

RISK ASSESSMENT

REPORTED DATA

2020-21

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RISK FACTOR VALUE INFLUENCE

The risks are based on the severity of the hazards to the public, workers, and property in the area of the incident.

Lines or equipment that could reasonably be a hazard to the public, or utility workers, or property, from the result of failure have high risk ratings.

Items that are better isolated and do not impose a high likelihood of a hazard to people or property have lower risk ratings.

ESS & SWITCHING FACILITIES

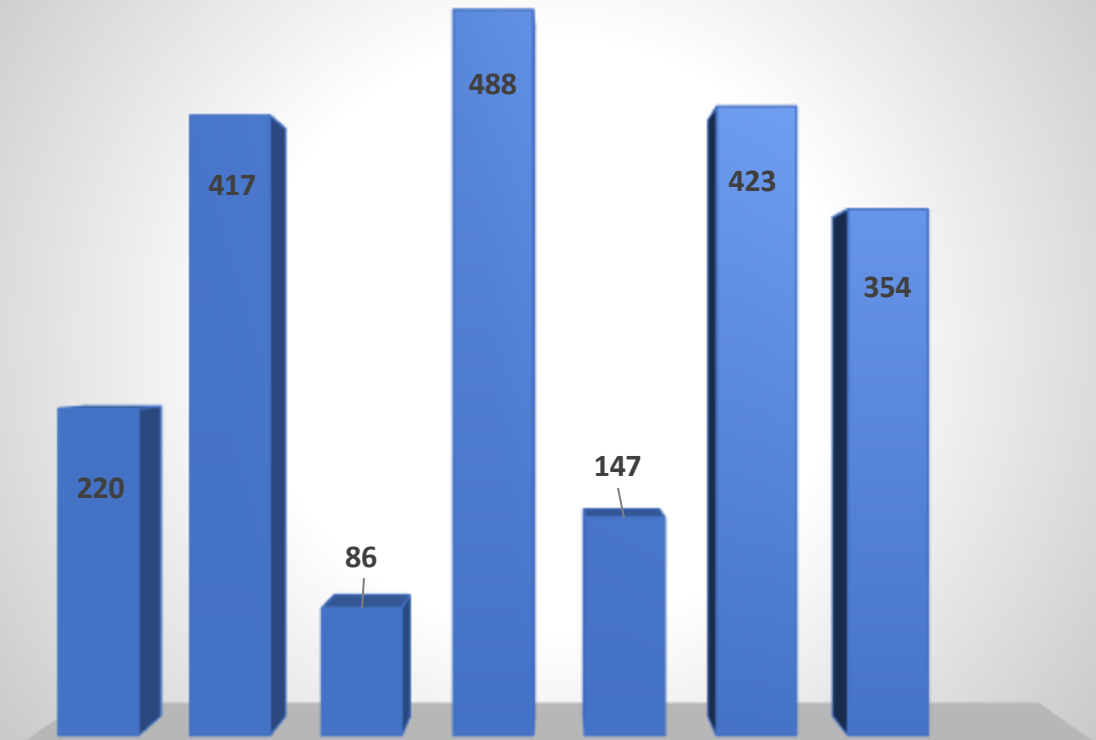
PLEASE RESPOND BY **APRIL 1, 2022**:

ESS (ELECTRICAL SUPPLY STATIONS):

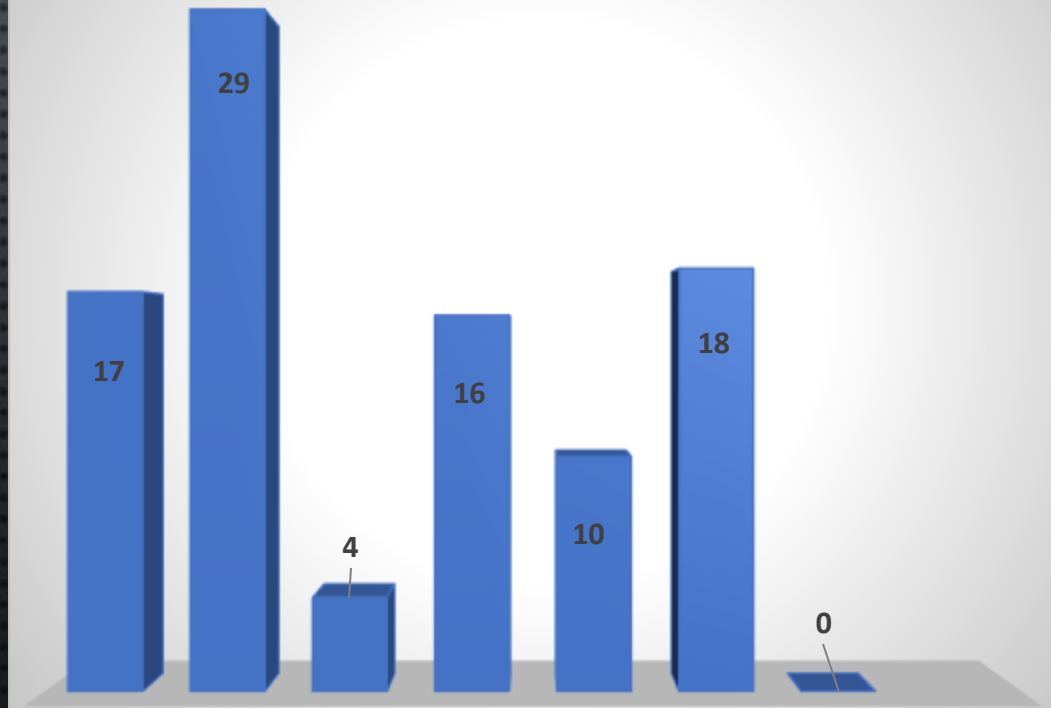
- 1) PROVIDE INFORMATION, PER COUNTY OR SERVICE AREA, OF THE NUMBER OF ESS FACILITIES IN SERVICE, AND HOW MANY ARE NOT IN SERVICE. PLEASE PROVIDE INFORMATION ON ANY FACILITY THAT WAS EITHER PUT IN SERVICE (COMMISSIONED) OR TAKEN OUT OF SERVICE (DE-COMMISSIONED) FOR THE PAST TWO YEARS (2020 & 2021). PROVIDE THE CORRESPONDING DATE(S) OF WHEN THE FACILITY WAS COMMISSIONED, AS WELL AS WHEN A FACILITY WAS DE-COMMISSIONED, ALONG WITH THE REASON WHY.
- 2) PROVIDE A LIST OF POWER TRANSFORMERS (DUPLICATE THE WORKSHEET TABS AS NECESSARY) USED IN ESS FACILITIES (SPECIFICALLY INSIDE THE FENCED AREA) IN THE FOLLOWING FORMAT:
 - a) PROVIDE A LIST OF THE NUMBER OF POWER TRANSFORMERS AND THE NUMBERS OF YEARS IN SERVICE (NEWEST TO OLDEST). THE YEARS OF SERVICE MAY BE LISTED IN GROUPS SUCH AS: 0 TO 20 YEARS, 21 TO 40 YEARS, 41 TO 60 YEARS, AND OVER 60 YEARS IN SERVICE.
 - b) PROVIDE THE NUMBER OF TRANSFORMER REPLACEMENTS OVER THE PAST TWO CALENDAR YEARS (2020 & 2021).
 - c) PROVIDE INFORMATION ON THE AVERAGE NUMBER OF YEARS THE TRANSFORMER WAS IN SERVICE BEFORE REPLACEMENT. PLEASE INDICATE THE REASON FOR REPLACEMENT.
- 3) PROVIDE A LIST (DUPLICATE THE WORKSHEET CELLS AND TABS AS NECESSARY) OF ALL OTHER EQUIPMENT UTILIZED IN THE ESS FACILITIES. LIST AS MANY OF THE ITEMS AS POSSIBLE (INSIDE THE FENCED AREA) WITH EITHER THE ACTUAL AMOUNT, OR YOUR BEST ESTIMATE.
 - a) PROVIDE INFORMATION ON THE NUMBER OF EACH DEVICE IN SERVICE, THE NUMBER OF FAILURES OF EACH DEVICE WHILE IN SERVICE FOR THE PAST TWO YEARS (2020 & 2021) AND THE AVERAGE NUMBER YEARS IN SERVICE UNTIL THE POINT OF FAILURE.

