

Exhibit to Agenda Item #5

Accept the monitoring report for Strategic Direction SD-4, Reliability.

Special Board of Directors Meeting

Tuesday, June 9, 2020, scheduled to begin at 5:30 p.m.

SD-4, Reliability Policy

Meeting customer energy requirements is a core value of SMUD.

Therefore:

SMUD will assure all customer energy requirements are met. This will be accomplished through the use of: (i) its generation resources and purchase power portfolio 100 percent of the time; and (ii) its transmission assets to assure an overall availability of at least 99.99 percent.

SMUD will achieve distribution system reliability by:

Limiting the average frequency of outage per customer per year to:

- With major event : 0.99 – 1.33
- Excluding major event : 0.85 – 1.14

Limiting the average duration of outages per customer per year to:

- With major event: 67.5 – 93.3 minutes
- Excluding major event: 49.7 – 68.7 minutes

Ensuring that no individual circuits exceed these targets for more than two consecutive years. For circuits that exceed these targets for two consecutive years, a remedial action plan will be issued and completed within eighteen months.

SMUD will maintain the electric system in good repair and make the necessary upgrades to maintain load serving capability and regulatory standards.

SD-4, 2019 Reliability Results

Generation and Transmission System

Met customers' energy supply needs 100% of the time through a combination of SMUD generation and purchase power supplies

➤ Generation Asset and Gas Pipeline Availability

- Thermal Generation – 85.93%
- Hydro Generation – 84.51%
- Thermal Generation June through September – 97.91%
- Hydro Generation June through September – 92.49%
- At system peak, 50% of the generation was provided by internal resources and 50% was provided by purchased power

➤ Overall availability of transmission system was 100%

SMUD was in compliance for both SAIDI and SAIFI (excluding major events) as well as SAIFI including major events for the distribution system reliability metrics in 2019.

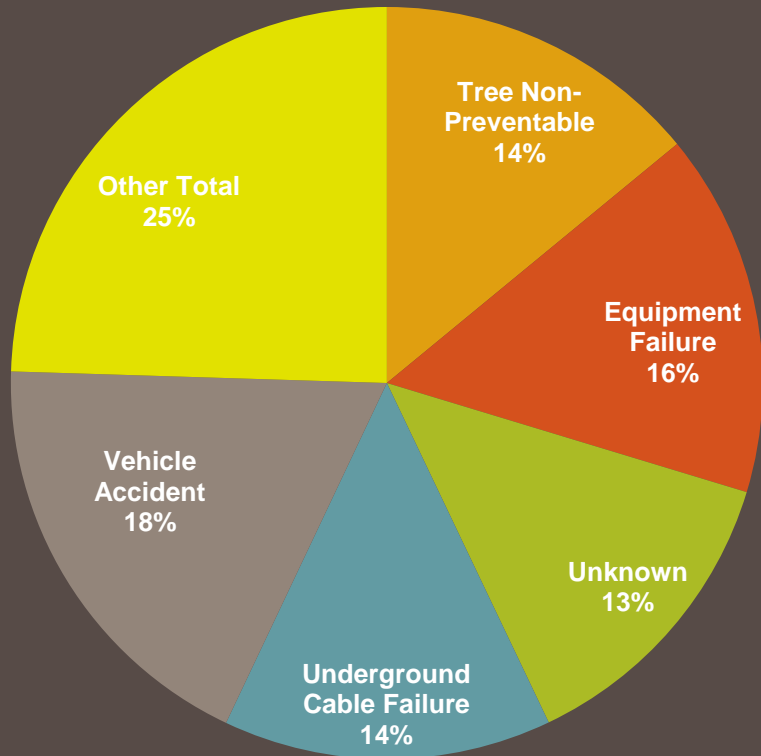
	With Major Events		Excluding Major Events	
	SD-4 Limit	2019 Results	SD-4 Limit	2019 Results
SAIFI	1.33	1.33	1.14	1.04
SAIDI (minutes)	93.3	114.5	68.7	66.0

