

City of Rollingwood

Power outages in the area

Joe Walsh, Advanced Technology Program Manager

Kim Doyal, Community Engagement & Public Involvement



April 28, 2021

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Today's Agenda

- **Power Lines & Outages**

Presented by Kim Doyal, Community Engagement & Public Involvement

- **Vegetation Management**

Presented by Kim Doyal, Community Engagement & Public Involvement

- **Recent Winter Storm Event**

Presented by Joe Walsh, Advanced Technology Program Manager

- **Next Steps**

Presented by Joe Walsh, Advanced Technology Program Manager

 There will time at the end of each section to ask questions.



Power Lines & Outages

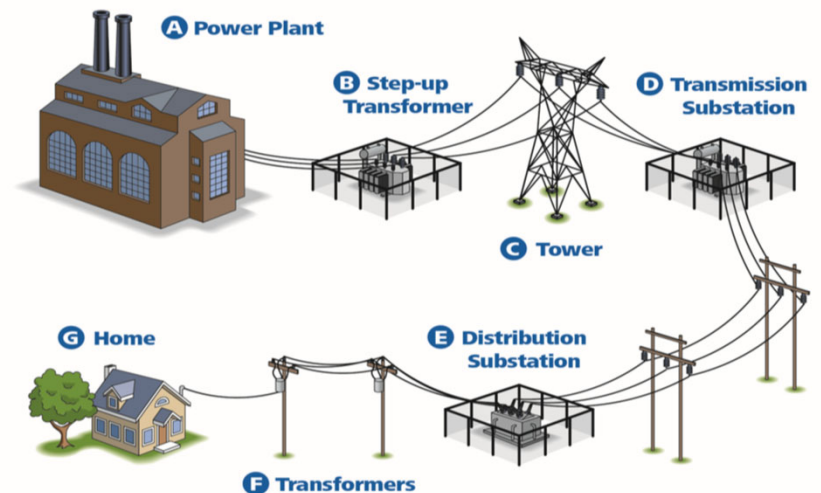
Kim Doyal, Community Engagement & Public Involvement



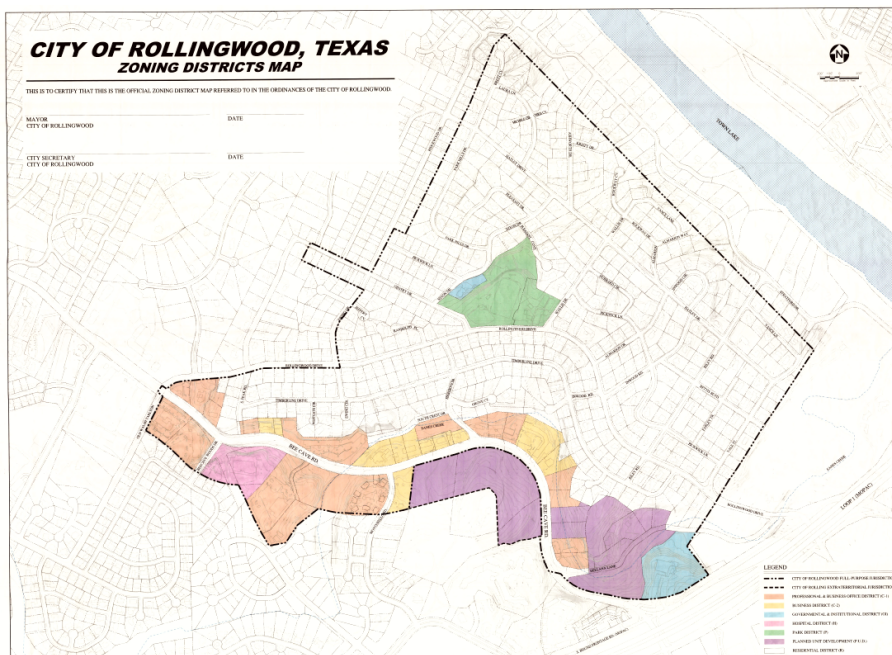
Power Lines and Energy Distribution

Thousands of residents are supplied power on an electrical circuit.

