



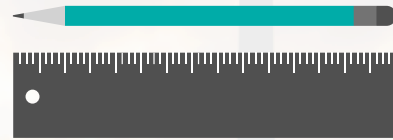
INVESTING IN RENEWABLES

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OBJECTIVES



Understand the current renewable energy consumption market trends



Analyze the direction of each Individual source of renewable energy consumption using the 5-year forecast



Create a comparative analysis of the predicted growth in consumption over the next 5 years to recommend the best sector for short-, medium- and long-term investment

RENEWABLE ENERGY

Energy sourced from renewable substances which replenish by itself in the human timescale.



HYDROELECTRIC POWER

Force of flowing water



SOLAR ENERGY

Energy from the Sunlight



WOOD ENERGY

Combustion of wood



GEOTHERMAL ENERGY

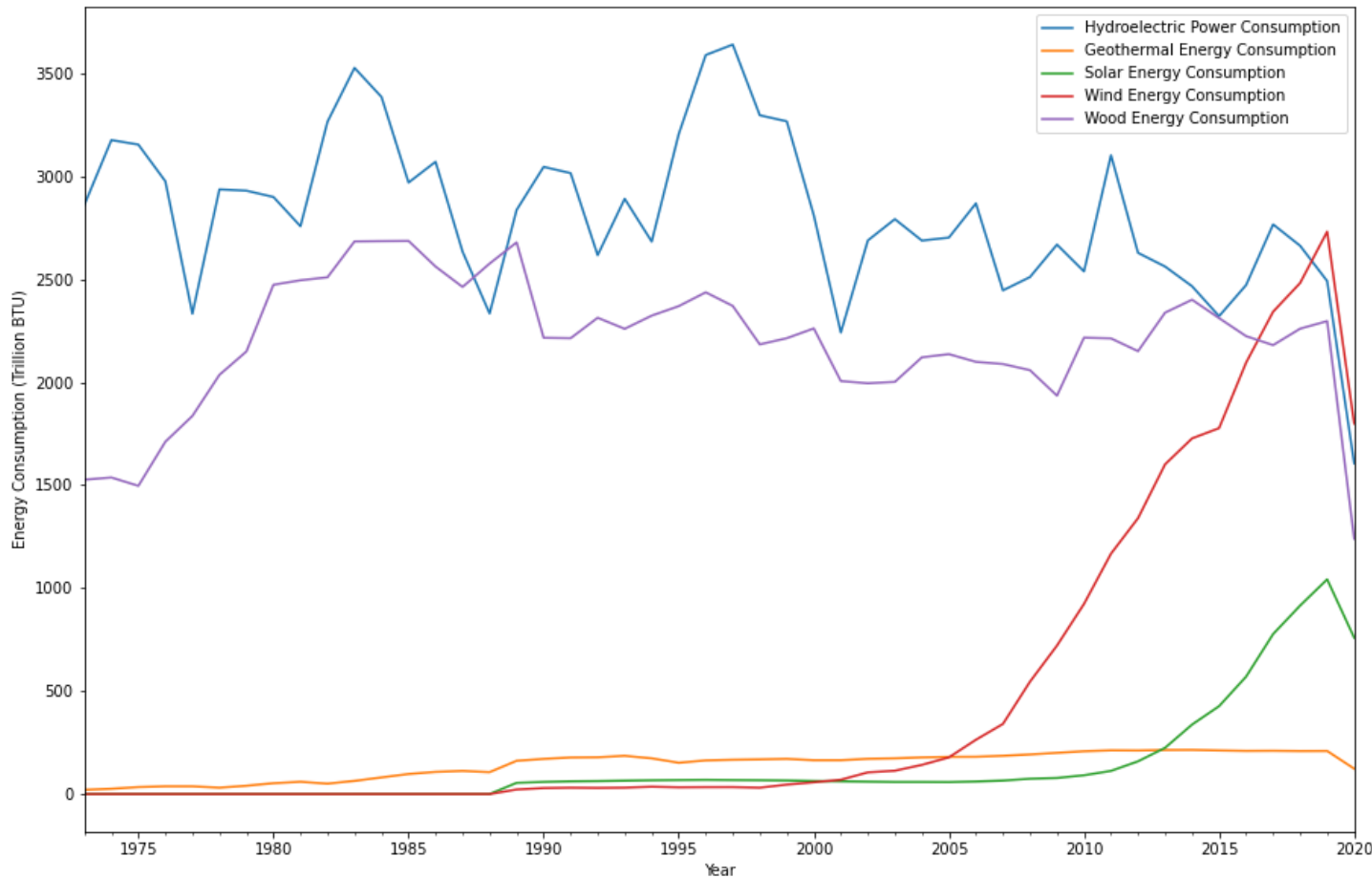
Heat within the Earth



WIND ENERGY

Force of wind

CURRENT TRENDS



HYDROELECTRIC power consumption plateau at 2500 Trillion BTU

WOOD energy consumption rose till 1980 then plateau at 1750 Trillion BTU

GEOTHERMAL energy consumption almost stagnant at 100 Trillion BTU

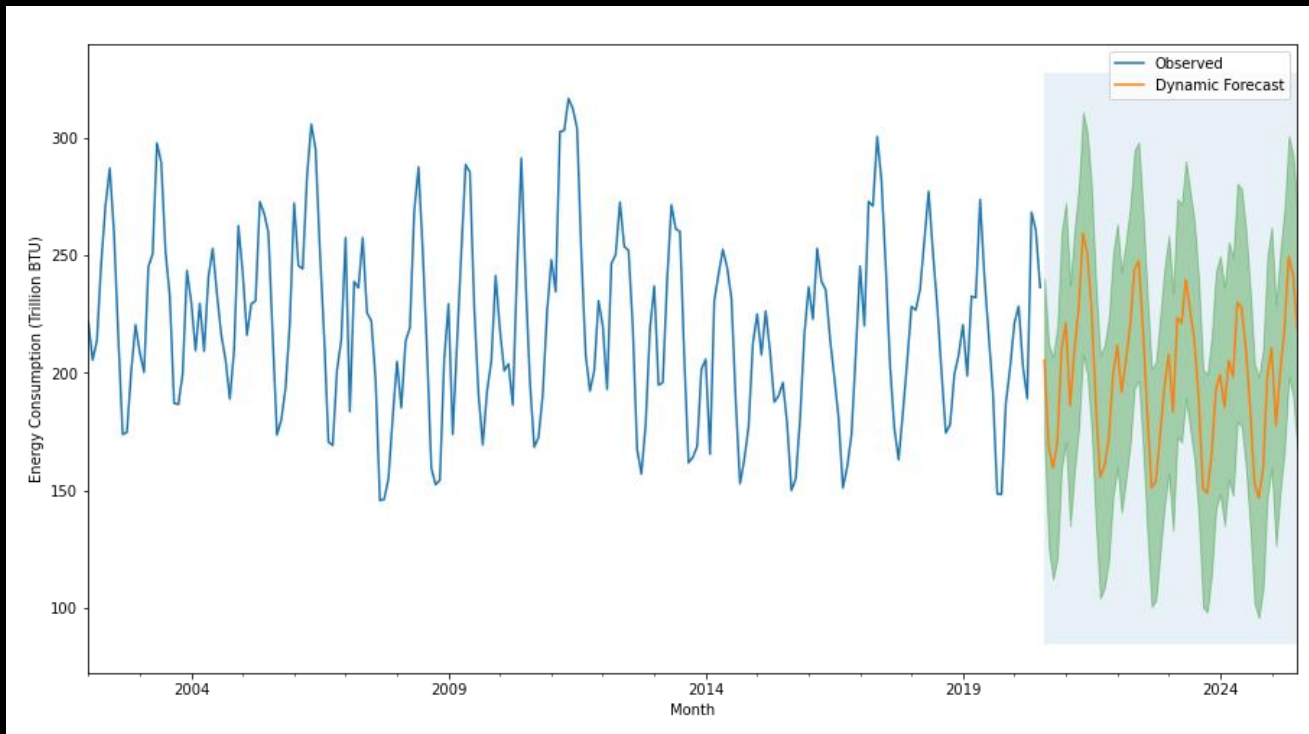
WIND and **SOLAR** energy consumption
– only recent
– growing at tremendous rates



