

MENTOR –ON-THE-LAKE

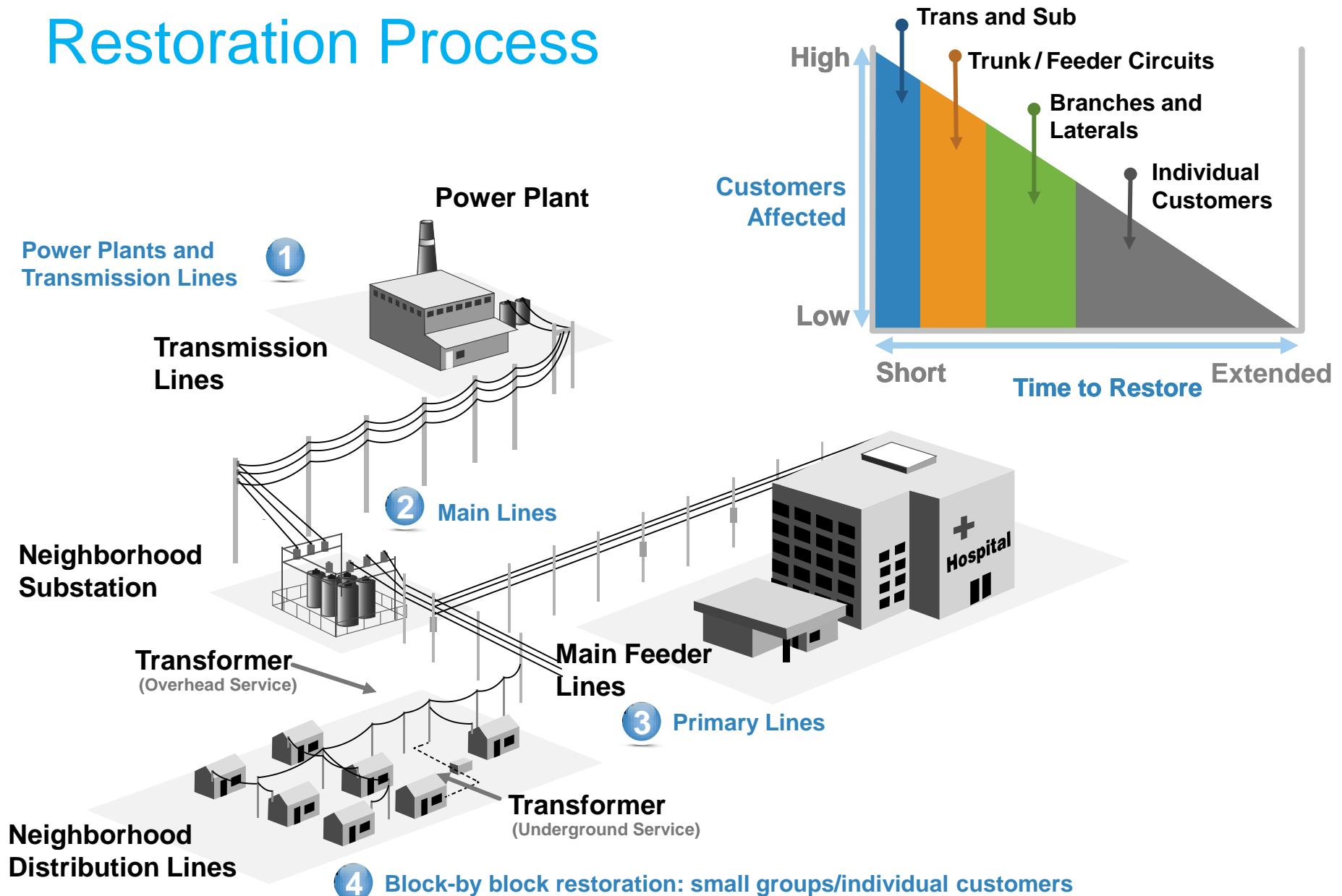
Preparation and
Restoration Process, Energy Reliability, Energizing the
Future and Forestry

