

OTTAWA ELECTRICAL

Electrical Emergencies

Sparking, burning smells, dead circuits, and when
to call immediately

7 Expert Answers from Construction Brain

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Should I call an electrician for flickering lights?

Flickering lights are worth taking seriously — while sometimes caused by something simple, they can also signal a dangerous wiring problem that needs professional attention.

The first thing to check is whether the flickering is isolated to one fixture or happening throughout your home. A single flickering bulb is usually just a loose bulb, a failing LED driver, or a dimmer switch that's incompatible with your bulbs — all minor issues you can troubleshoot yourself. But if multiple lights are flickering, or if the flickering is happening across different rooms or circuits, that's a red flag that points to something deeper in your electrical system.

When flickering lights become a serious concern, watch for these warning signs:

- Flickering that happens when you run large appliances (washing machine, microwave, AC)
- Lights that dim noticeably and then brighten back up
- Flickering accompanied by a burning smell or warm outlets/switches
- Flickering in an older home with knob and tube wiring or a Federal Pacific panel
- Breakers tripping at the same time as the flickering

These symptoms can indicate **loose connections, overloaded circuits, or a failing main panel** — all of which are genuine fire hazards. Loose neutral connections in particular are known to cause house fires and can be difficult to detect without professional testing equipment.

In Ottawa homes specifically, flickering lights are a common complaint in houses built before the 1980s, where aging wiring connections have loosened over decades of heating and cooling cycles. If your home has aluminum wiring (common in Ottawa homes built between 1965–1975), flickering can indicate oxidation at connections — a known fire risk that the Ontario Electrical Safety Code addresses with specific repair requirements.

What you should do right now: If the flickering is minor and isolated to one fixture, try tightening the bulb and swapping it out. If it persists, or if you notice any of the warning signs above — especially a burning smell — shut off the affected circuit and call a licensed electrician. A burning smell combined with flickering is an emergency: shut off your main breaker and call immediately.

For a proper diagnosis, an ESA-licensed electrician will check your panel connections, test circuit loads, and inspect wiring at the affected fixtures. This kind of inspection typically runs **\$150–\$250** for the service call in Ottawa, and it's well worth it for peace of mind. If you'd like Electrical Ottawa to take a look, we offer free estimates and 24/7 emergency service for Ottawa residents.

Is it dangerous if my lights keep flickering?

Flickering lights can range from a minor nuisance to a serious fire hazard — and in some cases, it's a sign of a problem that needs immediate attention.

The cause matters a lot here. Occasional flickering when a large appliance kicks on (like your fridge, AC, or furnace) is fairly normal. These motors draw a surge of current at startup, causing a brief voltage dip. If the flicker is momentary and happens only when that appliance starts, it's usually not dangerous — though it may indicate your panel is working close to capacity.

What you should be concerned about is **persistent or worsening flickering**, especially if it happens across multiple rooms, affects lights on different circuits, or comes with other warning signs. This can point to several more serious issues:

Loose or failing connections are the most common culprit and the most dangerous. A loose wire creates resistance, which generates heat. Over time, this can char insulation, damage your panel, or start a fire inside your walls — often with no visible warning until it's too late. This is especially common in older Ottawa homes with **aluminum wiring**, where connections can loosen and oxidize over time.

An overloaded circuit is another possibility. If too many devices share a circuit, the voltage fluctuates under load. This is a code issue and a safety concern, particularly in older homes that weren't wired for today's electrical demands.

Problems at the main panel or service entrance are the most serious scenario. If flickering is happening throughout your entire home, the issue could be with your main breaker, the neutral connection, or even the utility feed from Hydro Ottawa. A failing main neutral is particularly dangerous — it can cause voltage to swing wildly and damage appliances or create shock and fire risks.

In Ontario, **burning smells, flickering accompanied by buzzing sounds, or discoloration around outlets or your panel** are emergency situations. Shut off the affected circuit or your main breaker and call a licensed electrician immediately. If you smell burning, leave the home and call 911.

