

# POWER OUTAGE PREPAREDNESS

2020 PNM ENERGY SOLUTIONS WEBINAR SERIES



Talk to us.



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# AGENDA

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- ✓ Power Outages
- ✓ PNM Action plan to minimize outage impacts
- ✓ Understand PNM outage planning and restoration
- ✓ Tips to prepare your business for an outage
- ✓ Reporting an outage
- ✓ Useful tools and resources
- ✓ Questions & Answers



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## KEY TAKEAWAY FROM TODAY'S WEBINAR

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To provide PNM business customers with the following:

- PNM Outage information
- Outage tools & resources to aid in planning and preparation
- Tips to minimize outage impact to business operations



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## TODAY'S SPEAKERS

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**Apollonia Gonzales**  
Sr. Strategic Account Manager



**Mike Davis**  
Manager, PNM Distribution Operations Center

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## HOUSEKEEPING

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- You will receive an email with the presentation from today's webinar and you can find it on [PNM.com/business-events](http://PNM.com/business-events)
- Please ask your questions by typing into the chat box during the Q&A session.
- We are committed to answering all submitted questions. If we are unable to get to them today, we will provide a response after the presentation



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# WHO WE ARE

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## PUBLIC SERVICE COMPANY OF NEW MEXICO

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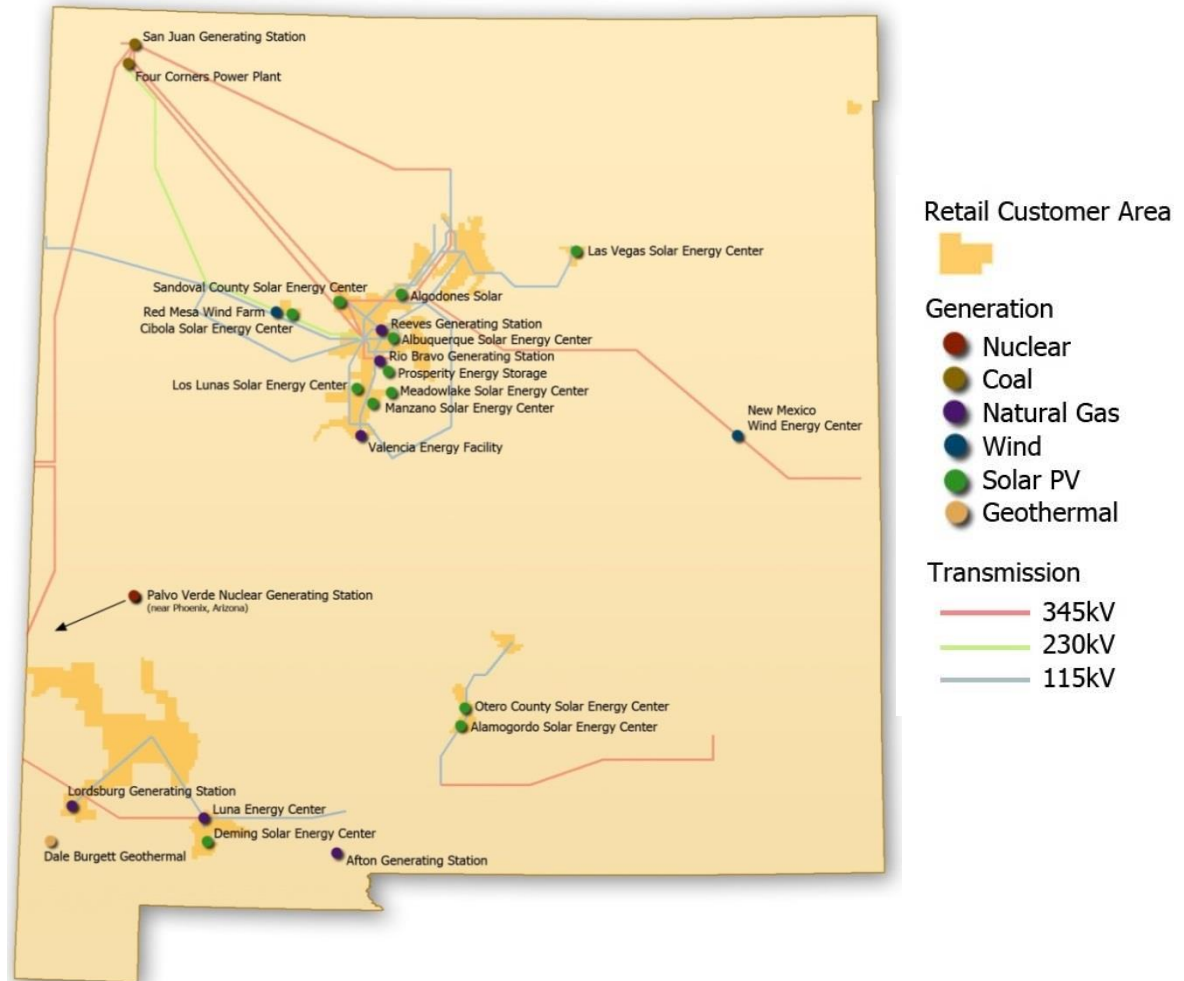
- Core mission to provide reliable, low-cost, safe and environmentally responsible energy to our customers
- Founded in 1917
- First New Mexico business on the NYSE
- Annual revenues \$1.4B
- Employs 1,500
- Gives over \$4M to local non-profits annually





