STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF INDIANAPOLIS POWER & LIGHT COMPANY ("IPL") FOR AUTHORITY TO INCREASE RATES AND CHARGES FOR ELECTRIC UTILITY SERVICE AND FOR APPROVAL OF: (1) ACCOUNTING RELIEF, INCLUDING IMPLEMENTATION OF MAJOR STORM DAMAGE RESTORATION RESERVE ACCOUNT; (2) REVISED DEPRECIATION RATES; (3) THE INCLUSION IN BASIC RATES AND CHARGES OF THE COSTS OF CERTAIN PREVIOUSLY APPROVED QUALIFIED POLLUTION CONTROL PROPERTY; (4) IMPLEMENTATION OF NEW OR MODIFIED RATE ADJUSTMENT MECHANISMS TO TIMELY RECOGNIZE FOR RATEMAKING PURPOSES LOST REVENUES FROM DEMAND-SIDE MANAGEMENT PROGRAMS AND CHANGES IN (A) CAPACITY PURCHASE COSTS; (B) REGIONAL TRANSMISSION ORGANIZATION COSTS; AND (C) OFF SYSTEM SALES MARGINS; AND (5) NEW SCHEDULES OF RATES, RULES AND REGULATIONS FOR SERVICE.	)	**CAUSE NO. 44576**
IN THE MATTER OF THE INDIANA UTILITY REGULATORY COMMISSION'S INVESTIGATION INTO INDIANAPOLIS POWER & LIGHT COMPANY'S ONGOING INVESTMENT IN, AND OPERATION AND MAINTENANCE OF, ITS NETWORK FACILITIES	)	**CAUSE NO. 44602**

PETITIONER INDIANAPOLIS POWER & LIGHT COMPANY
COMPLIANCE FILING: ASSET MANAGEMENT
AND PERFORMANCE METRICS COLLABORATIVE

Petitioner Indianapolis Power & Light Company ("IPL"), by counsel and in compliance with the Order in this Cause dated March 16, 2016 (pp. 20 and 21), hereby files the attached 2018 Annual Performance Metrics Report and updated Downtown Network Gantt Chart.

Respectfully submitted,

By _____

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CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing was served upon the following via electronic email, hand delivery or First Class, United States Mail, postage prepaid this 29th day of March 2019 to:

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March 31, 2019

Mrs. Beth E. Heline
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Re: 2018 Annual Collaborative Report

Mrs. Heline,

In compliance with commitments made by Indianapolis Power & Light Company ("IPL") in the Collaborative Project Charter and the Cause No. 44576 Order, enclosed please find the 2018 Annual Performance Metrics Report and an updated Gantt Chart, along with a narrative detailing progress made implementing each commitment. In addition, the 2018 Annual Performance Metrics Report includes the additional Customer and Customer Service metrics as stipulated in the Cause No. 45029 Settlement Agreement.

The data included in the report represents results through December 31, 2018. In terms of performance, IPL continues to perform quite well. We achieved another year of strong reliability performance. System Average Interruption Duration Index (SAIDI) results, which measures the average customer experience in terms of electrical power interruption duration, is expected to be in the top quartile in the industry for 2018. In addition, our residential rates remain among the lowest of the 20 largest cities served by an investor owned utility (IOU) and IPL is consistently one of the lowest cost electric IOUs in Indiana. We are committed to maintaining our position as a low-cost energy provider, both in Indiana and across the U.S.

Some areas of IPL's performance are worth explaining in greater detail. First, there was one Section 114 Notice submitted to the IURC in 2018. On April 13, 2018, a subcontractor at our Harding Street Station in Indianapolis, Indiana sustained a fatal injury after experiencing a fall on the job during a maintenance outage for Gas Turbine #6 at the plant. IPL continues to strive to provide a safe working environment for its employees and contractors, and safe and reliable service to the public at large. Safety is considered a fundamental value of the Company through indoctrination, continual training and actual practice.

Second, our employee turnover rate, which measures the percentage of IPL employees that resigned, were terminated or retired, increased in 2018. IPL, and its parent The AES Corporation underwent a corporate-wide reorganization at the beginning of 2018 that resulted in the permanent

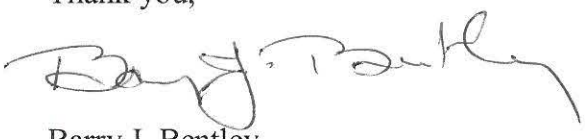
reduction of approximately 100 employees. The reorganization took advantage of operational efficiencies across the corporate footprint.

Third, IPL experienced Customer Service staffing challenges that impacted service levels. As a result, we have improved our Customer Service recruiting and hiring process to attract top talent, increased staffing levels and implemented employee recognition programs.

Lastly, IPL's System Average Interruption Frequency Index (SAIFI) results, which measures the average customer experience in terms of electric power interruption frequency, continued to increase in 2018 due to tree related events outside the trimming zone. As explained in last year's report, the increase in tree interruptions is partially attributed to the effects of the invasive Emerald Ash Borer infestation on local ash tree populations. Ash trees impacted by the infestation are often subject to erosion at the root plate, resulting in the whole tree hinging over at the base. As a result, outages related to trees/limbs from outside the trimming zone are increasing.

Overall, IPL is pleased with the 2018 performance. Progressing into 2019, we continue to look for ways to improve our processes to provide safe and reliable service for our customers.

Thank you,



Barry J. Bentley
Senior Vice President, US Utilities Operations
Indianapolis Power & Light Company

Cc: Mr. Robert Veneck, rveneck@urc.in.gov
Ms. Jane Steinhauer, jsteinhauer@urc.in.gov
Dr. Brad Borum, bborum@urc.in.gov

Indianapolis Power & Light Company

2018 Annual Performance Report

IPL T&D

results through 12/31/2018

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IPL and Public Safety

Indianapolis Power & Light Company ("IPL") strives to provide a safe working environment for its employees and contractors, and safe and reliable service to the public at large. Considered a fundamental value of the Company through indoctrination, continual training and actual practice, IPL emphasizes that all leaders are:
* Accountable for establishing safety requirements, providing a means to monitor these expectations, and holding their personnel accountable to meeting these requirements via positive reinforcement, coaching, and/or corrective action as appropriate, and
* Responsible for assuring that all personnel assigned under their purview are provided the resources necessary to comply with the safety requirements.

Similarly, all IPL employees and contractors are duly expected to, as a condition of employment:
* Comply with all established safety rules, regulations and procedures, and
* Stop work if an unsafe condition could potentially expose its workers, or the public, to a hazard, injury or death.

Description of Metrics

Lost Time Incident Rate, a metric reported to the Federal Occupation and Health Administration (OSHA) and the State of Indiana, is a standard metric used across the industry. Intended to be a rate per 100 full time employees ("FTEs"), it is calculated by multiplying the number of lost time cases by 200,000 (100 FTEs x 2,000 hours per year) and dividing that result by the total number of employees labor hours worked. In this manner, both full and part-time employees are included in the statistic.

One way to monitor public safety is to review the number of tickets from Indiana 811 to locate underground facilities in 2 working days. This "Call before you dig" process helps to protect the public from accidental contact with energized equipment.

Section 114 Notices submitted to the IURC will be reported to indicate the number of incidents where the public was injured by IPL equipment (segregating events where IPL was not at fault)

Another metric for public safety is to report on the process of looking for contact voltage in the Central Business District (CBD). This annual survey is a proactive measure to look for potential hazards to the public and remediate as necessary.

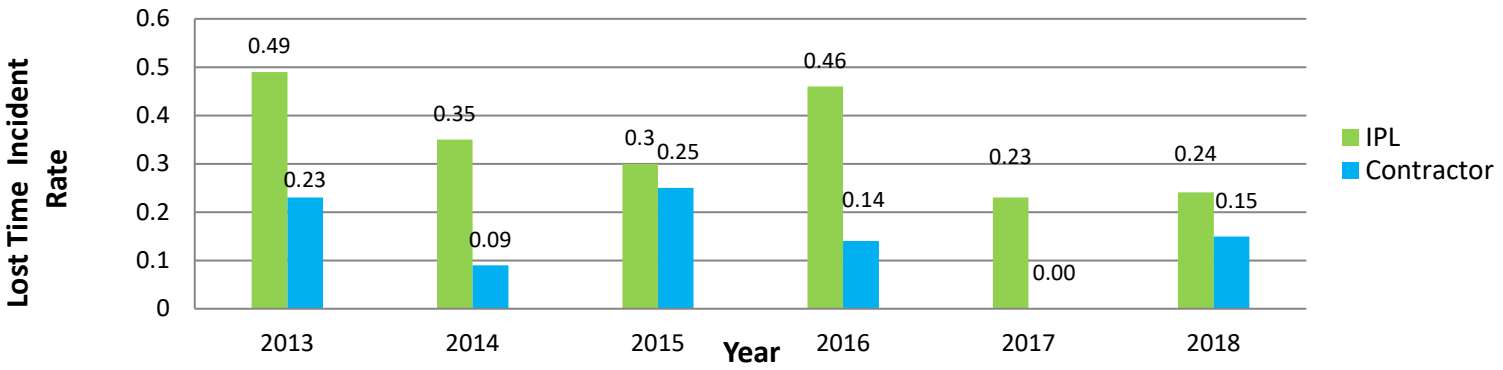
IPL and Public Safety

Lost Time Incident Rate (Tier 1 Metric)

Number of lost time cases relative to the total number of hours worked. The chart below shows both IPL employees and contractors.

$$\text{LTI Rate} = \frac{\#\ lost\ time\ cases \times 100\ Full\ Time\ Employees \times 2{,}000\ hours\ per\ year}{\#\ hours\ worked\ for\ the\ year}$$

Figure 1. Annual Lost Time Incident Rates (LTI)

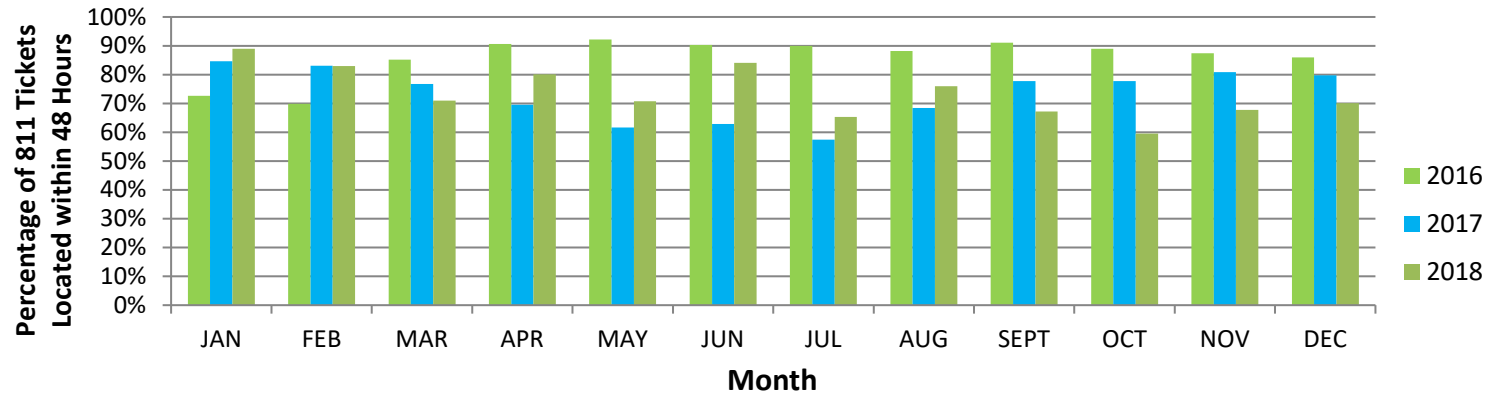


Prior to 2013, IPL did not track contractor LTI cases on a rate basis. The LTI rate is equivalent to the OSHA defined, " Lost Workday Case Rate". In 2015, the industry average was 1.3.

Underground 811 Locating Performance (Tier 1 Metric)

The chart below shows the percentage of 811 tickets that are located within 48 hours for IPL.

Figure 2. Underground 811 Locating Performance



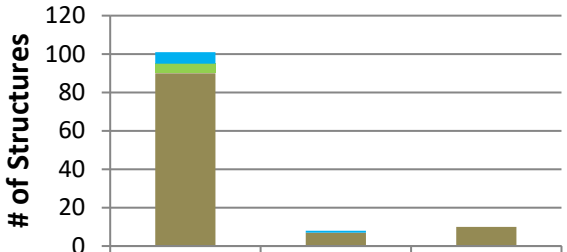
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2016	6,510	7,274	11,062	12,428	11,741	12,786	11,291	9,179	11,608	12,122	11,911	7,268	125,180
2017	7,597	8,576	12,224	11,784	14,301	15,053	14,530	16,100	13,525	13,970	11,671	8,672	148,003
2018	6,900	8,349	12,556	15,006	16,637	16,289	15,338	18,656	17,092	17,780	14,248	10,142	168,993

This table displays the total number of 811 tickets by month for IPL. The 2016-2018 ticket average is 12,283.

2017 CBD Contact Voltage Inspection Results (Tier 1 Metric)

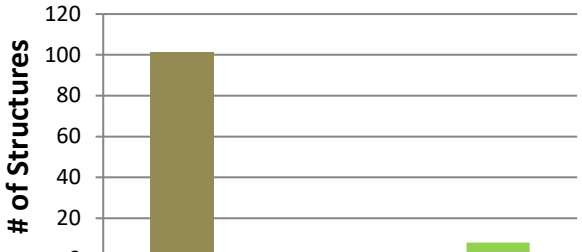
Results of 2017 survey performed in the downtown area looking for abnormal voltages. Equipment used can detect voltage differences over 1 Volt.

Figure 3. 2017 Survey Locations Identified



	1.0 to 4.9 V	5.0 to 24.9 V	over 25 V
Non-Utility	6	1	0
Underground	5	0	0
Street Lights / Traffic Signals	90	7	10

Figure 4. 2017 Survey Locations Corrected



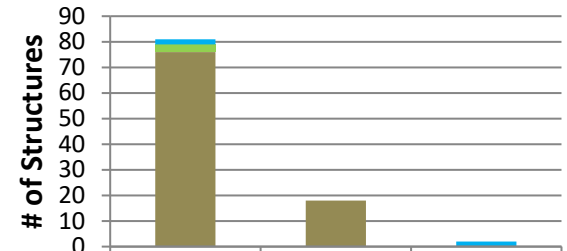
	1.0 to 4.9 V	5.0 to 24.9 V	over 25 V
Non-IPL facility	0	1	0
Repaired	0	2	8
No repair needed	101	0	0

All items over 5 Volts were repaired. Items under 5 Volts may exist based on adhering to electric codes. The Non-IPL facilities were locations to be corrected by DPW or other equipment owners.

2018 CBD Contact Voltage Inspection Results (Tier 1 Metric)

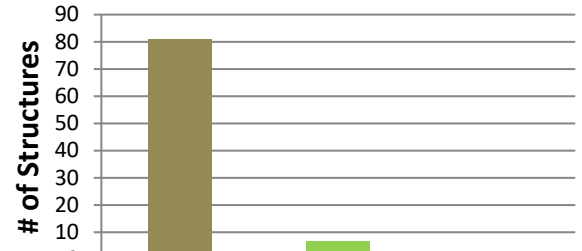
Results of the survey performed in the downtown area looking for abnormal voltages. Equipment used can detect voltage differences over 1 Volt.

Figure 5. 2018 Survey Locations Identified



	1.0 to 4.9 V	5.0 to 24.9 V	over 25 V
Non-Utility	2	0	2
Underground	3	0	0
Street Lights / Traffic Signals	76	18	0

Figure 6. 2018 Survey Locations Corrected

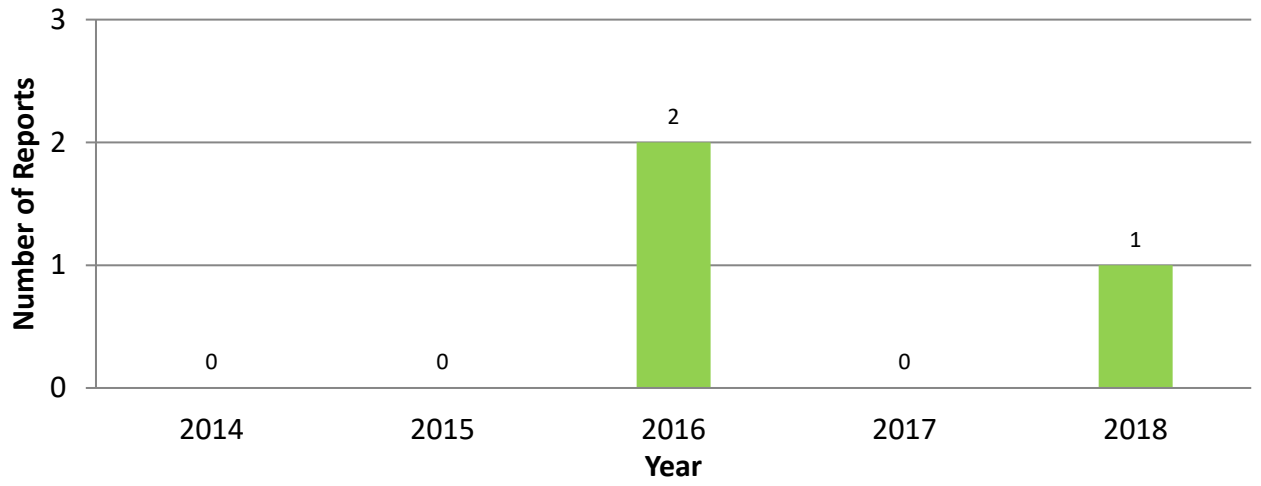


	1.0 to 4.9 V	5.0 to 24.9 V	over 25 V
Non-IPL facility	0	0	2
Repaired	0	7	0
No repair needed	81	0	0

All items over 5V are to be repaired. Items under 5 Volts may exist, based on adherance to electric codes.

Section 114 Notices Submitted to the IURC (Tier 1 Metric)
Number of incidents where public was injured by IPL equipment (shown in a way that accounts for events where IPL was not at fault)

Figure 7. Number of Section 114 Notices Submitted to the IURC



Pursuant to Indiana Code § 8-1-2-114

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Reliability

Providing safe and reliable service to its customers is a primary cornerstone to IPL's performance management system. The following metrics strive to present IPL's system reliability performance from two perspectives:

* That to which IPL can be held accountable and appropriately compared and evaluated against other electric utilities (excluding Major Event Days), and
* That which is representative of the full customer experience (including Major Event Days).

Through these two lenses, the metrics included in this section address both the frequency and duration of sustained customer outages (i.e.; those lasting longer than five minutes), and independent of this distinction, the frequency of momentary service interruptions.

Description of Metrics

IPL follows IEEE Standard 1366 in calculating distribution reliability indices. This process identifies data that can be classified as a Major Event Day (MED) to find days where the distribution system experienced stresses beyond what is normally expected. These MEDs should be analyzed separately as they can distort the trends of daily operation.

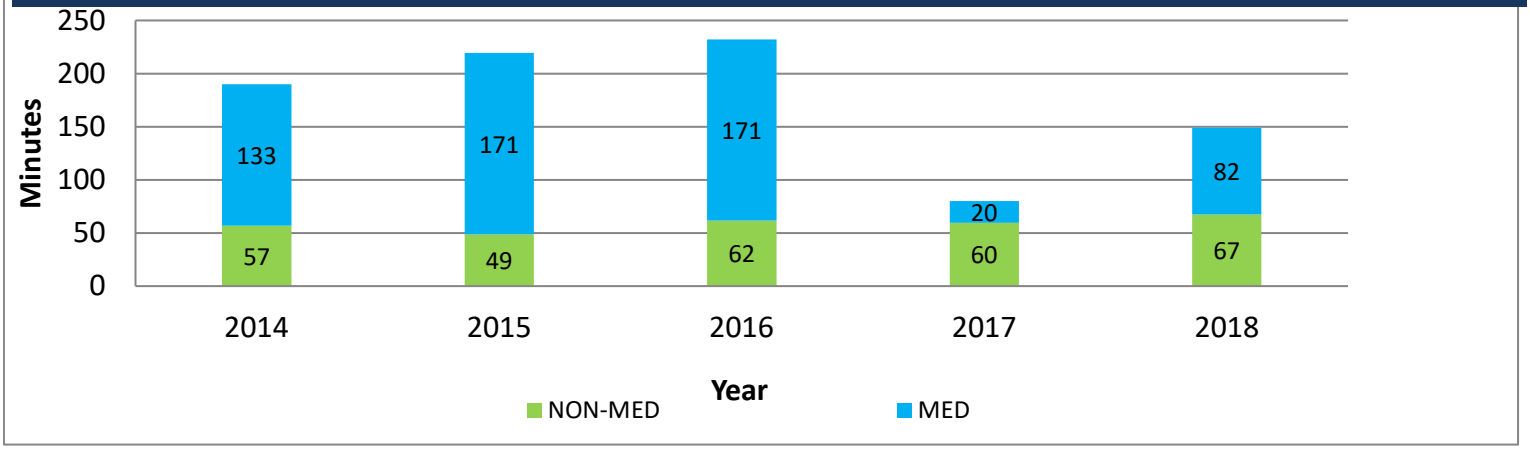
* System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) measure the experience of the average customer (system-wide) in terms of electrical power interruption duration and frequency.
* Customer Average Interruption Duration Index (CAIDI) provides a measure of the average outage duration for a customer.
* Momentary Average Interruption Frequency Index (MAIFI) accounts for the fact that the previous SAIDI and SAIFI metrics exclude service interruptions with a duration of five minutes or less. These types of outages can cause frustration among both residential (inconvenience of resetting older digital devices) and commercial / industrial (costly impact in the form of lost productivity) customers.
* T-MED (or T_{MED}) is the Major Event Day (MED) threshold value calculated annually in accordance with IEEE Standard 1366. This value is used to identify days in which SAIDI is large enough to distort the trends of daily operation. Daily SAIDI and SAIFI will be provided for each MED to help indicate the severity of the service interruptions.

Reliability

SAIDI - Major Event Day (MED) and Non-Major Event Day (Tier 1 Metric)

Sum of customer minutes of interruption duration divided by total number of customers served. An outage is defined as an interruption lasting more than 5 minutes.

Figure 8. SAIDI - Major Event Day and Non-Major Event Day

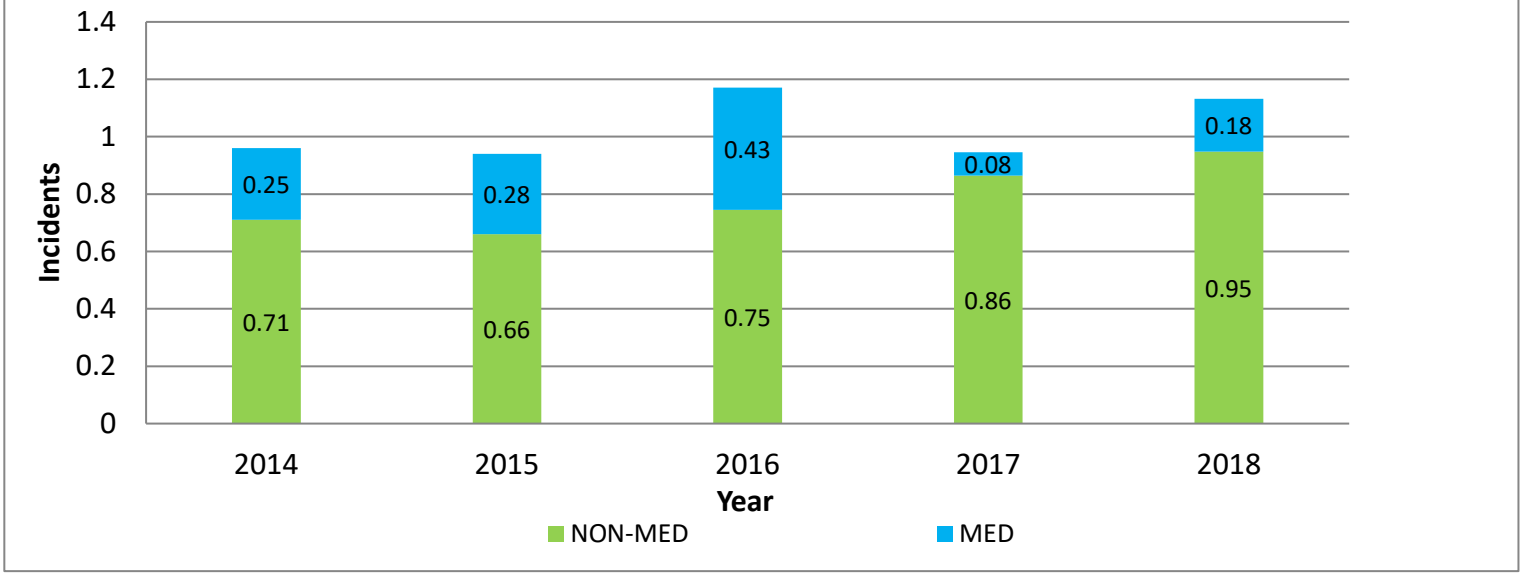


2017 was a low MED year, resulting in reduced outage durations, as there were fewer outage jobs in total and less opportunity to have more jobs than available crews.

SAIFI - Major Event Day and Non-Major Event Day (Tier 1 Metric)

Sum of total number of customers interrupted divided by total number of customers served. An outage is defined as an interruption lasting more than 5 minutes.

Figure 9. SAIFI - Major Event Day and Non-Major Event Day

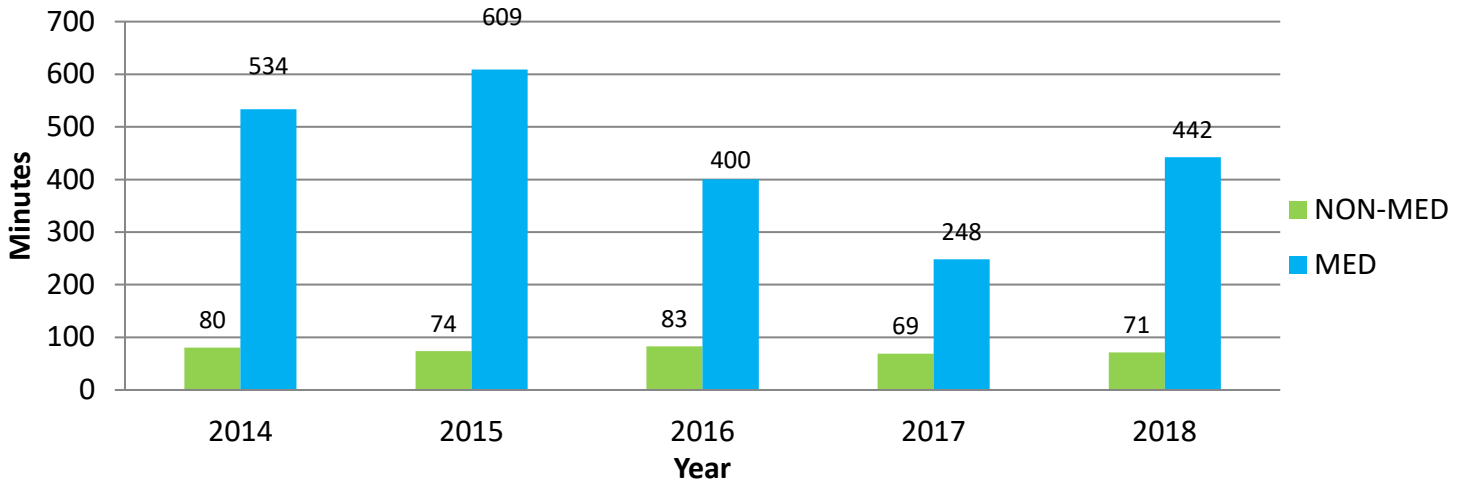


2017 was a low MED year, resulting in reduced outage durations, as there were fewer outage jobs in total and less opportunity to have more jobs than available crews.

