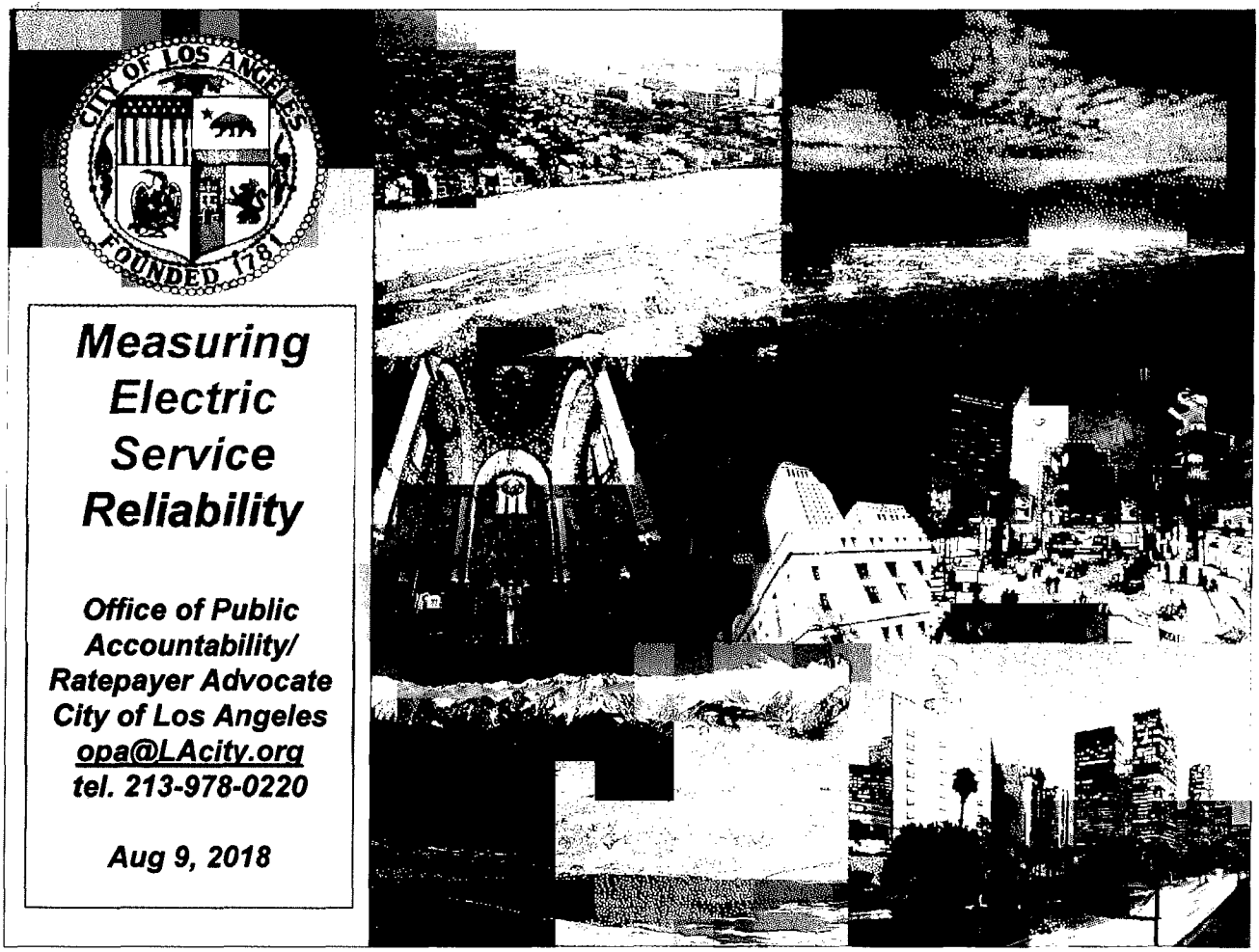

Measuring Electric Service Reliability

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Aug 9, 2018

Typical Definitions of Electrical Utility Service Reliability Performance

- **SAIFI** *(system average interruption frequency index)*
  Number of times the utility's average customer experienced a sustained power interruption (over five minutes) per year
- **SAIDI** *(system average interruption duration index)*
  Minutes of sustained interruptions the utility's average customer experienced per year
- **CAIDI** (*customer average interruption duration index)*
  Average minutes of interruption a customer would experience. CAIDI viewed as the average restoration time.
- **MED** *(major event days)*
  Days selectively excluded from statistics in some versions of reporting based on the severity of specific outages