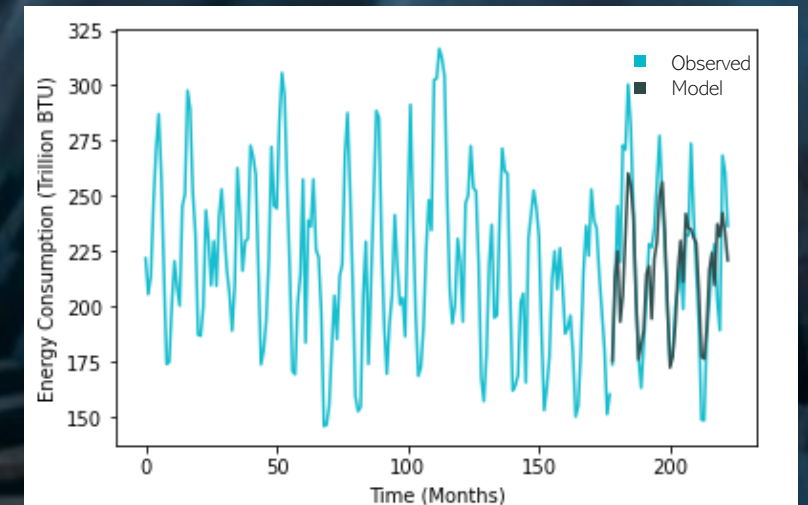
TIME SERIES ANALYSIS

5-YEAR FORECASTS

HYDROELECTRIC POWER CONSUMPTION



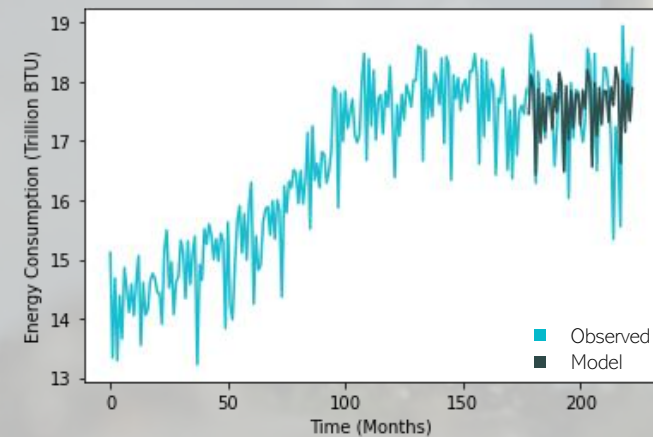
