

Central and South America drought and hydro generation

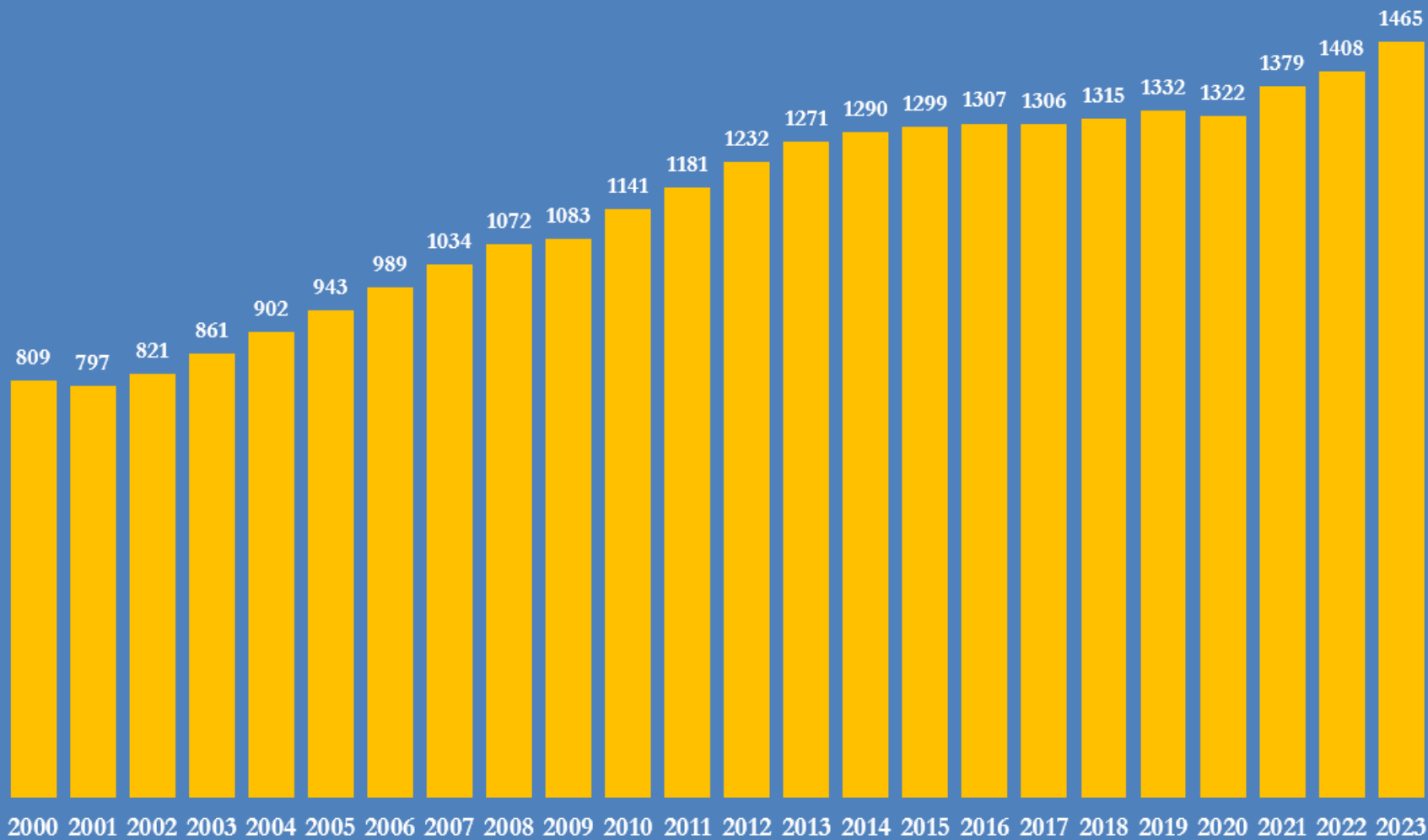
Selected indicators

JOHN KEMP

25 September 2024

Central and South America electricity generation, 2000-2024

annual, billion kilowatt-hours

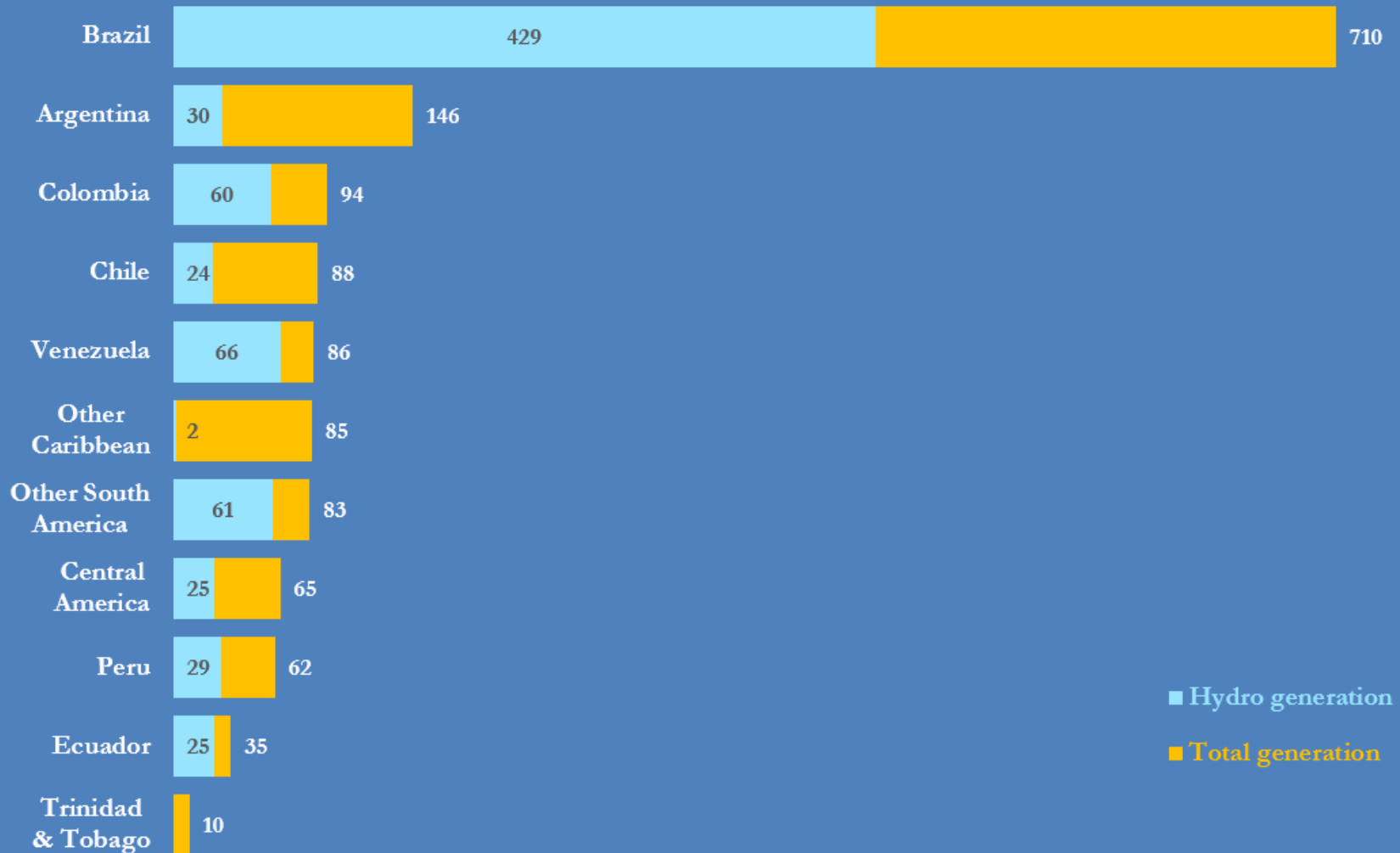


Source: Energy Institute (Statistical Review of World Energy 2024)

@JKempEnergy

Central and South America electricity generation, 2023

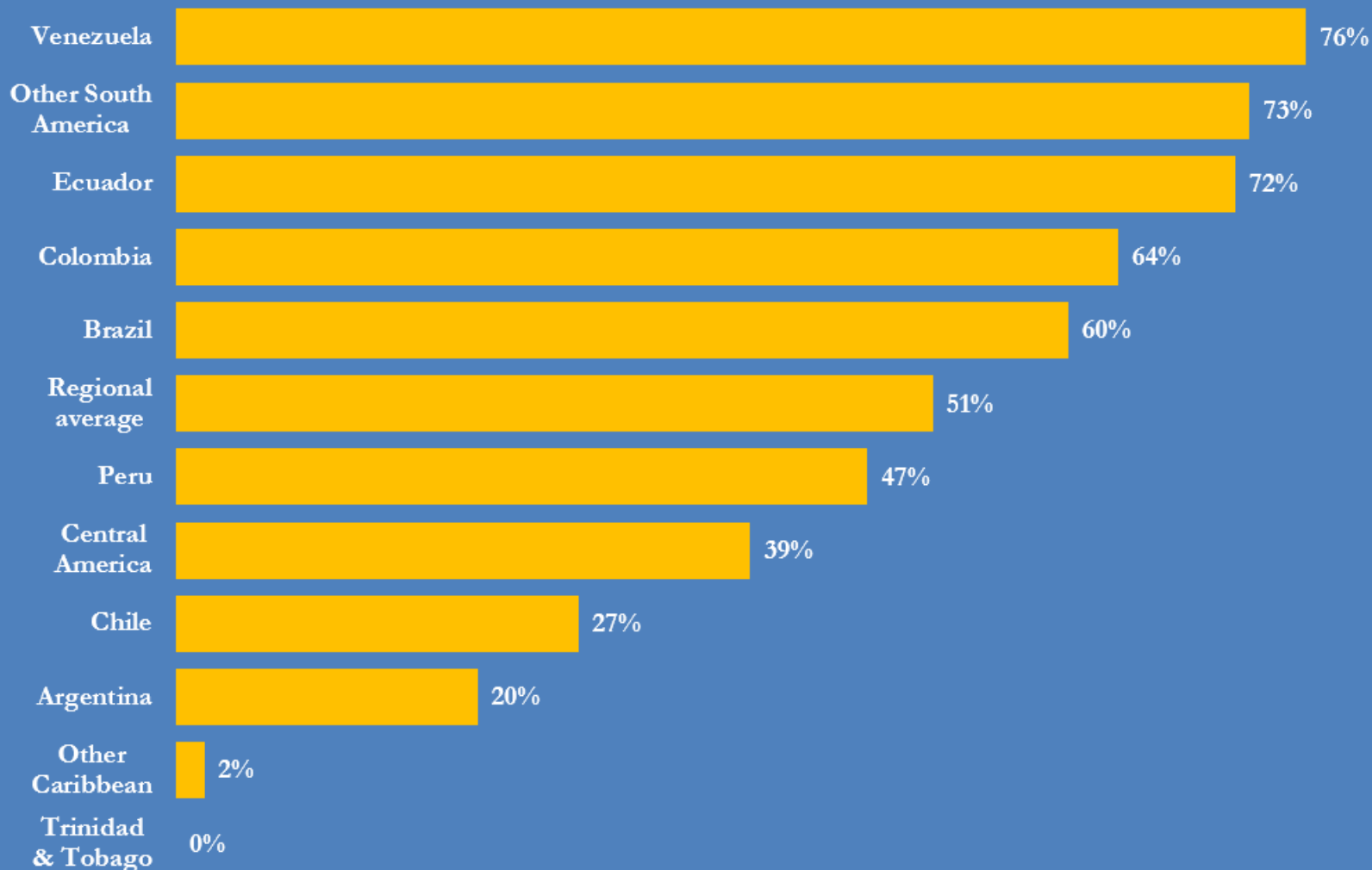
billion kilowatt-hours



Source: Energy Institute (Statistical Review of World Energy 2024)

