

Homeowner Electrical Safety Handbook

INSIDE YOUR HOME



Electrical
Safety
Authority

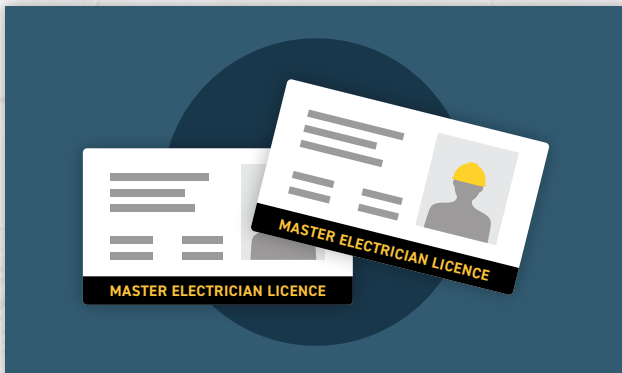


ELECTRICAL SAFETY INSIDE YOUR HOME

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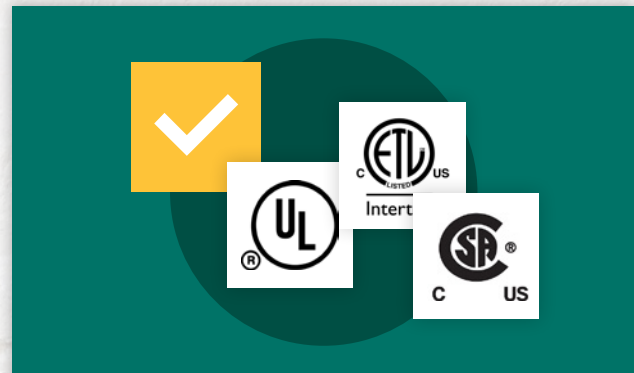
Keeping yourself, your home and your family safe is your number one concern. We have many easy-to-follow tips to ensure you and your loved ones are safe from electrical injury.

ESA'S TOP TIPS:



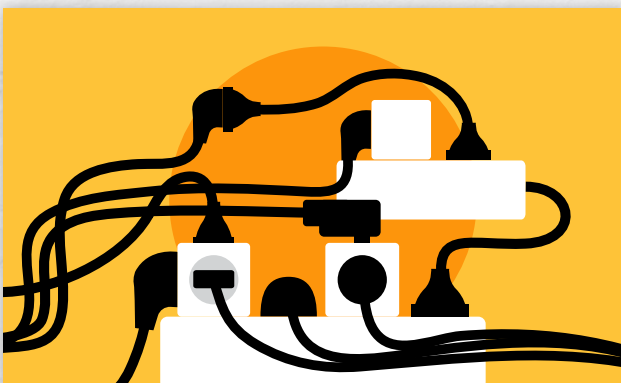
If you're hiring someone to do electrical work, they need to be licensed.

Ask your electrical contractor for their ECRA/ESA licence number.



Only purchase electrical products with a certification mark.

For a full list of recognized certification marks (some examples above), visit esasafe.com/approvalmarks.







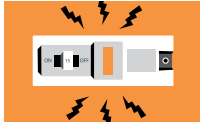
Don't daisy chain powercords or extension cords.

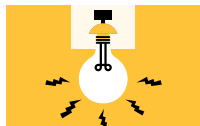


There's no such thing as a safe shock.

COMMON ELECTRICAL HAZARDS

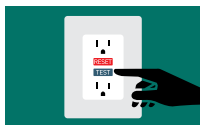
Look out for these common electrical hazards in the home and learn how to avoid them.

HAZARD	WHAT'S THE RISK?	HOW TO AVOID IT
Damaged Cords 	<p>Frayed or damaged extension cords or cord ends can expose wires, resulting in potential shock and fire hazards. Extension cords used incorrectly or as permanent wiring can also create potential shock and fire hazards.</p>	<p>Replace damaged cords, undersized cords, and remove from under carpet. Do not use interior-rated cords for outdoors.</p> <p>Contact a Licensed Electrical Contractor to add additional outlets or circuits.</p>
Overloaded Outlets 	<p>“Octopus” outlets—ones that have too many devices plugged in—can overheat and present potential fire hazards.</p>	<p>Contact a Licensed Electrical Contractor to add additional outlets or circuits or use an approved powerbar.</p>
Inadequate Grounding 	<p>Incorrect grounding presents a shock hazard.</p>	<p>Look for missing third prongs, or two-to-three prong adapters. Consult with a Licensed Electrical Contractor if your home's wiring requires updating.</p>
Unapproved Electrical Products 	<p>Unapproved electrical products can present both shock and fire hazards—especially true for products bought online.</p>	<p>Look for the mark of a recognized certification agency on any electrical product you purchase. It represents both product safety and value.</p>
Fuses or circuits that frequently trip or cut out 	<p>Overheated plugs or outlets, fuses that blow, or circuits that frequently trip indicate overloading of the circuit or possible faulty electrical wiring or equipment, which can cause electrical shock or fire hazard.</p>	<p>Regularly check for these hazards and if you spot any of these hazards, contact a Licensed Electrical Contractor as soon as possible.</p>

HAZARD**WHAT'S THE RISK?****HOW TO AVOID IT****Lights that flicker**

Dim, surging or flickering lights can be a sign of a loose connection in a lighting circuit, fixture, or your electrical service and can present the risk of electrical shock or become a fire hazard.

