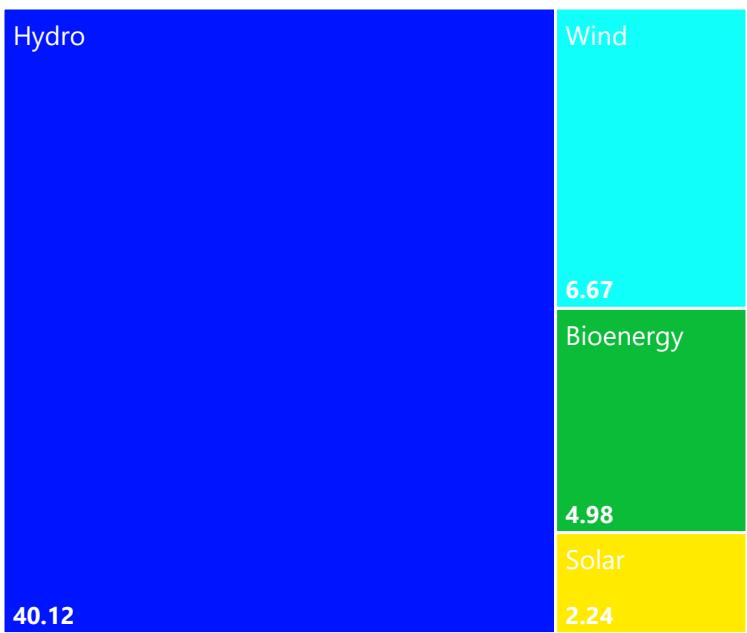




GLOBAL RENEWABLE ENERGY



Renewable Energy

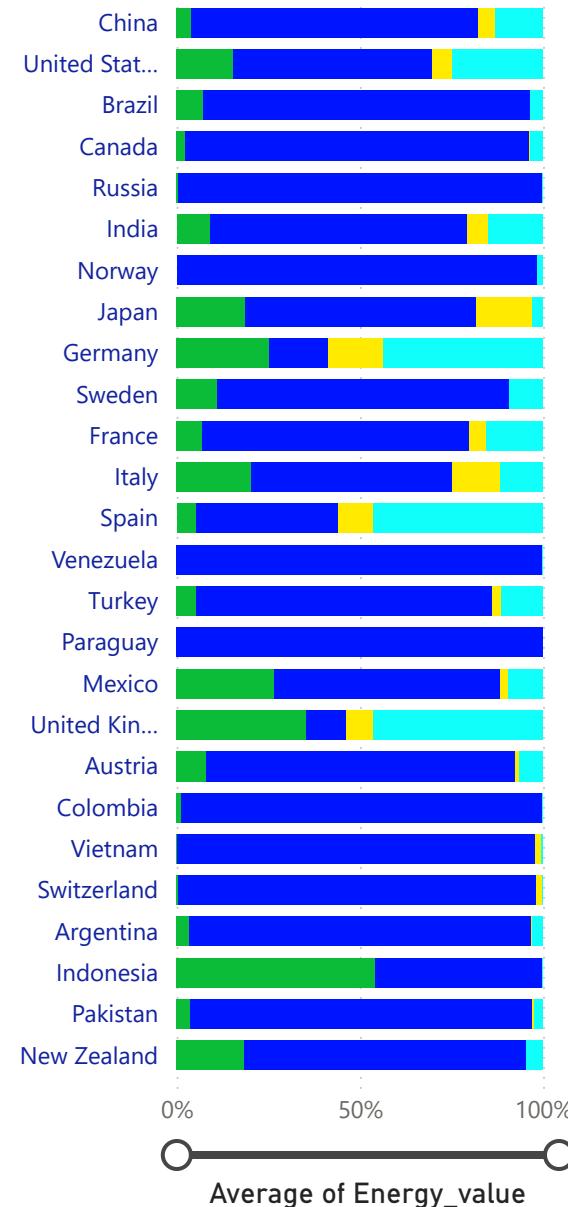


Countries



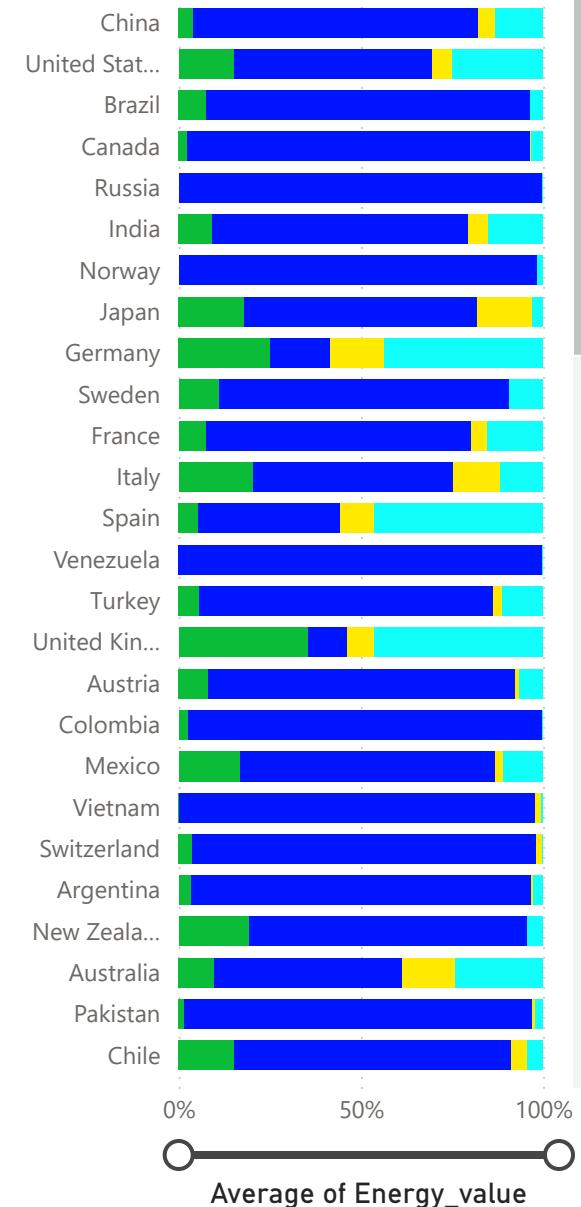
Energy Production

Energy_ty... ● Bioenergy ● Hydro ● Solar ● Wind



Energy Consumption

Energy_ty... ● Bioenergy ● Hydro ● Solar ● Wind



G20 vs Non-G20

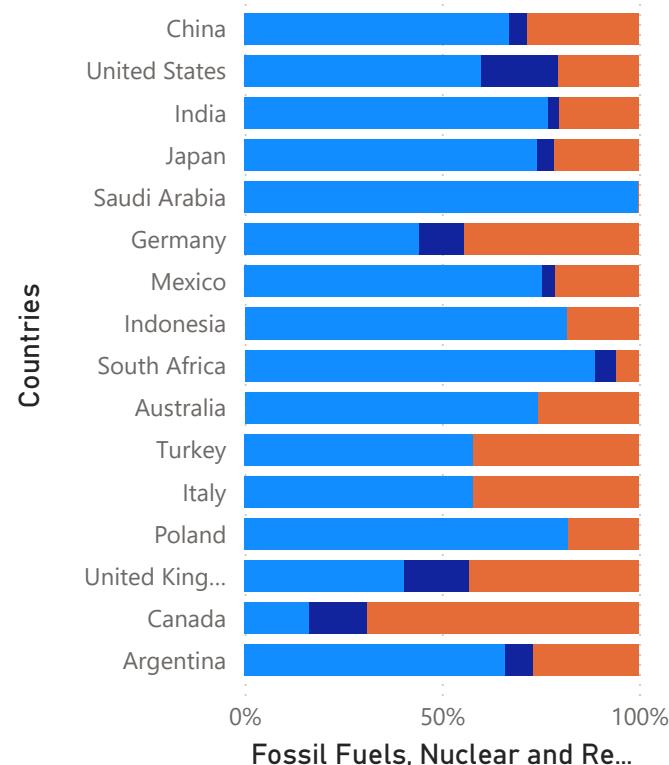