@JKempEnergy

Central and South America electricity generation, 2023 percentage of total generation from hydroelectricity

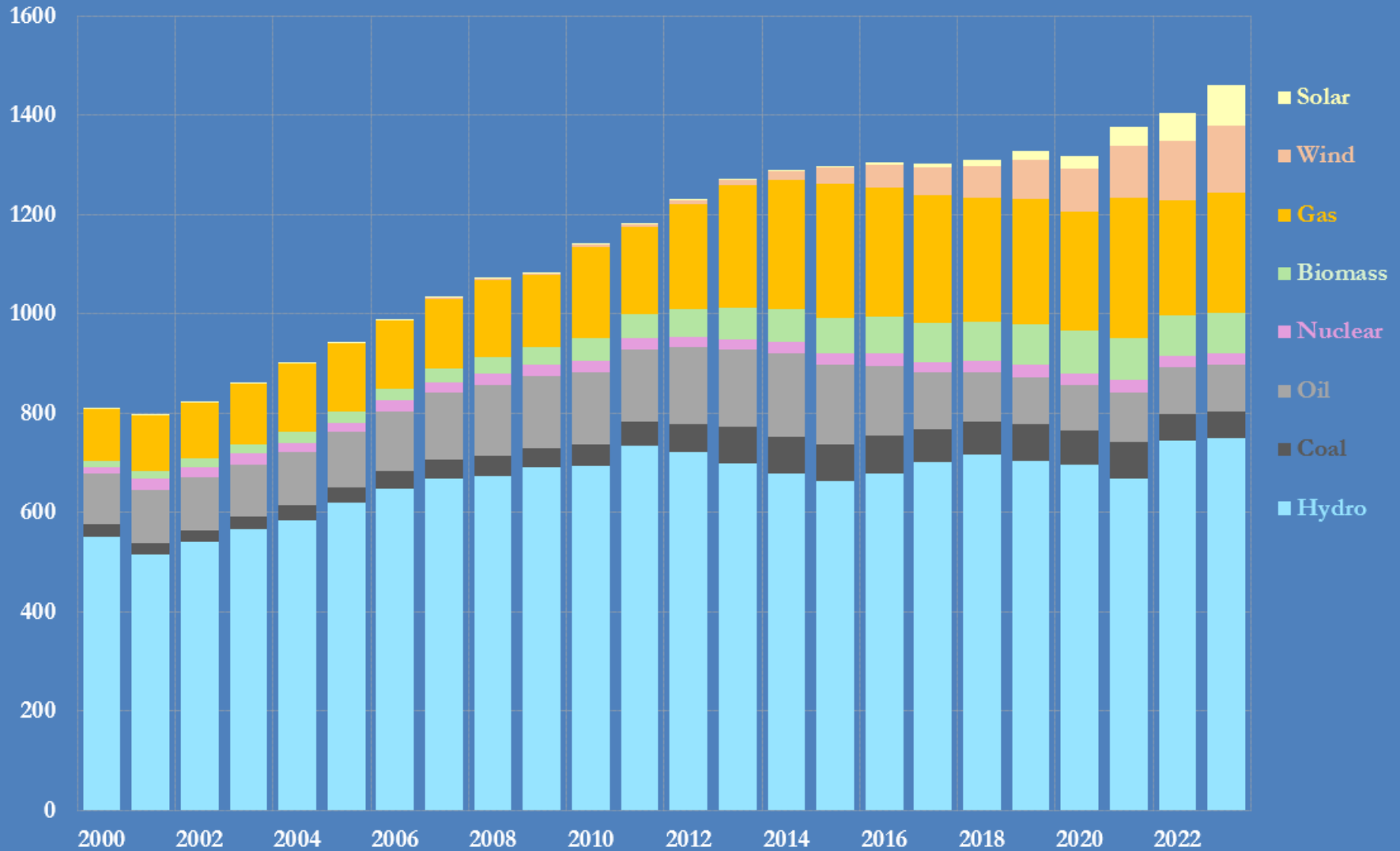


Source: Energy Institute (Statistical Review of World Energy 2024)

@JKempEnergy

Central and South America electricity generation, 2000-2024

annual, billion kilowatt-hours

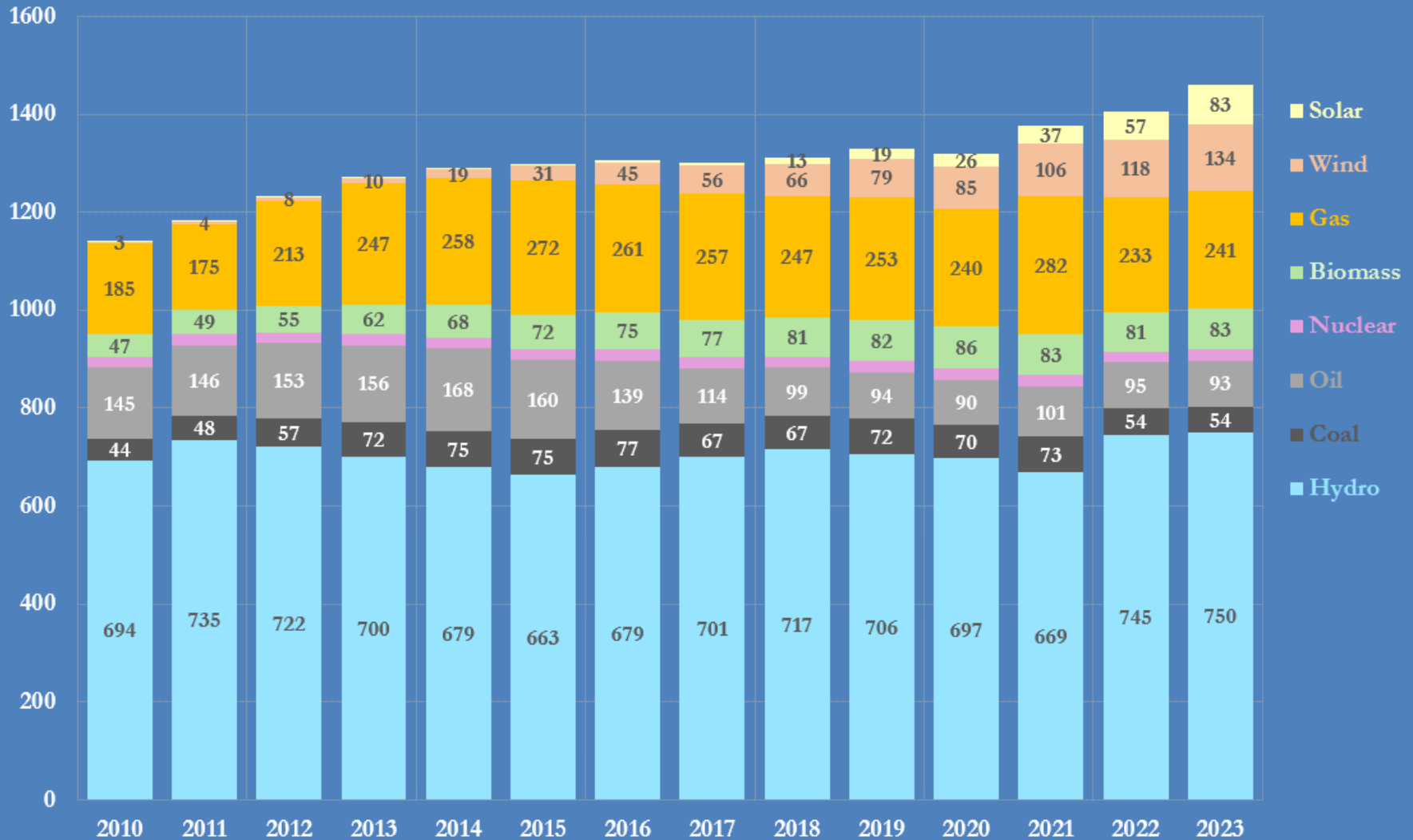


Source: Energy Institute (Statistical Review of World Energy 2024)

@JKempEnergy

Central and South America electricity generation, 2010-2024

annual, billion kilowatt-hours

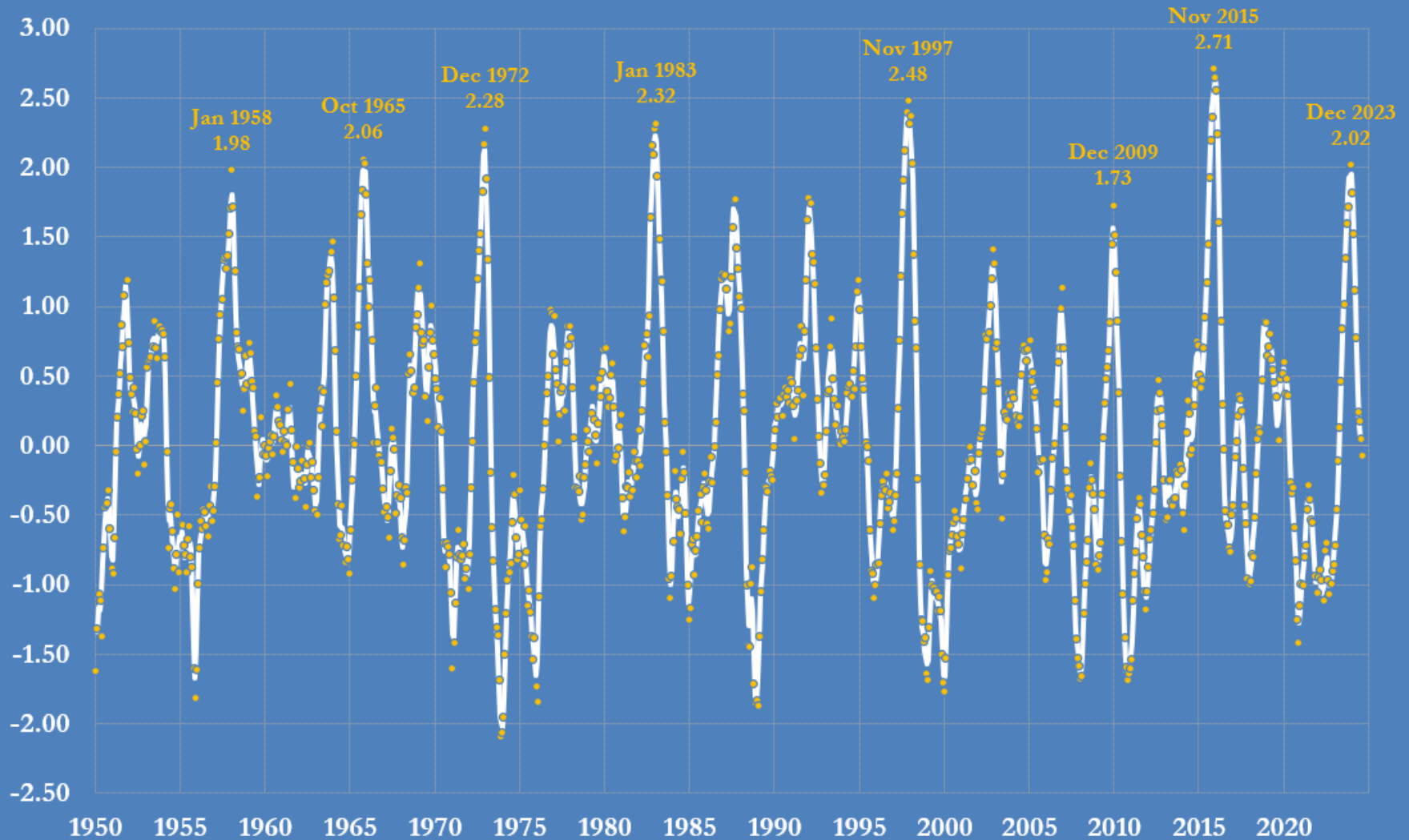


Source: Energy Institute (Statistical Review of World Energy 2024)

