

# Sources of data center energy estimates

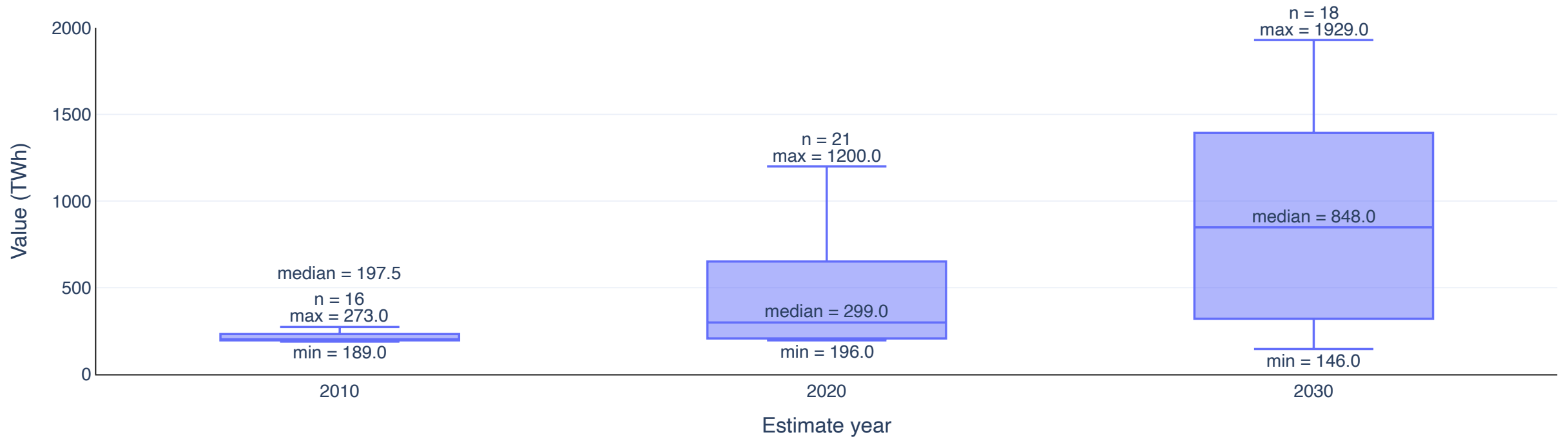
Mytton & Ashtine, Joule 6, 1–25, 2022

10.1016/j.joule.2022.07.011

# Key findings

- 258 data center energy estimates from 46 publications 2007 - 2021.
- 676 sources used.
  - 31% peer-reviewed.
  - 38 non-peer reviewed reports.
  - Reliance on private data from IDC (43%) and Cisco (30%).
  - 11% of sources had broken web links.
  - 10% were cited with insufficient detail to locate.

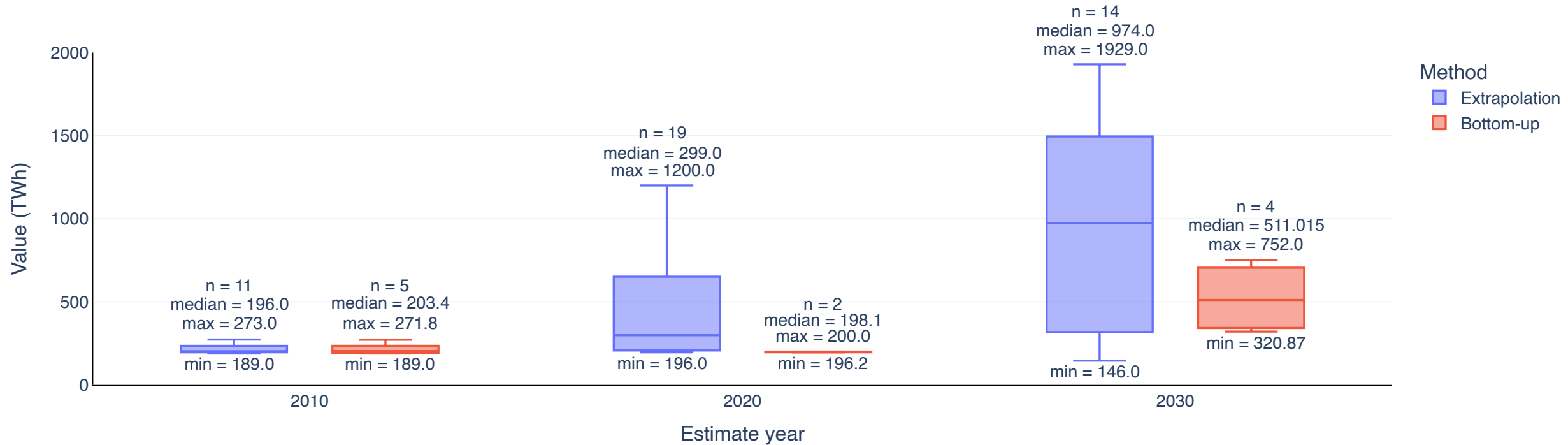
# Global data center energy estimates as ranges in TWh