ESS & SWITCHING FACILITIES

2020/21 ESS Facility Count

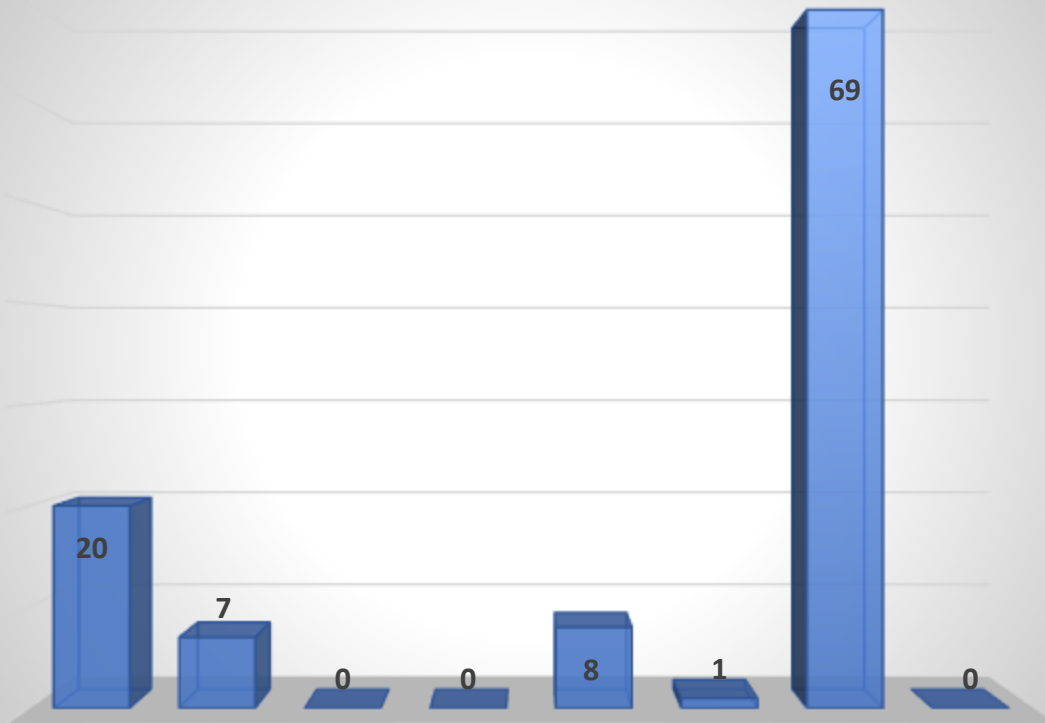


2020/21 Switching Facility Count

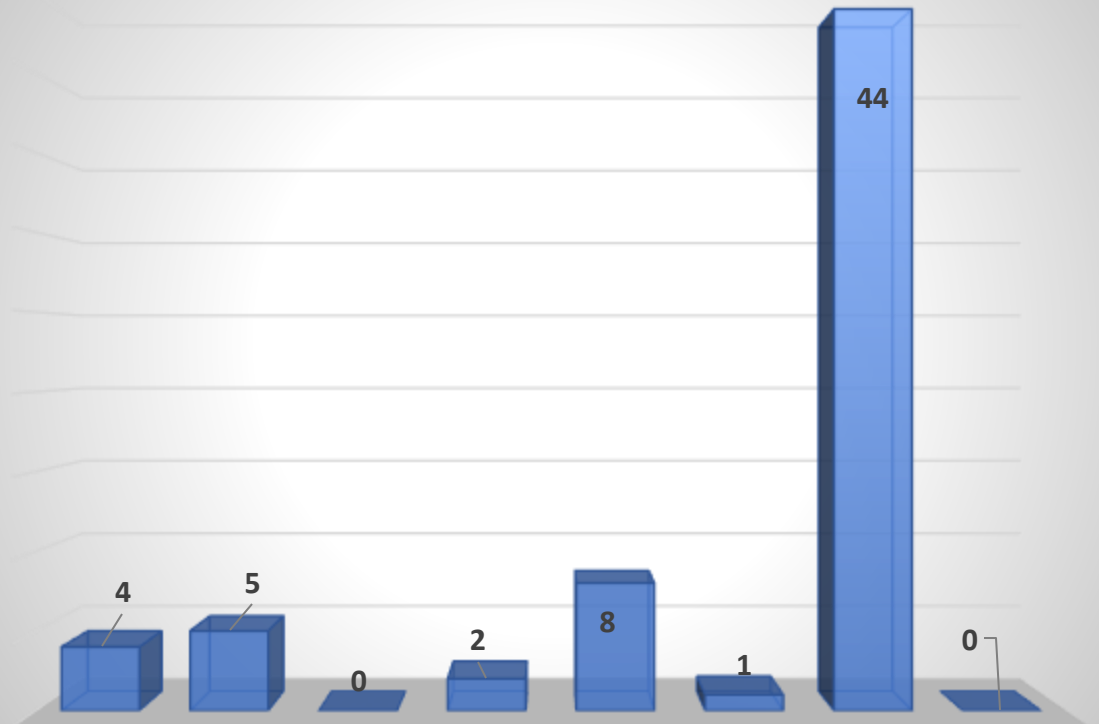


ESS EQUIPMENT FAILURES

2020 ESS Equipment Failures

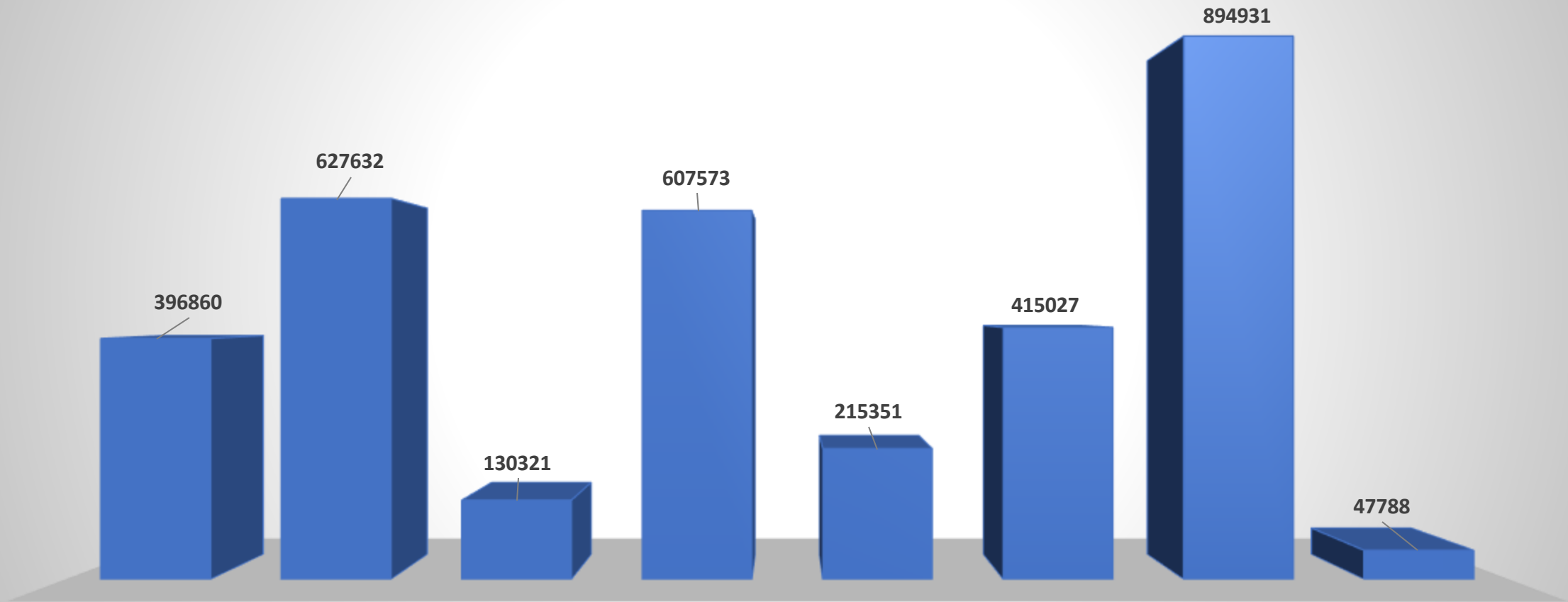


2021 ESS Equipment Failures



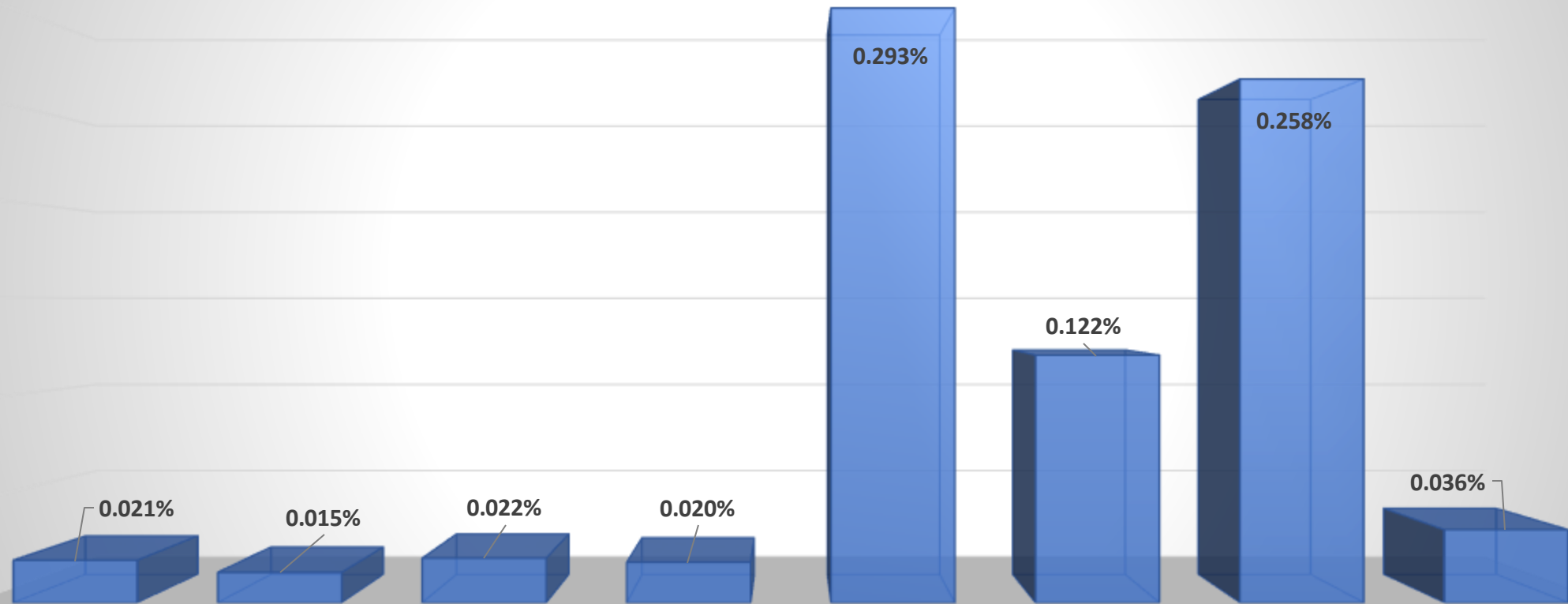
OVERHEAD DISTRIBUTION STRUCTURES

2021 Wood Distribution Pole Counts



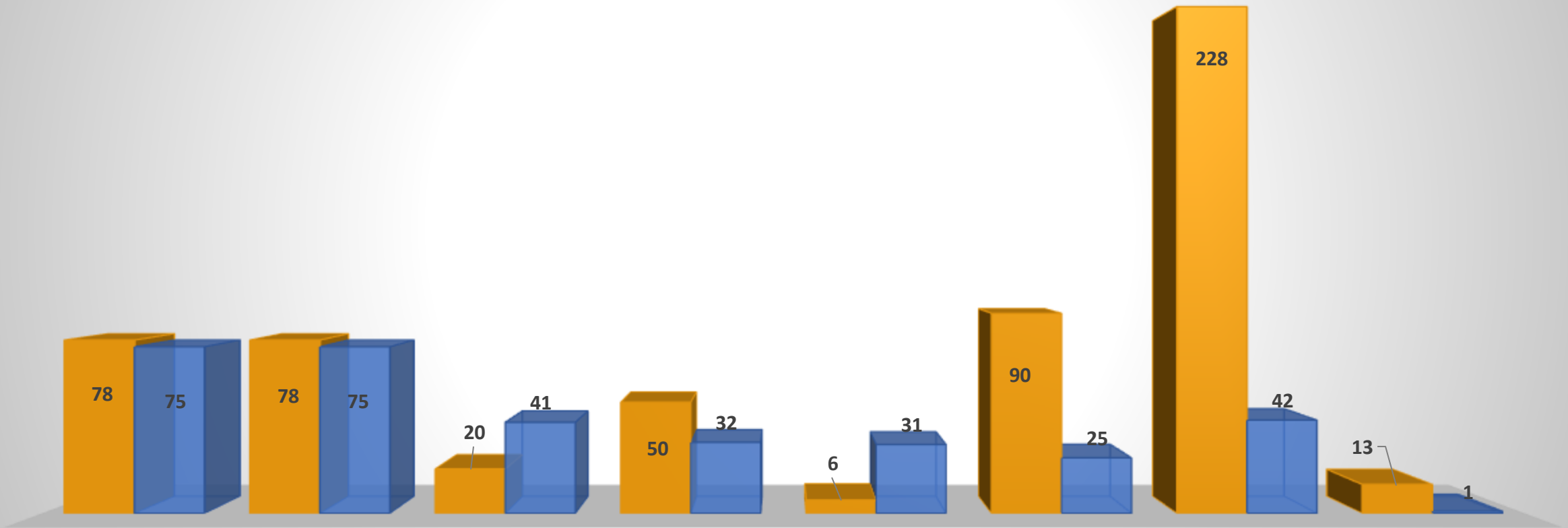
OVERHEAD DISTRIBUTION STRUCTURES

2021 Wood Distribution Pole Failure Rates



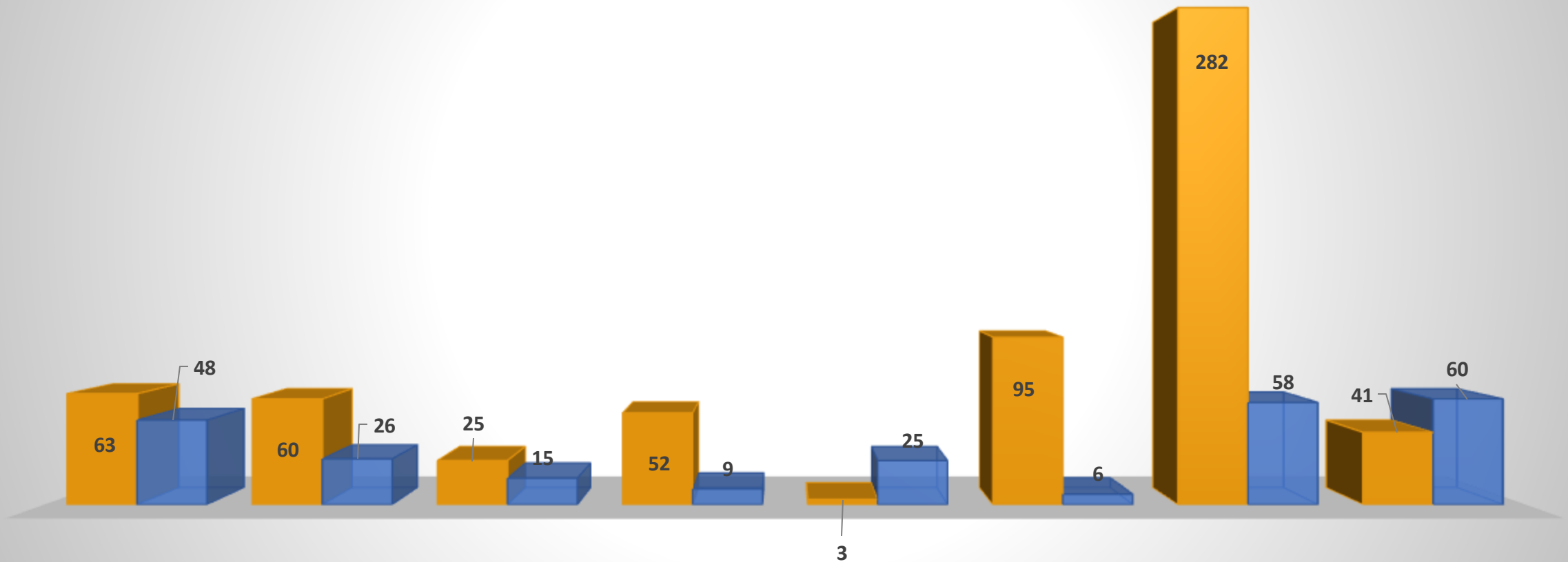
OVERHEAD DISTRIBUTION STRUCTURES

2020 Wood Distribution Pole Deterioration^{1st} and Weather Related^{2nd} Failures



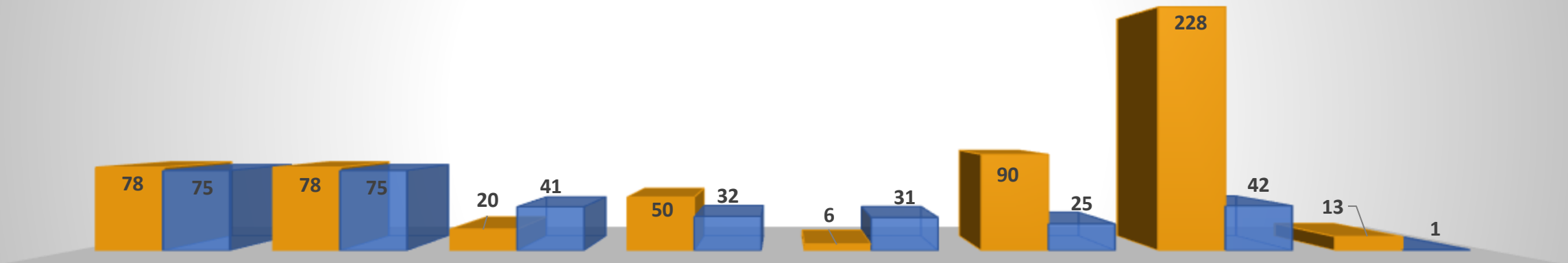
OVERHEAD DISTRIBUTION STRUCTURES

2021 Wood Distribution Pole Deterioration^{1st} and Weather Related^{2nd} Failures