CAIDI-Major Event Day and Non-Major Event Day (Tier 1 Metric)

Sum of total customer minutes of interruption divided by total number of customers interrupted. An outage is defined as an interruption lasting more than 5 minutes.

Figure 10. CAIDI-Major Event Day and Non-Major Event Day

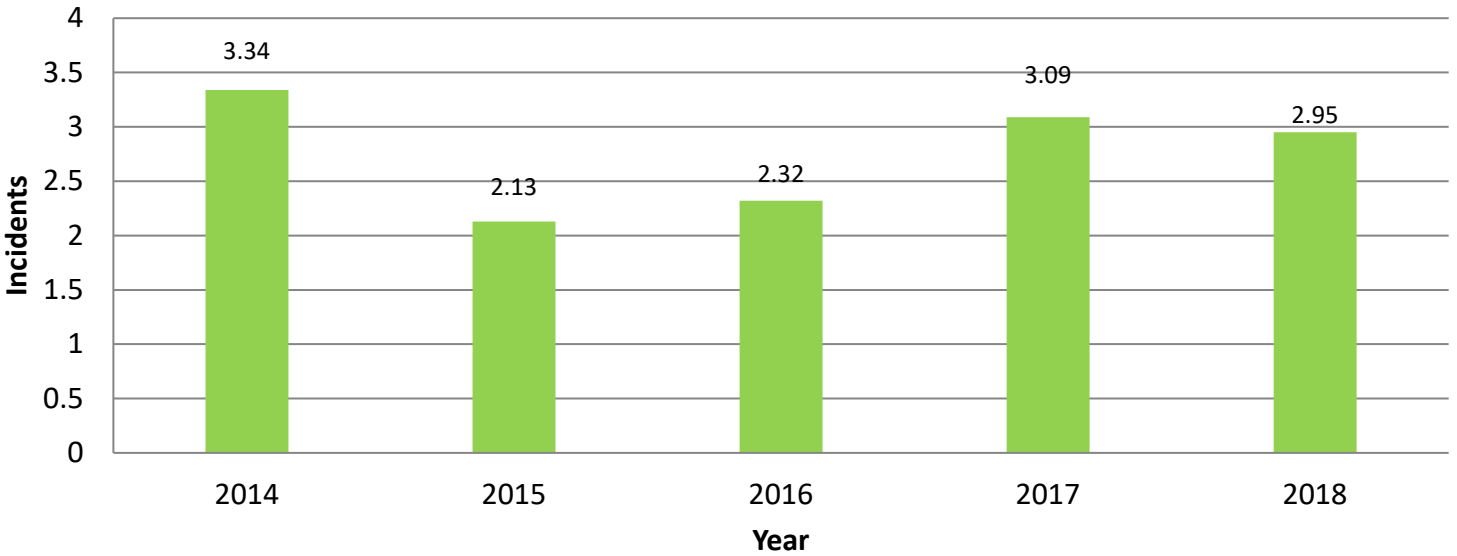


CAIDI for non-MED has been fairly consistent. CAIDI for MED is very dependent on the type of event. Storms with significant damage from trees will have a higher MED CAIDI.

MAIFI (Tier 1 Metric)

Sum of customer momentary interruptions (excluding momentary interruptions during an MED) divided by total number of customers served. Momentary interruption is an interruption lasting 5 minutes or less.

Figure 11. MAIFI

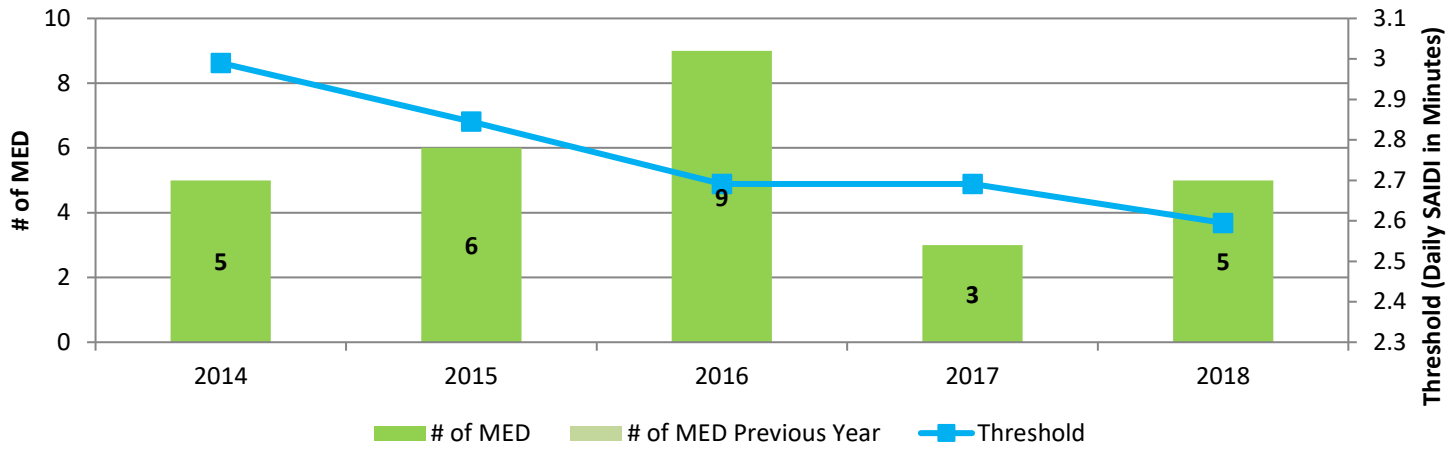


This metric tracks substation breaker operations. The 2014-2016 MAIFI values above do not include the operations related to Reclosers, whereas the 2017/2018 values do. Note: IPL utlizes 3-phase Reclosers. Currently, the Recloser/Breaker controls are configured such that if a fault occurs on one phase and the fault fails to "clear", then all 3 phases will be "locked out".

Major Event Day (Tier 1 Metric)

The bars indicate the number of MED IPL experienced (y-axis on left) and the blue line indicates the MED Threshold number (y-axis on right).

Figure 12. MED Summary



The MED threshold is based on the last 5 years of reliability data.

Date	Daily SAIFI	Daily SAIDI
1/5/14	0.088	89.73
1/6/14	0.046	14.25
1/7/14	0.006	3.26
6/23/14	0.044	7.42
7/1/14	0.068	19.44
6/21/15	0.022	5.83
7/13/15	0.130	106.99
7/14/15	0.065	45.05
7/15/15	0.012	4.50
7/17/15	0.034	5.54
9/19/15	0.018	2.85
4/2/16	0.053	28.13
6/15/16	0.077	42.92
6/23/16	0.064	17.82
7/13/16	0.053	12.46
7/27/16	0.034	3.45
8/24/16	0.034	4.48
8/26/16	0.088	54.82
8/27/16	0.006	3.68
9/16/16	0.016	2.81
1/10/17	0.020	5.49
7/11/17	0.033	7.20
11/18/17	0.029	7.67
8/25/18	0.022	4.02
9/8/18	0.019	3.19
10/20/18	0.128	68.06
10/21/18	0.005	3.24
12/31/18	0.011	3.06

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Operational Efficiency

Viewed in concert with Reliability and Asset Management, this section presents Capital Investment and O&M Spending levels in a way that facilitates (1) comparisons with other electric utilities, and (2) correlations with noted changes in system performance or the age and/or condition of critical assets. The goal is to assess the extent to which IPL establishes an investment and spending level that optimizes across the critical performance domains of Reliability and Asset Management, while maintaining customer rates at comparatively low levels.

Description of Metrics

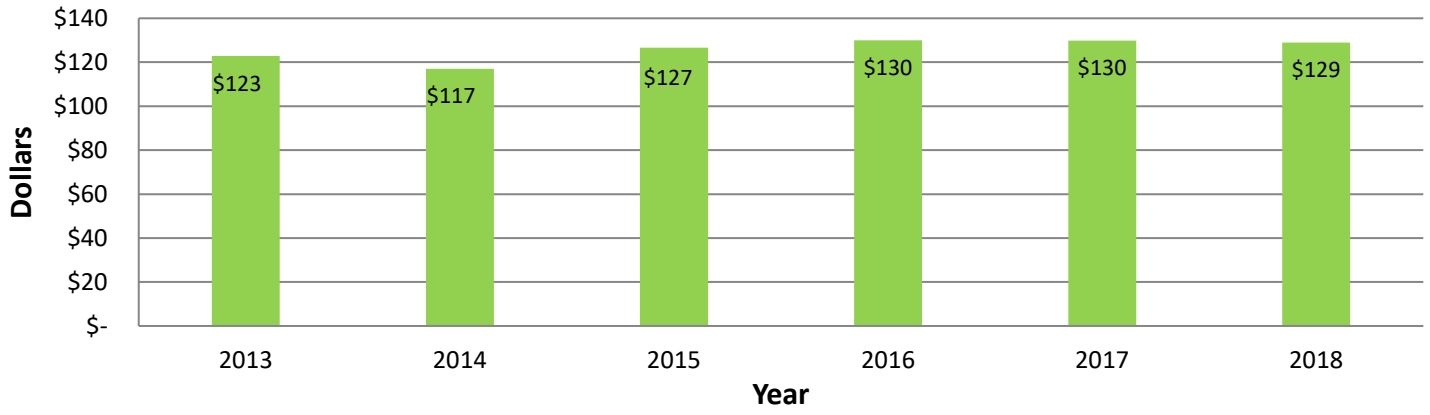
Metrics will compare the amount of money spent on Transmission and Distribution (T&D) infrastructure on a per customer basis.

Operational Efficiency - T&D

Operation and Maintenance (O&M) Spending per Customer - T&D (Tier 1 Metric)

This metric shows the T&D annual O&M spending per customer.

Figure 13. Annual O&M Spending per Customer - T&D

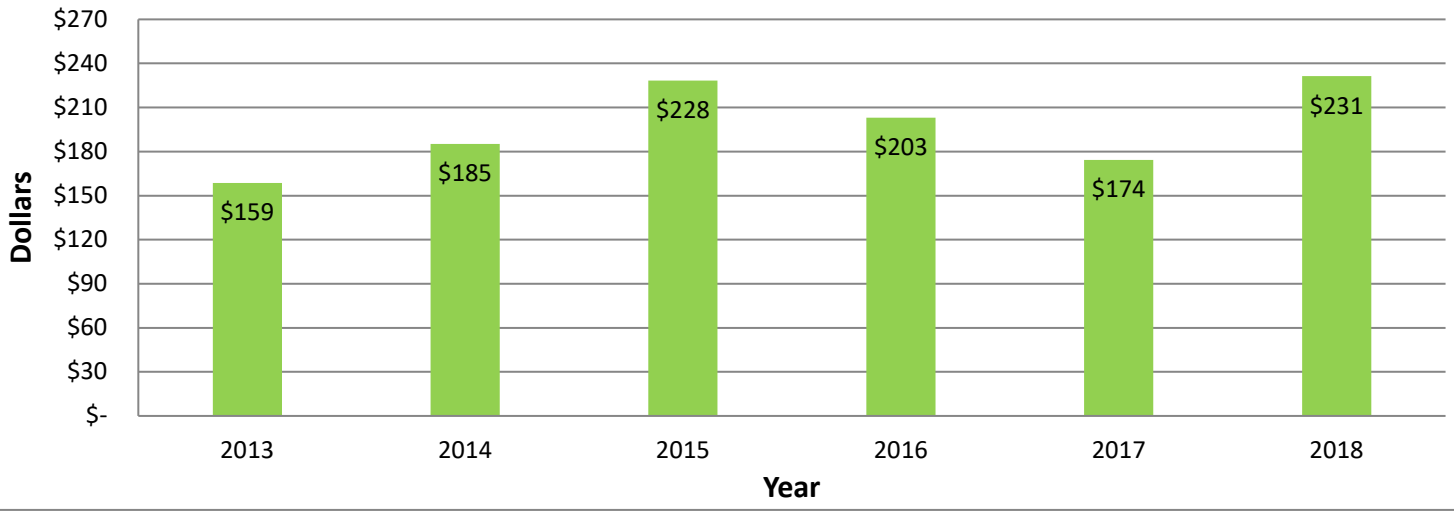


The average O&M spending per customer is approximately $126 per year. This covers operation and maintenance associated with both transmission and distribution equipment.

Capital Expenditure (CAPEX) per Customer - T&D (Tier 1 Metric)

This metric shows the T&D annual capital spending per customer. The industry median (FERC Form 1) over 3 years for utilities with between 200,000 and 1,000,000 customers is $204 per customer.

Figure 14. Annual CAPEX per Customer - T&D



The total T&D capital spending increased in 2015 as IPL upgraded the system transmission import capability, added a static VAR compensator, and upgraded network protectors in the CBD. In 2018, the capital spending increase was the result of CATV make-ready and overhead construction increases.

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Customer Satisfaction

IPL is committed to continuous improvement in the area of customer satisfaction, acknowledging that many of the metrics presented in the other domains (e.g.; Reliability, Operational Efficiency, and Affordability) are as important to customer satisfaction as they are to the domains they serve. With that in mind, this section addresses the metrics that focus on those activities primarily attributed to customer service (e.g.; minimizing wait times on the phone and limiting the number of times a customer needs to call on a specific issue).

Description of Metrics

* First Call Resolution takes data from a third party survey where the customer indicated their issue was resolved on the first contact and/or there is no further outstanding action necessary by IPL.

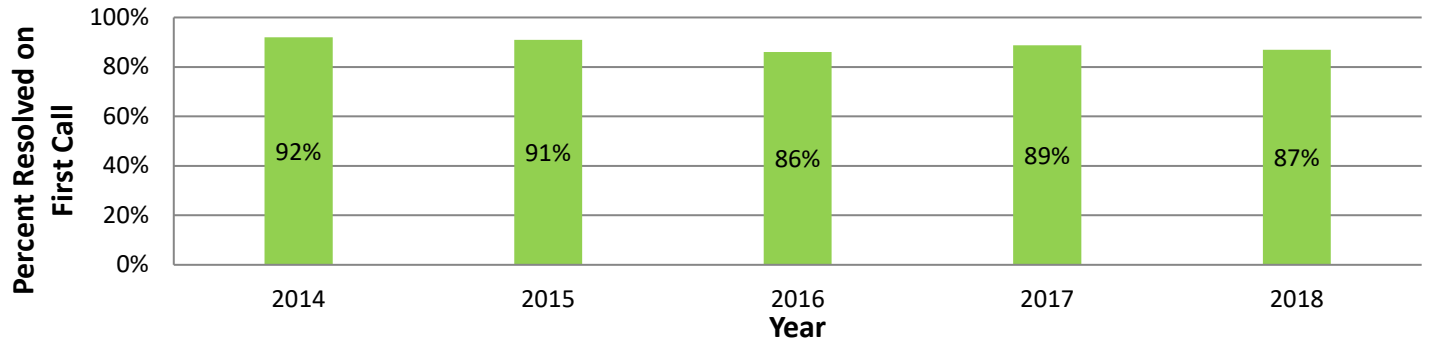
* Service Level is defined as the percentage of calls answered under 60 seconds. The higher the percentage, the lower the wait time customers experience.

Customer Satisfaction

First Call Resolution (Tier 1 Metric)

First call resolution (FCR) is the percentage of calls where the customer indicated their issue was resolved on the first contact and/or there is no further outstanding action necessary by IPL.

Figure 15. First Call Resolution

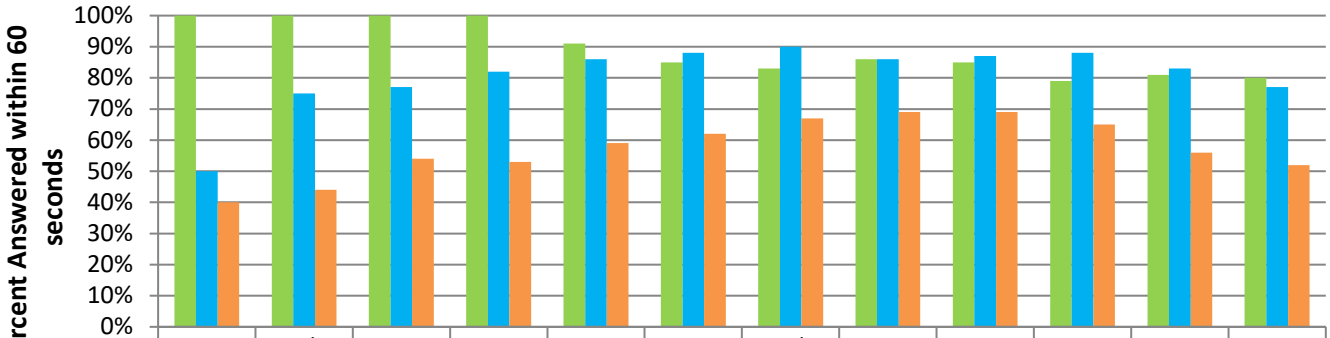


From 2012-2014, the survey to gather this data was conducted via a third party 1-2 days after the contact was made. In 2015, this was changed to an immediate automated after-call survey to better reflect the customer's experience. After the change in process, IPL determined there was an error in the calculation and the 2015 data above was likely inflated. In 2016, an adjustment was made to the calculation to ensure accuracy. IPL anticipates by making the change in timing of the survey, up to a 10% decrease and/or increase from prior results could be seen based on information given by a third party due to the difference in how the data is obtained from the customer.

Service Level (Tier 1 Metric)

Service Level is the percentage of calls answered within 60 seconds. The higher the percentage, the lower the wait time customers experience. This is a weekly target and the chart below shows the % of weeks the company goal of calls answered within 60 seconds was met.

Figure 16. Service Level



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2016	100%	100%	100%	100%	91%	85%	83%	86%	85%	79%	81%	80%
2017	50%	75%	77%	82%	86%	88%	90%	86%	87%	88%	83%	77%
2018	40%	44%	54%	53%	59%	62%	67%	69%	69%	65%	56%	52%

This is a new metric IPL started tracking in 2015 as a more accurate representation of its customers' wait time experience. By tracking this as a percentage of calls answered within 60 seconds, IPL is able to better manage volatility and avoid masking any anomalies unintentionally by tracking with an average statistic. At the beginning of 2017, higher usage due to a colder-than-normal December in 2016 was the primary reason for higher bill calls. During 2018, IPL experienced staffing challenges that impacted service level. As a result, IPL has improved the Customer Service recruiting and hiring process to attract top talent, increased staffing levels, and implemented employee recognition programs.

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Affordability

Recognized as a critical component in assuring customer satisfaction, notwithstanding IPL's mandate to provide safe and reliable service, IPL is committed to maintaining its position as a low cost provider, both in Indiana and across the U.S. Industry. Presented in the form of dollars per 1,000 kWh, IPL will annually present its costs in comparison to the other Indiana electric utilities and 20 of the largest cities served by Investor-Owned Utilities (IOUs).

Description of Metrics

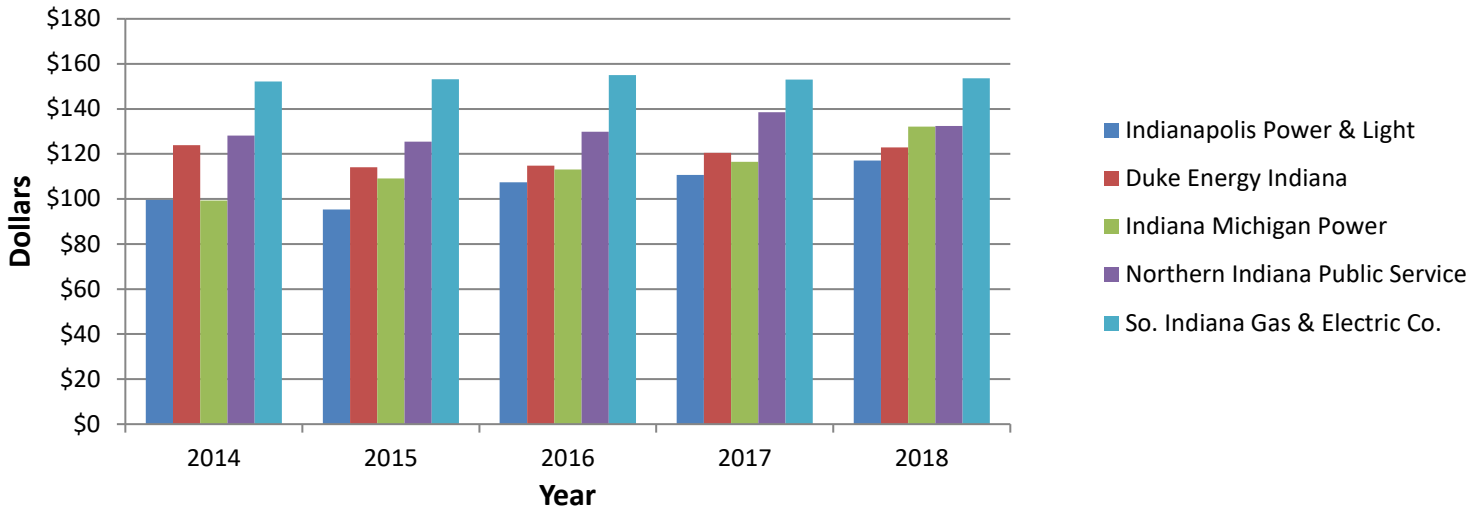
* In comparing IPL's Residential Bill to other state IOUs and across the U.S. Industry, a constant usage amount of 1,000 kWh is used for all companies to remove any distortion from actual usage of customers in the different areas.
* Residential Service Disconnections for Non-Payment and % of Accounts Receivable in Arrearages can inform stakeholders of any trends that are developing and prompt dialogue and response. It is not likely to be an indicator of electric utility performance.

Affordability

IPL Residential Bill per 1000 kWh vs. other state IOUs (Tier 1 Metric)

Compares IPL's Residential Bill per 1000 kWh with other investor owned utilities (IOUs) in the State of Indiana.

Figure 17. IPL Residential Bill per 1000 kWh vs. Other State IOUs

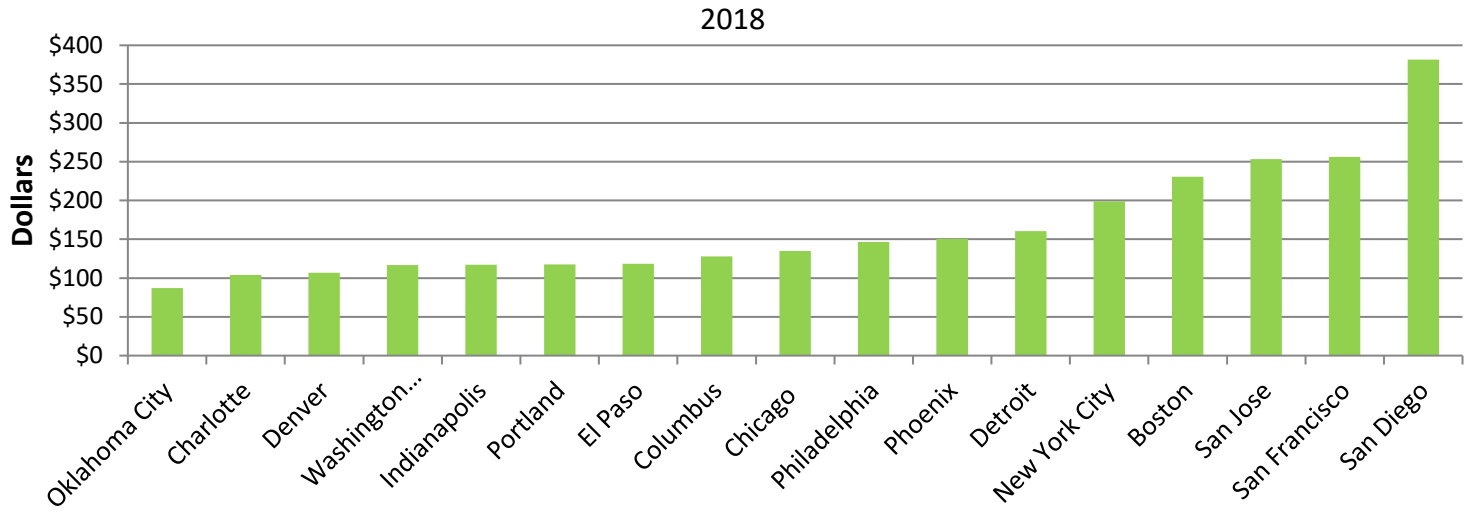


IPL is consistently one of the lowest cost electric IOUs in Indiana.

IPL Residential Bill per 1000 kWh vs. 20 Largest Cities Served by IOUs (Tier 1 Metric)

Compares IPL Residential Bills to the 20 Largest U.S. cities with investor-owned utilities using 1,000 kWh per month for residential service using the rates in effect July 1, 2018.