@JKempEnergy

Oceanic Niño Index, 1950-2024

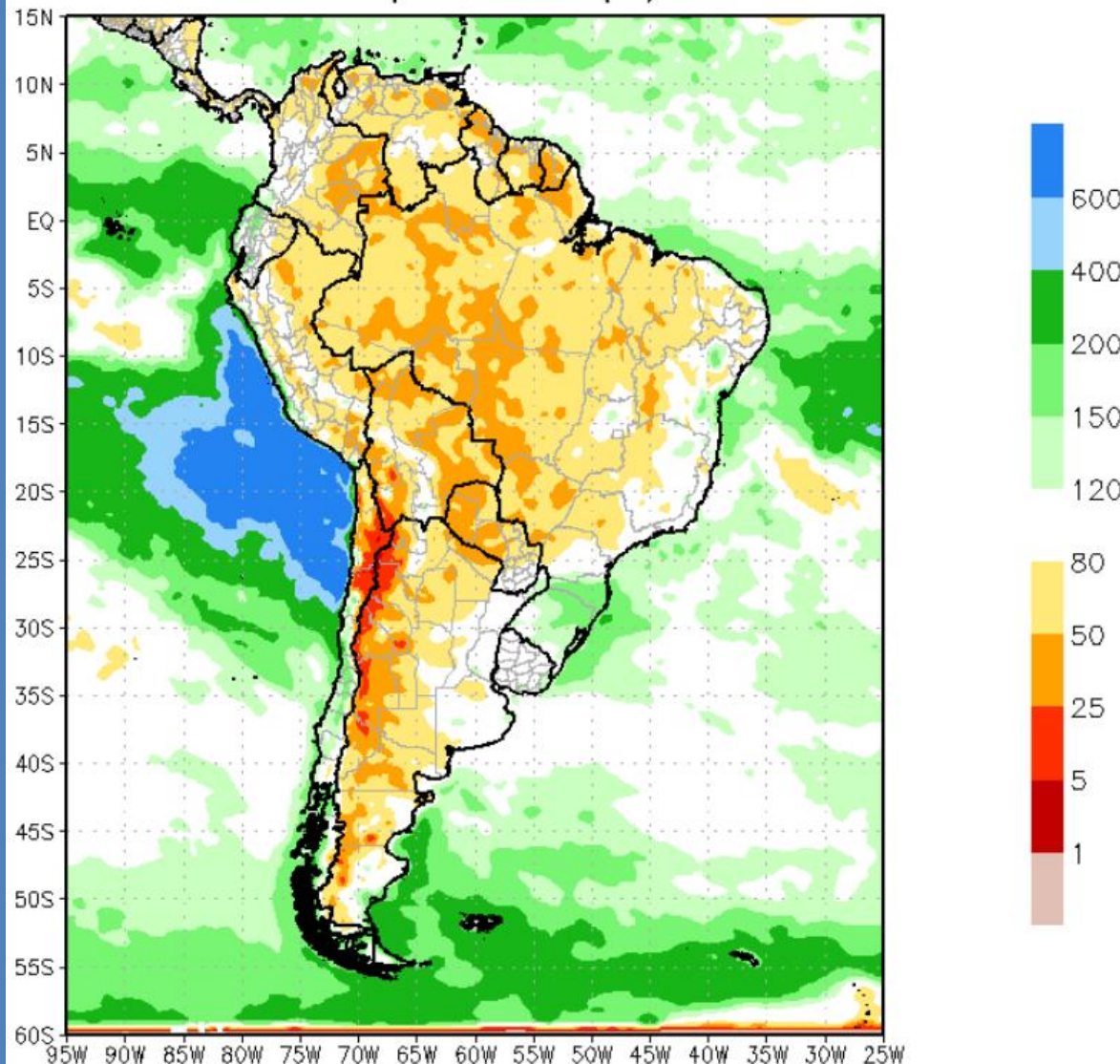
sea surface temperature in ENSO region 3.4, deviation from long-term average, °C
monthly and three-month centred average



Source: U.S. Climate Prediction Center

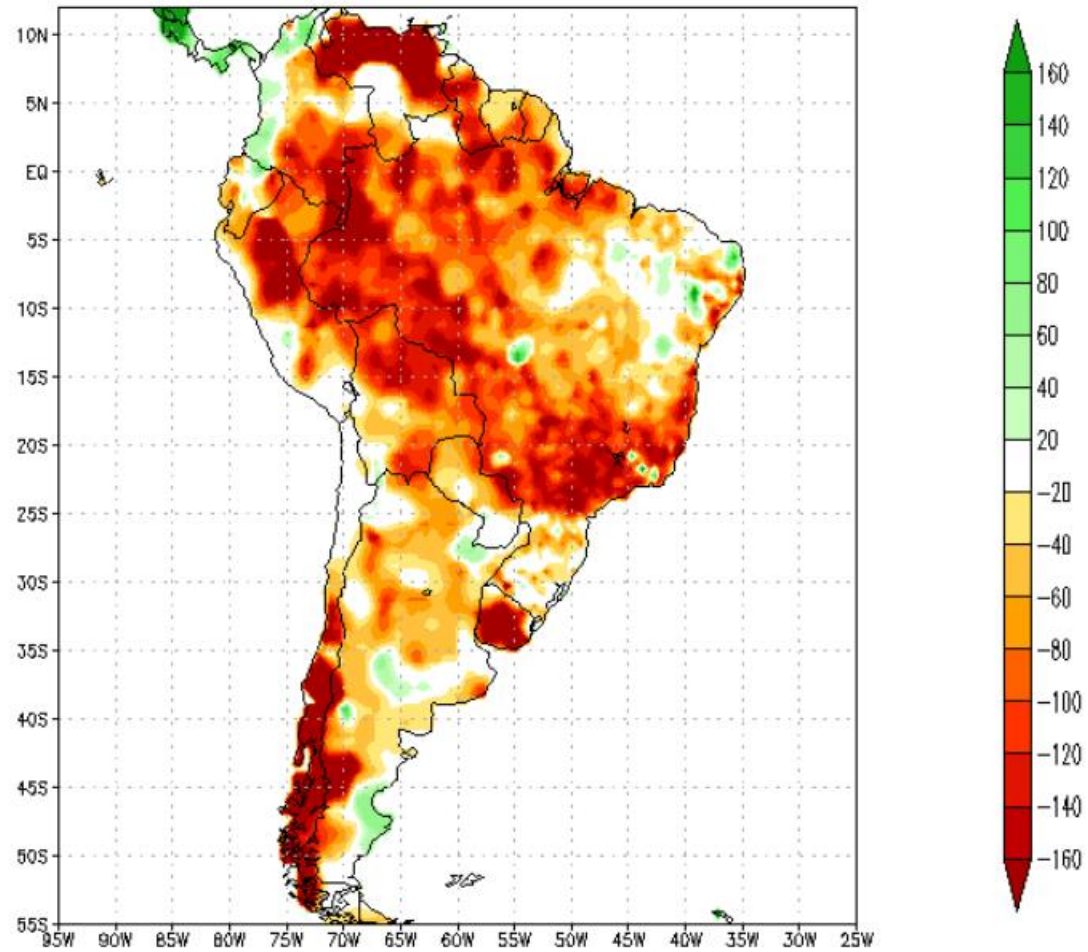
@JKempEnergy

Last 1yr (25SEP2023 – 23SEP2024)
Precip Percent(%)



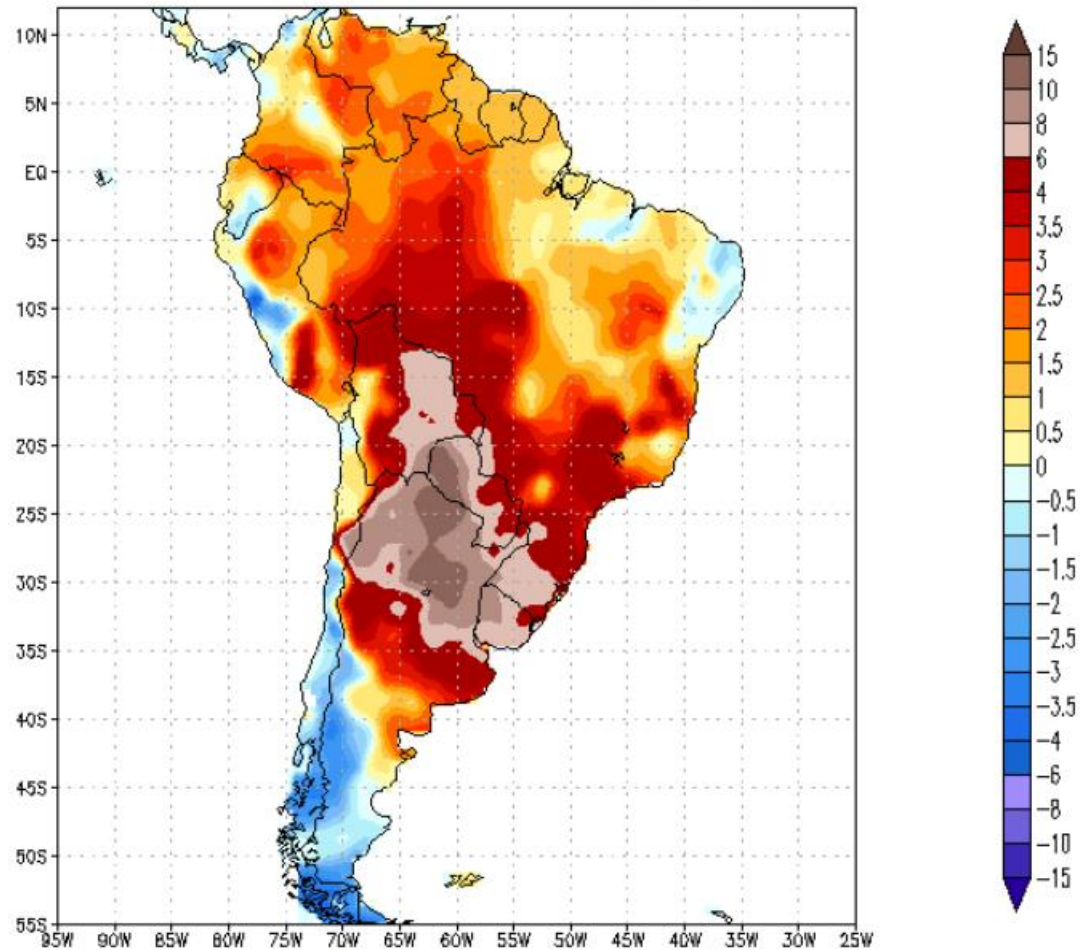
Source: Climate Prediction Center, U.S. National Oceanic and Atmospheric Administration

