

How to Become an Electrician

By Dillon Meyers

A practical, non-technical guide to getting hired, staying safe, and building a career

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A non-technical guide for beginners. Focus: getting hired, thriving on a crew, staying safe, and choosing a long-term path.

Important: Licensing, apprenticeship rules, pay, and code requirements vary by state and by local authority having jurisdiction (AHJ). Always verify requirements where you live and where you plan to work.

Contents

- Introduction
- 1. Getting Started
- 2. Tools, PPE, and What to Buy First
- 3. Specialties, Designations, and Career Paths
- 4. What to Expect on the Job
- 5. Safety: Dangers of the Trade
- 6. Licensing, School, and Continuing Education
- 7. Side Work and Working for Yourself
- 8. Industry Outlook
- Conclusion
- Appendix A: Checklists (first day, first week, first month)
- Appendix B: Starter tool checklist
- Appendix C: PPE and clothing checklist
- Appendix D: Resume + interview templates
- Appendix E: Questions to ask an employer or apprenticeship program
- References and Resources

Introduction

My name is Dillon Meyers. I wrote the original notes for this book after seeing the same avoidable problems ruin people's first year: showing up unprepared, landing with a bad contractor, not understanding what the work really looks like, and getting hurt because nobody slowed down.

This book is not a technical manual and it is not a substitute for an apprenticeship. It is a guide to help you start correctly. You will learn how to get hired, what good crews expect, what tools and

PPE matter first, and how to make smart career choices early. And it is for everyone considering the trade — **women are electricians too**, running crews and shops and teaching apprentices in every part of this industry, and every page of this book applies on exactly the same terms.

If you are serious about this trade, treat your first year like a professional athlete treats training. Consistency beats talent. Show up. Listen. Work safe. Improve every week.

1. Getting Started

Your goal is to move from "interested" to "hireable." That means: local requirements, a clear path (union or non-union), and a clean first impression.

1.1 Find your local requirements

Start here, not with tools. Requirements vary by state and city. You may need an apprentice card or registration before you can legally work. The exact sequence:

1. **Search** "[your state] electrical license apprentice" — the .gov result is the one you want.
2. **Click through** to the apprentice/trainee page. Look for: apprentice registration, journeyman license rules, contractor license rules, required hours, exam details, and CEU rules.
3. **Write down** the exact names of documents, fees, and application steps.
4. **Call the office** if the rules are unclear. Ask what a brand-new applicant should do first — they answer that question every day.

1.2 Union vs. non-union, neutrally

Both routes can be good. What matters is whether the training is structured and whether the culture is safe.

- **Union programs** often have formal apprenticeship pipelines, benefits, and predictable progression. Entry can be competitive.
- **Non-union** can hire faster and vary widely. Great shops exist. So do unsafe ones.
- Your decision should be based on local opportunities, commute, pay/benefits, and training quality, not internet arguments.

Where to actually look — these lookups stay current; a printed list would not:

- **apprenticeship.gov** — the U.S. Department of Labor's finder for every registered apprenticeship, union and non-union alike. Start here.
- **The IBEW Local Union Directory** (ibew.org) — the union's own directory of locals by area.
- **IEC and ABC chapters** — the two large non-union apprenticeship organizations.
- **Your state labor department's apprenticeship directory**, where one exists.

What electricians earn varies enough by state that any number printed here would mislead someone. The authoritative lookup is the **U.S. Bureau of Labor Statistics Occupational Outlook Handbook — Electricians**, which carries current national and state-level pay. Look yours up; it takes two minutes and it will be right when you read it, which this page cannot promise.

1.3 Build your "hireable" profile

When you're new, employers hire for character and habits. Skills come later.

- Reliable transportation. If you can travel or carpool, say that.
- A clean background story. If you have gaps, explain them simply and move on.
- Basic math comfort. Measurement and fractions show up constantly.
- Coachability. You can be confident without acting like you know everything.
- Physical readiness. This is not a gym, but you will lift, climb, and work in heat and cold.

Everything in this list is about habits, not biology — it applies identically to every person walking onto their first site.