Group_Type	Renewable Energy Share	Low-Carbon Electricity Share	Energy Consumption Per Capita	Total Renewable Electricity
G20	16.86	39.84	40,943.34	69,619.32
Non-G20	37.39	35.88	21,198.78	17,336.62
Total	54.25	75.72	62,142.12	86,955.94

Year G20
2020

Year Non G20
2020

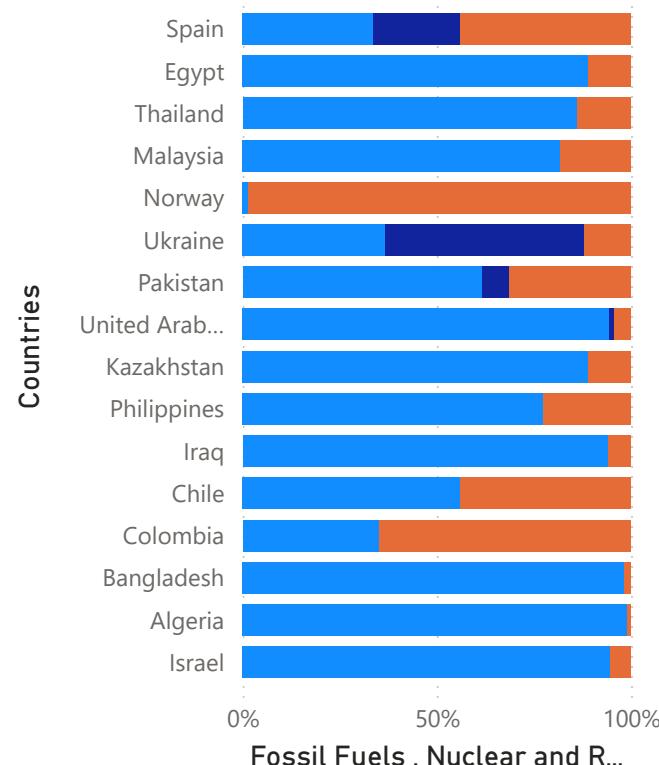
G20 Share of Fossil Fuels, Nuclear and Renewables Consumption