Figure 18. IPL Residential Bill per 1000 kWh vs. 20 Largest Cities Served by IOUs for 2018

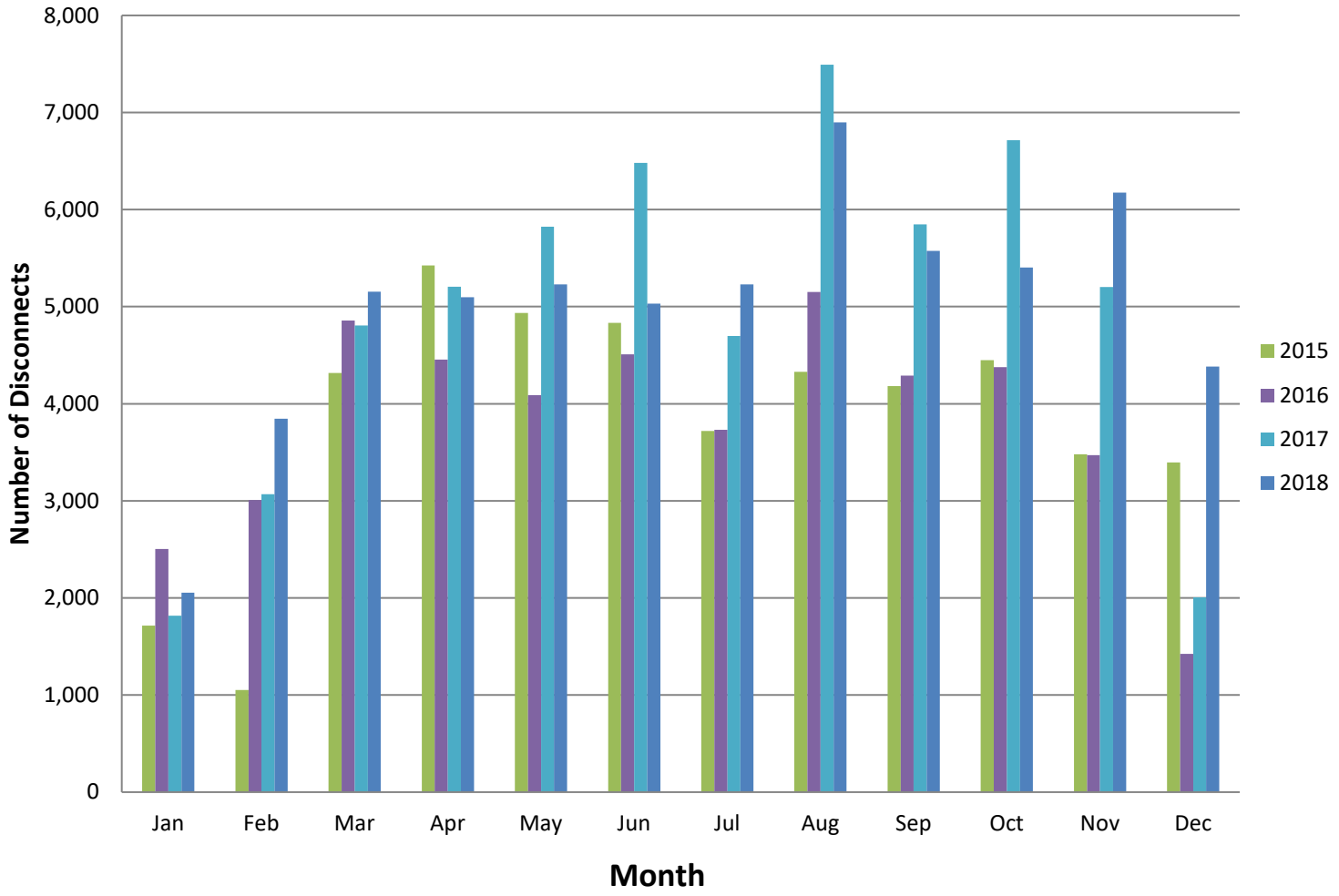


IPL's bills are among the lowest of the 20 largest cities served by an IOU.
NOTE: 3 Cities (Dallas, Fort Worth, and Houston) not reported.

Disconnects Due to Non-Payment (Tier 1 Metric)

The chart below shows the total number of disconnects due to customer non-payment for each month starting in 2015.

Figure 19. Disconnects Due to Non-Payment



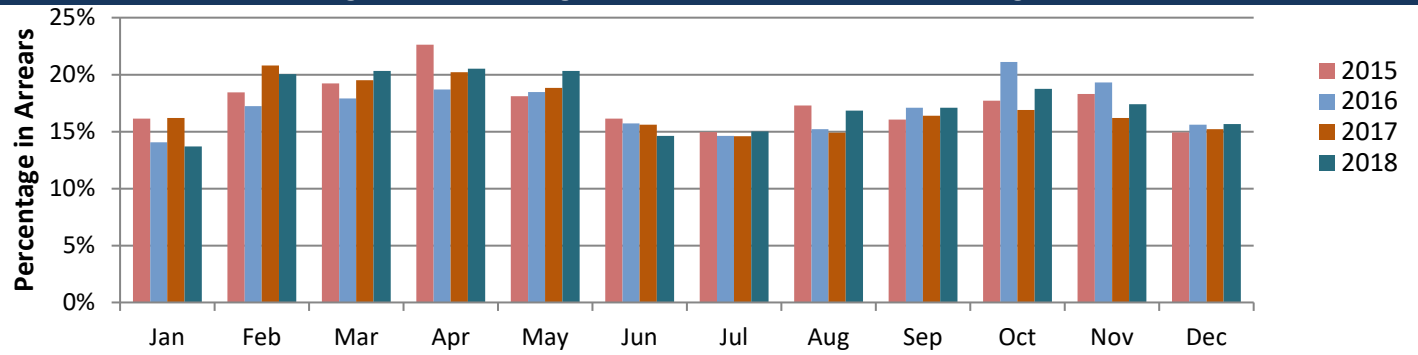
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2015	1,714	1,052	4,316	5,424	4,934	4,834	3,719	4,328	4,182	4,448	3,480	3,395	45,826
2016	2,504	3,010	4,856	4,454	4,089	4,508	3,732	5,151	4,289	4,378	3,471	1,425	45,867
2017	1,818	3,069	4,805	5,206	5,824	6,482	4,697	7,491	5,849	6,714	5,202	2,006	59,163
2018	2,055	3,847	5,156	5,099	5,229	5,030	5,230	6,899	5,576	5,403	6,176	4,382	60,082

The number of customers disconnected for non-payment during the winter is significantly less than other months. This is due to the winter moratorium (Indiana Code § 8-1-2-121) reducing the number of disconnects during weather extremes.

Percentage of Accounts Receivable in Arrearages (Tier 1 Metric)

This chart shows the percentage of accounts receivable in arrearages.

Figure 20. Percentage of Accounts Receivable in Arrearages



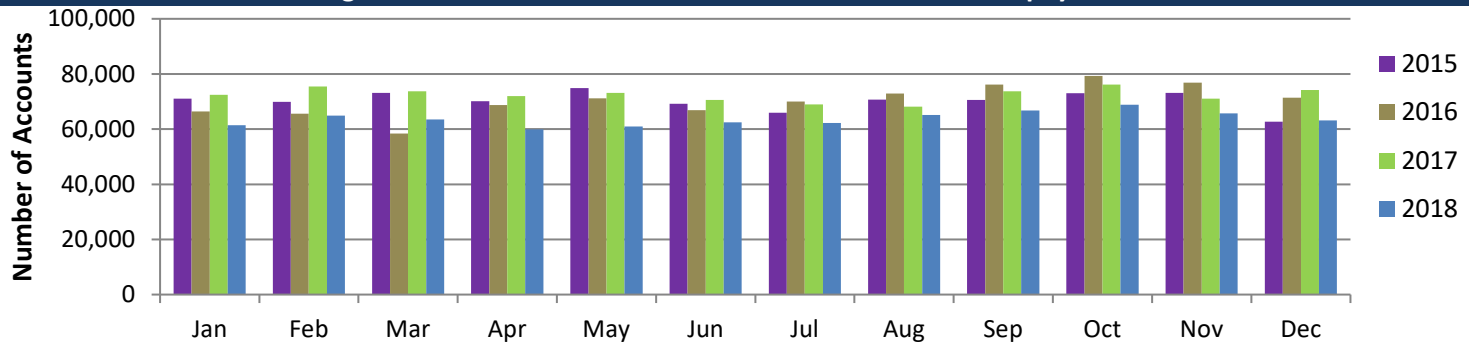
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	16.13%	18.45%	19.23%	22.62%	18.11%	16.15%	14.96%	17.30%	16.05%	17.71%	18.30%	14.92%
2016	14.05%	17.23%	17.91%	18.69%	18.47%	15.72%	14.61%	15.20%	17.10%	21.10%	19.30%	15.60%
2017	16.20%	20.80%	19.50%	20.20%	18.84%	15.60%	14.60%	14.90%	16.40%	16.90%	16.20%	15.20%
2018	13.70%	20.03%	20.33%	20.53%	20.32%	14.63%	15.01%	16.85%	17.09%	18.76%	17.41%	15.66%

Accounts are considered to be in arrears after 30 days past due. This percentage is affected by budget billing shortfalls, extensions granted, and deposit commitments that are not complete.

Accounts Sent Notice of Disconnection for Non-payment (Tier 1 Metric)

This chart illustrates the number of IPL accounts sent notices for disconnection by month and year. Notices are sent for bills past 30 days due or greater.

Figure 21. Accounts Sent Notice of Disconnection for Non-payment



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	69,252	73,501	75,940	77,965	73,596	72,748	71,191	74,616	77,829	78,577	75,287	71,792
2014	71,420	73,964	75,075	72,805	77,540	71,316	73,601	75,153	75,835	74,199	72,279	65,944
2015	71,015	69,834	73,165	70,143	74,920	69,140	65,965	70,708	70,528	73,068	73,089	62,682
2016	66,458	65,574	58,402	68,686	71,183	66,842	70,053	72,950	76,121	79,278	76,796	71,352
2017	72,387	75,470	73,676	72,025	73,099	70,565	68,986	68,094	73,752	76,188	71,088	74,206
2018	61,462	64,853	63,483	59,879	60,911	62,438	62,172	65,179	66,726	68,896	65,713	63,111

This chart illustrates the number of accounts sent notices for disconnection by month and year. Notices are sent for bills 30 days past due or greater.

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Financial

Analyzed in conjunction with other performance measures (particularly Reliability, Asset Management, the CBD UG Network and Operational Efficiency), IPL's actual investment (CAPEX) and spending (O&M) levels provide a comprehensive synopsis of how expenditures affect critical metrics contributing to both effectiveness and efficiency. As a collective, the trends represented by these metrics can be used to identify areas where a potential threat may exist and where remedial actions can either limit or avoid the impact (or consequence) of said threat.

Description of Metric

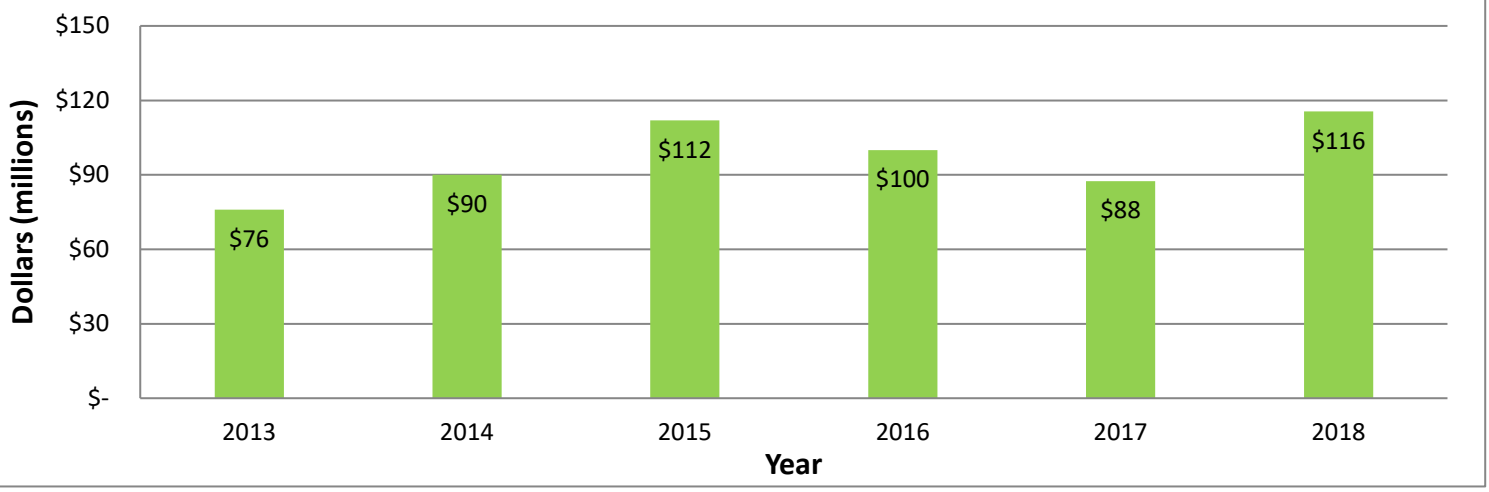
Metrics will compare the amount of money spent on Transmission and Distribution (T&D) infrastructure on an annual basis.

Financial - T&D

T&D Current vs. Historic Spending-CAPEX (Tier 1 Metric)

This chart shows IPL's historical and 12 month rolling Transmission and Distribution spending on capital projects and programs. This includes new customer work and system improvements.

Figure 22. T&D Capital Spending (in millions)

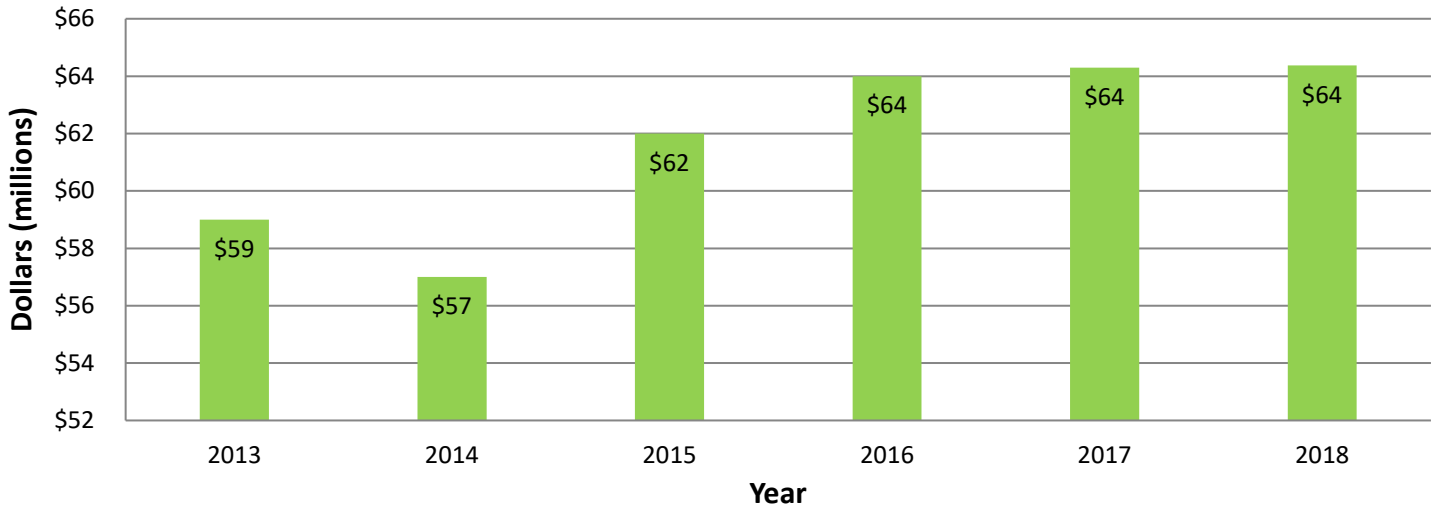


The total T&D capital spending increased in 2015 as IPL upgraded the system transmission import capability, added a static VAR compensator, and upgraded network protectors in the CBD. In 2018, the capital spending increase was the result of CATV make-ready and overhead construction increases.

T&D Current vs. Historic Spending-O&M (Tier 1 Metric)

This chart shows IPL's historical and 12 month rolling Transmission and Distribution spending on operations and maintenance expenses.

Figure 23. T&D O&M Spending (in millions)



Total T&D operations and maintenance expense has been slightly increasing over the last few years.

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Asset Management

The metrics reported in this section illustrate (at a high level) the effectiveness of IPL's approach in maintaining and replacing critical assets. Key areas monitored include inspection/test program adherence, replacement of aging electric system infrastructure, and the overall condition of installed assets.

Description of Metrics

* Percent of Planned Maintenance Completed takes the number of planned maintenance activities completed during the year divided by the total number of activities scheduled for the year. A value of 100% indicates that all of the planned work was completed. As a Best Practice, original inspection target values are retained to provide a consistent, trackable performance reference, sometimes resulting in >100% completion rates.

* Renewal Rate measures the number of assets that were refurbished or replaced compared to the total number of similar assets on the system.

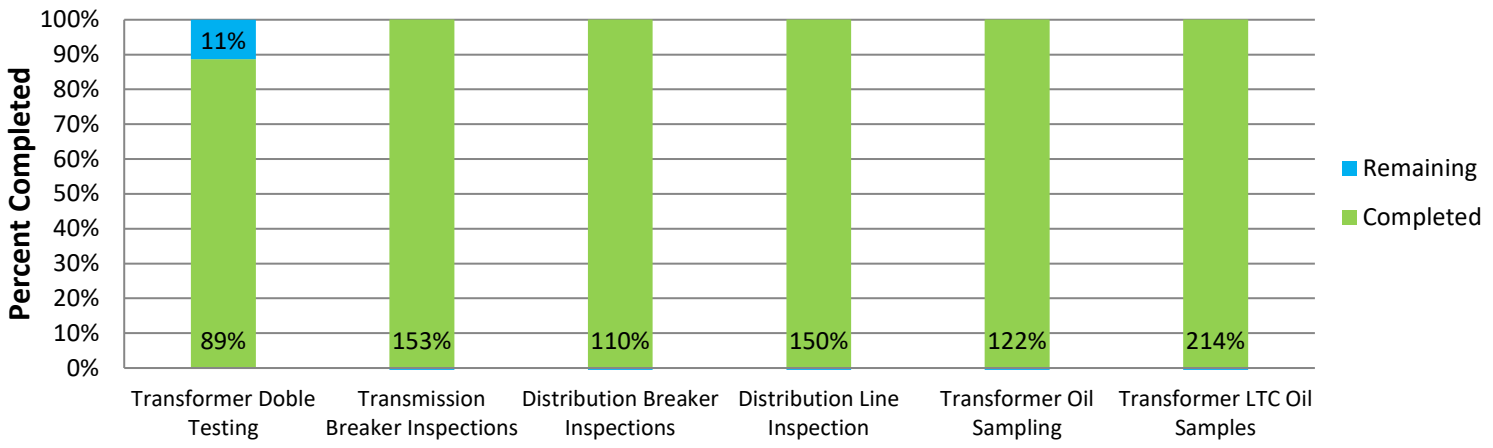
* Asset Condition (Health) Rating is used in conjunction with Asset Criticality (consequence of failure) to determine individual Asset Risk scores (RISK = HEALTH x CRITICALITY). Risk mitigation is achieved by prioritizing repair and/or replacement work based on Asset Risk ranking (focusing on the highest risk assets first).

Asset Management

Percent of Planned Maintenance Completed (Tier 1 Metric)

Amount of maintenance completed vs. what was committed for year to date in the scheduled maintenance plan.

Figure 24. Percent of Planned Maintenance Completed

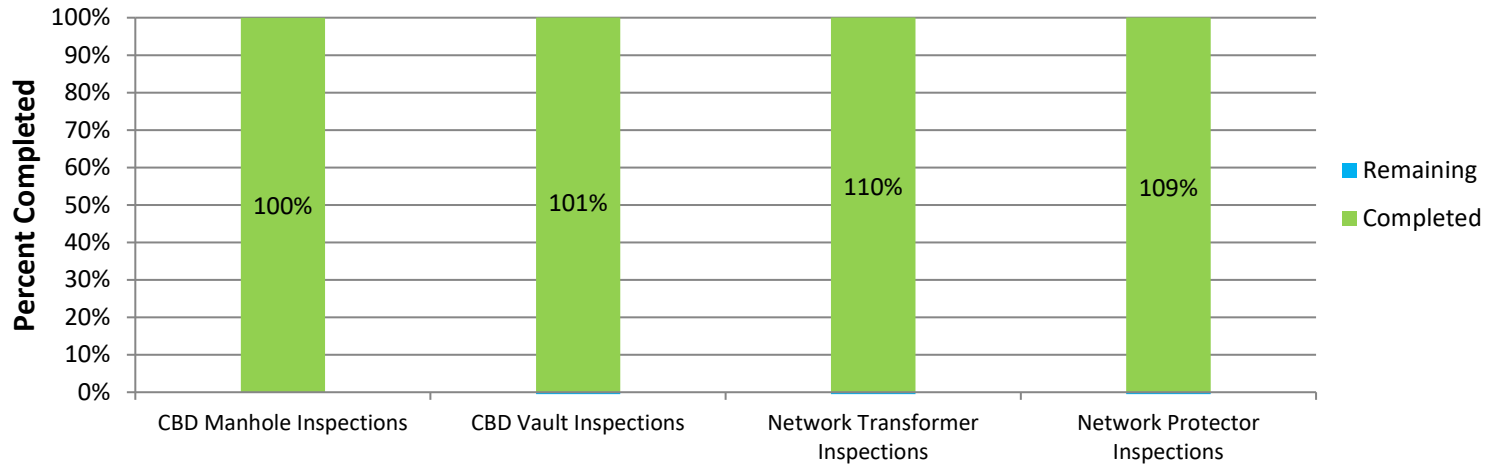


Transformer Doble (power factor) testing is prioritized based on asset risk and previous test results.

Percent of Planned Maintenance Completed - Downtown Network (Tier 1 Metric)

Amount of maintenance completed on CBD assets vs. what was the scheduled maintenance plan.

Figure 25. Percent of Planned Maintenance Completed (Downtown Network)

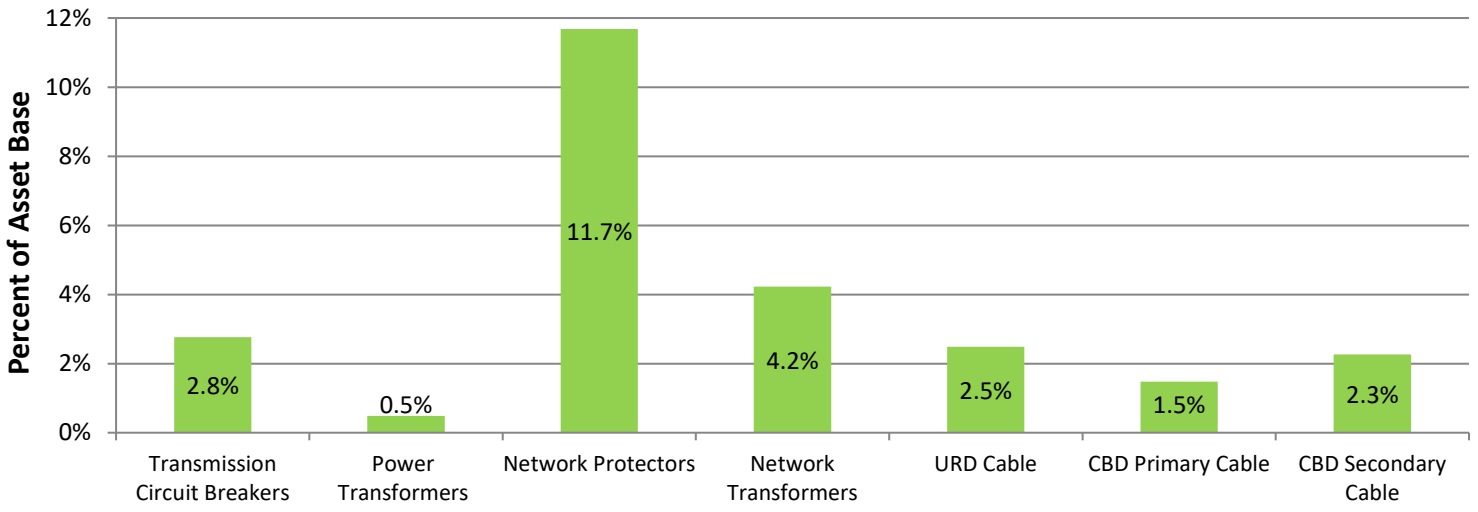


IPL's inspection plan for the CBD was based on optimum work management efficiency.

Renewal Rates (Tier 1 Metric)

This is a 5 year average annualized percentage of new assets being installed for some critical asset classes. The time frame reviewed is from 2013 through 2017 inclusive.

Figure 26. Renewal Rates



Substation transformer installations has been very low the last few years. IPL has an existing "watch" list and replaces transformers only when risk condition deems it necessary.

Asset Condition Rating (Tier 1 Metric)

An asset condition rating or asset health index if monitored over time can indicate an overall decrease or increase in the asset health of a particular asset or asset class.

Figure 27. Manhole Health

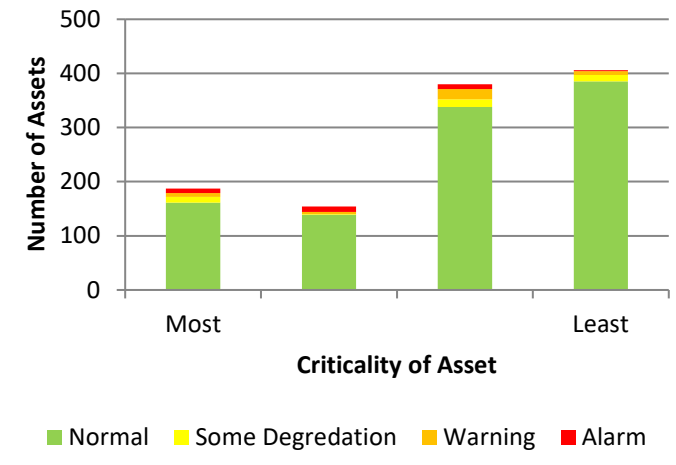
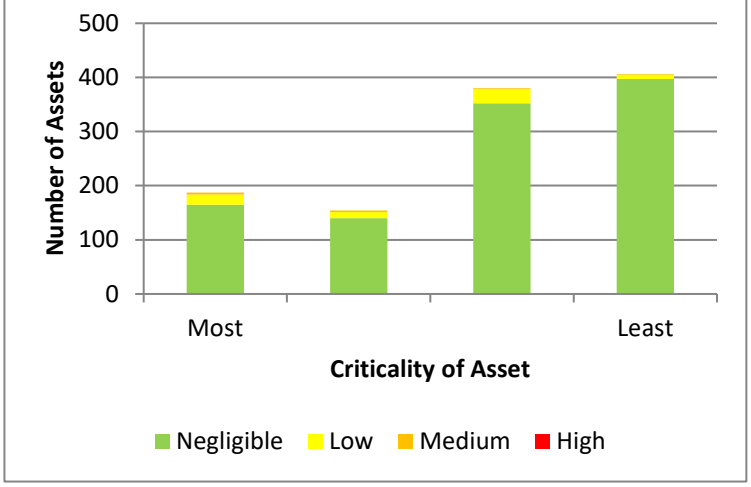


Figure 28. Manhole Risk



Work Orders to drive corrective action are initiated for any manhole having a risk score higher than "Low" and are prioritized on the amount of risk.
Increased risk is addressed by a combination of repairs, increased monitoring, and/or capital replacement work.

Asset Condition Rating (Tier 1 Metric)

An asset condition rating or asset health index if monitored over time can indicate an overall decrease or increase in the asset health of a particular asset or asset class.

