Costs & Pricing

Electrician rates, project costs, and estimates in Ottawa

8 Expert Answers from Construction Brain

electricalottawa.ca/construction-brain

Table of Contents

How much does it cost to add circuits to an old panel?

Adding circuits to an existing panel in Ottawa typically costs $300-600 per circuit, but this assumes your panel has available breaker spaces and sufficient electrical capacity. The total cost depends on the circuit type, wire run length, and whether your panel can handle the additional load.

Circuit Installation Costs: For a standard 15A or 20A household circuit, expect to pay $300-500 if the panel has open slots and adequate capacity. More specialized circuits cost more - a 240V circuit for a dryer or electric vehicle charger runs $400-600, while a dedicated 40A circuit for an EV charger can reach $800-1,200 depending on the distance from the panel.

The wire run significantly impacts cost. A short run to an adjacent room might add $100-200 to the base price, while running wire across the house or to a second floor can add $300-500. If the electrician needs to fish wire through finished walls or drill through multiple floor joists, labor costs increase accordingly.

Panel Capacity Considerations: Many older Ottawa homes have 100A panels that are already at or near capacity. Before adding circuits, a licensed electrician must perform a load calculation to ensure your panel can safely handle the additional demand. If your panel is maxed out, you'll need a panel upgrade to 200A service, which costs $2,000-3,500 in addition to the new circuit installation.

ESA Permit Requirements: All new circuits in Ontario require ESA permits, which your licensed electrician will obtain before starting work. The permit fee is typically included in the quoted price, and ESA will inspect the work within 3-5 business days of completion. Homeowners cannot legally install new circuits themselves - this work must be performed by an ESA-licensed electrician.

When Panel Replacement Makes More Sense: If your panel has no available spaces or insufficient capacity, adding a subpanel ($800-1,500) might be more cost-effective than a full upgrade for just one or two circuits. However, if you're planning multiple electrical improvements like EV charger installation, kitchen renovation, or basement finishing, upgrading to 200A service upfront often provides better long-term value.

For an accurate assessment of your panel's capacity and a detailed quote for your specific circuit needs, request a consultation from Electrical Ottawa's ESA-licensed electricians.

What is the average cost for a home electrical inspection?

Home electrical inspections in Ottawa typically cost between $200-$400, depending on the size of your home and scope of the inspection. This is separate from mandatory ESA inspections, which are required for permitted electrical work and cost around $100-$150.

There are actually two types of electrical inspections homeowners might need. **ESA inspections** are mandatory when you do permitted electrical work - your licensed electrician pulls the permit, completes the work, and ESA schedules an inspection within 3-5 business days. These inspections ensure the work meets Ontario Electrical Safety Code requirements and typically cost $100-$150 depending on the complexity.

Private electrical inspections are voluntary assessments you might want before buying a home, after purchasing an older property, or if you're concerned about your electrical system's safety. These comprehensive inspections examine your entire electrical system - from the service entrance and panel to outlets, switches, and major appliances. A qualified electrician will check for code violations, safety hazards, and components that need updating.

For Ottawa homes, private inspections typically cost:

- Small homes (under 1,500 sq ft): $200-$275
- Medium homes (1,500-2,500 sq ft): $275-$350
- Large homes (over 2,500 sq ft): $350-$400
- Additional cost for outbuildings: $50-$100 each

The inspection should identify critical safety issues like Federal Pacific or Zinsco panels (fire hazards), knob and tube wiring, aluminum wiring connections, missing GFCI protection, and overloaded circuits. Many insurance companies require electrical inspections for homes over 40 years old, and some won't insure homes with knob and tube or certain panel types without upgrades.

A thorough inspection includes checking the main service panel, testing GFCI and AFCI protection, examining visible wiring, testing outlets and switches, and reviewing grounding systems. The electrician should provide a detailed report with photos and prioritized recommendations.

If you're buying a home in Ottawa, consider an electrical inspection especially for properties built before 1980. Issues like knob and tube wiring or Federal Pacific panels can cost thousands to remedy and may affect your insurance coverage.

For a comprehensive electrical safety assessment of your Ottawa home, Electrical Ottawa provides detailed inspections with written reports and prioritized recommendations to keep your family safe.

