THE CHAMBERS GROUP
BATTERY BELT EXECUTIVE SEARCH

A BATTERY BELT TALENT BRIEFING

THE SKILL CLIFF

Where ICE manufacturing experience stops translating to EV.

Inside this briefing:

- The skills that transfer — and the ones that don't
- Why the new EV roles pay MORE, not less
- What to target when you hire and develop leaders
- How to build an internal academy that works

BUILT ON PRIMARY RESEARCH FROM:

World Resources Institute · Center for Automotive Research (BIETNA)
iFOREST · GNEM 2026 Whitepaper · C2ES Southeast Survey

SWIPE

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THE PATTERN I KEEP SEEING

It's not just the 30-year veteran

The call comes from all over. Yes, the 28-year ICE lifer — but also the 12-year process engineer, the quality director out of aerospace, the controls lead from oil & gas.

The common thread isn't age or tenure. It's that their experience is anchored in a **different technology** — and everything they bring **looks** transferable.

Then the job description asks for:

- Battery chemistry
- Electrochemical process control
- Cell formation cycling
- BMS architecture

None of which that background builds.

2 in 3 people working in battery today came from **another industry entirely.** Crossing the cliff isn't the exception — it's how the whole sector got built.

Source: Volta Foundation Battery Talent Census, 1,000+ professionals, 2026

This is the Skill Cliff.

The question was never whether your people can cross it. It's whether they cross it well — or stall at the door.

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THE DATA BEHIND IT

43%

of the technical competencies in EV manufacturing **do not overlap** with ICE manufacturing.

Source: iFOREST / Vasudha Foundation, ICE-to-EV workforce assessment, 2024

82%

of battery employers report a shortage of skilled applicants

Center for Automotive Research

6×

projected growth in US battery workforce demand by 2030

Volta Foundation / EDF

Nearly half the skill set is genuinely new.

The other half — the operational foundation — is exactly where ICE leaders win. The next slides separate the two.

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THE GOOD NEWS FIRST

What transfers — and it's a lot

Western manufacturers' real edge is decades of accumulated operational wisdom. It carries directly into EV.

Operations leadership at scale
Running multi-shift, multi-line production under pressure.

Lean, CI & problem-solving
A3, PDCA, Six Sigma — the improvement engine is identical.

Safety culture & compliance
OSHA discipline and a zero-incident mindset transfer fully.

Launch & ramp experience
Greenfield and brownfield ramp scars are gold in a gigafactory.

Quality systems thinking
IATF, FMEA, SPC — the framework is the same, the spec changes.

Supply chain & vendor command
Sourcing instincts and supplier leverage carry over directly.

The gap is never in leadership. It's in product knowledge.

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THE CLIFF ITSELF

What doesn't transfer — and why it matters

These are the five gaps that actually stop ICE leaders at the door. Each one has to be built — it isn't inherited.

1

Electrochemistry & battery chemistry

The #1 reported skills gap in the entire battery industry. It governs yield, safety, and cost — and no ICE role touches it.

2

Cell formation & process control

Formation cycling determines cell quality and scrap rate. Get it wrong and your ramp bleeds margin.

3

Battery management systems (BMS)

The brain of the pack. Mispriced talent here shows up as field failures and warranty exposure.

4

Thermal management of Li-ion

Thermal runaway is the difference between a recall and a record. ICE cooling intuition doesn't map cleanly.

5

High-voltage safety & standards

EV-specific quality and HV protocols are a different rulebook — learned, audited, and certified, not assumed.

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THE PART NOBODY LEADS WITH

Crossing the cliff is a pay raise

The Skill Cliff isn't a demotion. A 1,000-person industry census shows the battery pay ladder climbs hard at every level — and starts above adjacent fields.

U.S. median base salary by level. Source: Volta Foundation Battery Talent Census, 2026

+23%

Entry-level battery pay runs as much as 23% above adjacent engineering (chemical, industrial, materials).

But the talent that pays well also walks.

Average tenure is just **2.3 years**, and **half** of battery professionals are actively looking. Winning the hire is step one. Keeping them — through pay clarity and a real growth path — is the harder game.

