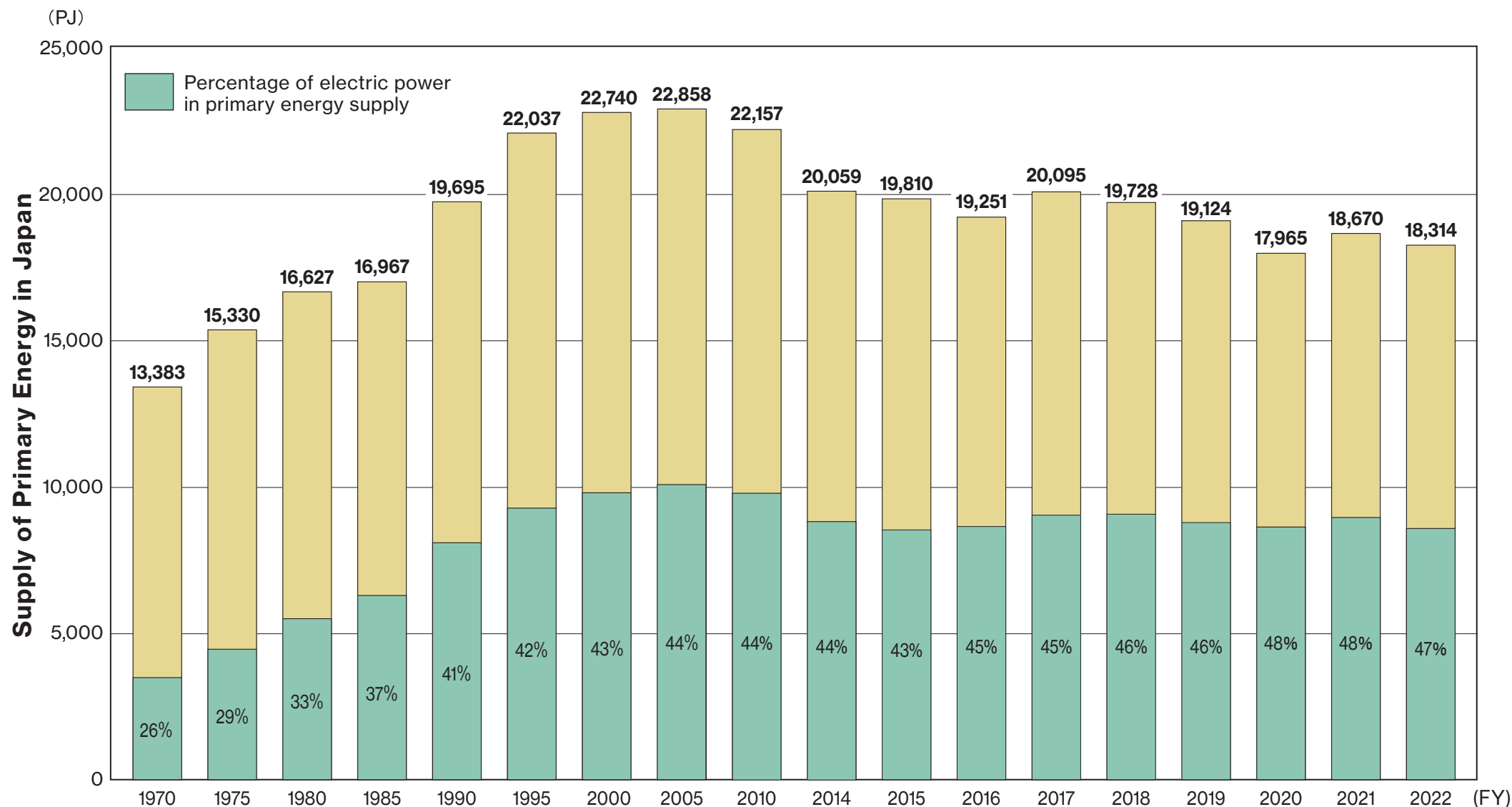
(Note) Oil etc. includes LPG, other gases and bituminous mixtures. Figures may not add up to the totals due to rounding. Numerical values depicted in this graph are composition ratios (%).