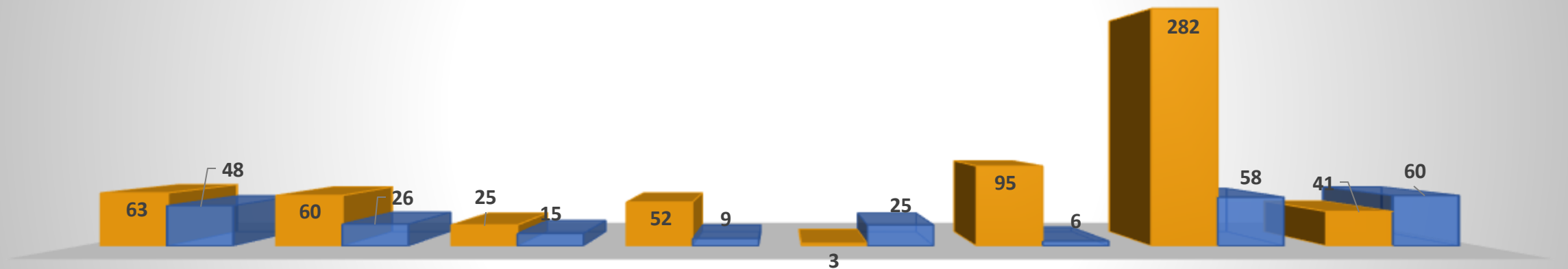


OVERHEAD DISTRIBUTION STRUCTURES

2020 Wood Distribution Pole Deterioration^{1st} and Weather Related^{2nd} Failures

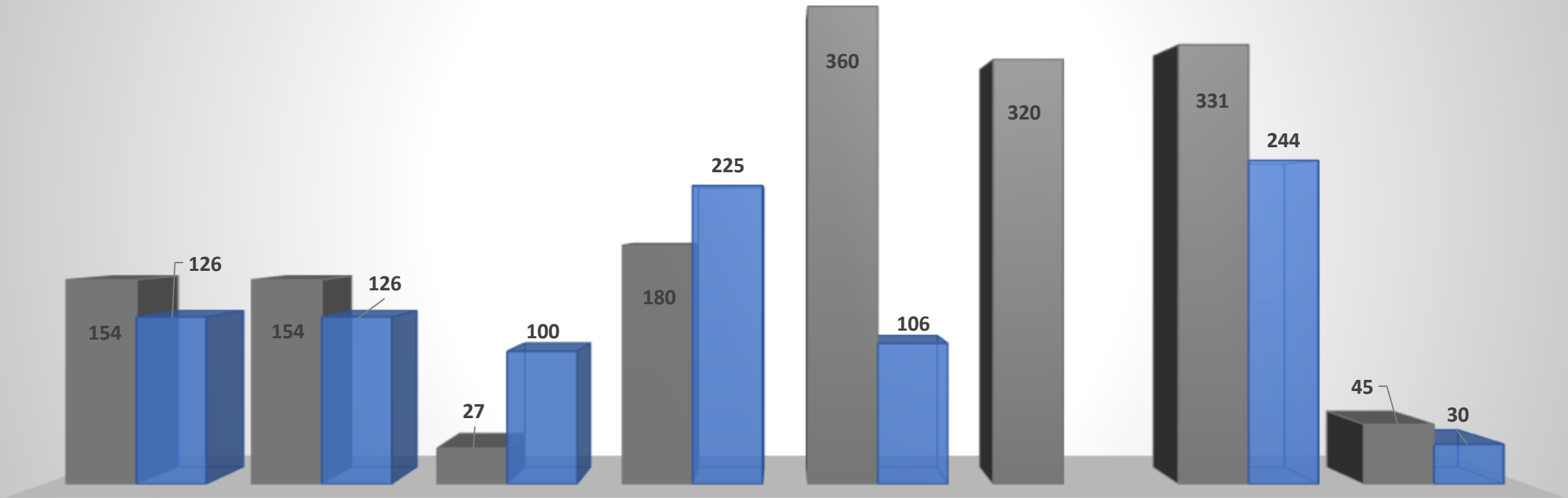


2021 Wood Distribution Pole Deterioration^{1st} and Weather Related^{2nd} Failures



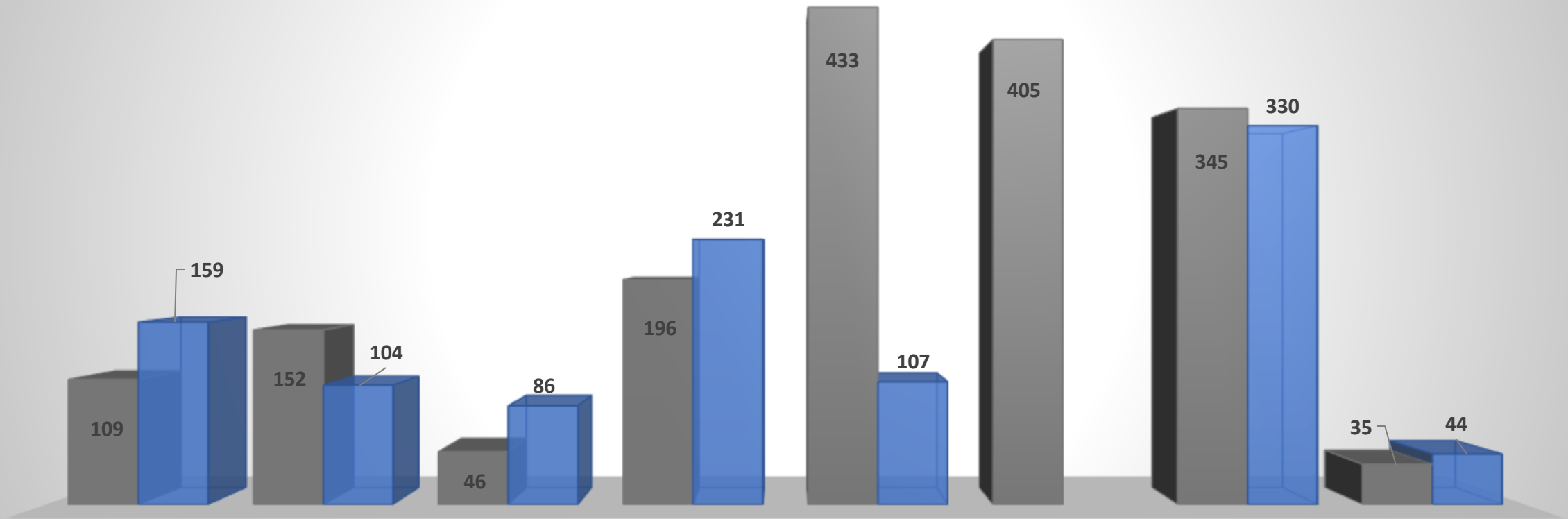
OVERHEAD DISTRIBUTION STRUCTURES

2020 Wood Distribution Pole Vehicle Accident^{1st} and OROW Tree^{2nd} Failures



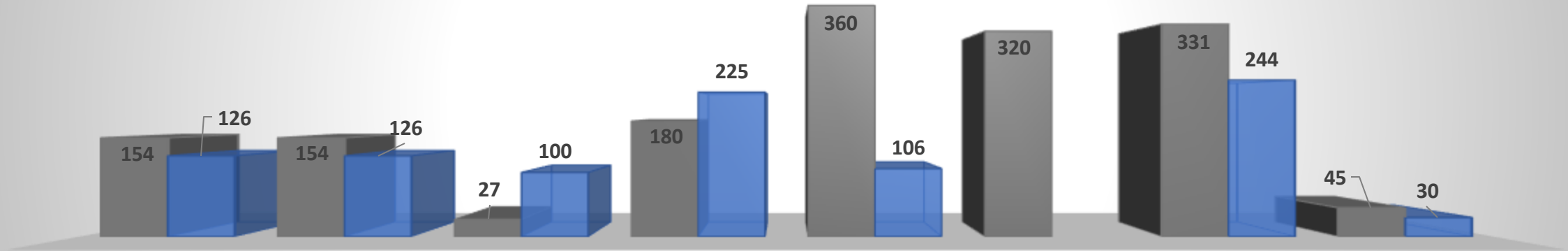
OVERHEAD DISTRIBUTION STRUCTURES

2021 Wood Distribution Pole Vehicle Accident^{1st} and OROW Tree^{2nd} Failures

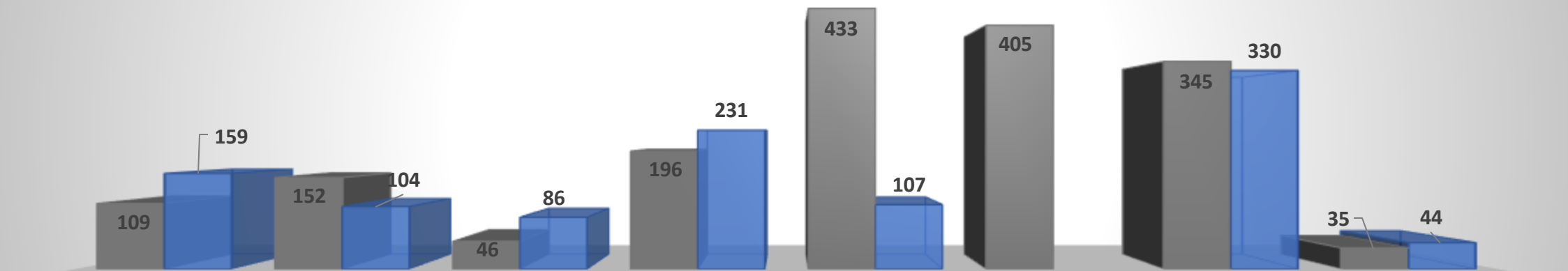


OVERHEAD DISTRIBUTION STRUCTURES

2020 Wood Distribution Pole Vehicle Accident^{1st} and OROW Tree^{2nd} Failures

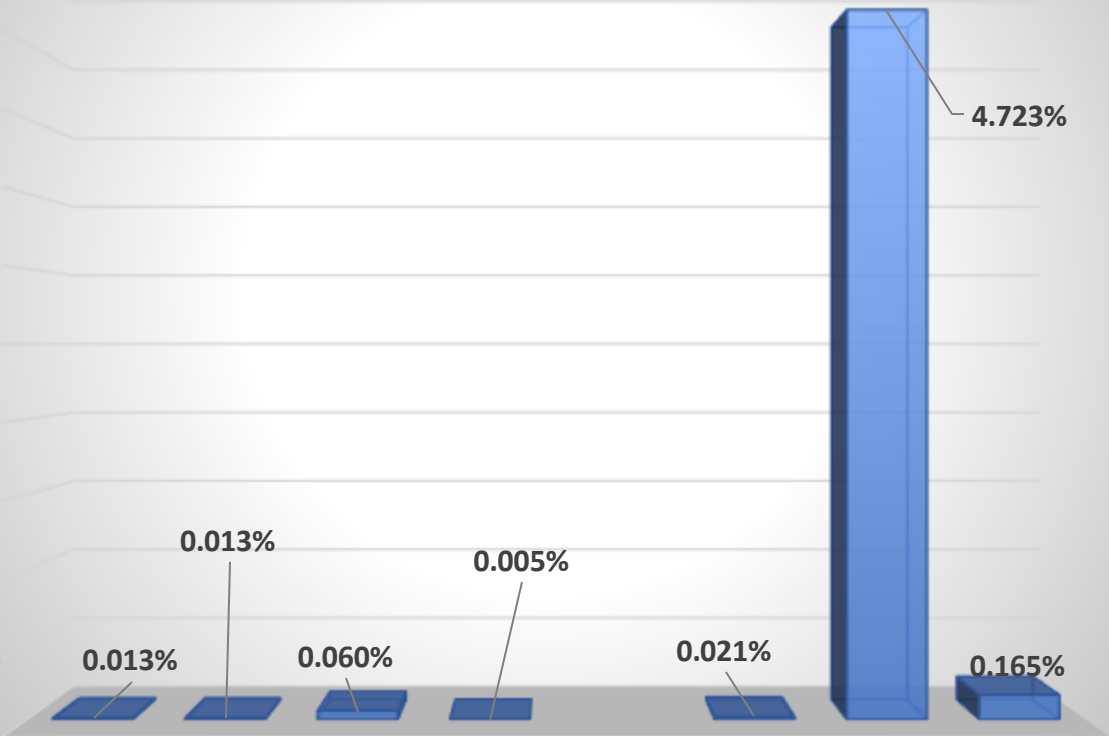


