

FOCUS FORWARD

AMEREN ILLINOIS COMPANY

2017 Summer Preparedness Review

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2017 Summer Preparedness Review

FOCUSED ENERGY. For life.



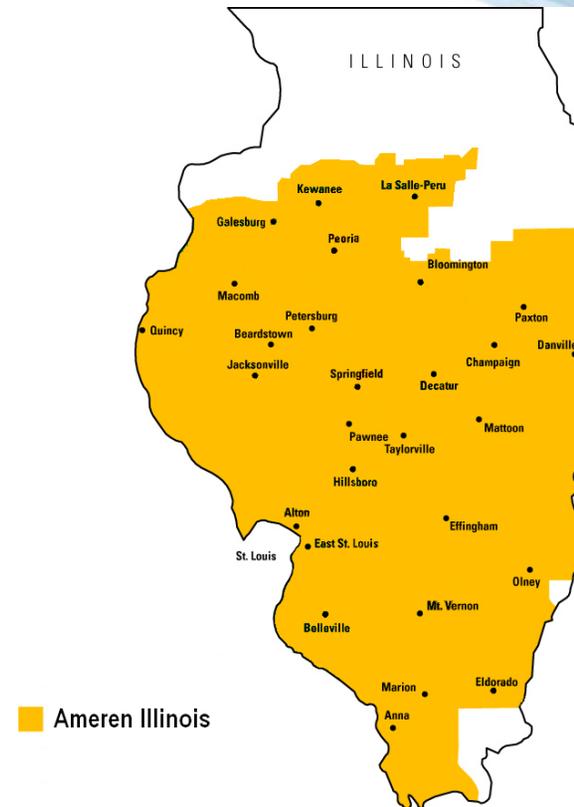
2017 SUMMER RELIABILITY REVIEW

- Transmission and Resource Adequacy
 - > Summer Peak Loads
 - > Ameren Illinois Supply Portfolio
 - > Retail Electric Suppliers (RES) Supplier Load
 - > Demand Response, RES, Operating Reserve Resources
- Readiness
 - > Transmission and Distribution Facilities
 - > Emergency Preparedness and Response
 - > Contact Centers and Communication Strategy
- Summary



AMEREN ILLINOIS COMPANY

- 1.2 million electric customers
 - > 46,000 miles of distribution lines
 - > No power plants
 - > Purchase electricity
- 817,000 natural gas customers
 - > 18,400 miles of natural gas pipeline
 - > No production facilities
 - > Purchase natural gas



2017 SUMMER RELIABILITY REVIEW

- Ameren Illinois Company has verified that sufficient generation resources are committed to serve the Illinois load. In addition, transmission and distribution capability is adequate to provide reliable electric service to our Illinois customers during 2017.



TRANSMISSION AND RESOURCE ADEQUACY

Summer Peak Loads (MW)

	2016 Actual	2017 Expected	2017 Worst Case
Ameren IL Total	7,138	7,287	7,725



TRANSMISSION AND RESOURCE ADEQUACY

“Resource Adequacy”

Ameren Illinois’ forecast of who is supplying the load.

	<u>2017 Expected Summer Peak</u>
Ameren Illinois Company	
Fixed Price Load	1,715 MW
Real-time Price Load	300 MW
Retail Electric Supplier Load	<u>5,272 MW</u>
Total	7,287 MW



TRANSMISSION AND RESOURCE ADEQUACY

“Resource Adequacy”

Ameren Illinois Company Forecasted Supply Portfolio (MW)

	<u>Peak Load</u>	<u>Capacity*</u> <u>Acquired</u>
Fixed Price Load		
Purchases	1,715	1,849
Real Time Price Load		
Purchases	<u>300</u>	<u>323</u>
Ameren Illinois Company Supply – Total	2,015	2,172

** Includes MISO 7.8% required reserve margin*



TRANSMISSION AND RESOURCE ADEQUACY

“Demand Response Resources”

- Interruptible Load
 - > Currently: ~ 248 MW of Interruptible RES and behind-the-meter load
 - > By summer: ~300 MW of additional load
- RTP for Residential, Small C&I, and Large Customers >150 kW
 - > Hourly Day Ahead MISO prices posted and used for settlement
 - > Interval Meter Required
 - > Projected summer participation:
 - **Large Customers** ~827 accounts with ~249 MW of coincident peak demand
 - **Small C&I** ~897 accounts and **Residential RTP / PSP** ~11,445 accounts with ~51MW of combined coincident peak demand
 - > **Rider Power Smart Pricing (PSP)** administered by Elevate Energy



TRANSMISSION AND RESOURCE ADEQUACY

“Retail Electric Suppliers”

- Do not anticipate any transmission constraints on the Ameren Illinois system that would inhibit the adequate supply to RES customers located in Ameren Illinois’ service territory.
- RESs designate their supply resources to MISO and make arrangements for transmission service.