- 98.4% of all distribution circuits (742 circuits) met the reliability criteria

2019 Distribution System Performance with Major Events

SAIFI

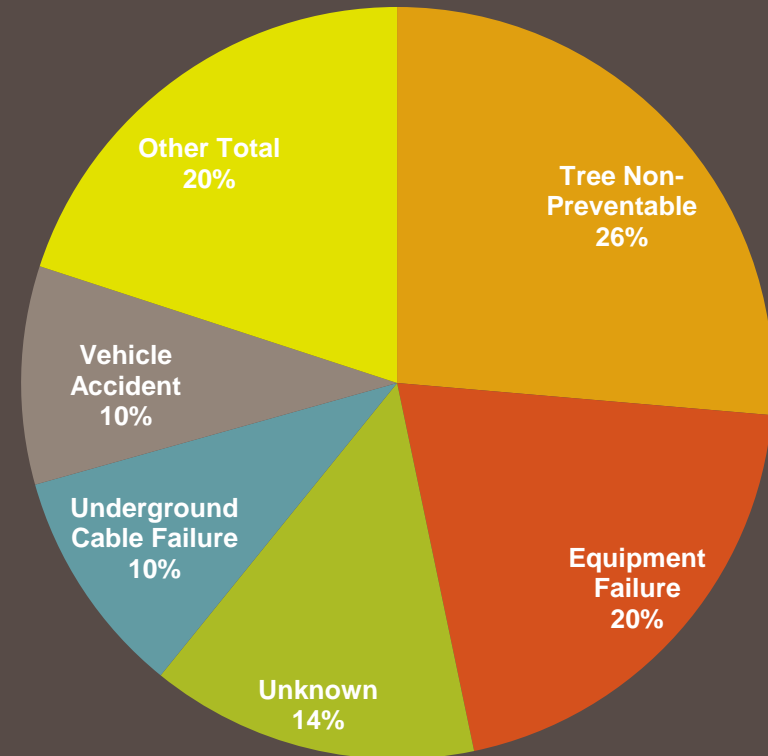
Year End Results = 1.33 (0% under SD-4 limit)
SD-4 Limit = 1.33



Average Outage Frequency (SAIFI)

SAIDI

Year End Results = 114.5 min. (23% over SD-4 limit)
SD-4 Limit = 93.3 minutes

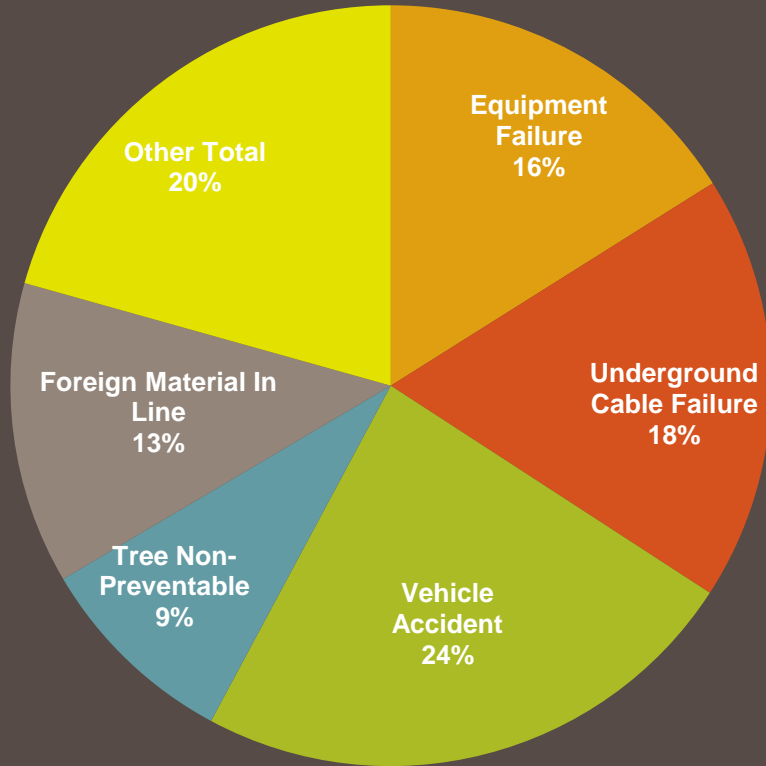


Average Outage Duration (SAIDI)

