ANAYLSIS OF 2015
RELIABLE PUBLIC POWER PROVIDER
(RP$_3$) APPLICATION DATA

Reliable Public
Power Provider

## CONTENTS

## GENERAL OVERVIEW

The Reliable Public Power Provider (RP$_3$) program recognizes utilities that demonstrate leading practices in four disciplines: reliability, safety, system improvement, and workforce development. Utilities assemble and submit applications to the 18-member RP$_3$ Review Panel, which is comprised of public power professionals from across the country. Utilities earn points for their answers to application questions based on the extent to which they meet the leading practices criteria. After thorough evaluation by the RP$_3$ review panel, utilities may be recognized as a Gold, Platinum, or Diamond Reliable Public Power Provider.

In 2015, 34 utilities applied to receive RP$_3$ designation, and 29 utilities attained designation. In comparison, APPA received 101 applications in 2014 and 94 utilities attained RP$_3$ designation. Fewer than average applications were anticipated and received for 2015, since the designation cycle was extended from a two-year designation period to a three-year period, there would be no utilities looking to renew or continue their designation for another year. Most applicants this year were either new or applying outside their usual cycle.

This report shows how the utilities in both 2014 and 2015 responded to each question in the RP$_3$ application by indicating how many answered affirmatively regardless of whether they attained RP$_3$ designation. Additionally, this report demonstrates overall trends in utility practices in the four RP$_3$ disciplines by showing strong utility practices in reliability statistics tracking, physical security measures, and OSHA training. The report follows the format of the RP$_3$ application – in each of the following sections the data is shown after each question it is associated with on the RP$_3$ application.

Special thanks to the RP$_3$ Industry Support Council for their generous support of this report.

**Overview of RP₃ Applicants and Designations:**

|                                | 2014 | 2015 |
|--------------------------------|------|------|
| Number of Utility Applicants   | 101  | 34   |
| Number of Utilities Designated | 97   | 29   |
| Diamond                        | 25   | 8    |
| Platinum                       | 40   | 9    |
| Gold                           | 32   | 12   |

## RELIABILITY SECTION OVERVIEW

This table outlines each question in the RP$_3$ application's reliability section. Next to each question is the maximum number of points a utility's response can earn, followed by average number of points designated on that question for 2014 and 2015, and the percentage difference between the two years. The last column displays the number of RFIs that were sent to utilities for that question in 2015. In the following pages, an analysis of how each question was answered in 2014 and 2015 is provided.

**Average scores in the reliability section:**

| Question | Points Possible | 2014 Average Points Designated | 2015 Average Points Designated | % Difference between 14 & 15 | # of RFIs Assigned in 2015[1] |
|---|---|---|---|---|---|
| Monitoring and Tracking Data | 2 | 1.92 | 1.94 | 1% | 1 |
| Reliability Statistics Tracking | 4 | 3.75 | 3.82 | 2% | 2 |
| Service Reliability Indices Use | 4 | 3.77 | 3.88 | 3% | 7 |
| Reliability Survey | 2 | 1.58 | 1.82 | 15% | 4 |
| Mutual Aid | 3 | 2.77 | 2.76 | 0% | 7 |
| Disaster Plan | 4 | 3.46 | 3.16 | -9% | 19 |
| Physical Security | 3 | 2.91 | 3.00 | 3% | 2 |
| Cyber Security Policy | 1 | 0.79 | 0.91 | 15% | 5 |
| Cyber Security Awareness | 1 | 0.63 | 0.67 | 6% | 1 |
| Periodic Cyber Security Assessments | 1 | 0.56 | 0.72 | 29% | 6 |

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[1] Requests for Information (RFI) are sent from the RP$_3$ Review Panel to utilities following their initial review of an RP$_3$ application to ask clarifying questions of a utility's response.

