

Citizens' Electric Company  
2014 Summer Readiness Overview  
05/27/2014

**A. Reliability Enhancement Program**

**a. Enhanced Vegetation Management**

Early in 2013, the Company recognized that 2012 had been a prolific growing season throughout its territory. It was apparent that the trend would continue in 2013 as well. To ensure continued reliability, the Company increased its vegetation maintenance expenditures from the budgeted amount of \$92,250 to an actual amount of \$130,719, an increase of 42% over budget and 84% over 2012 expenditures. The Company has further increased its 2014 vegetation budget by another 10% over 2013 expenditure levels. The increased expenditures and ongoing emphasis on vegetation management will permit aggressive danger tree removal and right-of-way maintenance, including a focus on the emerging issue of danger trees caused by Emerald Ash Borer infestation in the area.

Citizens' Electric was recognized for the twelfth consecutive year as a "Tree Line USA" utility. This award from the National Arbor Day Foundation recognizes the Company for using nationally approved trimming techniques and procedures in its vegetation management program. This program includes a goal to aggressively identify and negotiate removal of off right-of-way "hazard" trees, in an effort to reduce outages from this cause.

**b. Storm Hardening**

The most frequent cause of storm outages in the Company's territory is off right-of-way tree issues. The efforts discussed above to identify and remove danger trees constitute a large part of the Company's storm hardening initiative.

In addition, the Company has identified early failures in a particular batch of overhead lightning arrestors. To maximize protection for the coming storm season, inspection of important arrestor locations such as switch points has been accelerated. Arrestors found to be problematic have been replaced.

**c. Fuses/Reclosers**

The company has completed all recloser inspection and maintenance activity for 2014, in accordance with its PUC-approved comprehensive inspection and maintenance program. This year, comprehensive maintenance was performed on eight reclosers. This work includes removing the units from service, filtering or replacing the dielectric oil, inspecting contacts and replacing if needed, and testing to ensure proper response timing. All units have been returned to service and are ready for coming thunder storms. Visual inspection has been completed on all other reclosers in service.

In addition, a handful of supplemental fuses have been installed this spring in an effort to provide greater sectionalizing capability at select locations. These fuses will help reduce the impact of localized outages to a smaller number of customers in these areas.

d. **Smart Grid**

Citizens' Electric devoted significant effort to improving the accuracy of its circuit models in early 2014. This improved accuracy will allow the Company's automated outage management system to more accurately analyze outages by "pinging" smart meters, and to quickly verify restorations and overall system status. All smart grid systems, including AMR infrastructure, Outage Management System, and associated online and telephone customer service systems are fully operational and ready for processing outage transactions.

e. **Automatic Splice Connections**

Citizens' currently conducts annual visual inspections of all overhead structures. In addition, infrared inspections are performed on all three-phase primary overhead line sections each year and all single-phase line sections on a three-year cycle. Because of the historically high reliability of automatic splices, Citizens' does not specifically target them during either the visual or infrared inspection. All inspections are completed in accordance with the Company's PUC-approved Inspection and Maintenance program. To date, no issues have been identified with automatic splices on the Company's distribution program.

**B. Preventative Maintenance Programs**

a. **Capacitor Inspections**

The Company currently has 21 capacitor locations in service. In accordance with its approved inspection and maintenance plan, all locations have been inspected and are in service.

b. **Vegetation Management**

Nearly all of the Company's routine vegetation work is completed by contractors. Typically, this work is conducted during the summer months. This allows the Company to better respond to any unexpected "hot spots" that may require attention during the growing season. This schedule also helps ensure that contract crews will be present during the bulk of the summer storm season so they can be quickly deployed for restoration work if needed. This year's contract has been awarded and contract crews are expected to be on site beginning in mid-June. As discussed above, the Company will continue its aggressive program of maintenance and danger tree removals again this year.

c. **Substation Inspections**

All monthly substation inspections have been completed on schedule. Any issues requiring attention have been addressed.

d. **Aerial Patrols**

The Company does not own any transmission facilities and does not conduct any aerial patrols of its distribution facilities.

e. **Infrared Inspections**

Infrared inspections are performed on all three-phase primary overhead line sections each year and all single-phase line sections on a three-year cycle. To date, approximately 25% of this year's inspections have been completed. The Company expects to complete 100% of these inspections by year-end. Any issues found have been addressed.

