



Annual Report to LIPA Board of Trustees

T&D System Reliability

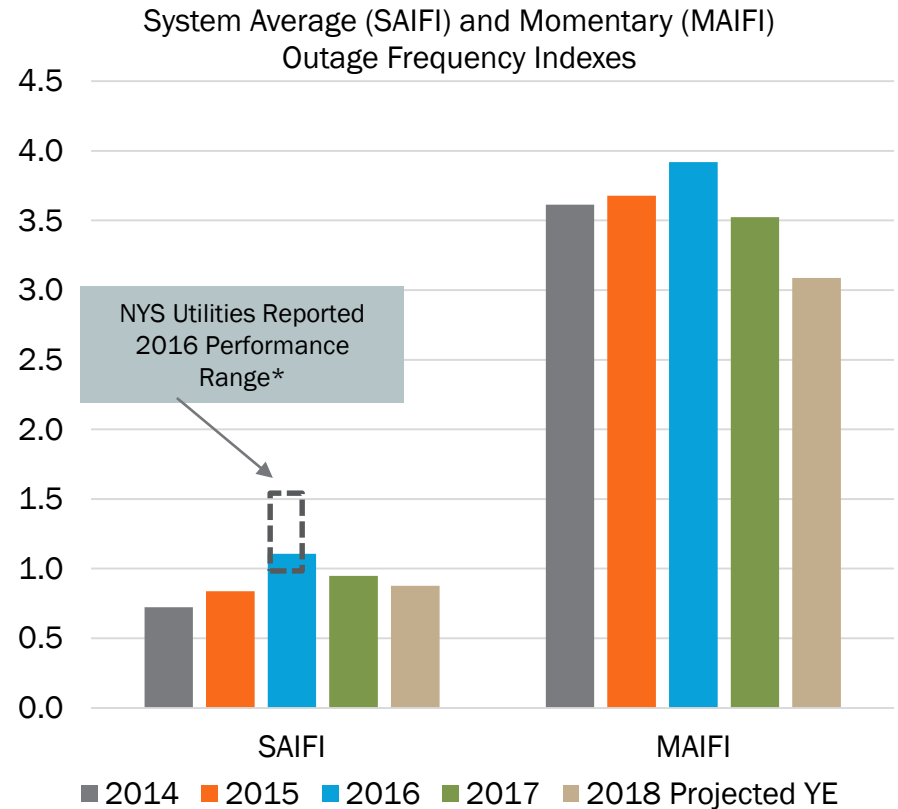
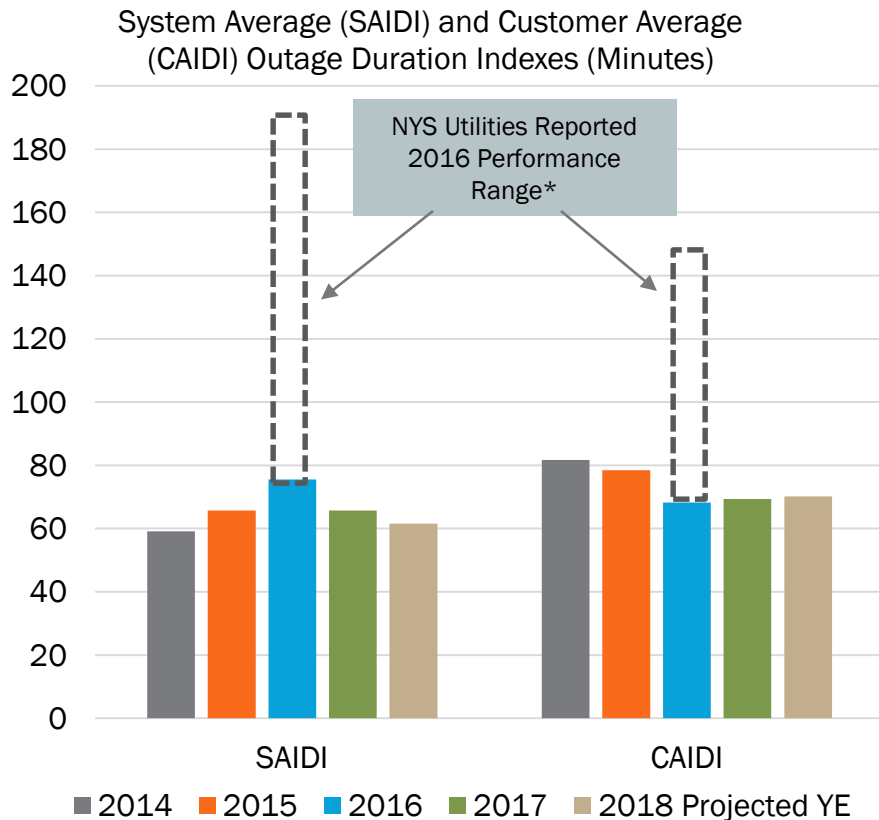
May 2018