2021 Wood Distribution Pole Vehicle Accident^{1st} and OROW Tree^{2nd} Failures

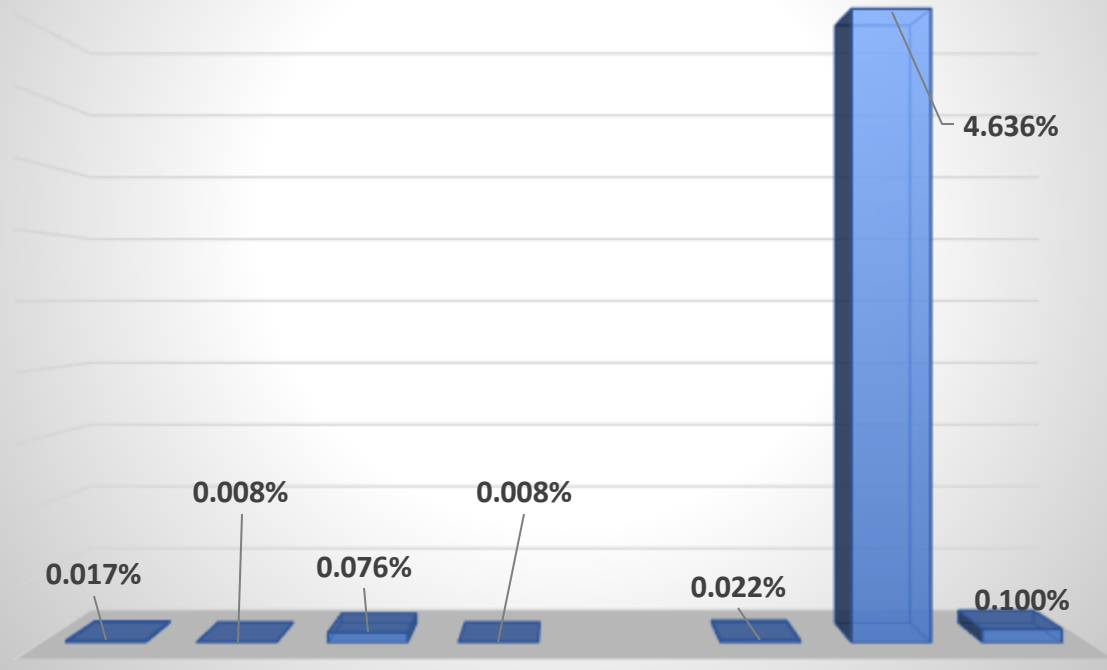


OVERHEAD DISTRIBUTION EQUIPMENT

2020 Transformer Failure Rates

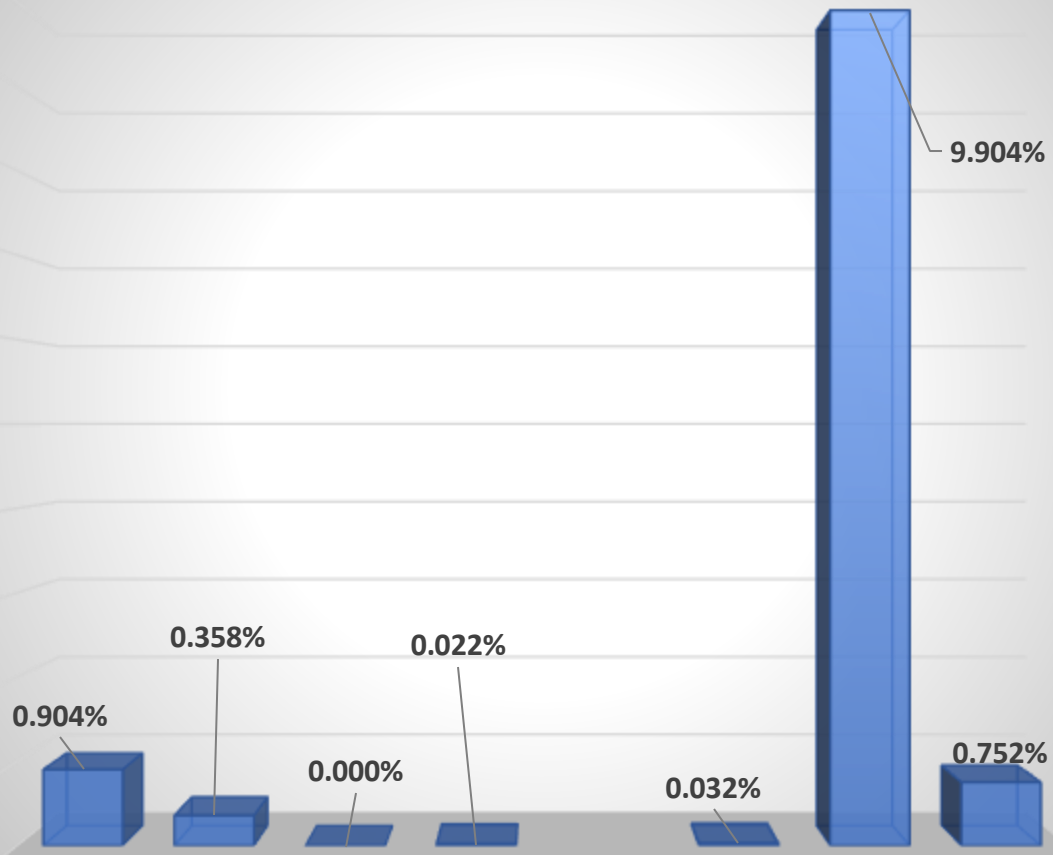


2021 Transformer Failure Rates

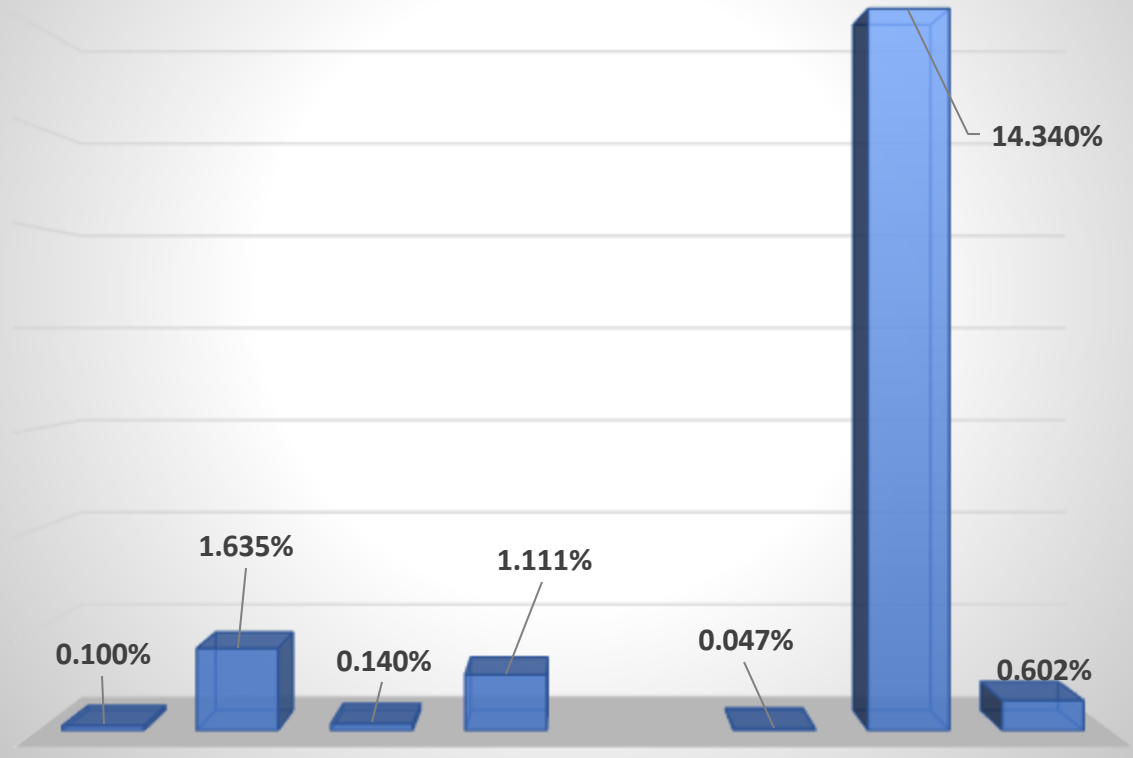


OVERHEAD DISTRIBUTION EQUIPMENT

2020 Auto-Recloser Failure Rates

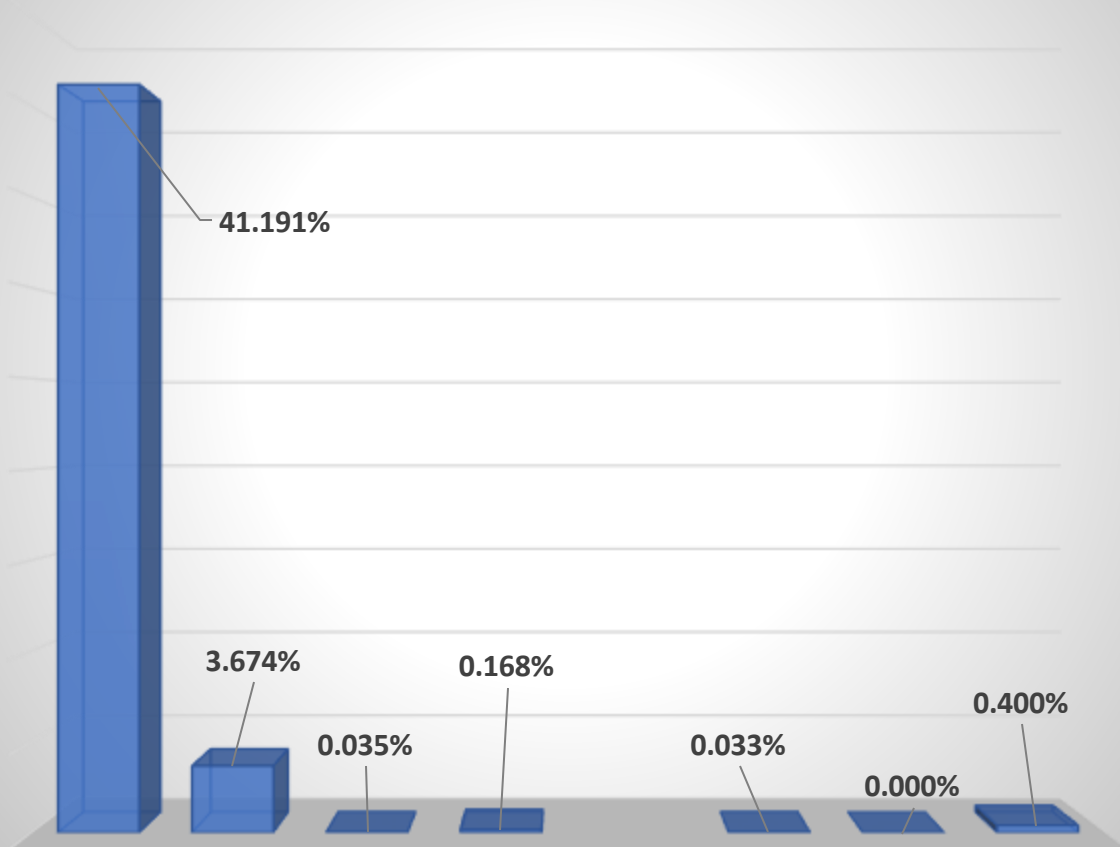


2021 Auto-Recloser Failure Rates

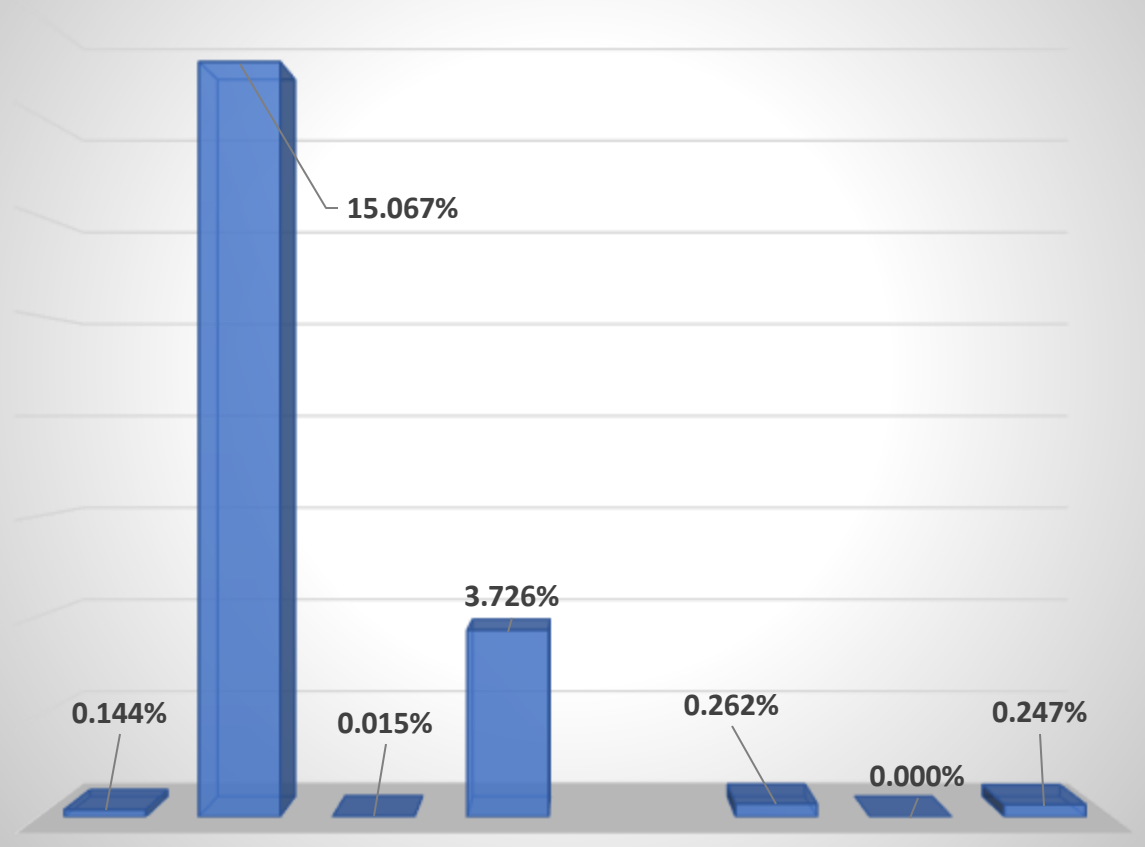


OVERHEAD DISTRIBUTION EQUIPMENT

2020 Cut-Out Fuse Holder Failure Rates

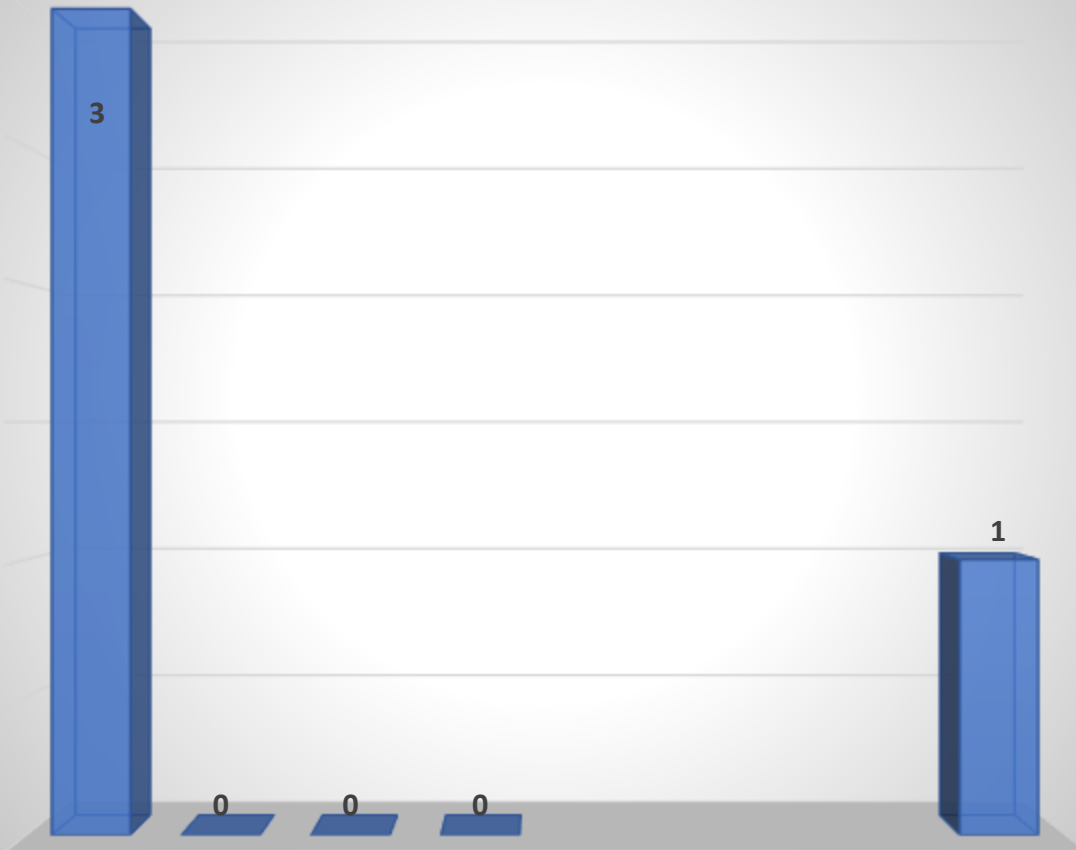


2021 Cut-Out Fuse Holder Failure Rates

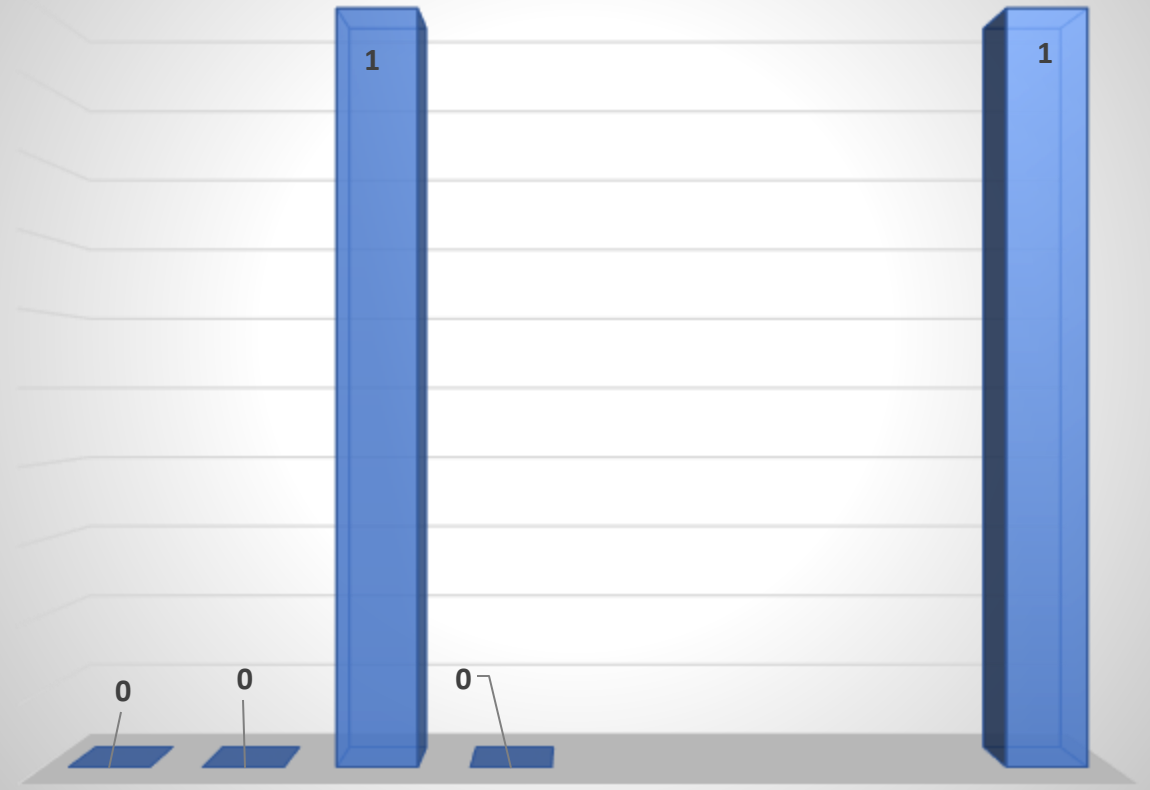


OVERHEAD TRANSMISSION CONDUCTORS

2020 Transmission Conductor Failures

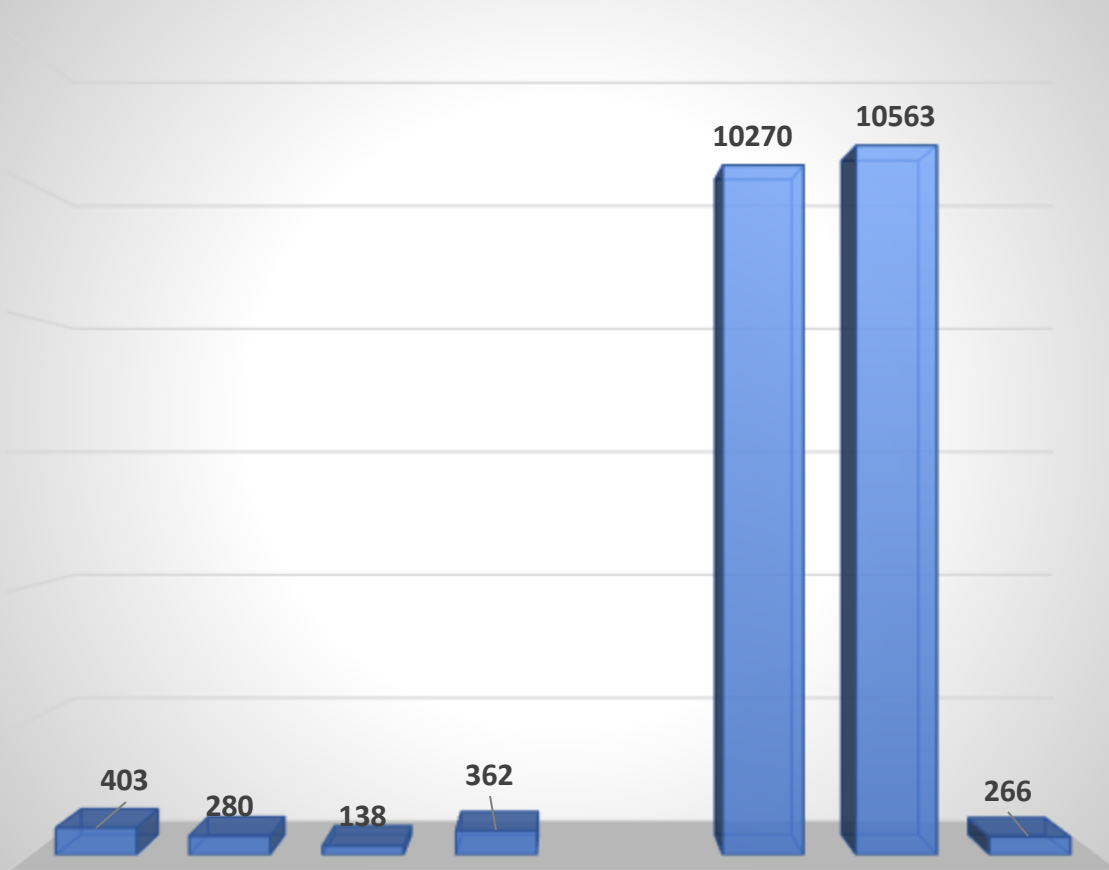


2021 Transmission Conductor Failures

