Chart of the Week 2022-35:
Germany's *Energiewende:*
Some Considerations

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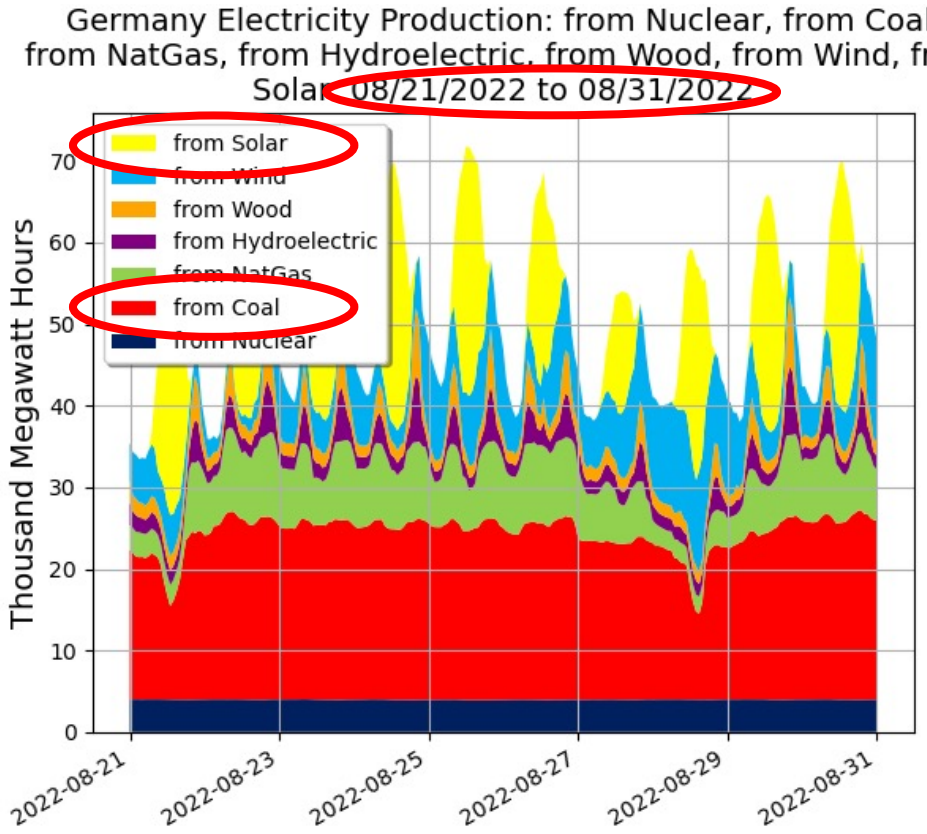
Washington, DC

German Coal Plant
Source: Alex Kraus/Bloomberg News

Germany's *Energiewende*: Some Considerations

Late summer German electricity is dominated by solar and coal.
Combined and at times, they account for up to 70% of total generation.



Analysis based on Hourly ENTSO-E Data

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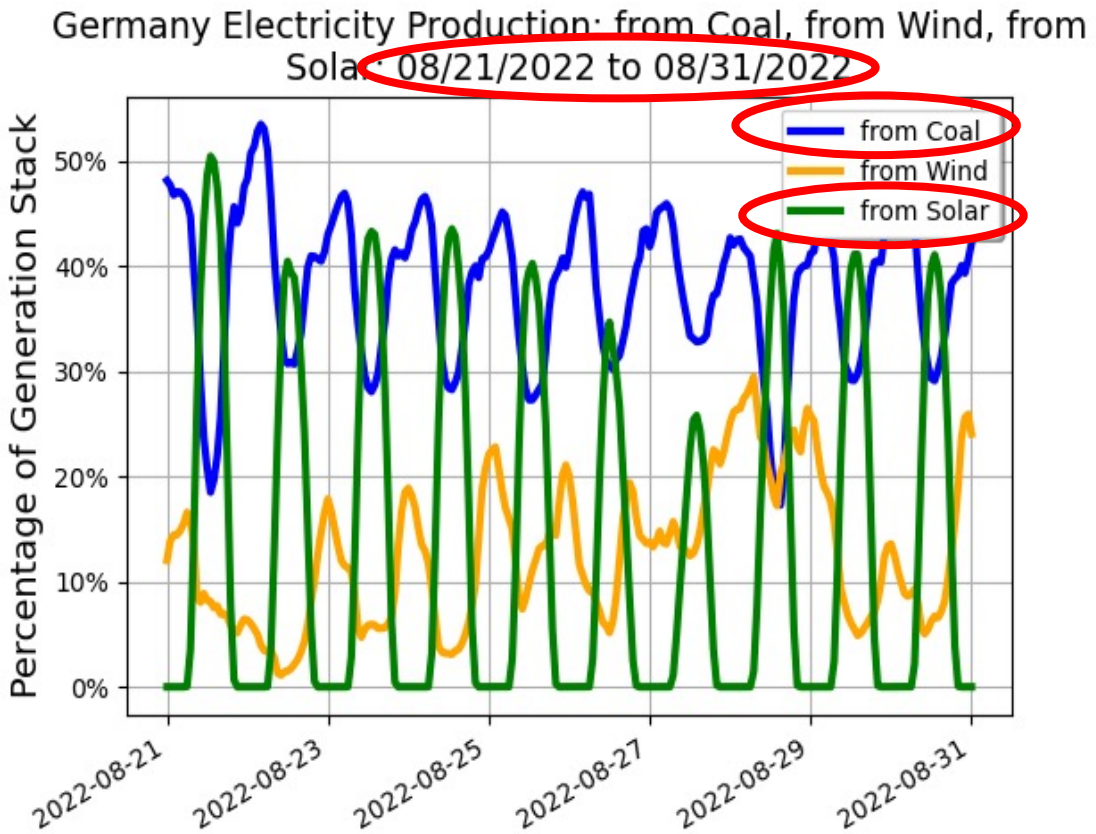