## PNM PROUDLY SERVING NEW MEXICANS FOR OVER 100 YEARS

- 530,000 customers in 40 communities
- 15,158 miles of transmission and distribution lines
- 2,701 MW generation capacity



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## POLL QUESTIONS

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Have you experienced a power outage within the last 12 months at your place of business?

- Yes
- No

Did your company invest in power reliability equipment, such as UPS devices, back up generators, and/or other back up power methods?

- Yes
- No



Image Credit: <https://www.123rf.com/clipart-vector/yes.html?sti=mmchduijkqnlh1y9v6o>



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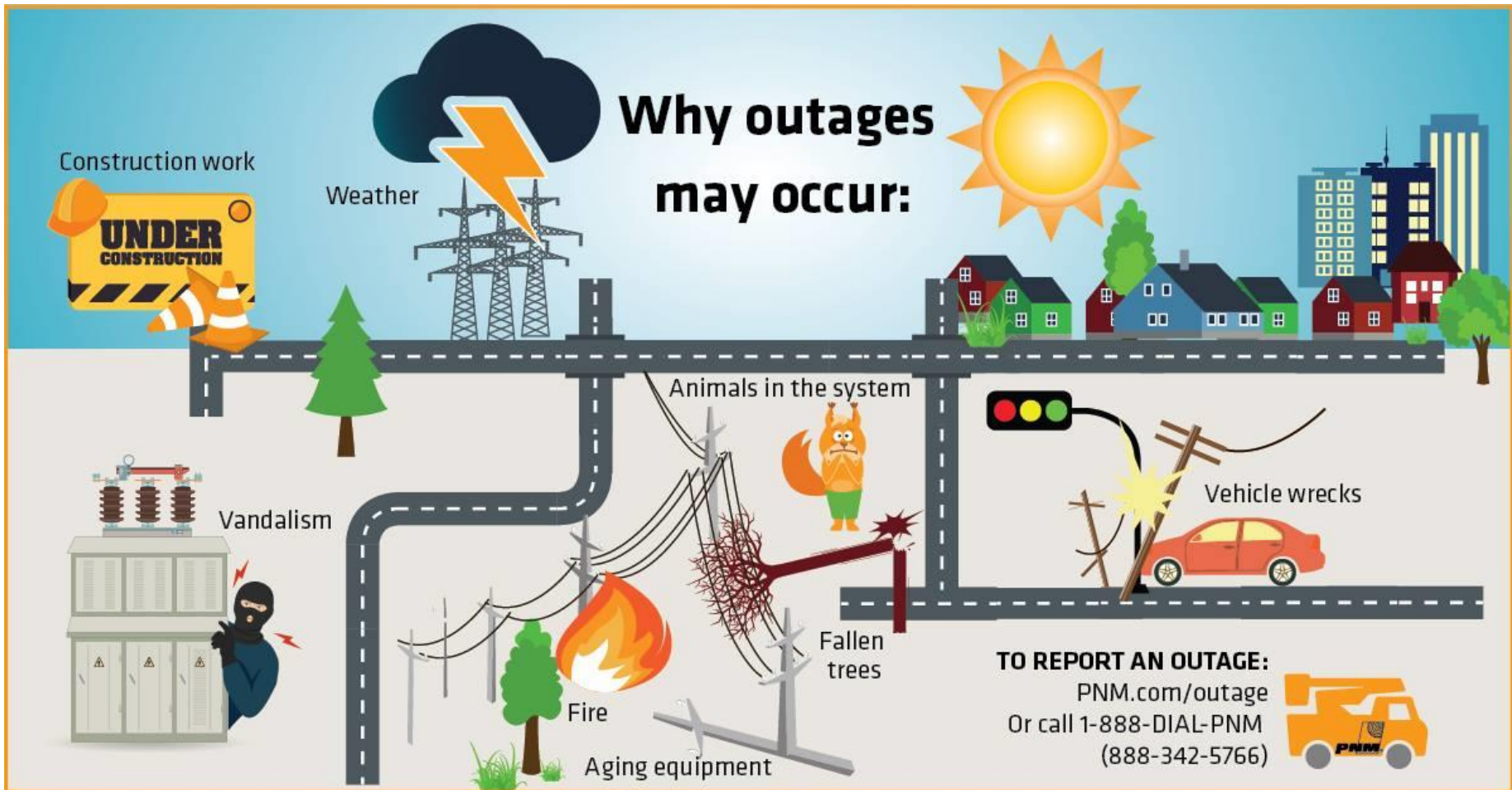