- Energy is distributed from a nearby substation.
- Some residents receive energy from overhead power lines, others from buried power lines.
- Neighborhood circuits have a mix of both overhead and buried power lines.
- Any disturbance affecting a power line disrupts the energy flow and can cause an outage affecting every resident on the circuit.



City of Rollingwood Circuits



- There are two substations feeding the City of Rollingwood on three electrical circuits.
- The Barton Substation feeds mostly the southern portion, and the Bee Creek substation feeds the remainder of the city.

Barton 05

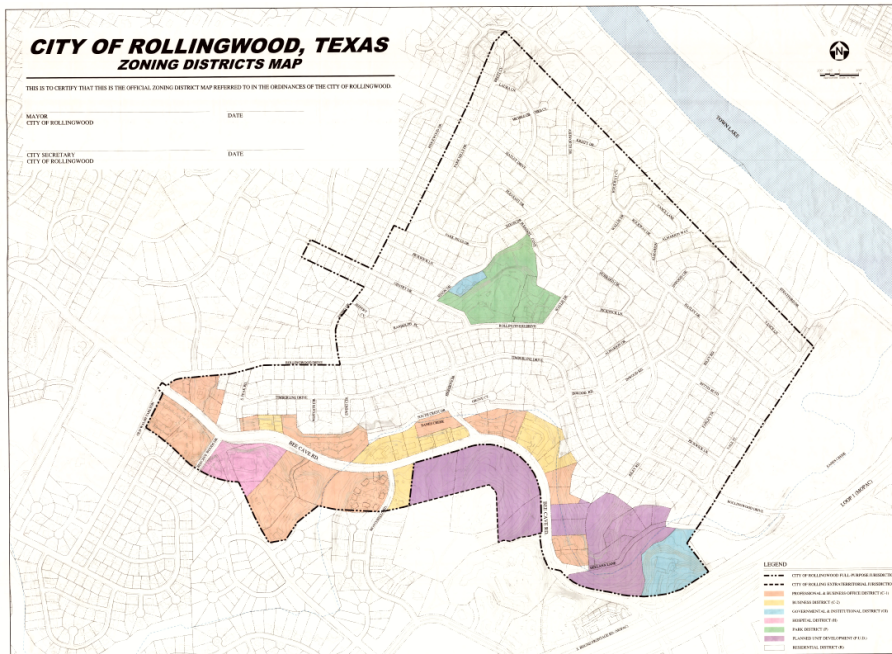
Bee Creek 03

Bee Creek 05

- Electrical circuits do not correspond with street or neighborhood grids (ex., three neighbors could be on three different circuits).



City of Rollingwood Circuits



- There are 584 poles in the City of Rollingwood.

COMM STUB	23
GUY	9
PRIMARY	431
SECONDARY	87
STREETLIGHT	34
Grand Total	584

- The annual usage fees associated with the poles in Rollingwood's jurisdiction is approximately \$19,200 per year. This amount will fluctuate as pole attachments are added or removed and due to the annual usage rate changing each year.



Most Common Reasons for Outages

- Storms   
- Vehicles 
- Trees and Vegetation 
- Animals  
- Construction  
- Equipment failure 



Outage Data 2019 – 2021

Circuit	*Total Outage Percentages		ERCOT/Storm Event Outages (Feb. 11-21)
BA05	69% Vegetation 9% Animals	12% Weather 9% Interference	No ERCOT-mandated load shed: Feb: 15-17 <i>After</i> load shed: Feb. 17-20 (vegetation + weather)
BC03	53% Vegetation 7% Animals	38% Weather 2% Interference	No ERCOT-mandated load shed: Feb: 15-17 <i>After</i> load shed: Feb. 17-20 (vegetation + weather)
BC05	63% Vegetation 12% Animals	25% Weather	No ERCOT-mandated load shed: Feb: 15-17 <i>After</i> load shed: Feb. 17-20 (vegetation + weather)



**This data applies across the entire circuit. Individual home outage percentages vary.*



Questions?