● Fossil Fuels ● Nuclear ● Renewables

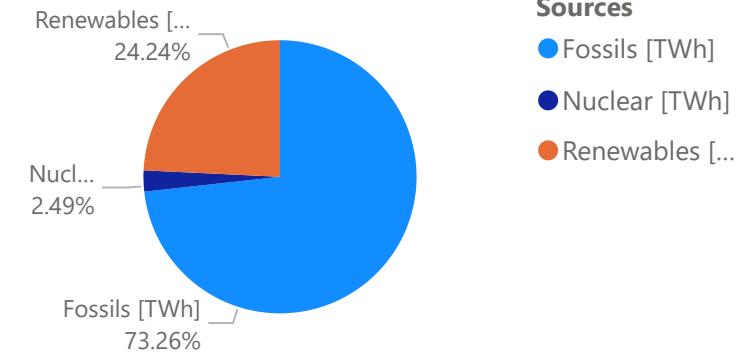


Non-G20 Share of Fossil Fuels, Nuclear and Renewables Consumption

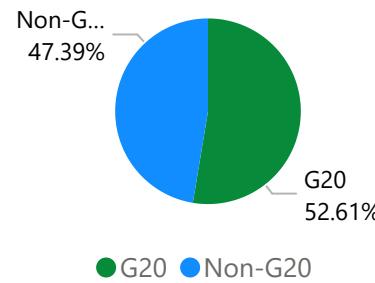
● Fossil Fuels ● Nuclear ● Renewables



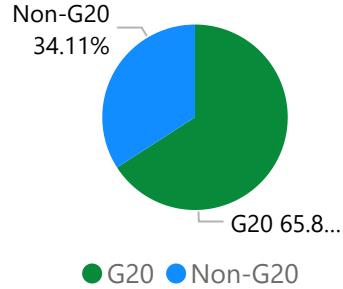
Electricity Sources



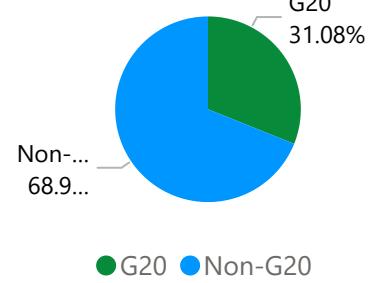
Low-Carbon Electricity Share



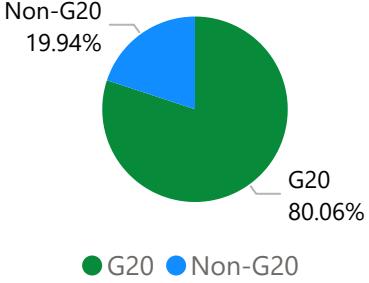
Energy Consumption Per Capita



Renewable Energy Share



Total Renewable Electricity

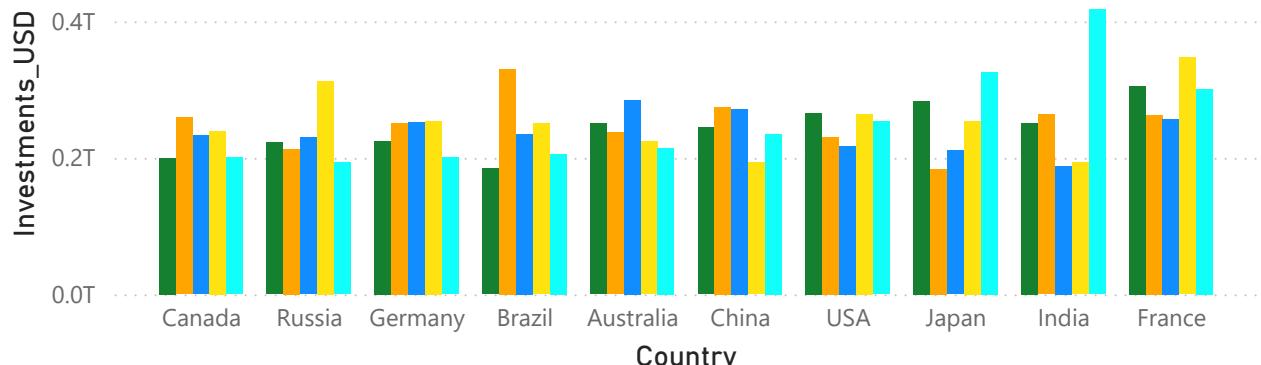


Year

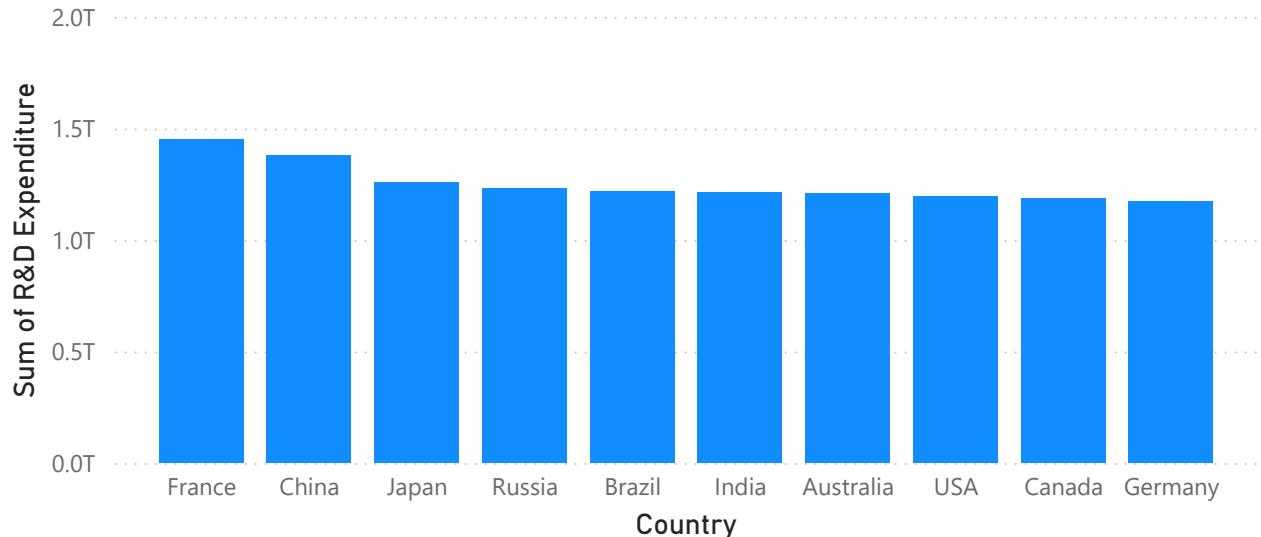
All

Investments_USD, Year by Country, and Energy Type

Energy Type • Biomass • Geothermal • Hydro • Solar • Wind



R&D Expenditure by Country