The honest answer is that flickering lights should never just be ignored and monitored indefinitely. A licensed electrician can use diagnostic tools to trace the source — whether it's a loose connection, an overloaded circuit, or a panel issue — before it becomes a much bigger (and more expensive) problem.

If your lights are flickering regularly, **request a free estimate from Electrical Ottawa** and we'll diagnose the issue properly. It's a quick inspection that could prevent a serious hazard down the road.

What do I do if power goes out in just part of my house?

A partial power outage in your home is typically caused by a tripped circuit breaker, blown fuse, or a problem with a specific circuit - not a utility issue. This is usually something you can troubleshoot safely before calling an electrician.

Start by checking your electrical panel for tripped breakers. In Ottawa homes, most panels are located in the basement, utility room, or garage. Look for breakers that have flipped to the "OFF" position or are sitting in the middle position between ON and OFF. A tripped breaker often indicates the circuit was overloaded or there's a fault somewhere on that circuit.

To reset a tripped breaker, first turn it fully to the OFF position, then flip it back to ON. You should hear a definitive click when it engages properly. If the breaker trips again immediately, there's likely a problem with the circuit that needs professional attention - don't keep resetting it.

Check which areas have lost power to help identify the affected circuit. In Ottawa homes, circuits are typically organized by area - one breaker might control all the outlets in a bedroom, while another handles the kitchen counter outlets. The lights and outlets in the same room are often on separate circuits, which is why you might have lights but no outlet power, or vice versa.

Look for obvious causes before calling for help. Did you plug in a high-power appliance like a space heater or hair dryer when the power went out? Were you using multiple appliances on the same circuit? Common culprits include overloaded kitchen circuits during meal prep, bathroom circuits when using hair dryers, or basement circuits with dehumidifiers and power tools running simultaneously.

If you have an older home with a fuse box instead of circuit breakers, look for blown fuses - they'll have a blackened window or visible break in the metal strip. Never replace a fuse with one of higher amperage, and if fuses blow repeatedly, you need an electrical inspection.

When to call Electrical Ottawa immediately: If you smell burning, see sparking, or if the same breaker keeps tripping after you've unplugged everything on that circuit. Also call if you're uncomfortable working around the electrical panel or if multiple circuits have failed simultaneously - this could indicate a more serious issue with your electrical system.

For homes in Ottawa's older neighborhoods like the Glebe or Westboro, partial outages sometimes reveal underlying issues with aging electrical systems that may need professional attention to prevent future problems.

What should I do if I get a shock from an outlet?

If you received an electrical shock from an outlet, your immediate safety is the priority. First, make sure you're away from the electrical source, then assess if you need medical attention - any shock that caused pain, burns, or affected your heart rhythm requires immediate medical evaluation.

Immediate Steps After a Shock

Stop using that outlet immediately and don't touch it again. If the shock was mild (like static electricity but from an outlet), you should still take it seriously. Turn off the circuit breaker for that outlet if you can safely identify which one controls it. Even minor shocks indicate a dangerous electrical fault that could cause electrocution or fire.

Check yourself for any burns, numbness, or unusual sensations. Electrical burns aren't always visible on the surface but can cause internal tissue damage. If you experienced any chest pain, irregular heartbeat, difficulty breathing, burns, or if the shock threw you or caused you to fall, seek medical attention immediately. Don't assume you're fine just because you feel okay initially - electrical injuries can have delayed effects.

Why Outlets Shock People

Electrical shocks from outlets typically happen due to faulty wiring, damaged outlets, missing GFCI protection, or ground faults. In Ontario, the **Ontario Electrical Safety Code** requires GFCI (Ground Fault Circuit Interrupter) protection within 1.5 meters of sinks, in bathrooms, outdoors, garages, and unfinished basements specifically to prevent dangerous shocks. If you were shocked in one of these locations without GFCI protection, this is a serious code violation.