Up next: Vegetation Management



Vegetation Management

Tree Pruning and Line Clearance

Kim Doyal, Community Engagement & Public Involvement

Joe Osborne, Line Clearance Superintendent







Certified Professionals

Austin Energy's Vegetation Management Division

- **14** Austin Energy Vegetation Management professionals on staff
- Each is a member of:
 - International Society of Arboriculture
 - International Society of Arboriculture Texas Chapter
 - Utility Arborist Association
- Additional memberships with:
 - Society of American Foresters
 - The Texas Forestry Association
- Division lead by **Joseph Osborne**, who has earned these memberships and serves on the Environmental Commission/Urban Forestry Committee.





Outages Caused by Trees and Vegetation

Limbs and branches can scrape or fall onto power lines, causing:

- Voltage fluctuations and momentary outages (flickering lights)
- Burns to trees and power lines
- Equipment damage (esp. during storms)
- Frequent outages
- Increased wildfire risk
- Overall increased chance of service interruption



Current Tree Pruning Notification Process

Visit each property to assess pruning

- A work plan is prepared
- Affected trees are marked with green (pruning) or pink (removal) ribbons

If a homeowner is not home

- Work plan is left on a door hanger
- Includes a callback number for a return visit



If we do not hear back from the homeowner

- No work completed until the homeowner has been contacted

If a homeowner refuses pruning

- Sent a certified letter detailing the necessary work
- Tree pruning will be performed





WORK TYPE _____
DATE _____
AE REP. _____
PHONE _____

SORRY WE MISSED YOU
(If you are not the property owner, please read, then give this important notice to the owner.)

We will be in your neighborhood soon to prune and/or remove trees on your property which are too close to the distribution electric lines and equipment.




Trees growing into or close to the distribution electric lines and equipment are one of the major causes of power outages and can be a serious safety hazard. To maintain safe and reliable electrical service for all of our customers, Austin Energy uses qualified line clearance contractors with special training to prune and remove trees from the power lines. **This service is provided free of charge to our customers and can only be performed by qualified line clearance workers.**

The trees on your property have been assessed and a work plan is attached that outlines the proposed work. **All tree work will be completed to professional arboriculture standards and Austin Energy line clearance specifications and the work will be reviewed by a professional from Austin Energy's forestry section.**

YOUR OPTIONS AS AN AUSTIN ENERGY CUSTOMER

- Please call the number in the top right corner of this card to arrange for an on-site meeting with a contractor representative to review the proposed tree work.
- You may request an on-site meeting with an Austin Energy employee to discuss the proposed tree work.
- You may have a third party present during these meetings.
- You may request modifications to the proposed tree work.
- If the proposed plan calls for tree removals on your property, you may request that trees not be removed.
- You may request to be present when the tree work is performed.
- You will receive a written work plan documenting the proposed work on your property, if one is not attached.
- You may request pricing on electric system modifications to minimize or reduce tree work.
- You may request a replacement tree. For more information, visit our Web site at austinenrgy.com/go/trees.

The illustrations below indicate the type of clearance that is generally required to remove tree limbs that are too close to power lines or equipment. **If you have any questions, please call the number in the top right corner between 7:30 AM - 3:30 PM, Monday through Friday.**

 STEPS TO THE PROPER COLLAR CUT	 SIDE TRIM	 THROUGH TRIM
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Thank You.



Environmental Pruning Limitations

Month	Pruning Schedule
Jan	Prune
Feb	Oak Wilt Season
Mar	Oak Wilt Season/Bird Habitat Preservation
Apr	Oak Wilt Season/Bird Habitat Preservation
May	Oak Wilt Season/Bird Habitat Preservation
Jun	Oak Wilt Season/Bird Habitat Preservation
Jul	Oak Wilt Season/Bird Habitat Preservation
Aug	Bird Habitat Preservation
Sep	Prune
Oct	Prune
Nov	Prune
Dec	Prune

Non-Oak tree work continues on all planned circuits.





Recent Improvements

1. Proceed with pruning plans if homeowner doesn't respond back
 - Current process negatively impacts reliability for remaining customers on the circuit
 - Slows progress and extends pruning past *non* oak wilt window
2. Remaining in areas with many oaks to continue pruning during oak wilt season
 - Continuing to prepare workplans on oaks
 - Ready to begin pruning oaks as soon as oak wilt window has closed
 - Prioritizing oak pruning outside of oak wilt window (Aug. – Jan.)
3. Recently improved standards allow deeper pruning
 - Prevents a repeat of current overgrowth
 - Fast-growing trees pruned back 11 to 15 feet
 - Slow-growing trees pruned back 7 to 10 feet





Recent Improvements (cont.)