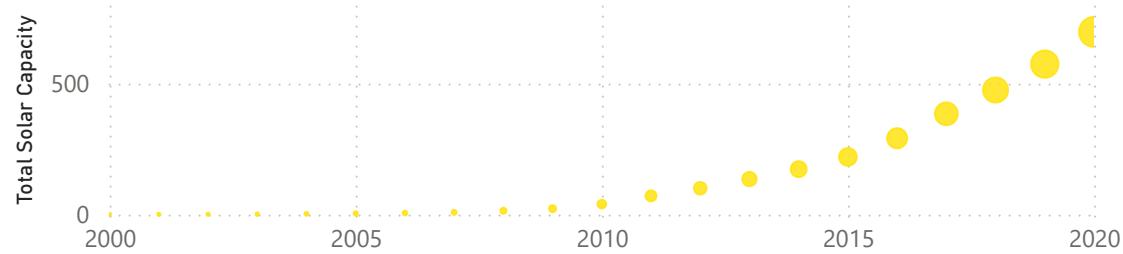
- Countries
- Algeria
 - Argentina
 - Australia
 - Austria
 - Belgium
 - Brazil
 - Bulgaria
 - Canada

Countries

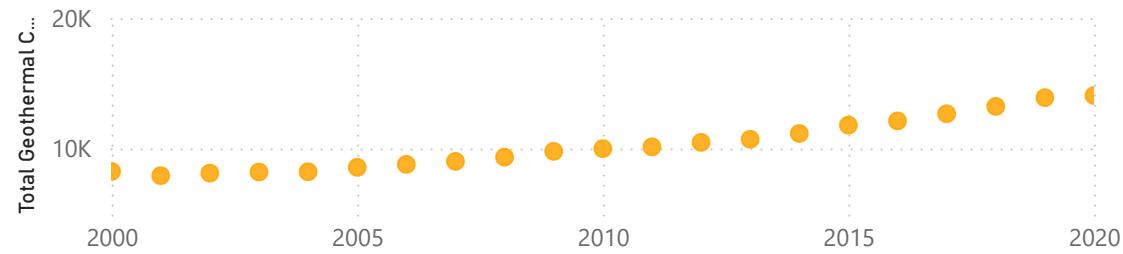


Countries	Solar	Geother
China	943.56	50
Germany	450.49	30
Japan	380.14	10,99
United States	328.89	50,68
Italy	192.83	14,87
India	140.61	
United Kingdom	85.59	
Australia	76.88	
France	76.12	15
Spain	67.72	
Total	3,228.92	216,19

Solar Capacity

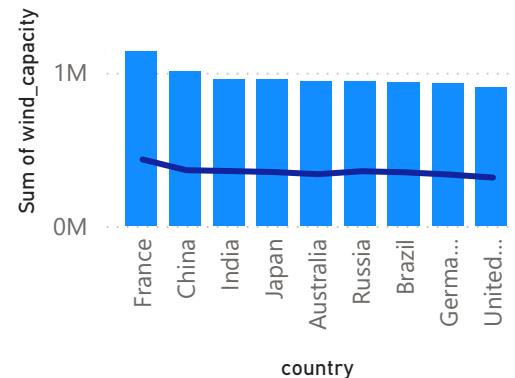


Geothermal Capacity



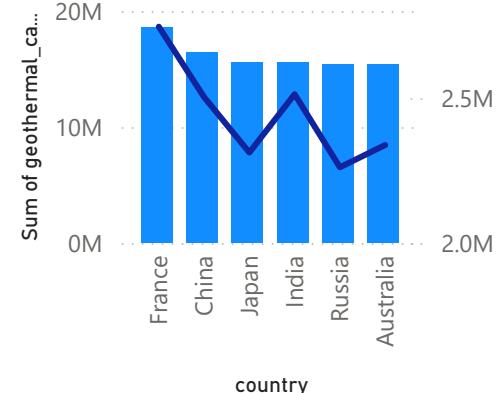
Wind Capacity & Speed

● Sum of wind_capacity ● Sum of wind_speed



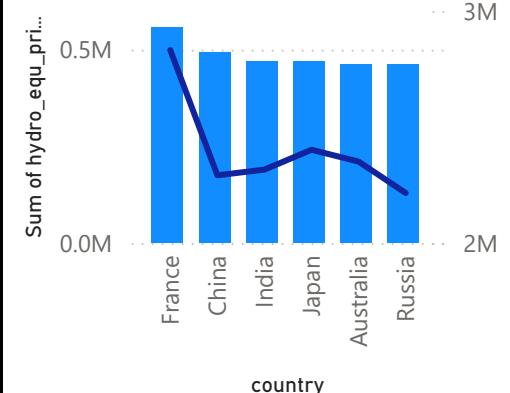
Geothermal Capacity & Potential

● Sum of geothermal_ca... ● Sum of geote...