Figure 29. Network Protector Health

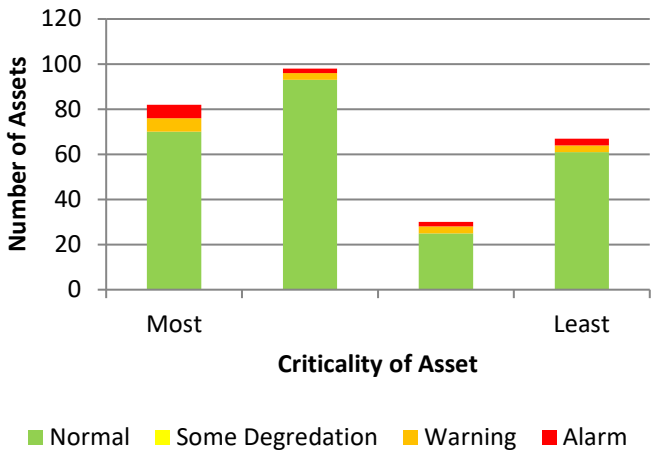
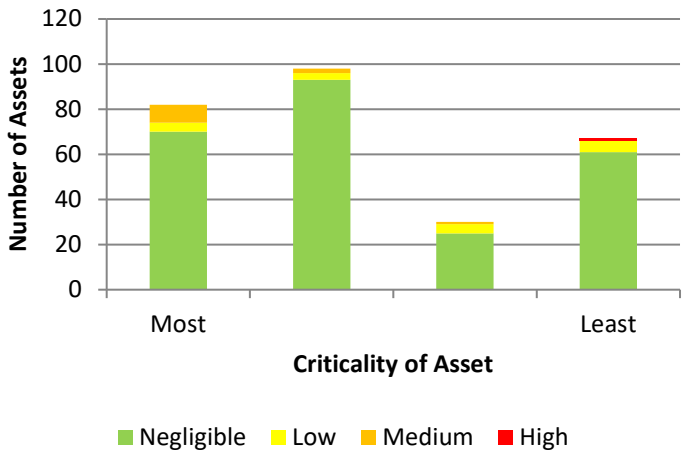


Figure 30. Network Protector Risk



Work Orders to drive corrective action are initiated for any network protector having a risk score higher than "Low" and are prioritized on the amount of risk.
Increased risk is addressed by a combination of repairs, increased monitoring, and/or capital replacement work.

Asset Condition Rating (Tier 1 Metric)

An asset condition rating or asset health index if monitored over time can indicate an overall decrease or increase in the asset health of a particular asset or asset class.

Figure 31. Network Transformer Health

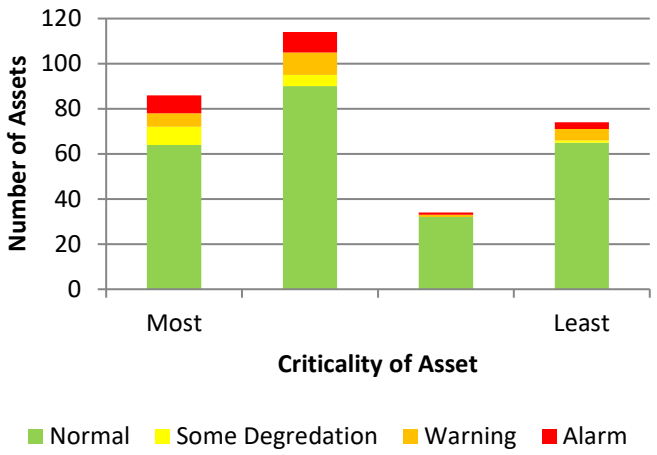
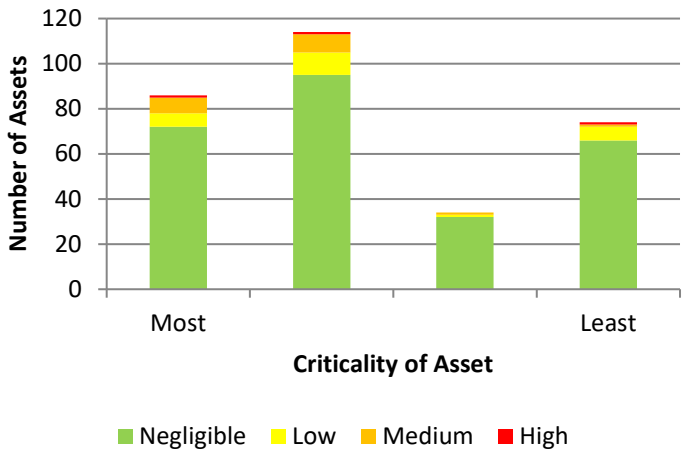


Figure 32. Network Transformer Risk



Work Orders to drive corrective action are initiated for any network transformer having a risk score higher than "Low" and are prioritized on the amount of risk.
Increased risk is addressed by a combination of repairs, increased monitoring, and/or capital replacement work.

Asset Condition Rating (Tier 1 Metric)

An asset condition rating or asset health index if monitored over time can indicate an overall decrease or increase in the asset health of a particular asset or asset class.

Figure 33. Vault Health

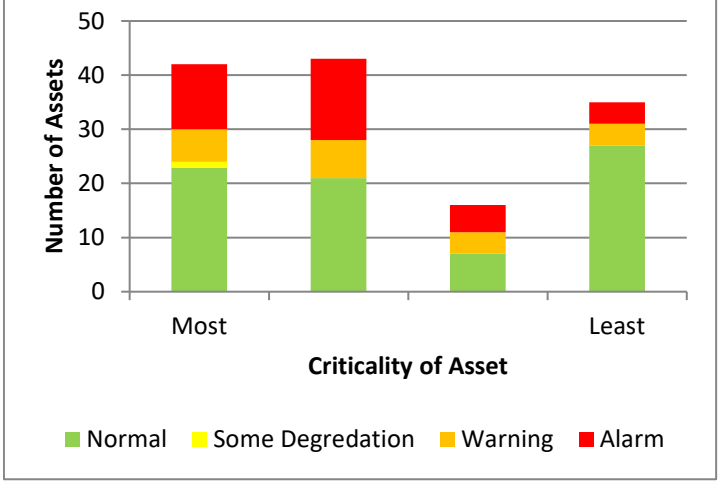
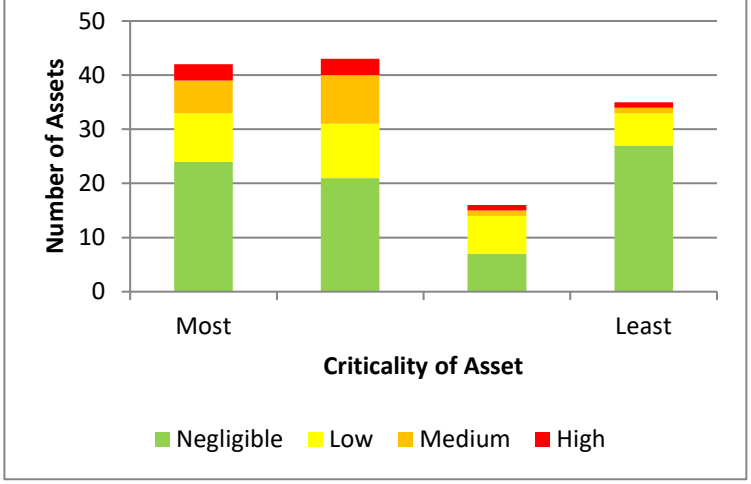


Figure 34. Vault Risk



Work Orders to drive corrective action are initiated for any vault that has a risk score higher than "Low" and are prioritized on the amount of risk.
Increased risk is addressed by a combination of repairs, increased monitoring, and/or capital replacement work.

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CBD Underground Network

Consistent with the CBD UG Network Life Cycle Plan and the Oversight Report, the following metrics report on the extent to which IPL's efforts to maintain and operate a highly complex underground network have reduced the number of significant events; and the number of equipment / component failures. IPL's progress in this area (and ultimate improvement in these metrics) will be reflective of its execution of the remaining initiatives listed in the Life Cycle Plan, an overall effective approach in maintaining / replacing its assets, and well-directed and appropriate investment and spending levels.

Description of Metrics

* Reportable CBD Underground Events helps to quantify the number of defined events that occur and to identify the type of equipment determined to be the most likely cause of the event.

* The number of customers that experienced sustained outages from Reportable CBD Underground Events are tracked as well. Not all Reportable Events will have customer outage.

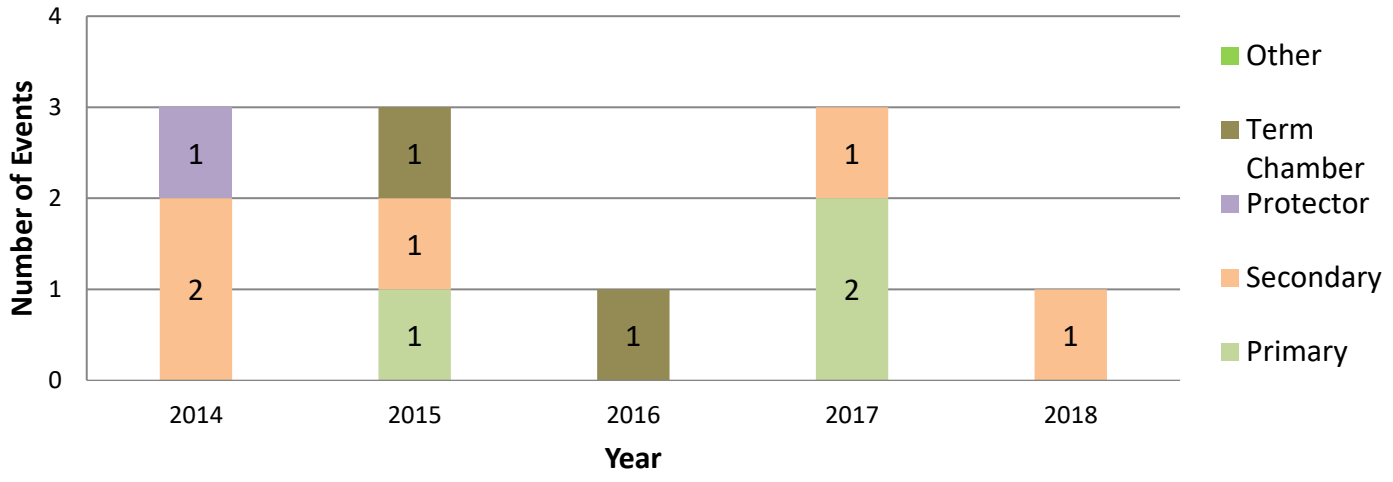
* IPL CBD Network Failures tracks the total number of components that failed while serving customers in the CBD by equipment type.

CBD Underground Network

Reportable CBD Underground Events (Tier 1 Metric)

The total number of Reportable CBD Underground Events by equipment type.

Figure 35. IPL Reportable CBD Underground Events

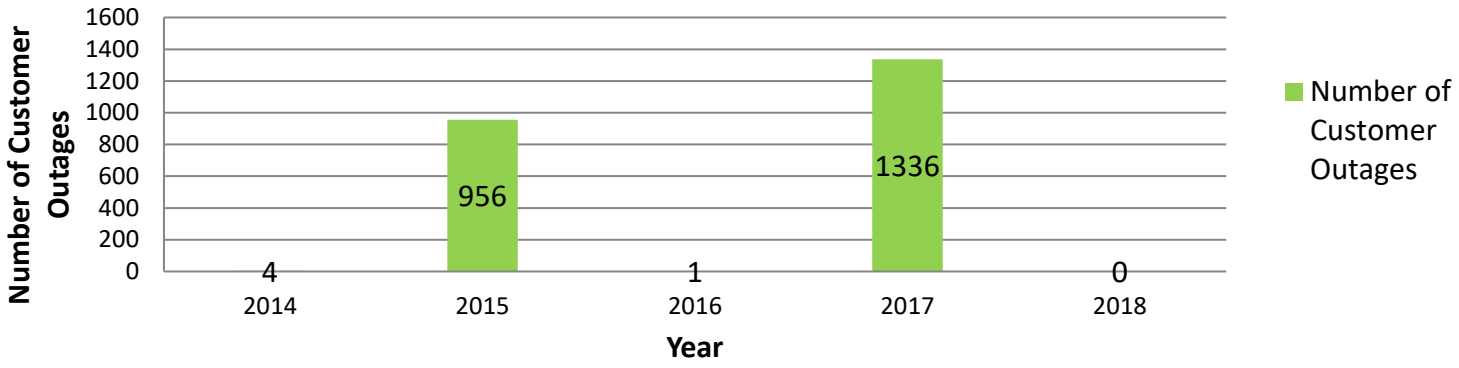


A Reportable CBD Network Event is one in which sustained fire or smoke emanates from a manhole or through the grate of a transformer vault and may involve a response from Indianapolis Fire Department ("IFD"). Not all reportable events are significant or due to IPL facilities. Additionally, a response by IFD is not dispositive of a significant event.

Customer Outages associated with Reportable CBD Underground Events (Tier 1 Metric)

This chart shows the total number of customers that experienced an outage from a Reportable CBD Underground Event.

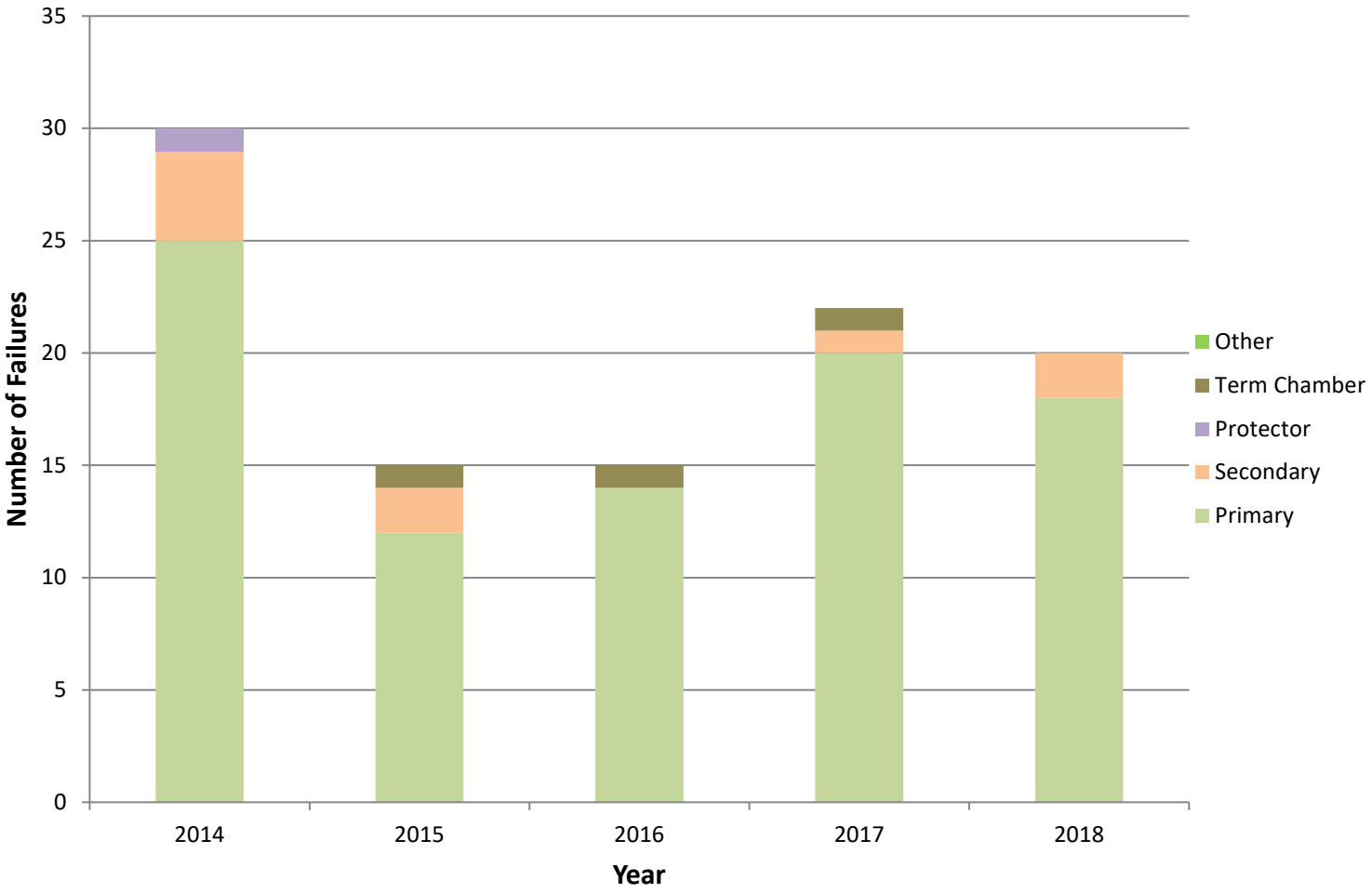
Figure 36. Number of customer outages associated with Reportable CBD Underground Events



The only reportable incidents with customer outages were:
2014 - 26 S. Meridian Network Protector (4 Customers)
2015 - North Street Secondary Network Fire (956 Customers)
2016 - Termination Chamber at 22 E. Wabash (1 Customer)
2017 - Primary Cable at 118 N. Delaware (1,336 Customers)

Equipment/Component Failures (Tier 1 Metric)
Number of failed components serving customers in the CBD by equipment type. This includes network transformers, protectors, cable systems and infrastructure.

Figure 37. IPL CBD Network Failures



All CBD equipment failures are reviewed for any lessons learned.

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Staffing

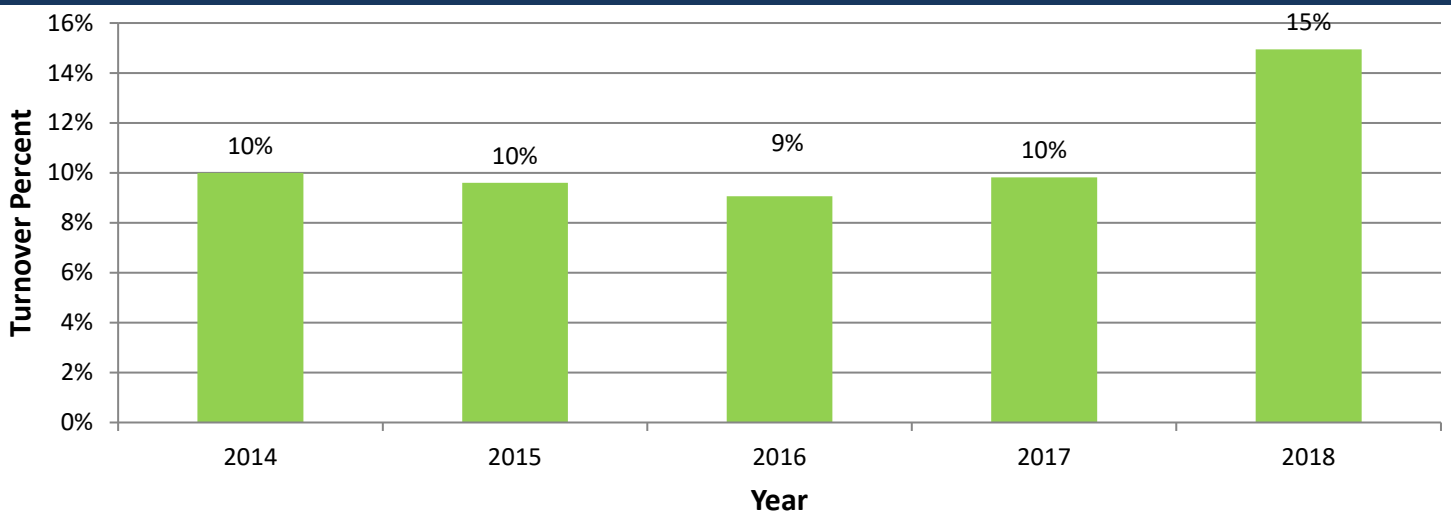
In reporting on employee turnover rate (the ratio of terminations, resignations and retirements to total number of employees in IPL's Transmission and Distribution organization), this section addresses the sustainability of the business from a staffing perspective. Acknowledging the advent of an aging work force, increased pressures being placed on the current work force, continually tightened operating budgets and increased customer expectations regarding reliability, IPL is committed to assuring a well-managed transformation of its organization. This will require well-executed staffing strategies and contingencies that anticipate and account for higher than previously experienced employee turnover.
This metric (employee turnover rate) will provide sufficient transparency to prompt such discussions.

Staffing

Employee Turnover Rate (Tier 1 Metric)

Percentage of IPL employees that resigned, terminated or retired during each year.

Figure 38. Turnover Percentage - IPL



Percentage of IPL employees that resigned, terminated or retired during each year. The employee turnover rate increased in 2018. IPL, and its parent The AES Corporation underwent a corporate-wide reorganization at the beginning of 2018 that resulted in the permanent reduction of approximately 100 employees. The reorganization took advantage of operational efficiencies across the corporate footprint.

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Generation

The goal is to have the generation assets available as much as possible on a long term basis. By planning the correct amount of scheduled outage to reduce forced outage, this helps to achieve an optimal balance to maximize the availablity of the assets.

Description of Metrics

* Equivalent Forced Outage Factor (EFOF) is the percent of time that a unit was unavailable (derate or full outage) because of a forced event.

* Equivalent Availability Factor (EAF) is the percent of time that a unit was available to run.

* Equivalent Scheduled Outage Factor (ESOF) is the percent of time a unit was unavailable from a scheduled event (derate or full outage) that is either planned or to perform maintenance.

* Net Capacity Factor (NCF) is the ratio of the actual realized generation to a unit's rated net maximum capacity and is expressed as a percent of a period of time.

* Data for the Harding Street Station (HSS) is for units 5, 6, and 7 only

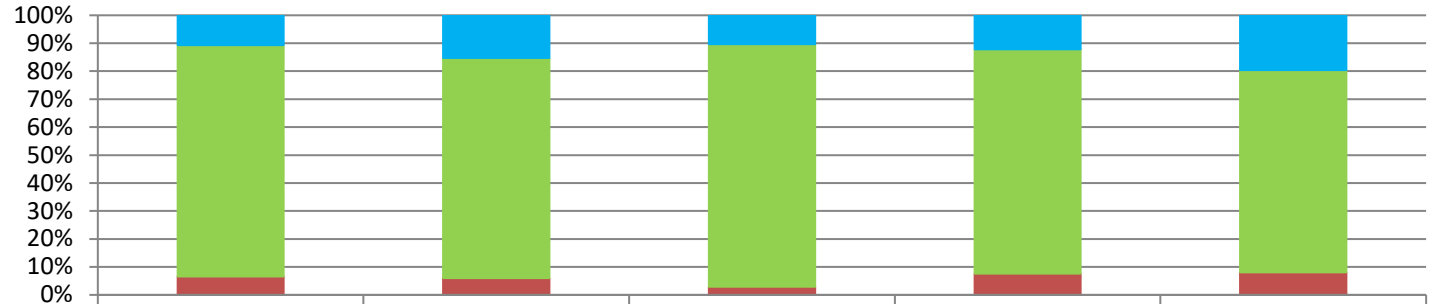
Petersburg Generation Performance (Tier 1 Metric)

$$\text{Equivalent Forced Outage Factor (EFOF)} = \frac{\textit{Forced Outage Hours} + \textit{Equivalent Forced Derated Hours}}{\textit{Period Hours}} \times 100\%$$

$$\text{Equivalent Availability Factor (EAF)} = \frac{\textit{Available Hours} - \textit{Equivalent Planned Derated Hours} - \textit{Equivalent Forced Derated Hours} - \textit{Equivalent Maintenance Derated Hours} - \textit{Equivalent Seasonal Derated Hours}}{\textit{Period Hours}} \times 100\%$$

$$\text{Equivalent Scheduled Outage Factor (ESOF)} = \frac{\textit{Maintenance Outage Hours} + \textit{Planned Outage Hours} + \textit{Equivalent Maintenance Derated Hours} + \textit{Equivalent Planned Derated Hours}}{\textit{Period Hours}} \times 100\%$$

Figure 39. Petersburg Generation Performance



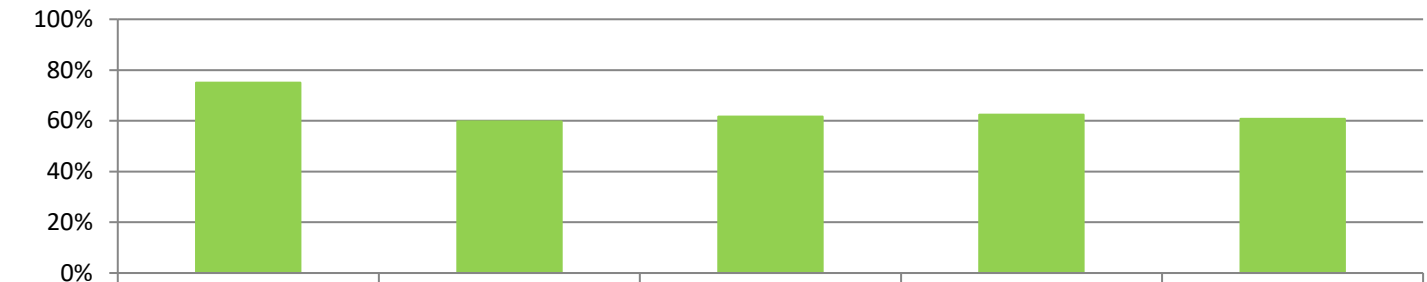
	2014	2015	2016	2017	2018
ESOF	10.69%	15.24%	10.37%	12.17%	19.61%
EAF	82.78%	78.70%	86.71%	80.22%	72.29%
EFOF	6.53%	6.06%	2.92%	7.61%	8.10%

Petersburg Generation Performance - Units 1, 2, 3, and 4

Petersburg Net Capacity Factor (Tier 1 Metric)

$$\text{Net Capacity Factor (NCF)} = \frac{\textit{Net Actual Generation}}{\textit{Period Hours x Net Maximum Capacity}} \times 100\%$$

Figure 40. Petersburg Net Capacity Factor



	2014	2015	2016	2017	2018
Series1	74.99%	59.82%	61.59%	62.40%	60.79%

Petersburg NCF varies annually based on natural gas prices, market energy prices, weather, planned maintenance schedules, and unplanned outages.

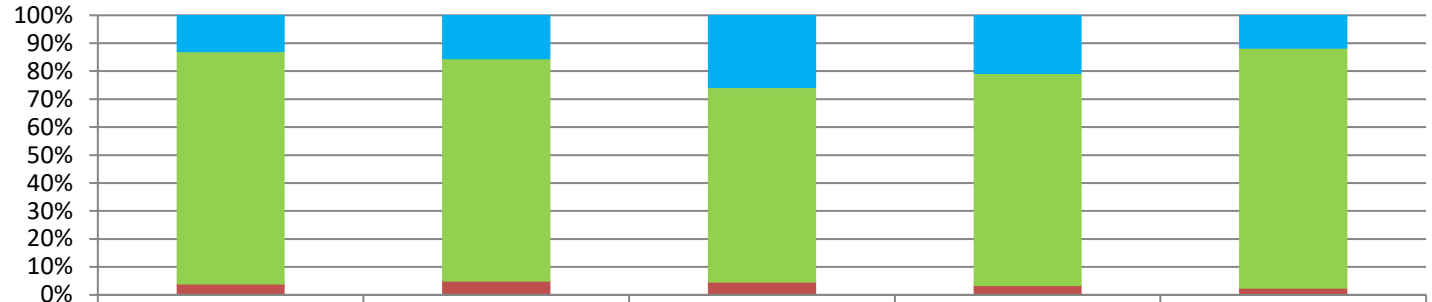
Harding Street Station Generation Performance (Tier 1 Metric)

$$\text{Equivalent Forced Outage Factor (EFOF)} = \frac{\textit{Forced Outage Hours} + \textit{Equivalent Forced Derated Hours}}{\textit{Period Hours}} \times 100\%$$

$$\text{Equivalent Availability Factor (EAF)} = \frac{\textit{Available Hours} - \textit{Equivalent Planned Derated Hours} - \textit{Equivalent Forced Derated Hours} - \textit{Equivalent Maintenance Derated Hours} - \textit{Equivalent Seasonal Derated Hours}}{\textit{Period Hours}} \times 100\%$$

$$\text{Equivalent Scheduled Outage Factor (ESOF)} = \frac{\textit{Maintenance Outage Hours} + \textit{Planned Outage Hours} + \textit{Equivalent Maintenance Derated Hours} + \textit{Equivalent Planned Derated Hours}}{\textit{Period Hours}} \times 100\%$$

Figure 41. Harding Street Station Generation Performance - Units 5, 6, and 7



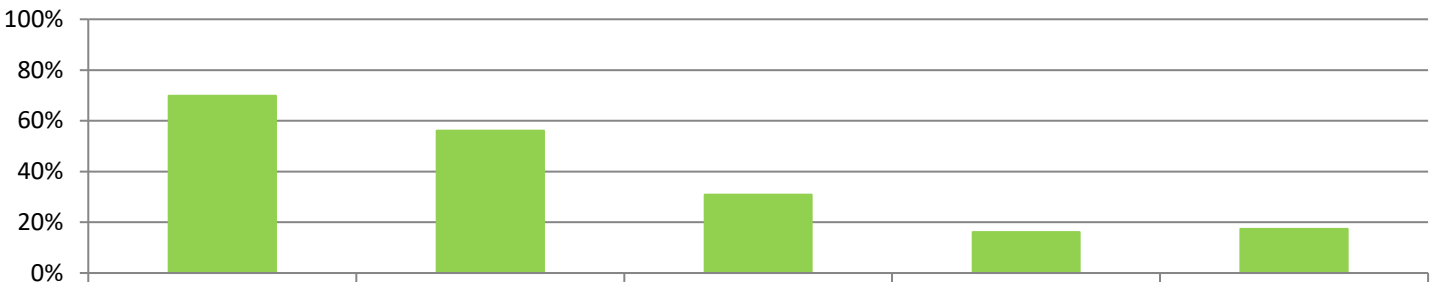
	2014	2015	2016	2017	2018
ESOF	12.80%	15.35%	25.68%	20.60%	11.54%
EAF	83.12%	79.57%	69.53%	75.96%	85.88%
EFOF	4.08%	5.08%	4.79%	3.44%	2.57%

Harding Street Station ESOF increased in 2015 and 2016 with the conversion to gas fired generation.