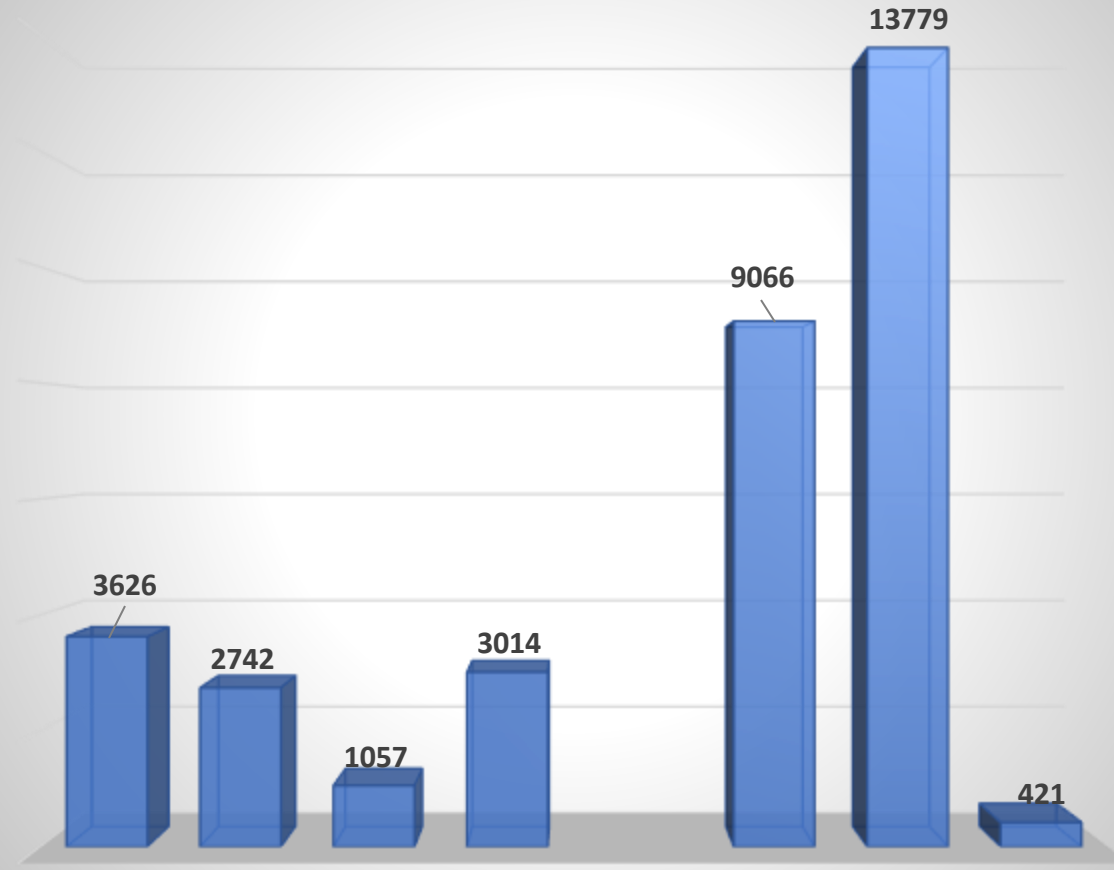


OVERHEAD DISTRIBUTION CONDUCTORS

2020 Distribution Conductor Failures

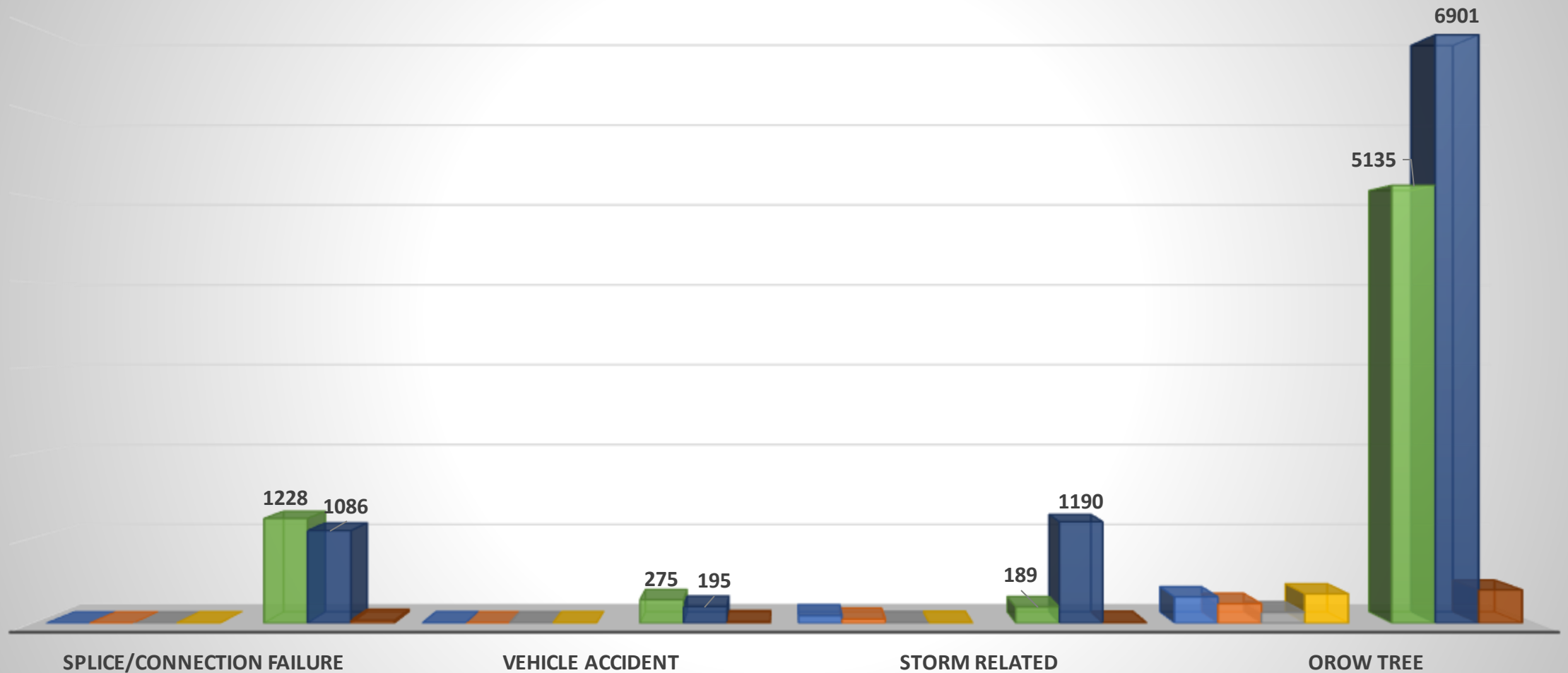


2021 Distribution Conductor Failures



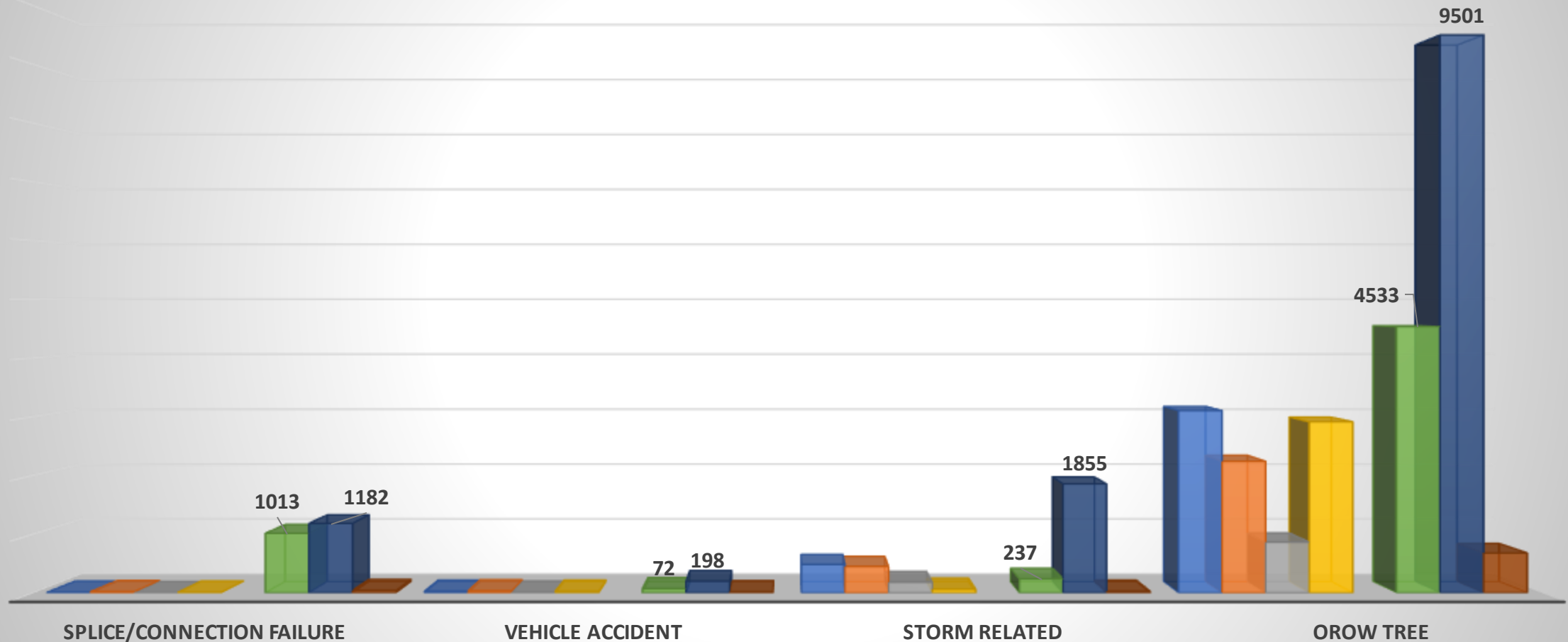
OVERHEAD DISTRIBUTION CONDUCTORS

2020 OHD Distribution Conductor Failures



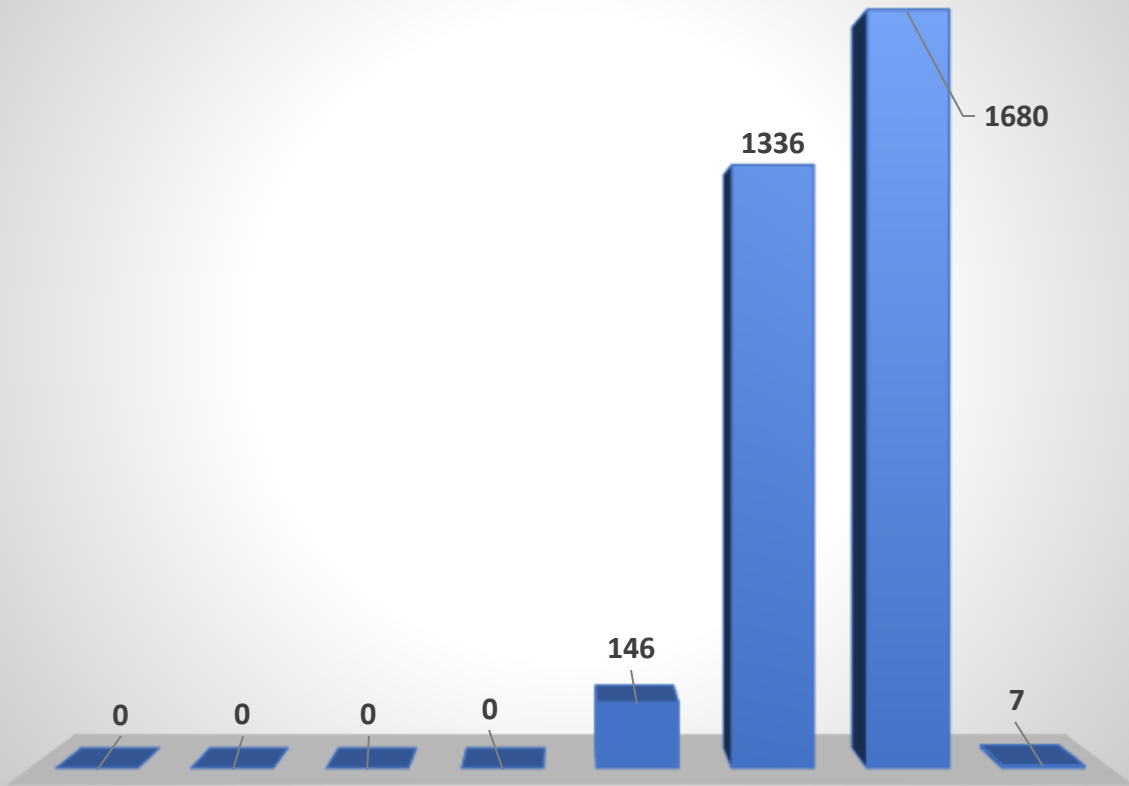
OVERHEAD DISTRIBUTION CONDUCTORS

2021 OHD Distribution Conductor Failures

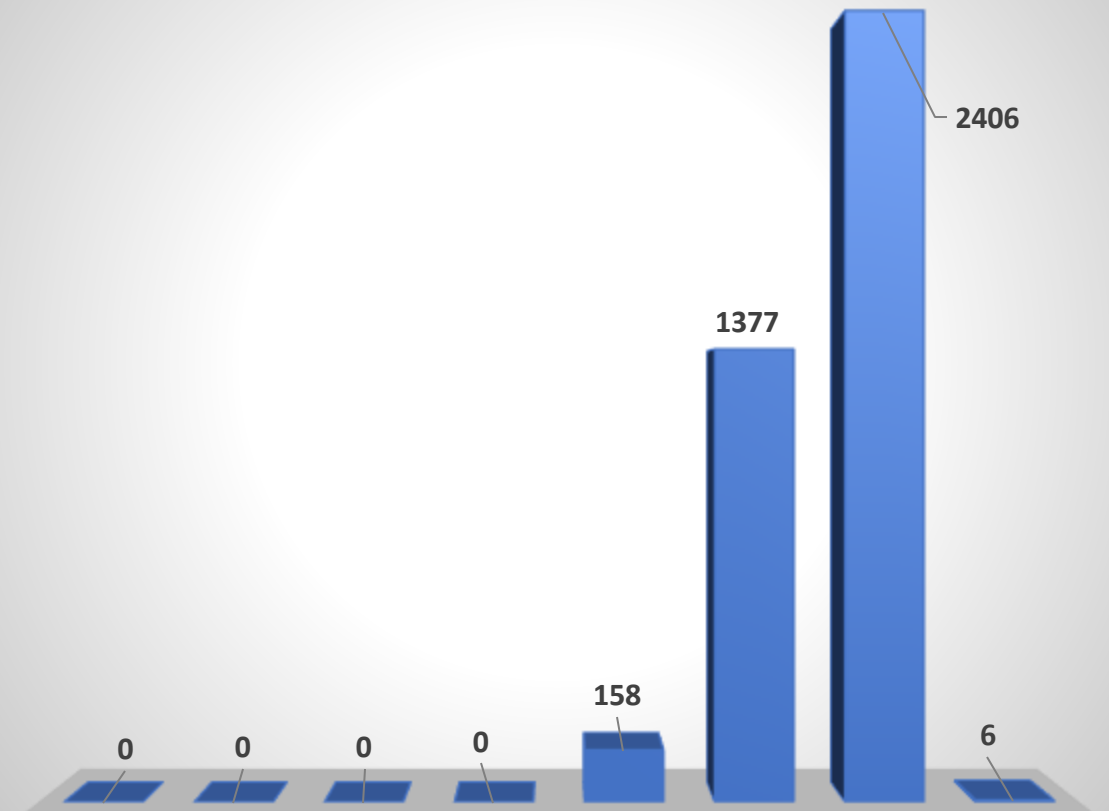


UNDERGROUND DISTRIBUTION CONDUCTORS

2020 Underground Conductor Failures

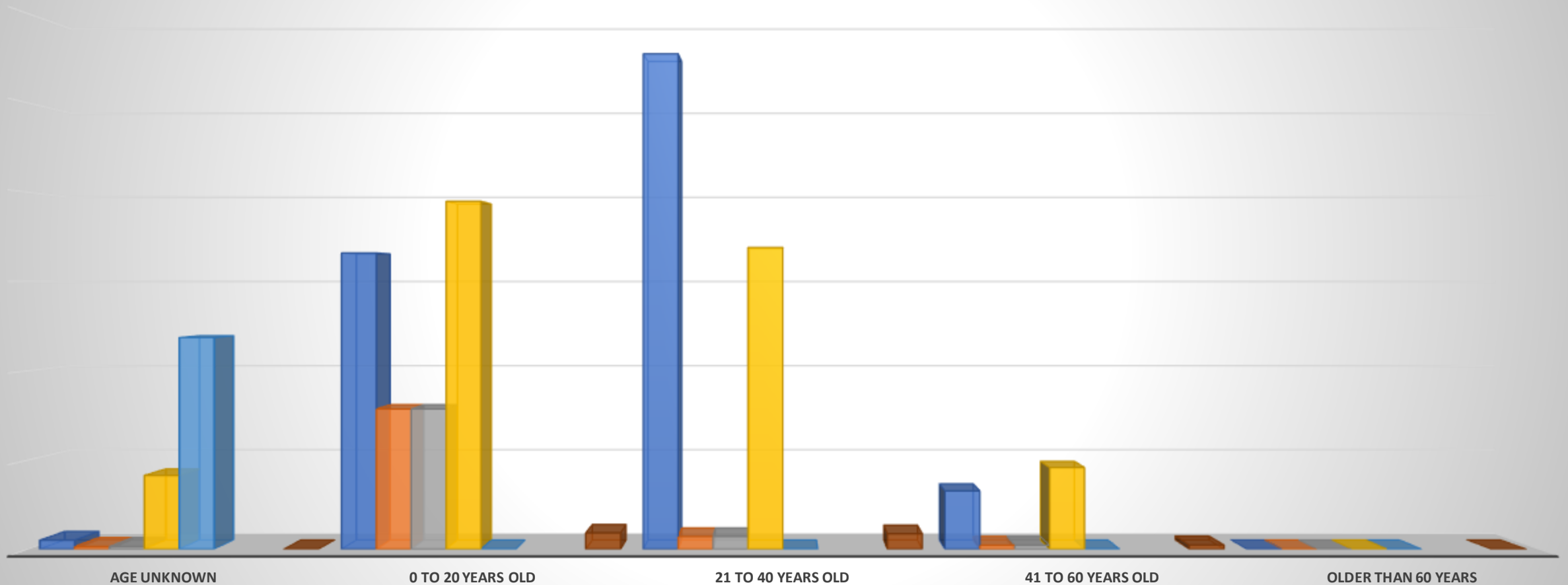


2021 Underground Conductor Failures



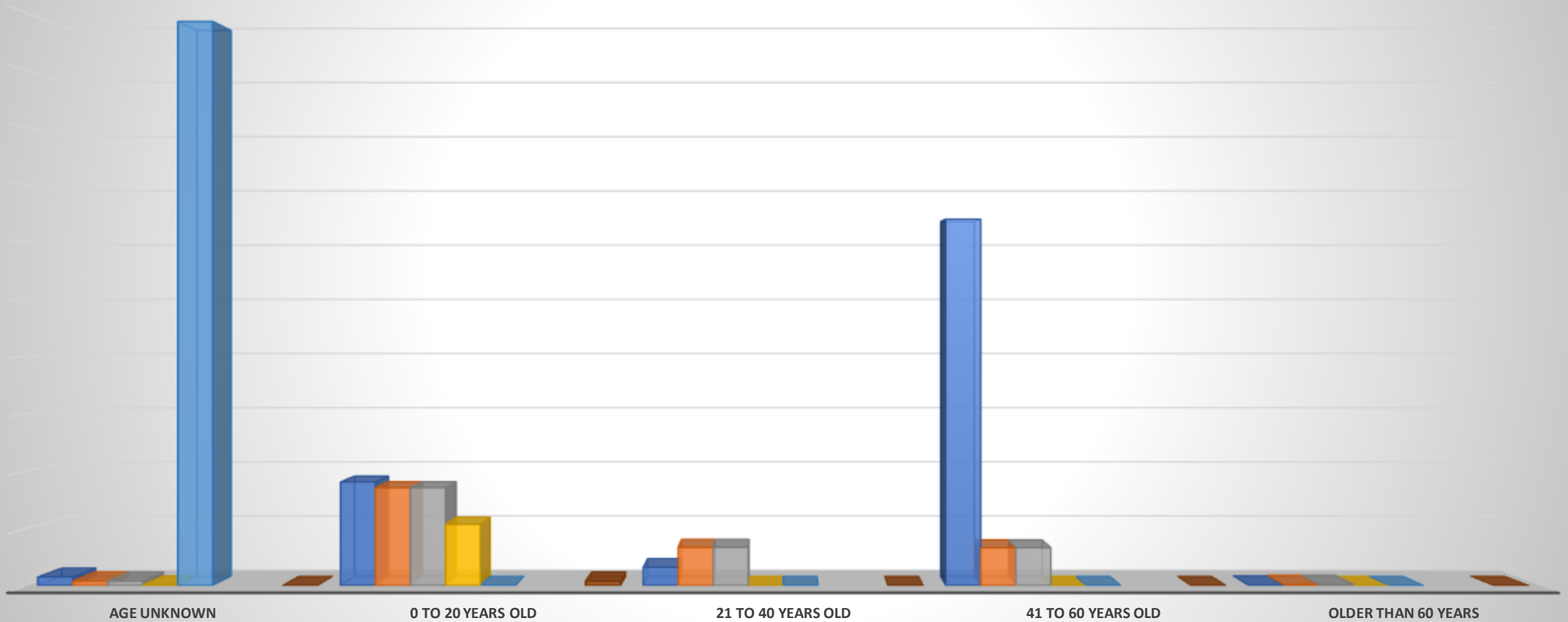
UNDERGROUND DISTRIBUTION EQUIPMENT

Distribution Pad Transformer Ages



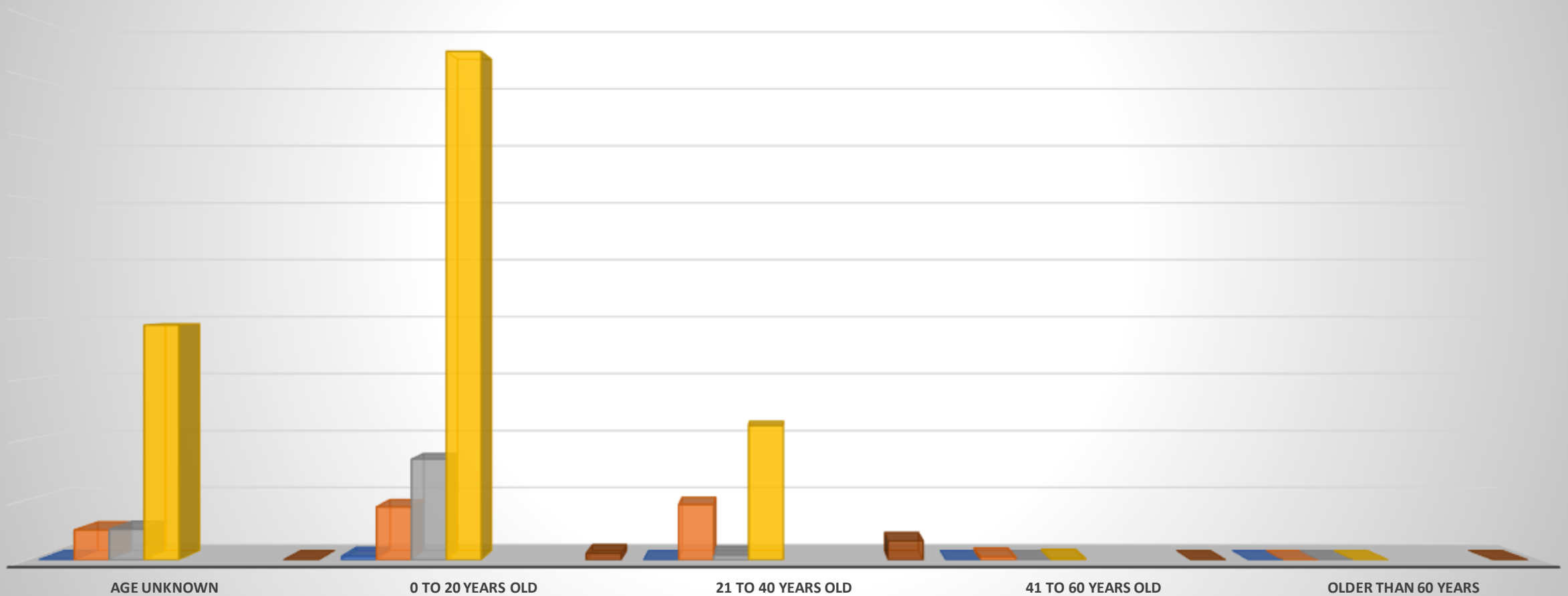
UNDERGROUND DISTRIBUTION EQUIPMENT