# POWER OUTAGES



# WHY OUTAGES OCCUR



# PNM STORM AND OUTAGE PREPARATION

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## STEPS PNM TAKES TO IMPROVE AND PROVIDE SAFE AND RELIABLE POWER

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At PNM SAFETY is our number one priority

Pre-Storm Preparation

Post Storm Damage Assessments

Manpower and Material Estimates for Restoration

Repair High Voltage Line and Other Essential Facilities

Working Priority Restoration

Greatest Customer Count

Yard-to-Yard Restoration of the Hard-to-Repair



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# COMMON POWER DISTURBANCES

Disturbance Type	Description	Local Effects
Transient (Surge)	A sub-cycle disturbance in the AC waveform, resulting in a sharp but brief voltage increase	<ul style="list-style-type: none"> <li>- Computer lock-up, processing errors, data loss</li> <li>- Burned Circuit boards, electrical insulation damage, equipment damage</li> </ul>
Sag/Swell	Any short term (1/2 cycle to 3 seconds) decrease ( <b>sag</b> ) or increase ( <b>swell</b> ) in voltage	<ul style="list-style-type: none"> <li>- Memory loss and data errors</li> <li>- Equipment shutdown; motors stopping or stalling and decreased motor life</li> <li>- Flickering lights</li> </ul>
Noise	An unwanted high frequency electrical signal that alters the normal voltage pattern (sine wave)	<ul style="list-style-type: none"> <li>- Lock-up of sensitive equipment</li> <li>- Data loss and processing errors</li> <li>- Distorted audio and video reception</li> </ul>
Harmonic Distortion	The alteration of the normal voltage pattern due to equipment generating frequencies other than the standard 60 cycles per second	<ul style="list-style-type: none"> <li>- Electrical equipment/wiring overheating</li> <li>- Decreased motor performance</li> <li>- Improper operation of breakers, relays, or fuses</li> </ul>
Under/Overvoltage	Any long-term change (more than 1 minute) below or above normal voltage levels	<ul style="list-style-type: none"> <li>- Dim or bright lights</li> <li>- Equipment shutdown, overheating of motors or lights</li> <li>- Reduced efficiency or life of equipment</li> </ul>

**References:** Power Quality Considerations – Bill Brown, P.E., Square D Engineering Services,

<http://www.goodielelectric.com/electrical-contractor-services-2/commercial-electrical-services/power-quality-testing/>



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# PNM SAFETY & TIPS DURING AN OUTAGE

[WWW.PNM.COM/SAFETY](http://WWW.PNM.COM/SAFETY)