TRANSMISSION AND RESOURCE ADEQUACY

“Ameren Illinois’ Transmission System”

- 4,619 circuit miles of transmission (138 kV through 345 kV) and 196 Bulk Electric System (BES) substations
- No Ameren Illinois transmission facilities are anticipated to be loaded above 100% at expected load levels
 - > The analysis is based on NERC and SERC planning standards, which include all single contingencies as specified by NERC.
- A Summer Operating Study is conducted to test the system and provide guidance to the operators. Ameren also participates in a MISO-wide Coordinated Summer Assessment. The results of both studies show the Ameren system is adequate to serve summer loads.
- Ameren Illinois is a transmission-owning member of the MISO. As such, the MISO congestion management process, which includes security constrained dispatch, is designed to alleviate constraints which may occur.



TRANSMISSION AND RESOURCE ADEQUACY

“Transmission Vegetation Management”

- Comprehensive Vegetation Management Program, compliant with NERC standards, which includes:
 - > Minimum of annual aerial or ground patrols on all circuits 100 kV and up. NERC reportable circuits patrolled a minimum of twice annually, at least once from the ground.
 - > Annual review of trimming schedules and vegetation control processes by Vegetation Management
- Target of zero preventable tree contact related transmission outages for Vegetation Management group
- www.ameren.com/transmission



DISTRIBUTION SYSTEM

“Reliability”

All Sub-Transmission Feeders, Substations, and Distribution Feeders are expected to be loaded within applicable ratings for expected and worst case summer peak scenarios on the Ameren Illinois Company Distribution System.



DISTRIBUTION SYSTEM

“Energy Infrastructure & Modernization Act (EIMA)”

The following EIMA projects completed in 2016 will help to improve system performance and reliability year-round.

- 77 total primary and high voltage distribution automation projects
 - > Reduce the number of customers affected by any single occurrence and improve fault locating ability
- 32 substation Viper reclosers installed
 - > Provide better coordination, fault locating, and single phase isolation
- 21 high voltage distribution line relays upgraded
 - > Upgrading electro-mechanical relays with microprocessor-based relays for better performance
- 74 high voltage distribution reinforcement poles installed
 - > Increase reliability by limiting potential for line cascading
- 25 total miles of primary and high voltage distribution line rebuilt
 - > Improve reliability of overhead distribution lines



DISTRIBUTION SYSTEM

“Energy Infrastructure & Modernization Act (EIMA)”

The following EIMA projects completed in 2016 will help to improve system performance and reliability year-round. (continued)

- 4 miles of spacer cable rebuilt or replaced
 - > Improve performance and reliability of spacer cable systems
- 5 system tie projects
 - > Improve operating efficiency and reliability of the distribution system
- 4 projects to add distribution capacity
 - > Increase the capacity of existing system to better serve load
- 10 substation animal fences installed
 - > Mitigate risk of animal outages from contact with live substation equipment



DISTRIBUTION SYSTEM

“Distribution Vegetation Management”

- Continue to meet all legal and regulatory compliance requirements related to vegetation management
- Continued focus on mowing and spraying operations along ROW corridors. The program provides better overall operational access to facilities and also reduces future trimming requirements.
- Additional utilization of aerial trimming and other mechanized equipment to improve reliability and productivity.
- Tree-related SAIFI has dropped from 0.16 in 2009 to 0.11 in 2016. Through April 1, 2017, SAIFI is 0.01.
- Continue educating the public regarding *Right Tree Right Place* concepts through public awareness ads, bill inserts, mysafetrees.com, and municipal interaction with vegetation management staff



DISTRIBUTION SYSTEM

“On-Going Reliability Improvement”

- Identification / Analysis of Worst Performing Circuits
 - > Associated Remediation Work
- Customers Exceeding Reliability Targets
 - > Associated Remediation Work
- Circuit Inspection and Repair
 - > Visual Inspection & Pole Strength Testing
- Storm-Line Hardening
 - > Use of composite poles to limit damage
- Device Inspections on Reclosers, Capacitors, and Regulators



DISTRIBUTION SYSTEM

“System Operation and Control”