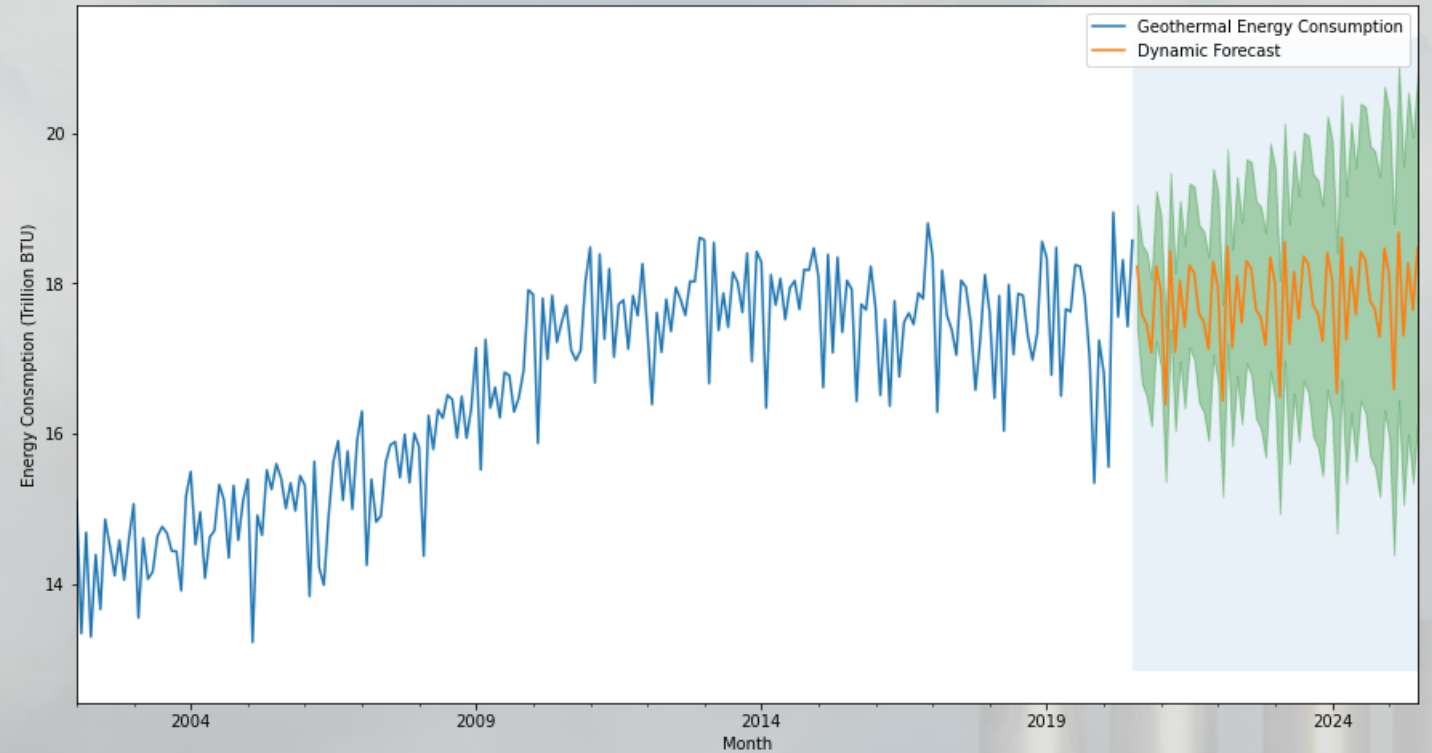
Consumption rates continue to plateau at fixed amounts with yearly seasonality



