



Planet Pulse

**A rhythmic check-in on
climate issues**





Data scapegoat?

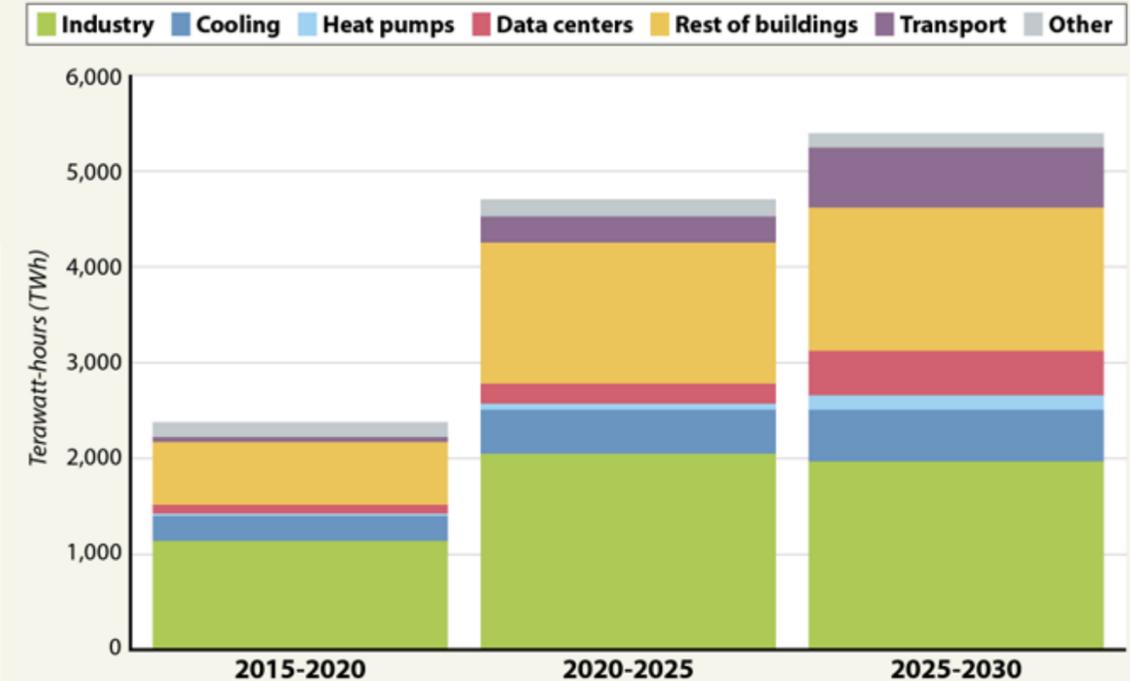
- Data centers have become a convenient target as the culprit for rising electricity costs.
- No doubt that they will eventually increase demand and thereby put upward pressure on electricity prices, but not today.
- In fact, according to the International Energy Agency, globally, transportation will account for 11.5% of demand increases versus 8.6% for data centers.
- The picture is different in the U.S. where EV adoption is slower and data center activity is higher. The EIA estimates data centers will be responsible for half of all increased demand through 2030.

What's Leading the Global Rise in Electricity Demand

Electricity demand is expected to surge worldwide, with electric vehicles, data centers, air conditioning and industry playing major roles. Below is a comparison of projected growth and actual growth in the recent past, according to the International Energy Agency.

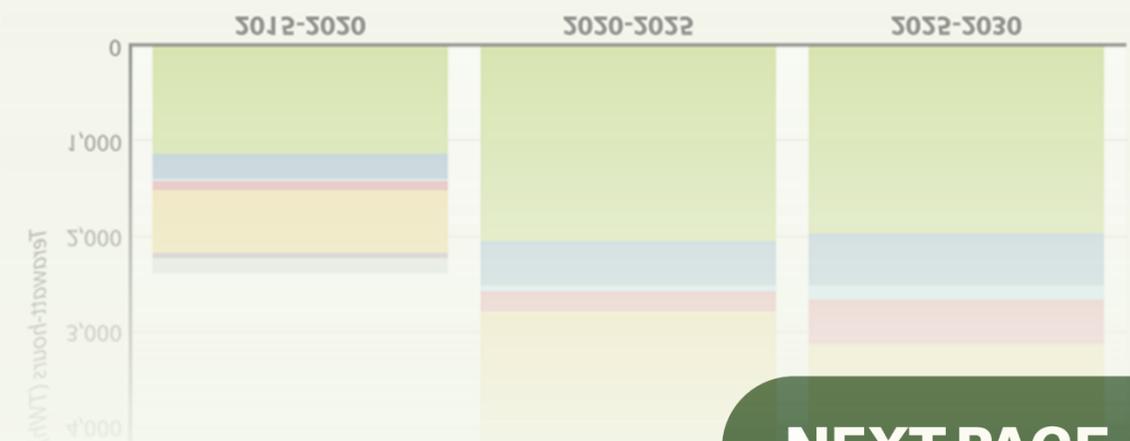
GLOBAL ELECTRICITY TOTAL DEMAND GROWTH

By sector, in terawatt-hours, 2015-2030



NOTE: "Rest of buildings" includes electricity demand from buildings that is in excess of the total from cooling, heat pumps and data centers.

NOTE: "Rest of buildings" includes electricity demand from buildings that is in excess of the total from cooling, heat pumps and data centers.



NEXT PAGE



Full coal ahead

- As I suspected, the decline in coal use for power generation will come to an abrupt stop under the current administration.
- Despite being more expensive than natural gas, the Trump administration has already ordered a number of coal plants to continue to operate.
- Now, the country's largest utility - the Tennessee Valley Authority - has indicated it would like to keep operating not one, but two coal-fired plants it had planned to mothball by 2035.
- And yes, data center demand is a factor in the decision.