Calculated Soil Moisture Anomaly (mm) 20240923



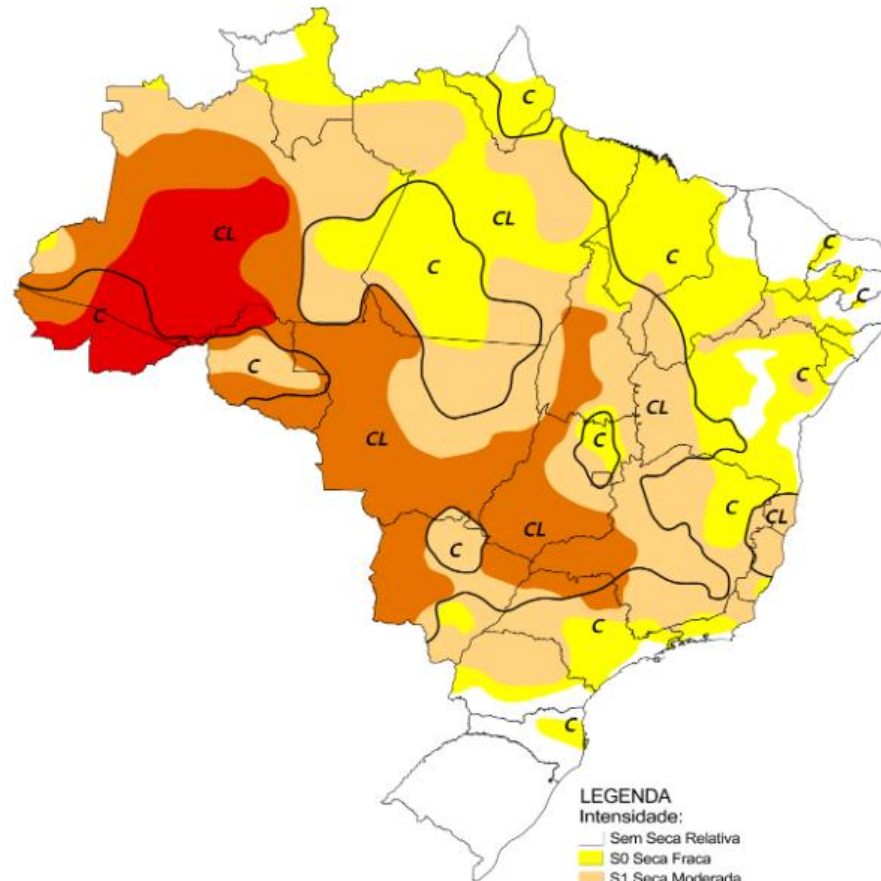
Source: Climate Prediction Center, U.S. National Oceanic and Atmospheric Administration

Observed 2m Temperature Anomaly (°C) 20240923



Source: Climate Prediction Center, U.S. National Oceanic and Atmospheric Administration

Monitor de Secas Agosto/2024



LEGENDA

Intensidade:

- Sem Seca Relativa
- S0 Seca Fraca
- S1 Seca Moderada
- S2 Seca Grave
- S3 Seca Extrema
- S4 Seca Excepcional

Tipos de Impacto:

- C = Curto prazo (e.g. agricultura, pastagem)
- L = Longo prazo (e.g. hidrologia, ecologia)
- ∧ = Delimitação de Impactos Dominantes

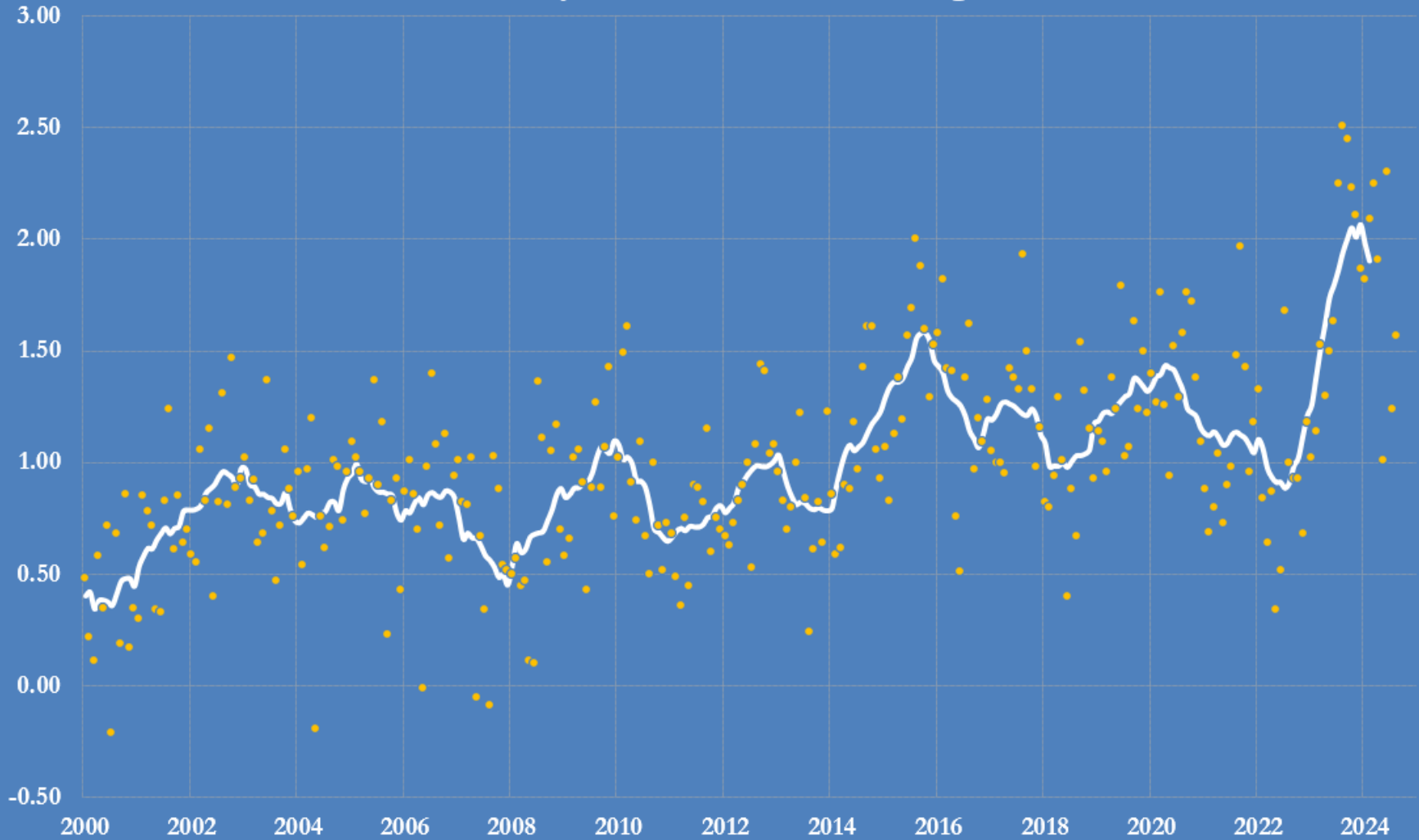
Elaborado em: 16/09/2024



Monitor
de Secas

South America average land surface temperature, 2000-2024

°C deviation from long-term average for 1901-2000
monthly and 12-month centred average

