



STORM HAZARDS MITIGATIONS

SAFETY GUIDE FOR RESPONDERS

2024

Elecnor Energy Services is fully committed to the safety and health of every employee. This manual provides best practice recommendations to reduce the chances of potential injuries to employees, near miss events or any other adverse outcomes. We are encouraging all employees to not just take minimal steps to mitigate hazards, we want everyone to take ALL STEPS to mitigate and eliminate hazards to our employees, the public, and protect our customers assets.

SAFETY STARTS WITH YOU

To be effective, you must consistently make informed and responsible decisions.

Important Contacts **For Emergencies, Dial 911**

Director of Operations.....	Willie Shutter	(615) 626-9113
Safety Manager.....	Tyler Gammie	(516) 672-3371

For any safety concerns or inquiries, please reach out to the Safety Manager. Safety should be contacted promptly for:

- Near miss incidents
- Employee injuries
- Motor vehicle accidents
- Utility outages, including dig ins
- Regulatory agency visits



Table of Contents

Meet the Team	3
Our Company	4
Message from our Director	5
Adverse Road Conditions	6
Low Bridges & Foreign Roadways	7
Inexperienced Field Workers & Utility Liaisons	7
Broken Tree & Branches	8
Inclement Weather & Working Conditions	9
Band-Aids & Improvised Rigging	10
Broken, Cracked or Damaged Poles	10
Downed & Low Hanging Wires	11
Fatigue	12
Guarding Against Complacency	12
Essential Preparation	13
Enhancing Communication	14

MEET THE TEAM



LEONARDO
SANCHO

President & CEO



MATTHEW
BRAUNWART

Chief Operating Officer



JERONI
GERVILLA

Chief Financial Officer



KEVIN
KIRBY

SVP of Operations



WILLIE
SHUTTER

Director of Operations



LUCAS
RIAÑO

Finance Manager



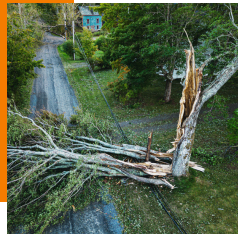
TYLER
GAMMIE

Safety Manager

Our Company

Elecnor Energy Services is a leader in delivering storm response services to utility sectors. We take an integrated approach to our projects, and respond with quality power crews that meet a comprehensive standards for the restoration. We have set a high bar for our clients, combining our decades experience with our knowledge to deliver solutions that stand out amongst the industry.

At EES, safety has been embedded in our culture and our leaders provide safety initiatives that protect not only our employees but also the work sites and our clients.



From the Beginning

Elecnor Group is one of the global leaders in the engineering, construction, and development of infrastructure projects. It is also a leading developer and investor in the fields of renewable energies, energy infrastructure, and aerospace.

With over 60 years of continuous growth and presence in more than 50 countries, Elecnor has become one of the outstanding business groups and a benchmark in the infrastructure, renewable energy, and technology sectors. Business diversification has been one of its strategic aims throughout history, enabling involvement in several industries, which range from electricity, gas, railways, industrial plants, telecommunications, water, control systems, construction, environment, and installation/maintenance to aerospace engineering.

Elecnor's strong international outlook has helped sustain a continuous expansion process, which has unlocked the doors to new markets around the world.



Welcome to Storm Hazards Mitigations, a tool specifically designed for responders involved in post-storm restoration efforts. Our primary goal is to **enhance safety awareness** and **provide a comprehensive knowledge base** for those assisting communities in devastated areas.

In every industry, safety manuals are tailored to specific job tasks and functions, detailing associated hazards. In the electrical industry, safety regulations are particularly stringent, often requiring a Health and Safety Plan (HASP) for every project. During my 13 years as a lineman on storm events, I noticed a significant gap: there was no safety manual tailored to the unique environment following a storm. This realization struck me, as storm restoration was among the most dangerous work I encountered.

After advancing from running crews to managing companies and conducting extensive research, I discovered that no such resource existed. With over 400 days spent on storm events, experiences on five remote islands, and numerous hurricanes, I am now the Director of an emergency response company. I created this program out of necessity to better equip and prepare those entering these hazardous conditions.

For a lineman, operator, or groundman, taking a storm call is always an anticipated event. Some calls may involve simply driving a truck to and from the site, only to be turned around if the storm is less severe than expected. However, when a storm showcases its full potential, the situation can become extremely dangerous. While typical line work is already hazardous, **we prepare through training and project-specific health and safety plans**. Restoring power after a weather event carries immense risks, often requiring on-the-spot prevention planning. Field workers must adopt an elevated mindset of awareness and assessment skills.