Vault Transformer Ages



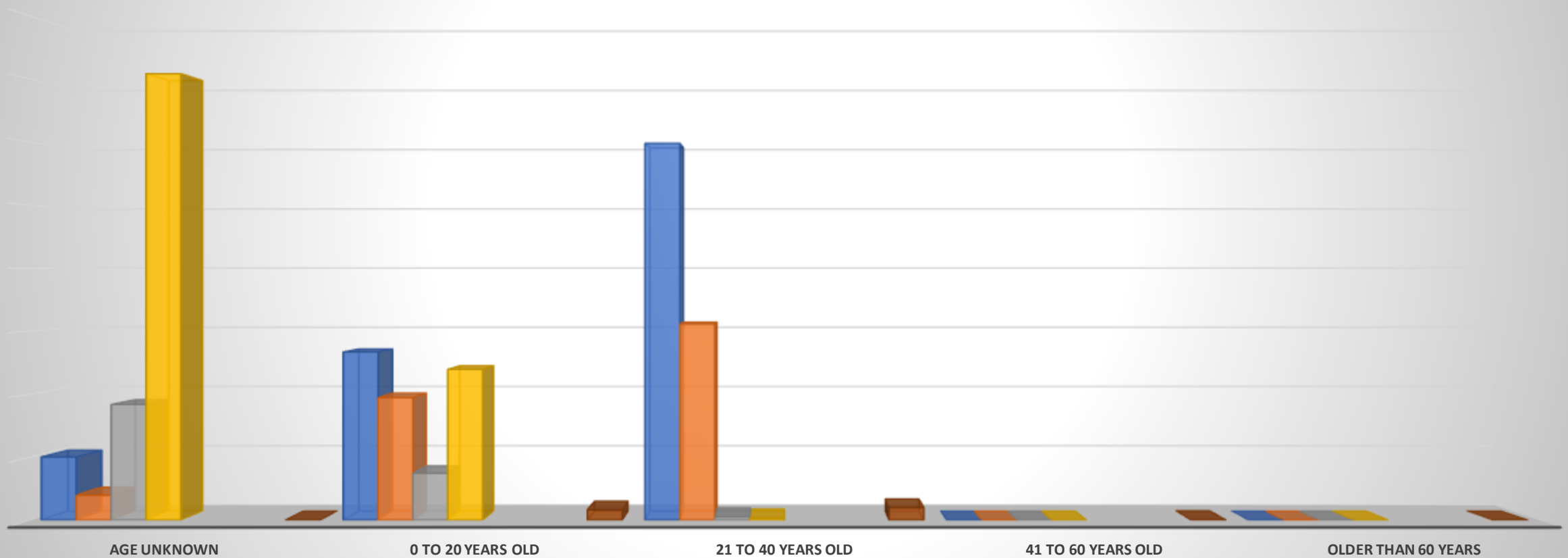
UNDERGROUND DISTRIBUTION EQUIPMENT

Underground Sectionalizer Ages



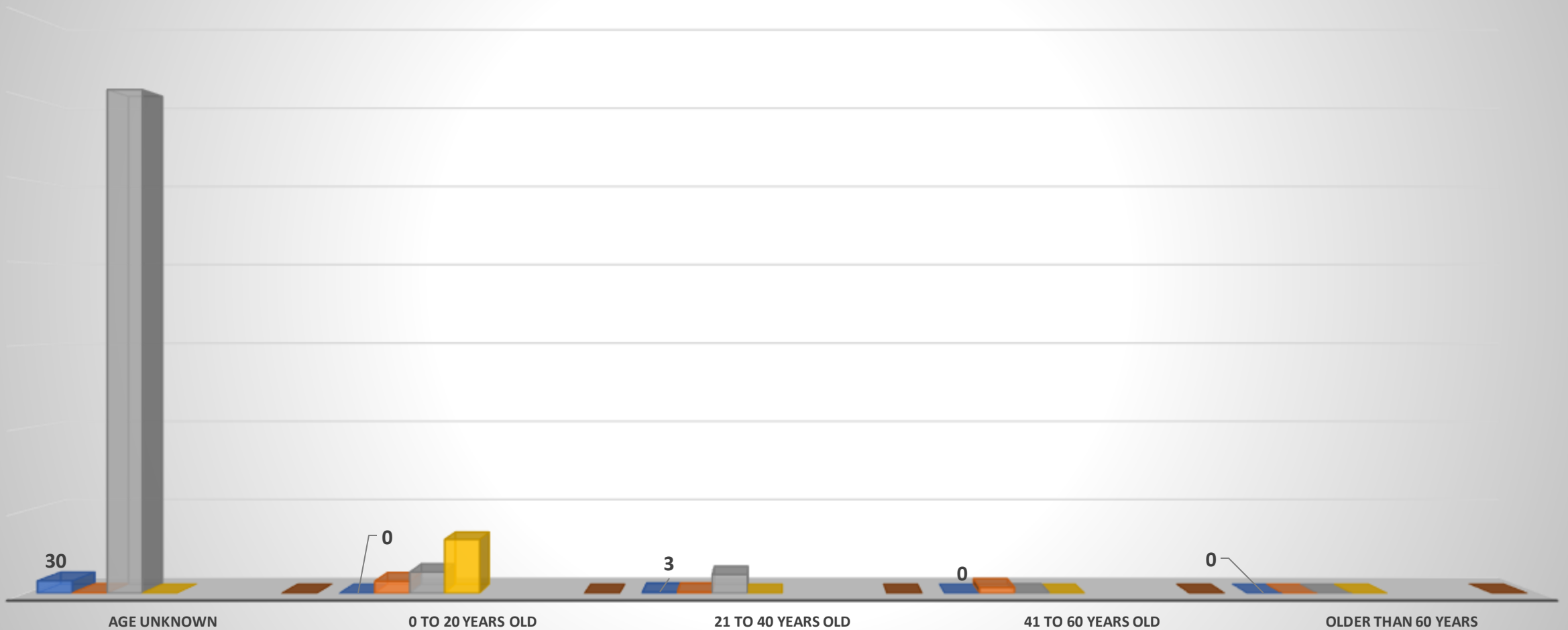
UNDERGROUND DISTRIBUTION EQUIPMENT

Underground Transformer Elbow Ages



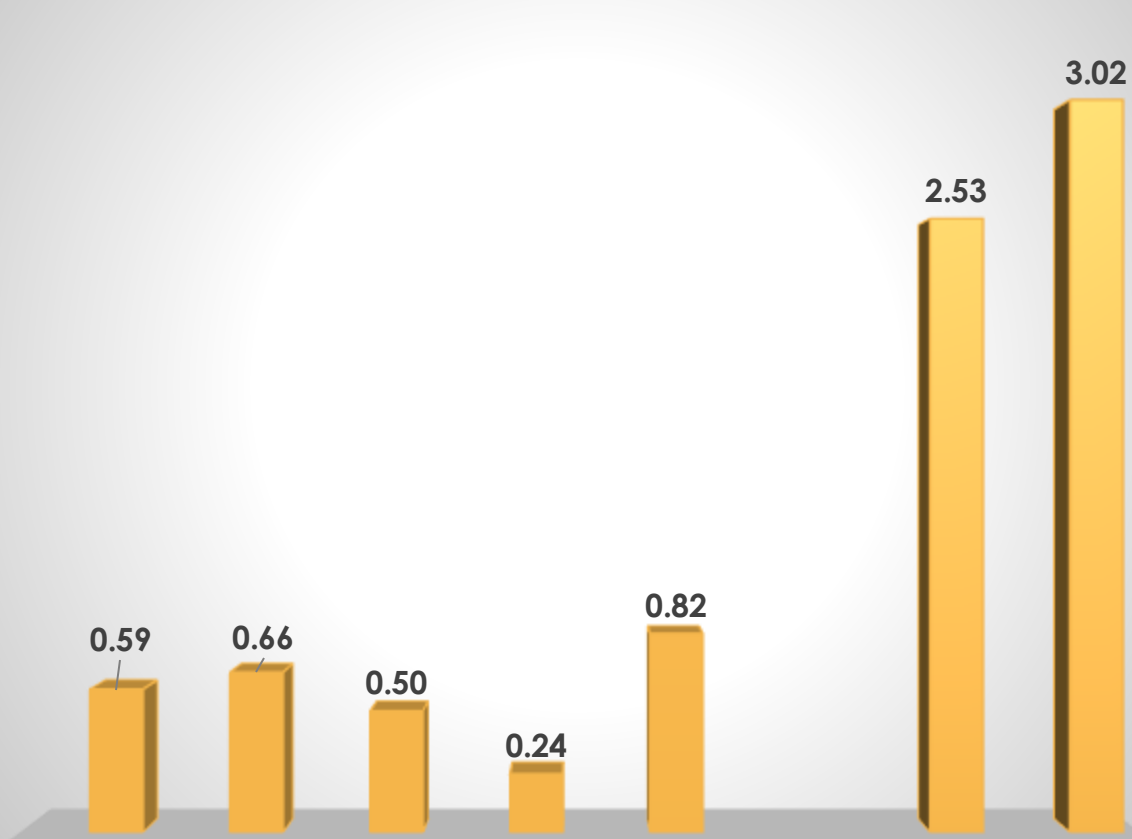
UNDERGROUND DISTRIBUTION EQUIPMENT

Underground Junction Box Ages

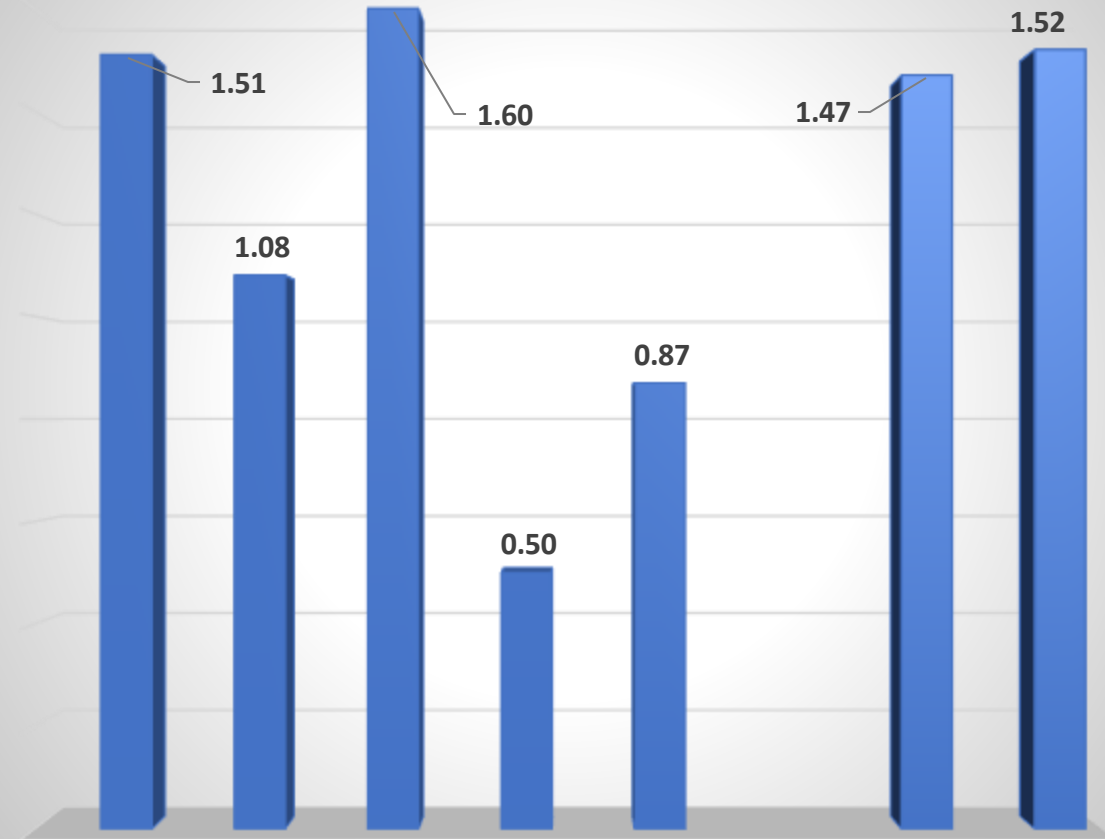


ACCIDENT & INCIDENT RATES

2020 OSHA Recordable Rates

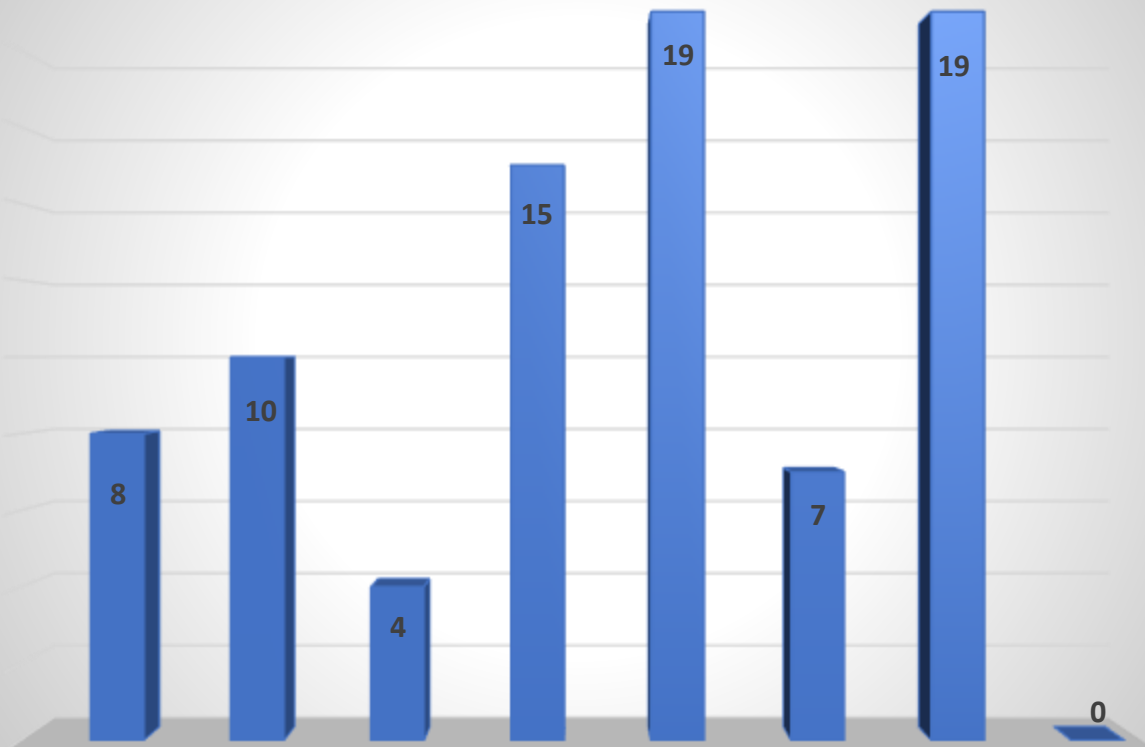


2021 OSHA Recordable Rates

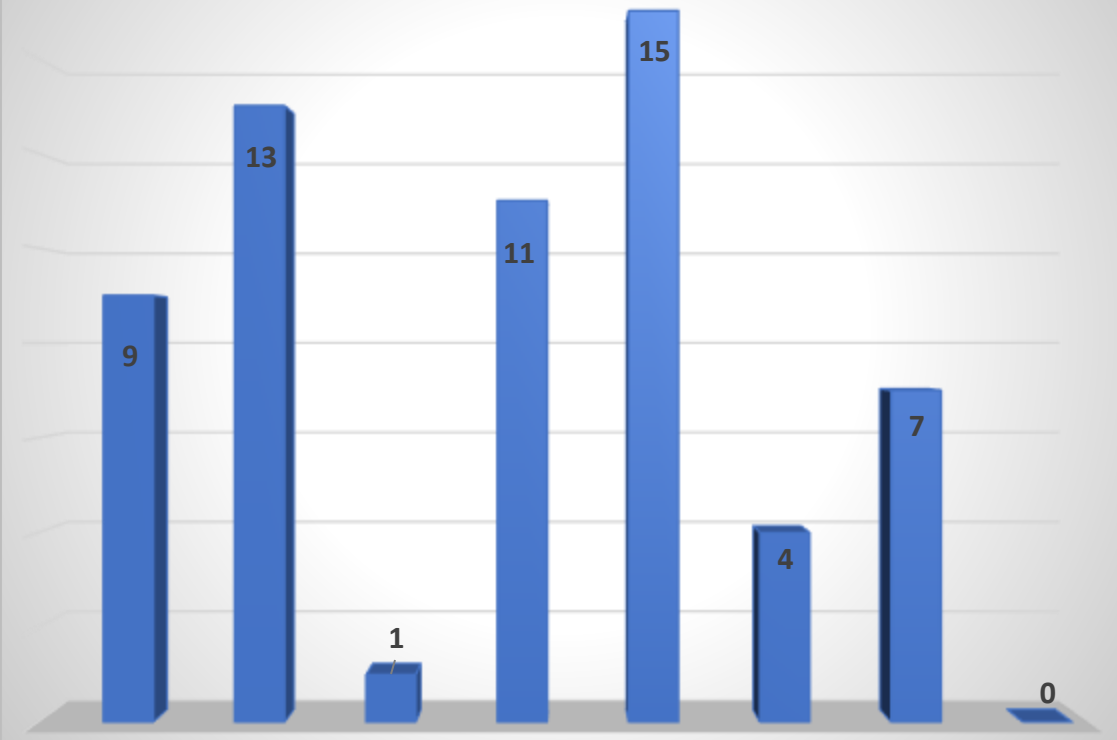


ACCIDENT & INCIDENT RATES

2020 UCTA-8 Reports

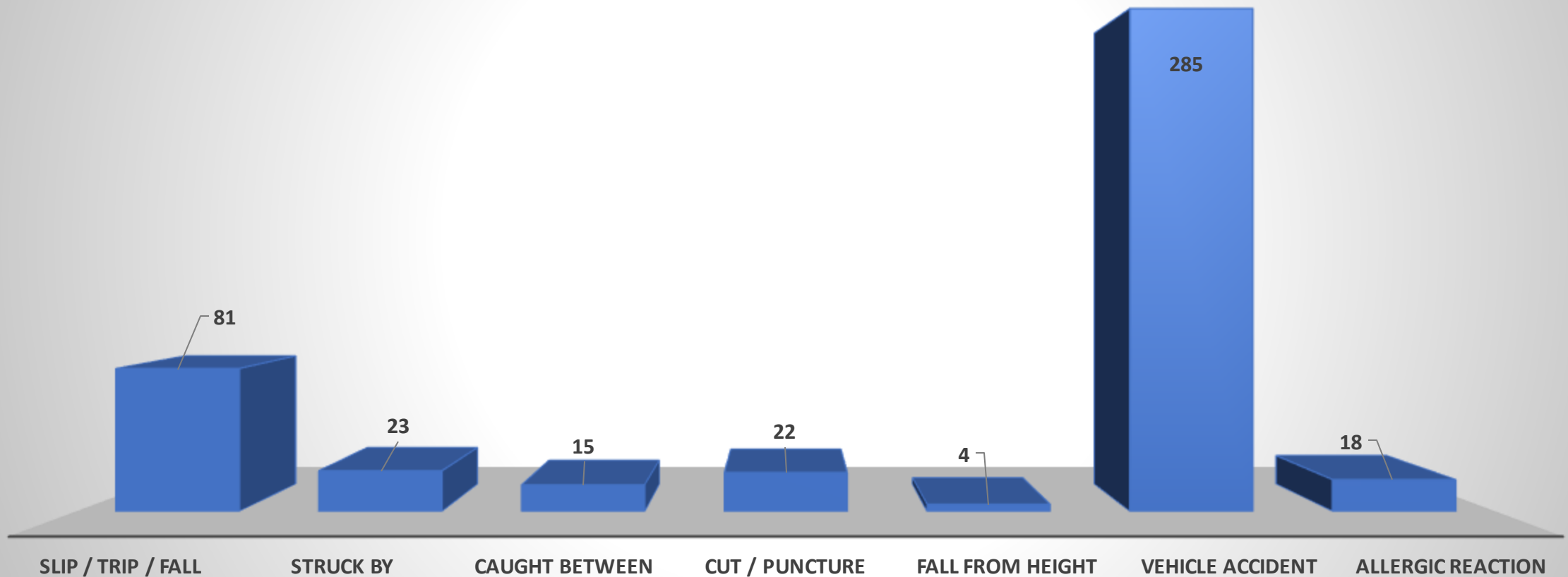


2021 UCTA-8 Reports



ACCIDENT & INCIDENT RATES

2020-21 Non Contact Worker and Contractor Injury Totals



ESS EQUIPMENT RISKS IDENTIFIED