Date 10/16/18

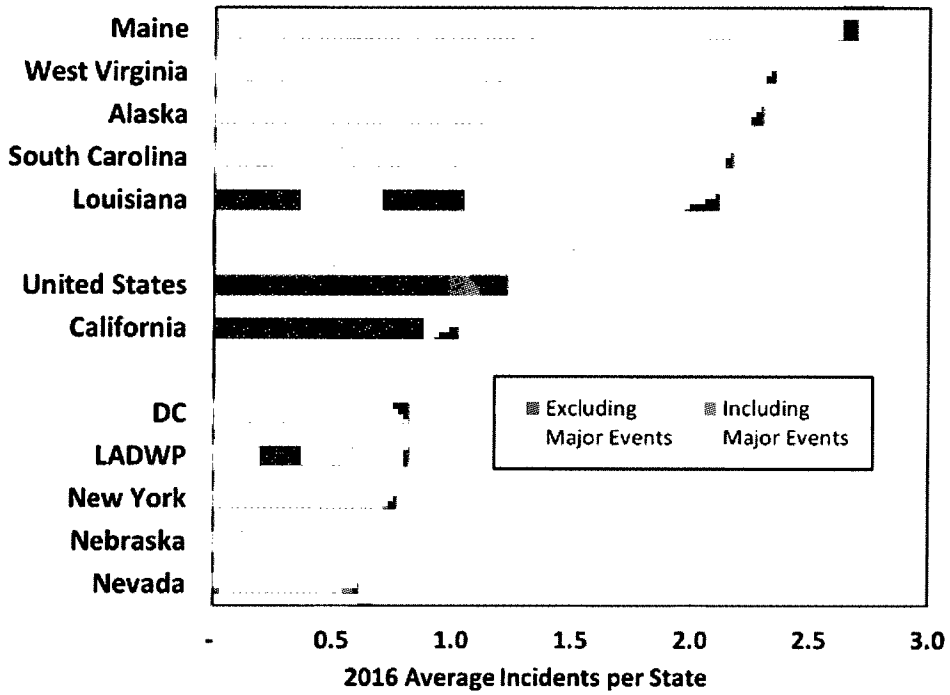
Submitted in ECCEJ Committee

Council File No: 18-0711

Item No.: 3

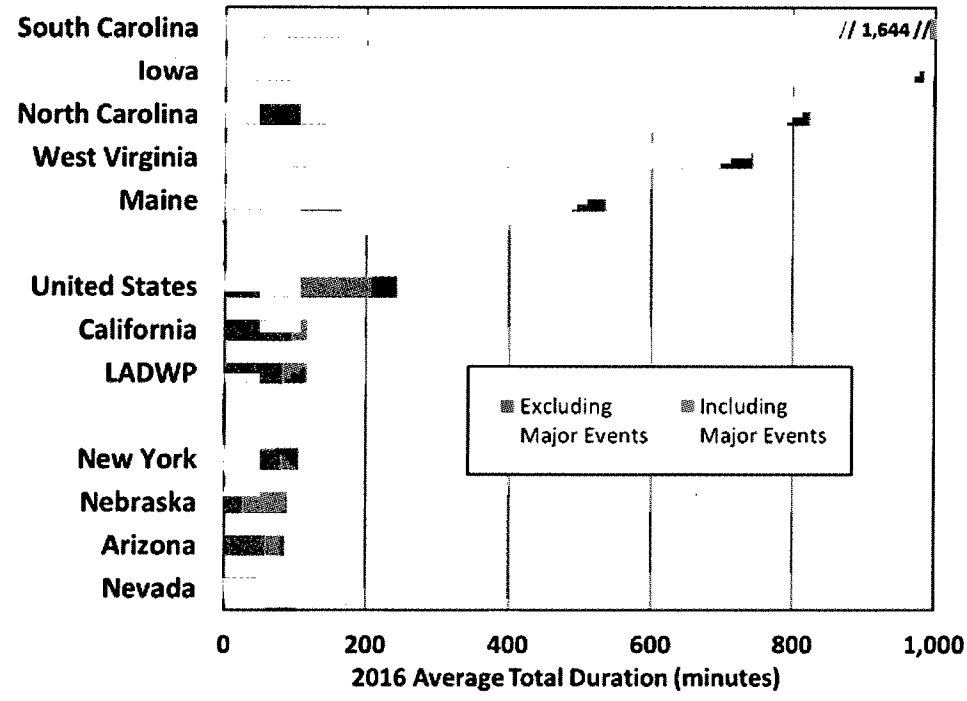
Deputy: NORM LID

Summary of 2016 Best & Worst States for SAIFI: Frequency of Interruptions



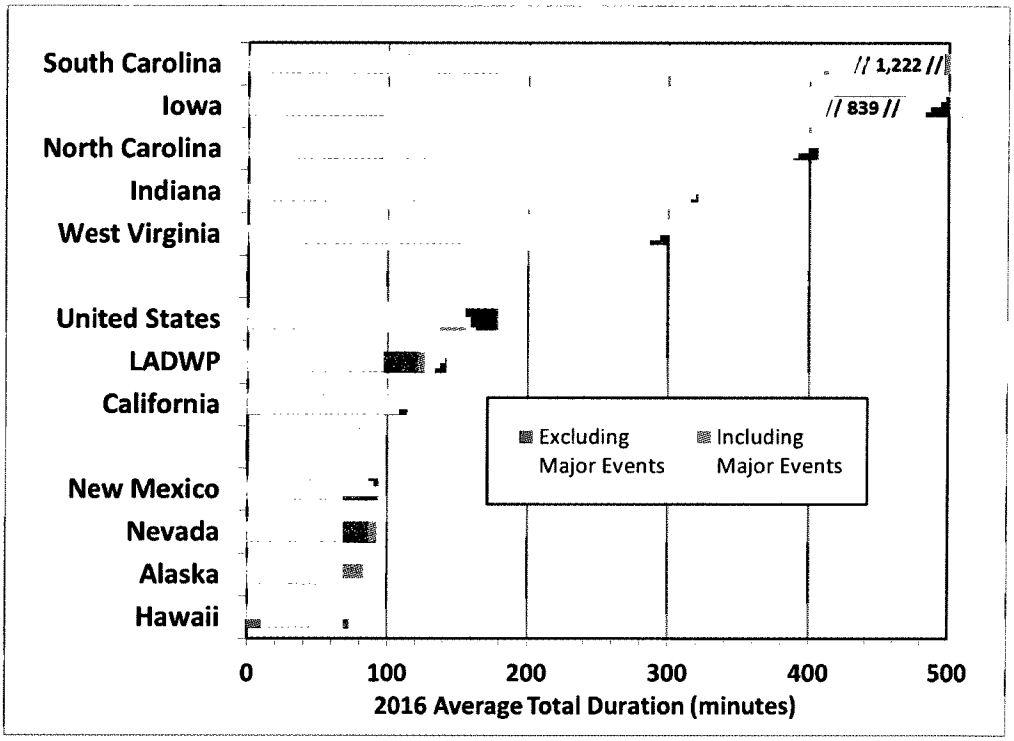
Data Source: U.S. Energy Information Administration, Annual Electric Power Industry Report (EIA-861 data file)

Summary of 2016 Best & Worst States for SAIDI: Duration of Interruptions



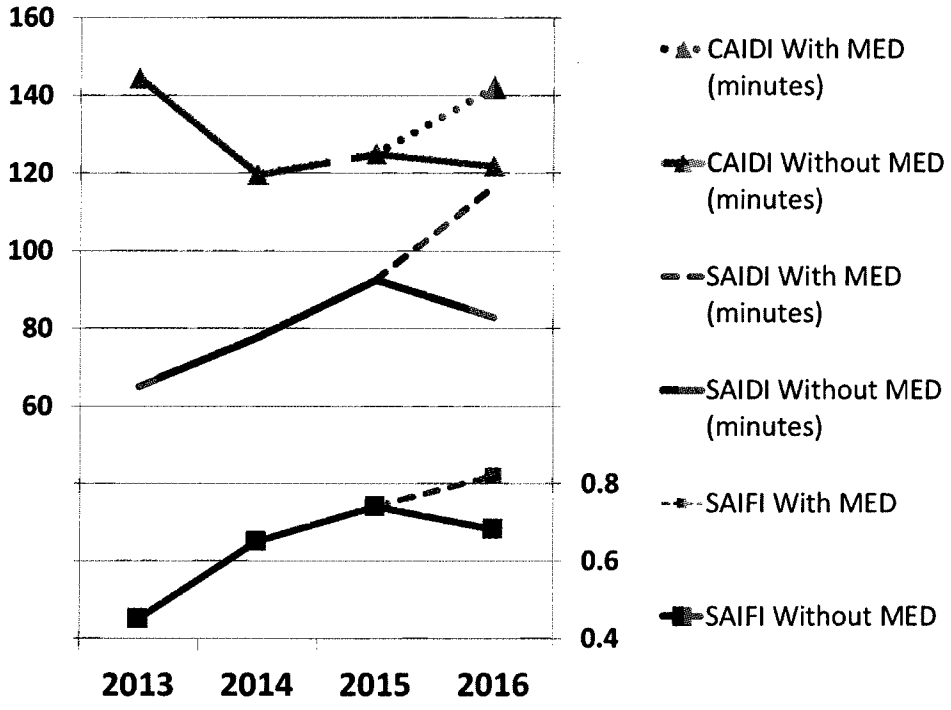
Data Source: U.S. Energy Information Administration, Annual Electric Power Industry Report (EIA-861 data file)

Summary of 2016 Best & Worst States for CAIDI: Average Duration of Interruption



Data Source: U.S. Energy Information Administration, Annual Electric Power Industry Report (EIA-861 data file)

LADWP Reliability Trends SAIFI, SAIDI, and CAIDI



Data Source: U.S. Energy Information Administration, Annual Electric Power Industry Report (EIA-861 data file); CAIDI calculated SAIDI/SAIFI.

Observations

- **Trends**
  - Restoration times (CAIDI) need improvement versus California peers; in the middle nationally
  - Continued, consistent, pro-active Power System Reliability Program infrastructure investments are needed to improve long-term trends
  - Distribution automation is expected to help
- **Areas for improvement**
  - Better communication on pre-warning (a DWP "Flex Alert") and on restoration progress
  - Increased field staffing levels needed, along with adapting constraints keeping apprentice count low
  - Regular reporting on priority circuit upgrades and selection criteria