1.4 How to find jobs

- **Apprenticeship programs:** union (JATC) and non-union programs. Follow their application steps exactly.
- **Local contractors:** apply directly on websites and in person if appropriate.
- **Supply houses.** Every electrician buys material somewhere, and the counter staff at an electrical supply house know every contractor in town — who is hiring, who is busy, who to avoid. Be decent to them, tell them you're looking, and you have a room full of well-connected people quietly working your job search. You will be sent to supply houses constantly as an apprentice anyway; being known there early is worth more than another online application.
- **Staffing agencies:** can be a foot in the door, but quality varies.
- **Networking — including other trades:** tell everyone you know you are looking. And don't limit it to electricians: **ask plumbers, HVAC techs, framers.** Trades work side by side and hear about each other's openings before any job board does.
- **Job sites:** use them, but do not rely only on them. A direct conversation is stronger.

If all else fails, get any job in construction and meet electricians. You will be on the same sites, you will learn how jobsites run, and the move across happens more often than you'd think.

1.5 The first phone call and the first interview

Your goal is to sound like an adult who will show up.

- Be ready to answer: where you live, transportation, work history, why electrical, availability, and whether you can pass a drug test if required.

- Ask smart questions: schedule, travel expectations, tool list, PPE policy, who supervises apprentices, and what your first month looks like.
- If you don't know something, say "I'm not sure yet, but I'm ready to learn and I take safety seriously."

1.6 Resume that works for beginners

One page. Clean. No fluff. Show reliability and hands-on ability.

Section — What to include

Headline — Entry-Level Electrical Apprentice | Reliable | Ready to Learn

Summary (3–4 lines) — Dependable worker with hands-on experience. Strong safety mindset. Comfortable with tools.

Experience — Construction, mechanical, warehouse, landscaping, maintenance. Focus on safety, teamwork, and showing up.

Skills — Hand tools, measurement, basic math, ladder safety, communication, learning fast.

Certs (if any) — OSHA card, first aid/CPR, lift/scissor training, driver license.

References — Available on request, or list 2–3 if you have strong ones.

Include any construction, mechanical, warehouse, or maintenance work. Even if it was not a job, projects count: building a fence, repairing equipment, remodeling a room.

2. Tools, PPE, and What to Buy First

Tools matter, but safety and preparation matter more. Buy smart. Buy in phases. **Ask for the tool list first** — and ask two more questions while you are at it: *does the company provide any tools*, and *do you help new hires buy their first set?* A surprising number of shops do one or both, and nobody volunteers it.

One idea before the lists start, because it saves beginners money and embarrassment: **there is no such thing as a "commercial tool" or a "residential tool."** Any tool can show up in any kind of work. Some tools are simply *more common* in one environment than another. A pipe bender lives on commercial jobs because commercial jobs have conduit, not because the bender is forbidden in a house. Learn what each tool does, and the categories stop mattering.

2.1 PPE and clothing: the real starter kit

This is the part people skip and the part that actually protects you.

- **Work boots with good traction.** Composite toe or steel toe depending on site rules.
- **Safety glasses.** Keep spares in your bag and your truck. Eye injuries are forever.

- **Gloves:** a light dexterity pair for terminations and a heavier pair for rough work, demo, and handling strut or pipe.
- **Hearing protection.** You will not notice the damage until it is permanent.
- **Hard hat and high-vis** if the site requires them — and many do from day one.
- **Weather gear:** rain jacket, layers, sun protection. The job keeps going in the weather, and being cold and wet makes people careless.

Two things worth saying plainly. First, if a company mocks you for wearing PPE or does not provide what the site requires, that tells you something about the company — see chapter 5. Second, **buy PPE that fits you.** Gear that fits badly gets taken off, and gear that is off is not protecting anyone. That applies to everybody on the crew.

2.2 Starter hand tools — the ones you use every single day

If you buy nothing else before your first day, buy these. This is the "getting started" category, and it is the only category worth thinking about as a category.

Tool — What it actually does for you

Wire strippers — Removes insulation to a clean length without nicking the conductor. The single most-used tool you own.

Lineman pliers — Cutting, twisting, gripping, pulling. The workhorse.

Diagonal cutters ("dikes") — Close, clean cuts where linemen will not fit.

Needle-nose pliers — Forming terminations and reaching into boxes.

Channel-lock pliers — Locknuts, connectors, anything round and stubborn.

Screwdrivers / a quality multi-bit driver — Flat and Phillips at minimum. A good multi-bit saves belt space.