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Restoration Process



Weather Event Process

Planning and Preparation

- **Company meteorologists monitor storm movement**
- **Conference calls to plan response**
- **Evaluate need for internal/external mutual assistance; bring in additional crews/staff and prepare staging areas/supplies**
- **Communicate with employees, emergency management agencies, government officials, regulators and customers emphasizing safety**



Thunderstorms



Snowstorms



High Winds



Extreme
Temperatures



Hurricanes



Tornadoes

Restoration Process

Communications

- **Messages** - including safety information - communicated through news releases, social media, paid media, www.firstenergycorp.com, and government entities
- **FirstEnergy Contact Centers**
 - Staffing increased to manage call volume
 - Provide information through interactive voice response (IVR), outage website and customer service representatives
- **External Affairs Managers** respond to government officials and emergency management



24/7 Power Center / Reporting an Outage

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Outages

Current Outages

[Report Power Outages](#)

[Report Streetlight Problem](#)

[Report Multiple Streetlight Problems](#)

[Report Area Light Problems](#)

[What to do if You Lose Power](#)

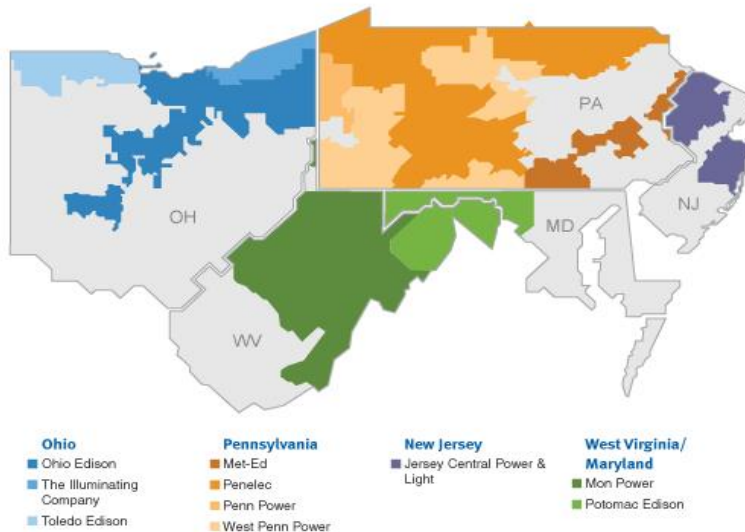
[Outage Assistance](#)

