Chart of the Week 2022-37:
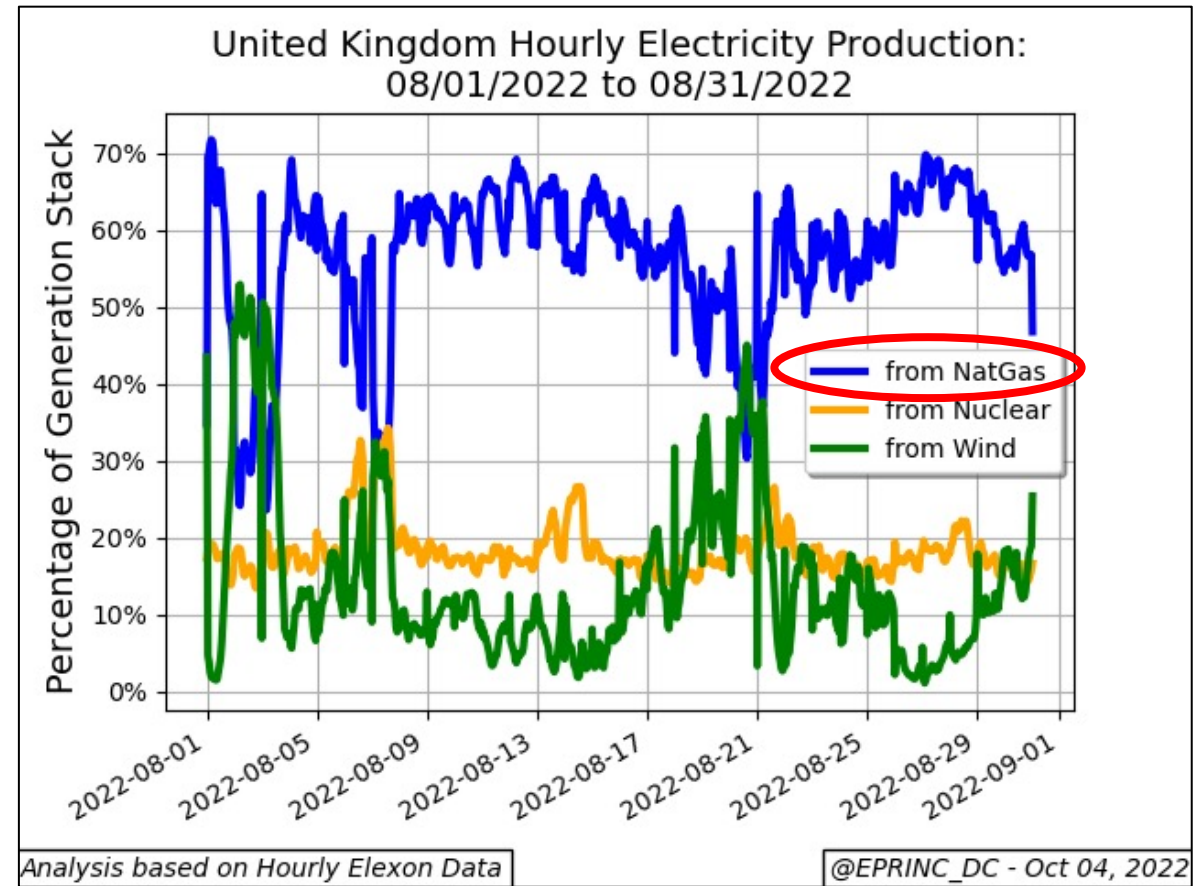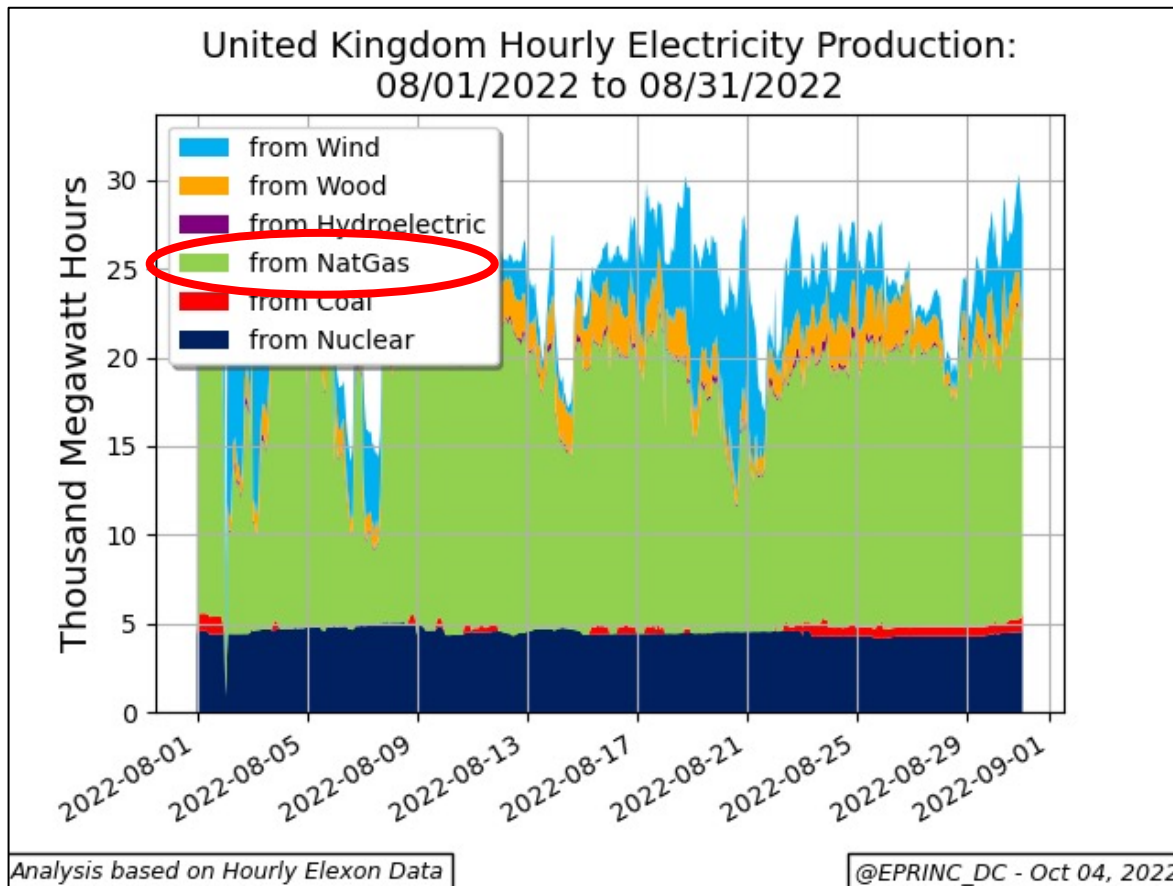# United Kingdom's Electricity Generation Mix*:* Some Considerations