Hydro Capacity & Potential

● Sum of hydro_equi_pri... ● Sum of hydro_p...



China

1,008,131.95
Sum of wind_capacity

France

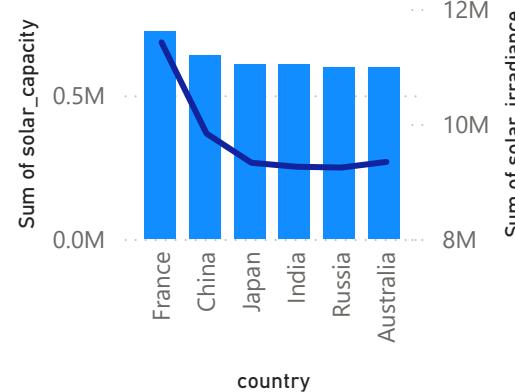
1,138,958.24
Sum of wind_capacity

India

958,110.14
Sum of wind_capacity

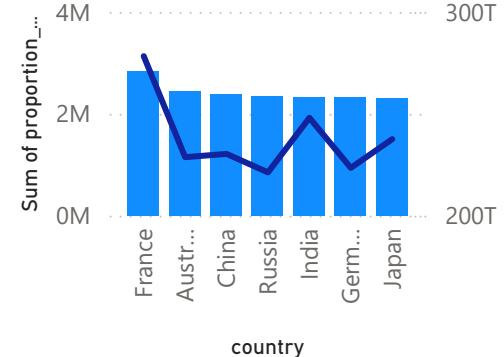
Solar Capacity & Solar Irradiance

● Sum of solar_capacity ● Sum of solar_irrad...



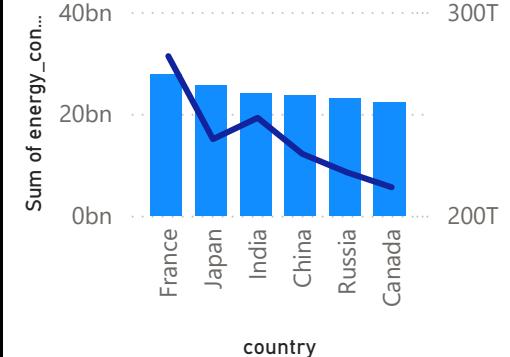
Energy from Renewables & Investments

● Sum of proportion_of_e... ● Sum of invest...



Energy Consumption & Investments

● Sum of energy_consum... ● Sum of investm...