4. Possibility of pruning certain oaks during oak wilt window
 - Limited oak tree pruning could be performed during oak wilt window
 - On underperforming feeders and for emergencies
 - Tools must be sterilized between each tree pruning and pruning cuts protected
5. City Council doubled Vegetation Management budget (effective Jan., 2021)
 - Jan. 2021 Austin Energy employed 26 Vegetation Management Crews
 - March 2021 increased to 31 Vegetation Management Crews
 - By May 2021 will have 58 Vegetation Management Crews in service





Questions?

Up next: Recent Winter Storm Event

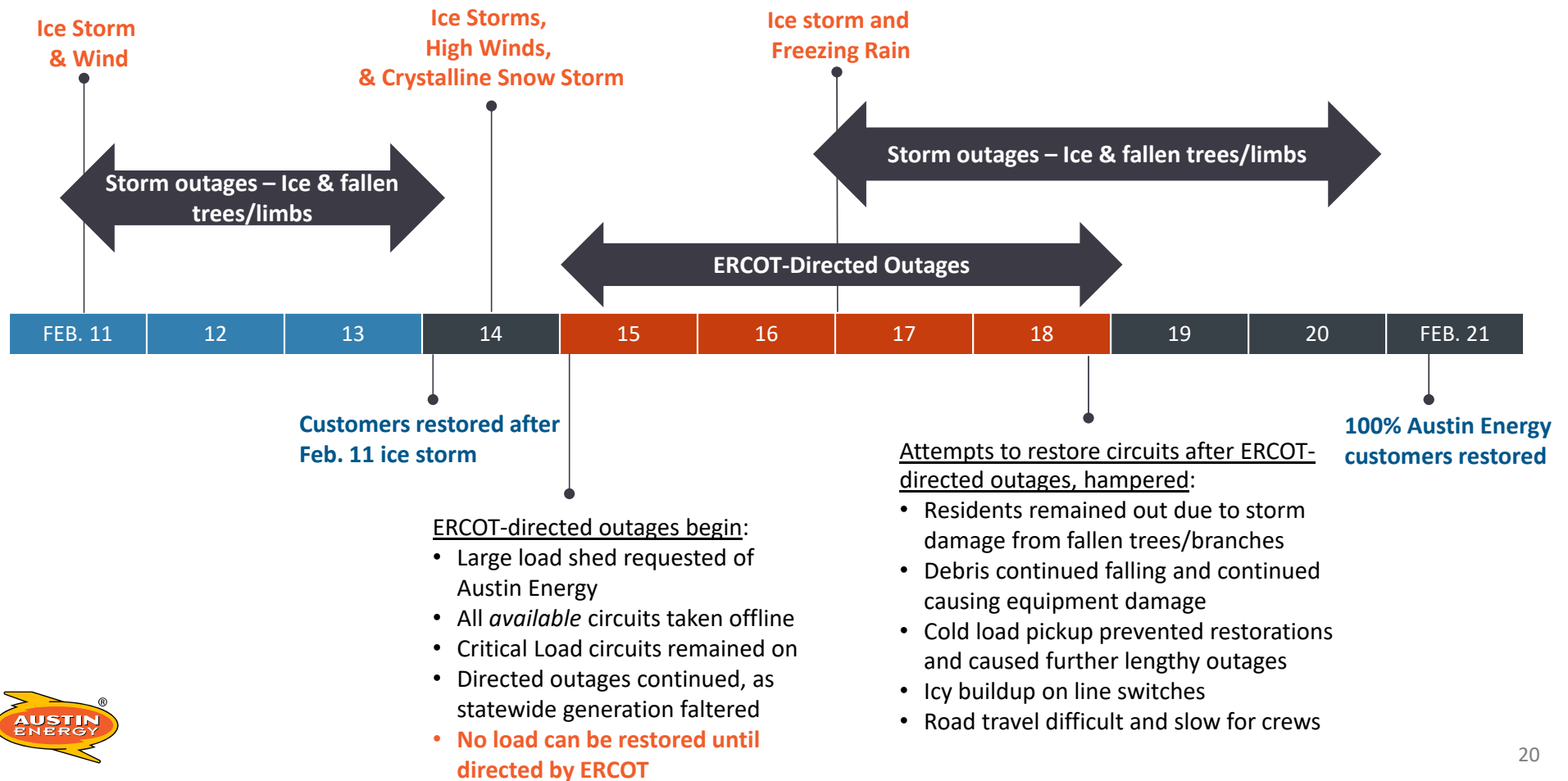