2019 Distribution System Performance Excluding Major Events

SAIFI

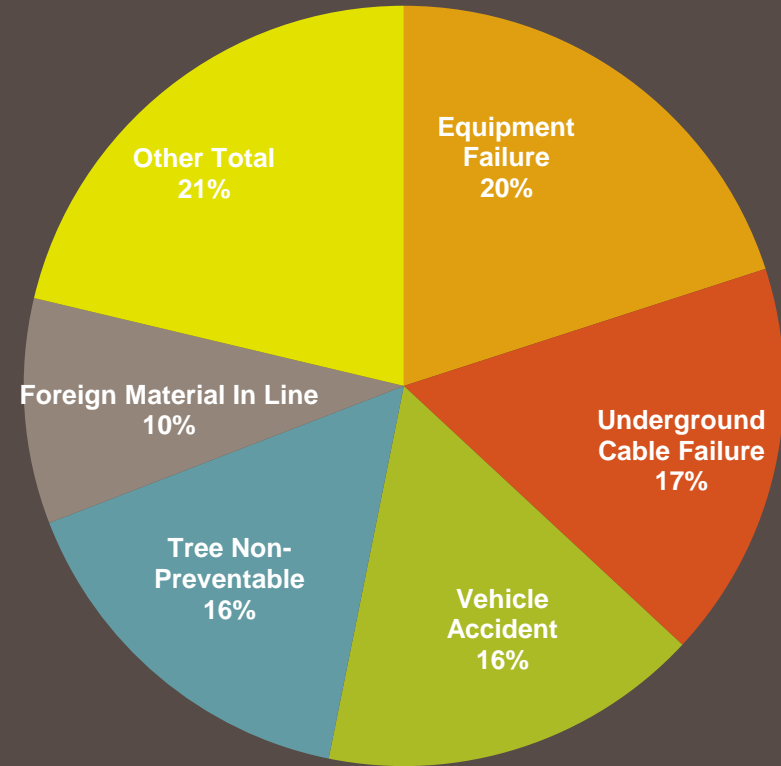
Year End Results = 1.04 (10% under SD-4 limit)
SD-4 Limit = 1.14



Average Outage Frequency (SAIFI)