China

638,204.20
Sum of solar_capacity

France

721,024.60
Sum of solar_capacity

Japan

606,537.58
Sum of solar_capacity



Total Financial Flows

80bn

Total Renewables

4.91K

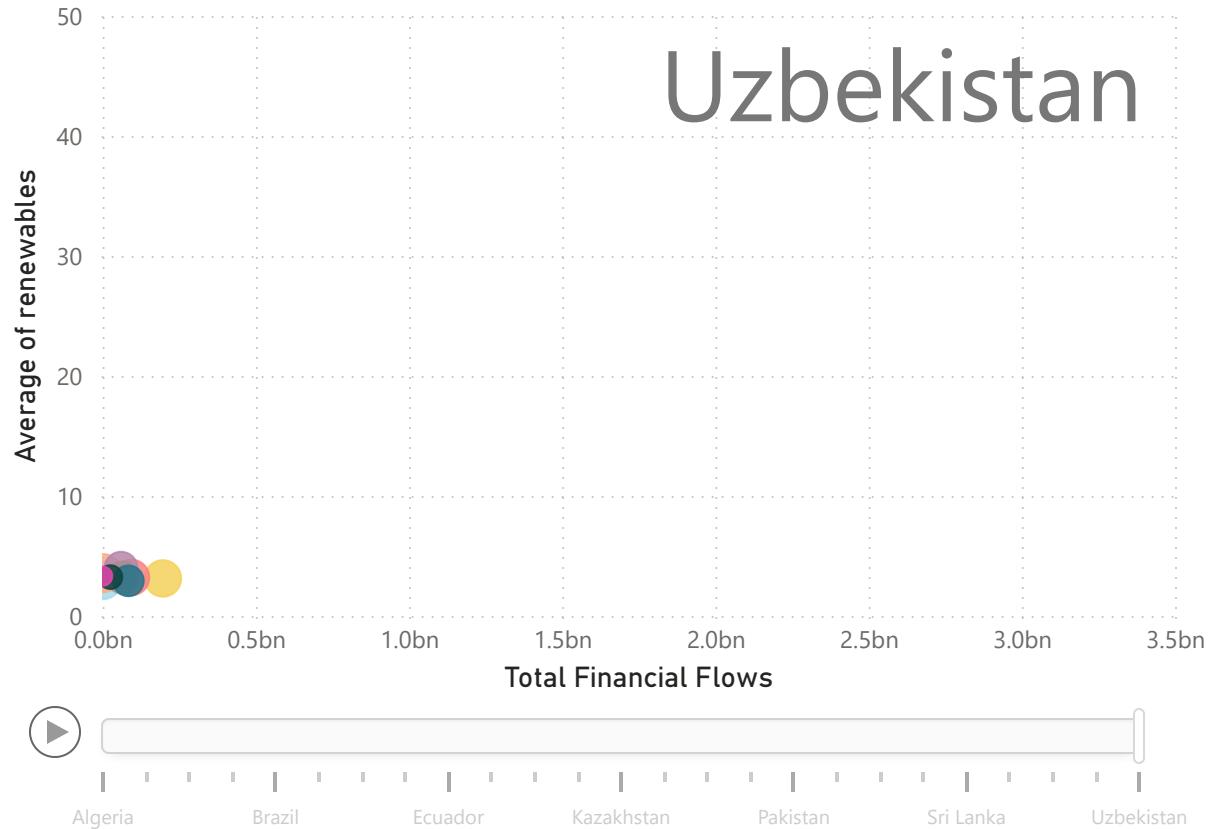