How much does an ESA inspection cost in Ontario?

ESA inspections in Ontario cost $85 for most residential electrical work, paid directly to the Electrical Safety Authority when your licensed electrician applies for the permit.

The **$85 inspection fee covers one standard inspection visit** for typical residential projects like panel upgrades, new circuits, EV charger installations, or rewiring work. This fee is separate from the electrical permit cost, which varies based on the scope of work but typically ranges from $75-$200 for most home projects.

Additional fees may apply if your installation fails the initial inspection and requires a re-inspection. ESA charges another $85 for each additional visit needed to approve the work. This is why it's crucial to hire experienced, ESA-licensed electricians who understand the Ontario Electrical Safety Code and get installations right the first time.

The inspection process works like this: Your licensed electrician pulls the permit and pays both the permit fee and inspection fee upfront. Once the electrical work is completed, they request the inspection through ESA's online system. An ESA inspector visits within 3-5 business days to verify the work meets code requirements. If everything passes, you receive a Certificate of Inspection - essential for insurance coverage and future home sales.

For Ottawa homeowners, this means your total upfront costs include both the electrician's quote plus the ESA permit and inspection fees. Most reputable contractors include these fees in their estimates, so you're not surprised by additional costs. However, always confirm whether ESA fees are included when comparing quotes.

Some projects may require multiple inspections - for example, major rewiring jobs might need a rough-in inspection before drywall goes up, then a final inspection. Each inspection visit costs $85, so complex projects can have higher ESA fees.

Remember, only ESA-licensed electrical contractors can pull permits and arrange inspections in Ontario. DIY electrical work beyond simple replacements like outlets and switches isn't just dangerous - it's illegal and will void your home insurance if something goes wrong.

For current ESA fee schedules or to verify your electrician's license, visit esasafe.com or call ESA at 1-877-ESA-SAFE (372-7233).

How much does it cost to install an electric car charger at home?

Installing a Level 2 EV charger at your Ottawa home typically costs between $1,200-$1,800 if your electrical panel has adequate capacity, or $3,000-$5,000 if a panel upgrade is needed.

The total cost depends on several key factors. The charger unit itself ranges from $400-$800 for quality brands like ChargePoint, JuiceBox, or Tesla Wall Connector. Installation labor adds $600-$1,000, which includes running a dedicated 240V circuit from your panel to the charging location, installing a NEMA 14-50 outlet or hardwired connection, and obtaining the required ESA permit and inspection.

Distance matters significantly - if your garage is far from your electrical panel, expect higher costs due to additional wiring. Most EV chargers require a dedicated 40-amp circuit using 8 AWG wire, though some newer models can work on 30-amp circuits. The electrician will also need to install appropriate GFCI protection as required by the Ontario Electrical Safety Code.

Panel capacity is the biggest variable. Many Ottawa homes, especially those built before 2000, have 100-amp panels that may lack the spare capacity for a 40-amp EV charger circuit. If your panel is already near capacity with your home's existing electrical loads, you'll need a panel upgrade to 200 amps, adding $2,000-$3,500 to the project cost.

ESA permits are mandatory for EV charger installations in Ontario. Your licensed electrician will pull the permit (typically $75-$150) and schedule the required inspection. This ensures the installation meets code requirements and maintains your home insurance coverage. Some insurance companies even offer discounts for professionally installed EV chargers.

Smart charger features like WiFi connectivity, scheduling, and load management can add $100-$300 to the unit cost but provide valuable benefits like charging during off-peak hydro rates. Tesla owners often choose the Tesla Wall Connector for seamless integration, while other EV owners typically go with universal J1772 chargers.

For an accurate quote on your specific situation, a licensed electrician needs to assess your panel capacity, measure the distance to your preferred charging location, and determine if any electrical upgrades are needed. **Electrical Ottawa offers free consultations** to evaluate your home's electrical system and provide detailed pricing for your EV charger installation.

What is the cost to install a dedicated circuit for an appliance?

Installing a dedicated circuit for an appliance in Ottawa typically costs between $300-$800, depending on the distance from your electrical panel, the amperage required, and the complexity of the installation.