- THE OVERALL AGE OF THE SUBSTATION AND SWITCHING FACILITY EQUIPMENT MAY BE THE LEADING INDICATOR OF FAILURES FROM THE DATA WE RECEIVED

OVERHEAD STRUCTURE RISKS IDENTIFIED

1. THE OVERALL AGE OF THE STRUCTURES (DECAY & STORM EVENTS)
2. VEHICLE ACCIDENTS
3. OFF RIGHT-OF-WAY TREES

OVERHEAD EQUIPMENT RISKS IDENTIFIED

- THE OVERALL AGE OF THE EQUIPMENT MAY BE THE LEADING INDICATOR OF FAILURES FROM THE DATA WE RECEIVED

OVERHEAD CONDUCTOR RISKS IDENTIFIED

1. OFF RIGHT-OF-WAY TREES
2. VEHICLE ACCIDENTS
3. STORM RELATED HAZARDS
4. SPLICE / CONNECTION FAILURES

UNDERGROUND CONDUCTOR RISKS IDENTIFIED

- OVERALL AGE OF THE CONDUCTORS IS THE LEADING INDICATOR OF FAILURES FROM THE DATA WE RECEIVED

UNDERGROUND EQUIPMENT RISKS IDENTIFIED

- OVERALL AGE OF THE EQUIPMENT IS THE LEADING INDICATOR OF FAILURES FROM THE DATA WE RECEIVED

ACCIDENT & INCIDENT RISKS IDENTIFIED