Historical Trends in Japan Power Generation Capacity by Source



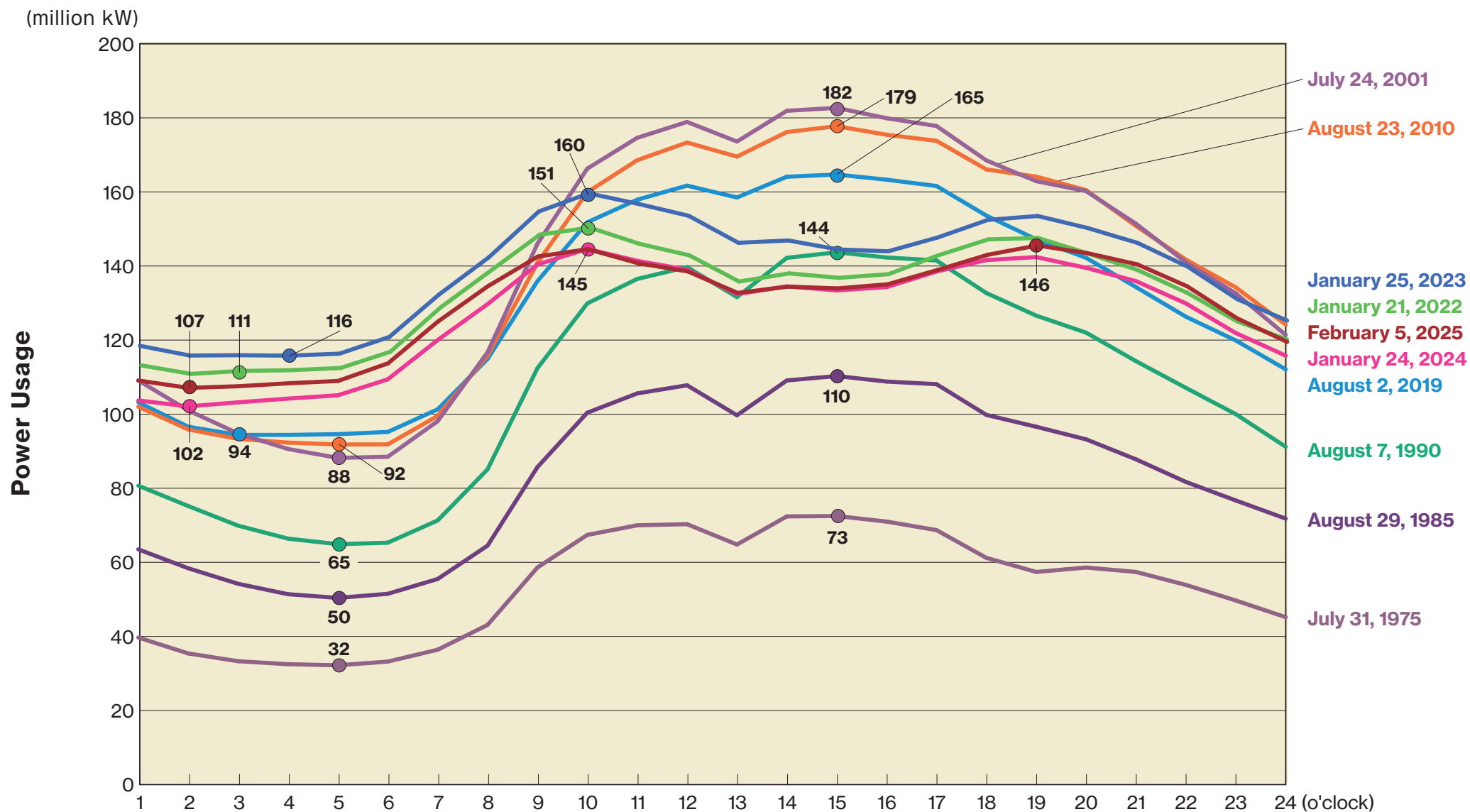
(Note) Oil etc. include LPG, other gases and bituminous mixtures.
 Figures may not add up to the totals due to rounding.
 Numerical values depicted in this graph are composition ratios (%).

Percentage of Electric Power in Primary Energy (Electrification Ratio)



(Note) 1 PJ (=10¹⁵ Joules) is equivalent to the amount of heat from approximately 25,800 kℓ of crude oil (PJ: petajoule).