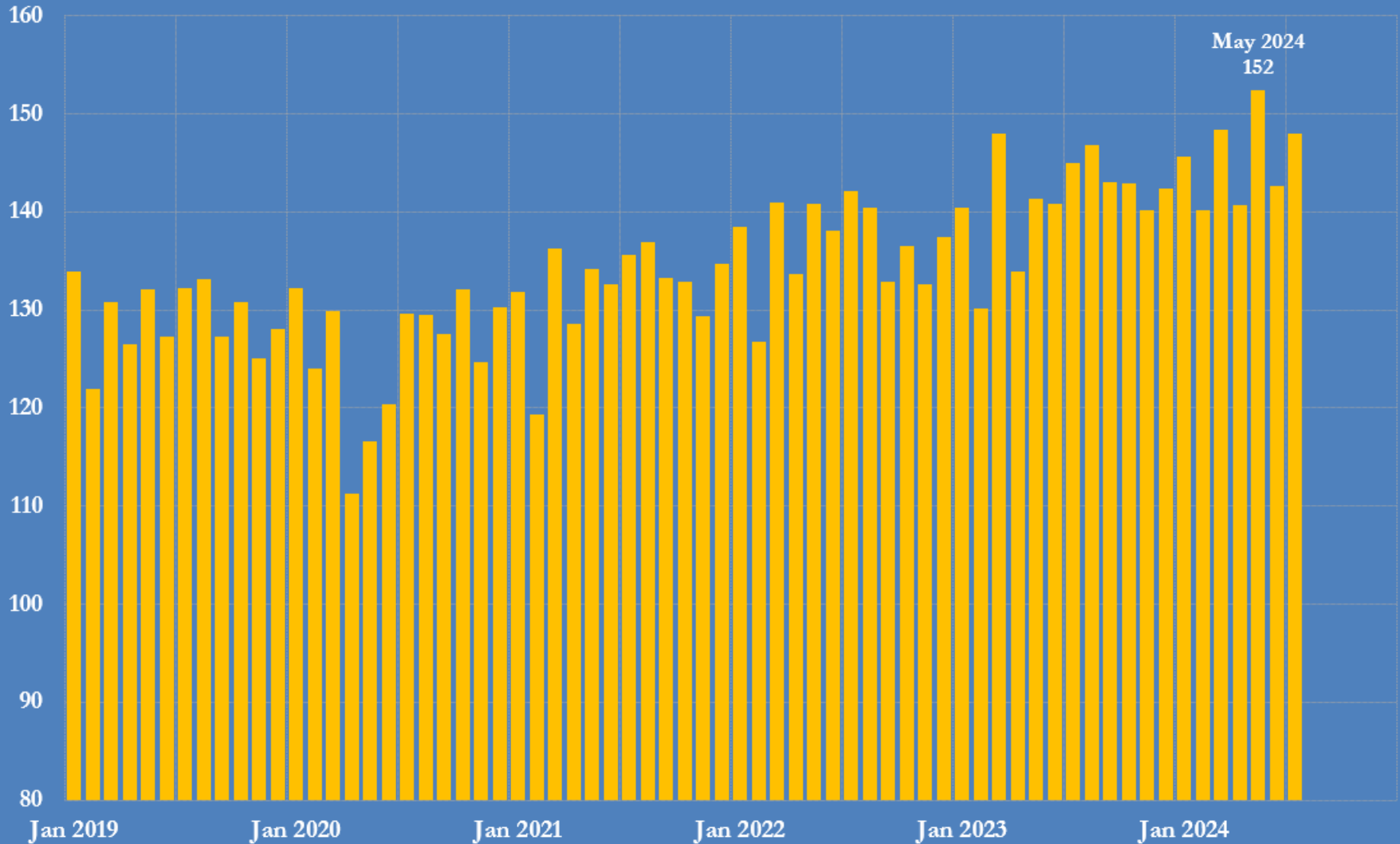


Source: U.S. National Centers for Environmental Information

@JKempEnergy

Latin America electricity generation, 2019-2024

monthly, billion kilowatt-hours, note truncated y-axis

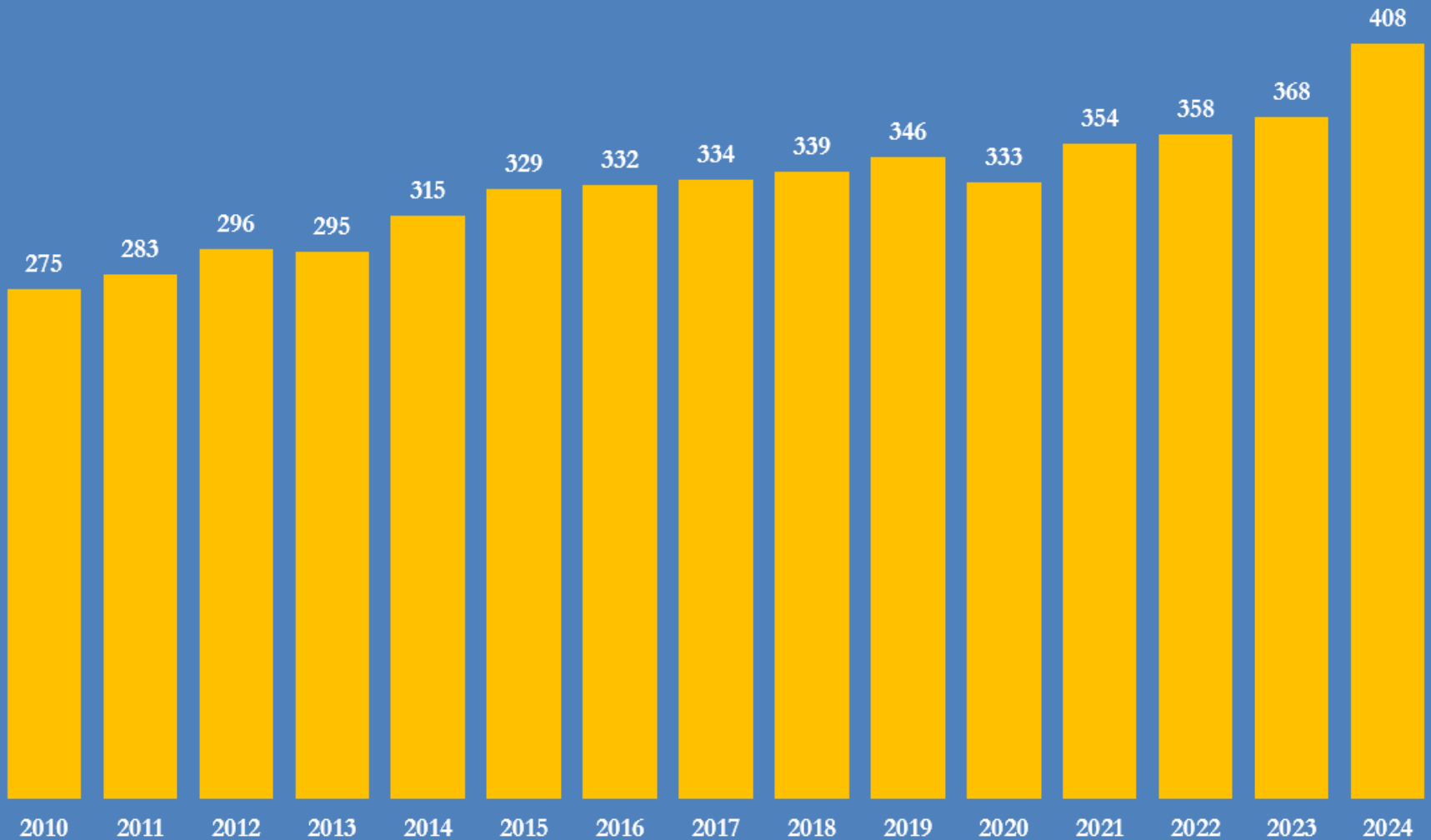


Source: Ember Climate Data

@JKempEnergy

Brazil electricity consumption, 2010-2024

billion kilowatt-hours, cumulative each from January to July
(data for 2023 includes estimates of micro and mini distributed generation)

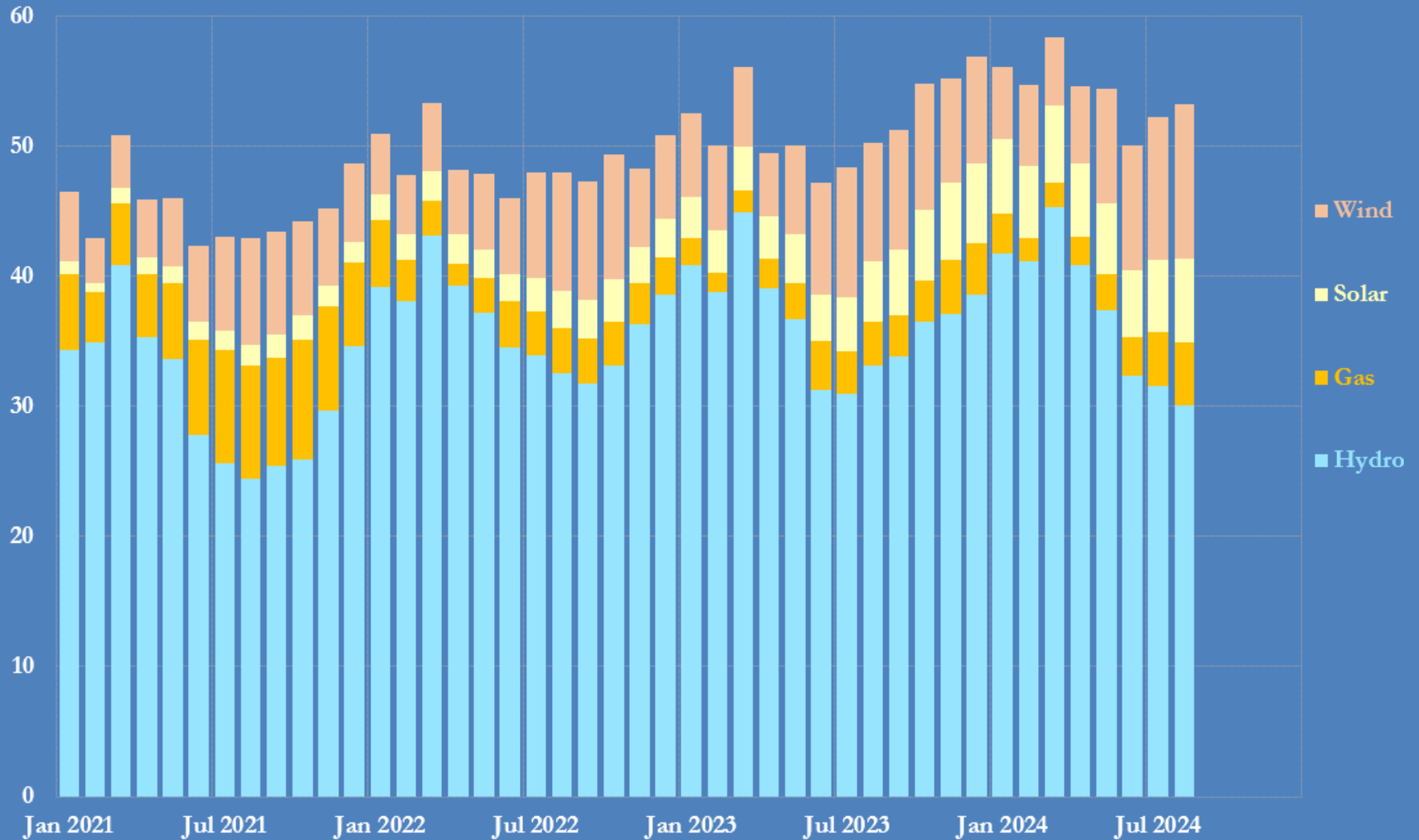


Source: Operador Nacional do Sistema Eletrico

@JKempEnergy

Brazil electricity generation, 2021-2024

billion kilowatt-hours, monthly, selected generation sources

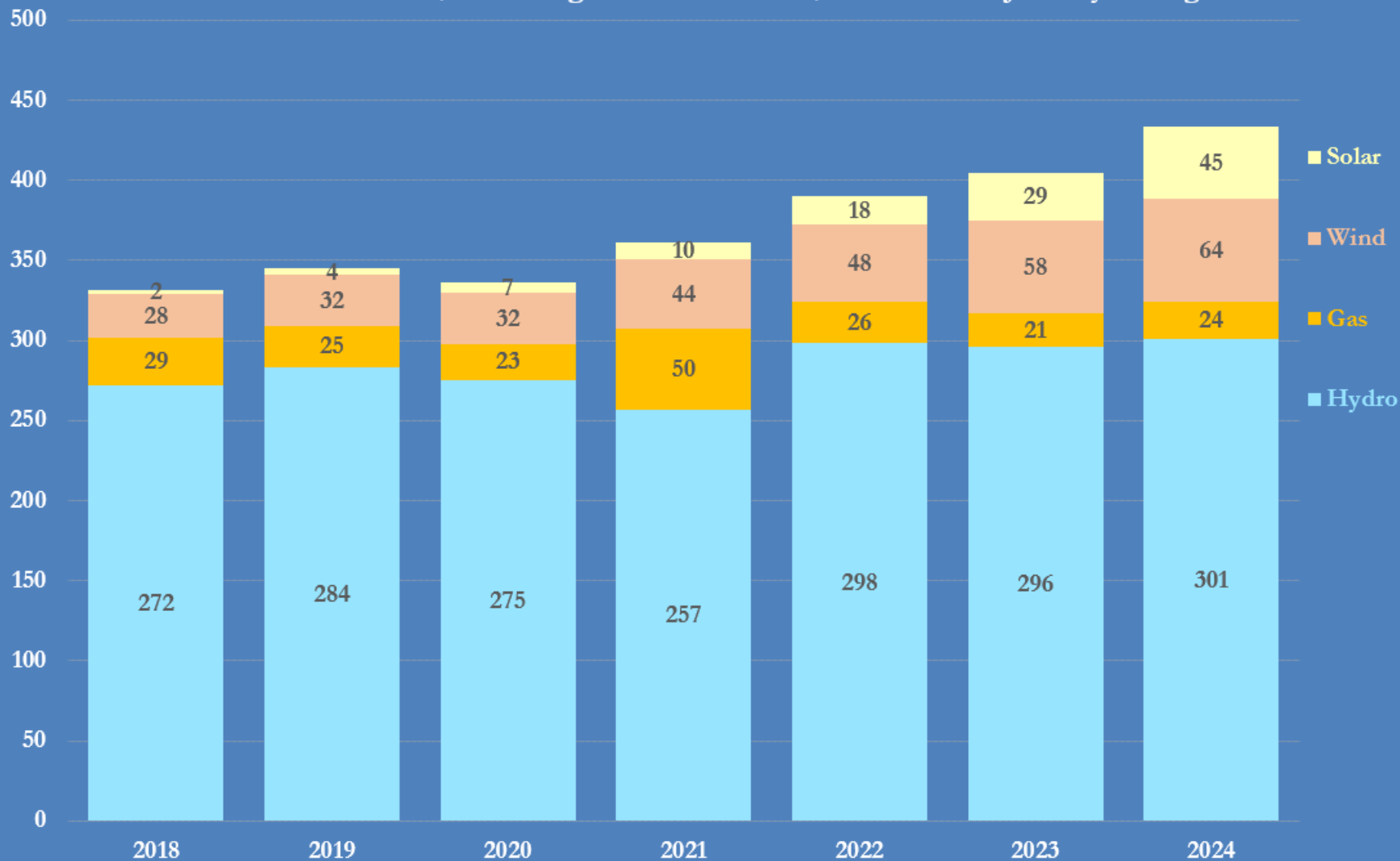


Source: Ember Electricity Data Explorer

@JKempEnergy

Brazil electricity generation, 2018-2024

billion kilowatt-hours, selected generation sources, accumulated January to August