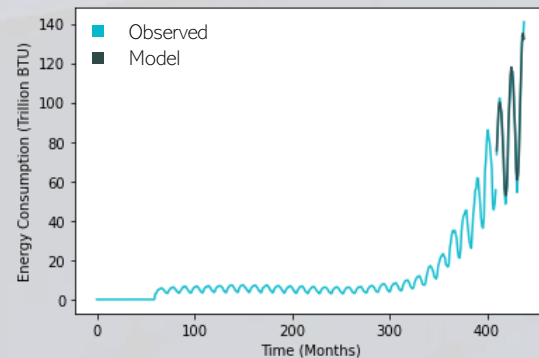
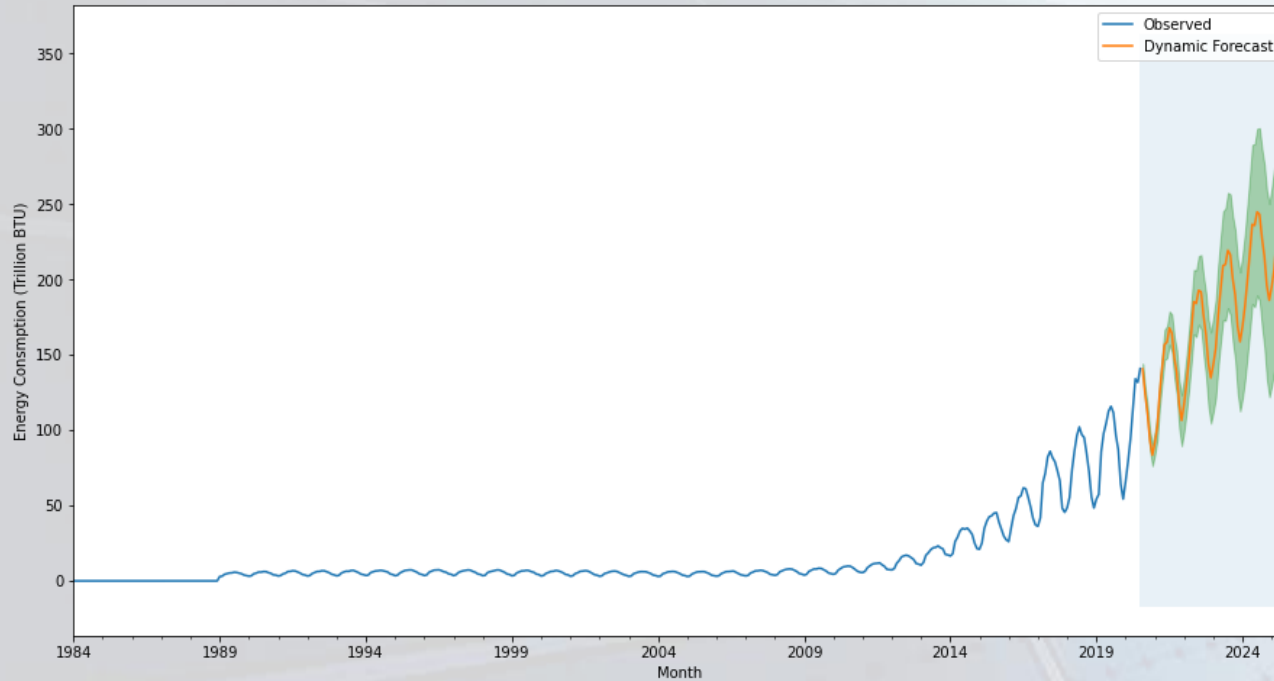
GEOHERMAL ENERGY CONSUMPTION