If you detect dim, surging or flickering lights in your home, contact a [Licensed Electrical Contractor](#).

GFCI Outlets that don't work when tested

A faulty GFCI (Ground Fault Circuit Interrupter) increases the risk of electrical shock.

Test GFCI (Ground Fault Circuit Interrupter) outlets monthly, or as per the manufacturer's instructions, to ensure they are operating properly. Defective GFCI outlets can be identified by pushing the test button—if power stays on after you have pushed the test button, your GFCI is defective. Defects are more common with older GFCI products. Contact a [Licensed Electrical Contractor](#) to replace your faulty GFCI outlets.



PREVENTING SHOCKS

Even a low-voltage shock can have serious long-term after effects, including memory loss, anxiety and pins and needles. Here's what you can do to prevent them.

Simple fixes to make your home a safe zone:

- 1 Replace missing or broken outlet cover plates;
- 2 Install tamper-resistant receptacles to protect younger children from shocks;
- 3 Keep cords away from children's hands and mouths;
- 4 Plug and unplug safely – Never overload outlets by plugging in too many cords and don't yank cords from the wall;
- 5 Replace damaged cords and only use extension cords temporarily;
- 6 Install Ground Fault Circuit Interrupters (GFCIs) in any room with water to help protect from a shock; and
- 7 Only hire a [Licensed Electrical Contracting business](#) to do electrical work done in your home. Ask to see their ECRA/ESA licence number.

Looking for more ways to make your home safe?
Visit esasafe.com/nosafeshock



BUYING ELECTRICAL PRODUCTS

All electrical products or electrical equipment used, sold, displayed or advertised for sale in Ontario, must be approved by an accredited certification or evaluation agency. Look for the marks.

Electrical products must carry the official mark or label of an accredited certification or evaluation agency; this indicates that the product was independently assessed for safety. The installation and connection of unapproved electrical equipment is against the law and puts people at risk.

Make sure to look for the mark or label before you buy, install or use an electrical product.



Common Examples

For a full list of recognized certification marks, visit esasafe.com/approvalmarks

HOME RENOVATIONS

If your home renovation project involves new electrical wiring or devices or repairing/replacing old ones, follow the law and do it safely. Here's what you need to know to keep your home improvement dream from becoming a nightmare.

Notifications & Inspections

Almost all electrical work requires a notification of work to be filed with ESA. An electrical notification of work creates a permanent record of the electrical work that has been done in your home and it triggers a review process by ESA. This is an added safeguard for you and your family.

- 1** Whoever is doing the electrical work (you or your Licensed Electrical Contractor) must file a notification of work with ESA before or within 48 hours of when the work starts. Call 1-877-ESA-SAFE (372-7233) to do this.
 - *The person doing the electrical work must file the notification. Never take out a notification on behalf of someone else.*
 - *A building permit isn't the same as an electrical notification – you may need both.*
- 2** The notification holder must call ESA as soon as possible once the electrical installation is ready for inspection. Electrical installations can't be concealed without the permission of the ESA.
 - *Inspections are there for the safety of you and your family to help ensure electrical work complies with the Ontario Electrical Safety Code (OESC). The process may vary depending on the project and ESA's evaluation of safety risk.*

- 3** Once the electrical work is reviewed and passed, ESA will issue a [Certificate of Acceptance](#) which confirms the electrical work is compliant with the OESC. It is an important document for insurance purposes, resale and peace of mind.

For more information, visit esasafe.com/notifications



Do-it-Yourself (DIY) Electrical Work

Homeowners have the option to DIY electrical work in their home. However, only you can do the electrical work. Friends, family members or neighbours cannot perform electrical installations in your home.

Electrical work can be incredibly complex and dangerous, and if done incorrectly, can lead to property damage and putting loved ones in danger. Here's what you need to know to do it safely:

1 Follow the Ontario Electrical Safety Code (OESC)

- Before you start your project, familiarize yourself with the latest OESC and see how it relates to your project.

2 Plan Your DIY Electrical Project

- When you have reviewed the latest OESC and made plans, you can begin work on your project. File a notification of work with ESA within 48 hours of commencing the work. Call 1-877-ESA-SAFE (372-7233)

3 Get Your Work Reviewed

- Have ESA review the work as soon as it is complete. Do not to conceal the work before ESA has reviewed it. The inspection process may vary depending on the project.

Learn more about DIY electrical work at esasafe.com/DIY.

ESA always recommends hiring a Licensed Electrical Contracting Business; they have the equipment, training and expertise to do electrical work safely.

Hiring a Licensed Electrical Contracting (LEC) Business

In Ontario, if you're hiring someone to do electrical work in your home, by law, it must be a Licensed Electrical Contracting Business (LEC).

An LEC has the expertise, equipment and training to do the job safely. Hiring the wrong person can result in major property damage, or even loss of life.