Outages ▶ Current Outages

Current Outages



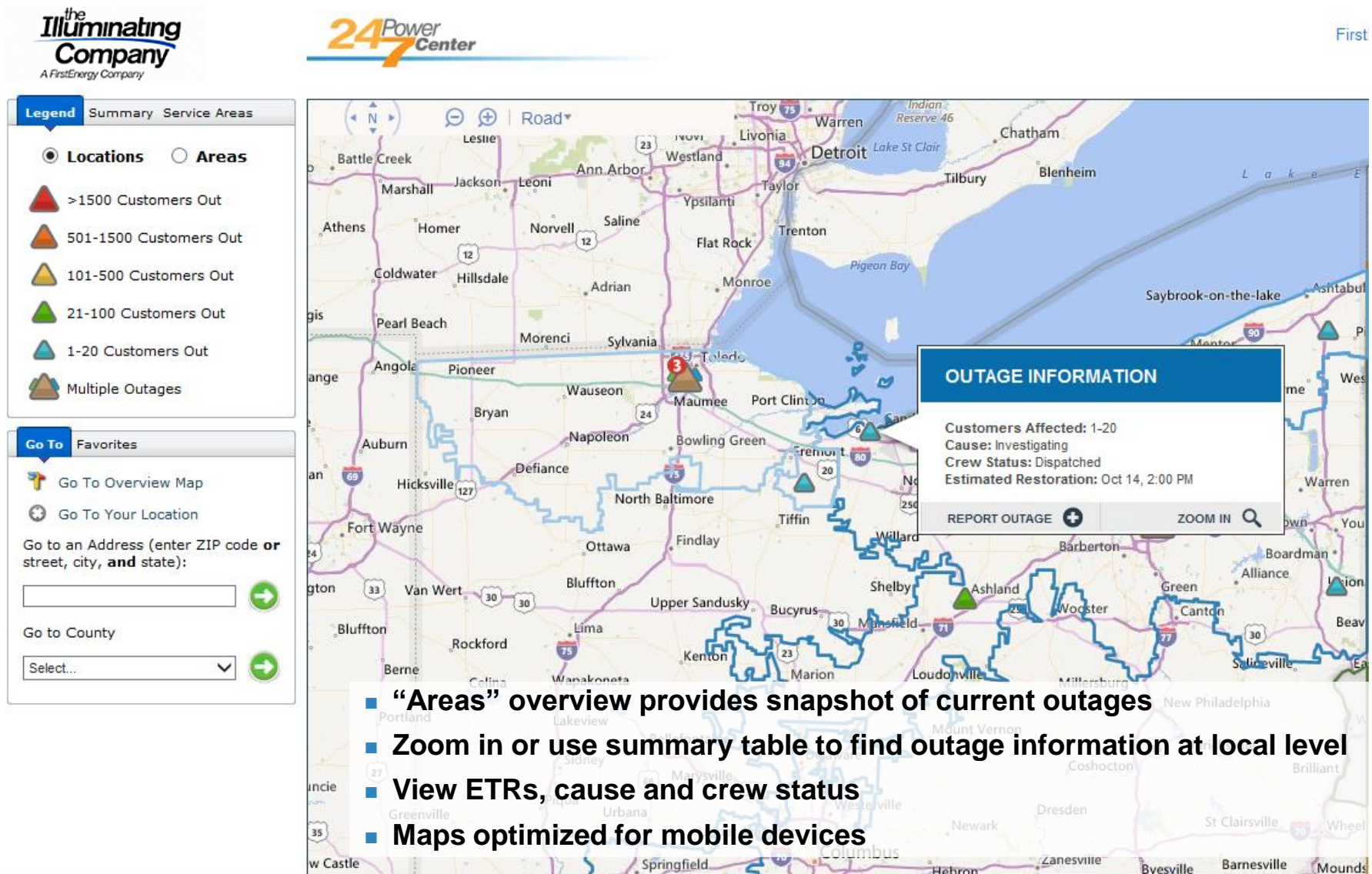
Click a state below to view outages:



Customers can:

- See where outages are occurring by address, zip code or zooming in on the map
- Report Outages from the map
- Find estimated restoration data during significant events

24/7 Power Center Outage Map



Mentor-on-the-Lake Energy Reliability

- Specific to the Andrews Road Area:
- - Mark Substation, feeder 4
- - April 1, 2021 – circuit patrol complete - broken insulator found, repaired week of April 19, 2021.
- - Outage Summary (four momentary outages not included):

2 Year Sustained Outage History						
For Internal Use Only						
Circuit:		L004MK		Customer Address:		
Total Number of Outages:		7		Inspection Cycle:		
Total Number of Outages L6 months:		4		Tree Trim Cycle:		
Order #	Date	Circuit	Cause	Duration	Customers Affected	Storm
16404176-1	6/29/2019	L004MK	Trees Off Row-Limb	96	2084	
20427484-1	10/2/2019	L004MK	Fire	47	2733	
20716663-1	8/3/2020	L004MK	Vehicle	43	2739	Minor
20948875-1	2/28/2021	L004MK	Equipment Failure	81	2745	
20954642-1	3/9/2021	L004MK	Forced Outage	25	2310	
20961994-1	3/18/2021	L004MK	Fire	118	1235	Minor
20963759-1	3/18/2021	L004MK	Equipment Failure	217	8	Minor

Mentor-on-the-Lake Energizing the Future

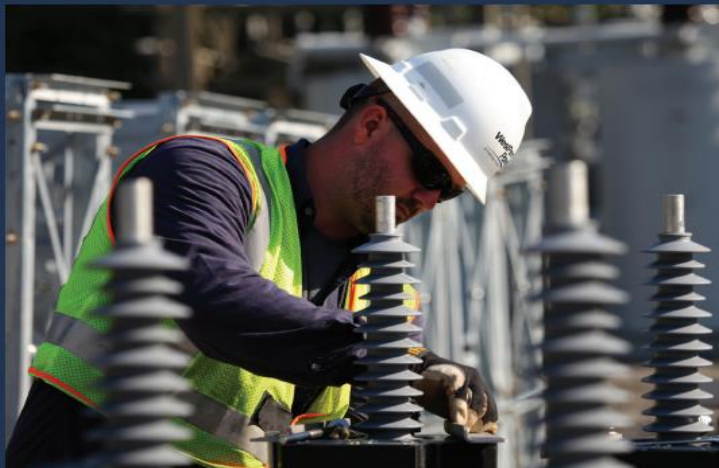
WE'RE INVESTING IN OUR CUSTOMERS

FirstEnergy launched *Energizing the Future* in 2014 to build a stronger, smarter, more secure transmission system.

