

INDUSTRY WHITEPAPER

The Definitive Guide to LED & Solar

Practical strategy for hiring, certifying, and retaining solar installers and LED retrofit electricians — for commercial contractors competing in one of the fastest-growing labor pools in the trades.

This is one of the few trades where the labor market is growing faster than the hiring playbook for it.

I'm Michael Carter, President of My Trade Talent. Most of the trades we recruit for are steady, replacement-driven markets — good people retiring or moving on, and someone has to backfill the seat. LED retrofit and solar are different. This is genuine growth, not just replacement, and it's happening fast enough that the hiring playbooks contractors are used to running haven't caught up.

What I've seen is that most contractors in this space are still hiring the way they'd hire for a flat market: post the job, wait for applicants, hope the certification on the resume is real. That works less well every year demand for solar and LED retrofit crews keeps outpacing the supply of qualified people.

This guide is what I'd want if I were building a solar or LED retrofit crew from scratch right now: an honest look at the labor market, the ten roles that matter most, and a hiring process built around verification instead of hope. I hope it's useful whether or not you ever work with us.

The five things to take away if you read nothing else.

- **This is a genuine growth market, not just a replacement market.** BLS classifies Solar Photovoltaic Installers (SOC 47-2231) as growing "much faster than average" — 7% or higher — through 2034, among the strongest growth rates BLS tracks for any construction-trades occupation.
- **Most of the crew is drawn from the electrician labor pool.** Electricians (SOC 47-2111) — who handle grid interconnection and most LED retrofit wiring — carry that same "much faster than average" growth rate, with roughly 81,000 projected annual openings nationally.
- **NABCEP certification is the credential that matters in solar** — and a resume line claiming it is not the same thing as a certification you've verified directly with NABCEP.
- **Hiring-intent search volume is thin, and that's expected, not a red flag.** Combined hiring-help search terms sum to only around 90 monthly searches, while combined pay and certification searches run into the thousands — this is a referral- and network-driven hiring market, not a job-board-driven one.
- **"LED retrofit electrician" isn't a separate BLS occupation** — it's a specialty inside the broader Electricians classification. We say that plainly in this guide rather than dressing it up as something it isn't.

INTRODUCTION

Solar and LED retrofit hiring has a verification problem on top of a growth problem.

Every commercial solar and LED retrofit contractor we talk to describes a version of the same situation: real demand for the work, real difficulty finding crews fast enough to keep up with it, and a hiring process that has trouble telling a genuinely NABCEP-certified installer or licensed electrician from someone who's good at describing themselves as one.

This guide lays out what the labor market actually looks like right now, the ten roles commercial contractors recruit for most, and a practical framework for hiring that doesn't rely on resume keywords.

Solar Photovoltaic Installers (SOC 47-2231) are projected to grow **7% or higher — "much faster than average"** — over 2024–2034, among the strongest growth rates BLS tracks for any construction-trades occupation.

Electricians (SOC 47-2111) — the licensed labor pool behind most LED retrofit wiring and solar interconnection work — carry the same "much faster than average" growth rate, with roughly **81,000 annual openings** projected nationally.

What makes this labor market distinct

Most trades we cover are replacement-driven: steady demand, retirements and transfers creating the openings. Solar and LED retrofit is a genuine growth market layered on top of that same replacement dynamic — which means the competition for qualified people compounds rather than staying flat year over year.

The national median for Solar Photovoltaic Installers is **\$53,140 a year (about \$25.55/hour)**, per the latest BLS-sourced wage data via O*NET OnLine. Electricians — who handle most commercial LED retrofit wiring and a large share of solar interconnection work — run higher, at a national median of **\$63,190 a year (about \$30.38/hour)**. Both figures move by metro and specialty; we don't have a verified state-by-state breakdown for this trade the way we do for some others, and we're naming that gap rather than filling it with a guess.

The search data tells you where candidates' heads are, and it isn't on job boards.

"Solar installer salary" draws roughly **590 searches a month**, with related pay-rate variants adding up to a combined salary cluster of roughly **1,680 searches a month** (SEMrush Keyword Magic Tool). Certification and licensing terms — "solar installer certification," "certified solar installer," "nabcep solar installer certification," and similar — add another combined **~900 searches a month**.

Search volume for hiring help itself is thin by comparison: "hire solar installer workers," "solar installers staffing," and metro-specific hiring queries sum to roughly **90 combined monthly searches**. That gap is consistent with what we see across specialized trades — candidates and researchers are curious about pay and certification; very few people search for staffing help directly, because commercial solar and LED retrofit hiring happens through contractor networks, GC relationships, and specialty staffing partners rather than open job-board search.