ELECTRICAL SAFETY

OUTAGES

STORM SAFETY

WILDFIRE SAFETY

KID SAFETY

FIRST RESPONDER SAFTY

PNM EMPLOYEE SAFETY

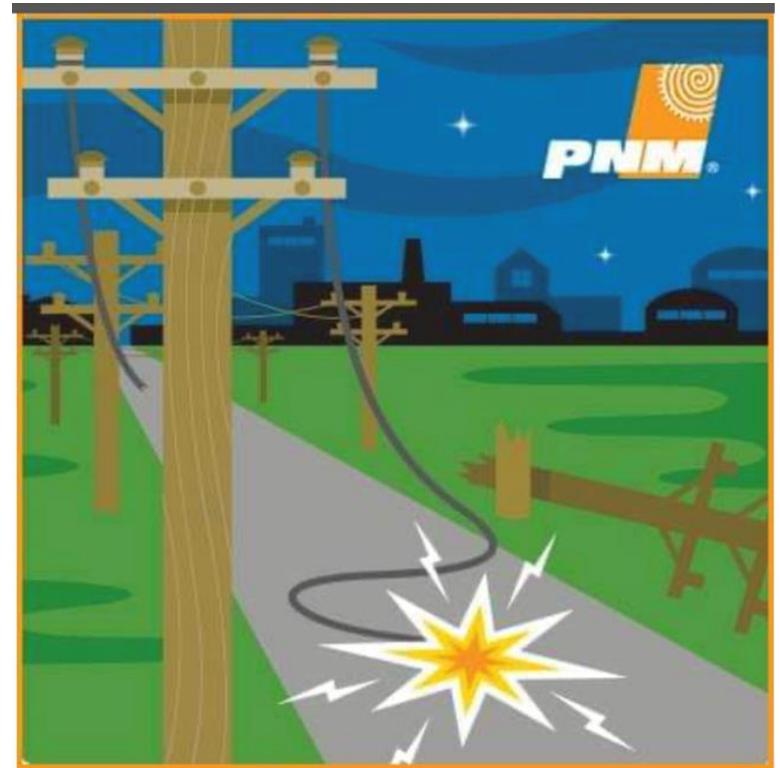
HOT AIR BALLOON SAFETY

ENERGY AND COPPER THEFT

TREE TRIMMING

CALL BEFORE YOU DIG

SCAM CALLS



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# HOW PNM MAINTAINS POWER RELIABILITY

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## PROACTIVE APPROACH TO IMPROVE/MAINTAIN SYSTEM RELIABILITY

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Track outage occurrence

Perform root cause analysis

Perform routine maintenance on critical grid infrastructure

Capital system improvements/upgrades

Improved customer notification system

24/7 on call outage team



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# COMMON STEPS BUSINESSES TAKE TO STRENGTHEN RELIABILITY AND MINIMIZE OUTAGE IMPACTS

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## BE PREPARED WITH THESE TIPS TO MINIMIZE THE IMPACT

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Business Continuity Plan



Emergency Response Training



Prepare Outage Kit



Install UPS Device



Backup Generation



Emergency Backup Fuel



## REPORTING AN OUTAGE



# IN THE EVENT OF AN OUTAGE

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## PNM CONTACT INFORMATION

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- **Emergencies: Dial 911**
- Have your PNM account number and/or phone number associated with account when calling to report an outage
- Report outages by
  - ✓ Calling **888-DIAL-PNM (888-342-5766)**
  - ✓ Texting Option
    - Register your device by texting #REG to 78766
    - Report outage by texting #OUT to 78766
  - ✓ or ONLINE at [PNM.com/outage](https://www.pnm.com/outage)



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# BECOME FAMILIAR WITH PNM.COM

The screenshot shows the PNM website homepage. At the top, there is a navigation bar with the PNM logo, links for 'About PNM', 'Contact Us', 'Log In/Sign Up', and 'Español'. A 'Talk to us.' button is next to social media icons for PNM.com, Twitter, and Facebook. A search bar is on the right. Below the navigation bar, a 'Services for:' menu includes 'Homes', 'Businesses', 'Community', 'Environment', 'Safety', and 'My Account'. The main banner features a large red hexagon with the text: 'Scammers are targeting PNM customers, especially on the weekend because they know we're closed. This is spoofing. They mask caller ID w/ our name/number so you'll answer, claiming past due balances, threatening to shutoff power, and demanding you pay up with a prepaid gift card.' To the right of the hexagon is an illustration of a hooded figure holding a smartphone. Below the hexagon is a 'SPOOFING EXAMPLE' showing a mobile phone screen with the PNM logo and a call button. On the left side of the banner, there is a 'Quick Links' menu with options: 'Log In to My Account', 'Not Registered? Sign Up', 'Pay My Bill', 'Moving? Start, Stop or Transfer Service', 'Report an Outage', 'Billing Options', and 'New Construction & Upgrade Services'. On the right side of the banner, there is a 'Live Chat' button. Below the banner, there are four promotional tiles: 'Renewable Energy' with '< 5%' and a leaf icon, 'OUTAGE CENTER' with 'Report power and streetlight outages' and a truck icon, 'EASY WAYS TO PAY' with 'Online, by phone and more' and a pencil icon, and 'SAVE MONEY' with 'Get rebates and discounts' and a piggy bank icon. A yellow arrow points from the 'OUTAGE CENTER' tile to the text 'Click on OUTAGE CENTER link'.