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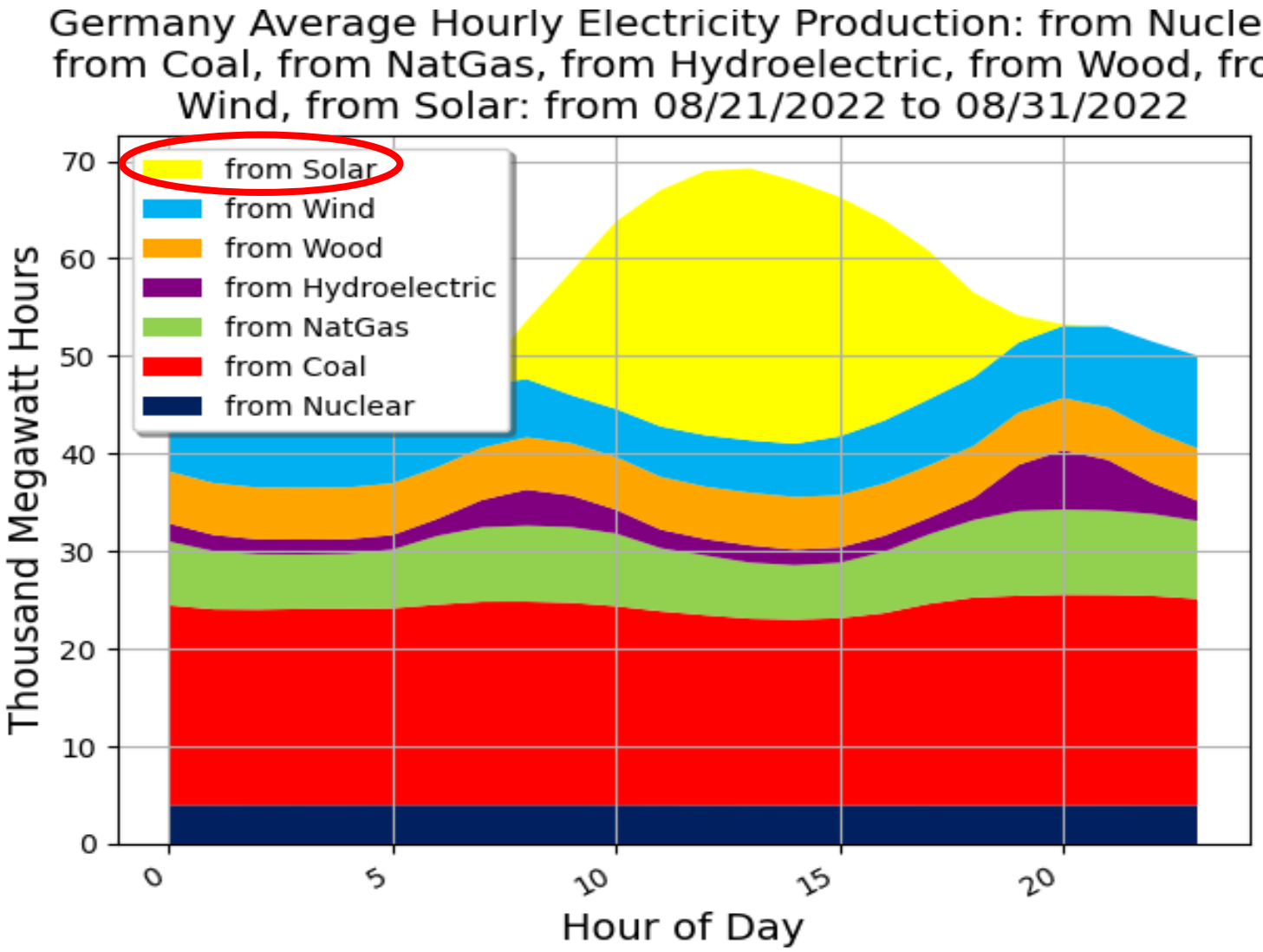

Much like the State of California, German summer generation has a "duck curve" dominated by high mid-day solar generation.

Unlike California, the late afternoon/evening rise in load after the sun sets is less severe and is managed by ramps in hydroelectric and natural gas generation.

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Germany's *Energiewende*: Some Considerations

- In late 2010, several months before Japan's Fukushima nuclear accident, the German legislature passed a set of laws collectively known as *Energiewende* ("Energy Turnaround" in German), the legislation aimed to manage Germany's accelerated transition to low GHG-emitting energy. Germany's target was to reduce energy caused GHG emissions by 40% of 1990 levels by 2020. At the time, nuclear power, emitting no GHGs, was seen as a bridging fuel.
- Immediately after the March 2011 Fukushima accident, *Energiewende* was amended, seeking to shutdown all of Germany's nuclear power plants by 2022 and eliminating nuclear power from the consideration of being a bridging fuel.
- Consequently, in the same time span that Germany has accelerated the development of costly intermittent generating capacity powered by wind and solar, it has continued to rely on high GHG-emitting coal for baseload generation.
- During late August 2022, German electricity relied on coal for almost 40% of total generation, with wind and solar producing 12.7% and 14%, respectively.
- 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)