Recent Winter Storm Event

Joe Walsh, Advanced Technology Program Manager
Craig Brooks, Director of Electric System Field Operations



Winter Event Timeline (February 11-21)



Frozen Vegetation on Power Lines

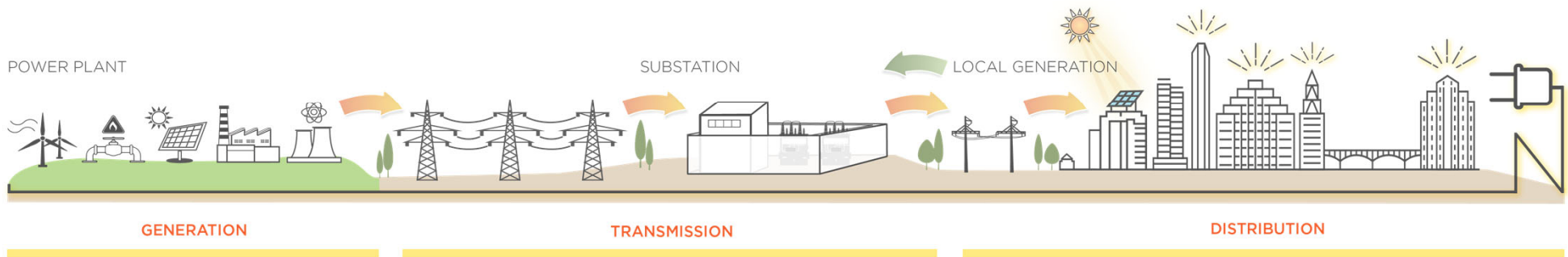
- Three winter storms crossed the area Feb. 11-18
- Ice weighed down limbs overhanging power lines, causing outages prior to ERCOT mandated outages
- Ice accumulation continued and damaged limbs continued falling after mandated outages ended
- Frozen lines and vegetation created hazardous working conditions
- Contributed to increased restoration times