1. VEHICLE ACCIDENTS IS THE LEADING CAUSE OF INJURIES
2. SLIPS, TRIPS, & FALLS IS THE SECOND MOST COMMON
3. STRUCK BY OBJECTS AND CUTS & PUNCTURES ALMOST EQUAL
4. ALLERGIC REACTIONS & CAUGHT BETWEEN ALSO CLOSELY EQUAL
5. FALLS FROM HEIGHTS IS SERIOUS, BUT AT A MINIMAL AMOUNT WITH CONSIDERATION TO THE AMOUNT OF WORK DONE FROM HEIGHTS

SUMMARY

- THE RISK ASSESSMENT WAS CREATED TO IDENTIFY POTENTIAL HAZARDS AND AREAS FOR POSSIBLE IMPROVEMENT.
- BETTER DOCUMENTATION OF EQUIPMENT IN SERVICE, THE YEARS IN SERVICE, AND REASONS FOR FAILURES COULD HELP GIVE INDICATIONS FOR POSSIBLE IMPROVEMENT.
- A STANDARDIZED DEFINITION OF FAILURE CAUSES WOULD YIELD BETTER COMPARISONS AND OPPORTUNITIES FOR IMPROVEMENT.
- SHORTER INSPECTION CYCLE FREQUENCY AND SHORTER CORRECTIVE ACTION COMPLETION PERIODS COULD HELP DECREASE FAILURE RATES