One honest limitation in this data: the SEMrush pull behind these figures is solar-specific — it does not yet surface a separate keyword cluster for commercial LED retrofit hiring or pay specifically. We're flagging that gap rather than inventing LED-specific search volume to fill it.

THE NABCEP BOTTLENECK

A resume can't tell you whether a solar certification is real, current, or the one that actually applies.

NABCEP — the North American Board of Certified Energy Practitioners — is a nonprofit certification body founded in 2002 that has become the primary credentialing organization for solar professionals in North America. Its flagship PV Installation Professional certification has been accredited to the ANSI/ISO/IEC 17024 personnel-certification standard since 2007 and is widely regarded as the gold-standard credential for photovoltaic installers.

- **Documented field experience** installing PV systems is required before a candidate can even sit the exam.
- **A minimum of 58 hours of advanced PV training** is required — this is not a credential someone picks up casually.
- **An OSHA-10 construction card or equivalent** is also required as part of qualifying.

The practical problem is the same one every credential-scarce trade runs into: job boards surface resumes, not verified certifications. Verifying NABCEP status directly, before an interview rather than after an offer, is the single step most reactive hiring processes skip under time pressure — and exactly the step that separates a good hire from an expensive mistake.

The positions commercial LED retrofit and solar contractors recruit for most.

Several of these roles share a BLS occupational code with a broader specialty, or roll up to a parent code because BLS does not survey wages at that level of detail — we note that explicitly rather than force a number that does not exist. A full wage breakdown is in the companion Salary Guide.

ROLE	CLASSIFICATION
Solar PV Installer	BLS 47-2231 — Solar Photovoltaic Installers
NABCEP-Certified Solar Technician	BLS 47-2231 (same base code; NABCEP is a certification layered on top, not a separate BLS category)
Commercial LED Retrofit Electrician	BLS 47-2111 — Electricians (no dedicated BLS code exists for retrofit work specifically)
Solar Electrician	BLS 47-2111 — Electricians (interconnection/inverter tie-in specialty)
Solar Project Manager	O*NET 47-1011.03 — Solar Energy Installation Managers, a Bright Outlook occupation; wage data rolls up to parent 47-1011
Solar Estimator/Designer	BLS 13-1051 — Cost Estimators
Energy Auditor/Efficiency Consultant	O*NET 47-4011.01 — Energy Auditors
Solar O&M Technician	BLS 47-2231 (same installer code; no separate operations-and-maintenance code exists)
Electrical Foreman (LED/Solar specialty)	BLS 47-1011 — First-Line Supervisors of Construction Trades and Extraction Workers
Low-Voltage/Controls Technician	BLS 49-2094 — closest match; no dedicated code exists for "lighting controls technician" specifically

HIRING PLAYBOOK

Screen for verified credentials before you screen for anything else.

- **Verify NABCEP status directly.** Don't take "NABCEP certified" at face value — confirm it directly with NABCEP before an interview, not after an offer.
- **Confirm electrical licensing separately from solar certification.** These are two different credentials held by two overlapping but distinct labor pools — a candidate can hold one without the other.
- **Ask about production experience on commercial scopes, not residential-only work.** A lot of solar hiring skews residential; commercial rooftop and ground-mount work has a different scale and code profile.
- **Build a pipeline before you need it.** In a genuine growth market, waiting until a seat opens puts you behind contractors who already have a warm bench.

A full interview framework — including specific questions by role — is in the companion Interview Guide.

Contingency fees are a tax on urgency. A retainer is a tax on nothing.

Most staffing agencies work on contingency — a percentage fee, often 20-25% of first-year salary, paid only when a hire lands. That model incentivizes speed over fit, and gives the agency no reason to build a durable pipeline for you in a market that's only getting more competitive.

My Trade Talent works on a flat monthly retainer instead:

- We're incentivized to build a standing, credential-verified pipeline — not just fill one seat and move on.
- Your cost doesn't spike with three open seats and doesn't disappear with zero — it's predictable.
- We stay accountable for fit over time, not just for a signed offer letter.

Every hire from zero is a tax on your growth. In a trade growing this fast, that tax compounds — a standing pipeline is worth evaluating against what you're doing today.

THE HIDDEN COST OF VACANCY

An open seat doesn't just sit empty — it moves work onto everyone else.

In a fast-growing trade, a vacant installer or electrician seat rarely shows up as a clean, isolated loss. It shows up as a project you can't crew, as overtime on the installers you already have, or as a bid you don't submit because you can't staff the scope with confidence. None of that is captured by "one open req" on a whiteboard.

With demand outpacing the search-volume data on hiring itself, this isn't a one-time gap to fill and forget — it's a standing condition of a fast-growing trade. Contractors who treat every vacancy as an emergency, one at a time, are working against a labor market that produces more openings every year, not fewer.