All Licensed Electrical Contractors:

- Have an ECRA/ESA licence number;
- Are required to be fully insured;
- Will arrange for notifications of work to the ESA;
- Are qualified to perform electrical work;
- Can offer an ESA Certificate of Acceptance; and
- Can provide references.

Visit esasafe.com/contractor to learn more about the different types of electrical contractors.

Also visit esasafe.com/unlicensed for tips on how to spot unlicensed electrical contractors.

Power Your Life

ESA's "Power Your Life" blog has resources, inspiration and helpful tips so you can achieve a reno that is on-trend and powered to perform. We cover ideas for inside the home (basements, home offices, kitchens, bathrooms and laundry rooms), as well as outside the home (pools, landscaping, and lighting).

Visit esasafe.com/poweryourlife



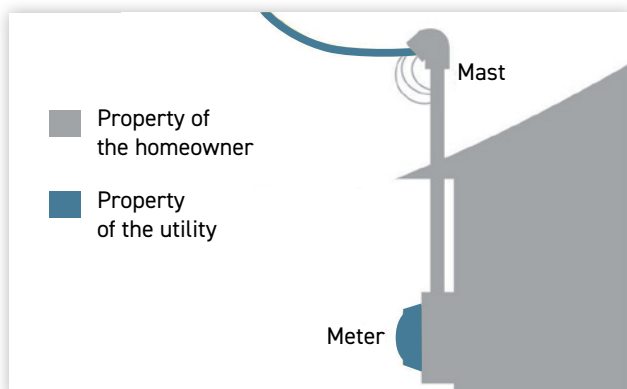
STORM SAFETY

Severe storms are a reality in Ontario, and they can present serious electrical dangers — not only outside your home, but inside as well. Make sure you're prepared with the following storm safety tips.

Power Outages & Restoring Power

Power outages are often caused by freezing rain, sleet storms and/or high winds, which damage powerlines and equipment. Cold snaps or heat waves can also overload the electric power system. It's important to be prepared for extended power outages, and to know how to speed up the power restoration process.

- As a homeowner, you are responsible for having repairs done to your own equipment, which typically begins where the wires attach to the house. For overhead installations, the wire from the pole to the house typically belongs to the utility; but the wires inside the mast/pipe, the mast, meterbase and those attached to/in the house belong to you.
- If there are damages to this equipment, you need to arrange repairs before the utility can safely reconnect power.
- Contact a [Licensed Electrical Contractor](#) to do these repairs. Hiring anyone other than a Licensed Electrical Contractor may delay having your power restored.



Power Surges

Power surges may damage the electrical equipment in your home. Electrical equipment is designed for specific voltages so unexpected increases resulting from a power surge may cause damage and create an electrical safety hazard.

After a power surge, check your electronic devices and electrical safety equipment to be sure they work properly. This includes:

- Ground Fault Circuit Interrupters (GFCIs)
- Arc Fault Circuit Interrupters (AFCIs)
- Smoke detectors, and/or carbon monoxide detectors hard-wired into your home's electrical system

You won't be able to tell if your electronic devices have damage by a visual inspection. You need to find and use the "push to test" button (follow the manufacturer's instructions) to check if the devices still work.

View more storm safety tips at esasafe.com/stormsafety

Flooding

When water makes contact with electrical systems, there is a risk of electric shock that could seriously injure or kill you. Electricity can also flow through water or wet flooring and cause a severe electrical shock.

- Do not enter your basement if the water is above the level of electrical outlets, baseboard heaters or furnace, or near your electrical panel.
- Call your local electric utility immediately if the water has risen above outlets, baseboard heaters or your furnace, covers power cords, or is near the electrical panel. Arrange for the utility to disconnect power to your home.

- Watch out for downed or low hanging powerlines in flood-affected areas. If you see one, stay back the length of a school bus (10 metres). Call 9-1-1 and your local electric utility to report it.

If your electrical system has been affected by flooding, you may have to wait for your utility to restore power to your property. [Hire a Licensed Electrical Contractor](#) to check your home's electrical system. The contractor will determine if it is safe and work with ESA to have the utility restore power to your home.



ELECTRIC VEHICLE & EV CHARGING SYSTEMS

If you have an electric vehicle (EV), or are thinking of buying one, you need to know the requirements for safely charging your vehicle at home.

EVs have different levels and types of charging that use different voltages (Volts) and amperages (Amps) to run. EVs can use a lot of power so it's important to make sure that your electrical panel can handle the extra load – you may need an upgrade. A [Licensed Electrical Contracting](#) (LEC) business can help you to determine your needs.

- If your home requires an electrical panel upgrade, you will need to contact your local utility. An LEC would be able to assist you.
- The person doing the installation must file a notification of work with ESA and follow the Ontario Electrical Safety Code.

- If you hire an LEC, they will file the notification of work with ESA for the installation. They will also provide you with a Certificate of Acceptance once the work has been completed and accepted as compliant.
- Before you buy an EV charging system, look for the official mark or label of a recognized certification or evaluation agency.

Get more information about EV Charging Systems at esasafe.com/ev.





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