Older homes with original wiring are particularly prone to shock hazards. Worn insulation, loose connections, or improper grounding can create dangerous conditions. Federal Pacific and Zinsco panels, common in Ottawa homes from the 1960s-80s, are known for failing to trip during faults, increasing shock and fire risks.

What You Must Do Next

Never use that outlet again until it's professionally inspected and repaired. This isn't a DIY situation - electrical faults that cause shocks can kill. Contact a licensed electrician immediately to diagnose and fix the problem. In Ontario, this type of electrical repair requires an ESA permit and inspection to ensure it's done safely and to code.

If the outlet is in a bathroom, kitchen, or other area that should have GFCI protection, the electrician will likely need to install GFCI outlets or breakers. This is required by the Ontario Electrical Safety Code and could prevent future shocks or electrocution.

For immediate electrical safety concerns like this, Electrical Ottawa provides emergency electrical services throughout Ottawa and surrounding areas. Don't wait - electrical faults that cause shocks are emergencies that require professional attention to prevent serious injury or house fires.

Q5

Is a buzzing electrical panel an emergency?

A buzzing electrical panel can indicate a serious electrical problem and should be addressed immediately.

While not always an immediate "call 911" emergency, it requires urgent attention from a licensed electrician as it could lead to electrical fires or equipment failure.

Common causes of panel buzzing include loose connections, overloaded circuits, failing breakers, or arcing within the panel. These issues generate heat and can escalate quickly. The buzzing sound often indicates electrical arcing - essentially tiny lightning bolts inside your panel that can ignite surrounding materials.

Immediate steps you should take: First, listen carefully to identify if the buzzing is coming from the main panel or a specific breaker. If possible, safely shut off non-essential circuits to reduce the electrical load. However, do not remove the panel cover or attempt any repairs yourself - this is extremely dangerous and illegal in Ontario without proper ESA licensing.

When it becomes a true emergency: If you smell burning, see sparks, notice scorch marks around the panel, or if the buzzing is accompanied by flickering lights throughout your home, shut off your main breaker and call for emergency electrical service immediately. These signs indicate active arcing that could cause a fire within minutes.

ESA requirements and safety considerations mandate that all electrical panel work must be performed by licensed electricians. In Ontario, homeowners cannot legally work inside electrical panels, and insurance companies often deny claims for fires caused by DIY electrical work. The Ontario Electrical Safety Code requires panels to operate silently under normal conditions.

Older panels are particularly concerning when buzzing occurs. Federal Pacific, Zinsco, and some older Square D panels are known for connection problems that cause buzzing and pose significant fire risks. These panels should be replaced immediately when showing signs of failure.

Cost considerations for Ottawa homeowners: Emergency electrical service typically runs \$150-\$250 for the service call, plus repair costs. If your panel needs replacement, expect \$1,500-\$2,500 for a like-for-like replacement, or \$2,000-\$3,500 for an upgrade from 100A to 200A service.

Next steps: Don't wait for the problem to worsen. Contact a licensed electrician today for an immediate inspection. Electrical Ottawa provides 24/7 emergency service for situations like this throughout Ottawa and surrounding areas. A quick diagnostic can determine whether you need immediate repairs or if a panel replacement is the safer long-term solution.

Remember, electrical panels should operate silently. Any unusual sounds warrant professional attention - it's always better to be safe when dealing with your home's electrical system.

Q6

What should I do if I smell burning from an outlet?

If you smell burning from an outlet, this is a serious electrical emergency that requires immediate action.

Turn off the circuit breaker for that outlet right away and stop using it completely - this could indicate dangerous arcing, overheating, or fire starting inside your walls.

Immediate steps to take: First, locate the circuit breaker that controls the affected outlet and switch it off. If you're not sure which breaker it is, turn off the main breaker to be safe. Unplug anything connected to that outlet immediately. If the burning smell is strong or you see any smoke, evacuate your home and call 911. Even if the smell seems minor, never ignore it - electrical fires can spread rapidly inside walls where you can't see them.