**1. What method(s) does your utility use to monitor and track reliability data?**

**Results:** (Utilities could check **all** that apply)

(Count of utility responses)

| Method | 2014 | 2015 |
|---|---|---|
| Tracked by Hand | 14 | 5 |
| Tracked by APPA eReliability Tracker Software | 48 | 17 |
| Tracked by Other Software | 51 | 16 |
| Tracked by Other Method | 9 | 5 |

2. **Use check boxes below to indicate each reliability statistic tracked by your utility and provide the most recent yearly calculation. Please list the preferred time period of measure for each index below. Refer to the Institute of Electrical and Electronics Engineers (IEEE) 1366 standard for more information on reliability statistics:**

**Results:**

(Median reported value)

|  | **2014** | **2015** |
|---|---|---|
| **SAIDI** | 43.025 | 30.91 |
| **CAIDI** | 78.79 | 67.43 |
| **ASAI** | 99.99 | 99.99 |
| **MAIFI** | 0.965 | 0.25 |
| **SAIFI** | 0.53 | .44 |

### 2015 SAIDI Quartiles:

| Quartile | Value |
|---|---|
| Minimum Value | 0.0311926 |
| First Quartile (25th percentile) | 10.464 |
| Median Quartile (50th percentile) | 31 |
| Third Quartile (75th percentile) | 53.4 |
| Maximum Value | 2973.176 |

1. **Does your utility use service reliability indices to maintain and improve utility operations?**

   **Results:**

   (Count of utility responses)

| How utility is using service reliability indices to improve the system | 2014 | 2015 |
|---|---|---|
| Worst Performing Circuit Identification | 89* | 26* |
| Vegetation Management (e.g., tree trimming) | 96* | 32* |
| Install Covered Wire | 34 | 14 |
| Distribution Circuit Inspection Program | 60 | 21 |
| Convert Overhead to Underground | 47 | 19 |
| Install Lightning Arresters | 69 | 20 |
| Install Animal/Squirrel Guards | 60 | 31* |
| Perform Thermographic Circuit Inspections | 70* | 23 |
| Perform Transformer Load Management | 36 | 13 |
| Economic Development | 38 | 15 |
| Send Indices to Public Utilities Commission/City Council/Governing Board | 53 | 20 |
| Produce Publicly Available Report | 31 | 14 |
| Underground Cable Replacements/Injections and Testing | 61 | 17 |
| Other | 18 | 4 |

   *\* Indicates top 3 results for each year.*

2. **Does your utility participate in a reliability survey or service to benchmark reliability indices?**

   **Results:** (Utilities could check **all** that apply)

<div align="center">(Count of utility responses)</div>

| Reliability Survey or Service | 2014 | 2015 |
|---|---|---|
| Number of utilities that responded "yes" | 86 | 32 |
| Our utility participates in APPA's biennial Distribution System Reliability & Operations Survey. | 54 | 25 |
| Our utility participates in a survey other than APPA's, and we have included our survey form as an attachment. | 30 | 8 |
| Our utility uses APPA's eReliability tracking program | 42 | 11 |
| Number of utilities that responded "no" | 15 | 2 |

**1. Does your utility participate in a national mutual aid agreement?**

**Results:**

(Count of utility responses)

| Mutual Aid Agreement | | 2014 | 2015 |
|---|---|---|---|
| **Yes**, our utility has a signed APPA national mutual aid agreement on file with APPA **OR** we have attached a signed APPA national mutual aid agreement in this application. | State | *N/A in 2014\** | 20 |
| | Regional | | 11 |
| | Other | | 5 |
| | Total | 83 | 36 |
| **No**, our utility only participates in our state/joint action agency/regional mutual aid program and has provided a copy of our agreement. | State | 13 | 6 |
| | Regional | 10 | 3 |
| | Other | 2 | 4 |
| **Other** | | 27 | 0 |
| **No** form of mutual aid agreement | | 18 | 2 |

*\*Additional checkboxes were introduced in 2015.*

1. **Does your utility have a disaster plan, or does your city have a disaster plan which includes an electric utility specific section?**

   **Results:**

   (Count of utility responses)

   | Utility has a Disaster Plan | 2014 | 2015 |
   |---|---|---|
   | Yes | 97 | 31 |
   | No | 1 | 3 |
   | We are in the process of developing a plan | 3 | 0 |

