# Challenge Objective

For the **Maven Power Outage Challenge**, you'll be playing the role of a Senior Analytics Consultant hired by the U.S. Department of Energy (DOE). Here's your project brief:

Electricity outages are a growing concern as we enter an age of unprecedented energy demand and climate disasters.

We have event-level power outage data going back to 2002 but have struggled to make sense of it due to severe issues with the data quality and integrity.

This is where you come in.

We need you to **consolidate and clean up the raw data** and **create a dashboard or report** to help us understand patterns and trends around outages, quantify their impact on our communities, and identify possible weak points in the grid.

Last but not least, please **explicitly call out any caveats or assumptions** you make regarding data quality issues or missing values.

# About The Data Set

Information on electric disturbance events is collected using Form DOE-417 and published online in an annual summary. The dataset contains 4 files for download: An Excel spreadsheet containing the annual summaries, and 3 PDF documents for reference (the survey form, instructions, and documentation for online form submissions).

Electric outage incidents in the US power grid from January 2002 to July 2023, including details related to the event start and end time, location, alert criteria, demand loss, and estimated number of people affected.

***NOTE: This dataset was compiled exactly as reported by the US Department of Energy. We have taken no measures to clean or prepare it, as our goal is to expose users to the types of data quality issues often encountered in the real world.***

# Recommended Analysis

1. Are there any trends in power outages over time?
2. Which event types are the most significant?
3. Are there any special events that skew the data?
4. What is the most common amount of downtime for a power outage?