**AMERICAN ENERGY MARKET REGULATOR CASE STUDY — Tableau/ SQL**

Thank you Chris for your time……….. Today we going to talk about AEMR. AEMR stands for American Energy Market Regulator. AEMR is responsible for regulating the domestic energy network here in the US. It has a core mandate to ensure that energy network remains reliable with minimal disruptions or outages. Talking about outages, there are four key types of outages:

1. Consequential – This outage is caused by an exogenous event or a consequence of work unrelated to the energy provider.
2. Forced – This outage is caused by a situation that has forced the power generating asset to be unavailable.
3. Opportunistic – This outage arises when an energy provider wishes to be proactive with the maintenance of their assets and believes that it can complete maintenance on its plant within a 48-hour window.
4. Planned – If it takes longer than this, the outage is considered a PLANNED outage as it was planned in advance and will take longer than 48 hours. This outage arises when an energy provider reports to the AEMR that an energy-generating asset needs to be taken offline for routine or planned maintenance activities to ensure the reliability of the asset in the future.

However, in recent times, the Management Team of AEMR has been increasingly aware of a large number of energy providers that submitted outages over the 2016 and 2017 calendar years. The management team has identified the following two areas of concern:

**A) Energy Stability and Market Outages**

**B) Energy Losses and Market Reliability**

Today’s presentation would focus on the 4 core themes:

Firstly, we shall look at the overview on the number of monthly disruption for the two-year period. Here, we seek to identify whether the rise in the number of disruptions is due to seasonality. Also, we shall zoom in on which day or time of the week account for most of the outages or peak periods.

Secondly, we shall study how the movement in the number of disruptions based on outage type vis-à-vis how they have been trending over the two-year period. Specifically, we shall explore which reasons account for most of the outages.

Thirdly, we shall then transition and look at how the spike in disruptions affects the actual volumes of energy supplied in megawatts. That is, does the surge in the number outages result in a massive load shedding?

Finally, we shall then learn about providers who are mainly responsible for the increase in the number of outages and disruption in MW. Here, we seek to find out whether the rise in outages is caused by a few minority or evenly spread among the 18 participants.

With that being said, let’s set the ball rolling………………………….