Allen (hex) keys — Lugs and set screws. Cheap, and you are stuck without them.

Tape measure — Layout, box heights, spacing. Used constantly.

Torpedo level — Boxes and devices plumb and level. People notice when they are not.

Utility knife / razor blade — Cable jackets, boxes, tape. Blades are consumables.

Hammer — Straps, staples, nail-on boxes, persuasion.

Sheetrock saw — Cut-in boxes and remodel openings.

Marker, pencil, notepad — Layout marks and — see chapter 4 — what you learned today.

Small flashlight or headlamp — Every panel, every ceiling, every crawl space.

Pouch and a tool bag — Your pouch is your workstation. Set it up the way you work.

2.3 Testers and meters

Ask what your employer wants you to carry. Common beginner items:

- **Non-contact voltage tester ("tic tester")**. For quick checks — **not proof of de-energized**. This distinction is the most important sentence in this chapter. A tic tester can miss. Verifying de-energized is a procedure, not a beep. See chapter 5.
- **Plug tester**. Useful in residential and basic troubleshooting.
- **A real multimeter** becomes important as you advance. **Learn to use it correctly before you trust it** — including what its category rating means and what it is rated to be used on.

2.4 Power tools you will meet

You will not buy most of these starting out. Companies usually own them. Know the names, because being sent for a tool you cannot identify is a bad first week.

- **Roto hammer** — anchors and holes in concrete.
- **Hole hog / right-angle drill** — boring through framing.
- **Sawzall (reciprocating saw)** — demo and cutting in tight spots.
- **Band saw** — clean cuts on strut and pipe.
- **Hand drills / impact drivers** — the everyday pair.
- **Hydraulic bender and hydraulic punch** — large conduit and enclosure knockouts.
- **Core driller** — clean round penetrations through concrete.
- **Skil saw** — framing and blocking.
- **Hot box / heat blanket** — warming PVC conduit so it bends without kinking.

2.5 Tools you will meet by environment

Not rules. Just where you tend to see them.

- **Commercial**: pipe reamer, MC strippers, MC dikes, pipe benders, magnetic level, step/uni bit, hydraulic punch kit, files, impact drill.
- **Industrial**: control-wiring tools, labeling tools, torque tools, and sometimes specialized test equipment.
- **Residential**: fish sticks, long flex bits, and the patience for crawl spaces.
- **Low voltage**: termination tools, punch-down tools, labelers, and testers specific to the cable type.

2.6 Common materials — learn the names early

You cannot order it, stage it, or ask for it if you cannot name it. In your first weeks, learn to recognise and name: boxes (device, junction, weatherproof), MC cable and MC connectors, NM cable, EMT and its couplings and connectors, PVC conduit and fittings, strut and strut clamps, wire nuts and push-in connectors, straps and staples, anchors, and the common conductor sizes and colours your shop uses.

2.7 The NEC is a tool too

*Governing status: **educational interpretation, not governing code.** Edition referenced: **NEC (NFPA 70) 2023.** Jurisdiction: **general — your state and local AHJ govern, and they may amend or adopt on a delay.** Source type: **secondary description. No code text is reproduced here — the NEC is copyrighted by NFPA; buy it, borrow it, or read it through NFPA's own free online access.***

Your code book belongs in the tool list, next to your strippers.

Nobody memorises it. What separates people who are good with the code from people who dread it is **navigation** — knowing roughly where a subject lives and being fast with the index and the table of contents. Treat it like a reference manual you are learning to search, not a textbook you are trying to finish.

Three habits that pay off immediately:

1. **Tab it, and use your own tabs.** The tabs you place yourself are the ones you remember.
2. **Learn the definitions.** A large share of exam questions and jobsite arguments are really vocabulary problems.
3. **Check which edition your jurisdiction actually enforces.** This is the part beginners get wrong. A new edition is published on a regular cycle, but **your state or local authority decides which edition applies to you and can amend it.** The book on the shelf at the supply house is not automatically the book your inspector is using. Always work to the enforced version in your area, and ask your journeyman or your AHJ if you are unsure.

2.8 Rough-in vs. trim — and why your tool bag changes

Most construction projects move through stages, and the stage you are on decides what is in your pouch that morning.