Responding to a storm call can be one of the most dangerous jobs of your career, surrounded by extreme hazards. Taking these risks seriously is crucial for your safety and that of your colleagues.

Whether you are new to the trade or have 30 years of experience, please use this booklet as a refresher on the dangers that could prevent you from returning home safely. We are truly our brothers' and sisters' keepers, and that responsibility begins with protecting ourselves by adopting a safety-first mindset.

Let's create an environment that fosters awareness and safety, helping ourselves and those around us.



Willie Shutter

Director of Operations, EES

ADVERSE ROAD CONDITIONS

One of the greatest dangers you can face when responding to a storm call is mobilizing from the meet-up location and navigating the roadways while restoring power. Ice, high winds, downed wires and trees, and washed-out roadways make driving a bucket truck or digger truck particularly hazardous. The most important defense against these dangers is paying close attention and proceeding with caution. **If a situation looks questionable, it should be approached with the utmost respect.** Your life is far more valuable than getting anywhere quickly — slow down, watch for potential threats, and always remain mindful.

Whether you are brought in before, during, or after the storm, you will likely encounter inclement driving conditions. Often, smaller storms follow the main event, complicating restoration efforts. The hazardous conditions left by the initial storm are frequently exacerbated by additional wind, rain, snow, and ice. During transit to the event, you may encounter trees, power lines, utility poles, building debris, and various other obstacles on the road. Trees and power lines are two of the most common and dangerous hazards you will face after a storm, so **it is crucial to stay alert and be prepared.**

Wind is the most prevalent feature of a damaging storm and can cause all the above-mentioned issues. Some of the greatest dangers after a storm come from objects that have not completely fallen but have been damaged.

With additional winds, these objects can be knocked down into work zones, moving vehicles,

homes, and more. **It is vital never to let your guard down or assume your environment is safe.** Conditions can change at any moment, so extreme caution should be exercised at all times.



LOW BRIDGES & FOREIGN ROADWAYS

Low bridges are a significant hazard on storm calls, and incidents occur too often. Unfamiliar areas and GPS units lacking bridge height information add to the difficulty. Proceed slowly and with great caution.

If in doubt, trust your instincts — do not risk it. Ensure the bridge height is adequate. Use a truck-specific navigation system, print state bridge height maps, or follow someone who knows the area. If unsure, take an alternate route.

Additionally, be aware that many roadways across the country are extremely narrow and have sharp drop-offs on the shoulders. These conditions can cause loss of control or even truck roll-overs. **Prepare for these situations by keeping a vigilant eye on the changing roadway ahead of you.** It is easy to zone out while driving, but losing focus can be deadly. Stay alert and prioritize safety at all times.

INEXPERIENCED FIELD WORKERS & UTILITY LIAISONS

While working on storm calls, you may encounter crew members or utility representatives who lack experience in the line industry, particularly in emergency situations.

Often, these individuals will acknowledge their inexperience and assist in any way they can. However, some may act as if they understand the tasks and become defensive if questioned. This behavior is dangerous and must be addressed immediately. **If someone in the field creates an unsafe situation, contact the General Foreman right away. Do not continue working if you believe an unsafe condition exists; stop until it is safe to proceed.**

Many workers responding to storm calls may not fully understand all the associated risks. It is crucial for those with experience to lead by example and educate those who lack exposure to these hazards. Safety should always be the top priority, and it is everyone's responsibility to ensure a safe working environment.

BROKEN TREES & BRANCHES

A staple feature of almost every storm is downed trees and limbs, which are a common cause of outages. This is one of the greatest hazards we face on a storm call. We all know what a widow-maker is and the risks they pose. Understanding how to approach situations involving trees and branches is crucial.

Key Safety Guidelines:

- **Know Your Limits:** Be honest about your experience level with downed trees. If you're unsure, call in specialists who handle this regularly.
- **Cut with Caution:** Cutting limbs attached to a downed tree can cause the entire tree to shift or fall. Only cut areas you are certain about and always have an escape plan.
- **Awareness of Surroundings:** Be aware of people around you while cutting branches. Branches can kick back or fall, creating additional hazards.
- **Use Proper Tools and Techniques:** Always use the right tools for the job. Utilize ropes for tie-offs or tie-downs to control swinging or falling limbs.
- **Prevent Unqualified Work:** Never allow anyone unqualified to perform dangerous cutting tasks. If you see an unsafe act, safely stop and correct it.
- **Respect Tree Hazards:** Always be cautious of trees and limbs on power lines. Do not shortcut tree mitigation; many have lost their lives by cutting corners, working beyond their skill level, and making mistakes.
- **Monitor Overhanging Limbs:** Pay attention to trees that have not fallen but have limbs ready to fall. Working around these can cause them to drop, leading to injury or death.