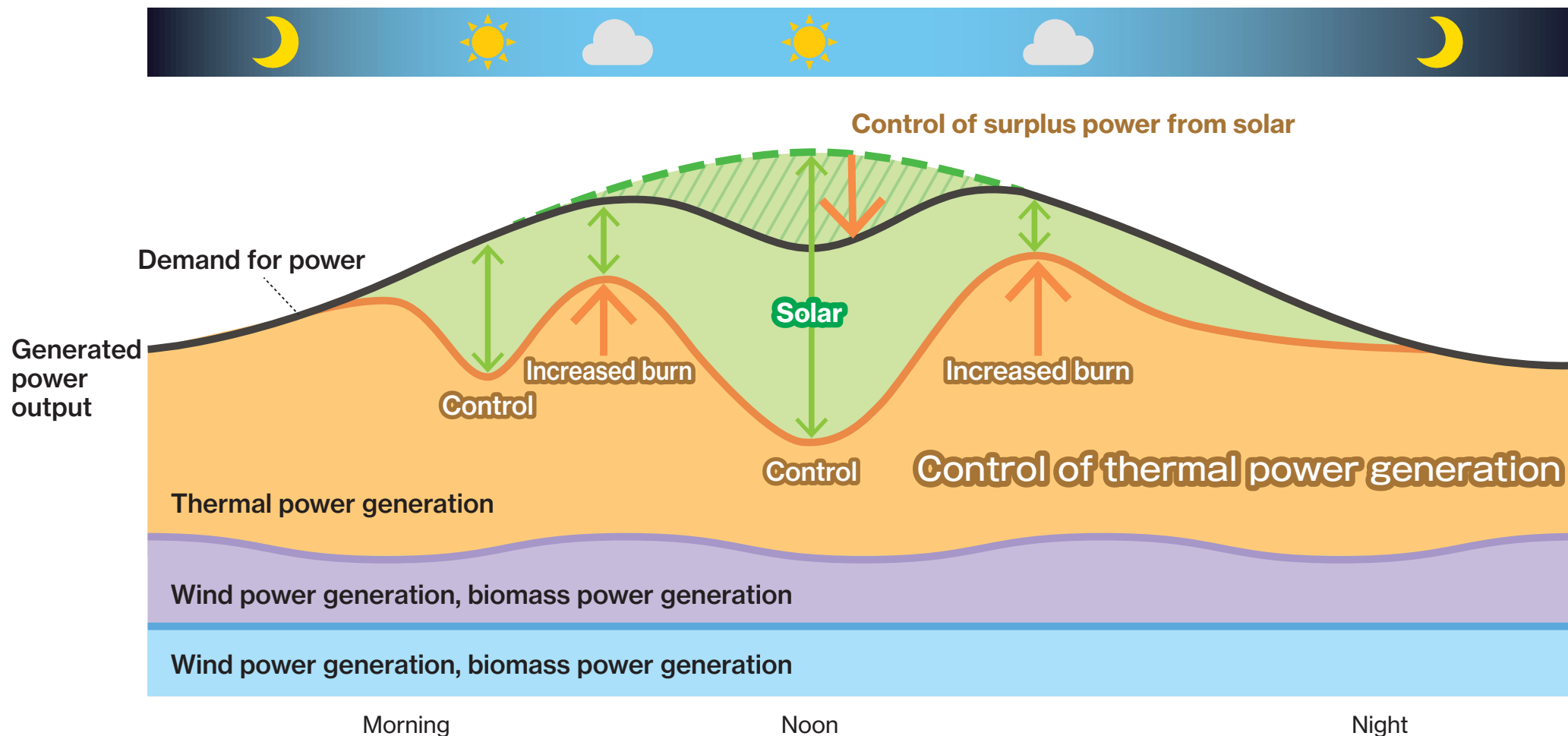
Hourly Power Usage on Peak Power Days



Note: 1975 only is total of 9 power companies (generating end), 1985–2015 is total of 10 power companies (generating end), and 2016 onward is total of 10 areas (sending end).