The cost varies significantly based on several key factors. **Circuit amperage** is the biggest price driver - a 15-amp circuit for a garbage disposal runs much less than a 50-amp circuit for an electric range. **Distance from the panel** also matters greatly, as longer wire runs require more materials and labor. A circuit to an adjacent kitchen might cost $300-400, while running wire to a basement workshop could reach $600-800.

Common dedicated circuits and typical Ottawa pricing:

- **20-amp kitchen appliance circuit**: $350-500
- **30-amp dryer circuit**: $400-600
- **40-50-amp electric range circuit**: $500-800
- **15-amp garbage disposal circuit**: $300-450
- **20-amp bathroom circuit**: $400-600

The installation process requires an **ESA permit** (around $75-100), which your licensed electrician will obtain. The work involves installing a new breaker in your panel, running appropriate gauge wire through walls or conduit, and installing the proper outlet. **Wire gauge matters** - 12 AWG for 20-amp circuits, 10 AWG for 30-amp, and 6 AWG for 50-amp circuits.

Panel capacity can affect costs significantly. If your panel is already at capacity, you'll need a panel upgrade first, adding $1,500-3,500 to the project. Many older Ottawa homes with 100-amp panels struggle with modern appliance loads, especially when adding electric vehicle chargers or hot tubs.

Safety considerations make this strictly professional work. Dedicated circuits prevent overloading, reduce fire risk, and ensure appliances operate efficiently. DIY electrical work violates Ontario regulations and can void your home insurance. The ESA requires inspection of all new circuits to ensure code compliance.

For an accurate quote on your specific appliance circuit, contact Electrical Ottawa for a free consultation. We'll assess your panel capacity, determine the optimal wire routing, and ensure your installation meets all Ontario Electrical Safety Code requirements.

Q6

What is the cost to rewire a house in Ottawa?

Rewiring a house in Ottawa typically costs between $8,000 to $25,000, depending on the home's size, age, and complexity of the electrical work required. The wide range reflects significant differences in scope - from partial rewiring of specific circuits to complete electrical overhauls of older homes.

Factors Affecting Rewiring Costs in Ottawa:

The size of your home is the primary cost driver. A 1,000 square foot bungalow might cost $8,000-$12,000 to rewire, while a 2,500 square foot two-story home could range from $15,000-$25,000. The age and construction type also matter significantly - older homes with plaster walls, limited access, or challenging layouts require more labor and careful work to minimize damage.

Specific Rewiring Scenarios:

Knob and tube removal is common in Ottawa's older neighborhoods like the Glebe, Westboro, and Sandy Hill. Removing knob and tube wiring typically costs $400-$800 per circuit, with most homes requiring 8-15 circuits. Complete knob and tube replacement often runs $12,000-$20,000 for an average Ottawa home.

Aluminum wiring repair is another frequent issue in homes built between 1965-1975. While complete aluminum wire replacement costs $8,000-$15,000, many homeowners opt for aluminum-to-copper pigtailing at outlets and switches, which costs $150-$300 per connection and can make the wiring insurance-compliant for much less.

ESA Requirements and Permits:

All rewiring work in Ontario requires ESA permits and inspections. Your licensed electrician will pull the necessary permits (typically $100-$200) before starting work. The rewiring must meet current Ontario Electrical Safety Code standards, including GFCI protection within 1.5 meters of sinks, AFCI protection for bedroom circuits in newer installations, and proper grounding throughout the home.

What's Included in Rewiring:

A complete rewire typically includes replacing the main electrical panel (if needed), running new 14 AWG and 12 AWG copper wiring throughout the home, installing new outlets and switches to current code standards, and ensuring proper grounding. Many Ottawa electricians will also upgrade your service to 200 amps during a full rewire if you currently have 100-amp service.

Safety and Insurance Considerations:

Old wiring isn't just inconvenient - it's dangerous. Knob and tube wiring with modern insulation creates fire risks, and many insurance companies in Ontario either refuse coverage or charge higher premiums for homes with outdated electrical systems. Aluminum wiring connections can overheat and cause fires if not properly maintained.

Getting Accurate Pricing:

Rewiring costs vary significantly based on your specific situation. Factors like accessibility, whether walls need to be opened, the number of circuits required, and panel upgrade needs all affect the final price. Most reputable Ottawa electricians offer free estimates where they'll assess your current electrical system and provide detailed pricing for your specific rewiring needs.