   **Results:**

   (Count of utility responses)

   | Utility's Disaster Plan was Last Reviewed | 2014 | 2015 |
   |---|---|---|
   | 0-1 years ago | 72 | 25 |
   | 1-3 years ago | 18 | 3 |
   | Over 3 years ago | 7 | 6 |

1. **Has your city/utility addressed physical infrastructure security needs for your system?**

   **Results:**

   (Count of utility responses)

   |  | **2014** | **2015** |
   |---|---|---|
   | Yes | 101 | 34 |
   | No | 0 | 0 |

   **Results:** (Utilities could check **all** that apply)

   (Count of utility responses)

   | Protective Measures Taken | 2014 | 2015 |
   |---|---|---|
   | Fences | 101 | 34 |
   | Surveillance | 83 | 27 |
   | Locks | 100 | 34 |
   | Patrols | 59 | 22 |
   | Controlled/monitored access to substations or other secure areas (data cards, RFID system, ID cards, etc.) | 61 | 22 |
   | Background Checks | 68 | 25 |
   | Security Awareness and Training for Employees | 72 | 24 |
   | Identified Assets Requiring Enhanced Security | 50 | 27 |
   | Other | 20 | 10 |

**1. Has your utility developed a formal cyber security policy for the organization?**

**Results:** (Utilities could check **all** that apply)

| Areas the policy addresses | 2014 | 2015 |
|---|---|---|
| | (Count of utility responses) | |
| Utilities that responded "yes" | 93 | 33 |
| Use of passwords and changing default passwords | 92 | 33 |
| System monitoring and access control | 84 | 28 |
| Encryption | 61 | 20 |
| Restricting foreign devise use (e.g., non-company owned USB) | 36 | 20 |
| Secure communications paths | 75 | 27 |
| Firewalls | 89 | 31 |
| Quarterly Access Review | N/A* | 15 |
| Violations Policy | N/A* | 17 |
| Other | 35 | 7 |
| Utilities that responded "no" | 8 | 1 |

*Additional checkboxes were introduced in 2015.*

**2. Does your utility require cyber security awareness or training for employees?**

**Results:**

(Count of utility responses)

|  | **2014** | **2015** |
|---|---|---|
| Yes | 74 | 23 |
| No | 24 | 11 |

**3. Does your utility conduct periodic cyber security assessments of its system? This assessment would involve looking at security gaps in network-connected devices.**

**Results:**

(Count of utility responses)

| **Schedule for Assessments of your System** | **2014** | **2015** |
|---|---|---|
| Number of utilities that responded "yes" | 89 | 33 |
| Every year (annually) | 54 | 19 |
| Every 1-3 years | 21 | 7 |
| When new systems are implemented | 54 | 26 |
| Other | 17 | 6 |
| Number of utilities that responded "no" | 9 | 1 |

## SAFETY SECTION OVERVIEW

This table outlines each question in the RP₃ application's safety section. Next to each question is the maximum number of points a utility's response can earn, followed by average number of points designated on that question for 2014 and 2015, and the percentage difference between the two years. The last column displays the number of RFIs that were sent to utilities for that question in 2015. In the following pages, an analysis of how each question was answered in 2014 and 2015 is provided.

**Average scores in the safety section:**

| Question | Points Possible | 2014 Average Points Designated | 2015 Average Points Designated | % Difference between 14 & 15 | # of RFIs Assigned in 2015 |
|---|---|---|---|---|---|
| Safety Manual Use | 2 | 1.90 | 1.97 | 4% | 5 |
| Safety Manual Directive | 2 | 1.88 | 1.71 | -9% | 3 |
| Regular Safety Meetings | 3 | 2.86 | 2.82 | -1% | 2 |
| Safety Rule Enforcement Policy | 2 | 1.62 | 1.50 | -7% | 10 |
| Documented Job Briefings | 2 | 1.70 | 1.82 | 7% | 0 |
| Safety Orientation Practice | 1 | 0.85 | 0.82 | -4% | 9 |
| Accident Investigations | 2 | 1.89 | 1.88 | -1% | 2 |
| Management Participation | 2 | 1.94 | 1.94 | 0% | 0 |
| OSHA Refresher Training | 2 | 1.94 | 2.00 | 3% | 0 |
| Automated External Defibrillators | 1 | 0.83 | 0.85 | 2% | 2 |
| Arc Hazard Assessments | 2 | 1.80 | 1.79 | -1% | 0 |
| Disaster Drills | 2 | 1.41 | 1.24 | -12% | 1 |
| Safety Index Benchmarking | 2 | 1.87 | 1.82 | -3% | 0 |