Downed trees are extremely dangerous, and even simple limb removal can turn hazardous in seconds. Respect these risks, stay vigilant, and always prioritize safety in storm response efforts.

INCLEMENT WEATHER & WORKING CONDITIONS

Your everyday line job is already filled with work site hazards, and storm work amplifies these risks. Some tasks during a storm may be simple and straightforward, but others, like replacing a broken pole in rain and wind, amidst downed trees and live wires, present severe dangers. These are not typical work site conditions; they are akin to working in a war zone and should be approached with heightened awareness and respect.

Key Safety Practices:

- **Know When to Wait:** Recognize when conditions are too dangerous to work. If the weather is too severe, wait it out. **If pressured to act unsafely, discuss your concerns with your General Foreman.** Your safety is more important than restoring power quickly. Avoid risking life and limb by rushing.
- **Thorough Planning:** When conditions are safe enough to work, conduct a comprehensive tailboard meeting. Identify and discuss all hazards associated with the task at hand. If new issues arise, stop work, reassess, and create a new plan before proceeding.
- **Understand Limitations:** Be aware of your crew members' limitations and experience levels. Assign tasks based on their capabilities and ensure everyone understands their role. Not everyone will be equipped to handle real-time hazard mitigations during storm work.
- **Collaborate and Prepare:** Work together and make smart decisions. Most accidents are preventable with proper preparation and communication. Stay vigilant and always look out for one another.



Remember, almost every accident is avoidable if you prepare for the worst.

Keep yourself sharp, stay safe, and be your brother's keeper.

BAND-AIDS AND IMPROVISED RIGGING

In storm situations, it's not uncommon to find ourselves lacking proper equipment, leading to creative solutions. While these improvised fixes can be resourceful in a pinch, caution is paramount. Knowing the difference between a safe solution and a dangerously makeshift one is crucial, especially in remote island settings.

Exercise common sense when improvising solutions, considering the condition of old hardware and structures like cross-arms and wood poles. **Rushed fixes could pose dangers for future line workers, creating potential hazards.**



While improvising solutions can sometimes be necessary, it's vital to prioritize safety. Always take precautions to protect yourself and those around you. Remember, safety should never be compromised, even in challenging situations.

BROKEN, CRACKED, OR DAMAGED POLES

Encountering broken or damaged poles during storm calls is a serious hazard. Tragically, there are numerous accounts of line workers sustaining severe injuries or losing their lives due to falls from such structures.

Many poles across the country are over 80 years old and have long surpassed their intended lifespan. Already hazardous, these aging structures become even more precarious during storms, posing significant risks to workers. To address this:

- Vigilantly inspect poles for signs of damage.
- Test stability before starting work.
- Prioritize safety precautions to prevent accidents.
- Rely on skill and knowledge, not luck, to navigate safely.

By staying alert and following safety protocols, we can mitigate risks and ensure the safety of all workers.

DOWNED & LOW HANGING WIRES

A major hazard during storm calls is dealing with downed and low-hanging wires. These wires can become entangled with trucks, potentially pulling down poles and creating dangerous situations. Navigating streets with hanging wires is risky, especially since many of these wires may be energized. It's crucial to know the circuits you're working on and identify which wires are live.

Key Safety Practices:

- **Identify Energized Wires:** If you suspect wires are energized, communicate with the utility representative to open cut-outs in specific locations. Understanding your environment and the equipment you're working with is vital. Never make assumptions about downed wires.
- **Always Use PPE:** Wear your personal protective equipment (PPE), including rubber goods, when moving any downed wires. Many lives have been lost due to incorrect assumptions about wire status. Do not make the same mistake.
- **Follow Qualified Personnel:** If you are not qualified to assess the hazards, follow those who are. Understanding specific systems is critical. On typical line jobs, encountering downed wires is rare unless an accident occurs. However, storm work frequently presents this hazard, requiring you to be well-prepared and equipped to handle it safely.
- **Assume All Wires Are Energized:** Always treat all wires — primary, secondary, and cable/communications — as if they are energized. Never assume anything about their status.