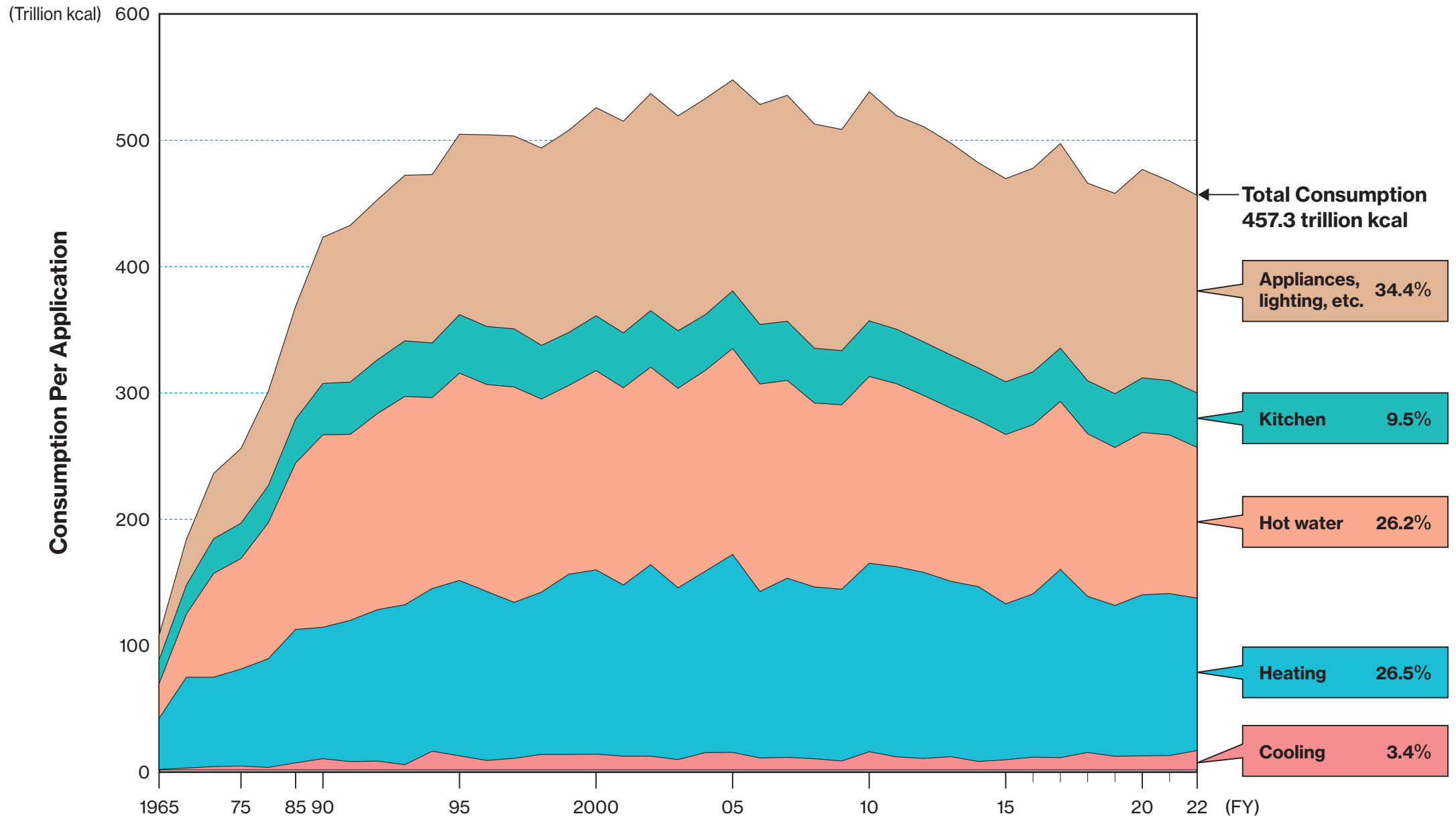
Combinations of Power Generation Methods to Correspond to Power Supply and Demand

Concept image of supply and demand on day of lowest demand (sunny day in May, etc.)