**1. Does your utility use a safety manual?**

**Results:** All utility respondents indicated that they use a safety manual.

(Count of utility responses)

| Manual Used | | 2014 | 2015 |
|---|---|---|---|
| APPA's Safety Manual | | 88 | 28 |
| | 15th Edition Used | 82 | 25 |
| Manual Developed In-house | | 25 | 11 |
| Other Manual or Innovative Approach | | 1 | 0 |

2.  **Are all utility employees directed by utility management to use, read, and understand the designated safety manual?**

    **Results:**

    (Count of utility responses)

    |  | **2014** | **2015** |
    |---|---|---|
    | Yes | 99 | 30 |
    | No | 2 | 4 |

**1. Does your utility conduct regular safety meetings for electric employees?**

**Results:** All utility respondents indicated they conduct regular safety meetings.

**Operations/Field Employees** (Utilities could check **all** that apply)

(Count of utility responses)

| Meeting Frequency | 2014 | 2015 |
|---|---|---|
| Daily | 2 | 3 |
| Monthly | 72 | 29 |
| Quarterly | 32 | 5 |
| Semi-Annually | 4 | 0 |
| Other | 32 | 8 |

**Management/Administrative/Other Employees** (Utilities could check **all** that apply)

(Count of utility responses)

| Meeting Frequency | 2014 | 2015 |
|---|---|---|
| Daily | 2 | 0 |
| Monthly | 72 | 23 |
| Quarterly | 32 | 8 |
| Semi-Annually | 4 | 3 |
| Other | 32 | 9 |

**2. Does your utility have a written policy or practice to enforce its safety rules, including conducting monthly (or more often) job site safety inspections?**

**Results:**

(Count of utility responses)

|  | **2014** | **2015** |
|---|---|---|
| Yes | 89 | 29 |
| No | 12 | 5 |

**3. Does your utility require documented job briefings for electric employees?**

**Results:**

(Count of utility responses)

|  | **2014** | **2015** |
|---|---|---|
| Yes | 89 | 31 |
| No | 12 | 3 |

4. **Does your utility have a practice or procedure to conduct a safety orientation with all non-utility employees (e.g., contractors, mutual aid situations) working on your system to ensure compliance with your utility's safety standards?**

   **Results:**

   (Count of utility responses)

   |  | **2014** | **2015** |
   |---|---|---|
   | Yes | 90 | 30 |
   | No | 11 | 4 |

5. **Does your utility change its safety practices/rules based on the findings from accident investigations or near-miss reports?**

   **Results:**

   (Count of utility responses)

   |  | **2014** | **2015** |
   |---|---|---|
   | Yes | 98 | 33 |
   | No | 3 | 1 |

**6. Does senior management actively participate in the utility's safety training initiatives for all employees at least once per year?**

**Results:** (Utilities could check **all** that apply)

(Count of utility responses)

| Employee Type | 2014 | 2015 |
|---|---|---|
| Utilities that responded "yes" | 101 | 33 |
| Electric Superintendent | 89 | 32 |
| Management or Department Head | 93 | 31 |
| Human Resources | 61 | 19 |
| Operations & Maintenance | 83 | 25 |
| Other | 30 | 9 |
| Utilities that responded "no" | 0 | 1 |

7. **Does your utility provide annual refresher training for OSHA-type issues? Best practice is for a utility to provide at least four types of training each year.**