Stage — What is happening — What tends to be in your hands

Layout — Marking where things go before anything is installed — Tape, marker, level, prints

Rough-in — Boxes, raceway, cable, and anything that gets buried before walls close — Hammer, hole hog, benders, strippers, dikes

Inspection point — The work is checked before it is covered — Nothing — this is a stop, and it matters

Trim / finish — Devices, plates, fixtures, panel work, labeling — Strippers, drivers, level, torque driver

Startup / punch — Energising, testing, correcting the list — Meter, tic tester, labels, patience

Knowing which stage you are on tells you what "ahead of the work" means that day — which is the habit chapter 4 is built around.

2.9 Buying strategy

- Buy the **top ten daily-use hand tools** first. Nothing else, at first.
- **Wait on expensive power tools** until you know your specialty and what your employer expects you to own.
- **If you borrow a tool more than twice, buy it.** That is the honest signal.
- **Buy the good version of the tool you use every day**, and the cheap version of the tool you use twice a year.
- **Keep your tools clean, organised, and marked with your name.** People trust the worker who is organised, and the pouch is the first thing a journeyman sees.

3. Specialties, Designations, and Career Paths

The trade has many lanes. Pick one based on interest and opportunity, then build a foundation that transfers anywhere.

3.1 Commercial

Commercial work is the widest lane. The structures you could find yourself on: multifamily buildings with parking garages, retail, malls, coffee shops, warehouses, storage units, schools, hospitals, high-rises, museums. **The possibilities are endless.**

The materials and tools that live here: MC cable and MC connectors, roto hammers, pipe benders — conduit work is the signature of the environment (and why the bender is *common* here, not *exclusive* here — chapter 2's rule).

3.2 Residential (new construction, remodel, service)

The honest pros and cons: crawl spaces are real, the scope is narrower, and the commercial systems aren't here. In exchange: it's easier to find work, easier to enter, there's more service work, you can work for yourself sooner, and you'll have far more contact with customers and homeowners — which is a skill of its own. Smart-home technology is pulling this lane forward.

3.3 Low voltage

The systems: fire alarm, data, repeaters, access control, DDC, sound, automation and lighting controls, relays. Low voltage is becoming more prevalent and **integrates with everything** — it is the computer-and-tech side of the trade. The wire is smaller, the tools differ (termination tools, punch-downs, labelers, cable-specific testers — chapter 2 §2.5), and the work rewards people who like systems thinking.

3.4 Industrial

PLCs, factory equipment, oil refineries, saw mills, lots of 480 V, controls, working with engineers, preventive maintenance, long hours, motor and machinery schematics. Industrial is where the trade meets heavy equipment and controls engineering, and where troubleshooting is the daily skill rather than the occasional one.

3.5 Roles beyond the field

Where field years can lead: bidder, estimator, parts and material manager, project manager, trainer, foreman, general foreman, office management, owner.

More and more of these positions are being filled by college graduates. You can still get these positions though.

If ownership is the goal: **you must check your local jurisdiction's requirements when opening your own shop** — contractor licensing is its own track, separate from your electrician's license, and it varies by state.

3.6 Choosing your first company matters

A good first shop builds you. A bad first shop uses you.

- Choose a company that trains, enforces PPE, and respects lockout/tagout.
- Avoid companies that normalize live work or treat injuries like a joke.
- Look for a place that does quality work. Speed comes later.

4. What to Expect on the Job

Most people don't quit because of the work. They quit because of the culture shock. This chapter is the one I most wish somebody had handed me.

Here is the promise underneath all of it: **this trade is practical, and it is learnable**. With decent training and the right attitude, you can become genuinely useful to a company inside a year. Not a journeyman — useful. That is why everything below is about attitude and habits rather than skill. The skill arrives on its own if you stay long enough to receive it.

4.1 What a journeyman expects from you

Strip it down and it is short: **show up on time, do what you're told, and ask when you don't know.** Expanded slightly:

- **Show up on time, every day.** Reliability outranks talent for the first year, and it is not close.
- **Follow instructions, and repeat them back** if there is any chance you misheard.
- **Ask questions before you create rework.** A question costs thirty seconds. Rework costs a day and somebody else's afternoon.
- **Keep your area clean and your material staged.**
- **Have enough tools with you.** Borrowing every third tool gets old fast.
- **Know how to operate your tools safely.** If you have never run it, say so before you run it.
- **Do not touch something you don't understand**, especially anything energized. See chapter 5.