Consumption rates continue to plateau at fixed amounts with yearly seasonality

Confidence Interval increase for the later years



SOLAR ENERGY CONSUMPTION

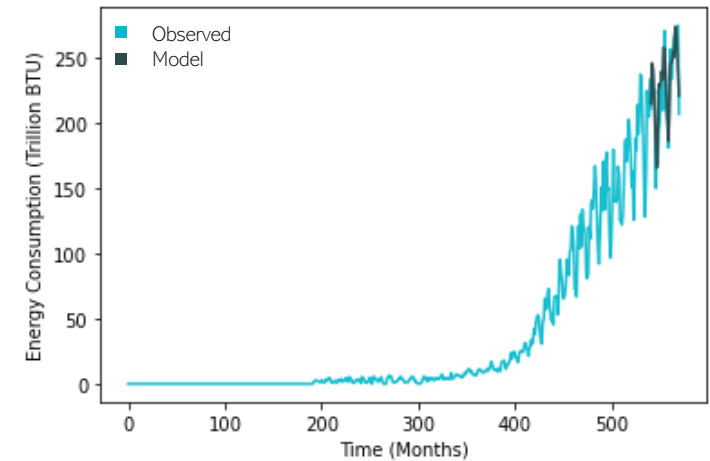
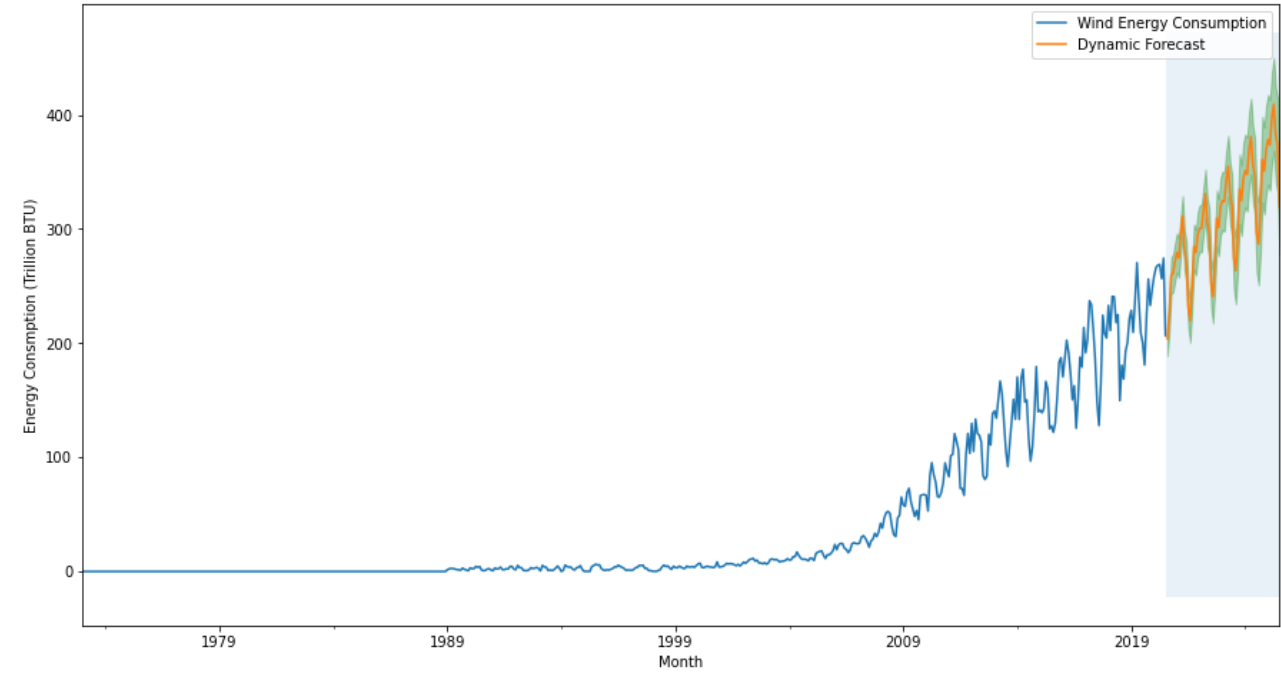


Consumption rates continue to rise at elevated rates and continued yearly seasonality.