**Results:**

(Count of utility responses)

|  | **2014** | **2015** |
|---|---|---|
| Yes | 91 | 34 |
| No | 10 | 0 |

**Results:** (Utilities could check **all** that apply)

(Count of utility responses)

| **OSHA Type Issues** | **2014** | **2015** |
|---|---|---|
| Bucket-truck Rescue | 93* | 31* |
| Confined Space Rescue/Permit Required Confined Spaces | 81 | 30 |
| CPR/AED | 99* | 33* |
| Cranes/Derricks | 43 | 18 |
| Hazardous Energy Control/Lockout/Tagout | 72 | 29 |
| HazMat | 63 | 25 |
| Job Briefing | 64 | 24 |
| Ladder Safety | 57 | 23 |
| Lock-out/Tag-out | 76 | *Removed in 2015* |
| Pole-top Rescue | 94* | 32* |

| | | |
|---|---|---|
| Enclosed Spaces and Working underground | 59 | 25 |
| Underground Electric Transmission and Distribution Work | 52 | 19 |
| Hazard Recognition in Trenching and Shoring | 60 | 29 |
| Other | 30 | 13 |

\* Indicates top 3 responses

8. **Does your utility provide Automated External Defibrillators (AEDs) at all work site locations?**

   **Results:**

   (Count of utility responses)

   |  | **2014** | **2015** |
   |---|---|---|
   | Yes | 91 | 30 |
   | No | 10 | 4 |

9. **Has your utility performed an arc hazard assessment, per National Electrical Safety Code (NESC) requirements?**

   **Results:**

   (Count of utility responses)

   |  |  | **2014** | **2015** |
   |---|---|---|---|
   | Yes |  | 93 | 31 |
   |  | Have notified and trained all affected employees regarding arc hazard requirements | 92 | 30 |
   | No |  | 8 | 3 |

**10. Does your utility conduct disaster drills that are electric-utility specific?**

**Results:** (Utilities could check **all** that apply)

(Count of utility responses)

| Drill Type | 2014 | 2015 |
|---|---|---|
| Utilities that responded "yes" | 86 | 24 |
| Earthquake | 15 | 12 |
| Fire | 45 | 30 |
| Flood | 14 | 11 |
| Hurricane | 17 | 8 |
| Snow/Ice Storm | 30 | 23 |
| Terrorist Attack | 21 | 14 |
| Tornado | 33 | 22 |
| Other | 47 | 17 |
| Utilities that responded "no" | 15 | 10 |

**1. Does your utility participate in safety index benchmarking?**

**Results:** (Utilities could check **all** that apply)

(Count of utility responses)

| Benchmarks/Program of Participation | 2014 | 2015 |
|---|---|---|
| Utilities that responded "yes" | 97 | 31 |
| APPA's Safety Awards of Excellence | 65 | 18 |
| OSHA 300 form (please attach form) | 57 | 20 |
| Other (please explain) | 32 | 15 |
| Utilities that responded "no" | 4 | 3 |

**What is your utility's incidence rate?**

**Results:**

| Incidence Rate | 2014 | 2015 |
|---|---|---|
| Median | 4.225 | 2.74 |
| Average | 5.74 | 4.33 |

## WORKFORCE DEVELOPMENT SECTION OVERVIEW

This table outlines each question in the RP₃ application's workforce development section. Next to each question is the maximum number of points a utility's response can earn, followed by average number of points designated on that question for 2014 and 2015, and the percentage difference between the two years. The last column displays the number of RFIs that were sent to utilities for that question in 2015. In the following pages, an analysis of how each question was answered in 2014 and 2015 is provided.

**Average scores in the workforce development section:**

| Question | Points Possible | 2014 Average Points Designated | 2015 Average Points Designated | % Difference between 14 & 15 | # of RFIs Assigned in 2015 |
|---|---|---|---|---|---|
| Demographics | 3 | 2.86 | 2.82 | -1% | 1 |
| Succession Plan | 3 | 2.04 | 1.82 | -11% | 8 |
| Recruitment Procedure or Practice | 2 | 1.79 | 1.59 | -11% | 5 |
| Development Plans | 3 | 2.10 | 1.88 | -10% | 14 |
| Recognition of Employee Performance | 3 | 2.20 | 2.21 | 0% | 3 |
| Written Education Programs | 4 | 3.41 | 3.13 | -8% | 3 |
| Networking and Professional Development | 4 | 3.67 | 3.71 | 1% | 6 |
| Membership and Service | 3 | 2.79 | 2.82 | 1% | 1 |