NEXT PAGE



Off the agenda

Percentage of Atlantic Council survey respondents choosing climate change as the single biggest threat to global prosperity over the next ten years

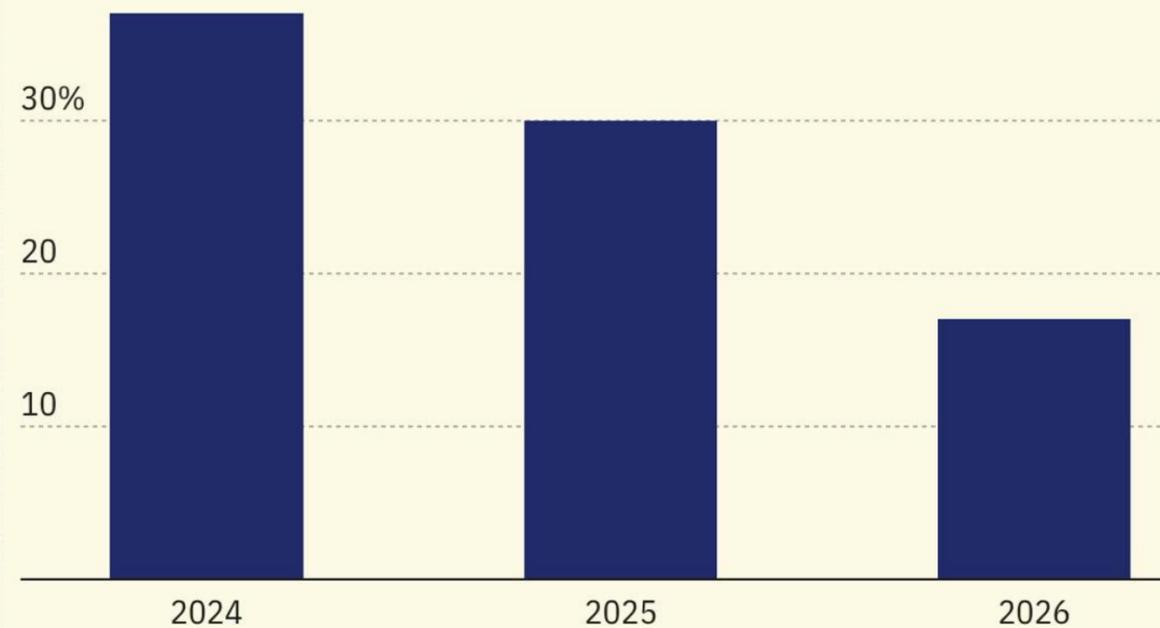


Chart: Tim McDonnell/Semafor • Source: Atlantic Council



Climate change takes a back seat?

- **By far, climate change has been front and center as the most significant environmental challenge.**
- **Then Trump won a second term and havoc has ensued.**
- **Even if the impact from the Trump administration is temporary, climate change may still play second fiddle.**
- **In the most recent Atlantic Council survey of 450 experts only 17% see climate change as the #1 threat.**
- **As I've previously covered, 64% believe war over access to fresh water is likely before 2036.**

NEXT PAGE



Robo oh-no



- Autonomous driving gets a lot of press as the future of transportation.
- Waymo has deployed robotaxis in five cities while Tesla continues to perfect its camera-only approach.
- But you know what robotaxis can't do?
- Function in winter weather.
- Given 70% of the U.S. population is subject to snow and freezing rain in the winter, that's a major not talked about problem.



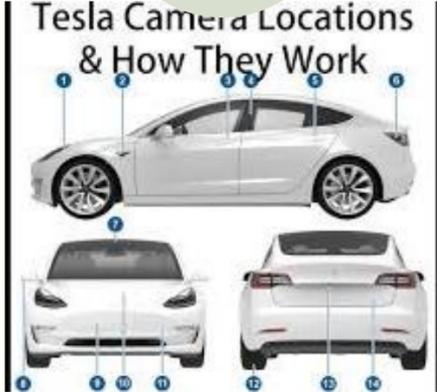
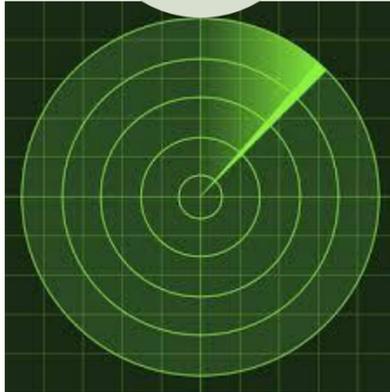
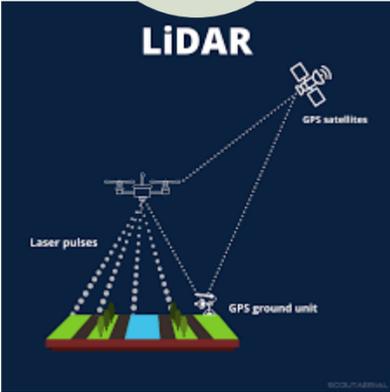
LiDAR uses pulses of light but the sensors absorb airborne particles including snowflakes.



Cameras are no better than the human eye. As conditions deteriorate, so does the ability to navigate poor conditions.



Radar isn't affected by snow, fog or rain, but it has the lowest resolution, making that option more than problematic.



Unbiased and Unfiltered

An honest assessment of the cleantech industry and the effort to stem climate change.