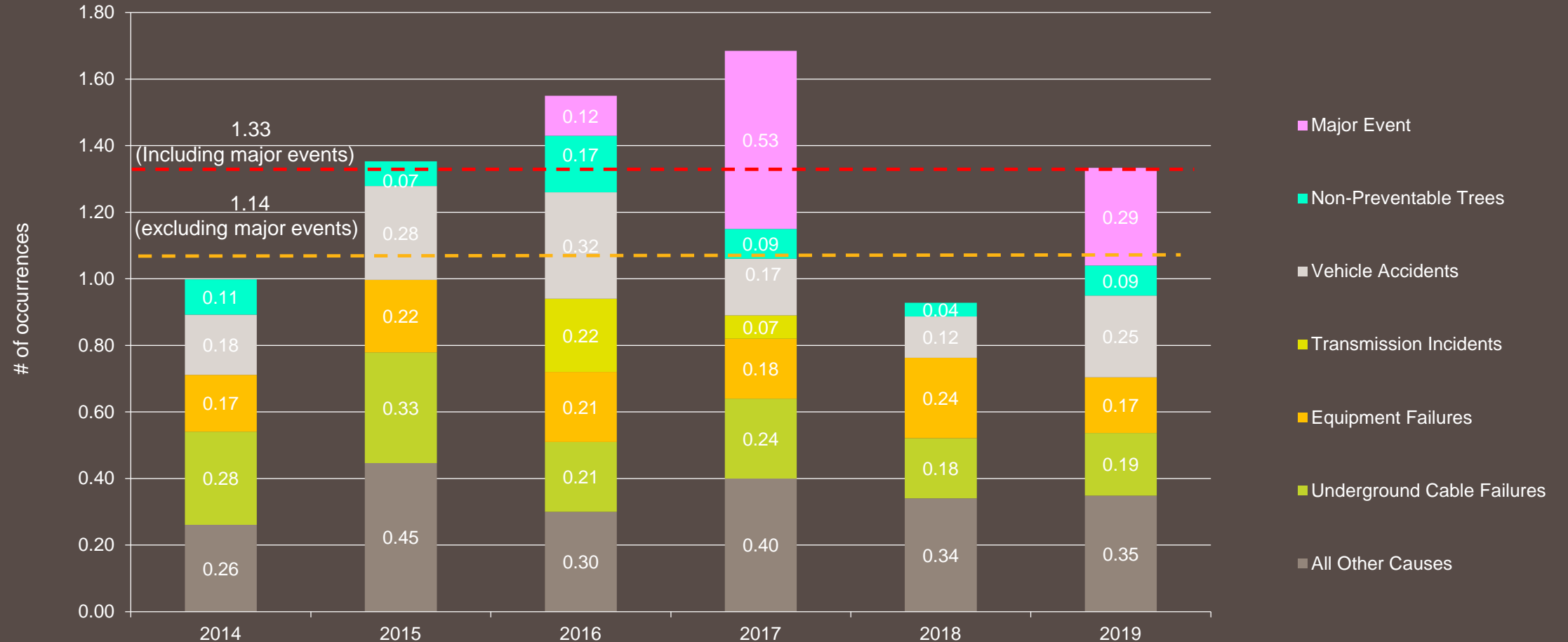
SAIDI

Year End Results = 66.0 min. (4% under SD-4 limit)
SD-4 Limit = 68.7 minutes

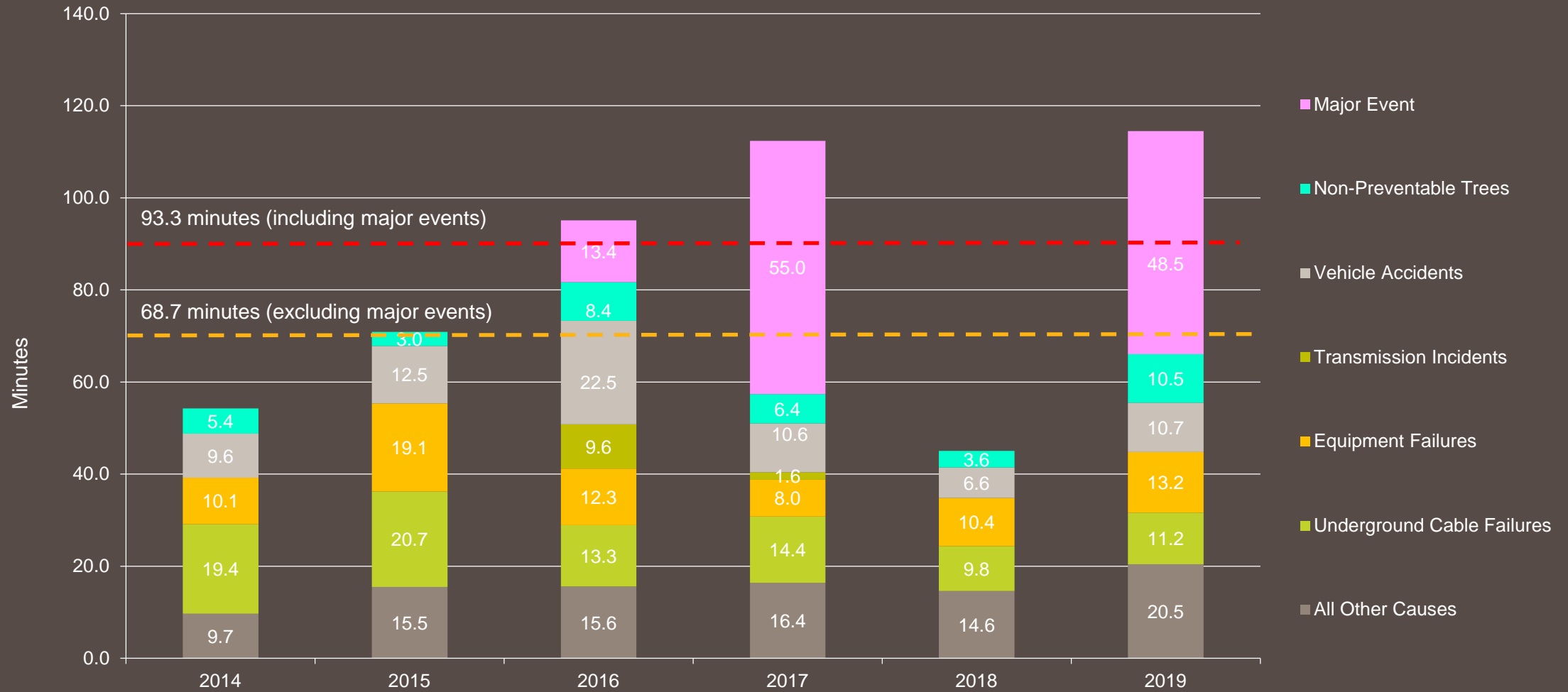


Average Outage Duration (SAIDI)

Outage Duration (SAIFI) Performance Drivers Multi-Year Comparison



Outage Duration (SAIDI) Performance Drivers Multi-Year Comparison



2019 Major Event Summary

- In 2019, SMUD experienced one major event Jan 6-7.
- The SAIDI for this major event was 48.5 minutes and the SAIFI was 0.29.
- Similar to previous major events, excessive precipitation as well as wind gusts up to 53 miles per hour played a significant role in causing damage.
- Tree-related and wind outages have longer restoration times due to the nature of the outage where trees may need to be removed, poles may need to be replaced, and lines may need reconductoring.