**1. Has your utility identified the demographics of its employees to prepare for succession planning?**

**Results:** (Utilities that could check **all** that apply)

(Count of utility responses)

| Items Used to Identify Each Employee | | 2014 | 2015 |
|---|---|---|---|
| Utilities that responded "yes" | | 99 | 31 |
| Age | | 87 | 20 |
| Eligibility for retirement | | 96 | 31 |
| | If your utility tracks this, what percent of employees are eligible for retirement within the next 5 years? | 26% average | 26% average |
| Position | | 69 | 21 |
| Other: | | 19 | 3 |
| Utilities that responded "no" | | 2 | 3 |

2. **Has your utility prepared a utility wide succession plan?**

   **Results:**

(Count of utility responses)

| Succession Plan | 2014 | 2015 |
|---|---|---|
| Yes, have a succession plan prepared | 75 | 24 |
| Working on a succession plan | 14 | 1 |
| No succession plan | 12 | 9 |

3. **Does your utility have a written procedure or practice for recruitment?**
   **Results:**

(Count of utility responses)

| | 2014 | 2015 |
|---|---|---|
| Yes | 96 | 6 |
| No | 5 | 28 |

1. **Does your utility prepare individual employee development plans with professional development goals for electric utility employees?**

   **Results:** (Utilities that could check **all** that apply)

   (Count of utility responses)

   | Category of Employee with Development Plans | 2014 | 2015 |
   |---|---|---|
   | Utilities that responded "yes" | 96 | 28 |
   | Operations/Field Employees (including lineworkers, meter readers, etc.) | 93 | 26 |
   | Management Level Employees | 83 | 27 |
   | Office Personnel (including engineers, administrative, etc.) | 77 | 26 |
   | Other | 12 | 4 |

**2. Does your utility have a standard practice or policy that provides formal recognition of commendable employee performance?**

**Results:** (Utilities that could check **all** that apply)

(Count of utility responses)

| Type of Recognition Program | 2014 | 2015 |
|---|---|---|
| Utilities that responded "yes" | 92 | 26 |
| Letter/Certificate of Commendation | 59 | 13 |
| Monetary or Merchandise Incentive Program | 52 | 13 |
| Employee Recognition Ceremony | 53 | 14 |
| Other | 40 | 13 |
| No | 9 | 8 |

**1. Does your utility have a written education policy, procedure, or program for professional development?**

**Results:** (Utilities that could check **all** that apply)

(Count of utility responses)

| Area(s) policy/procedure/program covers | 2014 | 2015 |
|---|---|---|
| Utilities that Responded "yes" | 101 | 30 |
| Tuition/Reimbursement for Courses, Workshops, Certificates, and Credentials | 98 | 30 |
| Internal University/School | 17 | 7 |
| Alliance or Agreement with an External University/School | 25 | 11 |
| Other | 26 | 32 |
| No | 0 | 4 |

**Results:** (Utilities that could check **all** that apply)

(Count of utility responses)

| Communication of policy/procedure/program | 2014 | 2015 |
|---|---|---|
| E-mail | 50 | 18 |
| Internal Newsletter | 38 | 7 |
| Office Posting (e.g., to bulletin boards in lunchroom) | 47 | 15 |
| Other | 63 | |

**Results:** (Utilities that could check **all** that apply)

(Count of utility responses)

| Frequency of Communication of policy/procedure/program | 2014 | 2015 |
|---|---|---|
| Upon Hire | 95 | 29 |
| Monthly | 9 | 4 |
| Quarterly | 14 | 2 |
| Annually | 41 | 15 |
| When Policy/Procedure/Program Changes | 89 | 27 |
| Other | 31 | 0 |

2.  **Does your utility support networking and personal/professional development by encouraging attendance across all employee groups at a wide variety of continuing education classes, workshops, local/state/national conferences, and attendance/participation in user/interest group meetings?**