WIND ENERGY CONSUMPTION

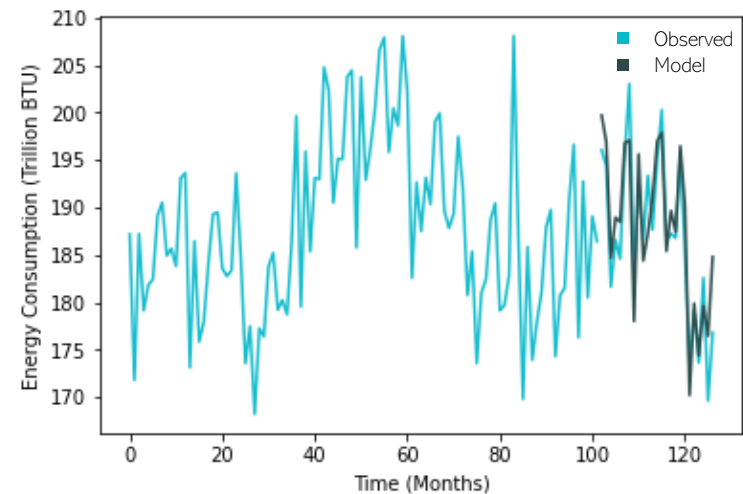
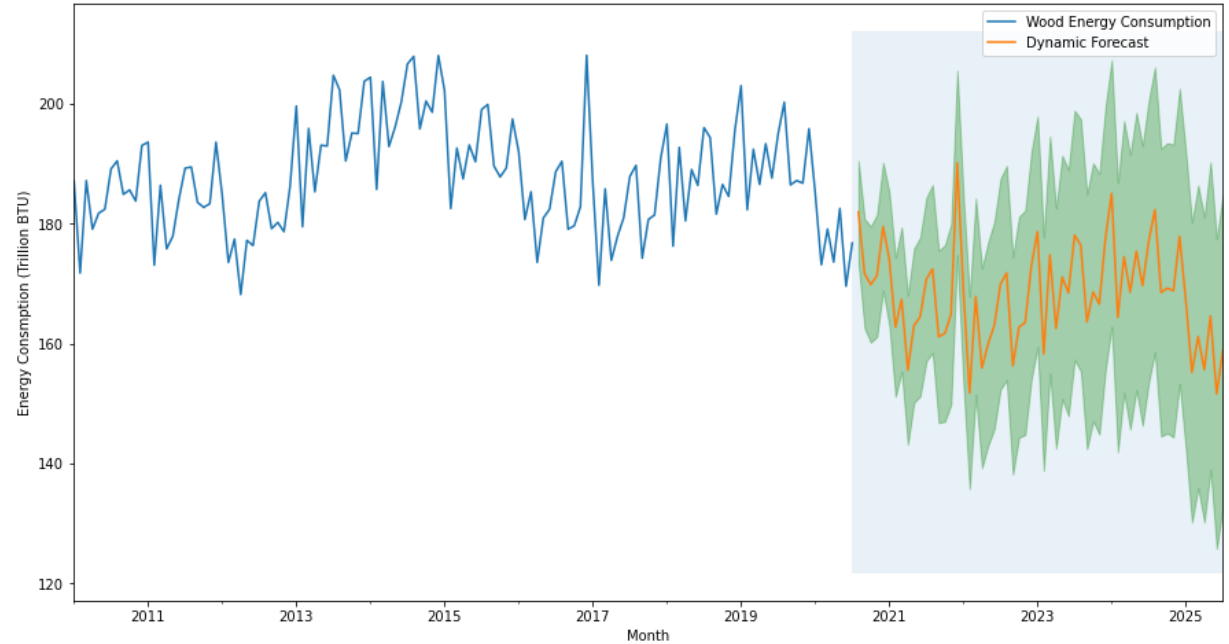
Consumption rates continue to rise at elevated rates and continued yearly seasonality.