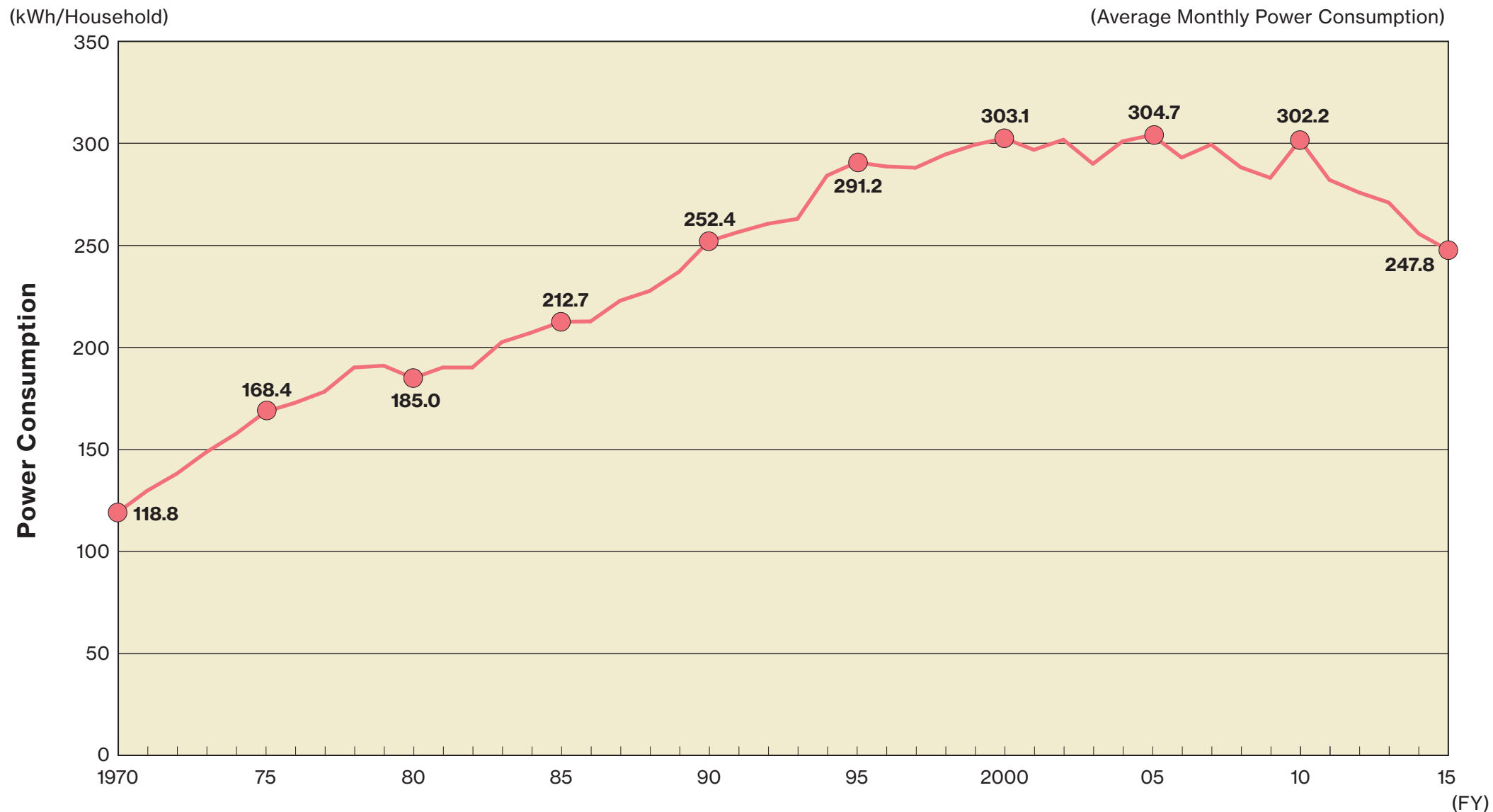
In order to achieve stable usage of power, the amount of power generated (supply) and amount of power consumed (demand) must be made always equal. For that purpose, the amount of power generated and the amount of power consumed must be balanced using methods such as thermal power generation that can compensate for the fluctuations in output from renewable energy.