## **C. Capacity Planning**

The Company provides load forecasts and works closely with its transmission provider to ensure continued transmission capacity availability. Long-range plans for additional substation or transmission facilities are refined periodically as load forecast trends are adjusted. System and feeder loading patterns and circuit voltage profiles are analyzed to ensure adequate capacity at all points on the Company's distribution system.

## **D. 2013/2014 Storm Update and Lessons Learned**

The primary weather impact experienced by the Company during the previous year was from typical summer thunder storms. No significant tropical or winter systems affected the service area. However, the Company provided mutual assistance crews to other utilities during several large events throughout the year. As a result of this involvement and the Company's participation in various post-event follow up meetings, Citizens' was able to incorporate the lessons learned by other utilities during these events. The Company continues to participate with various statewide and national best practices groups to maintain awareness.

## **E. 2014 Summer Readiness**

### **a. Capacity Additions**

There are no capacity additions planned during 2014. The Company is not aware of any capacity shortages on its distribution system.

### **b. Transmission Preparedness**

The Company does not own any transmission facilities. However, it provides load forecasts and works closely with its transmission provider to ensure continued transmission capacity availability.

### **c. Event Preparedness**

Lessons learned during 2013 have been incorporated into the Company's storm process. Access to resources from utilities in the PREA group and across the region will continue to play a significant role in any major event response.

In addition, the Company recently participated in a county spring storm drill to foster relationships with local officials as well as to drill readiness within the Company. Emergency material stock levels are adequate, the construction fleet is in good operating condition and staffing is at expected levels. All technology systems are fully operational.

### **d. Training**

In an effort to ensure efficient response to customer outage calls, refresher training has been provided to all office personnel involved in outage activities. All line personnel training is up-to-date in accordance with Company training plans and OSHA requirements.

## **F. Storm Response**

### **a. Outage Restoration Strategy**

Citizens' Electric employs a restoration strategy which aims to restore customers in the most efficient way possible. Ensuring the safety of the public and the Company's employees is the first priority. Crews are first dispatched to trouble locations that will restore service to the largest number of customers in the shortest amount of time, with priority given to incidents that will restore service to critical public infrastructure. Next, outages affecting individuals or small groups of customers are restored.

### **b. Communications and Outreach**

In addition to providing timely information through traditional methods such as newsletters, newspaper articles, and direct employee contact, the Company utilizes social media including Facebook and Twitter.

During 2013, the Company continued enhancing its online customer service portal called SmartHub. This tool allows customers to download a free customized application to their smartphone or tablet which provides secure access to a rich set of features. For example, customers can view and pay bills, report outages, check on outage status, analyze hourly usage, and request additional services. All functionality is also available to customers via SmartHub online, accessed from the Company's web site.

To increase public safety awareness, the Company conducted electrical safety training with various groups during the year. Demonstrations were provided for members of the local university community and the general public.

The Company maintains effective information exchange with county EMA officials and coordinates response to local emergencies as needed.

### **c. Restoration Material Staging and Delivery Efficiency Best Practices**

Due to the limited size of the Company's service territory, it believes there is a corresponding limit to expected material needs during a restoration effort. In most cases, the Company believes that any material delivery and staging could be accommodated at its headquarters. However, as a contingency, several alternative staging areas have been identified in the Company's Business Continuity Plan. The Company also has access to emergency materials from its corporate affiliates and from cooperatives across the state.

### **d. Mutual Aid Crew Assignment and Staging Efficiency Best Practices**

For the reasons discussed above, the Company also believes there is a practical limit to the number of mutual aid crews it could reasonably accommodate. Crews would likely be staged and dispatched at its headquarters. However, as a contingency, the Company has identified several potential offsite crew staging areas in its Business Continuity Plan.

The Company believes it is ready and well-positioned for the coming summer storm season. Through the application of the above initiatives, safety, reliability and customer satisfaction will be maintained throughout 2014.