ELECTRICITY PRICES PREDICTION

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In this analysis, we’re going to pull the time series for electricity prices for the state of Texas into Python for analysis, as shown below

Pull in natural gas time series data

series\_ID='NG.N3035TX3.M' nat\_gas\_df=retrieve\_time\_series(api, series\_ID) nat\_gas\_df.reset\_index(level=0, inplace=True)

#Rename the columns nat\_gas\_df.rename(columns={'index':'Date', nat\_gas\_df.columns[1]:'Nat\_Gas\_Price\_MCF'}, inplace=True)

#Convert the Date column into a date object nat\_gas\_df['Date']=pd.to\_datetime(nat\_gas\_df['Date'])

#Set Date as a Pandas DatetimeIndex nat\_gas\_df.index=pd.DatetimeIndex(nat\_gas\_df['Date'])

#Decompose the time series into parts decompose\_time\_series(nat\_gas\_df['Nat\_Gas\_Price\_MCF'])

#Merge the two time series together based on Date Index master\_df=pd.merge(electricity\_df['Electricity\_Price'], nat\_gas\_df['Nat\_Gas\_Price\_MCF'],

left\_index=True, right\_index=True) master\_df.reset\_index(level=0, inplace=True)

#Plot the two variables in the same plot plt.plot(master\_df['Date'], master\_df['Electricity\_Price'], label="Electricity\_Price")

plt.plot(master\_df['Date'], master\_df['Nat\_Gas\_Price\_MCF'], label="Nat\_Gas\_Price") # Place a legend to the right of this smaller subplot.

plt.legend(bbox\_to\_anchor=(1.05, 1), loc=2, borderaxespad=0.) plt.title('Natural Gas Price vs. TX Electricity Price over Time') plt.show()