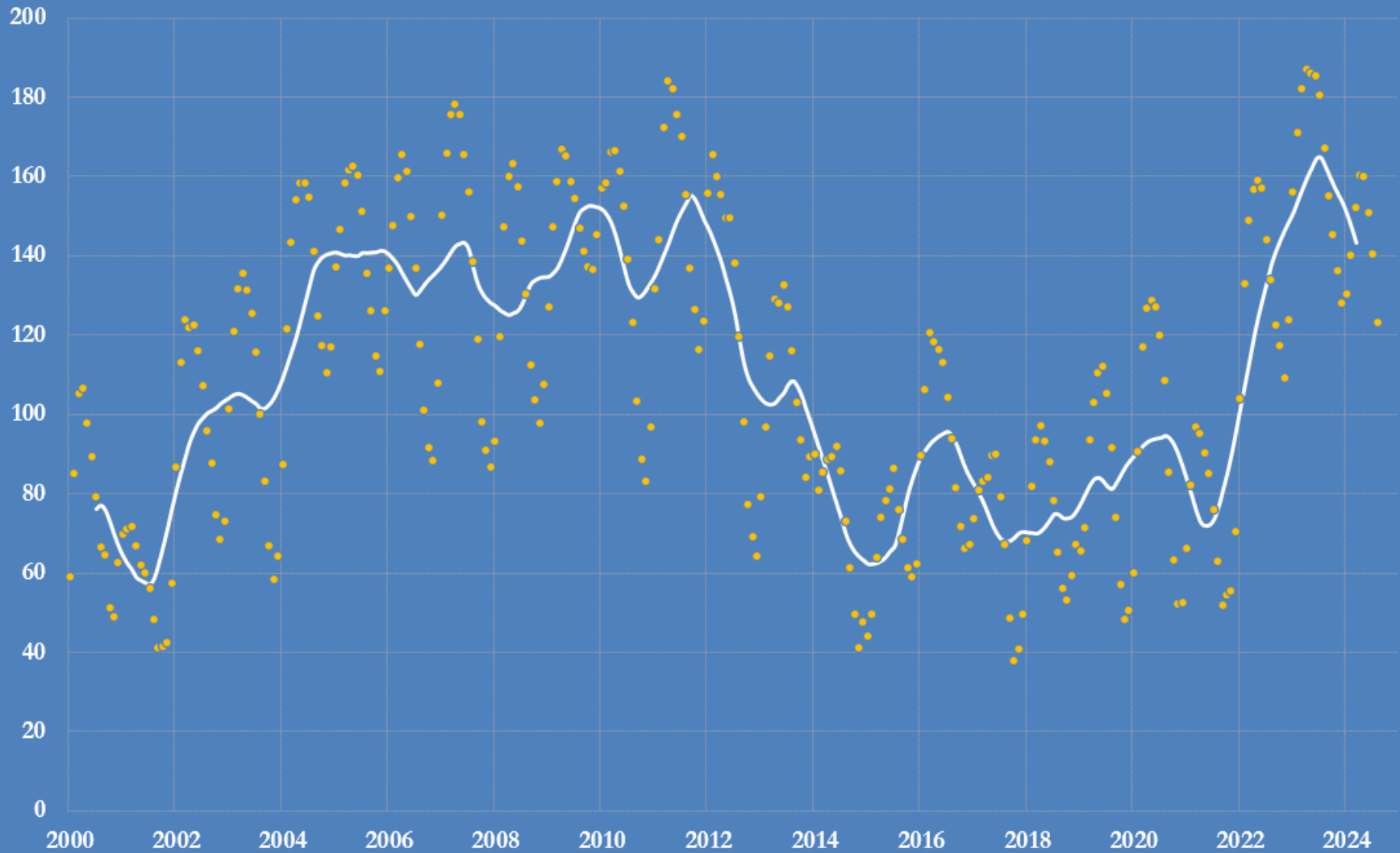


Source: Ember Electricity Data Explorer

@JKempEnergy

Brazil energy stored in hydroelectric reservoirs

billion kWh, all regional sub-systems, monthly and 12-month centred average

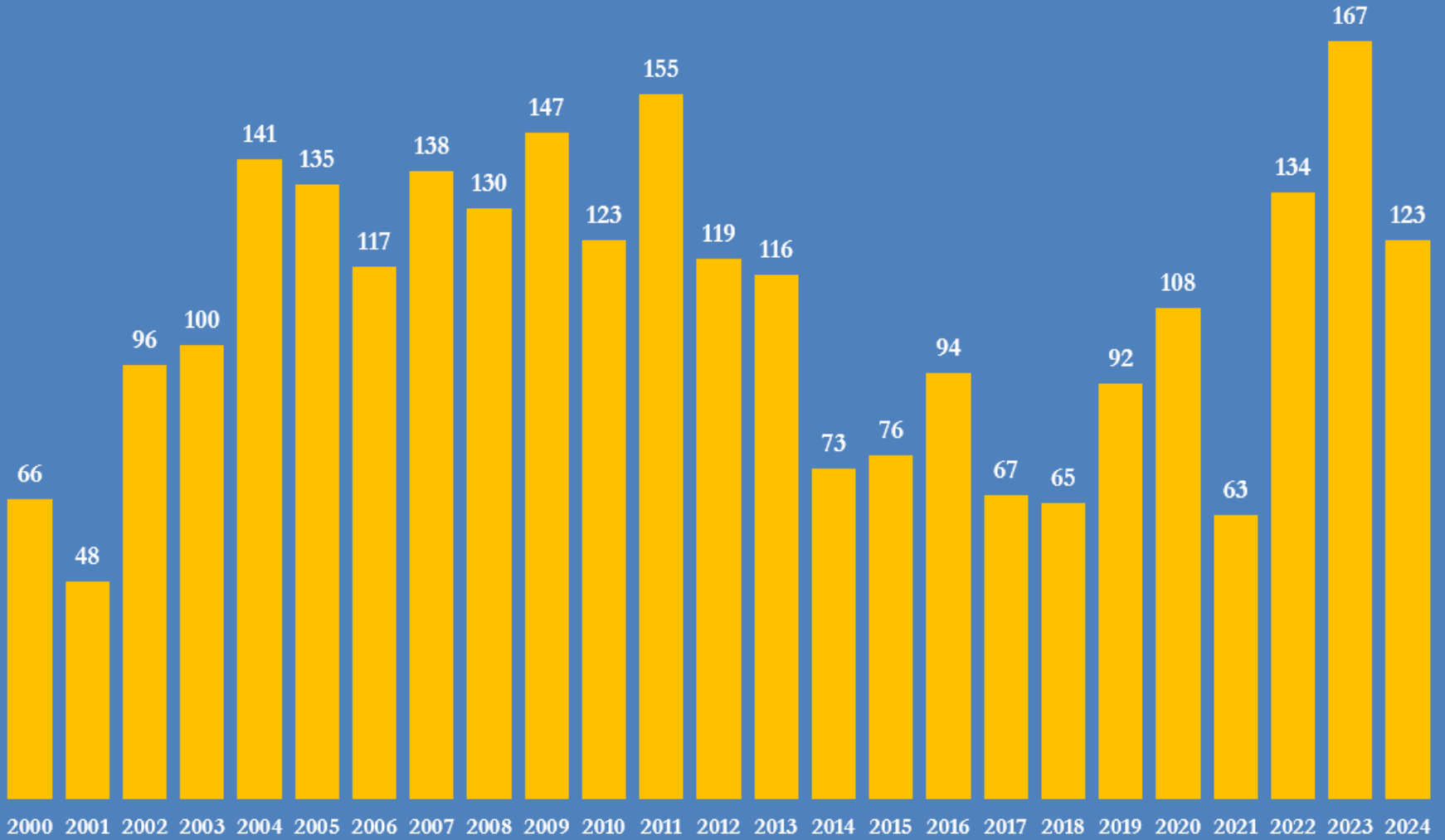


Source: Operador Nacional do Sistema Elétrico

@JKempEnergy

Brazil energy stored in hydroelectric reservoirs

billion kilowatt-hours, all regional sub-systems, each year in August

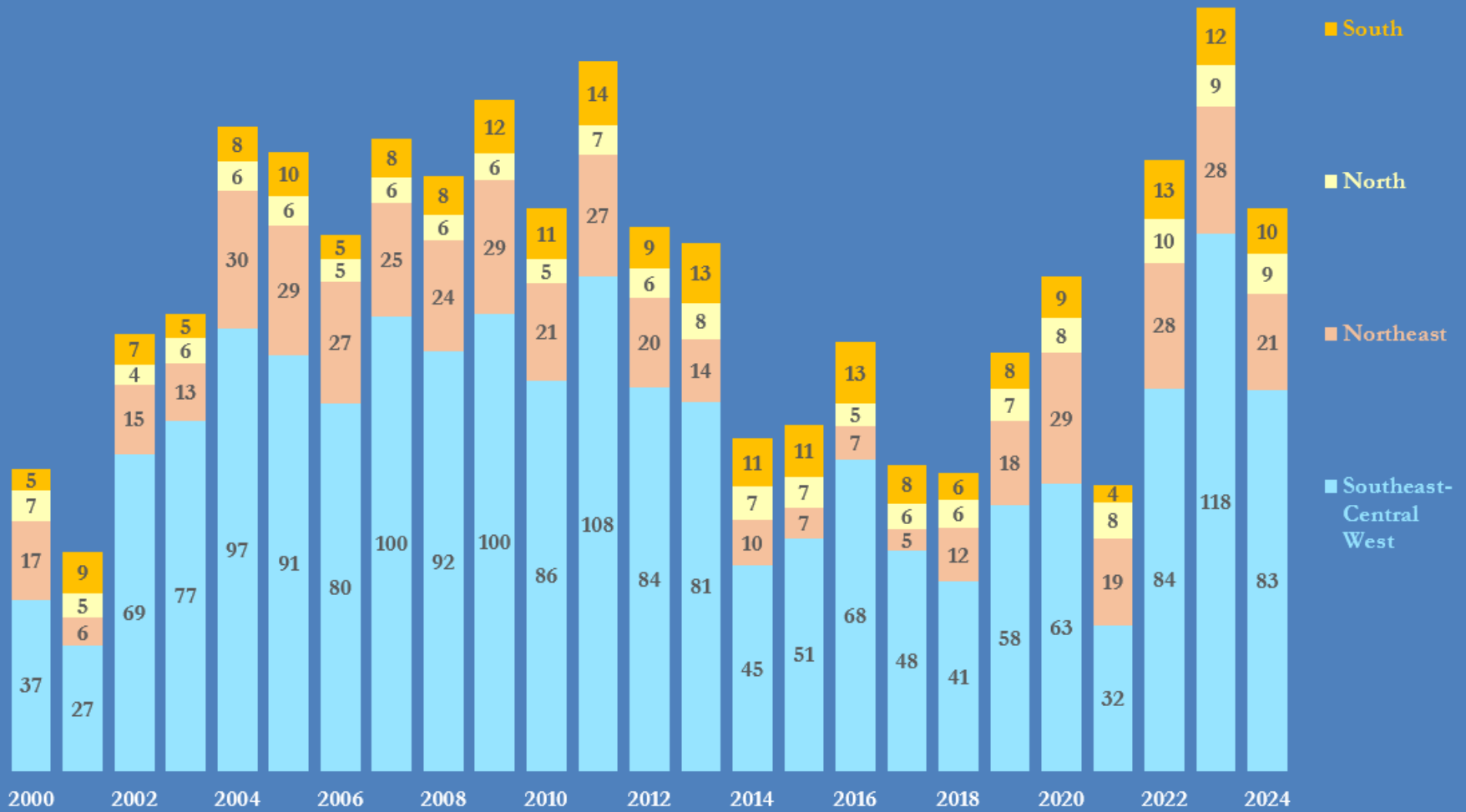


Source: Operador Nacional do Sistema Eletrico

@JKempEnergy

Brazil energy stored in hydroelectric reservoirs

billion kilowatt-hours, all regional sub-systems, each year in August