Household Energy Consumption Per Application



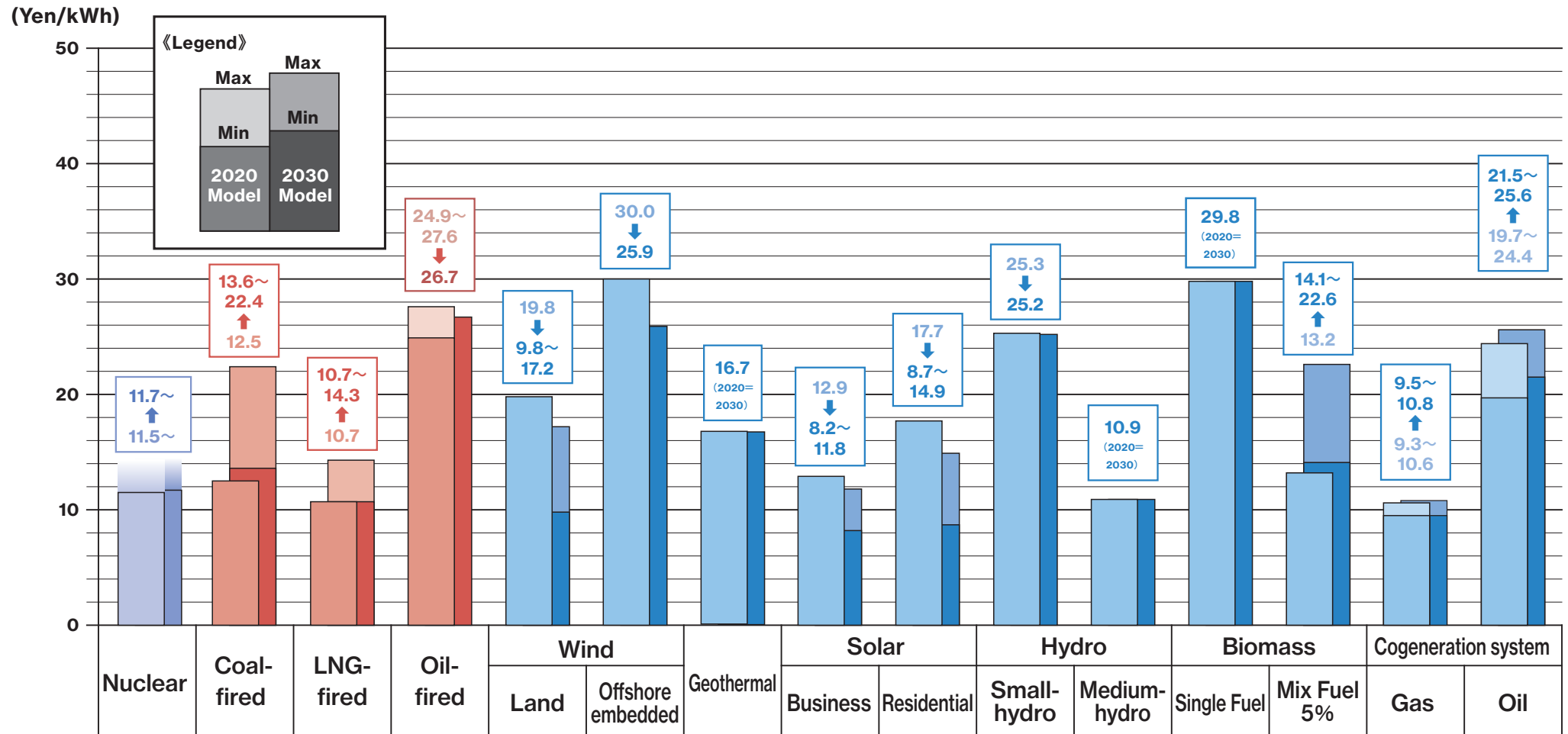
(Note) The category "Appliances, lightning, etc." includes washing machines, clothes dryers, futon dryers, TVs, VCRs, stereos, CD players, DVD players, record players, vacuum cleaners, PCs and electric bidet toilets.

Power Consumption Per Household



(Note) The values are the average across nine power companies.

Generation Cost Per Kilowatt Hour (kWh)



Capacity Factor	70%	70%	70%	30%	25.4%	30% (2030 : 33.2%)	83%	17.2%	13.8%	60%	60%	87%	70%	72.3%	36%
Lifespan	40 years	40 years	40 years	40 years	25 years	25 years	40 years	25 years	25 years	40 years	40 years	40 years	40 years	30 years	30 years