4.2 The four situations you will find yourself in

Almost every day is one of these four, and each one asks something different of you.

Situation — What it looks like — What is actually being asked of you

On a crew, group task — Several people, one objective — a big pull, a rack of pipe, a pour — Listen more than you talk. Watch where the work is flowing and put yourself where the next pair of hands is needed. Do not freelance mid-task.

One-on-one with a journeyman — You and one experienced person — This is your best classroom. Ask *why*, not just *how*. Watch the order they do things in — the sequence is the skill.

By yourself on a simple task — Sent off to do something remedial — This is a test, and everyone knows it. Do it completely, do it neatly, and report back **before** you are looked for.

Alongside another apprentice — Equal, or one step ahead of you — The trap. Two apprentices can confidently do a thing wrong together. If neither of you is sure, that is the moment to go ask.

4.3 How to ask good questions

- **Start with what you know:** "I understand we're landing these in panel A."
- **Ask one clear question:** "Do you want them labeled by circuit or by room?"
- **Repeat the plan back:** "Got it. I'll label, land, and torque to spec."
- **If you make a mistake, say it early.** Cover-ups cost more than errors, every single time.

There is a real tension here worth naming: you are told to think ahead and come up with a plan, *and* you are told to follow direction. Both are true. **Have a game plan, offer it, then do it the journeyman's way.** Group decisions have their place, and the person responsible for the work gets the final call.

4.4 Habits that make you valuable fast

- **Be early, not just on time.**
- **Keep a small notebook.** One line a day about what you learned. In six months it is the most valuable thing you own.
- **Learn material names.** If you can't name it, you can't order it, stage it, or be sent for it. (Chapter 2, §2.6.)
- **Think two steps ahead.** What will the next task need? Go get it before it is asked for.
- **Volunteer for the hard job and the ugly job.** Offer to do the challenging tasks, and do the things nobody else wants to do. It is the fastest reputation you will ever build.
- **Be in reasonable shape and take care of your body.** Hydration and sleep are job skills here.
- **Have reliable transportation, and be willing to carpool.** Say so at the interview.

4.5 Crew dynamics, other trades, and who belongs here

Construction can be blunt. That does not mean it should be unsafe or abusive.

- **Don't take normal jobsite jokes personally. Do take real disrespect seriously.**
- **Stay professional.** Your reputation travels between shops faster than you will believe.
- **Make friends with other trades.** Plumbers, HVAC, framers, drywall — they make your day easier when they like you, and they are also how you hear about the next job. Chapter 1 says to network; this is where networking actually happens.

And plainly: this trade is for women too. There are women running crews, running shops, and teaching apprentices in every part of this industry. If you are a woman reading this, the work is learnable by you on exactly the same terms as anyone else, and the same advice applies without modification: show up, ask, stay safe, be useful. If a crew treats that as remarkable, that is information about the crew — see §4.6 and chapter 5.

4.6 The part nobody writes down

Some electricians are pompous and full of themselves. That is not a construction problem; it is true in every workplace you will ever enter. You will meet people who are genuinely great at the work and impossible to be around, and you will meet people who are neither and still talk the loudest.

Because of the way construction works — crews, hierarchy, people who have been somewhere twenty years — there is more room here than in most industries for someone to lean on the people below them. Some of that is normal jobsite friction. Some of it is bullying.

Learn the difference between someone ruffling your feathers and someone disrespecting you. The first one you let go, and usually you laugh. The second one you do not absorb, and you do not escalate on the spot either. Most of the time the correct move is to keep working, stay professional, and let people who behave that way run out of rope on their own — they almost always do. If it crosses into safety, or it does not stop, that is a conversation with a foreman or the

shop, and chapter 5 covers the stop-work language.

None of this should scare you off. **The overwhelming majority of people in this trade are generous with what they know.** But you should walk in knowing the exception exists, so it does not knock you sideways in week two.

4.7 Timeline expectations

Timeframe — What to focus on

First day — PPE, learning names, staying close, watching procedures, asking where tools and material are kept.

First week — Clean basic installs, tool familiarity, ladder safety, material identification, learning jobsite routines.