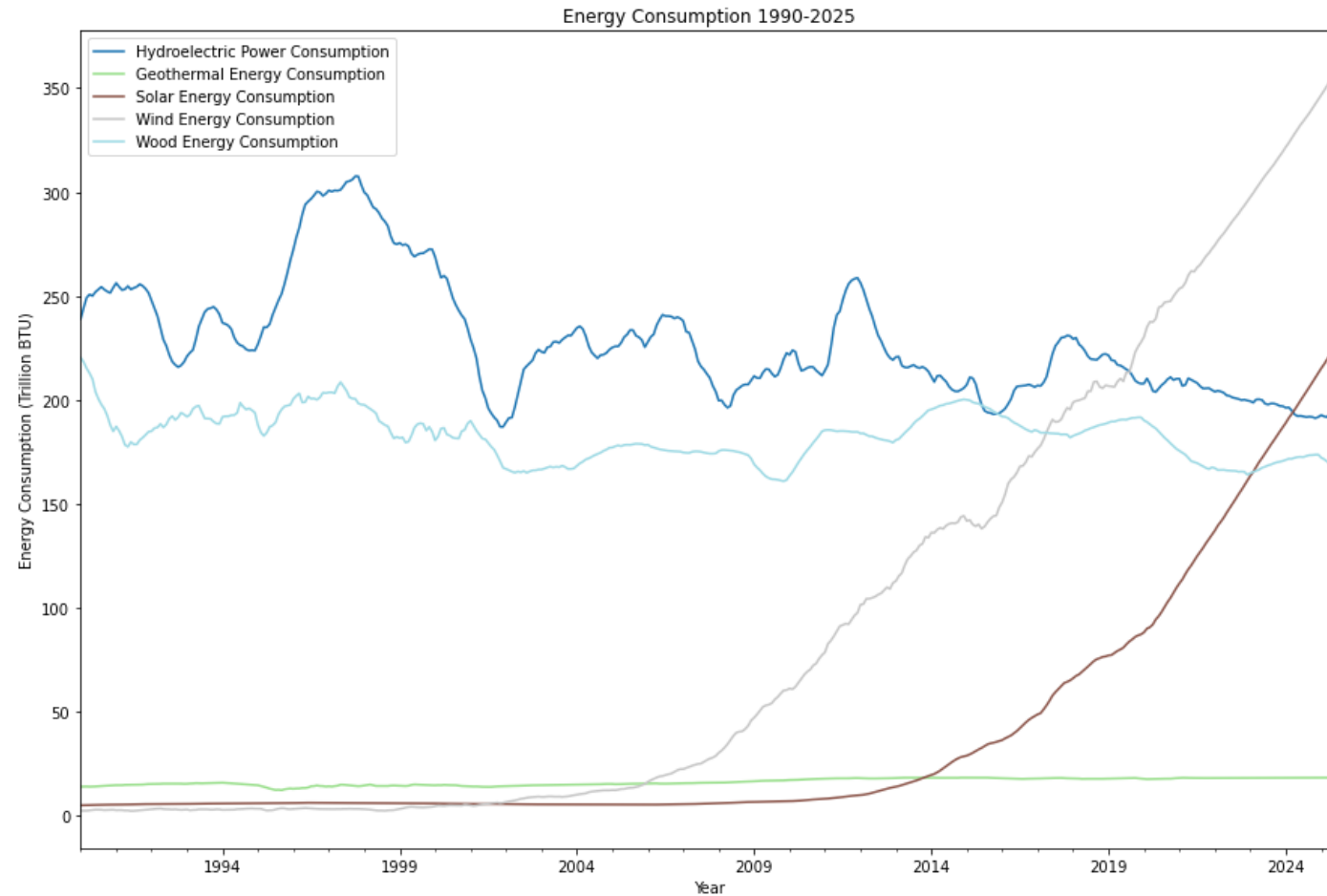
WOOD ENERGY CONSUMPTION

Consumption rates continue to plateau at fixed amounts with yearly seasonality

Confidence Interval increase for the later years



COMPARATIVE ANALYSIS





RECOMMENDATIONS

Mid term investor - wind farms since it has tremendous opportunities and seen to grow and exceed the consumptions of all other energy sources.

Short term investor -, consider the seasonal variations which is common to all energy sources. Invest in Wind Energy, since in the consumption rates for Wind would cross over those of Hydroelectric power in the later half of 2020.

Long term investors are strongly recommended to look into the market trends for Energy production in solar and wind.



FUTURE WORK

Conduct a time series analysis for production, cost and returns related to each source of renewable energy for a better insights into the investing opportunities

Build an interactive dashboard as a tool for the investors to recommend the best source of energy to invest in based on the amount and period of investment. This tool will take into consideration all four aspects, Demand, Supply, Cost and Returns to recommend the most profitable sector to invest in.



THANK YOU!

QUESTIONS?



APPENDIX

APPENDIX – I: MONTHLY ENERGY FORECAST