How Vegetation Impacts Reliability

Feb 2021 Ice Storm Outages

POWER DELIVERY MODEL



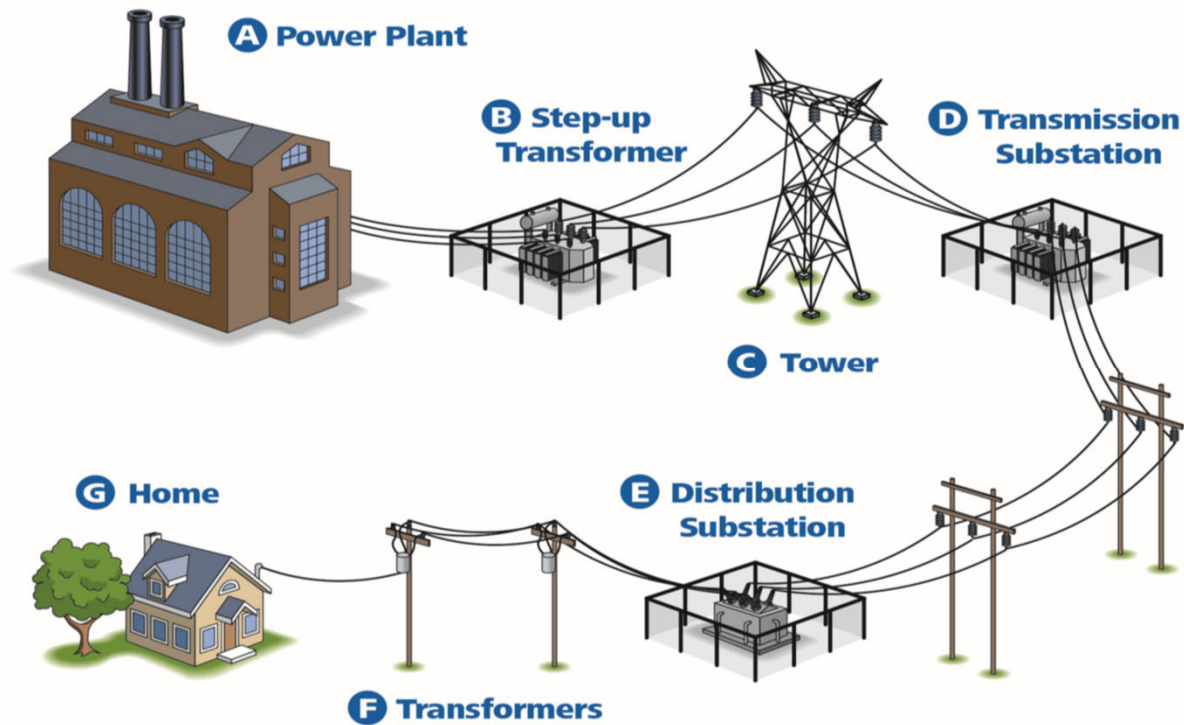
No vegetation caused outages

No vegetation caused outages

Primary cause of outages was vegetation contact with power lines. This includes direct contact, falling trees, and falling branches.



Service Generation





Questions?

Up next: Wrap-up and Next Steps



Next Steps

Joe Walsh, Advanced Technology Program Manager



Continued Focus on Wildfire Risk Areas

Vegetation (Re-established Industry Standards for Vegetation Clearances)

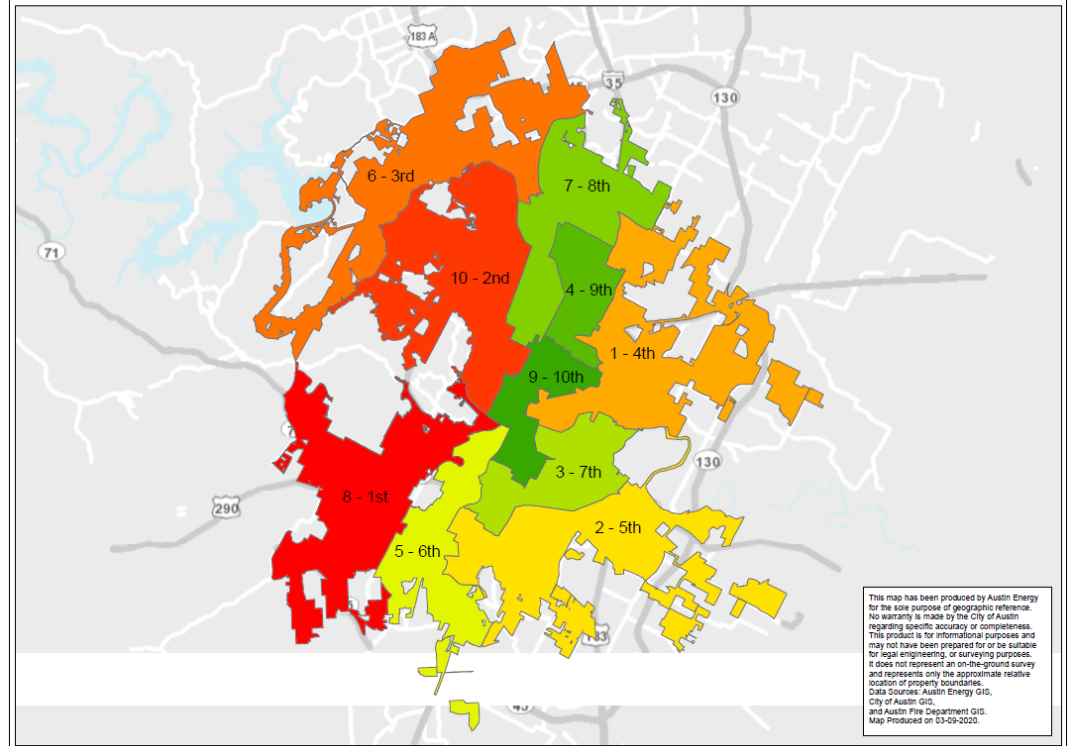
Storm Hardening (Long Term Rebuild; Pole Replacements)

- Intelligent Recloser use philosophy.