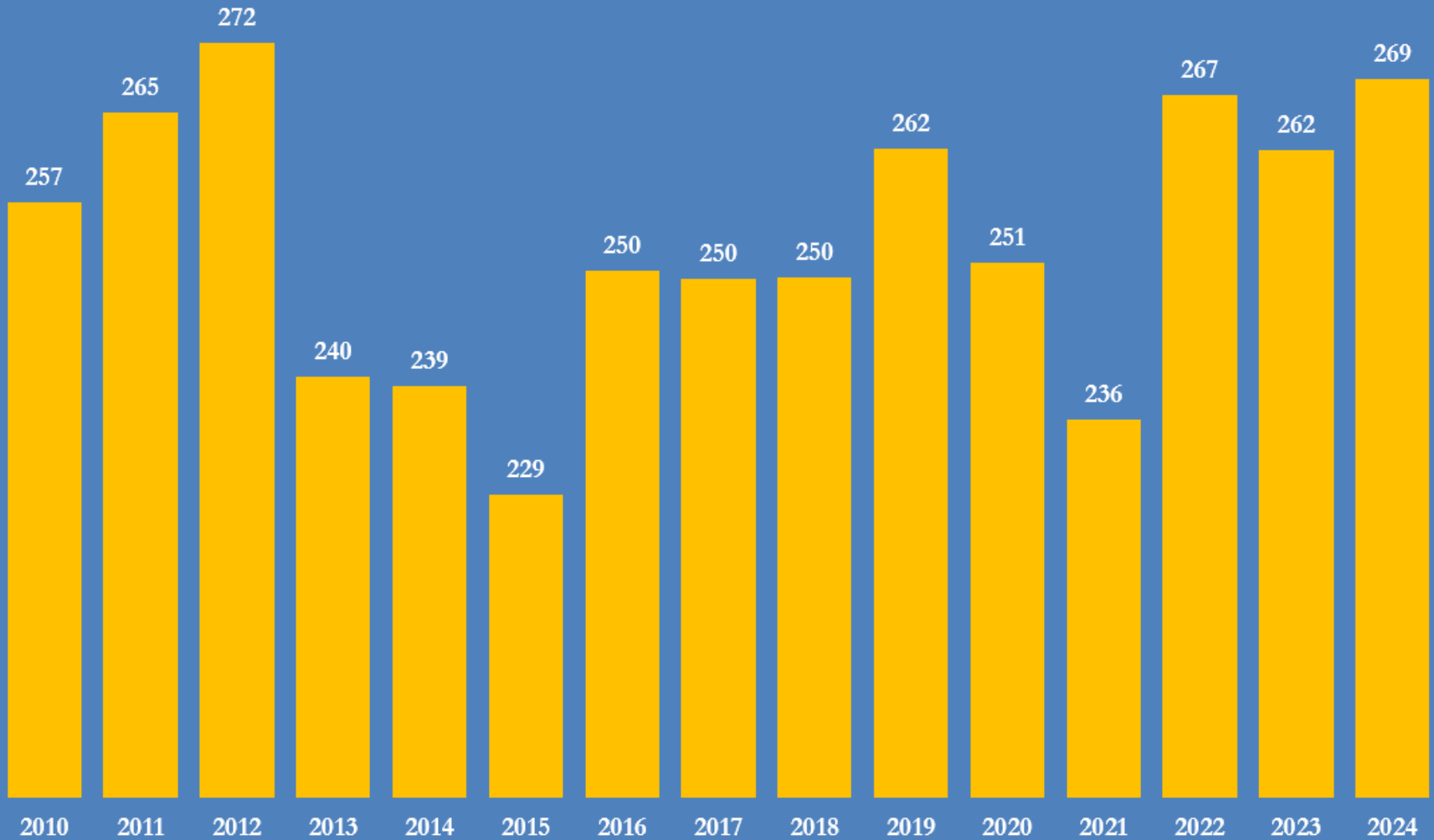


Source: Operador Nacional do Sistema Eletrico

@JKempEnergy

Brazil hydroelectric generation, 2010-2024

billion kilowatt-hours, cumulative each year from January to July

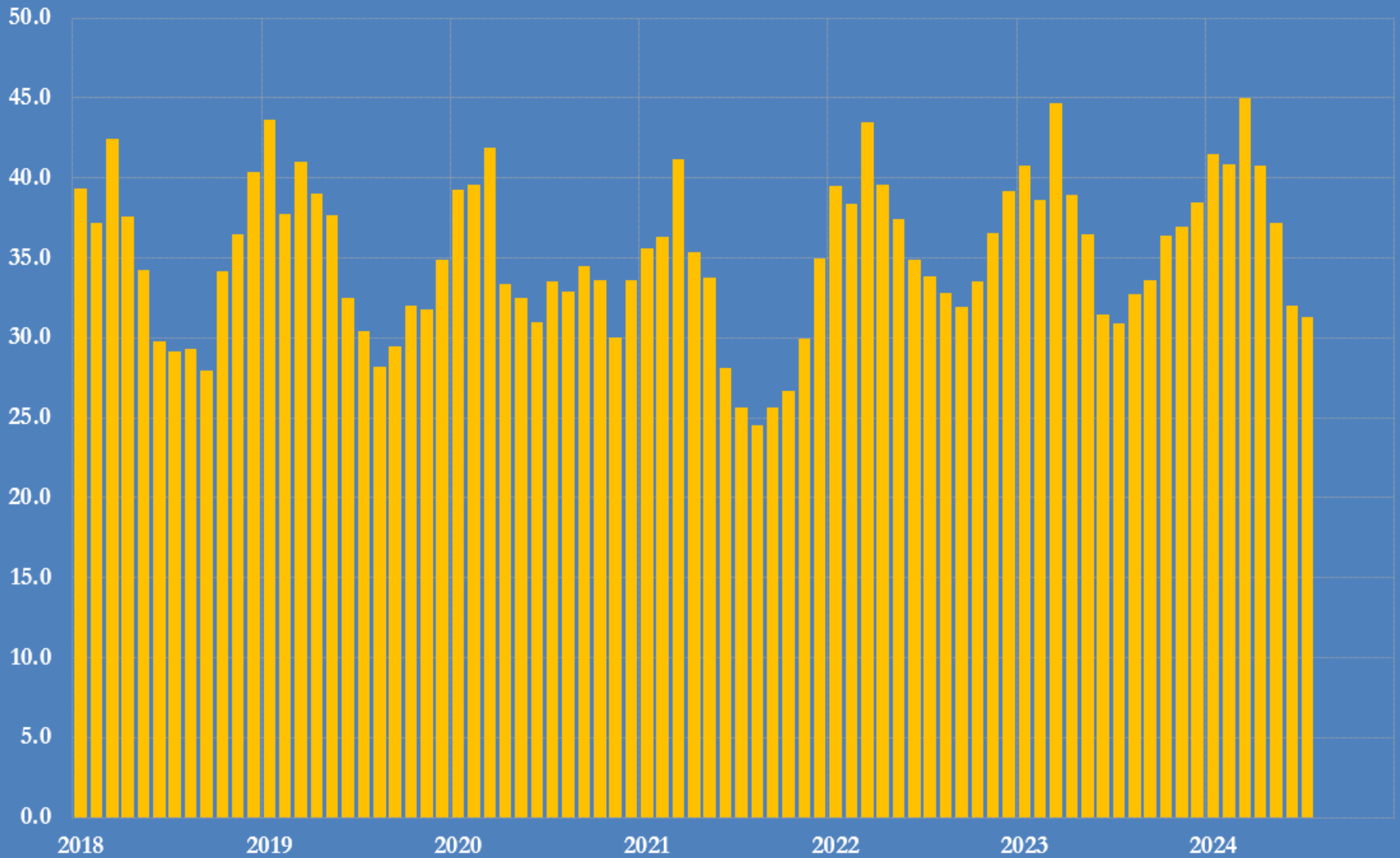


Source: Operador Nacional do Sistema Eletrico

@JKempEnergy

Brazil hydro electricity generation, 2019-2024

billion kilowatt-hours, monthly

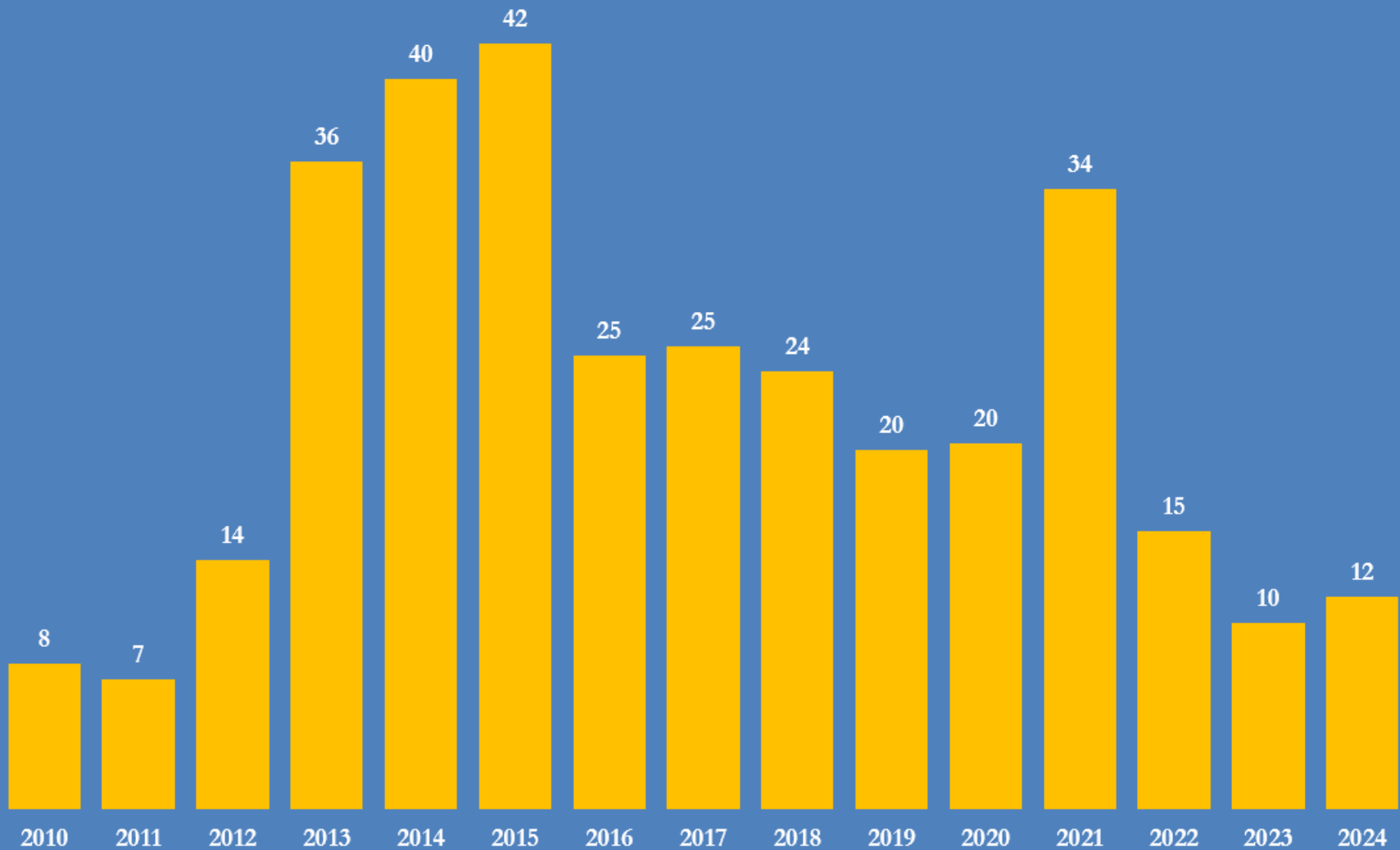


Source: Operador Nacional do Sistema Eletrico

@JKempEnergy

Brazil gas-fired generation, 2010-2024

billion kilowatt-hours, cumulative each year from January to August