Use our free **Cost of Vacancy Calculator** at mytradetalent.com/cost-of-vacancy to model what a specific open seat is costing your shop in overtime, coverage, and lost margin — by role and days vacant.

Certified installers and licensed electricians have options. What are they actually screening for?

In a scarce-credential, fast-growing market, the hiring conversation runs both directions. Contractors who win the best candidates on their shortlist tend to be specific and honest about a handful of things candidates in this trade consistently ask about:

- **Commercial versus residential scope.** Candidates want to know whether they're doing commercial rooftop and ground-mount work or getting pulled onto residential jobs they didn't sign up for.
- **Safety record, not safety slogans.** A specific answer about fall-protection practice and incident history lands better than a poster on the wall — this is roof and height work.
- **A real path toward NABCEP certification or advanced electrical licensing.** Contractors who can describe that path specifically — training hours funded, exam fees covered — retain longer than ones who mention it vaguely.
- **Schedule and travel expectations.** Solar and LED retrofit work is often multi-site; candidates weigh predictability the same way field welders and pipefitters do.

None of this replaces competitive pay. But at parity, the shop that answers these questions specifically wins the candidate the vaguer competitor loses.

RETENTION

The certification path that gets someone hired is also what keeps them.

Because NABCEP credentials are individually held, portable, and career-defining, they double as a retention lever most contractors underuse. A solar installer who sees a concrete, funded path toward NABCEP certification — better pay, more autonomy, a foreman track — has a real reason to stay rather than shop their resume every time a competitor posts a higher hourly rate.

The same logic applies to electricians doing LED retrofit and solar interconnection work: a visible path toward advanced licensing or a foreman role matters as much as the paycheck, especially in a market growing fast enough that competitors are actively recruiting your best people.

BUILDING THE PIPELINE

What "credential-verified pipeline" actually means, operationally.

A standing pipeline isn't a bigger applicant pool — it's a smaller, pre-vetted one, maintained continuously instead of assembled under deadline. In practice, that means:

- NABCEP certifications and electrical licenses are confirmed directly with the issuing body, before a candidate ever reaches your desk — not after an offer is extended.
- Candidates are tagged by actual scope experience (commercial rooftop, ground-mount, interconnection, retrofit) rather than self-reported skill level.
- The pipeline stays warm between openings, so filling a seat today doesn't leave you starting from zero when the next one opens — which, in a growth market, it will, sooner than in most other trades.

Four questions worth asking any recruiter before you sign with them.

- **"How do you verify a NABCEP certification?"** If the answer doesn't mention contacting NABCEP directly, the candidates you're seeing haven't been verified — just represented.
- **"How do you tell a commercial-experienced candidate from a residential-only one?"** A lot of solar hiring is residential by default; ask how they screen for actual commercial scope.
- **"What happens to the pipeline if I don't have an open seat this month?"** Contingency recruiters have no incentive to maintain one. Ask what stays warm between placements.
- **"Do you specialize in this trade, or is solar/LED one of a dozen categories you cover?"** Specificity in the answer usually tracks with specificity in the candidates.

FINAL WORD

The market isn't going to slow down. The process can catch up.

Genuine growth in a labor market is a good problem to have, but it's still a problem if your hiring process isn't built for it. Solar Photovoltaic Installers and the electricians who support them are growing among the fastest of any construction-trades occupation BLS tracks — the contractors who build a verified, standing pipeline now will spend less time and money chasing this problem than the ones who keep posting and hoping.

Electrician apprenticeships and NABCEP training providers, not open job-board search.

Consistent with the search-volume data cited earlier in this guide, this candidate pool isn't sitting on job boards typing "solar installer job" into a search bar. Licensed electricians typically come up through formal electrician apprenticeship and licensing pathways; NABCEP-certified solar technicians typically come through NABCEP-registered training providers that deliver the required advanced PV training hours.

That matters for sourcing: relationships with electrician apprenticeship programs and NABCEP training providers consistently surface stronger, more verifiable candidates than a generic posting — because the credentialing step is already built into how these candidates entered the trade.

A flat-rate recruiting partner built for commercial trades.

My Trade Talent recruits for commercial trades contractors nationally on a flat monthly retainer — no per-hire contingency fee, no incentive to rush a placement that doesn't fit. We maintain live, credential-verified candidate pipelines across LED retrofit, solar installation, and nine other commercial trades verticals.

Get in touch: mytradetalent.com · (314) 886-7975 · staffing@abstraktmg.com



Every hire from zero is a *tax* on your team.

My Trade Talent maintains a live, credential-verified pipeline of trades talent on a flat monthly retainer — so open seats fill with qualified people, not guesses.

Schedule a Discovery Call

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