



## American Energy Market Regulator Case Study Instructions

Review the [case study overview](#) to refresh your understanding of the case study goals.

Note: you'll be completing the majority of your analysis using the Jupyter platform where you'll be writing SQL directly within the cells using the `%%sql` notation.

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### Project Steps

#### Step 1. SQL Exercise

Download the SQL case study files [here](#) and complete all 10 questions across Part I and Part II in the Jupyter Notebook. **Note that we have included a subset of the answers for each query that you can compare your answers against. You can also use these subsets to identify the column names you should have in your SQL queries.**

#### Expand Your Thinking (Optional)

Having addressed the core questions from the Management Team, it's time to flesh out your insights further. Feel free to explore the dataset based on any additional questions you are interested in. Some additional questions you might explore include (but are not limited to):

- We know that Outage type X is the most common; how has this changed when contrasting the 2016 Monthly Outages versus 2017?

- How many outages are approved in comparison to those that are canceled?
- When contrasting Energy Losses, Duration and Outage Frequency – do we have separate market participants which contribute the most for each of these areas?
- Is there anything we can glean from the textual data provided by the AEMR Team? (i.e. Is there a specific description / failure that is most common?)

These questions are just a **suggestion** to expand your thinking. We recommend when looking at your questions, draft up an Issue Tree and see **how** these questions might tie back to your key themes so you will know where this analysis will fit under (i.e. Energy Stability / Energy Losses etc.)

## Step 2. Craft a Visual Story

- Upon completion of the SQL exercises o, you'll need to craft a story in Tableau that illustrates to Management **what** your key findings are. Remember that you'll need to ensure these findings tie back to the key story points that Management is expecting you to answer.
- We recommend that you put together an executive presentation for this case study, though you are welcome to create a presentation using the presentation style you feel most comfortable with.

## Step 3. Present Your Findings

Present your case study findings to your mentor.