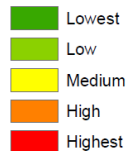
Infrared Line Inspections: (2) Cameras On-Site + Plans To Purchase (2) Additional Cameras

Continued work on Underperforming Equipment + Maint./Patrol Tickets

COA Council Districts - AFD Fire Rank



Austin Energy Circuit Boundaries
AFD Wildfire Risk Average



Continued Focus on Wildfire Risk Areas

Vegetation (Re-established Industry Standards for Vegetation Clearances)

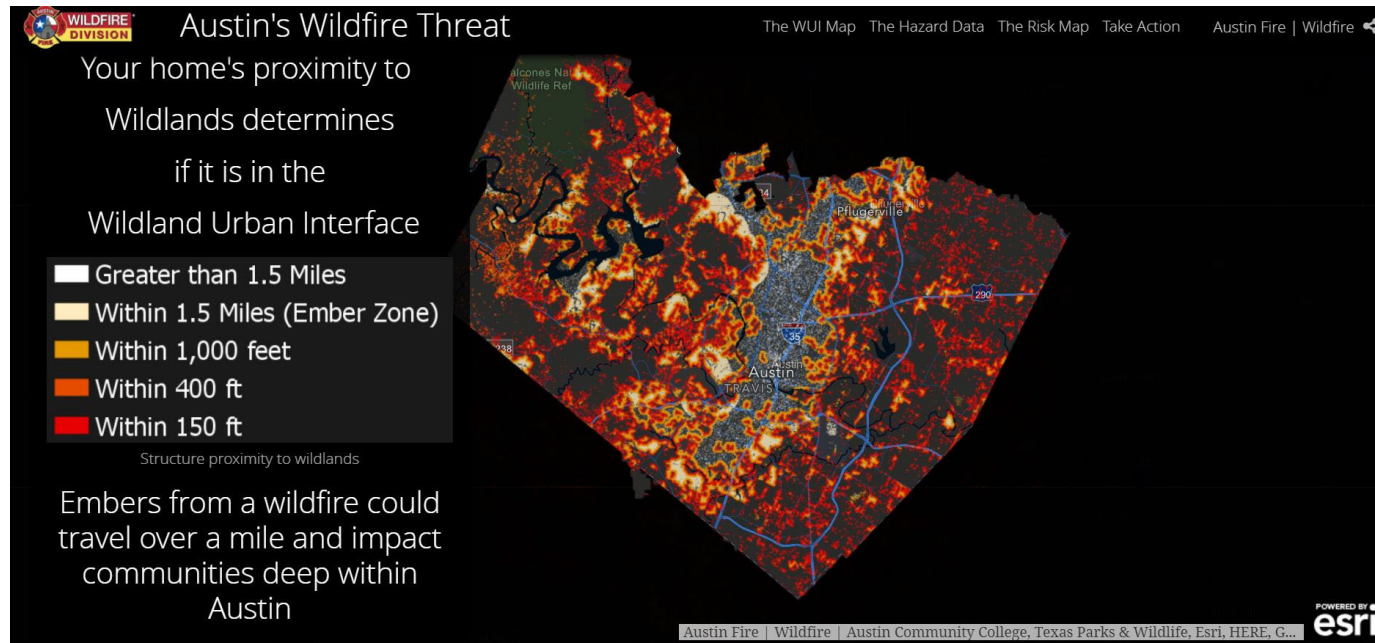
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Infrared Line Inspections: (2)

