



GLOBAL MECHANICAL INTELLIGENCE

Q3 2025

JULY - SEPTEMBER

JABIL

MADE **POSSIBLE.**
MADE **BETTER.**

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EXECUTIVE SUMMARY

Welcome to the Q3 edition of the Global Mechanicals and Subassembly report.

As we enter the second half of the year, we are witnessing a rapidly evolving global supply chain ecosystem, characterized by shifting tariffs, accelerating electrification and digitalization, and intensifying sustainability mandates. While demand remains resilient in key sectors, including electric vehicles (Evs), electronics, and healthcare, supply dynamics and pricing trends vary significantly by category and geography.

KEY MARKET TRENDS

TARIFF REALIGNMENT

U.S.–China and U.S.–Mexico trade policies are reshaping sourcing strategies, with Mexico, Southeast Asia, and India emerging as key manufacturing regions.

ELECTRIFICATION & DIGITALIZATION

AI data centers, EVs, renewable energy, and smart devices are driving demand for high-performance components—especially in batteries, displays, and die-cut.

SUSTAINABILITY

Regulatory pressure in Europe and North America is accelerating the shift to recyclable, bio-based, and solvent-free materials across packaging, resins, and die-cut components.

SECTOR HIGHLIGHTS

BATTERIES

Global demand is surging, led by EVs and energy storage. Solid-state and LFP chemistries are gaining traction. Cobalt prices are up significantly, while lithium prices have softened.

DISPLAYS

OLED and Micro LED technologies are advancing rapidly. China dominates production, but tariffs and glass substrate shortages are influencing pricing.

CABLES

AI and automation are fueling demand for high-speed and industrial cables. Supply is tight due to raw material constraints and tariff-driven shifts.

EXECUTIVE SUMMARY (CONT.)

POWER SUPPLIES

Stable pricing and lead times. Demand is strong from data centers and EV infrastructure. Southeast Asia is gaining as a production base.

OPTICAL LENSES

Mobile and automotive sectors are driving growth. Supply is stable, but geopolitical risks are prompting diversification.

METALS

- **Aluminum:** Prices stabilizing post-tariff suspension. The U.S. and India are expanding capacity.
- **Copper:** Bullish outlook due to growing green energy demand; prices are currently high.
- **Nickel:** Oversupply from Indonesia; battery demand is slowing.
- **Steel:** Prices rising in the U.S., stable in the EU, and softening in Asia. EV and infrastructure sectors are key demand drivers.

PACKAGING

- **PE:** North America sees structural growth, while China faces oversupply.
- **PET:** Demand is strong in the beverage industry; India faces shortages, while the EU is focused on rPET.
- **Paper & Linerboard:** Prices are rising in the Americas, stable in the EU, and easing in Asia.

ENGINEERING RESINS

Ranges from stable to oversupplied, with generally soft pricing, but sensitive to additives like flame-retardants, and tariffs.

DIE-CUT

Demand is strong across EVs, electronics, and medical devices. Specialty materials command premium pricing. Sustainability and innovation are key differentiators.

EXECUTIVE SUMMARY (CONT.)

STRATEGIC IMPLICATIONS

Jabil remains committed to diversifying its sourcing strategies to minimize exposure to geopolitical, regulatory, and supply chain disruptions. Through continuous monitoring of raw material pricing and regulatory developments, we manage cost fluctuations and reduce the risk associated with trading in a volatile market. We are also investing in sustainable, high-performance materials to meet the evolving requirements of our customers and to comply with global standards. Our ongoing focus remains on anticipating potential disruptions, mitigating risk and ensuring continuity across our global value chain. If you require further information or support, please do not hesitate to contact us directly.

Yours sincerely,

Keith Lapinski & Andy Van Putte

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GLOBAL **MECHANICAL** INTELLIGENCE

Q3 2025 | JULY - SEPTEMBER

BATTERIES

HEATMAP

	Q3'25	Q4'25	Q1'26	Q2'26
MARKET DYNAMICS				
Primary Battery (Lithium Metal)				
Primary Battery (Dry)				
Rechargeable (Lithium-ion)				
Rechargeable (Lithium-Polymer)				
Rechargeable (Others)				
SUPPLY ANALYSIS				
Primary Battery (Lithium Metal)				
Primary Battery (Dry)				
Rechargeable (Lithium-ion)				
Rechargeable (Lithium-Polymer)				
Rechargeable (Others)				
PRICING SITUATION				
Primary Battery (Lithium Metal)				
Primary Battery (Dry)				
Rechargeable (Lithium-ion)				
Rechargeable (Lithium-Polymer)				
Rechargeable (Others)				

Market Dynamics: Stable Supply Chain Risk; Potential Supply Chain Risk; High Supply Chain Risk
Pricing Situation: Decreasing Pricing; Stable Pricing; Increasing Pricing
Supply Analysis: Increasing Capacity/Supply; Stable Capacity/Supply; Decreasing Capacity/Supply

MARKET DYNAMICS

EXPLOSIVE DEMAND GROWTH

- The global battery market, valued at over \$100 billion in 2024, is projected to grow at a 15–20% CAGR through 2025
- Electric Vehicles (EVs): Expected to account for 60–70% of total lithium-ion battery demand, with China leading global EV adoption
- Energy Storage Systems (ESS): The global ESS market is forecast to reach \$13.13 billion by 2025, fuelled by solar and wind integration
- Consumer Electronics: Steady but slower growth, with continued reliance on lithium-ion polymer batteries.