First month — Speed with quality, print reading basics, better organization, fewer repeated mistakes.

First year — Reliable work habits, safe troubleshooting basics, understanding workflow, building trust to work more independently.

4.8 Two things that surprise almost everyone

The work slows down sometimes. Construction moves with the weather, the money, and the schedule. There will be stretches with overtime and stretches with none. Budget like you know that.

The weather is part of the job. You will work in heat, in rain, in cold, in mud, and in a crawl space in August. Good gear is not a luxury (chapter 2, §2.1).

And the line every green apprentice says, usually around week three:

"Wow — this job is so much different than I thought it would be."

That is not a warning. It is just true, and it is better to hear it now.

5. Safety: Dangers of the Trade

If you cut corners, electricity, gravity, and moving equipment will collect the debt.

5.1 Non-negotiables

- If you are unsure, stop and ask.
- Verify de-energized. Do not trust labels or memory.
- Use lockout/tagout when required.
- Use fall protection and the right ladders and lifts.
- Wear eye protection. Always.

5.2 'Working hot' reality

Some environments have energized work. That does not mean beginners should be doing it. If a shop uses energized work as a default, consider leaving.

5.3 Red flags in a contractor

- They rush you onto live circuits.
- They don't provide PPE or mock people for using it.
- They skip training and then yell.
- They ignore fall protection rules.
- They refuse to fix known hazards.
- **They don't take time to show you how to operate tools properly.** A shop that hands you a tool you've never run and walks away is telling you what your safety is worth to them.

5.4 Stop-work script — and speaking up

If you need words in the moment, try this:

"I'm not comfortable doing this energized. I need it de-energized and verified, or I need a qualified person to handle it."

Don't be afraid to speak up. The script above exists because the moment it's needed is the moment it's hardest to improvise. And the other half of the same rule: **always look out for each other.** You will catch a hazard someone else walked past, and someone else will catch yours. Crews that watch each other's backs go home whole; crews that don't, eventually don't.

5.5 Get the OSHA card

Get your OSHA card early — OSHA 10 at minimum. It's a short outreach course (OSHA 30 is the longer version, common for leads and foremen), it teaches you the hazard categories that actually kill people in construction, and it's one of the few things you can put on a resume *before* anyone hires you. It goes straight on the beginner resume (chapter 1), and some states, municipalities, sites and employers require it outright.

Be precise about what it is, because job ads are not. OSHA Outreach gives you a **course completion card**, not a certification or a licence — OSHA says so directly, and there is no such thing as being "OSHA certified." The program is voluntary at the federal level, and it does not replace the job- and hazard-specific training your employer still has to give you. It is a strong starting signal, not a credential that qualifies you to do a task. The References section points to OSHA's own training pages — go to the source.

6. Licensing, School, and Continuing Education

One warning before any of this: **every state is different**. Not slightly different — different enough that hours earned in one state may count differently in the next, exam rules change at the border, and a license class that exists in one state may not exist in another. Every specific claim in this chapter is a *pattern*, not your state's rule. When this chapter and your state's licensing site disagree, **your state's site is right**. Nothing in this chapter is a licensing requirement — your state's licensing authority publishes the requirements, and this book's job is to make sure you go read them.

The exact path depends on where you live. The pattern is similar: hours, schooling, exams, then continuing education.

6.1 Apprenticeship basics

Most electricians learn through an apprenticeship. Many formal apprenticeships run about 4 years, sometimes longer depending on occupation and program structure.

6.2 Exams and studying

- Study the code like a navigation problem. Learn how to find answers fast.
- Practice with timed questions. Time management is the hidden skill.
- Learn definitions. Many questions are vocabulary traps.

6.3 The NEC, local adoption, and local amendments

(Governing status: educational interpretation, not governing code. The NEC — NFPA 70 — is referenced by role, not reproduced; jurisdiction: general.)

The NEC is revised on a regular cycle — but the NEC itself is not the law anywhere until a jurisdiction adopts it, and **jurisdictions can adopt late, amend what they adopt, or add requirements of their own**. That means three books can be in play at once: the newest edition at the supply house, the edition your state enforces, and the amendments your city or county layered on top. **The enforced version in your area is the only one that governs your work**. Your licensing authority and your local AHJ publish which edition applies and what they've amended. When your journeyman and the inspector disagree, the enforced local text — not the newest book — settles it.