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WHO IT HITS HARDEST

It's a leadership problem, not a line problem

Frontline workforce · solvable

Operators and technicians can be retrained on community-college timelines. readySC, NCCCS, and Georgia Quick Start already do this well — measured in **months**.

Months

Senior leadership · the real gap

Plant managers, engineering directors, VPs of Operations. These roles need operational depth **and** technical domain knowledge at once. No short course builds that.

5–10 years to build from an ICE foundation

Most facilities needed these leaders 18 months ago.

That gap doesn't close on a training-program timeline.

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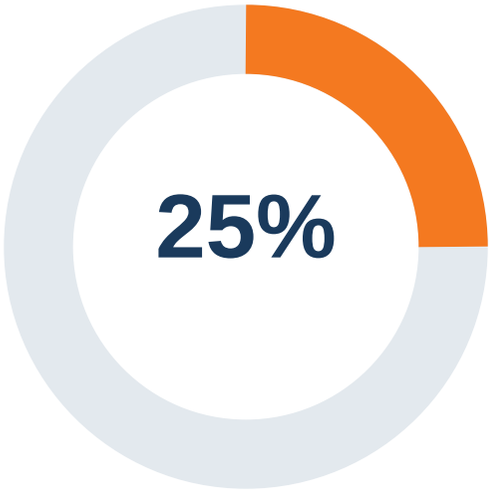
WHY IT STAYS UNSOLVED

Most employers aren't built to close it



Only 1 in 4 automotive manufacturing firms have a formal partnership with a college or training institution for workforce development.

Source: WRI survey of 330 automotive manufacturers, 2025

~48% of firms offer any in-house training program at all.

17% name computer systems, AI & robotics as the #1 skill needed.

2× more likely to feel 'threatened' by EV if they make no BEV products yet.

The skills gap isn't a talent shortage.
It's an infrastructure gap. The next slides are the fix.

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WHAT TO DO · 01

Build a real internal academy

The companies crossing the cliff don't wait for leaders to self-educate. They engineer the transition. A working model has four parts:

01 Pair, don't replace

Put each ICE operations leader alongside a battery-engineering mentor from day one. Knowledge flows both ways.

02 Rotate through the cell

Structured rotations through formation, cell assembly, and quality in year one — hands on the actual process.

03 Earn-and-learn

Apprenticeship-style tracks with no pay cut. WRI flags these as the single most effective transition tool.

04 Make learning a KPI

Year-one goals include technical-domain milestones, not just output. What gets measured gets built.

Proof it works: JLR is training 29,000 staff in electrification by 2030. Ford committed $525M to technician training. Mercedes, €1.3B. The academy IS the strategy.

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WHAT TO DO · 02

Target these skills — in this order

Whether you're hiring or developing, prioritize the capabilities that move yield, safety, and ramp

HIRE FOR (scarce)	BUILD / UPSKILL
Electrochemistry / cell chemistry	Automation & robotics literacy
BMS design & calibration	Data & MES/ERP fluency
Formation & process control	EV-specific quality (IATF→cell)
Power electronics architecture	Digital troubleshooting
HV systems & thermal safety	AI-assisted process control

Why this order matters

Scarce skills set your ceiling

You can't ramp faster than your thinnest bench. Chemistry and BMS talent is the constraint — pay for it.

Trainable skills set your speed

Automation and data fluency are learnable in months. Build them internally and you ramp without bidding wars.

Foundation skills are your moat

Your ICE leaders already have the operational layer. Layer technical depth on top — don't replace the person.

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WHAT TO DO · 03

Treat workforce as regional infrastructure

The fastest-hiring Battery Belt manufacturers don't treat workforce as an internal HR cost. They

One labor market. One engineering bench. Everyone hiring from it.

readySC

Builds the workforce for a new SC plant — customizable training mapped to your facility's ramp.

NCCCS + Wake Tech

NC community-college network; the Careers Electric Training Network is scaling EST enrollment.

SCMEP

Supports existing SC manufacturers with process and workforce capability.

