



NETWORKS

Serving all electricity customers

FARM SAFELY WITH ELECTRICITY

IT MAKES SENSE TO CHECK

esbnetworks.ie





Introduction

I am happy to introduce this important booklet on electrical safety on farms.

Electricity is essential for our economy. It is so much a part of modern living that we often take it for granted. This farm safety booklet outlines potential electrical hazards to be aware of around the farm. The key safety messages will help you to plan ahead and keep you, your family and your livestock safe.

As part of our continuous commitment to electrical safety, we implement public safety information and awareness programmes to highlight the danger of coming into contact with overhead electricity wires and underground cables. This booklet is one element of our Safety communications programme.

Electricity is delivered across the country using both overhead wires and underground cables. It is a powerful and versatile source of energy, but it can be dangerous unless we use safe systems of work. Where safety procedures have not been followed, serious accidents, including fatalities, have occurred where farm work has taken place too close to the electricity network.

Safety continues to be a core value for ESB Networks and we are committed to providing a safe and secure electricity infrastructure to our 2.3 million electricity customers in Ireland.



Yours sincerely,

A handwritten signature in black ink, appearing to read 'Paul Mulvaney', written over a light blue horizontal line.

**Paul Mulvaney,
Executive Director,
Networks Customer Delivery
ESB Networks**

Electrical safety on farms



When using farm machinery be aware of overhead wires.

Electrical accidents on Irish farms

SITUATIONS INVOLVED IN ACCIDENTS WITH OVERHEAD ELECTRICITY WIRES:

- A silage harvester made contact with a 10,000 volt (10kV) overhead wire.
- Cutting timber close to a 20,000 volt (20kV) overhead wire.
- Electric fence at 230 volts because electricity wires had fallen onto electric fence.
- Fallen electricity wires caused by tractor hitting pole.

Identify the risks on your farm

Have you identified the risks associated with overhead electricity wires and underground cables and included them in your farm safety statement?

These accidents are foreseeable. By identifying these electrical risks and working safely, they can be prevented.

What are the risks?

- **Working near overhead wires**

Typical farm machinery can easily reach an overhead wires.

Forage harvesters, combine harvesters, tipping trailers, and moving high loads where there are overhead wires are major risks.

Ensure that poles, stay-wires and protective earth wires (attached to poles) are not damaged during farming work.

- **Carrying out digging work where there are buried electricity cables**

Always check if there are buried cables before digging.

Contact dig@esb.ie or 1800 928 960 to get maps of ESB cables.

Check out www.esbnetworks.ie for information on safe digging around buried cables.

- **Hedge cutting and tree cutting near overhead electricity wires**

Hedge cutting and tree cutting have caused some very serious electrical accidents.

Watch out for poles and stay wires hidden from view. If a pole or stay are damaged, the pole could fall bringing down live overhead wires.



ELECTRICAL SAFETY

What to watch out for!



Network technician repairing fallen wires after a storm.

1. Fallen electricity wires – keep away

Bad weather (such as high winds), fallen timber or other windblown debris can bring down overhead electricity wires.

Every year valuable cattle and sheep are electrocuted after storm damage when trees fall on overhead wires. Do not put yourself at risk when trying to intervene.

Always assume that fallen or low-lying overhead wires are live until ESB Networks informs you that the power has been switched off and made safe.