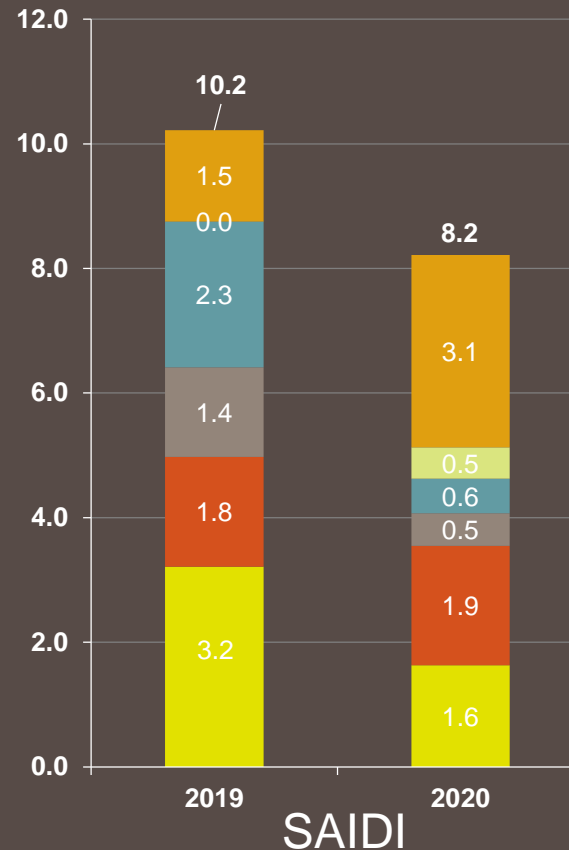
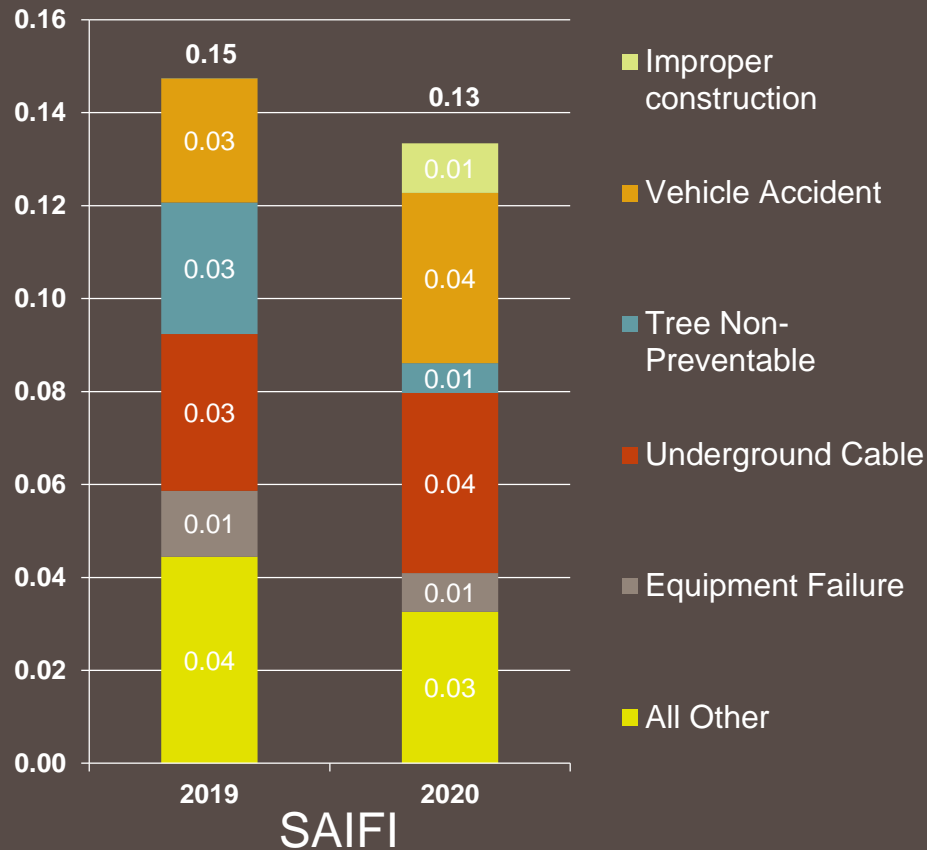
	Jan 6-7, 2019
Maximum Wind Gust (MPH)	53
Sustained Wind (MPH)	31
Rainfall (in.)	1.06
Number of Outages	282
Customers Sustained Outages	184,213
SAIFI	0.29
SAIDI	48.5

2019 Worst Performing Circuits

- Two circuits (0.3% of the total number of circuits) exceeded the reliability limits for more than two consecutive years.
- Ten additional circuits exceeded the reliability limits for two consecutive years (1.3% of the total number of circuits).
- A total of seventeen projects were issued to improve the reliability of these twelve circuits.
- Six projects have been completed, while the remaining eleven projects are in progress and scheduled to be completed by the 18-month requirement.

2020 Distribution Reliability Update

Comparison to 2019 – YTD Thru March 31st



2020 Reliability, excluding Major Events			
	Jan 1 – Mar 31, 2020	2020 YE Projection	SD-4 Limit
SAIFI	0.13	1.06	1.14
SAIDI (minutes)	8.2	61.1	68.7

Questions