Harding Street Station Net Capacity Factor (Tier 1 Metric)

$$\text{Net Capacity Factor (NCF)} = \frac{\textit{Net Actual Generation}}{\textit{Period Hours x Net Maximum Capacity}} \times 100\%$$

Figure 42. Harding Street Station Net Capacity Factor - Units 5, 6, and 7



	2014	2015	2016	2017	2018
NCF	69.88%	56.05%	30.91%	16.07%	17.44%

Harding Street Station NCF decreased in 2015 and 2016 with the conversion to gas fired generation.

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Customer Service (New 2018 Metrics)

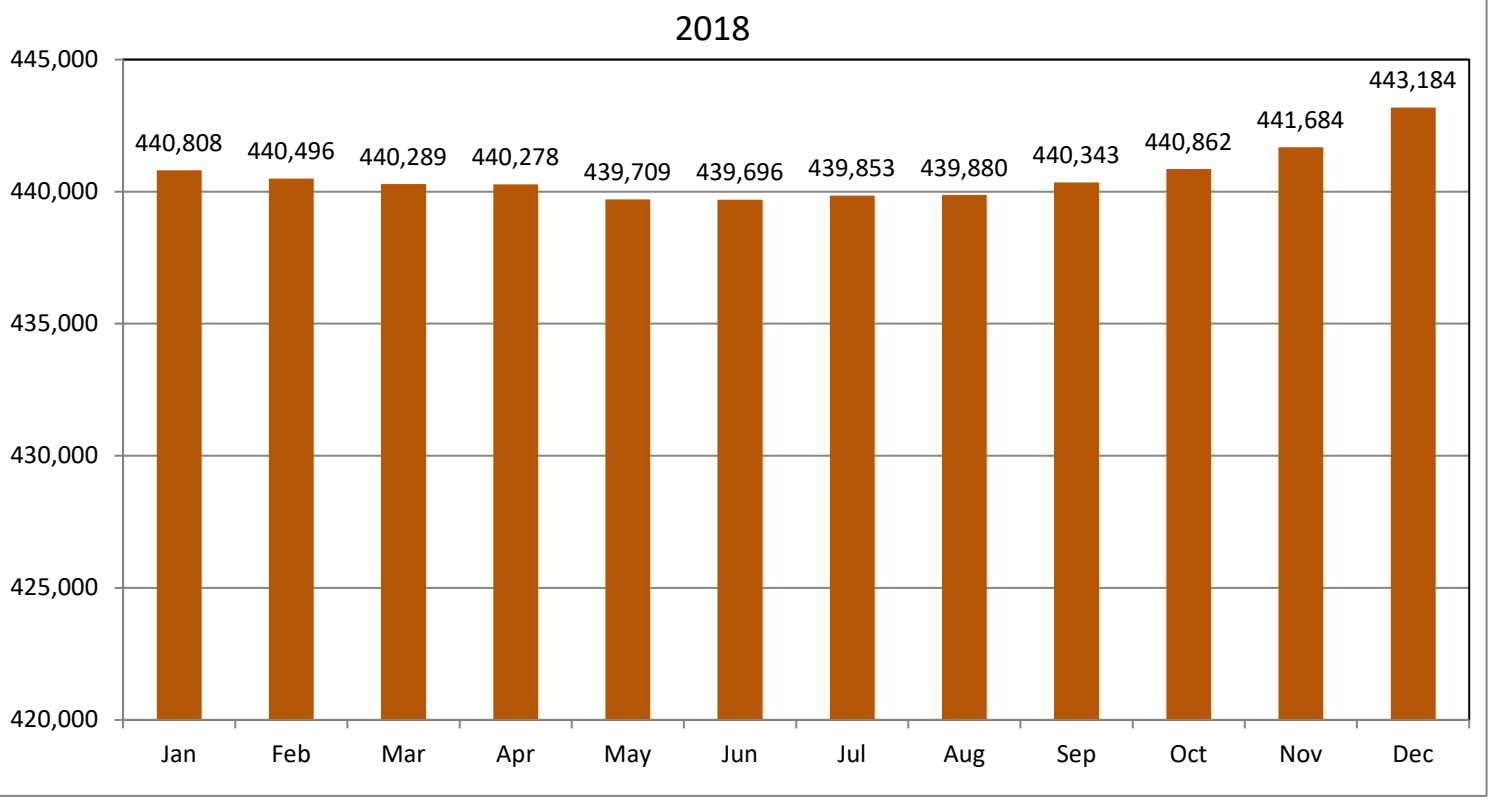
As stipulated in the Cause No. 45029 Settlement Agreement, the following Customer and Customer Service Metrics Section has been added. Per the Settlement Agreement, these metrics will be reported annually, reflecting monthly statistics.

Customer and Customer Service Metrics (New Metrics Starting in 2018)

Number of Residential Accounts (Tier 1 Metric)

This chart shows the number of IPL residential accounts by month and year.

Figure 43. Number of Residential Accounts by Month



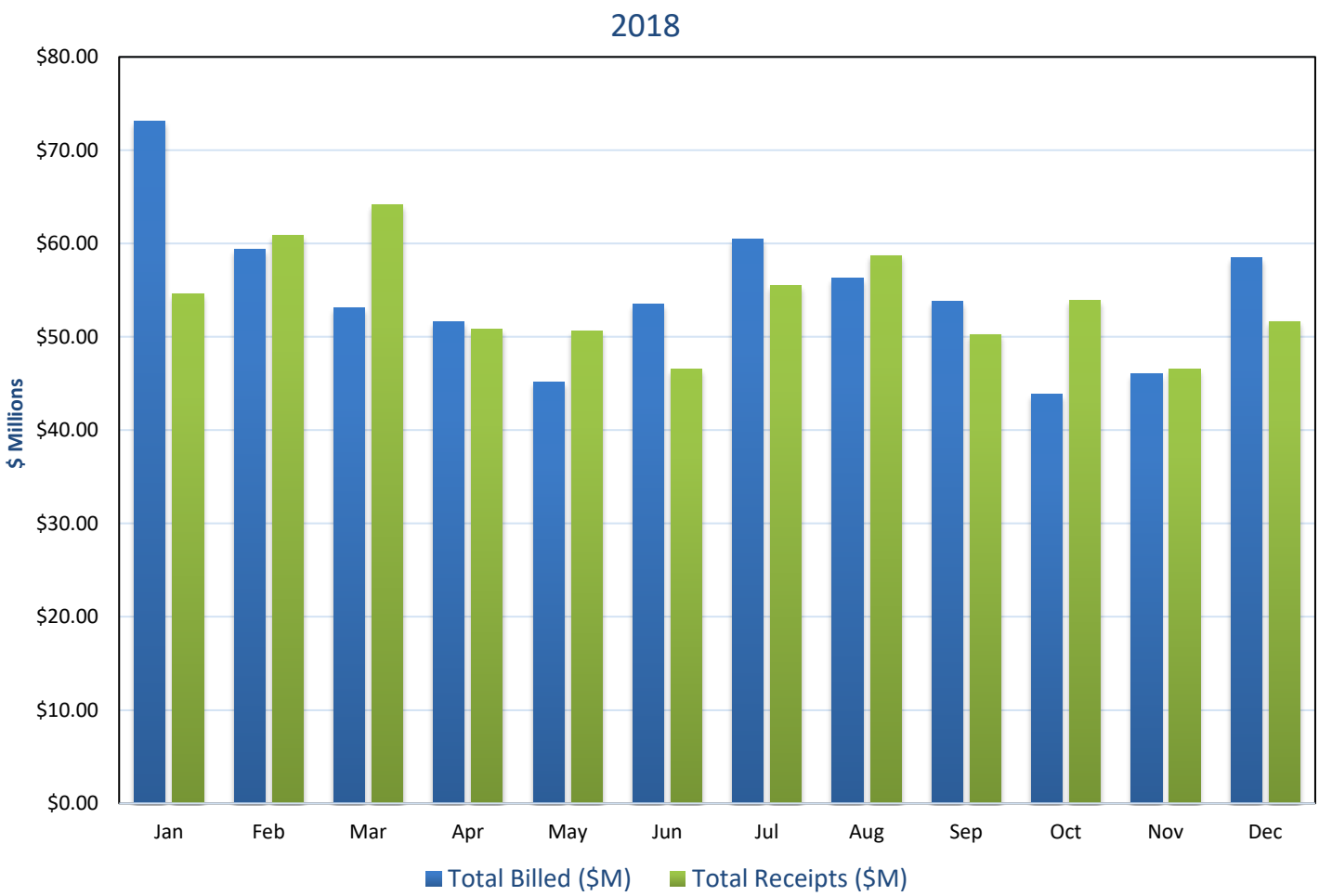
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	440,808	440,496	440,289	440,278	439,709	439,696	439,853	439,880	440,343	440,862	441,684	443,184

This chart shows the total number of Residential Accounts by month.

Residential Accounts: Total Billed vs. Total Receipts (Tier 1 Metric)

This chart shows IPL residential accounts total billed vs. total receipts by month.

Figure 44. Residential Accounts: Total Billed vs. Total Receipts ($M)



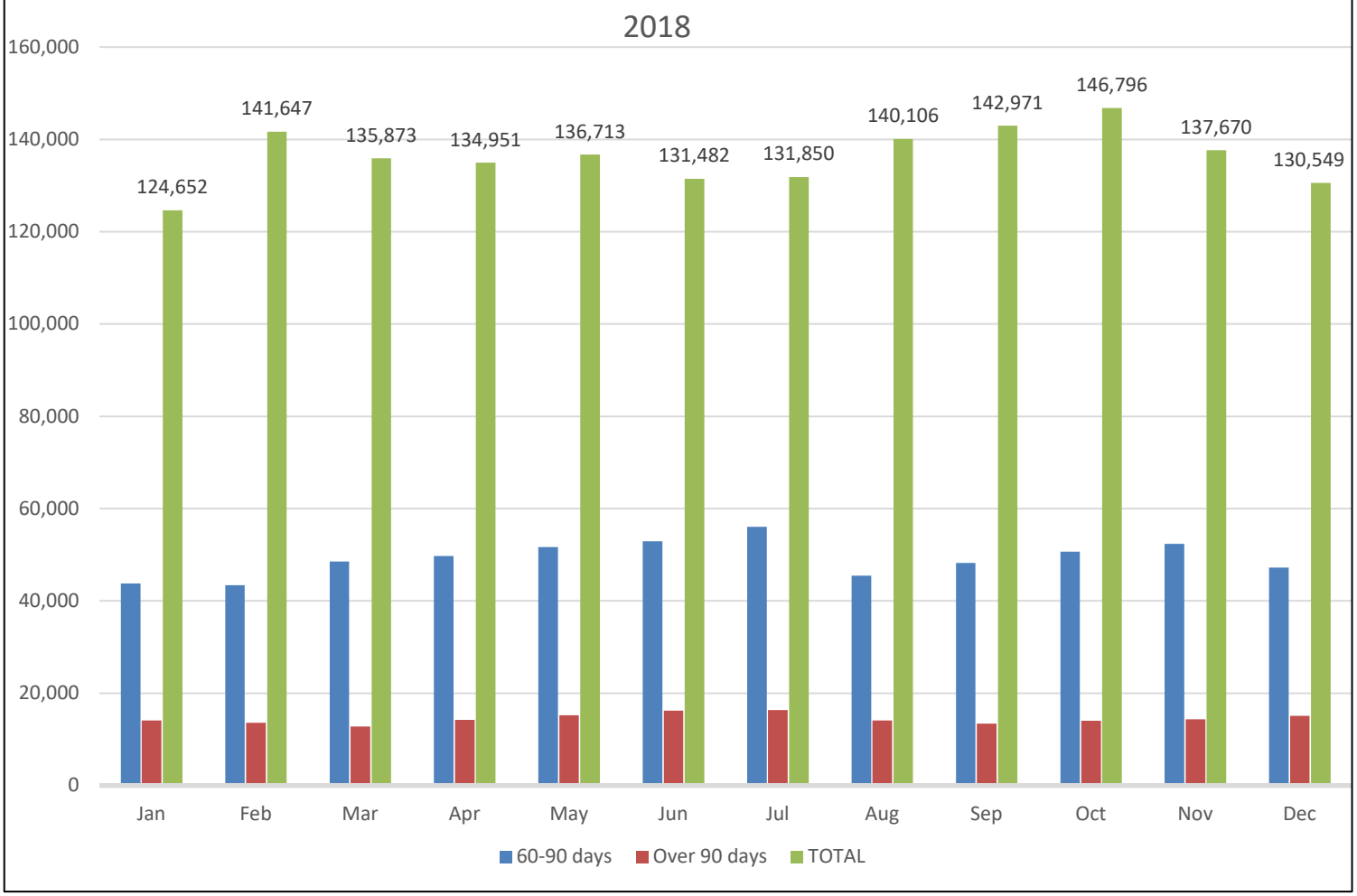
2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Billed ($M):	$73.069	$59.394	$53.150	$51.632	$45.117	$53.477	$60.496	$56.306	$53.820	$43.868	$46.059	$58.501
Receipts ($M):	$54.637	$60.899	$64.147	$50.835	$50.589	$46.510	$55.476	$58.738	$50.259	$53.936	$46.566	$51.658

This chart shows the monthly total billed vs. total receipts (in $M) for residential accounts.

Residential: No. of Unpaid Accounts (Tier 1 Metric)

This chart shows the number of residential unpaid accounts 60-90 days, 90+ days, and total by month

Figure 45. Residential: No. of Unpaid Accounts



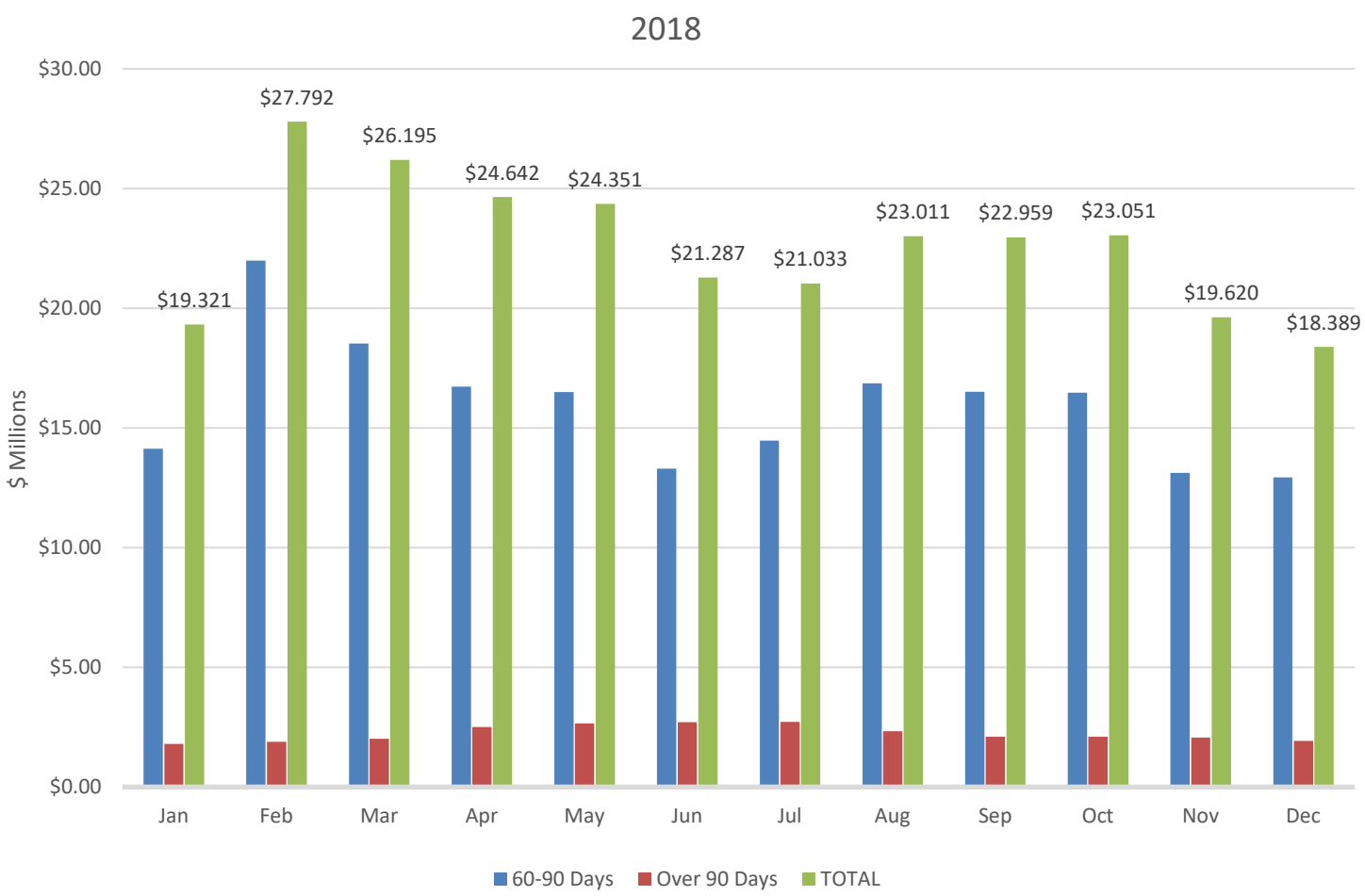
2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
60-90 days	43,807	43,410	48,544	49,718	51,647	52,944	56,060	45,467	48,244	50,662	52,364	47,213
Over 90 days	14,091	13,618	12,756	14,245	15,220	16,228	16,359	14,116	13,379	14,025	14,326	15,065
TOTAL	124,652	141,647	135,873	134,951	136,713	131,482	131,850	140,106	142,971	146,796	137,670	130,549

This chart shows the monthly total number of Residential unpaid accounts. NOTE: The "60-90 days" customer count includes the "over 90 days" accounts.

Residential: Dollar Value of Unpaid Accounts (Tier 1 Metric)

This chart shows the dollar value of residential unpaid accounts 60-90 days, 90+ days, and total by month

Figure 46. Residential: Dollar Value ($M) of Unpaid Accounts



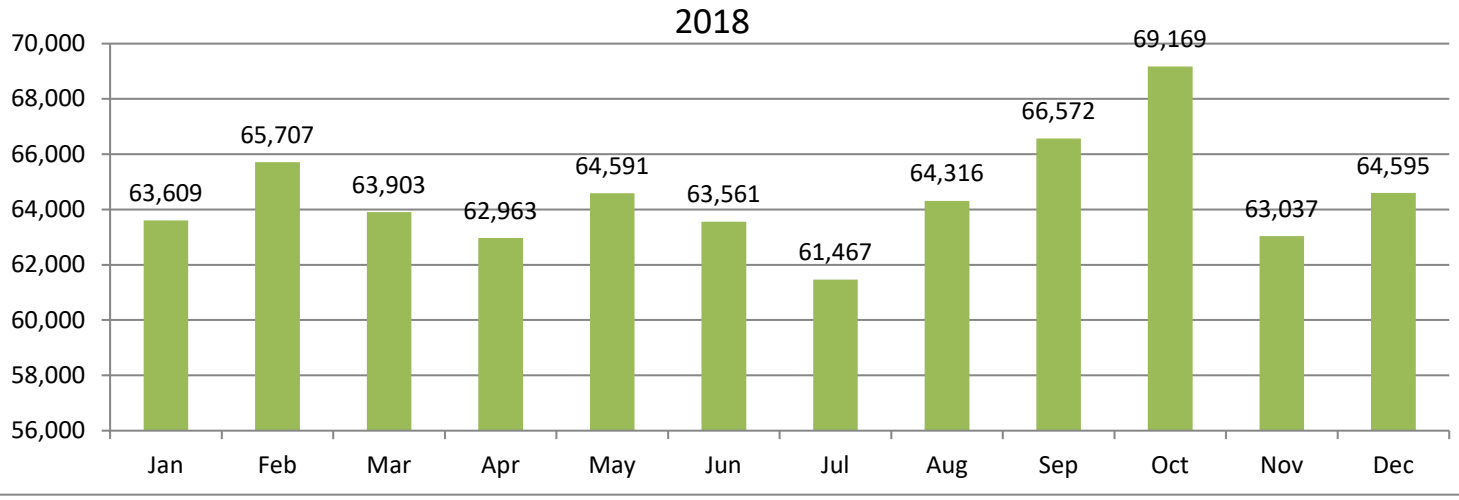
2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
60-90 Days	$14.136	$21.983	$18.519	$16.722	$16.502	$13.295	$14.472	$16.862	$16.513	$16.470	$13.126	$12.938
Over 90 Days	$1.800	$1.892	$2.017	$2.500	$2.655	$2.702	$2.714	$2.332	$2.098	$2.103	$2.063	$1.922
TOTAL	$19.321	$27.792	$26.195	$24.642	$24.351	$21.287	$21.033	$23.011	$22.959	$23.051	$19.620	$18.389

This chart shows the monthly total dollar value (in $M) of Residential unpaid accounts. NOTE: The "60-90 days" customer count includes the "over 90 days" accounts.

Residential Accounts Sent Notice of Disconnection for Non-payment (Tier 1 Metric)

This chart shows the number of IPL accounts sent notices for disconnection by month. Notices are sent for bills past 30 days due or greater.

Figure 47. Residential Accounts Sent Notice of Disconnection for Non-payment



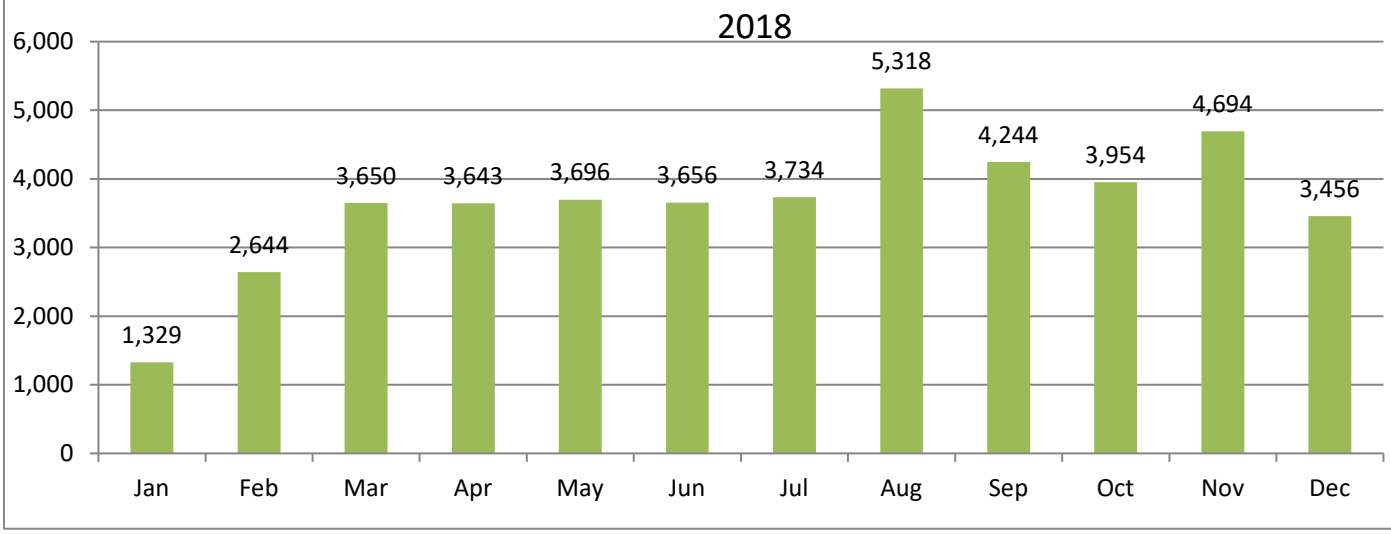
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	63,609	65,707	63,903	62,963	64,591	63,561	61,467	64,316	66,572	69,169	63,037	64,595

This chart shows the monthly number of residential accounts sent notices of disconnection for non-payment. Notices are sent for bills 30 days past due or greater.

Residential: No. of Service Disconnections for Non-Payment (Tier 1 Metric)

This chart shows the number of residential service disconnections for non-payment by month.