Why this happens and the dangers: Burning smells from outlets typically indicate loose connections, overloaded circuits, or faulty wiring that's creating dangerous heat buildup. This is exactly how electrical fires start - the heat can ignite surrounding materials like insulation or wood framing. In Ottawa's older homes, this is especially common with aluminum wiring (installed in the 1960s-70s) or knob and tube wiring, both of which are more prone to connection failures and overheating.

What not to do: Don't try to investigate the problem yourself by removing the outlet cover or touching anything electrical. Don't use that outlet again, even if the smell goes away - the underlying problem is still there. Never ignore a burning electrical smell thinking it will resolve itself. Under the Ontario Electrical Safety Code, this type of emergency repair must be done by an ESA-licensed electrician, and attempting DIY repairs on a potentially live circuit could be fatal.

Next steps: Call a licensed electrician immediately for an emergency inspection - Electrical Ottawa provides 24/7 emergency service for exactly these situations. The electrician will need to identify the source of the problem, which could be loose connections, damaged wiring, or an overloaded circuit. Depending on what's found, you may need outlet replacement, circuit rewiring, or panel upgrades. If you have insurance, document the issue with photos (from

a safe distance) as electrical problems can sometimes be covered.

Prevention for the future: Have your electrical system inspected if your home is over 25 years old, especially if you have aluminum wiring or Federal Pacific panels. Avoid overloading outlets with too many devices, and replace any outlets that feel warm to the touch or have scorch marks. Remember, electrical fires cause over 4,000 house fires annually in Canada - taking burning smells seriously could save your home and family.

Should I turn off power if I smell something burning?

Yes, absolutely turn off the power immediately if you smell something burning. This could indicate dangerous electrical arcing, overheating wires, or equipment failure that poses a serious fire risk.

Immediate steps to take:

First, try to locate the source of the burning smell. If it's coming from a specific outlet, appliance, or electrical panel, shut off the circuit breaker for that area immediately. If you can't pinpoint the source or if the smell is strong and coming from your electrical panel, **shut off the main breaker to cut power to your entire home.**

After cutting the power, unplug any appliances or devices that were running when you first noticed the smell. Don't use any electrical equipment until you've identified and resolved the source. If the burning smell is very strong, consider leaving your home and calling 911 - electrical fires can spread rapidly and produce toxic smoke.

What causes electrical burning smells:

Burning smells typically indicate **overheating electrical components**. This could be loose wire connections creating arcing, overloaded circuits, failing breakers, or deteriorating wire insulation. Older homes with knob and tube wiring or aluminum wiring are particularly susceptible to these issues. Federal Pacific and Zinsco panels are notorious for overheating breakers that can cause burning smells and fires.

ESA requirements and safety:

Under the Ontario Electrical Safety Code, any electrical work to diagnose and repair burning smell issues must be performed by an ESA-licensed electrician. This isn't a DIY situation - **electrical fires cause hundreds of house fires annually in Ontario**. Your insurance company will also require professional diagnosis and repair documentation.

Next steps:

Once you've secured the area, contact a licensed electrician immediately for emergency diagnosis. Don't restore power until the issue has been professionally identified and repaired. If you're experiencing this issue in Ottawa, Electrical Ottawa offers 24/7 emergency electrical service to quickly diagnose and resolve dangerous electrical problems.

Remember: **electrical burning smells are never normal and always require immediate professional attention.** It's better to lose power temporarily than risk a house fire.

Disclaimer: This guide is provided for informational purposes only by Ottawa Electrical. It does not constitute professional advice. Always consult qualified, licensed contractors and your local building authority before starting any construction or renovation project. Information is current as of September 20, 2026 and may change. Visit electricalottawa.ca for the latest answers.