**Results:** (Utilities that could check **all** that apply)

| | Operations/Field | | Management/ Administrative | | Other (please explain in attachment) | |
|---|---|---|---|---|---|---|
| | **2014** | **2015** | **2014** | **2015** | **2014** | **2015** |
| Classes/Workshops | 96 | 33 | 94 | 30 | 14 | 1 |
| Local Conferences | 76 | 25 | 82 | 26 | 11 | 1 |
| State/Regional Conferences | 84 | 25 | 96 | 1 | 12 | 1 |
| National Conferences | 58 | 13 | 85 | 34 | 10 | 0 |
| User/Interest Group Meetings | 66 | 20 | 83 | 1 | 10 | 0 |

(Count of utility responses)

3. **Does your utility encourage and support active membership in professional and community organizations and service on committees and boards that benefit the utility?**

   **Results:** (Utilities that could check **all** that apply)

   (Count of utility responses)

   | Membership Type | 2014 | 2015 |
   |---|---|---|
   | Active Membership in Professional and Community Organizations | 97 | 32 |
   | Active Service on Committees and/or Boards | 99 | 32 |

## SYSTEM IMPROVEMENT SECTION OVERVIEW

This table outlines each question in the RP₃ application's system improvement section. Next to each question is the maximum number of points a utility's response can earn, followed by average number of points designated on that question for 2014 and 2015, and the percentage difference between the two years. The last column displays the number of RFIs that were sent to utilities for that question in 2015. In the following pages, an analysis of how each question was answered in 2014 and 2015 is provided.

**Average scores in the system improvement section:**

| Question | Points Possible | 2014 Average Points Designated | 2015 Average Points Designated | % Difference between 14 & 15 | # of RFIs Assigned in 2015 |
|---|---|---|---|---|---|
| Research and Development Program and Participation | 3 | 2.68 | 2.38 | -11% | 17 |
| Programs for Energy Conservation and Energy Efficiency | 3 | 2.27 | 2.53 | 11% | 11 |
| Outreach on Energy Conservation and Energy Efficiency | 3 | 2.81 | 2.88 | 2% | 9 |
| System Maintenance | 4 | 3.78 | 3.59 | -5% | 7 |
| System Losses | 3 | 2.75 | 2.65 | -4% | 3 |
| Near-Term Capital OM Projects | 5 | 4.72 | 4.65 | -1% | 10 |
| Planning Study | 4 | 3.60 | 3.38 | -6% | 9 |

## A – RESEARCH & DEVELOPMENT

1. **Is your utility a member of a research and development program?**

   **Results:** (Utilities that could check **all** that apply)

   (Count of utility responses)

| Research and Development Programs | 2014 | 2015 |
|---|---|---|
| Our utility is a member of APPA's R&D program, DEED | 85 | 26 |
| Our utility is a member of EPRI's R&D program | 11 | 3 |
| Our utility is a member of our state or regional R&D program | 19 | 4 |
| Other | 21 | 5 |

   **Results:** (Utilities that could check **all** that apply)

   (Count of utility responses)

| Utilities' Participation in R&D | 2014 | 2015 |
|---|---|---|
| Current grants/scholarships (submit summary of project) | 27 | 11 |
| Applied for grants/scholarships in past 3 years | 38 | 6 |
| Review of relevant research projects conducted by other utilities, and application to projects your utility is conducting (for example, DEED Project Database, DEED-published documents, or EPRI research papers) | 59 | 24 |
| Use of software or technology developed by a utility research group (for example, GridLAB-D) | 20 | 3 |
| Other | 35 | 8 |

1. **Has your utility implemented energy conservation and/or energy efficient processes or programs?**

   **Results:**

   (Count of utility responses)

   |  | **2014** | **2015** |
   |---|---|---|
   | Yes | 96 | 31 |
   | No | 5 | 3 |

2. **Does your utility/city provide education outreach to the public, including policymakers, about energy conservation and energy efficiency programs?**

   **Results:**

   (Count of utility responses)

   |  | **2014** | **2015** |
   |---|---|---|
   | Yes | 99 | 34 |
   | No | 2 | 0 |

1.  *System Maintenance*: **Does your utility have and maintain records of all plant assets requiring maintenance, including a documented maintenance and inspection schedule?**