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About PNM | Contact Us | Log In/Sign Up | Español

Talk to us. PNM.com

Services for: Homes Businesses Community Environment Safety My Account

Log In to My Account  
Not Registered? [Sign Up](#)

**Quick Links**

- Pay My Bill
- Moving? Start, Stop or Transfer Service
- Report an Outage
- Billing Options
- New Construction & Upgrade Services

Scammers are targeting PNM customers, especially on the weekend because they know we're closed. This is spoofing. They mask caller ID w/ our name/number so you'll answer, claiming past due balances, threatening to shutoff power, and demanding you pay up with a prepaid gift card.

SPOOFING EXAMPLE

PNM

Learn more >>

Live Chat

**Renewable Energy**  
Real Time SERVING OUR CUSTOMERS RIGHT NOW  
**< 5%**

**OUTAGE CENTER**  
Report power and streetlight outages

**EASY WAYS TO PAY**  
Online, by phone and more

**SAVE MONEY**  
Get rebates and discounts

Click on OUTAGE  
CENTER link

# PNM WEBSITE: OUTAGE CENTER LINK

[www.pnm.com/outage](http://www.pnm.com/outage)

Provides the following:

- LIVE OUTAGE MAP
- OPTION TO REPORT OUTAGE
- OPTION TO REPORT A STREETLIGHT OUT
- SAFETY & TIPS
- SIGN UP FOR OUTAGE ALERTS

The screenshot displays the PNM Outage Center website. At the top, there is a navigation bar with the PNM logo, links for 'About PNM', 'Contact Us', 'Log In/Sign Up', and 'Español', a 'Talk to us.' button, and social media icons for PNM.com, Twitter, and Facebook. Below this is a secondary navigation bar with 'Services for:' followed by 'Homes', 'Businesses', 'Community', and 'Environm'. The main heading is 'Outage Center'. Below the heading, a paragraph states: 'PNM electricity reliability is among the best in the nation, but when outages do affect you, the Outage Center provides you with resources to report new outages or view known outages on our outage map.' The main content area features four large, light-colored boxes with orange and blue accents. The first box is titled 'VIEW ONLINE OUTAGE MAP' with a location pin icon and the subtext 'See outage locations, and estimated restore times.' The second box is titled 'REPORT AN OUTAGE' with a truck icon and the subtext 'Click to report or Text #OUT to 78766' and 'Message & data rates apply. Text #HELP for options or #STOP to cancel.' The third box is titled 'REPORT A STREETLIGHT OUT' with a streetlight icon. The fourth box is titled 'SAFETY & TIPS during an Outage' with a power line icon. The fifth box is titled 'SIGN UP FOR OUTAGE ALERTS' with a power line icon and the subtext 'We'll let you know when power is expected to be restored'.



# LIVE OUTAGE MAP – SNAP SHOT

View Outage Map - Internet Explorer

https://www.pnm.com/search-an-outage

View Outage Map

Find It

Map

550

550

25

40

25

84

40

285

60

54

285

380

54

25

Cuba

Española

Los Alamos

La Cueva

Santa Fe

Agua Fria

Las Vegas

Villanueva

Moriarty

Clines Corners

Santa R

Corona

Carrizozo

San Antonio

Socorro

Magdalena

Datil

Pie Town

Alamo

Techado

Grants

Thoreau

Crownpoint

Church Rock

Los Lunas

Estancia

Vaughn

Claunch

El Malpais National Conservation Area

Sevilleta National Wildlife Refuge

LAGUNA PUEBLO

Multiple Outages Exist. Click on it inside the map to zoom to them.

move your mouse over it inside the map to see when the power should be back on

**Customers affected**

1-49

50 - 250

More than 250

**Report an Outage**

Report your outage online or call us 24 hour a day.

