



THE CORE COALITION
SUPPORTING COMPETITIVE AMERICAN MANUFACTURING

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Contact: Dr. Gwynne Johnston

Gwynne@thecorecoalition.com

Lessons from Heathrow for the US Grid

BUDA, TX--- During the evening of Thursday March 20, a major fire erupted in a substation near Heathrow, shutting down air traffic for Friday, and disrupting international flights around the world. Subsequent expert analysis suggested that the fire was caused by ignition of transformer oil from an old, overloaded transformer. Power was restored to the airport by way of bypass circuits but a permanent fix for the airport and surrounding residential community will take months. It is noteworthy that the deteriorating condition of the transformer had been identified during inspections in 2022.

The International Energy Agency (IEA) and others have estimated that the average age of power transformers associated with the national US grid supplying electricity to all of the US exceeds 30 years, many closer to 40 years. Several things have happened to these transformers during this period. Average loading, and hence heating, has increased significantly. All of the older transformers used a combination of “old-style” grain oriented electrical steel for the core, more prone to heating than current high efficiency grain oriented electrical steels, and an “old style” transformer oil, which is much more prone to breakdown and ignition than current transformer oils.

The situation is further compounded by the rapidly expanding demand for electric power from the grid due to the increase in data centers, EV charging, and connection of renewable energy sources. To add to the fire, pun intended, most utilities do not carry or have access to spare transformers.

If there is a lesson to be learned from the fire at Heathrow, it is that we should not assume that the grid is OK. Experts from The Core Coalition, an industry group that advocates for transformer supply chain integrity, recommend a dual phase re-inspection of grid transformers and the establishment of a strategic stockpile of critical transformers.

Disasters happen. Planning to prevent predictable disasters is simply execution of common sense.

Learn more about The Core Coalition at <https://thecorecoalition.com>.

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