Figure 48. Residential Service Disconnections for Non-Payment



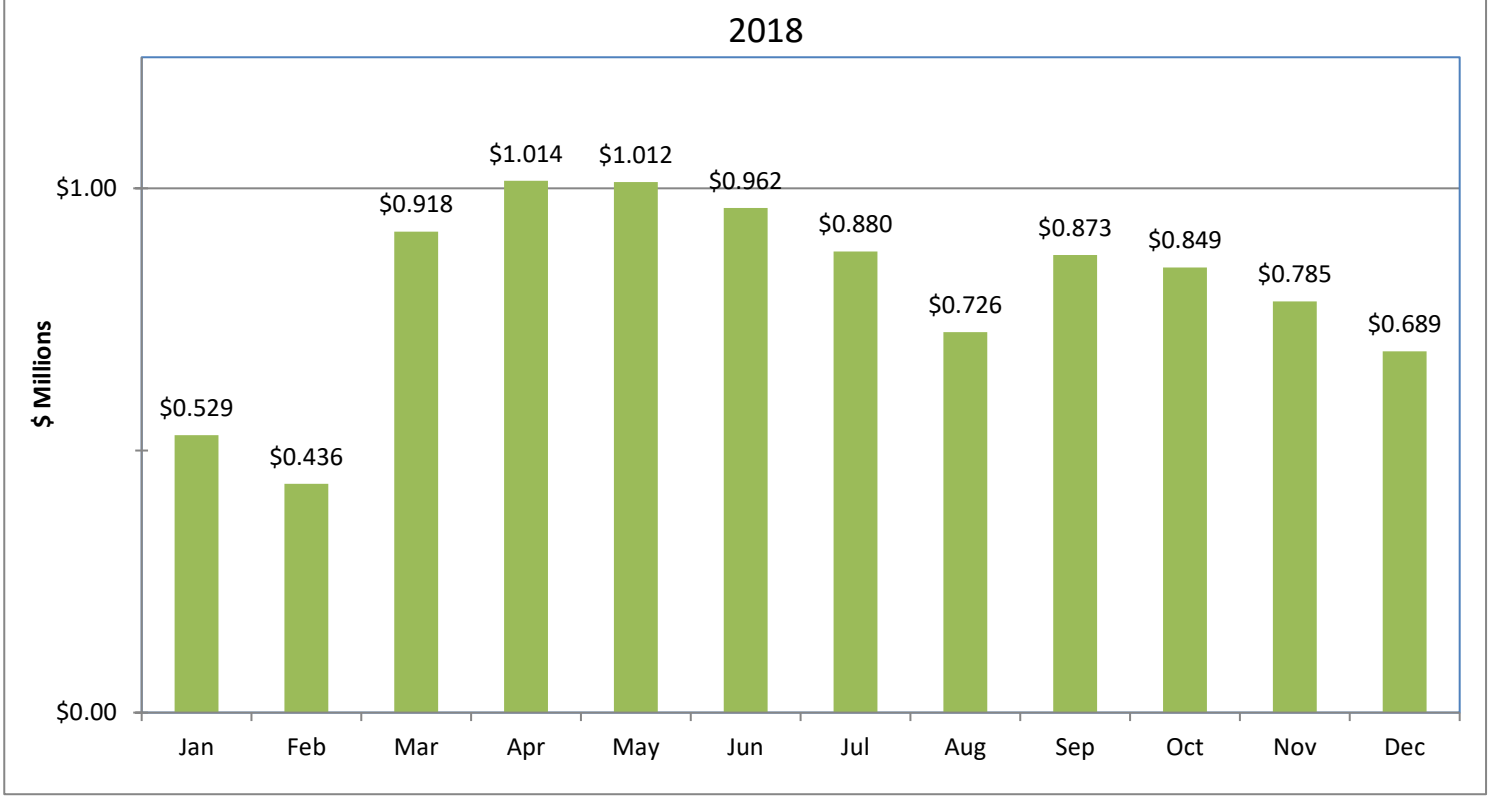
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	1,329	2,644	3,650	3,643	3,696	3,656	3,734	5,318	4,244	3,954	4,694	3,456

This chart shows the monthly number of Residential service disconnections for non-payment.

Residential: Dollar Value of Accounts Written Off as "Uncollectible" (Tier 1 Metric)

This chart shows, by month, the dollar value of IPL residential accounts written off as "uncollectible".

Figure 49. Dollar Value ($M) of Residential Accounts Written Off as "Uncollectible"



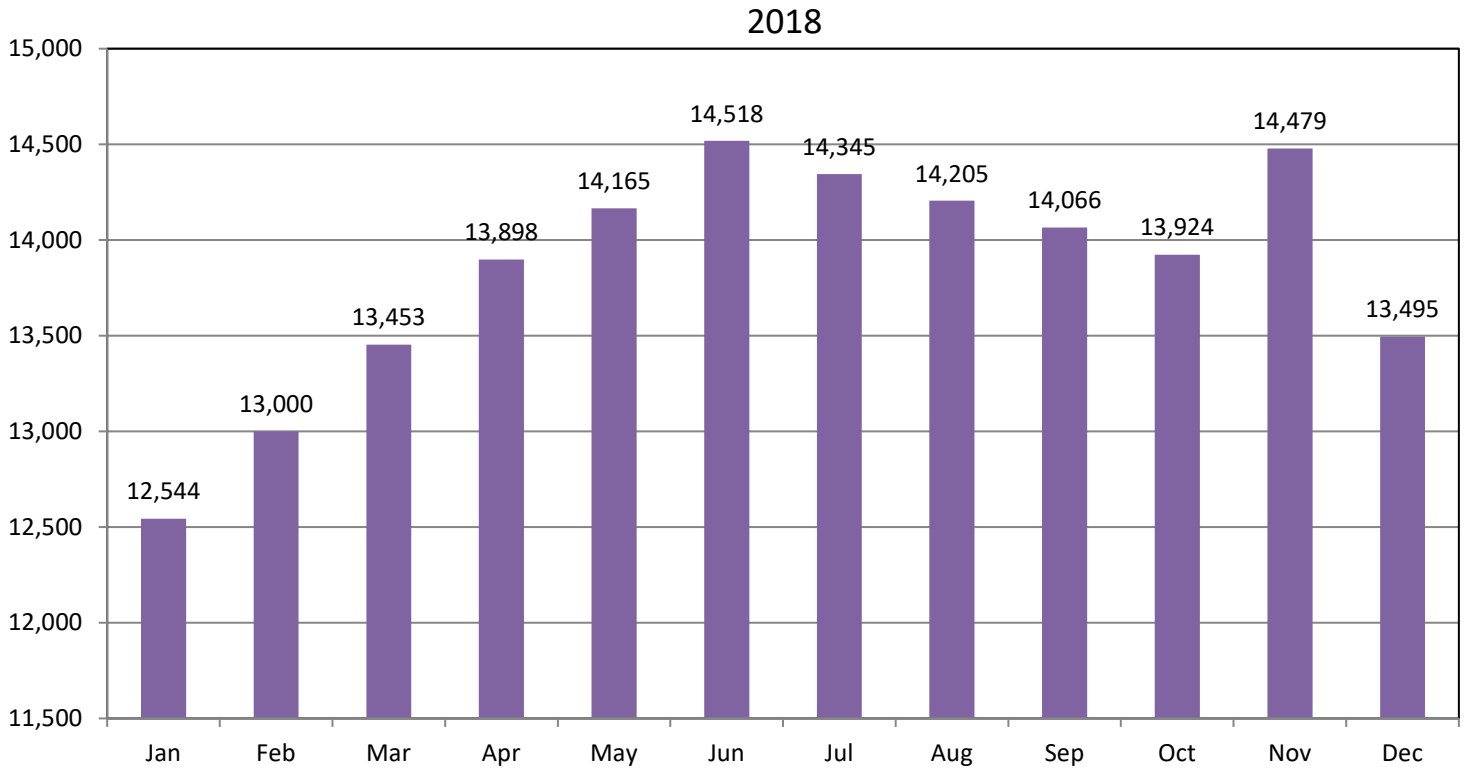
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	$0.529	$0.436	$0.918	$1.014	$1.012	$0.962	$0.880	$0.726	$0.873	$0.849	$0.785	$0.689

This chart shows the monthly dollar value (in $M) of Residential accounts written off as "uncollectible".

Number of LIHEAP (or comparable program) Accounts (Tier 1 Metric)

This chart shows the number of IPL accounts known to be in LIHEAP (or comparable program) by month.

Figure 50. Accounts in LIHEAP (or Comparable Program) by Month



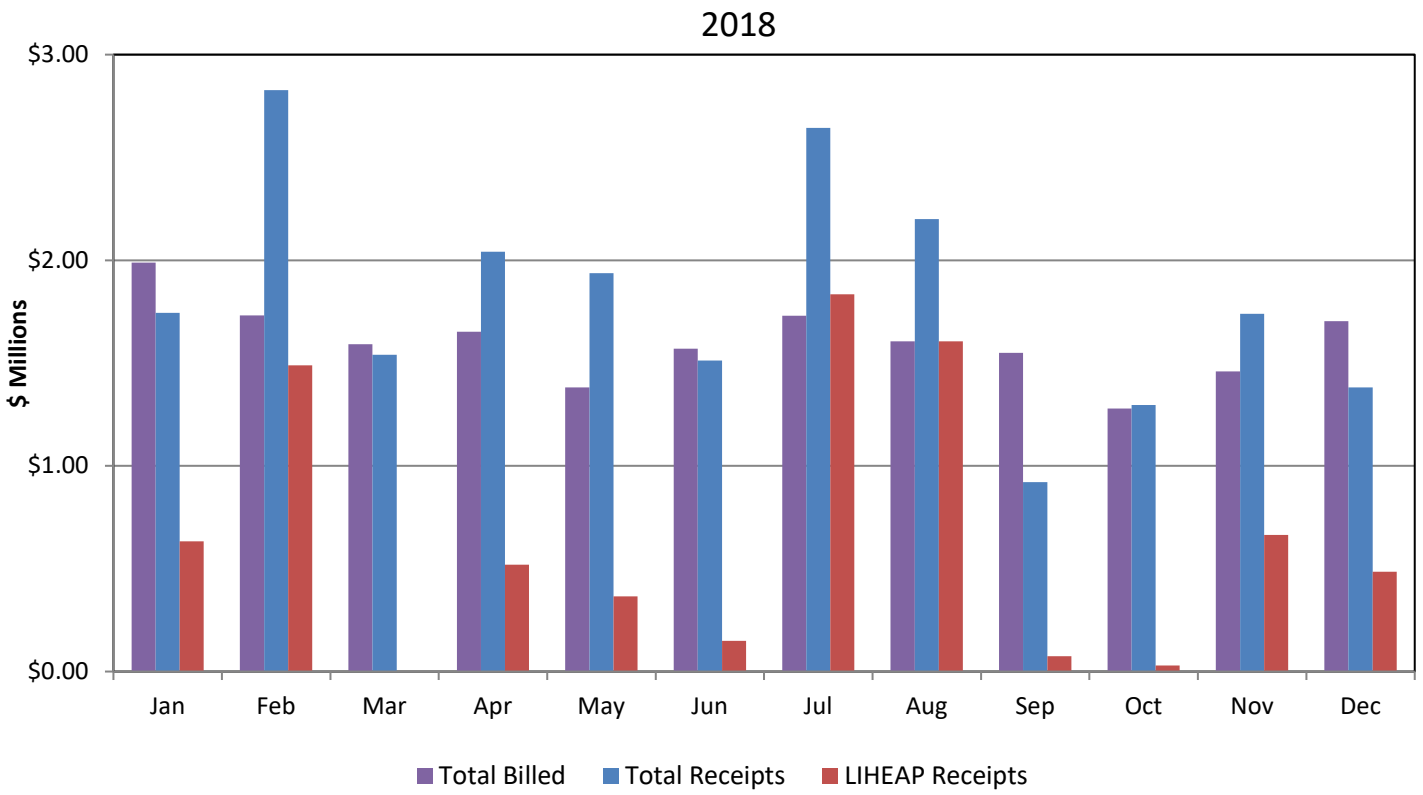
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	12,544	13,000	13,453	13,898	14,165	14,518	14,345	14,205	14,066	13,924	14,479	13,495

For more consistent comparisons, LIHEAP accounts were determined each month by counting the number of active accounts that had received LIHEAP assistance within that month or the 11 months prior. For example, the number of LIHEAP accounts in July, 2018 of 14,345 is the number of accounts that received LIHEAP during the time period of August, 2017 through July, 2018.

LIHEAP Participants: Total Billed, Total Receipts, Receipts Paid by LIHEAP (or comparable program) (Tier 1 Metric)

For LIHEAP (or comparable program) participants, this chart shows the Total Billed, Total Receipts, and Total Paid by LIHEAP by month.

Figure 51. LIHEAP Participants: $M Total Billed, Total Receipts, Paid by LIHEAP (or comparable program) by Month



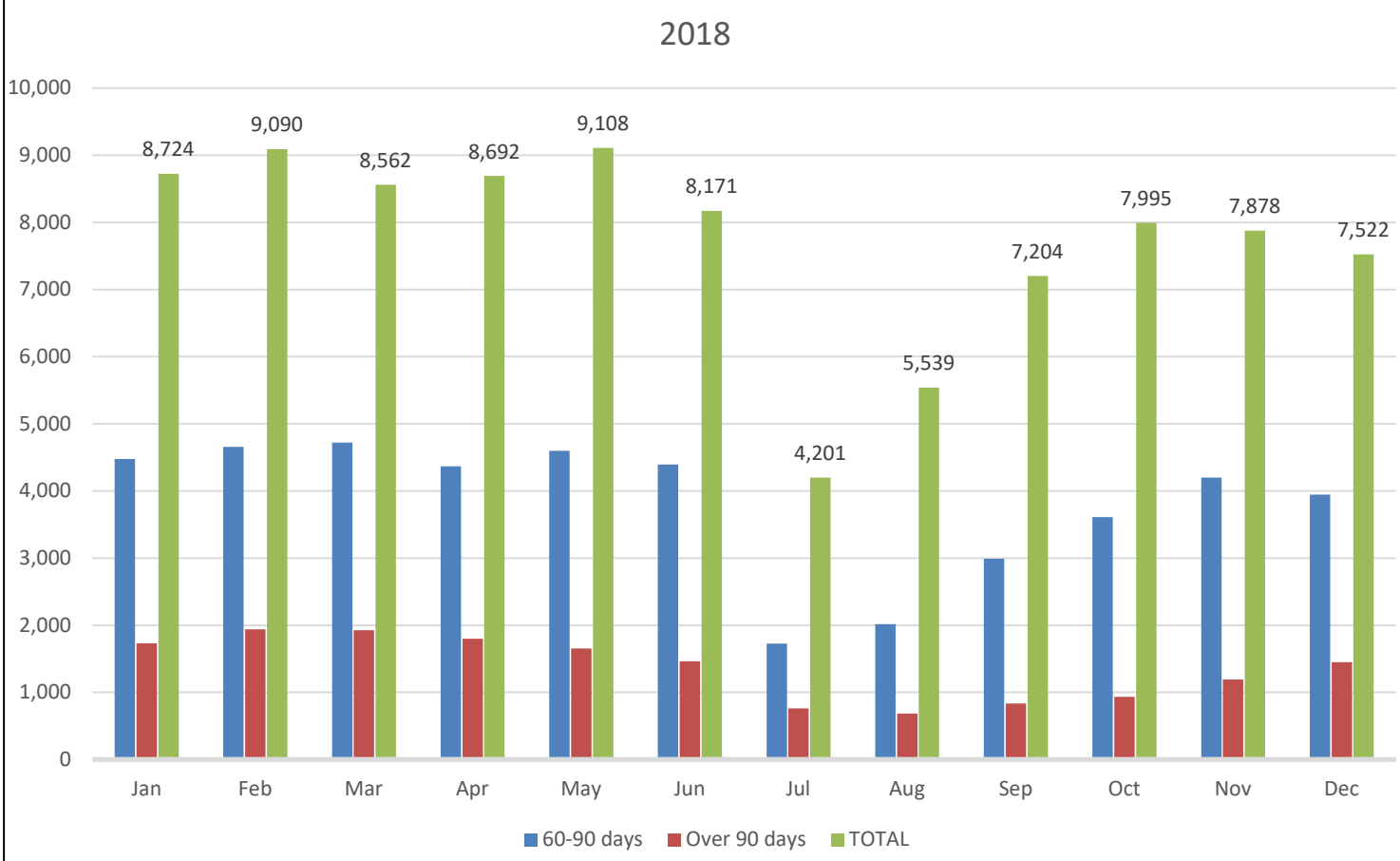
2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total Billed	$1.9880	$1.7319	$1.5911	$1.6524	$1.3823	$1.5692	$1.7306	$1.6060	$1.5496	$1.2795	$1.4595	$1.7045
Total Receipts	$1.7446	$2.8267	$1.5401	$2.0414	$1.9369	$1.5124	$2.6432	$2.2007	$0.9204	$1.2967	$1.7401	$1.3812
LIHEAP Receipts	$0.6330	$1.4890	$0.0000	$0.5191	$0.3653	$0.1491	$1.8338	$1.6058	$0.0750	$0.0287	$0.6639	$0.4855

LIHEAP Receipts are payments made from LIHEAP only.
Total receipts include standard payments, as well as payments from LIHEAP and all other forms of assistance.

LIHEAP Participants: No. of Unpaid Accounts (Tier 1 Metric)

For LIHEAP (or comparable program) Participants, this chart shows the number of unpaid accounts 60-90 days, 90+ days, and total by month

Figure 52. LIHEAP Participants: No. of Unpaid Accounts



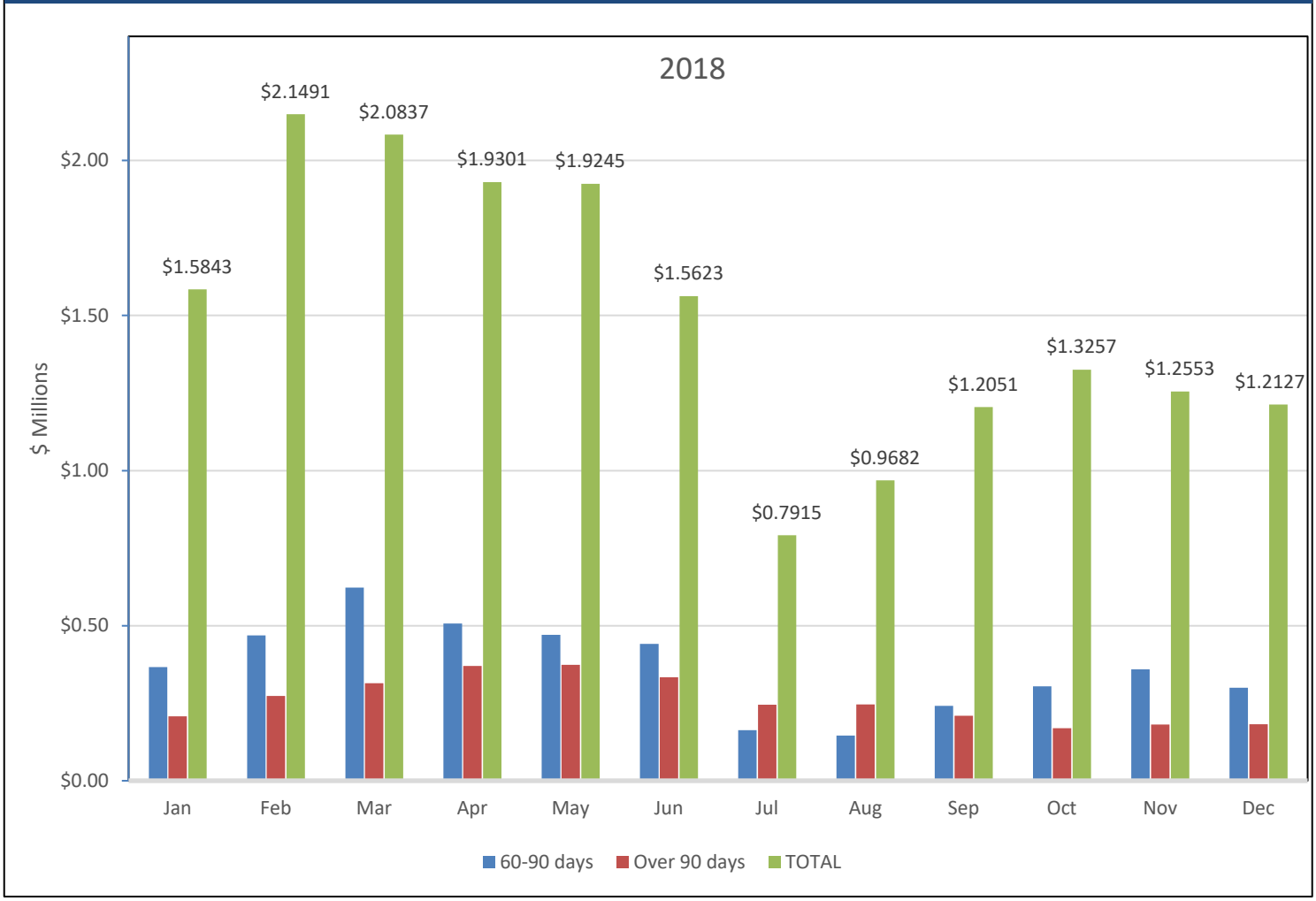
LIHEAP Participants: No. of Unpaid Accounts: 60-90 days, 90+ days, Total#												
2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
60-90 days	4,475	4,657	4,718	4,369	4,600	4,393	1,728	2,017	2,989	3,609	4,201	3,947
Over 90 days	1,732	1,941	1,925	1,797	1,654	1,465	763	686	834	933	1,190	1,450
TOTAL	8,724	9,090	8,562	8,692	9,108	8,171	4,201	5,539	7,204	7,995	7,878	7,522

This chart shows, for LIHEAP participants, the monthly number of unpaid accounts. NOTE: The "60-90 days" customer count includes the "over 90 days" accounts.

LIHEAP (or comparable program) Participants: Dollar Value of Unpaid Accounts (Tier 1 Metric)

For LIHEAP (or comparable program) participants, this chart shows the dollar value of unpaid accounts 60-90 days, 90+ days, and total by month

Figure 53 . LIHEAP Participants: Dollar Value ($M) of Unpaid Accounts



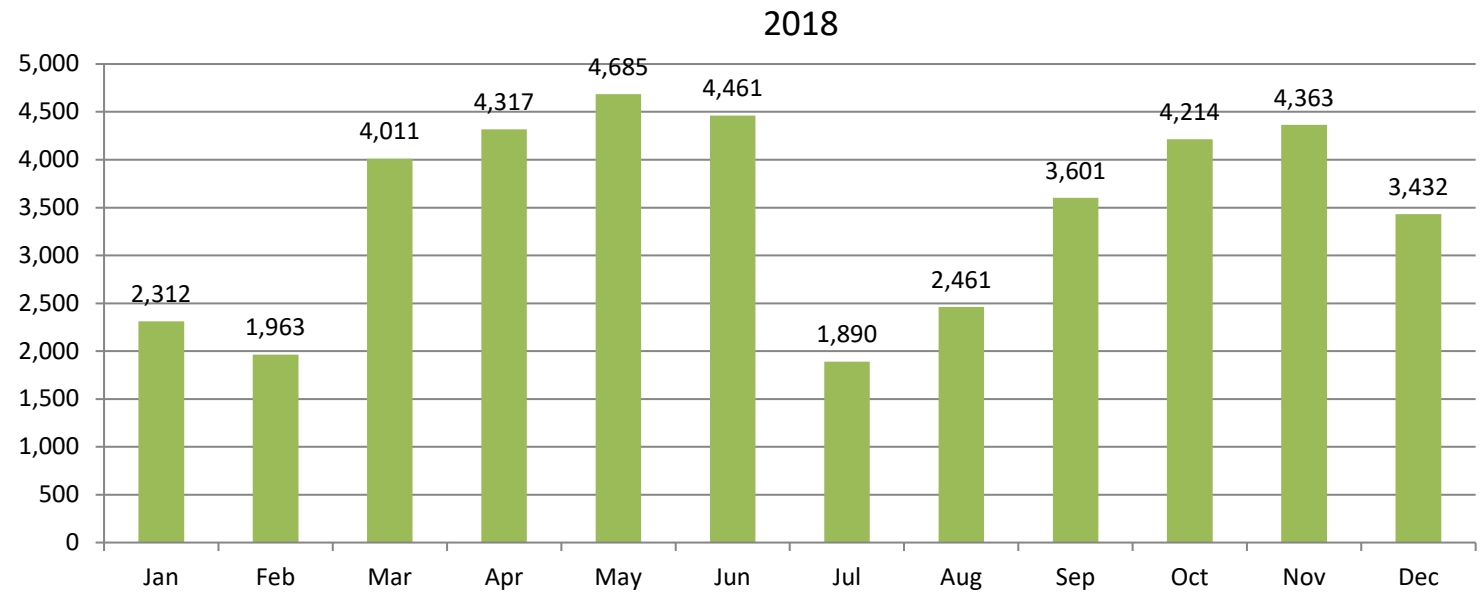
2018	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
60-90 days	$0.3664	$0.4684	$0.6230	$0.5071	$0.4709	$0.4410	$0.1626	$0.1456	$0.2414	$0.3042	$0.3590	$0.3001
Over 90 days	$0.2077	$0.2731	$0.3141	$0.3697	$0.3740	$0.3335	$0.2450	$0.2460	$0.2093	$0.1694	$0.1813	$0.1824
TOTAL	$1.5843	$2.1491	$2.0837	$1.9301	$1.9245	$1.5623	$0.7915	$0.9682	$1.2051	$1.3257	$1.2553	$1.2127

This chart shows, for LIHEAP participants, the monthly dollar value (in $M) of unpaid accounts. NOTE: The "60-90 days" customer count includes the "over 90 days" accounts.

LIHEAP Participants: No. of Accounts Sent Notice of Disconnection for Non-payment (Tier 1 Metric)

For LIHEAP (or comparable program) Participants, this chart shows the number of accounts sent notices for disconnection by month. Notices are sent for bills past 30 days due or greater.

Figure 54. LIHEAP Participants: Accounts Sent Notice of Disconnection for Non-payment



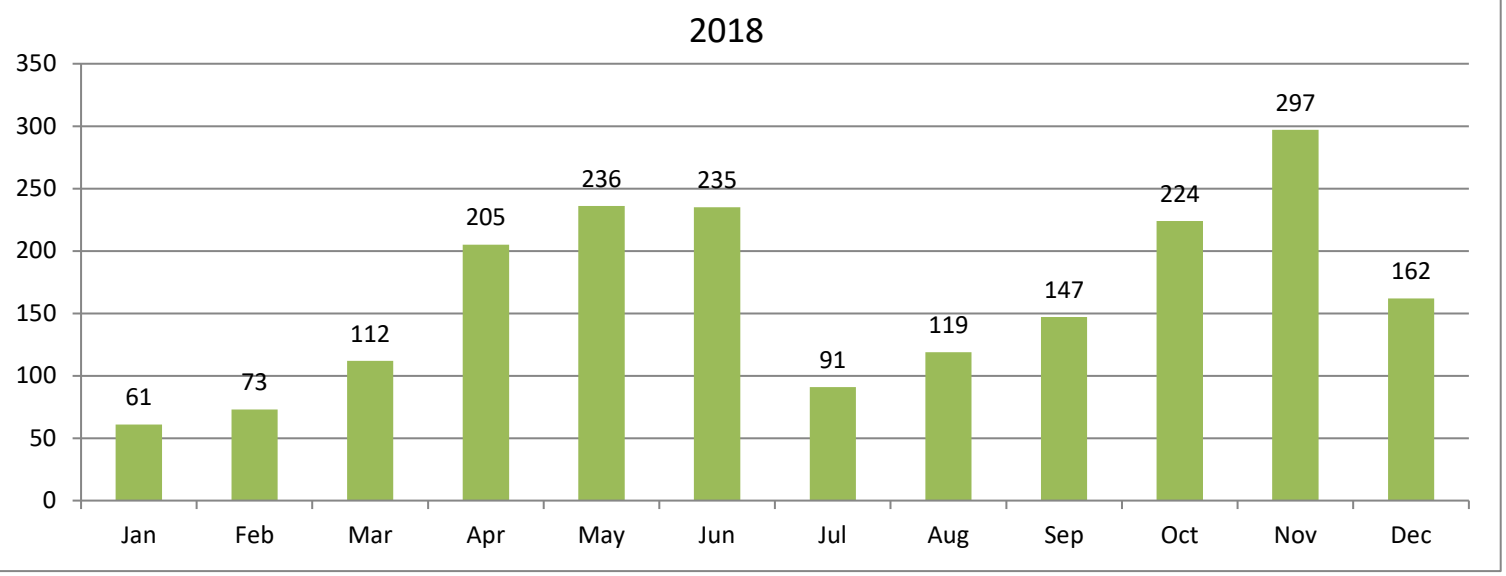
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	2,312	1,963	4,011	4,317	4,685	4,461	1,890	2,461	3,601	4,214	4,363	3,432

This chart shows, for LIHEAP partcipants, the monthly number of accounts sent notices of disconnection for non-payment. Notices are sent for bills 30 days past due or greater.