Call 1-888-DIAL-PNM (888-342-5766). Say "outage" to get started,

Or

Report Your Outage Online

Live Chat

Feedback

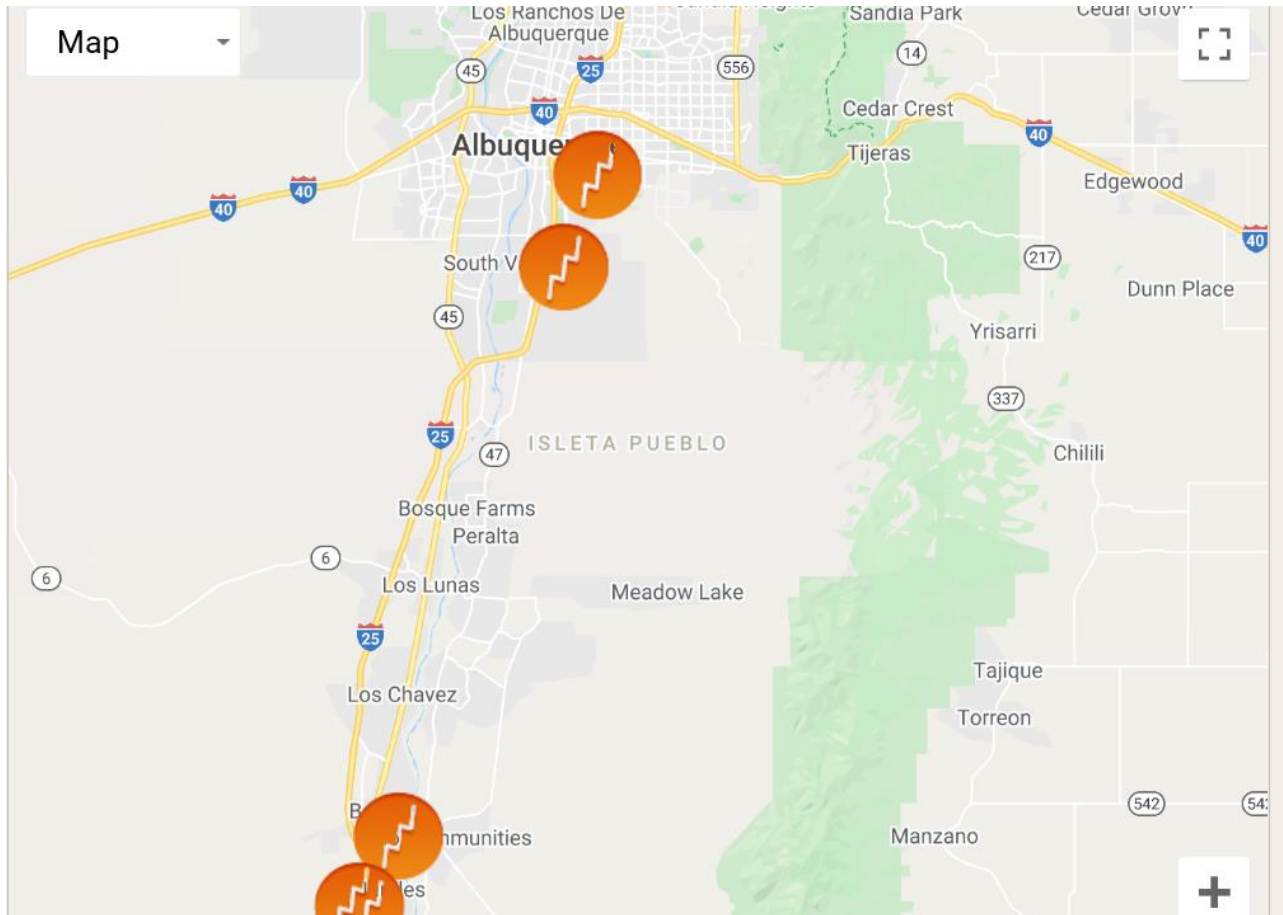


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# LIVE OUTAGE MAP – SNAP SHOT – ZOOMED IN




# TOOLS AND RESOURCES - SAFETY


ELECTRIC SAFETY FOUNDATION INTERNATIONAL: [WWW.EFSI.ORG](http://WWW.EFSI.ORG)


**PREPARE YOUR BUSINESS AND RECOVER FROM A NATURAL DISASTER**


While we can't prevent natural disasters, we can ensure our businesses are electrically safe **before** and **after** the storm. Practicing electrical safety and being **prepared** can lead to a smooth recovery and an opportunity to renovate the electrical efficiency of your business.