DOE Battery Workforce Initiative

National curriculum standards + classroom-plus-mentorship model you can adopt.

Companies plugged into the ecosystem hire measurably faster.
It's the cheapest competitive advantage in the Battery Belt.

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PROOF, NOT THEORY

We build the system, not just the shortlist

Closing the Skill Cliff isn't a job posting — it's a system. Here's how we've actually done it, sometimes **before** placing a single conventional hire.

01 Academy before the first hire

We've gone into a client and designed an internal upskilling academy — defined curriculum, clear progression — before recruiting a single team member. People land into a system that already works.

02 Or place the architect

In other searches, we brought in the leader who then built the internal team and the development engine from the inside. One right hire becomes the multiplier.

03 Always with the state in the room

In every case, we work alongside the client and the state's workforce resources to build the plan and stand up the system — together, not in isolation.

The placement is the start, not the finish.

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TAKE THIS TO YOUR NEXT OPS MEETING

The one-page action list

If you do nothing else with this briefing, do these five things.

- [ ] **1. Audit your open JDs**

  Strip out 'must-have' requirements for skills that don't exist at US scale yet. You're disqualifying your best candidates.

- [ ] **2. Re-filter for learning velocity**

  Weight how fast a candidate has crossed a new technical domain before — not just what they know today.

- [ ] **3. Stand up a mentor pairing**

  Match every incoming ICE leader to a technical mentor. This is the highest-ROI move on the list.

- [ ] **4. Sign one ecosystem partner**

  Pick up the phone to readySC, NCCCS, or SCMEP this quarter. One partnership beats ten job postings.

- [ ] **5. Tell your ICE leaders the truth**

  The cliff is real, it's crossable, and the roles on the other side pay more. That's a retention message.

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IF YOU'RE THE ONE CROSSING IT

Your 90-day cliff-ready plan

You don't need to start over. You need to **translate** what you've got — and **target** what you build. Here's the on-ramp.

DAYS 1–30

Map the gap honestly

- Name what already transfers — your operations, lean, safety, and quality foundation.
- Pinpoint the 2 technical gaps that matter most for the roles you actually want.

DAYS 31–60

Build credible signal

- Targeted fundamentals on battery basics — you need fluency, not a PhD.
- Translate your ICE wins into EV language a hiring manager instantly recognizes.

DAYS 61–90

Make the move legible

- Rewrite your story around transferable strength + proven learning velocity.
- Get into real conversations — with hiring teams, or a recruiter who knows the market.

2 in 3 people in battery already did this.
You'd be walking a well-worn path — not blazing a new one.

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SKIP THE RESEARCH

I'm the resource — use me

This briefing pulls from a dozen industry reports. You don't have time to read them all — that's my job. Wherever you sit, reach out and I'll point you to exactly what's relevant to **your** situation.

IF YOU'RE HIRING

- Comp benchmarks for the role you're filling
- Transition-track models that actually work
- Where the Carolinas bench really sits
- Who's hiring against you — and how to win

IF YOU'RE MAKING THE MOVE

- ICE, aerospace, oil & gas, automation —
- I'll tell you straight what transfers
- What to build before you apply
- Which doors are actually open right now

One message. I'll point you the right way.

michael@chambersrecruitment.com

No pitch, no pressure — I'd rather be the person you remember as useful than the one who sold you something. That's how this works.

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THE BOTTOM LINE

The Skill Cliff is real.

It's mid-career. It's expensive.
And it's completely crossable.

Whoever's crossing it — your 12-year process engineer or your 28-year plant lead — the ones who clear it go in with eyes open. They know what transfers, they have a plan for what doesn't. The companies who help them win the ramp.

How is your team bridging the gap?

Drop a comment — I read and reply to every one.

Or message me directly (slide 15) and I'll point you the right way.

Michael Chambers

Founder & President, The Chambers Group

99%
12-mo retention

96%
24-mo retention

Retained executive search for the Battery Belt:
EV/Battery · SiC Semiconductors · Aerospace & Defense · Automation

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