Agenda – T&D System Reliability

- Metrics
- Storm Restoration
- Compliance
- Smart Grid Progress
- Initiatives

T&D Reliability Metrics

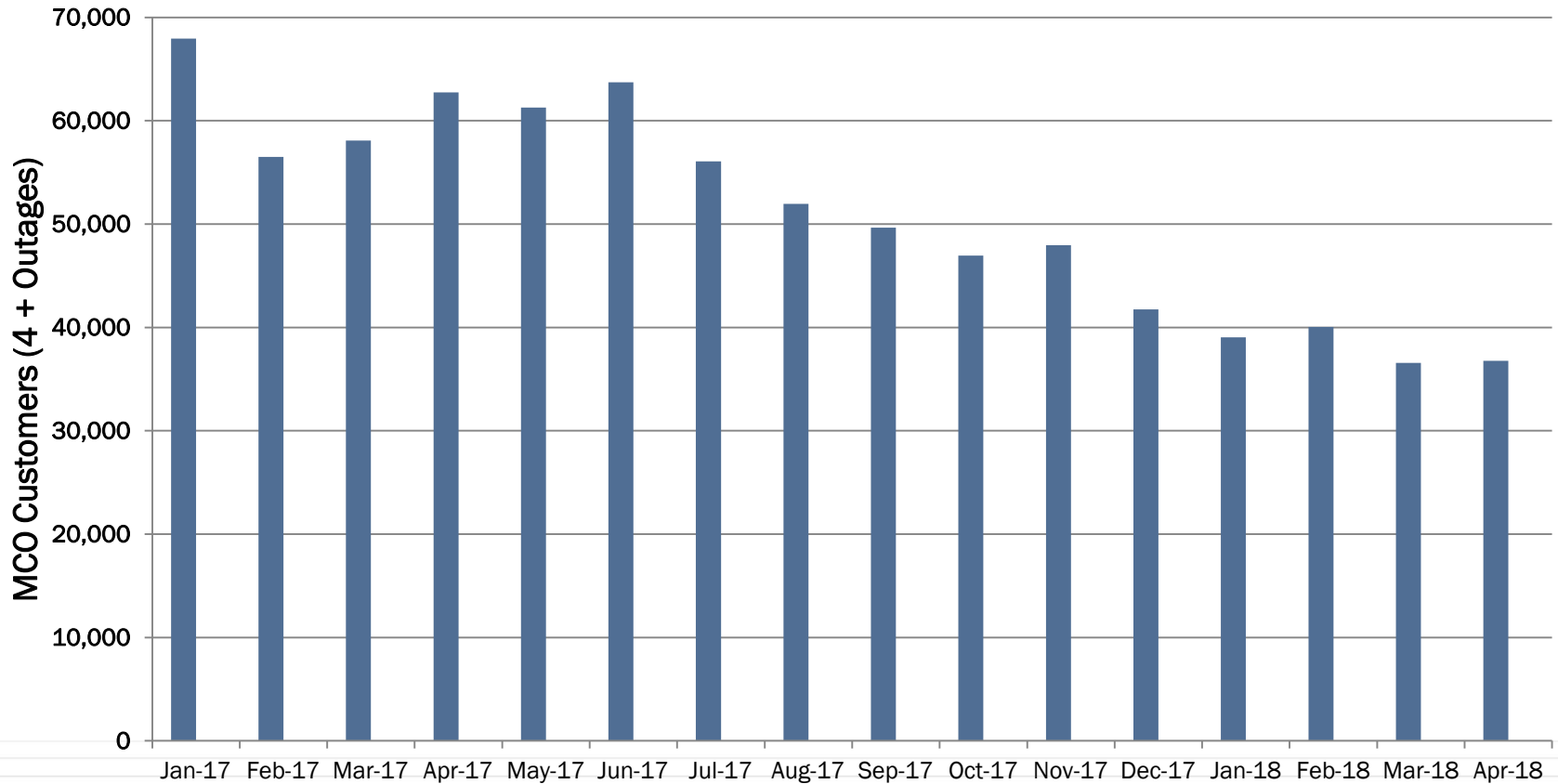


- Excludes Con Edison; 2017 Performance Range not yet available
- 2017 PSEG LI performance per most recent National Benchmarking Study: SAIDI and CAIDI (1st Quartile), SAIFI (2nd Quartile)

.....SAIDI, SAIFI and MAIFI forecasted to improve from 2017

Customers with Multiple Outages (Sustained MCO)

Sustained MCO Metric by Month



...Comparable measurement is being developed for momentary customer outages

Storm Restoration

Year	No. of Storms	Total Outage Jobs	Total Customer Outages	Cust. Restored Within 4 hrs	Average Outage Duration (minutes)
2015	20	5,225	382,254	79%	204
2016	21	6,980	532,729	86%	131
2017	13	4,960	328,705	79%	203
2018 (YTD)	8	5,779	304,771	71%	311

T&D System Reliability - Compliance

- NERC Compliance
 - Developed and implemented a Systematic Approach to Training (SAT) Program for all its Control Room Operators to meet the requirements as a newly registered Transmission Operator (TOP).
 - Prepping for upcoming (September 2018) NERC Critical Infrastructure Protection (CIP) Audit
 - Responded to NERC Alerts
- Conducted Annual Operating Studies (NERC, NYISO)
- Environmental
 - No major incidents recorded

Smart Grid Progress

- Automatic and remote switching
 - 898 switches (“ASUVs”) as part of FEMA Storm Hardening