Total Fossil Fuels

107.94K

Countries

All

Financial flows to developing countries VS Share of renewable energy

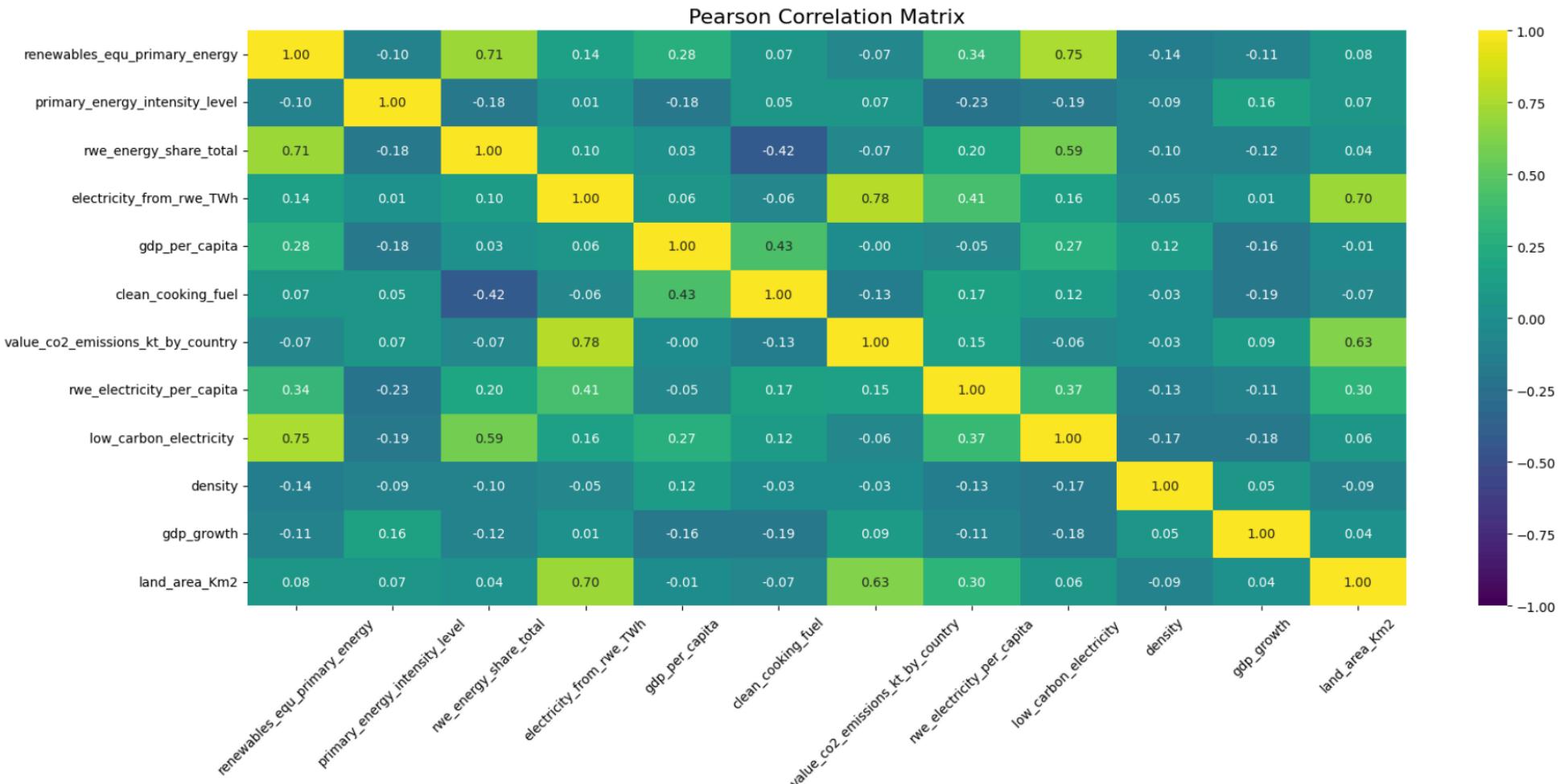
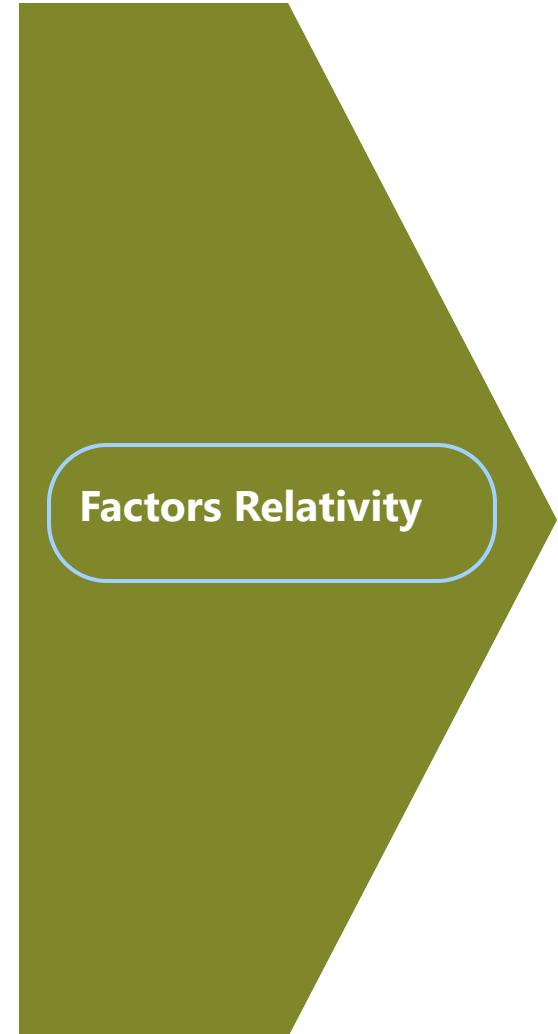