Cameras On-Site + Plans To Purchase
(2) Additional Cameras

**Continued work on
Underperforming Equipment +
Maint./Patrol Tickets**

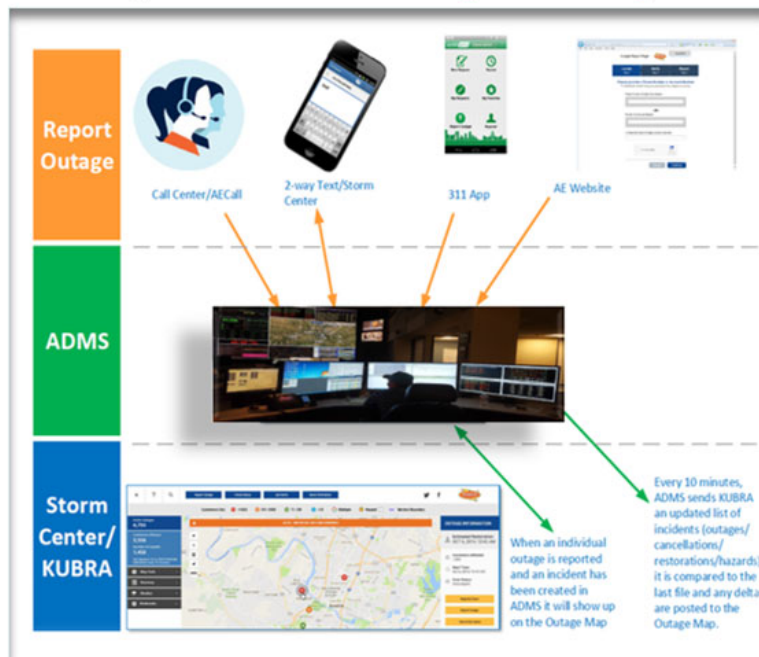


<https://www.arcgis.com/apps/Cascade/index.html?appid=0c0da8f074fa4b99b5f996e947254158>



Outage Alerts and Outage Map

Primary Notification: **Notify Two-Way**



Complementary Notification: **Social Media**

This block shows a screenshot of Austin Energy's Twitter profile and a tweet. The profile information includes:

- Top Tweet:** earned 9,119 impressions. The tweet text reads: 'OUTAGE UPDATE: We are currently working on 73 trouble calls affecting 206 customers. We hope to have everyone restored by 8 p.m. tonight. We're sorry for the inconvenience and thank you for your patience as our crews work to restore power.'
- Followers:** 21,500
- Tweets:** 200,000
- December Snapshot:**
 - 174 Mentions
 - 2200 Profile Visits
 - Twitter platform used primarily for breaking news situations; e.g., outages

The tweet itself shows a map of the Austin area with red dots indicating outage locations, similar to the one in the Primary Notification diagram. The tweet has 1,782 people reached and 257 engagements.



Visit <https://austinenergy.com/ae/outages>

Next Steps

- Continued Focus on the Underperforming Circuits and Wildfire Risks, plan the work on the remaining circuits for 5 year cycle
- **BA-05:**
 - Last Patrol Date: **December 2, 2019**
 - # of Maintenance Tickets Open: **4 (1 – P2, 2 - P3's, 1 - P4)**
 - # of Poles identified on Inspections Project: **0**
- **BC-03:**
 - Last Patrol Date: **September 15, 2020**
 - # of Maintenance Tickets Open: **11 (11 – P3's)**
 - # of Poles identified on Inspections Project: **0**
- **BC-05:**
 - Last Patrol Date: **October 29, 2019**
 - # of Maintenance Tickets Open: **0**
 - # of Poles identified on Inspections Project: **0**





Next Steps

Summary of Vegetation Work

- Bee Cave Substation (BC03)
Located between #1 & 2 AFD ranked Wildfire Risk / Oak Wilt & Bird Habitat Area / Non-District
Pre-planning scheduled 08-2021
- Bee Cave Substation (BC05)
Located between #1 & 2 AFD ranked Wildfire Risk / Oak Wilt & Bird Habitat Area / Non-District
Pre-planning scheduled 12-2021
- Barton Creek Substation (BA05)
#1 AFD ranked Wildfire Risk / Oak Wilt Area / District 7
Pruning Completed 2015 / Patrol planned 8-2021



Questions?



**Customer Driven.
Community Focused.SM**



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