

Navigating Battery Validation Risk In The EV Supply Chain

By **Samuel Madden and Vanessa Miller** (January 26, 2026)

Vehicle electrification has moved battery system supply chains from a background component into the center of the automotive universe, simultaneously shifting the focus of contract disputes and litigation.

Recent disputes illustrate this shift. Tesla Inc.'s graphite supply deal with Syrah Resources faces potential termination after repeated qualification delays.[1]

And in October, Tesla lost the latest round in a billion-dollar trade secret battle over dry-coated electrode technology, when the U.S. District Court for the Northern District of California ruled against the automaker in *Matthews International Corp. v. Tesla*.

These developments underscore the high stakes of technical validation.[2] For battery engineers, product validation is the moment of truth for a battery design. The systems must demonstrate their durability, safety, compliance with standards, key performance indicators and, ultimately, contracts.

For in-house counsel, battery validation is no longer just an engineering exercise. It is a driver of contractual disputes, regulatory exposure and even shareholder litigation.

If legal teams do not understand the technical realities of the process, they may miss a critical source of legal and business risk in the electric vehicle era.

The Validation Bottleneck: A Catalyst for Legal Crisis

Battery validation is painstakingly slow. Components are cycled thousands of times, modules are pushed through thermal runaway scenarios and full packs are crash-tested.

These processes take months or years, with results that can sometimes be unpredictable. This is particularly true given that batteries are highly customized integrated components.

When technical validation milestones slip, the resulting validation delay can quickly snowball into a breach of contract claim. Thus, engineering uncertainty translates into high-stakes legal considerations that are best addressed in supply agreements before validation begins.

Contractual Buffers

Agreements can build necessary flexibility for validation-driven delays, and for scenarios in which such delays expose the original equipment manufacturer to supplier claims for damages or reimbursement for certain investments due to the delay.

Disclosure Risks

Public statements that directly link launch delays to quality validation period extensions make validation a matter of public record. This can open the door to investor scrutiny and



Samuel Madden



Vanessa Miller

potential securities litigation if plaintiffs allege that known validation risks were downplayed.

Allocation of Costs

It is essential to clearly outline in contracts who pays for costs associated with additional tooling, storage or retesting in specific delay scenarios.

Litigation Defensibility

Every validation report, thermal profile and cycle-life curve is potential evidence if there are product failures, warranty issues or recalls down the road. Strong, well-documented validation acts as a shield, proof of diligence and foresight.

Conversely, plaintiff attorneys may comb through records to argue that delays or results were proof of known risks, or that extended testing meant defects should have been foreseen.

It is critical to bridge the gap between engineers, who see an acceptable degradation curve, and lawyers, who may see a breach of warranty exposure, to prevent disputes born of misalignment.

Generalizing High-Stakes Component Supplier Disputes

When components fail to meet performance standards, legal disputes arise over quality, warranty protection and indemnification obligations. These conflicts often fall into several categories.

Nonconforming Goods and Commercial Viability

A central theme in recent battery-related disputes involves components that allegedly fail to conform to specifications, regulations or warranties, rendering them defective and unfit for their intended use.

Failure to Meet Specifications

Litigation arises when components are supplied that allegedly do not conform to specifications, samples, statutes, regulations, standards or contractual requirements. OEMs may pursue the battery supplier seeking to recover costs related to defective and nonconforming goods.

Breach of Warranty of Fitness for Particular Purpose

Disputes frequently involve the implied warranty of merchantability and the implied warranty of fitness for a particular purpose. Most OEMs list these warranties as express warranties in their broad, buyer-friendly warranty provisions.

For instance, a component purchased for a specific low-temperature application, even though it meets all specifications and is free from defect, may fail to work in the particular application or exhibit safety concerns once installed in the vehicle, making it unfit for the intended purpose.

Information Asymmetry and Consequential Defects

Disputes are often driven by allegations that defects were far more consequential than initially represented, leading to rapid degradation with serious safety risks.

When technical reports define component defects as "cosmetic" and within the supplier's risk tolerance, but these defects are later revealed to involve performance and safety implications, the late disclosure can render the product commercially unviable, or subject to a very costly recall.

Retroactive Constraints and Shifting Warranty Requirements

The nature of advanced component technology means that OEMs or battery suppliers may impose new, restrictive technical requirements late in the development cycle to preserve warranty coverage. These unexpected requirements often shift the economic burden back to the purchaser.

Imposition of Technical Requirements

OEMs or battery suppliers may impose increasingly onerous, unanticipated constraints in the middle of development.

For example, warranty protection may become dependent on safety measures, requiring extensive isolation, diagnostics or monitoring of problems such as lithium plating or electrolyte leakage to detect potential failure modes.