6.4 CEUs

- Track CEU requirements early so you don't scramble at renewal time.
- Keep digital copies of completion certificates.
- Choose CEUs that improve your work: grounding/bonding, motor controls, troubleshooting, and safety.

7. Side Work and Working for Yourself

Do it right or don't do it. Side work is not "free money." It is liability if you are careless.

7.1 The dark side (what ruins people)

- Doing unpermitted work and hoping nothing goes wrong.
- Taking jobs beyond your skill level.
- Using cheap parts to increase profit.
- Not having insurance.
- Competing against your employer's customers.

7.2 Do it professionally

- Use a written scope. Spell out what is included and what is not.
- Take before-and-after photos.
- Invoice clearly and collect payment professionally.
- If the job requires a permit, pull it or don't take the job.
- If you want to grow, build a simple website and a contact form.

7.3 When to start a real business

Start a shop when your skills are stable and your systems are ready: estimating, scheduling, customer communication, safety, and cash flow.

8. Industry Outlook

Electrical work is not disappearing. It is expanding into new systems.

8.1 Labor market snapshot

BLS reports a median pay of \$63,190 per year (\$30.38/hour) for electricians (May 2025 data), with 9% projected growth (2025–2035) and about 72,700 openings per year. *Source: BLS Occupational Outlook Handbook — Electricians, May 2025 data; page last modified 2026-08-27. Look it up rather than trusting this line: the figure moves every year.*

8.2 Trends that can create opportunity

- Building automation and controls
- Data centers and high-density power distribution
- EV charging infrastructure

- Solar + battery storage integration (region-dependent)
- Smart home and smart building systems
- Retrofits for energy efficiency

Where you live shapes what the work is: solar-heavy regions, data-center corridors, and EV-buildout states each pull the trade in their own direction — **geography is part of the career decision**, and moving toward the work is always an option (§8.5).

8.3 How to stay valuable for decades

- Stay strong on fundamentals: workmanship, troubleshooting, and safety.
- Get comfortable with documentation: labeling, as-builts, and change tracking.
- Learn one specialty deeply, and one adjacent specialty enough to collaborate.
- Develop communication. The best-paid people can explain problems clearly.

And here is the part nobody puts in the brochures: **this trade sets you free**. Do it for four years and you hold a skill that doesn't expire — you can take time off and come back, learn new skills on top of it, move, start a business, or step into the office side. The skill travels with you the whole way — the *licence* is issued by a state or local authority, so moving can mean meeting that jurisdiction's requirements, and chapter 6 is where you check. Very few careers let you *leave and return* on your own terms. This one does.

8.4 Retirement and pensions

Few people enter the trade thinking about retirement, and it's one of the trade's quiet advantages. Union locals typically carry **defined pension plans plus annuity funds**; non-union shops increasingly offer 401(k) plans with matching. Either way, a person who starts at twenty and stays has a retirement picture most office careers would envy — ask about it in the interview (the appendix's pay-progression question is where it fits).

8.5 The trade travels

An electrician's skills work everywhere buildings do. Licensed trades move between cities and — with the licensing caveats from chapter 6 — between states; travelers chase big projects on purpose for the overtime, and some people build whole careers out of going where the work is biggest. If you want to see the country while getting paid well, this trade is one of the few honest ways to do it.

8.6 Electrician vs. lineman, in one paragraph

People mix these up constantly. **Electricians** (inside wiremen and the specialties in chapter 3) build and maintain the electrical systems *inside and on* buildings and facilities. **Linemen** work on the utility side — the poles, overhead and underground distribution, the grid itself. Different apprenticeships, different unions, different working conditions, and a different risk profile. Both are good trades; this book is about the first one. If the utility side calls to you, search "line worker apprenticeship" — it is its own path from day one.

Conclusion

Thanks for reading. If you take anything from this book, let it be this: reliability and safety will carry you farther than raw talent.

The trade can provide money, knowledge, confidence, and real freedom. If you commit to learning, stay humble, and take safety seriously, you will give yourself a strong chance of building a career you are proud of.