Regression Analysis 1

Forecasting Renewable Energy Growth : Key Drivers in Energy Adoption in G20 and Others

Model: Linear Regression





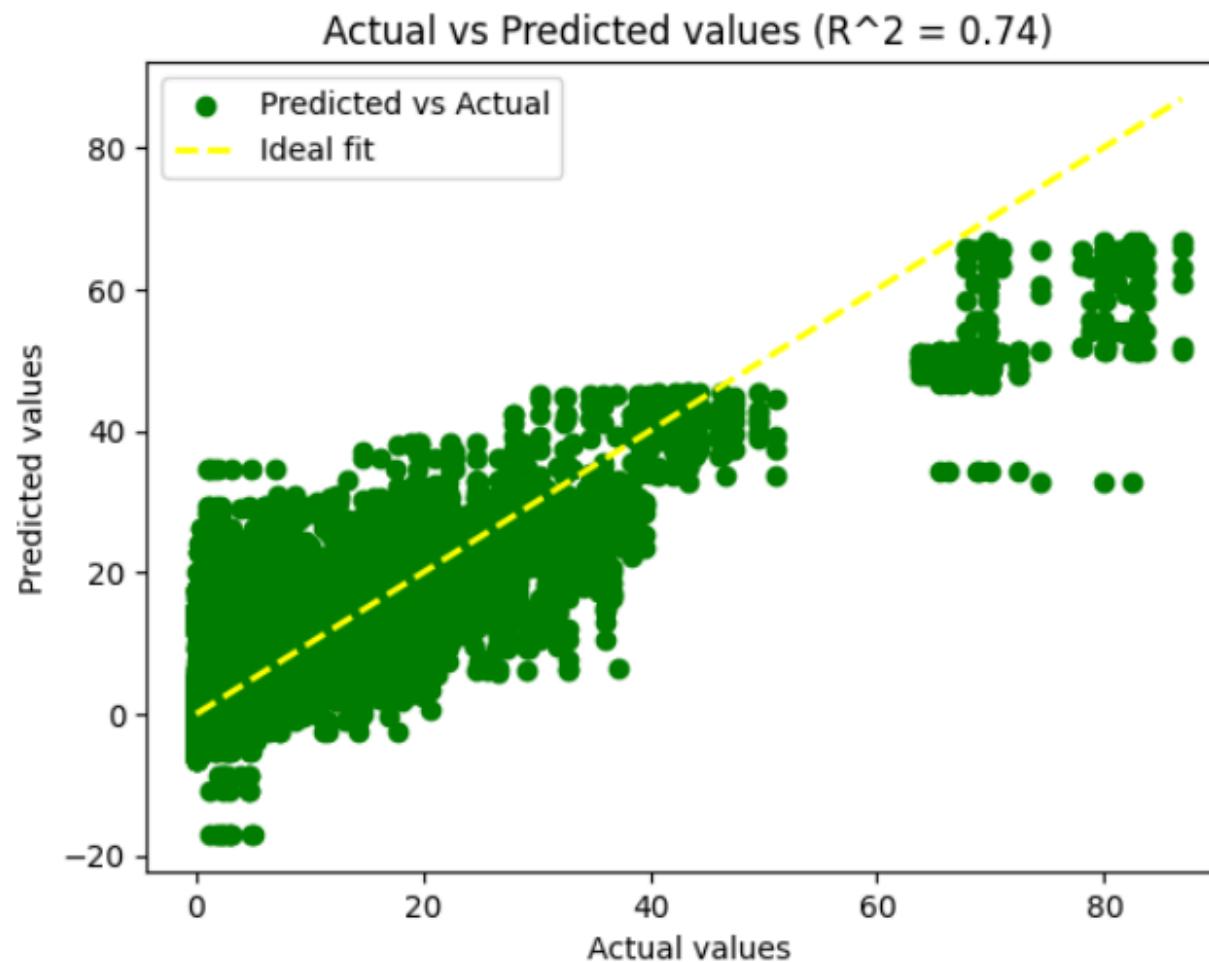
Key Metrics and Insights

MEAN ABSOLUTE ERROR
5.60

R-SQUARED
74%

MEAN SQUARE ERROR
58.20

Coefficient Plot





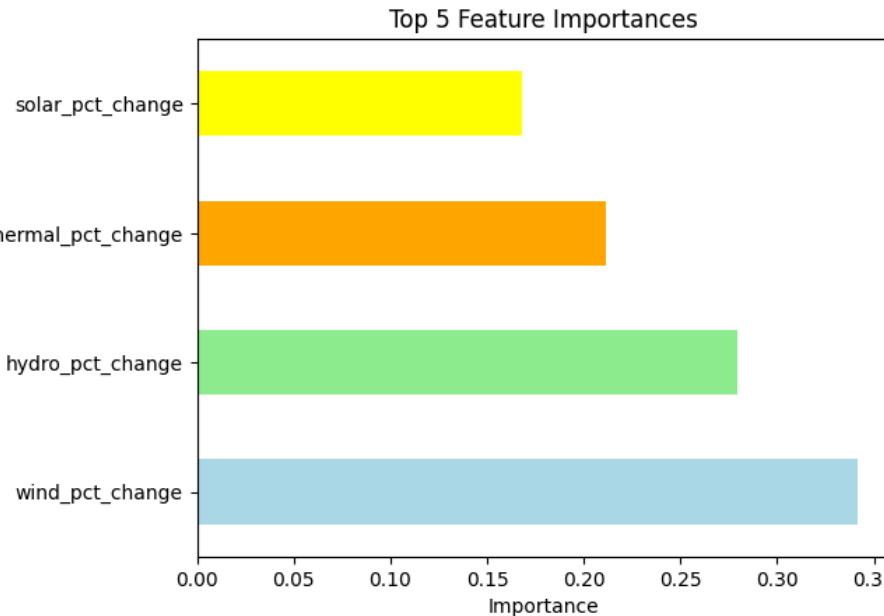
Regression Analysis 2

Predicting Renewable Energy Impact on Fossil Fuel Reduction

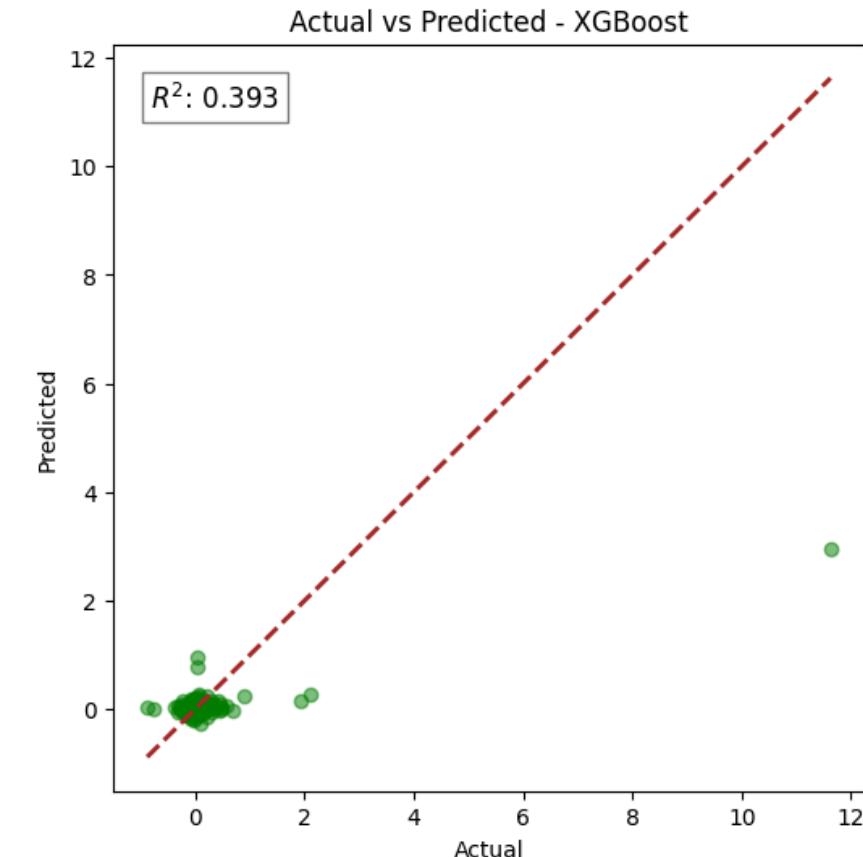
Models: XGBoost, Gradient Boosting, Random Forest, Linear Regression

R-SQUARED
39%

MEAN AVERAGE ERROR
0.14



Feature Importance Analysis



Coefficient Plot