**IN THE EVENT OF A NATURAL DISASTER**


**Create** emergency shutdown and start up **procedures**.


**Turn off** power source if requested by utility.


**Charge** all electronic communication devices.

**Unplug** and **elevate** electronics.

**AFTER THE STORM**

**Avoid flooded areas.**

**Always use a GFCI and transfer switch** with portable generators.


**Have a qualified electrician** inspect any submerged or water damaged electrical equipment.

**PREPARE FOR FUTURE STORMS**

**Microgrids**  
Microgrids can prevent long term power outages by providing localized generation and storage.

**Smart Grids**  
Smart grids provide **smart distribution** along with self-healing and autonomous restoration of power.

**Relocate Energy Sources**  
Having energy sources and major equipment on **higher floors** may prevent water damage during future storms.

 [www.facebook.com/ESFi.org](http://www.facebook.com/ESFi.org) [www.twitter.com/ESFidatorg](http://www.twitter.com/ESFidatorg) [www.youtube.com/ESFidatorg](http://www.youtube.com/ESFidatorg)

**ALWAYS ASSUME ALL DOWNED LINES ARE LIVE**

Downed power lines can be **deadly**. Always assume a downed power line is **live** and avoid approaching them or anything near them.

**Use Precaution**

**Downed power lines** can energize the ground up to **35 feet** away. Even more in wet conditions.

**If you see a downed power line, call 911.**

**Never drive over** downed power lines or anything in contact with them.

**Never try to move** a downed power line.

**STAY AWAY AND CALL 911**

**Consider all lines** to be live and dangerous.

**Stay in place or inside your vehicle** unless you see **fire or smoke**.

**Warn others** to stay at least **35 feet** away.

**Tell others** not to approach vehicle, downed lines, or anything that may be in contact with downed lines.

**Call 911.**

**In the Event of Fire or Smoke**

**Do not touch** the ground and vehicle at the **same time**.

**Jump from the vehicle** with your **feet together**.

**Shuffle away**, avoid lifting your feet.

 [www.facebook.com/ESFi.org](http://www.facebook.com/ESFi.org) [www.twitter.com/ESFidatorg](http://www.twitter.com/ESFidatorg) [www.youtube.com/ESFidatorg](http://www.youtube.com/ESFidatorg)



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# TOOLS AND RESOURCES - PREPAREDNESS

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## PREPAREDNESS IS ESSENTIAL FOR IN CASE OF AN ELECTRICAL OUTAGE

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FEMA: Ready Business Power Outage Tool Kit

- [https://www.fema.gov/media-library-data/1510690314175-1e6c4874b251c3022ac4b57b0369e2da/Power\\_Outage\\_Ready\\_Business\\_Toolkit\\_Interactive\\_Final\\_508.pdf](https://www.fema.gov/media-library-data/1510690314175-1e6c4874b251c3022ac4b57b0369e2da/Power_Outage_Ready_Business_Toolkit_Interactive_Final_508.pdf)

Department of Homeland Security: Ready.gov (Power Outages)

- <https://www.ready.gov/power-outages>

Department of Homeland Security: Ready.gov (Business)

- <https://www.ready.gov/business>

Red Cross: Power Outage Safety

- <https://www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies/power-outage.html>



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QUESTIONS?



# UPCOMING WEBINARS

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## 2020 PNM ENERGY SOLUTIONS WEBINAR SERIES

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- **Energy Efficiency Programs – Find the right fit for your business**  
Thurs., August 20 at 2:00 pm
- **Electric Vehicles – An introduction to transportation electrification**  
Thurs., September 17 at 2:00 pm
- **Understanding Your PNM Bill**  
Thurs., October 22 at 2:00 pm
- **Copper Theft Awareness – What you need to know to protect your business**  
Thurs., November 13 at 2:00 pm

[PNM.com/business-events](https://www.pnm.com/business-events)



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# Thank you for attending!

## **PNM Business Customers**

**Phone:** (888) 245-3659

**Hours:** Weekdays, 7:30 a.m. to 6 p.m.



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