These efforts to modernize the “Interstate Highway System” of the electric grid are achieving results that benefit our customers.

Since 2014, FirstEnergy has achieved a 37 percent reduction in equipment-related transmission outages in our Ohio territory, as well as our Penn Power service area in western Pennsylvania. We anticipate achieving similar results as the program expands eastward.

Transmission upgrades are also needed to integrate advanced energy options, including renewables and private generation sources, and to respond to our customers' evolving needs.



1

UPGRADING OR REPLACING AGING EQUIPMENT



- By modernizing our transmission equipment, we're able to help reduce the number and frequency of outages, strengthen our facilities and better manage maintenance expenses.
- We've rebuilt or replaced more than 700 miles of transmission lines across our service area.
- We've replaced aging circuit breakers and transformers in substations with new models featuring diagnostic systems that detect problems before they occur.

Mentor-on-the-Lake Energizing the Future

ENHANCING SERVICE RELIABILITY

FirstEnergy has completed 600 to 700 projects per year focused on three main areas

2

BOOSTING SYSTEM PERFORMANCE



- Technology upgrades are making our system more secure and more resistant to extreme weather events and cyberattacks.
- Since 2014, we've installed 1,000 miles of new fiber optic cable to enhance network communications. This will enable grid operators to react more quickly to disturbances on the system by isolating damage and rerouting power from other sources.
- An advanced, secure communications network also supports real-time monitoring and predictive maintenance of our substation equipment so we can detect problems before they impact service to customers.

3

ADDING OPERATIONAL FLEXIBILITY TO THE GRID



- Adding a separate set of wires to existing transmission lines, which reduces the likelihood of power outages by adding redundancy to our system.
- Reducing the duration of outages on long-distance power lines by installing new technology that can isolate a power outage to the immediate area where damage occurs. This limits the number of customers affected by a lengthy outage.
- Upgrading older substations to an advanced design that helps keep power flowing to our customers if a local transmission line goes out of service due to weather, maintenance work or other disruption. The design creates additional paths for power to flow to customers.

Mentor-on-the-Lake Energizing the Future

- **Mentor-on-the-Lake improvements over the last 18 months**
- - New tie established/installed between the Nash substation and Ohio substations which will provide duplicate coverage during outages
- - Nash and Newell Substations have been updated with Smart capacitor banks and viper reclosers: this will allow automation from the Brecksville Northern Region Distribution Control Center (DCC).
- - 2022 Regional External Affairs intend to re-instate DCC tours for Public Officials.

Forestry Procedures

- Trees are trimmed to improve service reliability and decrease the momentary and sustained loss of power
- FirstEnergy employs independent contractors whose skilled, professional crews trim trees to provide enough clearance between limbs and lines for safe and reliable service. Crews perform the work under the guidance and inspection of FirstEnergy Forestry Supervisors.
- FirstEnergy contractors attempt to notify property owners before removal of tree. This does not apply during emergency situations.
- Crews are instructed to use a natural trimming method called drop-crotch or directional pruning, proven to be the best method for the long-term health of the tree.
- Directional pruning directs the subsequent growth away from power lines and thus, reduces the amount of wood to be removed in future trims.
- Our vegetation policy states crews do not remove stumps or roots of trees. Stumps will be cut off flush with the ground. Trees located in fencerows or contain metal, cement rocks etc., will be above the interfering material.
- Small tree limbs and branches are run through a chipper and hauled away. Wood too large for the chipper is cut into manageable lengths and left on the property for disposal by property owner.
- Vegetation Management program – www.firstenergycorp.com/trees

Thank You

Questions & Answers