Appendix A: Checklists (first day, first week, first month)

First day checklist

- Confirm start time and address the day before
- Show up 15–20 minutes early
- Boots, work clothes, and required PPE
- Water, snacks, and any required paperwork
- Basic hand tools from the tool list, pouch, and a notebook
- Keep your phone away unless you need it for work
- Ask where to park, where to store tools, and who your point of contact is

First week checklist

- Learn names, jobsite rules, and where material is stored
- Ask for expectations: break times, reporting structure, daily start routine
- Identify the top 20 materials you touch most
- Keep your tools organized and your area clean

First month checklist

- Track what you learned each week

- Ask for feedback: one thing to improve, one thing you're doing well
- Start learning prints and layout basics
- Identify a specialty direction you might want to explore

Appendix B: Starter tool checklist

This is a starter list. Your employer may require more or less.

Wire strippers · Lineman pliers · Diagonal cutters (dikes) · Needle-nose pliers · Channel-lock pliers · Screwdrivers (flat and Phillips, plus a multi-bit driver) · Allen keys (hex set) · Tape measure · Torpedo level · Utility knife / razor blade · Hammer · Pouch and a small tool bag · Non-contact voltage tester (tic tester) · Basic multimeter (learn to use it safely) · Drill bit set (as needed)

Appendix C: PPE and clothing checklist

Work boots appropriate for the site · Work pants and durable shirts · Safety glasses · Hearing protection · Work gloves (task-appropriate) · Hard hat if required · High-visibility vest/shirt if required · Weather gear: rain jacket, layers for cold, sun protection for heat

Appendix D: Resume + interview templates

Beginner resume headline examples

- Entry-Level Electrical Apprentice | Reliable | Safety-Minded
- Electrical Helper | Ready to Learn | Strong Work Ethic

Resume bullet examples (entry-level)

- Reliable worker with hands-on experience using basic hand and power tools in construction/maintenance environments.
- Demonstrated punctuality and strong attendance across prior roles.
- Able to follow instructions, work safely, and learn quickly under supervision.
- Comfortable lifting, climbing ladders, and working in physically demanding conditions.
- Team-oriented and able to communicate clearly with foremen, journeymen, and other trades.

Interview answers that work

- **Why electrical?** "I want a hands-on career with a clear training path and long-term demand."
- **What are your strengths?** "Reliability, learning fast, and taking safety seriously."
- **Weakness?** "I'm new, so I'm careful about asking questions and verifying instructions."
- **What do you do if you're unsure?** "I stop and ask. I don't guess with electricity."

Interview questions you should be ready for

- Why do you want to become an electrician?
- Tell me about a time you learned a skill quickly.
- How do you handle working early mornings and long days?
- What does safety mean to you on a jobsite?
- Are you able to travel or work overtime if needed?

Appendix E: Questions to ask an employer or apprenticeship program

- What does the first 30 days look like for a new apprentice/helper?
- Who trains apprentices day-to-day?
- What is your PPE policy? Do you enforce it?
- How often do apprentices work energized systems?
- What tools should I bring on day one?
- Do you reimburse for school or books? Do you provide a tool list?
- How much travel is typical?
- What is the pay progression and review schedule?
- What type of work do you do most?
- What are your expectations for a new hire in the first 30–90 days?
- How do you handle safety and lockout/tagout?

References and Resources

- U.S. Bureau of Labor Statistics, Occupational Outlook Handbook: Electricians. (Pay, outlook, training basics.)
- U.S. Bureau of Labor Statistics, Career Outlook: Apprenticeships (overview of apprenticeship structure).
- OSHA Outreach Training Program (10-hour and 30-hour course completion cards): [osha.gov/training/outreach](https://www.osha.gov/training/outreach) — what the card is, and what it is not.
- OSHA 29 CFR 1926.21 Safety training and education (employer duty to instruct workers).
- OSHA 29 CFR 1926.417 Lockout and tagging of circuits (construction, Subpart K — Electrical). Note: 29 CFR 1910.147, the general-industry lockout/tagout standard you will see cited most often, states in its own scope that it does not cover construction employment. Check which set applies to the work you are doing.

- Electrical Safety Foundation International (ESFI): National Electrical Code overview.
- NFPA fact sheet: Electrical Cycle of Safety (NEC three-year revision cycle).

These sources are listed so you can verify facts and update numbers over time.