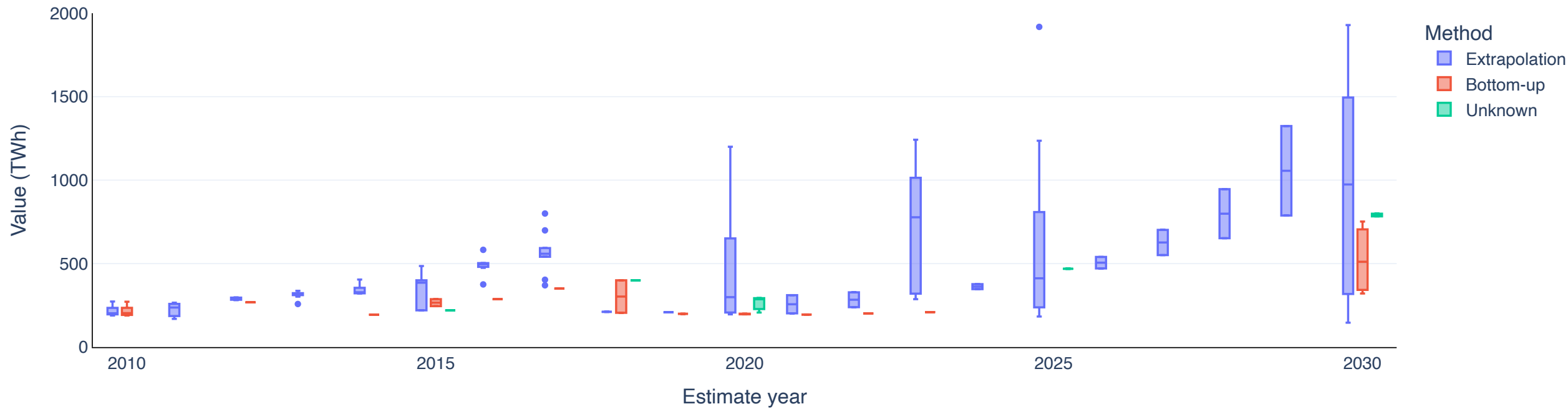
# Different methodologies

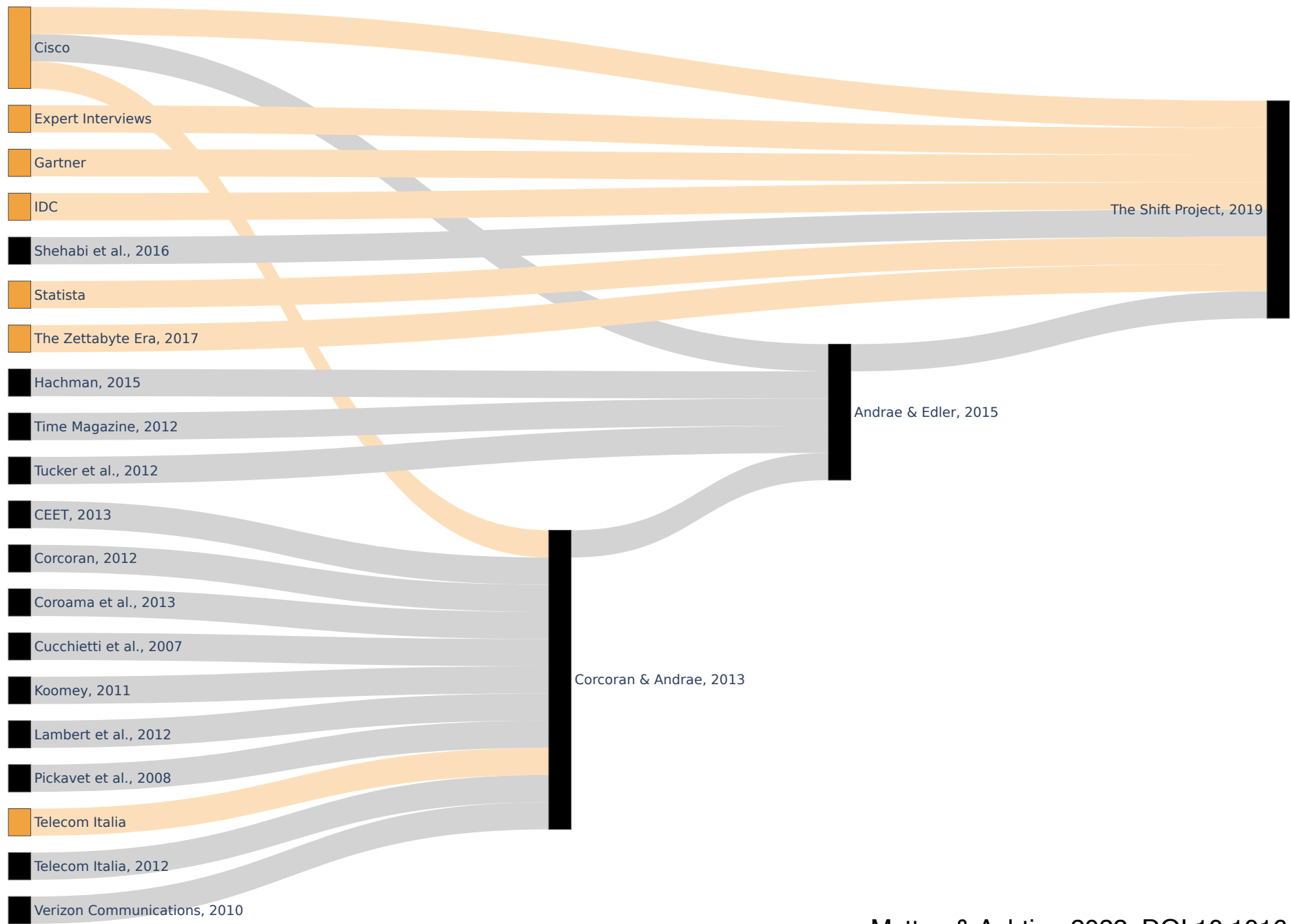
- Bottom-up
- Top-down
- Extrapolation

# Comparing methodologies



# Future predictions

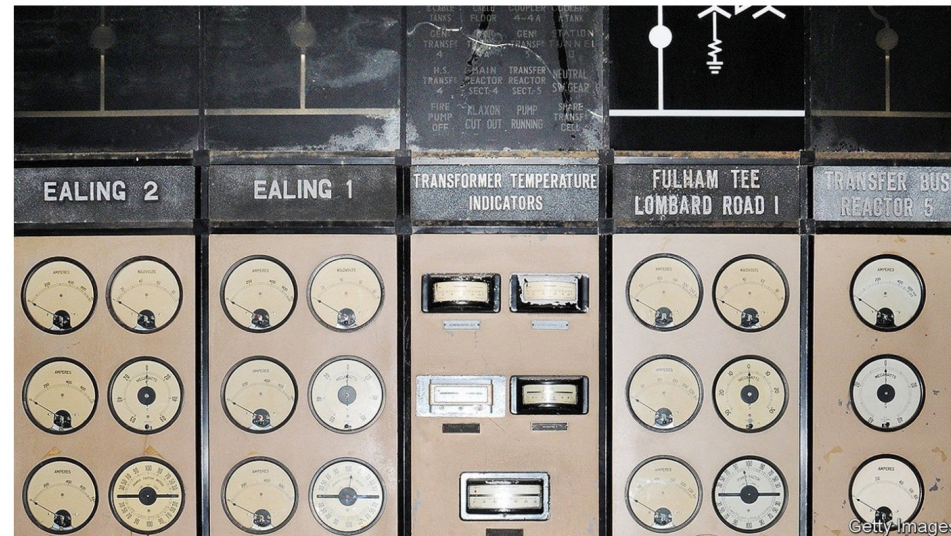




Britain | Gridlocked

# Britain's overstretched electricity grid is delaying housing projects

The grid needs to be expanded to cope with the demands of net zero



Jun 2nd 2022

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ON MAY 24TH the Greater London Authority, a governance body for the capital, wrote to the person in charge of planning and economic development in the borough of Ealing. The letter, entitled “Electricity Capacity in West London”, noted that housing developers were facing delays in connecting new homes to the grid, and that electricity would not be available to them until between 2027 and 2030. New battery-storage systems and data centres had already gobbled up capacity.