 - 360 Installed and Commissioned to Date
 - 234 Additional Installed Awaiting Commissioning
- Advanced Metering (AMI)
 - Installed to date – 61,750 meters
 - Year end - 99,090 meters

Initiatives to Improve Reliability

- Non-Reclosure Assurance (“NRA”) Automation to be completed in 2018
- Targeted Programs to Improve Reliability:
 - Circuit Improvement Program (161 Circuits vs 102 in 2017)
 - Reliability programs have reduced outages on the 25 worst performing circuits by about 30% when comparing 2016 to 2017 performance.
 - FEMA (323 planned mitigation miles 2018 vs 289 in 2017. 273 planned ASUV’s commissioned 2018 vs 321 in 2017)
 - Vegetation Management (3,266 Miles Combined Distribution and Transmission)
 - Infrared T&D (3,500 miles, 50% higher than historical)
- Customer Centric Reliability Programs
 - Multiple Customer Outages/Repeat Fuse Program (974 Locations)
 - Residential Underground Distribution
- Storm Response Improvement
 - Storm Impact Analysis
 - Mobile and Damage Assessment

Interconnection Metrics

For Smaller Projects < 50 kW in Size

- Introduced in 2016 as a Tier 1 OSA metric
- Higher volume of activity in the thousands annually, less complicated and shorter study processes

For Larger Projects > 50 kW in Size

- Introduced in 2017 as a Tier 2 metric, and promoted to a Tier 1 OSA metric in 2018
- Lower volume of activity in the hundreds annually, more complicated and lengthy study processes