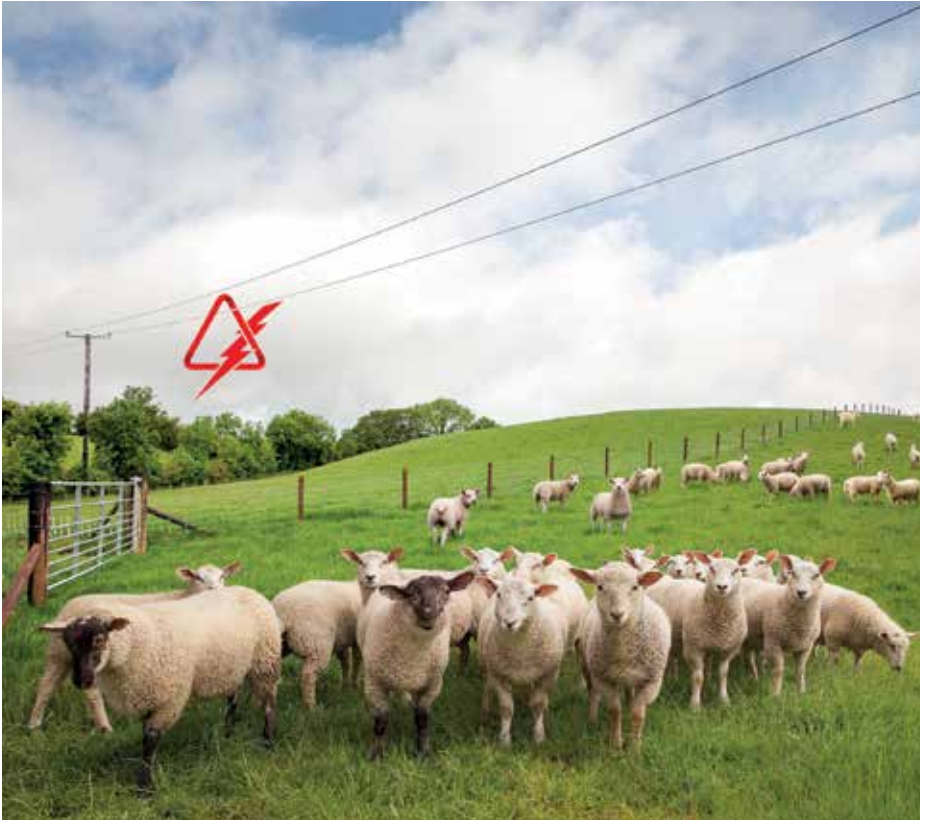
Never approach a fallen wire.

Do:

- Keep away from fallen electricity wires.
- Contact ESB Networks immediately at 1800 372 999.

Don't:

- Never touch or come near fallen electricity wires.
- Never assume it is safe to handle fallen wires.



2. Electric fences and metallic fences - expect the unexpected

Overhead electricity wires can, sometimes, end up on the ground or resting on ditches or across electric fence wire. This means that anything metallic could be electrified at 230 volts or higher and, therefore, dangerous to touch.

Do:

- Remember electricity wires are always live.
- Phone ESB Networks' Emergency number: 1800 372 999 (24 hour / 7 day service).

Don't:

- Never touch or handle fallen electricity wires.
- Never touch anything that could conduct electricity unless you are sure it is safe.

3. Standby generators – special rules apply

Standby generators are a convenient source of electricity in emergency situations when the ESB Networks supply is unavailable.

Special rules apply to the installation of standby generators which your registered electrical contractor will be familiar with.

Do:

- Always ensure a proper change-over switch is installed at the main distribution board.
- Always use a registered electrical contractor.
- Always notify ESB Networks of the presence of a standby generator.

Don't:

- Never use a temporary generator without a change-over switch.
- Never plug a portable generator into a socket.



Never use a temporary generator without a change-over switch.



Be careful of overhead wires when using machinery.

4. Machinery and high loads - electricity can jump gaps

Making contact with overhead electricity wires or even coming close puts you at serious risk of injury or death from electrocution. Electricity from overhead wires can jump gaps, so you don't need to make contact to be seriously injured. The majority of accidents occur because of failure to notice the overhead wires and to take sensible precautions.

Do:

- Look around you.
- Ensure equipment does not come into contact with overhead wires.
- Be careful using irrigating equipment, rain guns and sprinklers or spreading slurry. You could be electrocuted if liquid hits the overhead wires.
- Be aware of stay wires and take steps to avoid striking them, as damage caused to both machinery and the electricity network can be substantial.
- Portable grain augers are a particular risk due to their operating height.

Don't:

- Do not work near overhead wires.
- Do not raise wide spray booms, tipper lorries, cranes, ladders, scaffolding or telescopic handlers near overhead wires.

5. Hedge cutting near overhead Electricity Wires - there are no second chances

Trees and hedges which grow near or into overhead electricity wires are a significant safety risk. Controlling this risk means keeping your distance when timber cutting and recognising that any machinery or equipment must not come near electricity wires because 'electricity can jump gaps'. In many cases the only safe option is to request that the electricity is switched off by ESB Networks. Serious accidents have happened where the timber-cutting equipment being used has touched off the electricity wires causing electrocution; in other incidents staywires have been cut by the hedge cutter and it then sprung up onto the electricity wires which made the loose stay wire 'live'. Where there is any risk, always contact ESB Networks for advice.