Downed and low-hanging wires are a common and dangerous aspect of storm work. **Proper preparation, vigilance, and adherence to safety protocols are essential to mitigate these risks.**



Stay alert, use your PPE, and always prioritize safety in these challenging conditions.

FATIGUE

Fatigue is a serious hazard that must be constantly monitored, especially during storm work. Long hours and harsh conditions — whether heat, snow, wind, or water — put immense stress on your body. It's crucial to **recognize signs of fatigue and take necessary breaks to avoid it.**

Stay hydrated and get adequate sleep to maintain your health. Never push yourself too far, especially in unfamiliar environments. Heat and humidity are major contributors to fatigue and can be deadly. Always take extra precautions to protect yourself.

Be vigilant for signs of fatigue in your crew members as well. Notice changes in behavior and appearance. **If you suspect someone is fatigued, ensure they take a rest.** This proactive approach can save lives.

GUARDING AGAINST COMPLACENCY

Complacency poses a significant threat to the safety of line workers, particularly during storm events where danger levels are elevated. It's crucial to **remain vigilant and avoid falling into a false sense of security.**

Line work demands precision and efficiency, traits that many of us take pride in. However, this pride can sometimes lead to complacency, putting ourselves and others at risk. It's time to set aside ego and prioritize safety over speed and bravado.

Remember, **slower progress can often lead to faster and safer outcomes.** We must train ourselves to anticipate potential complications and consider the consequences of our actions. Even the most skilled workers are not immune to accidents caused by complacency.

Promoting a culture of thoughtful action and mindfulness is essential. We must be proactive in challenging complacent attitudes and behaviors, both in ourselves and in our colleagues. By doing so, we can ensure the safety and well-being of everyone involved in line work.

ESSENTIAL PREPARATION

Assisting with post-storm assessment and restoration efforts can vary in duration from days to months, presenting unique challenges. Drawing from personal experience, such as the 7-month emergency response in the CNMI after Typhoon YUTU in 2018, numerous challenges were faced. While achieving perfect packing is unlikely, thorough preparation is paramount. Rather than assuming conditions, inform yourself to plan effectively.

Footwear Consideration:

One commonly overlooked preparation item is footwear. While it's tempting to rely solely on a single pair of work shoes or boots, prolonged storm events can take a toll on your feet. Hours spent in inclement conditions can lead to discomfort and even injury. **Having two pairs of footwear is essential to mitigate wear and tear, ensuring your comfort and safety throughout extended assignments.**

Strategic Tooling:

Selecting the right tools for storm restoration can be challenging, especially when faced with weight restrictions on flights and limited carrying capacity. Prioritize essential tools based on the specifics of your assignment. **Communicate with your employer to understand what tools they provide and what you need to bring.** Remember, it's not just about getting tools to the site; it's also about managing their return.

Clothing Planning:

Clothing selection is crucial for adapting to diverse climates and conditions. **Plan for at least 7 days' worth of clothing for each storm event,** considering potential weather changes. **Research the climate of your destination and pack accordingly.** Avoid assumptions about local availability of clothing, as stores may be closed or lacking necessary items.

Preparation is key to navigating the challenges of storm restoration. By prioritizing essentials and planning for potential contingencies, you can ensure your readiness for any assignment.

ENHANCING COMMUNICATION

Communication stands as our foremost tool in ensuring both the safety and success of our work. Despite its paramount importance, effective communication among crew members, leaders, and affiliated teams often proves challenging, and this shortfall can pose serious risks.

In the Line Industry, egos and personal conflicts can hinder communication, but we must recognize that our work environment is not a place for interpersonal disputes. None of us wish harm upon even our most contentious colleagues. To foster a safer industry, we must prioritize solidarity in our commitment to safety and craftsmanship.

Every individual in this field deserves respect and a platform to voice their concerns and perspectives. Experience and background, regardless of tenure, offer valuable insights that enrich our collective understanding. Neglecting to acknowledge and utilize this diversity of experience fosters a hazardous atmosphere.

Our profession is termed a Brotherhood for a reason — we are bound together by a shared commitment to support and uplift one another. It is imperative that **we actively listen and collaborate**, as this unity aligns with the foundational principles of our industry's pioneers.

In essence, **fostering effective communication is pivotal to our collective success and safety**. Let us commit to improving our communication practices to uphold the ideals of our profession and ensure the well-being of all involved.



55 Corneau Way
South Windsor, CT 06074
United States

Phone: 617-812-8811 Fax: 860-533-7129