For a comprehensive evaluation of your home's electrical system and accurate rewiring costs, request a consultation with ESA-licensed electricians through the Ottawa Construction Network.

What is the cost to install under cabinet lighting?

Under cabinet lighting installation in Ottawa typically costs $200-500 per linear foot for hardwired LED strips, or $150-300 per fixture for individual puck lights, including professional installation by a licensed electrician.

The total cost depends on several factors including the type of lighting you choose, the length of cabinets, and whether new electrical circuits are needed. **Hardwired LED strip lighting** is the most popular choice, providing even illumination without visible fixtures. These systems typically cost $200-500 per linear foot installed, which includes the LED strips, dimmer controls, and professional wiring.

Individual puck lights offer more focused lighting and easier installation, running $150-300 per fixture. For a typical kitchen with 12-15 feet of upper cabinets, expect to pay $2,500-6,000 for a complete hardwired system, or $1,800-4,500 for puck lights.

Plug-in systems are the most budget-friendly option at $50-150 per linear foot for the fixtures alone, but you'll still need an electrician to install outlets inside the cabinets if they don't exist. Many Ottawa homeowners prefer hardwired systems because they're cleaner looking and don't require visible cords or transformers.

ESA permit requirements apply when installing new circuits for under cabinet lighting. Most installations require running new wiring from the electrical panel, which needs both a permit and ESA inspection. However, if you're simply connecting to an existing outlet circuit with adequate capacity, no permit may be required - your electrician can determine this during the consultation.

Installation considerations include whether your cabinets have a light rail or valance to hide the fixtures, the distance to the electrical panel, and whether you want dimming controls. Smart dimmer switches add $100-200 but allow you to adjust brightness and even set schedules through your phone.

The **Ottawa market** has seen increased demand for LED under cabinet lighting as part of kitchen renovations. Quality LED systems last 15-20 years and use minimal electricity, making them a worthwhile investment that also increases home value.

For a free estimate on your under cabinet lighting project tailored to your specific kitchen layout and electrical needs, request a quote from Electrical Ottawa. We'll assess your current electrical setup and recommend the best solution for your budget and lighting goals.

How much does an electrician charge per hour in Ottawa?

Electricians in Ottawa typically charge between $80-$150 per hour, with most licensed contractors falling in the $100-$120 range for standard residential work. Emergency calls and after-hours service usually command premium rates of $150-$200+ per hour.

The hourly rate varies significantly based on several factors. **Experience level** plays a major role - apprentice electricians working under supervision might bill at $80-$90 per hour, while master electricians with 15+ years of experience typically charge $120-$150 per hour. **Type of work** also affects pricing, with complex troubleshooting, panel work, or specialized installations like EV chargers commanding higher rates than basic outlet replacements.

Many electrical contractors in Ottawa prefer project-based pricing rather than strict hourly billing. This approach often provides better value for homeowners because it eliminates uncertainty about final costs. For example, a panel upgrade might be quoted as a flat $2,500-$3,500 rather than "however many hours it takes at $120/hour." This protects you from unexpected complications that could extend the job timeline.

Emergency service rates are substantially higher, typically starting at $150-$200 for the first hour, with some contractors charging up to $250 for middle-of-the-night calls. However, many electrical issues that seem like emergencies can wait until regular business hours - unless you're dealing with sparking, burning smells, or complete power loss.

ESA permit costs are separate from labor rates and typically run $75-$150 depending on the scope of work. Licensed electricians include permit pulling in their service, but the ESA fees are usually passed through to the homeowner. Remember that most electrical work in Ontario requires permits - attempting to skip this step to save money can result in insurance claim denials and safety hazards.

When comparing electrician rates in Ottawa, focus on **total project value rather than just hourly rates**. A contractor charging $100/hour who completes quality work efficiently often costs less than someone charging $80/hour who works slowly or creates problems requiring callbacks. Always verify that your electrician is ESA-licensed, WSIB-insured, and pulls proper permits.

For accurate pricing on your specific electrical project, request quotes from multiple licensed contractors. Electrical Ottawa connects you with vetted ESA-licensed electricians who provide transparent, competitive pricing for Ottawa-area homeowners.