Economic Nonviability

New requirements mandating hardware additions — such as requiring one monitoring device per parallel-circuit module in a low-voltage system — can drastically increase development and manufacturing costs, effectively rendering the modules economically infeasible for the intended projects.

Furthermore, new performance thresholds may be imposed, such as requiring the battery pack to be disabled at a specific total volatile organic compound threshold — e.g., 20 parts per million.

These late-imposed constraints can also include prohibitions on use, such as advising that components are not suitable for applications requiring traction.

This effectively precludes many potential uses for inventory that has already been purchased, and leaves manufacturing capacity that has already been allocated unused.

Indemnification and Failure Recourse

OEMs rely on robust contractual provisions to recover costs associated with supplier-caused failures, including those stemming from defective or nonconforming parts.

Recourse for Recalls and Repair Costs

OEMs typically seek indemnification for all costs stemming from defects, including the expense of repair or recall and correction.

In addition to the broad warranty provisions, contracts often contain an express contractual obligation for a supplier to indemnify the OEM against claims arising from defective

components and reimburse the OEM for all associated costs.

This explicitly includes all costs and expenses incurred by the OEM, including costs associated with any recalls.

Intellectual Property Infringement

In cases involving integrated electronic components, like radios with 4G connectivity, OEMs often seek indemnification for third-party claims alleging IP infringement.

Suppliers frequently provide an express contractual warranty that the goods or work product will not infringe any third-party IP and agree to defend, indemnify and hold the OEM harmless against such IP claims.

If the supplier fails to resolve these claims, the OEM may be forced to pay significant licensing fees for past and future technology usage.

Continuity of Supply and Evolving Standards

Standards are continuously evolving due to the nature of the nascent industry and its rapid growth. This technical reality creates legal challenges.

Standards Evolution

Validation is measured against internal test plans and external standards like UL 2580, SAE J2464, ISO 12405 and IEC 62660. This creates abundant ground for disputes, where a supplier may claim compliance with contractually defined standards, while an OEM insists compliance requires the latest, stricter ones.

Contracts should clearly allocate the cost of revalidation if standards change midstream.

Strategic Volume Reduction

While not focused on quality, litigation can arise when an OEM unilaterally and often drastically reduces volumes from the quantity included in the OEM's forecasts that were used for the supplier to prepare its quotation.

Volume reductions can make a program unprofitable, since the supplier is unable to amortize its investments across the number of components it originally planned and held capacity for.

Even if this does not rise to a formal breach of contract claim or quasi-contractual claim, it likely will result in the battery supplier seeking a price increase or other relief to justify the investments that it made.

A Call to Action for General Counsel and Supply Chain Counselors

The evolving technical landscape of electrification demands proactive legal engagement.

Translate engineering to legal reality.

Recognize that engineering observations directly translate into legal exposure — e.g., "600 cycles completed" versus "delivery milestone missed," or "acceptable degradation curve"

versus "breach of warranty exposure."

Conduct legal and engineering reviews early to prevent disputes arising from technical misalignment.

Audit contracts for component-specific flexibility.

Supply agreements must explicitly address validation timelines, standards and detailed cost allocation for delays. Contracts should be clear on which technological standards apply and how new regulations will be handled.

Treat validation data as evidence.

Assume every validation report may one day be Exhibit A. Ensuring documentation is defensible, complete and consistent with all contractual obligations acts as a crucial legal shield.

Know the technical failure mechanisms.

Legal strategy must be informed by the specific technical drivers of litigation, such as validation delays, unforeseen results and latent defects to effectively manage warranty and nonconformity claims.

Samuel Madden, Ph.D., is a director at Secretariat Advisors LLC.

Vanessa Miller is a partner and the chair of the national automotive team at Foley & Lardner LLP.

The opinions expressed are those of the author(s) and do not necessarily reflect the views of their employer, its clients, or Portfolio Media Inc., or any of its or their respective affiliates. This article is for general information purposes and is not intended to be and should not be taken as legal advice.

[1] Australia's Syrah Resources, Tesla to further extend graphite supply deal deadline, Reuters (November 16, 2025), <https://www.reuters.com/business/autos-transportation/australias-syrah-resources-tesla-further-extend-graphite-supply-deal-deadline-2025-11-16/>.

[2] Blake Brittain, Tesla sues ex-supplier Matthews over EV battery trade secrets, Reuters (June 17, 2024), <https://www.reuters.com/business/autos-transportation/tesla-sues-ex-supplier-matthews-over-ev-battery-trade-secrets-2024-06-17/>.