Max Pyziur
October 5, 2022
Washington, DC

U.K.'s Electricity Generation Mix: Two Views of Hourly Generation During August 2022
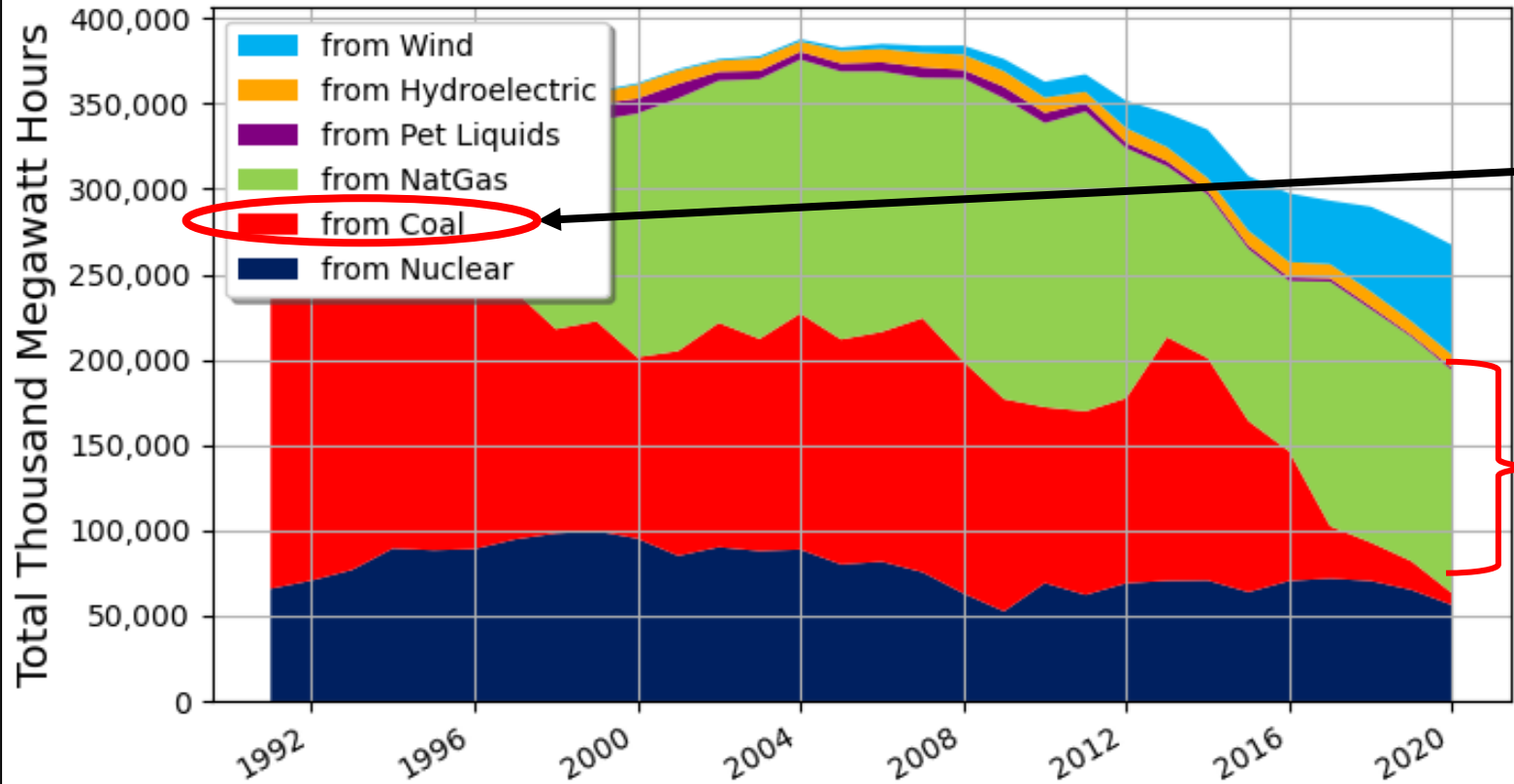
Despite efforts to install more wind generation and commission nuclear power plants, U.K.'s electricity generation mix is dominated by natural gas.

U.K.'s Electricity Generation Mix: Annual Total Generation 1991– 2019

United Kingdom Annual Electricity Production: 12/31/1990 to 12/31/2019

Legend:
- from Wind
- from Hydroelectric
- from Pet Liquids
- from NatGas
- from Coal
- from Nuclear

Y-axis: Total Thousand Megawatt Hours (0 to 400,000)
X-axis: 1992, 1996, 2000, 2004, 2008, 2012, 2016, 2020

Analysis based on Annual Eurostat Data

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The U.K. is committed to shutting down all of its coal-fired generation by 2025. Non-GHG emitting new nuclear power generation is projected to replace the lost coal capacity.

Until a sufficient number of nuclear plants are commissioned, the U.K. is operating under its "dash for gas" policy: natural gas usage will prevail.

U.K.'s Electricity Generation Mix: Some Considerations

- Since the United Kingdom's first national electricity generation authorities were established in the 1920s, coal has been the dominant fuel source.

- Beginning in the 1960s, the U.K. commissioned nuclear-powered plants; this added another significant layer of baseload generation. Combined through 2015, coal and nuclear generation have produced over 50 percent of the U.K.'s required electricity.

- In November 2015, seeking to reduce greenhouse gas emissions, governing authorities announced that all U.K. coal-fired electricity plants would be shut down by 2025. In order to replace the lost generation capacity, the U.K has plans for eight new nuclear-powered plants. With no clear timetable for the commissioning of these facilities, the U.K. has adopted its "dash for gas" policy: natural gas will be the fuel that is used until more nuclear generating capacity is on-line.

- In addition, the first of 3,000 megawatts (MWs) of wind generation capacity was commissioned in 2008. Through 2021, another 22,500 MWs of wind generation has been added for a total of 25,500 MWs.

- During August 2022, U.K. electricity relied on natural gas for almost 60% of total generation, with wind and nuclear each producing approximately 15%.

- The expanded version of this slide deck is available at: https://eprinc.org/chart-of-the-week/

- For more information on this chart, please contact Max Pyziur (maxp@eprinc.org)