Do:

- Make sure that there is no risk of coming near to electricity wires.
- Contact ESB Networks for advice in advance.
- Remember electricity can jump gaps.
- When cutting timber around electricity poles, clear around the pole and stay by hand.
- Check the max working height of the boom and saw.
- Check that the limiters are working and are set to the right height
- Check for level ground so that machine is stable and keep a safe distance from edges of drains.
- Carry out the work so that if something goes wrong the timber will always fall in the opposite direction to the electricity wires.

Don't:

- Never carry out hedgcutting or tree cutting near overhead electricity wires.
- Never put yourself in a position when the machine or any tool being used can come near electricity wires.

ESB Networks Emergency Number:
In case of emergency
phone 1800 372 999
(24 hour/7 day service)
esbnetworks.ie





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STEER CLEAR OF ELECTRICITY POLES, IT COULD SAVE YOUR LIFE

Damage to poles, stay wires and buried earth wire puts people and livestock at risk of injury or death of electrocution

- Always be aware of where poles and stays are.
- When breaks occur, electricity wires may end up on the ground or resting on ditches or on electric fence wire.
- Electricity wires are always live.
- Report any damage immediately

Phone immediately **1800 372 999**

(24 hour/7 day service).

www.esbnetworks.ie



If the worst happens – take these steps and stay safe:

If a machine or its attachments come into contact with an overhead wire, it could be fatal for anyone who touches the machine. Do not rely on rubber tyres or rubber-soled boots for protection – they will not insulate against a high-voltage shock. Tyres can burst into flames and boots can be destroyed. These are the steps that should be taken in the event of a hit on an overhead wire.

Step 1: Keep Clear

- The driver of a vehicle that comes into contact with overhead wires will usually remain safe in the cab of the vehicle. Other people are at risk if they make simultaneous contact with the vehicle (and anything attached to it) and the ground.



EXTREME DANGER:
NEVER MAKE CONTACT
between machine and ground

Step 2: Get Help

- You, or someone else, should contact ESB Networks' emergency number (1800 372 999) immediately.

Step 3: Jump Clear

- If you have to leave the cab, jump well clear so that no simultaneous contact is made between you, the vehicle and the ground. Land on your feet and do not touch the ground with your hands. Move away at once using short steps or bunny hop with both feet together.



If risk increases, jump clear
and keep others away
DO NOT STEP DOWN

Step 4: Stay Clear

- Do not go back to the vehicle, even if you think it is safe to do so. It may still be live.
- Nobody should approach the vehicle until ESB Networks has confirmed that it is safe to do so.

Step 5: Safe Operation

- If the vehicle is not tangled with the overhead wire, reverse away until contact is broken. Do not climb out of the vehicle or attempt to operate the vehicle while standing on the ground outside the vehicle.



Stay calm, disengage gently,
back away if possible, call
emergency number
STAY IN THE CAB



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FALLEN ELECTRICITY WIRES - WHAT EVERY FARMER NEEDS TO KNOW

Overhead electricity wires and poles can sometimes break

- Electricity wires are always live.
- When breaks occur, electricity wires may end up on the ground. If a fallen wire lands on an electric fence or gate, that also becomes live.
- Serious accidents occur when people and livestock come into contact with fallen electricity wires.
- You should never, ever, go near fallen electricity wires. Be extra vigilant at nighttime or during windy weather.
- Never handle stock that may be in contact with wires.

Phone immediately **1800 372 999** (24 hour/7 day service).

www.esbnetworks.ie



KEY FARM SAFETY MESSAGES

1. Watch out for overhead electricity wires
2. Steer clear of electricity poles
3. Electricity wires are always live
4. Never touch fallen wires.
5. Never handle stock that may be in contact with electricity wires.
6. Display safety stickers on farm machinery to remind everyone to be “electricity safe”.
7. In an emergency, phone immediately 1800 372 999.

“Safety is a core value for ESB Networks and we are committed to educating our customers on how to stay safe and stay clear of electricity wires.”