LIHEAP Participants: No. of Service Disconnections for Non-Payment (Tier 1 Metric)

For LIHEAP (or comparable program) Participants, this chart shows the number of service disconnections for non-payment by month.

Figure 55. LIHEAP Participants: Service Disconnections for Non-Payment



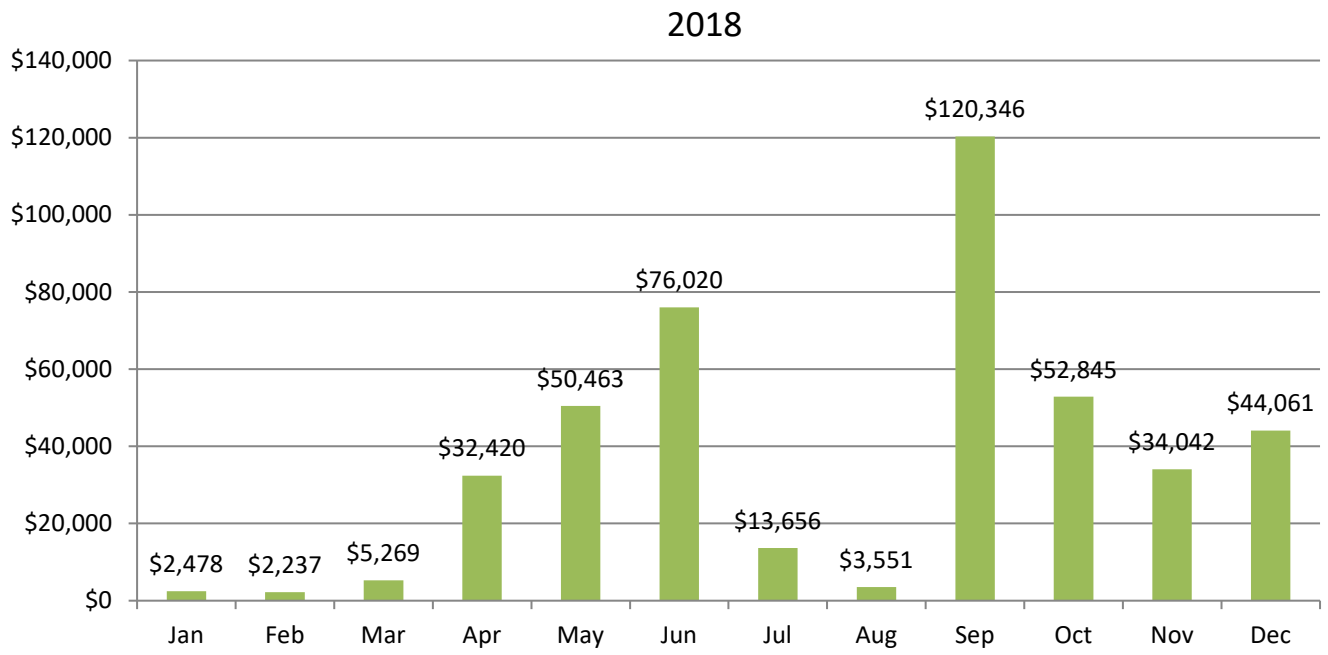
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	61	73	112	205	236	235	91	119	147	224	297	162

IPL does adhere to the IAC rule regarding seasonal disconnection suspension for LIHEAP accounts.
Based on how LIHEAP accounts are determined (refer to Figure 50), accounts could have been disconnected prior to being approved for LIHEAP in the current assistance year or they could have applied for and received LIHEAP assistance in the prior assistance year but didn't apply in the current assistance year, making them eligible for disconnection (but still included in the calculated LIHEAP account metric).

LIHEAP Participants: Dollar Value of Accounts Written Off as "Uncollectible" (Tier 1 Metric)

For LIHEAP (or comparable program) participants, this chart shows, by month, the dollar value of accounts written off as "uncollectible".

Figure 56. LIHEAP Participants: Dollar Value of Accounts Written Off as "Uncollectible"



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2018	$2,478	$2,237	$5,269	$32,420	$50,463	$76,020	$13,656	$3,551	$120,346	$52,845	$34,042	$44,061

This chart shows, for LIHEAP participants, the monthly dollar value of accounts written off as "uncollectible".

IPL Downtown Network Commitment Gantt Chart Narrative Summary
Updated as of February 28, 2019

Indianapolis Power & Light Company (IPL) prepared a Gantt chart in 2011 which has been used to track the status of various commitments made to the Indiana Utility Regulatory Commission regarding its Downtown Network system. IPL further provides the Commission with updates to the Gantt chart on an annual basis. As new commitments were made, they were added to the Gantt chart for tracking purposes.

Below is a narrative of the commitments and their respective status. IPL has previously provided the Commission with detailed reports on completed commitments. For items that remain open, additional detail is provided in this update to reflect progress through February 28, 2019.

1. **2011 O'Neill Downtown Network Assessment Recommendations**
   All Items are complete

2. **Center Substation Event**
   All items are complete

3. **150 E Market Street Event**
   All items are complete

4. **26 S. Meridian Street Event**
   a. Recurring Items
      i. Provide Annual Progress Reports through 2018[1] – Complete
      ii. 480 Volt Network Protector Replacements, scheduled 2018 completion – Complete
      iii. Quarterly Reporting to the Commission through 2018 – Complete
      iv. Meet Annually with Indianapolis Fire Department – On Going
   b. All Other Items are complete

5. **327 E New York Street Event**
   No specific action items from this event

6. **428 Massachusetts Avenue Event**
   All Items are complete

[1] With the completion of the 480-volt network protector change out program in December 2017, a full year early, IPL has proposed that the annual Update Status Report for 2017 be the final status report as there are no open commitments from RCA reports issued in 2014 and 2015 to report on.

7. North Street Event

All Items are complete

8. Other Initiatives

a. Monitor Duct Line Temperature Pilot – Complete

In 2016, IPL began a pilot project to use fiber optic cable to provide real-time temperature monitoring in the duct lines and manholes adjacent to or crossing Citizens Energy steam lines. This system provides temperature readings for every meter along the fiber cable route and provides alarming capabilities. Initially, 6,800 feet of fiber cable was installed for the pilot. Results were very promising on use of this cutting-edge application of technology. The pilot was able to detect a steam anomaly as it developed. This allowed IPL to work with Citizens Energy to mitigate the anomaly quickly to limit risk and potential damage to IPL power cables and duct system. IPL provided a detailed presentation of the Digital Temperature Sensing (DTS) pilot at the August 2016 Collaborative meeting, which included IURC Staff, the OUCC, and other IPL stakeholders. Periodic updates were provided at subsequent Collaborative meetings.

In the 4th quarter of 2016, IPL installed an additional 30,000 feet of fiber optic cable to expand the area being monitored. Three additional fiber circuits were added along with an additional digital monitoring device to increase the redundancy of the system. The three new circuits cover areas east and north of Monument Circle, and additional areas around the Convention Center and the State Capitol buildings. Calibration of the new circuits took place in January and February 2017. The new circuits were placed in-service in February 2017.

In 2018, IPL was scheduled to install another 30,000 feet of fiber optic cable to further expand the area being monitored. Three additional fiber circuits will be added, and this will provide IPL monitoring of all the areas in downtown Indianapolis where IPL power cables and duct system co-exist with Citizens Energy steam lines. This work was deferred while we investigated proof of concept for the Digital Acoustical System (DAS). The DAS uses the same fiber cable and would allow us to monitor sounds in the manholes and duct lines.

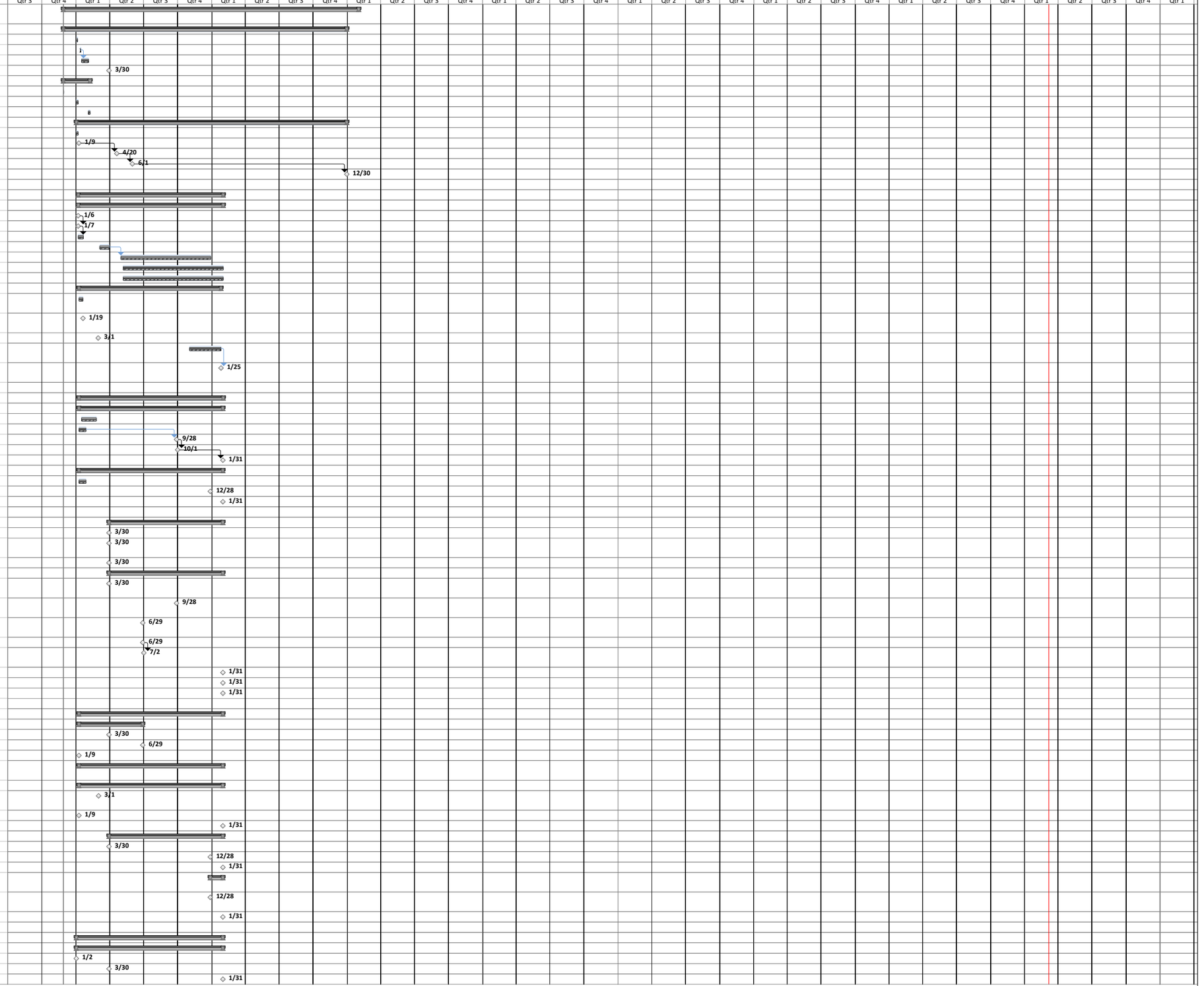
b. Increase robustness of the CBD SCADA system – *Complete*

This initiative involved adding two additional Gateway Vaultgards to reduce the number of vaults connected to a single Gateway Vault Relay. Both new Gateway Vaultgards were installed in conjunction with a new spot network vault. This work split two of the existing SCADA circuits into four circuits. The work was completed in March 2017.

c. Implement Asset Life Cycle Plans

The status of the various Asset Life Cycle Plans has been added to the Gantt Chart for tracking purposes. There are 19 Asset Life Cycle Plans that are being tracked. Thirteen of the plans are complete and have been implemented. There are an additional six plans that are carrying over to 2019. Progress has been made on the plans but they are not ready to publish.

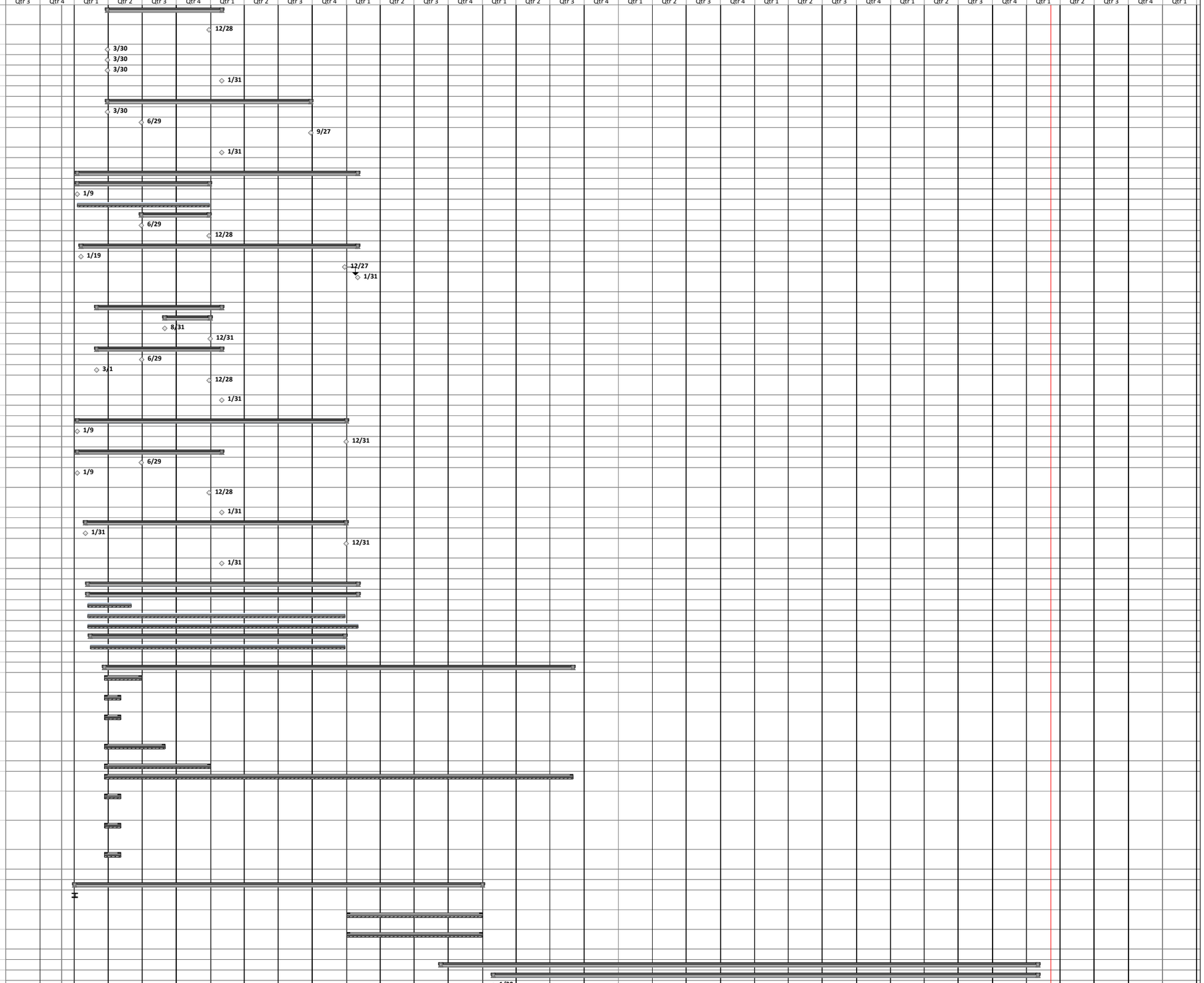
ID		Task Name	% Complete	Start	Finish	Comments
1	✓	**O'Neill Indepenent Assessment of DnTn UG Network**	**100%**	**Mon 11/28/11**	**Fri 1/31/14**	
2	✓	**Rec. 1 - Coordination w/CTE**	**100%**	**Mon 11/28/1**	**Mon 12/30/**	
3	✓	Meeting Between IPL & Citizens	100%	Wed 1/4/12	Wed 1/4/12	
4	✓	Citizens Provide Thermal Survey Data	100%	Fri 1/13/12	Fri 1/13/12	
5	✓	Create New GIS Map	100%	Mon 1/16/12	Fri 2/3/12	
6	✓	Citizen to Provide 2012 Survey Data	100%	Fri 3/30/12	Fri 3/30/12	
7	✓	**1A & B-Identify Hot Manholes**	**100%**	**Mon 11/28/1**	**Tue 2/7/12**	
8	✓	Identify Hot Manholes	100%	Mon 11/28/1	Mon 11/28/	
9	✓	Inspect Hot Manholes After CTE Repairs	100%	Mon 1/2/12	Fri 1/6/12	
10	✓	Monthly Citizens Report	100%	Fri 2/3/12	Tue 2/7/12	
11	✓	**1C - Laboratory Analysis**	**100%**	**Mon 1/2/12**	**Mon 12/30/**	
12	✓	Collect Samples	100%	Mon 1/2/12	Fri 1/6/12	
13	✓	Send Samples to lab	100%	Mon 1/9/12	Mon 1/9/12	
14	✓	Receive Lab Results	100%	Fri 4/20/12	Fri 4/20/12	
15	✓	Determine Criteria for Replacing Cables	100%	Fri 6/1/12	Fri 6/1/12	
16	✓	Replace cables as warranted	100%	Mon 12/30/1	Mon 12/30/	
17						
18	✓	**Rec. 2 - Enhanced Inspections**	**100%**	**Fri 1/6/12**	**Thu 1/31/13**	
19	✓	**2A - Improved Inspection Process**	**100%**	**Fri 1/6/12**	**Thu 1/31/13**	
20	✓	New Inspection Form	100%	Fri 1/6/12	Fri 1/6/12	
21	✓	Train Field Crews on New Form	100%	Sat 1/7/12	Sat 1/7/12	
22	✓	Begin Inspections w/New Form	100%	Sat 1/7/12	Fri 1/20/12	
23	✓	Tablet Computers for Field Trial	100%	Mon 3/5/12	Fri 3/30/12	
24	✓	2012 Inspection under New Process	100%	Tue 5/1/12	Fri 12/28/12	
25	✓	IPL Quality Inspection Audits	100%	Mon 5/7/12	Thu 1/31/13	
26	✓	Third Party Quality Inspection Audits	100%	Mon 5/7/12	Thu 1/31/13	
27	✓	**2B - Repairs Identified from Inspections**	**100%**	**Mon 1/9/12**	**Fri 1/25/13**	
28	✓	Schedule Repairs - Off Cycle January Inspection	100%	Mon 1/9/12	Thu 1/19/12	
29	✓	Complete Repairs - Off Cycle January Inspection	100%	Thu 1/19/12	Thu 1/19/12	
30	✓	Implement Service Level Indicators	100%	Thu 3/1/12	Thu 3/1/12	
31	✓	Schedule Repairs - 2012 Inspection Program	100%	Fri 11/2/12	Fri 1/25/13	
32	✓	Complete Repairs - 2012 Inspection Program	100%	Fri 1/25/13	Fri 1/25/13	
33						
34	✓	**Rec. 3 - Material Standards**	100%	**Mon 1/9/12**	**Thu 1/31/13**	
35	✓	**3A - Termination Chamber Change to Elbows**	**100%**	**Mon 1/9/12**	**Wed 1/30/1**	
36	✓	Revise Network Transformer Specification	100%	Mon 1/16/12	Fri 2/24/12	
37	✓	Revised Construction Standards Drawings	100%	Mon 1/9/12	Fri 1/27/12	
38	✓	Modify existing stock units	100%	Fri 9/28/12	Fri 9/28/12	
39	✓	Modified units available for installation	100%	Mon 10/1/12	Mon 10/1/1	
40	✓	Report on Installation of Modified Units	100%	Thu 1/31/13	Thu 1/31/13	
41	✓	**3B - Install Deflector Shield**	**100%**	**Mon 1/9/12**	**Wed 1/30/1**	
42	✓	Revised Construction Standards	100%	Mon 1/9/12	Fri 1/27/12	
43	✓	Install Additional Locations for Installation	100%	Fri 12/28/12	Fri 12/28/12	
44	✓	Report on Installation of Progress	100%	Thu 1/31/13	Thu 1/31/13	
45						
46	✓	**Rec. 4 - Network Protectors & Transformers**	**100%**	**Fri 3/30/12**	**Thu 1/31/13**	
47	✓	**4A - Protectors with Aluminum Bus**	**100%**	**Fri 3/30/12**	**Fri 3/30/12**	
48	✓	Finalize Potential Locations of Protectors with AL Bus	100%	Fri 3/30/12	Fri 3/30/12	
49	✓	Sample 33% of Possible Units with AL Bus	100%	Fri 3/30/12	Fri 3/30/12	
50	✓	**4B - Protectors with Water Ingress**	**100%**	**Fri 3/30/12**	**Thu 1/31/13**	
51	✓	Begin Inspecting & Pressure Test Protectors with AL Bus	100%	Fri 3/30/12	Fri 3/30/12	
52	✓	Complete Toluene Gas Testing of Network Protectors	100%	Fri 9/28/12	Fri 9/28/12	
53	✓	Develop Repair Plan from Inspection Results	100%	Fri 6/29/12	Fri 6/29/12	
54	✓	Revised Protector Venting Practice	100%	Fri 6/29/12	Fri 6/29/12	
55	✓	Begin Repair/Replace Protectors based on New Criteria	100%	Mon 7/2/12	Mon 7/2/12	
56	✓	Report on Progress	100%	Thu 1/31/13	Thu 1/31/13	
57	✓	**4C - Transformer & Protector Replacements**	**100%**	**Thu 1/31/13**	**Thu 1/31/13**	
58	✓	Continue Current Practice & Report Progress	100%	Thu 1/31/13	Thu 1/31/13	
59						
60	✓	**Rec. 5 - Asset Management Procedures**	**100%**	**Mon 1/9/12**	**Thu 1/31/13**	
61	✓	**5A - Failure Analysis Process**	**100%**	**Mon 1/9/12**	**Fri 6/29/12**	
62	✓	Load Jan.-July 2011 Data into DB	100%	Fri 3/30/12	Fri 3/30/12	
63	✓	Update RCA Procedures	100%	Fri 6/29/12	Fri 6/29/12	
64	✓	Notify IURC of Reportable Events	100%	Mon 1/9/12	Mon 1/9/12	
65	✓	**5B - Resource Planning for Maint. & Equip.. Replacement**	**100%**	**Mon 1/9/12**	**Thu 1/31/13**	
66	✓	**5A - Asset Management Staffing**	**100%**	**Mon 1/9/12**	**Thu 1/31/13**	
67	✓	Hire New Asset Mgmt. Engineer (In Progress)	100%	Thu 3/1/12	Thu 3/1/12	
68	✓	Continue use of Consultant	100%	Mon 1/9/12	Mon 1/9/12	
69	✓	Report Progress	100%	Thu 1/31/13	Thu 1/31/13	
70	✓	**5B - Fault Analysis Process**	**100%**	**Fri 3/30/12**	**Thu 1/31/13**	
71	✓	Add JAN-AUG 2011 Data to the Database	100%	Fri 3/30/12	Fri 3/30/12	
72	✓	Integrate with Ivara Asset Mgmt System	100%	Fri 12/28/12	Fri 12/28/12	
73	✓	Report Progress	100%	Thu 1/31/13	Thu 1/31/13	
74	✓	**5C -Condition Based Equipment Replacement Process**	**100%**	**Fri 12/28/12**	**Thu 1/31/13**	
75	✓	Complete Development of Criteria and Process	100%	Fri 12/28/12	Fri 12/28/12	
76	✓	Report Progress	100%	Thu 1/31/13	Thu 1/31/13	
77						
78	✓	**Rec. 6 - Technology Improvements**	100%	**Mon 1/2/12**	**Thu 1/31/13**	
79	✓	**6A - Tablet Computers**	**100%**	**Mon 1/2/12**	**Thu 1/31/13**	
80	✓	Purchase Devices	100%	Mon 1/2/12	Mon 1/2/12	
81	✓	Program Device & Begin Field Trials	100%	Fri 3/30/12	Fri 3/30/12	
82	✓	Report on Progress	100%	Thu 1/31/13	Thu 1/31/13	



Project: 2014 Action Plan Schedul
Date: Thu 3/7/19

Task | Milestone | Project Summary | External Milestone | Inactive Milestone | Manual Task | Manual Summary Rollup | Start-only | Deadline | Baseline Milestone | Progress
Split | Summary | External Tasks | Inactive Task | Inactive Summary | Duration-only | Manual Summary | Finish-only | Baseline | Baseline Summary