Initiative

Status

- Practice Load Shed Drill with Transmission Operations and MISO (Midcontinent Independent System Operator) each month Ongoing
- Update and review of operating guidelines within all Dispatch Offices Ongoing
- Monitor System Improvement Construction Projects to ensure completion before summer peak Ongoing



DISTRIBUTION SYSTEM

“Emergency Preparedness and Response”

- EOC Activation

- > 2016

- 7 Events (Damage to Ameren Illinois’ systems) totaling 228 hours of activation
 - 1 Event (Provide mutual assistance to ComEd) totaling 41 hours

- > 2017 (to-date)

- 3 Events (Storm damage to Ameren Illinois’ system) totaling 152.5 hours

- Enhanced, Proactive Communication to Stakeholders and Customers

- > Focus on updated Estimated Safe Restoration Time information by outage order
 - > Proactive engagement with the State Incident Response Center and with local and county entities to contribute information critical to building state-wide situational awareness
 - > Communications plan is activated before Ameren Illinois experiences damage and continues through the course of all events and EOC activations

On-going Training and Exercise (number of hours)

	Total	Logistics	Operations	EOC
2016	2,244	284	1,724	236
2017	764	44	592	128



DISTRIBUTION SYSTEM

“Contact Centers and Communications”

- Customer Service, Community Outreach & Public Relations
 - > Integrated Call Centers
 - Home Agents available for additional support
 - > Community Relations
 - Outreach prep with municipal leaders/IEMA/ESDA
 - 24-Hour Outreach to critical customers
 - > PR/Media Relations
 - Social updates (Twitter @AmerenIllinois and facebook.com/AmerenIllinois)
 - Digital Customer reps respond to inquiries in social channels
 - 24-Hour Media Hotline
 - > Safety Training to prepare first responders for disaster safety and recovery



NEW OUTAGE MAP

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Ameren Illinois
Customers Without Service: **126**
Customers Served: **1,216,704**

Ameren Missouri
Customers Without Service: **85**
Customers Served: **1,198,918**
Last Updated: Today at 4:13 PM
Information updated every 12 minutes.

Summary

State/County

State/ZIP

Map Tools

Weather

Bookmarks

Customers Out

- 1-50
- 51-500
- 501-2,500
- >2,500
- Multiple

- Dynamic and mobile enhanced to create a better experience for customers
- Easier-to-access outage information
- Weather feature to track storms impacting customers
- Bookmarks to quickly search locations



SUMMER SAVINGS CUSTOMER COMMUNICATIONS

Spring into Summer with
STRATEGIC SAVINGS
AmerenIllinois.com/Programs

Insulate the attic, ceilings, walls, floors and crawlspaces to reduce energy usage by up to **30%**

SUMMER TEMPERATURES AHEAD

Here are some tips to keep costs down as temperatures

AmerenIllinois.com/Programs

THINGS YOU CAN DO RIGHT NOW TO SAVE \$\$

Keep the heat out! Close your blinds or drapes to save up to \$20/year.

Wash clothes in cold water to reduce energy used to heat the water. Save up to \$10 a year!

Set your water heater to 120 degrees to save approximately 3-5% in energy costs.

INVESTMENTS YOU CAN MAKE TO SAVE \$\$

Adjust the thermostat just one degree higher in the summer to save 3% of your bill! Programmable thermostats make it easy!

Plug your computer and other electronics into a power strip and switch it off when not in use to save up to \$55/year.

Choose Energy Star certified CFL and LED light bulbs to use up to 80% less energy. They last 25 times longer than conventional lighting, too!

Insulate the attic, ceilings, walls, floors and crawlspaces to reduce energy usage by up to **30%**

Spring INTO SUMMER WITH BUDGET BILLING

KEEP IT STEADY WHEN IT'S HOT OR NOT
Budget Billing averages your bills for level payment year-round.

APRIL MAY JUNE

Learn more: AmerenIllinois.com/Budget

Yearly Average Consumer Bill Amount \$



2017 SUMMER RELIABILITY

“Summary”

Ameren Illinois ...

- > Has acquired generation capacity and has the transmission and distribution capability to provide reliable electric service to its customers in 2017
- > Is working to complete critical maintenance and system upgrades to reduce customer interruptions
- > Crisis Management continues to improve our preparedness with 24-hour weather monitoring by Earth Networks/Weatherbug, by conducting internal exercises, and by pursuing other internal emergency response enhancement initiatives. These initiatives include detailed restoration planning and damage assessment solutions.
- > Is continually looking for ways to improve performance and customer service



Interruptions helping to reduce outages



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Questions?

For More Information:

Please visit:

www.AmerenIllinois.com





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