

# Home Electricity Guide.



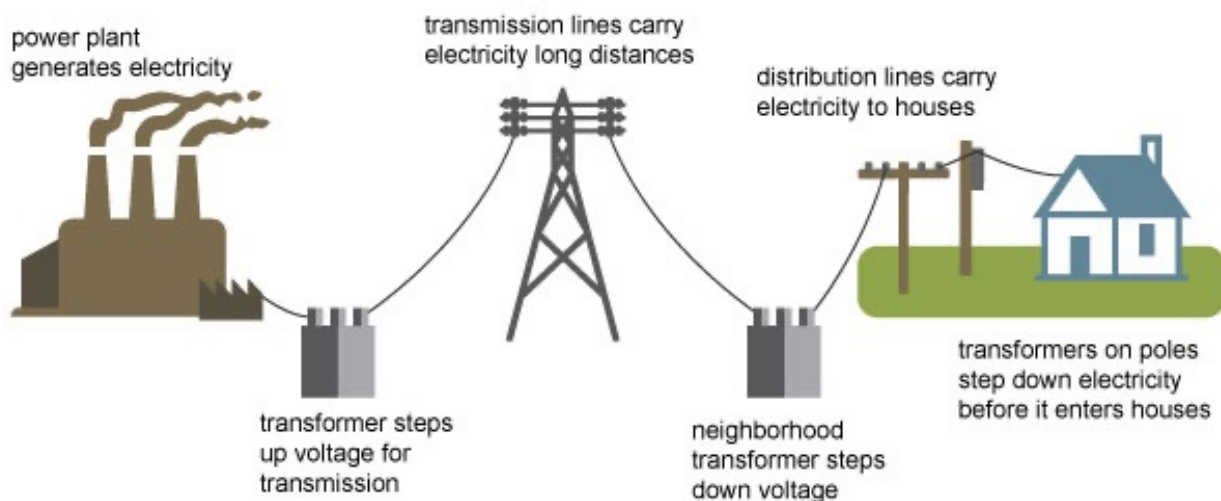
PLUMBING  
HEATING  
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ELECTRICAL

**From the moment we wake up to the time we go to bed, electricity is an integral part of our daily lives.**

We rely on it for almost everything we do, from lighting up our homes to powering our gadgets and appliances. How is electricity utilized in our everyday lives, particularly within the confines of our homes? Beyond the obvious functions like lighting and heating, electricity powers an array of appliances and systems that makes our lives comfortable and convenient.

While electricity enhances our lives in countless ways, it's crucial for homeowners to understand how to use it safely and responsibly. Basic knowledge of electrical systems within your home, such as the location of the circuit breaker panel and how to reset a tripped circuit breaker, can prevent accidents and ensure uninterrupted power supply. Regular maintenance of electrical appliances and wiring is essential to avoid potential hazards like electrical fires. Additionally, being mindful of energy consumption not only reduces utility bills but also benefits the environment.

## Electricity generation, transmission, and distribution



Source: Adapted from National Energy Education Development Project (public domain)



# Service Meter and Panel

## Service Meter

Electricity is received through the home's service meter. The primary function of the service meter is to measure the amount of electrical energy used by the household in kilowatt-hours (kWh). This measurement is what the utility company uses to bill the homeowner. Often referred to as an electric meter or utility meter, it is a critical component of the home's electrical system.



## Electrical Panel

Also known as a breaker box or fuse box, it is the central hub of a home's electrical system. It controls the flow of electricity to different circuits in the house.



**Panel Location** – Electrical panels are typically located in basements, garages, utility rooms, or bedrooms. It should be easily accessible and not obstructed.

**Labeling** – Each breaker should be clearly labeled to indicate which circuit it controls. Proper labeling helps identify which breaker to turn off in case of an issue or when performing electrical work.

**Keep the Panel Area Clear** – Ensure there's at least three feet of clearance around the panel for easy access in case of emergency.

**Routine Checks** – Regularly inspect your electrical panel for signs of wear, corrosion, or overheating. Listen for any buzzing or crackling sounds, which could indicate a problem.

**Professional Work** – Always hire a qualified electrician for any modifications or major repairs to your electrical panel. DIY work on the panel can be dangerous and may violate local building codes.



# Circuit Breakers

Inside the electrical panel are circuit breakers which look like switches. Circuit breakers ensure the safety and reliability of the electrical system by protecting against overloads and short circuits and are designed to trip (automatically cut off) the electrical flow when the circuit is overloaded. This prevents damage to wiring and equipment due to excessive current. Resetting a tripped circuit breaker is generally a straightforward process, but it's important to follow safety procedures.



## How to reset a circuit breaker:

1

### Identify the Tripped Breaker:

Open the panel door and look for a breaker that's not in the fully "on" or "off" position. It's often in the middle.

2

### Turn Off Devices:

Before resetting, turn off or unplug any devices on that circuit to prevent overloading.

3

### Reset the Breaker:

Push the tripped breaker firmly to the "off" position, then push it back to the "on" position. You should feel or hear a click.

4

### Test the Circuit:

Turn on the devices you turned off earlier to see if they work. If they do, you're all set.