ID	Task Name	% Complete	Start	Finish	Comments
83	**6B - Integrate Tablet Computers with Rec. 1, 2, and 5**	**100%**	**Fri 3/30/12**	**Thu 1/31/13**	
84	Make GIS data available on Tablet	100%	Fri 12/28/12	Fri 12/28/12	Not feasible on tablet, deploying laptop with maps by end of 2016
85	Rec. 1 Integration Plan	100%	Fri 3/30/12	Fri 3/30/12	
86	Rec. 2 Integration Plan	100%	Fri 3/30/12	Fri 3/30/12	
87	Rec. 5 Integration Plan	100%	Fri 3/30/12	Fri 3/30/12	
88	Report on Progress	100%	Thu 1/31/13	Thu 1/31/13	
89					
90	**Rec. 7 - SCADA Project**	100%	**Fri 3/30/12**	**Fri 9/27/13**	
91	Complete Update of Deployment Plan	100%	Fri 3/30/12	Fri 3/30/12	
92	Complete Identification of Users	100%	Fri 6/29/12	Fri 6/29/12	
93	Complete User Training & Final Business Practices	100%	Fri 9/27/13	Fri 9/27/13	
94	Report on Progress	100%	Thu 1/31/13	Thu 1/31/13	
95					
96	**Rec. 8 - Small scale Technology**	100%	**Mon 1/9/12**	**Fri 1/31/14**	
97	**8A - Thermal Imaging**	**100%**	**Mon 1/9/12**	**Fri 12/28/12**	
98	Acquire Additional Cameras	100%	Mon 1/9/12	Mon 1/9/12	
99	Use for with 2012 Inspections	100%	Mon 1/9/12	Fri 12/28/12	
100	**8B - Fault Direction Indicators**	**100%**	**Fri 6/29/12**	**Fri 12/28/12**	
101	Issue Purchase Order	100%	Fri 6/29/12	Fri 6/29/12	
102	Install Indicators	100%	Fri 12/28/12	Fri 12/28/12	
103	**8C - Swiveloc Manhole Covers**	**100%**	**Thu 1/19/12**	**Fri 1/31/14**	
104	Complete Initial Installations	100%	Thu 1/19/12	Thu 1/19/12	
105	Complete Evaluation of Effectiveness	100%	Fri 12/27/13	Fri 12/27/13	
106	Issue Recommendation for Additional Covers	100%	Fri 1/31/14	Fri 1/31/14	
107					
108	**Rec. 9 - GIS Mapping & Network Modeling**	100%	**Thu 3/1/12**	**Thu 1/31/13**	
109	**9A - Develop Mapping Products**	**100%**	**Fri 8/31/12**	**Mon 12/31/**	
110	GIS Secondary Network Model	100%	Fri 8/31/12	Fri 8/31/12	
111	Verify Data	100%	Mon 12/31/1	Mon 12/31/	
112	**9B - Develop CYME Models**	**100%**	**Thu 3/1/12**	**Thu 1/31/13**	
113	Complete Creation of Network Models	100%	Fri 6/29/12	Fri 6/29/12	
114	Contact Other CYME Users	100%	Thu 3/1/12	Thu 3/1/12	
115	Complete Analysis of the Secondary Network with CYME	100%	Fri 12/28/12	Fri 12/28/12	
116	Report on Progress	100%	Thu 1/31/13	Thu 1/31/13	
117					
118	**Rec. 10 - DGA & Flame Retardant Fluid**	100%	**Mon 1/9/12**	**Tue 12/31/1**	
119	Rec. 10 - DGA & Flame Retardant Fluid	100%	Mon 1/9/12	Mon 1/9/12	
120	Rec. 10 - DGA & Flame Retardant Fluid	100%	Tue 12/31/1	Tue 12/31/1	
121	**10A - Re-Evaluate DGA Testing**	**100%**	**Mon 1/9/12**	**Thu 1/31/13**	
122	Incorporate into Asset Mgmt Process	100%	Fri 6/29/12	Fri 6/29/12	
123	Begin DGA Testing of Network Transformers	100%	Mon 1/9/12	Mon 1/9/12	
124	Modify Re-Test Cycle based on Test Results	100%	Fri 12/28/12	Fri 12/28/12	
125	Report on Progress	100%	Thu 1/31/13	Thu 1/31/13	
126	**10B - Fire Retardant Fluids**	**100%**	**Tue 1/31/12**	**Tue 12/31/1**	
127	Purchase FR3 Fluid	100%	Tue 1/31/12	Tue 1/31/12	
128	Complete Retro-Fill of Termination Chambers with FR3	100%	Tue 12/31/13	Tue 12/31/13	
129	Report on Progress	100%	Thu 1/31/13	Thu 1/31/13	
130					
131	**O'Neill Management Consulting Oversight**	100%	**Mon 2/6/12**	**Fri 1/31/14**	
132	**Progress Meetings**	**100%**	**Mon 2/6/12**	**Fri 1/31/14**	
133	Weekly Conference Calls	100%	Mon 2/6/12	Fri 6/1/12	
134	Monthly Review of Progress	100%	Mon 2/6/12	Fri 12/27/13	
135	Annual Review of Progress	100%	Mon 2/6/12	Fri 1/31/14	
136	**Technical Discussions**	**100%**	**Mon 2/13/12**	**Fri 12/27/13**	
137	Schedule as Needed	100%	Mon 2/13/12	Fri 12/27/13	
138					
139	**CENTER SUB EVENT**	100%	**Thu 3/22/12**	**Mon 8/31/1**	**RCA 3-22-15, Response 5-4-12**
140	Establish formal infrared and ductor criteria to trigger maint. Priorities	100%	Thu 3/22/12	Fri 6/29/12	
141	Improve readability of circuit bkr monthly operation spreadsheet	100%	Thu 3/22/12	Fri 5/4/12	
142	Create review process to ck for outstanding maint before issuing maint cycling order to Sys Ops	100%	Thu 3/22/12	Fri 5/4/12	
143	Develop plan to return primary relaying to normal operations	100%	Thu 3/22/12	Fri 8/31/12	
144	Improve documentation of Sub maint records	100%	Thu 3/22/12	Mon 12/31/	
145	Fully utilize automated asset mgmt tools specifically designed for substation maint.	100%	Thu 3/22/12	Mon 8/31/15	
146	Allocate resources and implement tools to assure that sub maint activity is adequately tracked and prioritized efficiently	100%	Thu 3/22/12	Fri 5/4/12	
147	Implement a procedure to track all work sched. Delays and ordering of parts to avoid delays in req. maint of equip.	100%	Thu 3/22/12	Fri 5/4/12	
148	Document process for field data review and subsequent work flows	100%	Thu 3/22/12	Fri 5/4/12	
149					
150	**150 E. MARKET EVENT**	**100%**	**Mon 1/2/12**	**Wed 12/31/**	
151	Continue MH inspections noting condition of cable jacket	100%	Mon 1/2/12	Mon 1/2/12	
152	Continue installation and review of Swiveloc MH Covers	100%	Thu 1/2/14	Wed 12/31/14	
153	Install Swiveloc locking MH covers on Mkt St from the Circle to Alabama St	100%	Thu 1/2/14	Wed 12/31/14	
154					
155	**26 S. MERIDIAN ST. EVENT - OCT 2014**		**Wed 9/10/14**	**Thu 1/31/19**	
156	**Annual Progress Report**		**Fri 1/30/15**	**Thu 1/31/19**	
157	2014	100%	Fri 1/30/15	Fri 1/30/15	



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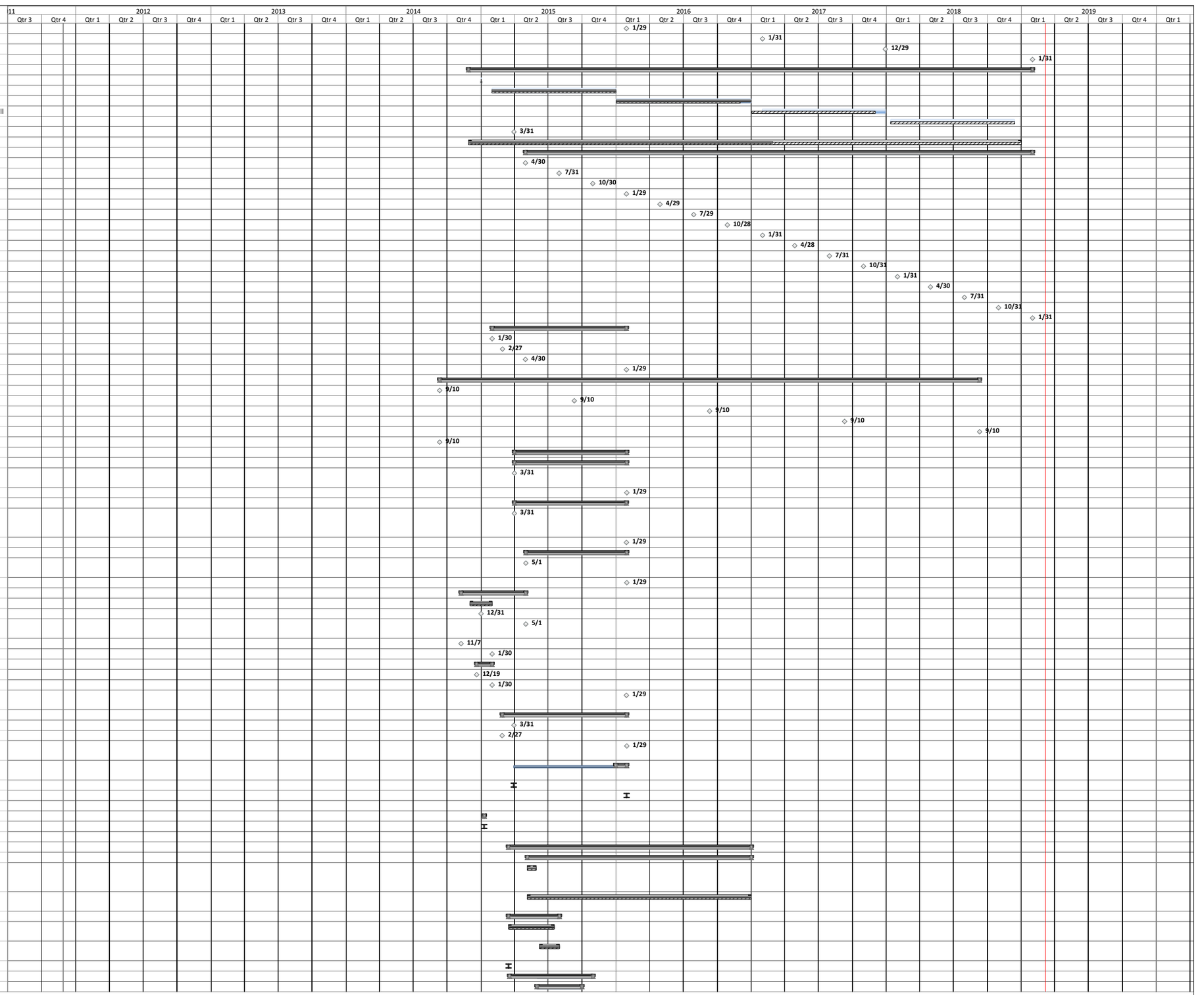
ID		Task Name	% Complete	Start	Finish	Comments
158	✓	2015	100%	Fri 1/29/16	Fri 1/29/16	
159	✓	2016	100%	Tue 1/31/17	Tue 1/31/17	
160		2017		Fri 12/29/17	Fri 12/29/17	
161		2018		Thu 1/31/19	Thu 1/31/19	
162		**Rec. 1 - Replace 480 Volt NWP**	**100%**	**Fri 11/28/14**	**Thu 1/31/19**	**137 of 137 replaced**
163	✓	2014 Replacements (2)	100%	Wed 12/31/14	Thu 1/1/15	1 unit replaced
164	✓	2015 Replacements (35)	155%	Fri 1/30/15	Thu 12/31/15	62 units replaced
165	✓	2016 Replacements (35)	100%	Fri 1/1/16	Fri 12/30/16	14 Installed March/April, 1 installed Nov.
166		2017 Replacements (35)	187%	Mon 1/30/17	Fri 12/29/17	30 units replaced Spring, 26 units replaced Fall
167		2018 Replacements (30)	NA	Fri 1/12/18	Thu 12/13/18	All units replace by end of 2017
168	✓	Customer Meetings	100%	Tue 3/31/15	Tue 3/31/15	
169		Monthly Schedule Review	100%	Fri 11/28/14	Mon 12/31/18	All units replace by end of 2017
170		**Quarterly Update Report to Commission**		**Thu 4/30/15**	**Thu 1/31/19**	
171	✓	1Q/2015	100%	Thu 4/30/15	Thu 4/30/15	
172	✓	2Q/2015	100%	Fri 7/31/15	Fri 7/31/15	
173	✓	3Q/2015	100%	Fri 10/30/15	Fri 10/30/15	
174	✓	4Q/2015	100%	Fri 1/29/16	Fri 1/29/16	
175	✓	1Q/2016	100%	Fri 4/29/16	Fri 4/29/16	
176	✓	2Q/2016	100%	Fri 7/29/16	Fri 7/29/16	
177	✓	3Q/2016	100%	Fri 10/28/16	Fri 10/28/16	
178	✓	4Q/2016	100%	Tue 1/31/17	Tue 1/31/17	
179		1Q/2017	100%	Fri 4/28/17	Fri 4/28/17	
180		2Q/2017	100%	Mon 7/31/17	Mon 7/31/17	
181		3Q/2017	100%	Tue 10/31/17	Tue 10/31/17	
182		4Q/2017	100%	Wed 1/31/18	Wed 1/31/18	
183		1Q/2018	NA	Mon 4/30/18	Mon 4/30/18	
184		2Q/2018	NA	Tue 7/31/18	Tue 7/31/18	
185		3Q/2018	NA	Wed 10/31/18	Wed 10/31/18	
186		4Q/2018	NA	Thu 1/31/19	Thu 1/31/19	
187	✓	**Rec. 2: - Network Event Response Plan**	**100%**	**Fri 1/30/15**	**Fri 1/29/16**	
188	✓	Written Draft Plan	100%	Fri 1/30/15	Fri 1/30/15	
189	✓	Final Plan	100%	Fri 2/27/15	Fri 2/27/15	
190	✓	Tabletop Drill	100%	Thu 4/30/15	Thu 4/30/15	
191	✓	Recap Tabletop Drill - Report to Commission	100%	Fri 1/29/16	Fri 1/29/16	
192		**Rec. 3 - Meeting with IFD**		**Wed 9/10/14**	**Mon 9/10/18**	
193	✓	2014 Annual Meeting	100%	Wed 9/10/14	Wed 9/10/14	
194	✓	2015 Annual Meeting	100%	Thu 9/10/15	Thu 9/10/15	
195	✓	2016 Annual Meeting	100%	Sat 9/10/16	Sat 9/10/16	
196		2017 Annual Meeting	100%	Sun 9/10/17	Sun 9/10/17	
197		2018 Annual Meeting		Mon 9/10/18	Mon 9/10/18	
198	✓	Assign On-Scene Incident Commander	100%	Wed 9/10/14	Wed 9/10/14	
199	✓	**Rec. 4 - Mitigation Strategy**	**100%**	**Tue 3/31/15**	**Fri 1/29/16**	
200	✓	**Network Feeder Breaker Relay**	**100%**	**Tue 3/31/15**	**Fri 1/29/16**	
201	✓	Study Relay Settings for fault detection improvements and develop action plan	100%	Tue 3/31/15	Tue 3/31/15	
202	✓	Include Status in 2016 Annual Report	100%	Fri 1/29/16	Fri 1/29/16	
203	✓	**Fire Detection System**		**Tue 3/31/15**	**Fri 1/29/16**	
204	✓	Review options and issue recommendation report to IPL Management	100%	Tue 3/31/15	Tue 3/31/15	
205	✓	Include Status in 2016 Annual Report	100%	Fri 1/29/16	Fri 1/29/16	
206	✓	**FR3 Insulating Fluid (Main Transformer)**		**Fri 5/1/15**	**Fri 1/29/16**	
207	✓	Review benefits and issue recommendation to IPL Management	100%	Fri 5/1/15	Fri 5/1/15	
208	✓	Include Status in 2016 Annual Report	100%	Fri 1/29/16	Fri 1/29/16	
209	✓	**Rec. 5 - Gateway Vault Comm Review**	**100%**	**Fri 11/7/14**	**Fri 5/1/15**	
210	✓	Daily Telemetry Error Report	100%	Mon 12/1/14	Fri 1/30/15	
211	✓	Operating Procedure for Telemetry Errors	100%	Wed 12/31/14	Wed 12/31/14	
212	✓	Report to IPL Mgmt on Alt. Routing of SCADA Wiring for Heat Protection	100%	Fri 5/1/15	Fri 5/1/15	
213	✓	Network SCADA Information Metric	100%	Fri 11/7/14	Fri 11/7/14	
214	✓	Report Annual Availability Metric	100%	Fri 1/30/15	Fri 1/30/15	
215	✓	**Rec. 6 - Enhanced NWP Inspections**	**100%**	**Fri 12/19/14**	**Fri 1/30/15**	
216	✓	Inspect pre-1985 West. CM-22 Units	100%	Fri 12/19/14	Fri 12/19/14	
217	✓	Issue Inspection Summary Report	100%	Fri 1/30/15	Fri 1/30/15	
218	✓	**Rec. 7 - Succession Plan Summary Update in Annual Report**	100%	Fri 1/29/16	Fri 1/29/16	
219	✓	**Rec. 8 - Training**	**100%**	**Fri 2/27/15**	**Fri 1/29/16**	
220	✓	Attend EATON Electrical Network Sys. Conf.	100%	Tue 3/31/15	Tue 3/31/15	
221	✓	Attend EATON NWP Maint. Training	100%	Fri 2/27/15	Fri 2/27/15	
222	✓	Include Summary of Conf. Attended in Status Report	100%	Fri 1/29/16	Fri 1/29/16	
223	✓	**Rec. 9 - Report on Inspecton and Work Order Audit**		**Thu 12/31/15**	**Fri 1/29/16**	
224	✓	Audit WO	100%	Mon 3/30/15	Mon 3/30/15	
225	✓	Issue Report to Commission	100%	Fri 1/29/16	Fri 1/29/16	
226						
227	✓	**327 E. NY EVENT**	**100%**	**Fri 1/9/15**	**Fri 1/9/15**	
228	✓	No specific Action items	100%	Fri 1/9/15	Fri 1/9/15	
229						
230	✓	**428 MASS. AVE. EVENT**		**Mon 3/16/15**	**Sat 12/31/16**	
231	✓	**Edison and Gardner Lane Subs**		**Wed 5/6/15**	**Sat 12/31/16**	
232	✓	Investigate engineering methods which will result in a reduction of the primary phase to ground fault current	100%	Wed 5/6/15	Fri 5/29/15	
233	✓	Install digital relay protection on the Edison and Gardner Lane Underground feeders	100%	Wed 5/6/15	Sat 12/31/16	
234	✓	**Other**		**Mon 3/16/15**	**Fri 7/31/15**	
235	✓	Perform lab test to determine cause of elect. flashover	100%	Mon 3/16/15	Fri 7/17/15	
236	✓	Corrective actions resulting from lab test results	100%	Mon 6/8/15	Fri 7/31/15	
237	✓			Mon 3/16/15	Mon 3/16/15	
238	✓	**NORTH STREET EVENT**		**Thu 3/19/15**	**Fri 10/30/15**	
239	✓	**Tier 1**		**Mon 6/1/15**	**Wed 9/30/15**	



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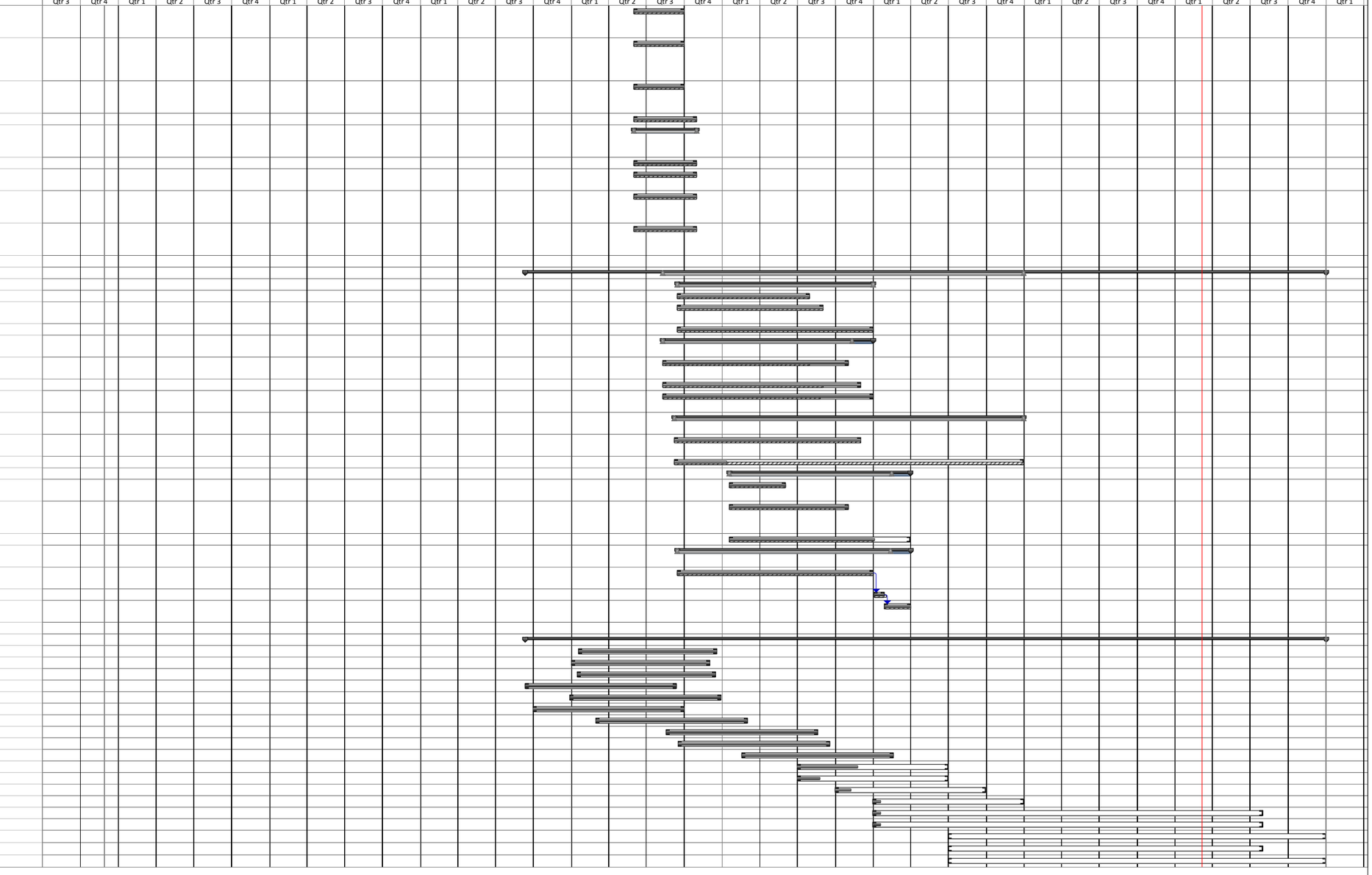
ID		Task Name	% Complete	Start	Finish	Comments
240	✓	Evaluate available high temp jacket material for primary and secondary cables & change IPL cable spec as appropriate	100%	Mon 6/1/15	Wed 9/30/15	
241	✓	Review downtown network sys for other locations where elect duct banks with a large cross section of cables cross or run parallel in close prox of steam lines	100%	Mon 6/1/15	Wed 9/30/15	
242	✓	Perform duct bank temp surveys at steam crossings and where running parallel to IPL facilities	100%	Mon 6/1/15	Wed 9/30/15	
243	✓	Tier 2	100%	Mon 6/1/15	Fri 10/30/15	
244	✓	**Remove cable for exam of thermal damage from ducts where elevated temp found or historically observed**		**Mon 6/1/15**	**Fri 10/30/15**	
245	✓	Replace cables as warranted	100%	Mon 6/1/15	Fri 10/30/15	
246	✓	Based on temp survey findings and cable exam develop Asset Mgmy strategy	100%	Mon 6/1/15	Fri 10/30/15	
247	✓	Remove and analyze bus support insulators from collector bus at 114 W North St vault to determine if damaged	100%	Mon 6/1/15	Fri 10/30/15	
248	✓	Develop prgm to inspect integrity of bus support insulators during routine vault inspections	100%	Mon 6/1/15	Fri 10/30/15	
249						
250		**OTHER INITIATIVES**		**Thu 9/11/14**	**Tue 12/31/1**	
251	✓	**Monitor Duct Line Temperature Pilot**		**Mon 9/14/15**	**Fri 12/30/16**	
252	✓	Complete fiber cable installation	100%	Mon 9/14/15	Fri 7/29/16	
253	✓	Install head end monitoring equipment and calibrate locations (8/16)	100%	Mon 9/14/15	Wed 8/31/16	
254	✓	Monitor performance	100%	Mon 9/14/15	Fri 12/30/16	
255	✓	**Crab and Limiter Connections for new secondary cable installations**		**Mon 8/10/15**	**Fri 12/30/16**	
256	✓	Issue engineering work orders (7/16)	100%	Mon 8/10/15	Mon 10/31/16	
257	✓	Complete construction (8/16)	100%	Mon 8/10/15	Wed 11/30/	
258	✓	Gather feedback to adjust construction standards (8/16)	100%	Mon 8/10/15	Fri 12/30/16	
259		**Update and improve IPL's Construction Standards for CBD Equipment**		**Mon 9/7/15**	**Fri 12/29/17**	
260	✓	Identify appropriate standards	100%	Mon 9/7/15	Wed 11/30/16	
261		Create and update all CBD standard documents	85%	Mon 9/7/15	Fri 12/29/17	
262		**Increase the Robustness of the CBD SCADA**		**Mon 1/18/16**	**Thu 3/30/17**	
263	✓	Identify location for additional VaultGard devices (Complete)	100%	Mon 1/18/16	Wed 6/1/16	
264	✓	Issue engineering work orders	100%	Mon 1/18/16	Mon 10/31/16	
265		Install and commission VaultGards	100%	Mon 1/18/16	Thu 3/30/17	
266	✓	**Implement PI Historian Automatic e-mail Notifications**		**Mon 9/14/15**	**Fri 3/31/17**	
267	✓	Upgrade PI server	100%	Mon 9/14/15	Fri 12/30/16	
268	✓	Test PI-Notifications software	100%	Mon 1/2/17	Thu 1/26/17	
269	✓	Identify alarm points and implement notifications (10/16)	100%	Fri 1/27/17	Fri 3/31/17	
270						
271		**Implement Asset Life Cycle Plan**		**Thu 9/11/14**	**Tue 12/31/1**	
272	✓	Wood Poles	100%	Sun 1/18/15	Fri 12/18/15	
273	✓	Relay System Protection	100%	Thu 1/1/15	Tue 12/1/15	
274	✓	Circuit Breakers	100%	Thu 1/15/15	Tue 12/15/1	
275	✓	Power Transformers	100%	Thu 9/11/14	Fri 9/11/15	
276	✓	Downtown Network	100%	Sun 12/28/14	Mon 12/28/	
277	✓	Underground Residential Cable (URD)	100%	Tue 9/30/14	Wed 9/30/15	
278	✓	Overhead Distribution Lines	100%	Sun 3/1/15	Tue 3/1/16	
279	✓	Transmission Structures	100%	Tue 8/18/15	Thu 8/18/16	
280	✓	Substation Batteries	100%	Wed 9/16/15	Fri 9/16/16	
281	✓	Transmission Lines	100%	Wed 2/17/16	Fri 2/17/17	
282		Meters	80%	Thu 6/30/16	Fri 6/30/17	
283		Substation Communications	100%	Thu 6/30/16	Fri 6/30/17	
284		Distribution Transformers	100%	Fri 9/30/16	Fri 9/29/17	
285		Capacitor Banks	100%	Fri 12/30/16	Sat 12/30/17	
286		Reclosers & Sectionalizers	75	Fri 12/30/16	Wed 7/31/15	
287		Substation CTs and PTs	70	Fri 12/30/16	Wed 7/31/15	
288		System Control and Data	0%	Fri 6/30/17	Tue 12/31/1	
289		Disconnect Switches	40	Fri 6/30/17	Wed 7/31/15	
290		Pole Top Hardware	0%	Fri 6/30/17	Tue 12/31/1	



Project: 2014 Action Plan Schedul
Date: Thu 3/7/19

Task — Milestone — Project Summary — External Milestone — Inactive Milestone — Manual Task — Manual Summary Rollup — Start-only — Deadline — Baseline Milestone — Progress
Split — Summary — External Tasks — Inactive Task — Inactive Summary — Duration-only — Manual Summary — Finish-only — Baseline — Baseline Summary