    **Results:**

    (Count of utility responses)

    |  | **2014** | **2015** |
    |---|---|---|
    | Yes | 100 | 33 |
    | No | 1 | 1 |

    **Results:** (Utilities that could check **all** that apply)

    (Count of utility responses)

    | **Asset Requiring Maintenance** | **2014** | **2015** |
    |---|---|---|
    | Cable Testing | 29 | 16 |
    | Capacitor Switch Testing | 40 | 18 |
    | Control House | 73 | 23 |
    | Crossarm/Insulator Testing/Inspections | 61 | 24 |
    | Cut-out Testing/Inspections | 48 | 22 |
    | Instrument Transformer Verification | 65 | 22 |
    | Meter Testing | 88 | 31* |
    | Pedestal Inspections (single phase) | 39 | 19 |
    | Pole Testing | 78 | 28 |
    | Relay Testing | 83 | 29 |

| | | |
|---|---|---|
| Substation Battery Testing/Inspection | 92* | 29 |
| Substation Switch Testing | 76 | 23 |
| Substation Transformer Testing/Inspections | 95* | 31* |
| Transformer Inspections (3-phase) | 65 | 22 |
| Tree Trimming | 95* | 30* |
| Other | 45 | 7 |

* Indicates top 3 responses

2. *System Losses:* **Does your utility have any processes/programs in place that address overall system loss?**

**Results:**

(Count of utility responses)

|  | **2014** | **2015** |
|---|---|---|
| Yes | 100 | 29 |
| No | 1 | 5 |

**Results:** (Utilities that could check **all** that apply)

(Count of utility responses)

| **Method used to lower system losses** | **2014** | **2015** |
|---|---|---|
| Operation Improvement (balancing loads and phases) | 75 | 27 |
| Adding Parallel Feeders to Reduce Loading | 31 | 6 |
| VAR (Reactive Power) Management (capacitors, equipment upgrades) | 75 | 25 |
| Distribution Transformer Management (e.g., analysis/upgrade, transformer load management to reduce losses, multiple transformers versus single transformer based on system analysis, voltage management, etc.) | 68 | 20 |
| Theft Prevention | 68 | 15 |
| Calculate and Consider Losses in Improvement Decisions | 57 | 15 |
| Voltage Upgrade | 42 | 12 |
| Conductor Upgrade | 72 | 22 |
| Other | 23 | 6 |

3. *Near-Term Capital and O&M Projects*:  **Please provide a detailed description of projects that your utility has recently completed or will be working on in the near term (with a focus on the past two years and the next two years) as a way to continually improve its system.**

**Results:**

(Count of utility responses)

|  | **2014** | **2015** |
|---|---|---|
| Yes | 101 | 34 |
| No | 0 | 0 |

4. **Planning Study: Has your utility performed an internal or external analysis or planning study to help evaluate the long-term needs of your utility's system infrastructure?**

   **Results:**

   (Count of utility responses)

   |  | **2014** | **2015** |
   |---|---|---|
   | Yes | 99 | 32 |
   | No | 2 | 2 |

   **Results:** (Utilities that could check **all** that apply)

   (Count of utility responses)

   | Addressed by Planning Study/Analysis | 2014 | 2015 |
   |---|---|---|
   | Load Forecast | 93 | 29 |
   | Contingency Analysis (e.g., alternate feed) | 72 | 20 |
   | Fuse Coordination/Fault Analysis | 65 | 20 |
   | Project Identification | 74 | 20 |
   | Equipment Age Analysis | 52 | 21 |
   | Land and Environmental Analysis (e.g., SPCC, ROW) | 32 | 12 |
   | Capacity Studies | 77 | 22 |
   | Other | 13 | 5 |

**Results:** (Utilities that could check **all** that apply)

| Time Frame for Planning Study/Analysis | 2014 | 2015 |
|---|---|---|
| Conducted Annually/Ongoing Process | 42 | 17 |
| Three Year System Plan | 11 | 1 |
| Five Year System Plan | 45 | 11 |
| Ten Year System Plan | 39 | 4 |
| Other: | 20 | 8 |