**Seek Professional Help:** If the breaker continues to trip or you notice any issues, it's best to contact a licensed electrician. Persistent tripping could indicate a more serious problem that needs professional attention.



# Standard and GFCI Outlets

For general-purpose areas in your home, standard duplex outlets are typically sufficient. However, for areas where water is present or there's a higher risk of electrical shock, GFCI outlets are essential for safety. Unless they have been updated or renovated, older homes typically do not have GFCI plugs. GFCI outlets became common in new construction starting in the 1970s, with regulations expanding over the years to cover more areas in the home.

If an older home hasn't been upgraded to include GFCI outlets in places like bathrooms, kitchens, or outdoor areas, it does not have this crucial safety feature. Homeowners can, however, retrofit their homes with GFCI outlets to improve safety.

Having a licensed electrician upgrade your outlets to GFCI can ensure the installation is done correctly and adheres to current electrical codes. They can also assess if other electrical updates are needed to improve the safety and functionality of your electrical wiring.



**Standard Outlet**

Standard outlets do not have built-in protection. They are suitable for general use but may not provide extra safety features in areas where electrical hazards are a concern.



**GFCI Outlet**

(Ground Fault Circuit Interrupter)

GFCI outlets have test and reset buttons on their faceplates to test and reset them if they trip. They are especially important in areas where water is present, such as bathrooms, kitchens, outdoors, and garages.



# Electrical Inspections

An electrical inspection is when a licensed electrician comes to your home and makes sure that every part of your electrical system is working correctly. Issues can go unnoticed for months or even years unless the system is inspected.

## Why you should consider an electrical inspection for your home:

**Safety Assurance:** Electrical issues like faulty wiring, overloaded circuits, or damaged outlets can pose significant safety risks, including fire hazards or electric shocks. An inspection ensures your electrical system is safe for you and your family.

**Preventive Maintenance:** Regular inspections help catch small issues before they become big problems. For example, identifying and fixing a minor wiring issue now can prevent a costly repair or dangerous situation later.

**Energy Efficiency:** An inspection can reveal areas where your home's electrical system could be more efficient, such as outdated or improperly wired lighting and appliances. Upgrading these can lead to lower energy bills and a more environmentally friendly home.

**Older Electrical Panels:** Often found in homes built several decades ago, an electrical inspection can determine if your panel is outdated. Older panels were designed to handle the electrical loads typical of the time they were installed, but as technology and home energy use have evolved, many of these systems are now outdated and potentially unsafe. An old panel may struggle to support today's needs, leading to overloaded circuits, frequent breaker trips, or even potential fire hazards.

**Peace of Mind:** Knowing that your home's electrical system is safe and up-to-date gives you peace of mind, whether you're staying put, selling, or renting out your property. An electrical inspection is essential for ensuring safety, compliance, and efficiency, while also providing you with peace of mind.

### Why a Licensed Electrician?

Licensed electricians have the training, experience, and tools needed to diagnose and fix electrical problems safely and effectively. Attempting to fix electrical issues on your own can be extremely dangerous, potentially leading to injury, fire, or further damage to your home's electrical system.



# Safety Considerations

## **CHILDPROOFING**

Use outlet covers or plug protectors when outlets are not in use.

## **OVERLOADING CIRCUITS**

Avoid overloading electrical circuits. Use power strips with built-in circuit breakers.

## **EXTENSION CORDS**

Use extension cords as a temporary solution, not a permanent one.  
Never daisy-chain multiple extension cords together.

## **GROUND FAULT CIRCUIT INTERRUPTERS (GFCI) OUTLETS**

Install GFCIs in areas where water is present (kitchens, bathrooms, outdoors) to prevent electrical shock.

## **CORD MANAGEMENT**

Keep cords away from heat sources, water, and sharp objects to prevent damage.  
Avoid running cords under carpets, rugs, or heavy furniture.

## **ELECTRICAL PANEL**

Know the location of your electrical panel and how to shut off the power in case of emergencies.  
Label circuit breakers for easy identification.

## **SMOKE DETECTORS**

Ensure smoke detectors are installed on every level of your home, and test them regularly.  
Replace batteries at least once a year or as recommended by the manufacturer.

## **ELECTRICAL OUTAGE**

During power outages, use flashlights or battery-powered lanterns instead of candles.

## **RESPECT OUTDOOR POWER LINES**

Stay away from downed power lines, and never touch them. Report them to authorities immediately.

## **EMERGENCY PREPAREDNESS**

Have a fire extinguisher and a first-aid kit readily available.

## **DIY ELECTRICAL WORK**

If you're not a qualified electrician, don't attempt electrical repairs or installations.  
Hire a licensed electrician for any electrical work.



# Thank You For Downloading this Guide

This guide is intended to provide you with information to help you understand how electricity works in your home. Electrical safety is essential for protecting your home and loved ones from potential hazards. Regular inspections and responsible usage can help prevent accidents and electrical fires. Address problems promptly, and seek professional assistance when needed. TLC is here to help if you need electrical service. If you have any questions, please don't hesitate to reach out to our team. To schedule service, please click the button below, or call our office.

## CONTACT US:

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Call our office today

Albuquerque	Santa Fe
(505) 761-9644	(505) 471-0119

[Schedule Service](#)



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