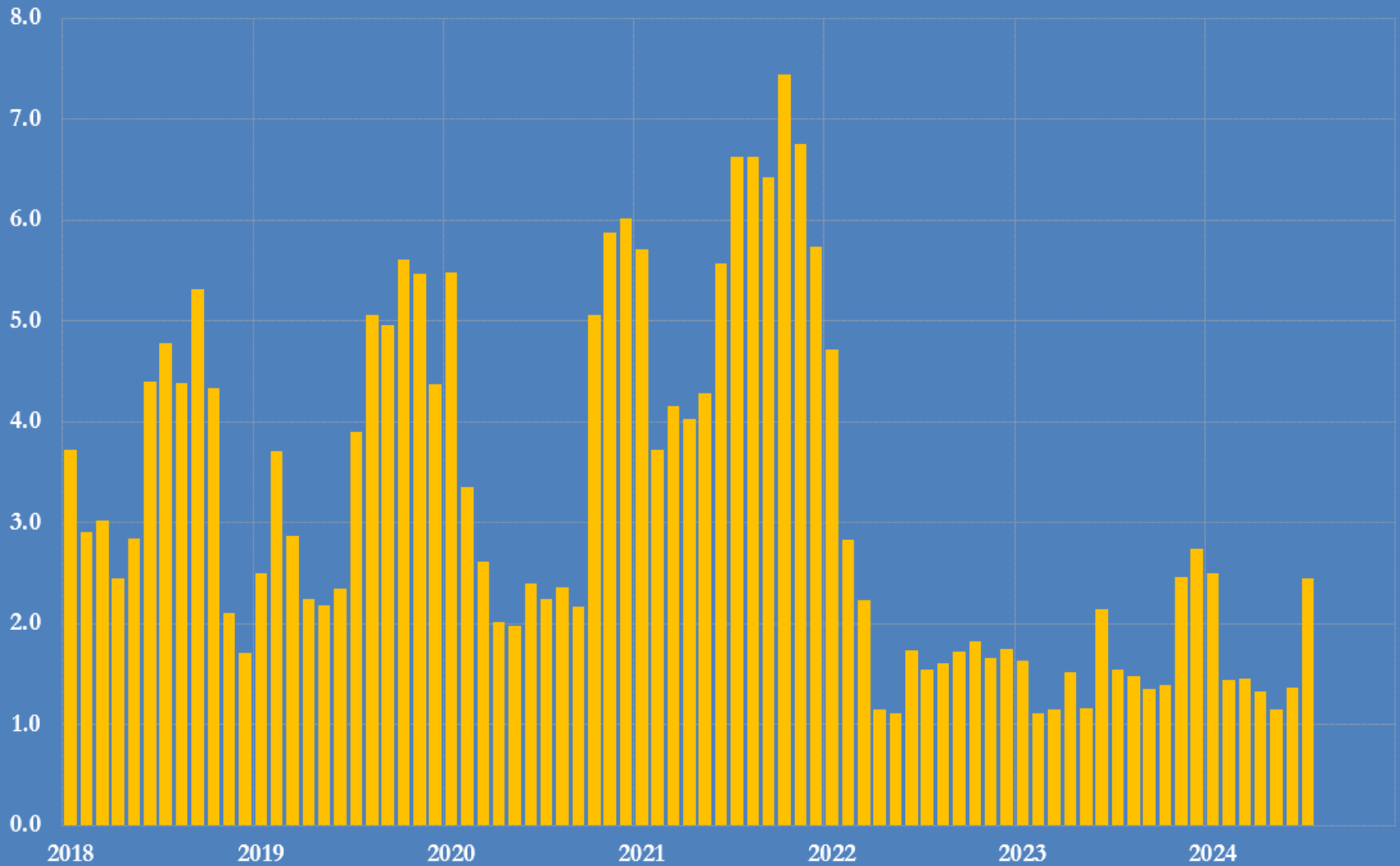


Source: Operador Nacional do Sistema Elétrico

@JKempEnergy

Brazil gas-fired electricity generation, 2019-2024

billion kilowatt-hours, monthly

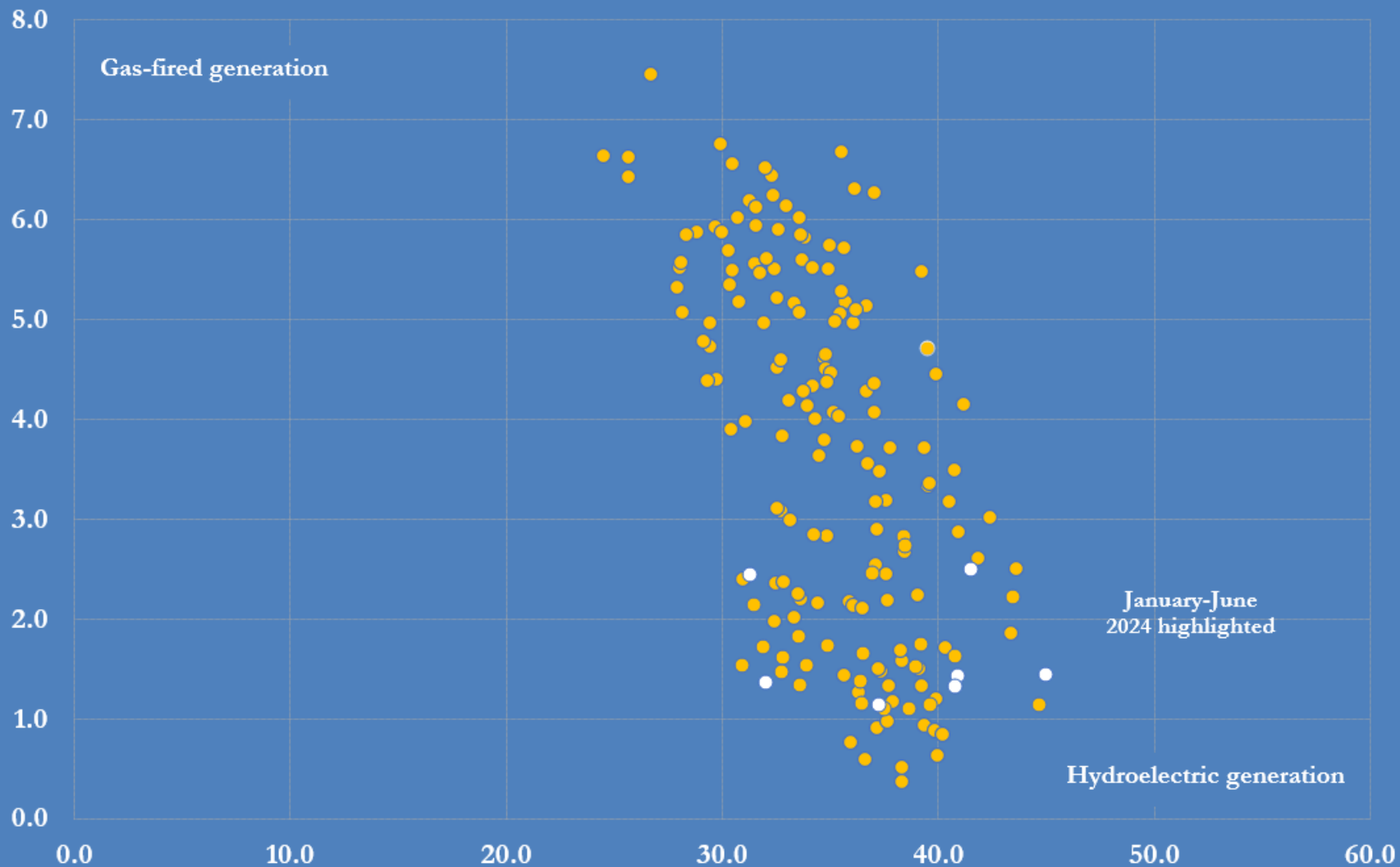


Source: Operador Nacional do Sistema Elétrico

@JKempEnergy

Brazil electricity generation, 2010-2024

billion kilowatt-hours, monthly

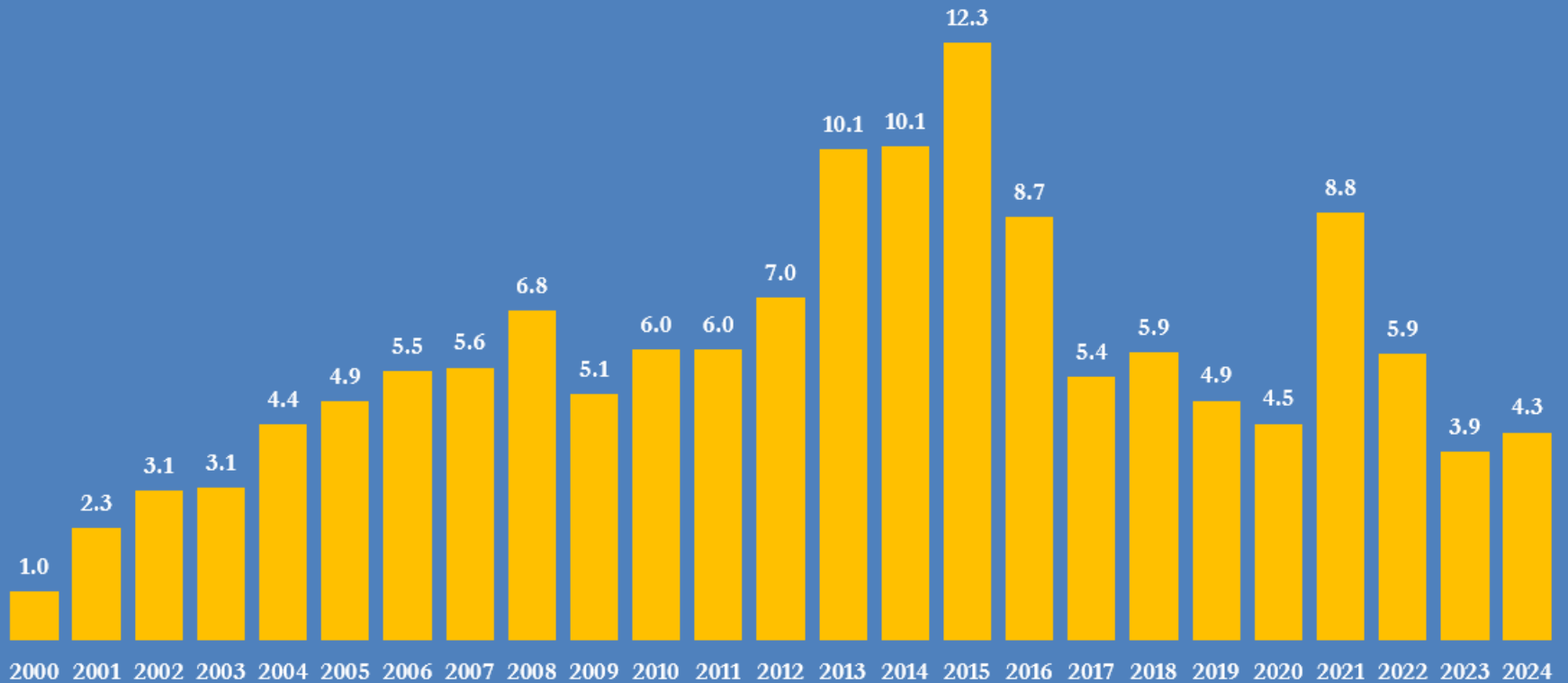


Source: Operador Nacional do Sistema Eletrico

@JKempEnergy

Brazil natural gas imports, 2000-2024

billion cubic metres, accumulated each year from January to July



Source: Agencia Nacional do Petroleo, Gas Natural e Biocombustiveis

@JKempEnergy