SUPPLY CHAIN SHIFTS AND LOCALIZATION

Battery manufacturers are increasingly localizing production to mitigate geopolitical risks and logistical bottlenecks. Companies like Tesla are vertically integrating supply chains, securing raw materials through direct partnerships.

TECHNOLOGY INNOVATION

While lithium-ion remains dominant, solid-state and lithium-sulfur batteries are gaining traction due to their potential to offer higher energy density and improved safety. LFP (lithium iron phosphates) batteries are also gaining popularity due to their cost and safety advantages.

SUPPLY PLANNING

Geopolitical tensions, trade tariffs (e.g., 25% U.S. import duties), and regional policy divergence contribute to fragmented supply chains. These factors are delaying upstream responses to rising EV and ESS demand.

RECENT DEVELOPMENTS (JULY 2024 – JUNE 2025)

Date	Battery Supplier/Manufacturer	End User (Company 2)	Development Type	Description	Deal Value
May-25	BYD (China) -		Product Development & Launch	BYD Energy Storage has launched its new fourth-generation home battery system the Battery-Box HVB (high voltage Blade). This residential storage solution incorporates BYD's Blade Battery technology, previously utilized in its electric vehicles, to offer higher energy density. The modular system, - presented in a stacked cabinet format similar to previous HVS and HVM models, ranges from 5.9 kWh (two modules) to 29.6 kWh (ten modules) per stack, and can be expanded up to 89.07 kWh by using three systems in parallel	

Topic	Battery Manufacturer	End User Company	Development Type	Description	Deal Value
EV Charge Station			Hardware	<p>Clarion has unveiled the new, a battery monitoring technology for heavy-duty vehicles designed to provide real-time insights while reducing fuel consumption and emissions. Announced on April 27, 2025, ahead of the AEF Expo, this new can reportedly reduce engine idling time by up to 50%, resulting in annual fuel savings of approximately \$1,000 per vehicle. The system uses a sensor to collect battery data (voltage, current, temperature), which is processed in the Clarion cloud using AI algorithms to deliver predictive insights on battery state of charge, and is now available in the U.S. and Canada after testing in Europe.</p>	-
EV Cell Storage			Full Development & Test	<p>Chinese battery giant CATL unveiled its innovative Franco-Franco Power Battery. The battery features a dual-core architecture that delivers an extraordinary maximum range exceeding 1,000 kilometers (620 miles) on a single charge. The design divides the battery into two independent energy cores, offering different cell materials and incorporating dual-core systems for enhanced safety, potentially reshaping the competitive dynamics between pure electric and hybrid vehicles.</p>	-
EV Battery as Alternative to Gasoline		Energy Storage Unit	Hardware	<p>Soliant and Fational Energy announced the successful validation of Fational's automotive-grade 40VH solid-state battery cells, a significant step towards commercializing next-generation EV batteries. These 17Ah cells demonstrated an energy density of 375 Wh/kg, can fast-charge from 10% to over 80% in just 10 minutes, and operate within a temperature range of -40°C to 60°C. The cells also demonstrated high-power capabilities, reaching up to 4C discharge, and have achieved over 400 cycles, progressing towards automotive qualification. Soliant plans to integrate these advanced solid-state batteries into a demonstration fleet by 2026, as part of their ongoing collaboration to optimize battery pack architecture for lighter, more efficient, and cost-effective EVs.</p>	-

Item	Part Number	Quantity	Unit	Description	Notes
1	100-1000	100	EA	100-1000	
2	100-1000	100	EA	100-1000	
3	100-1000	100	EA	100-1000	

Sl. No.	Topic	Page No.	Page No.	Page No.
1	Introduction to the course and the importance of mechanical engineering in the world of today.	1	1	1
2	Basics of Engineering Mechanics: Statics and Dynamics.	2	2	2
3	Strength of Materials: Stress, Strain, and Elasticity.	3	3	3
4	Fluid Mechanics: Properties of Fluids, Flow, and Pressure.	4	4	4
5	Thermodynamics: Heat, Work, and Energy.	5	5	5
6	Engineering Materials: Properties and Selection.	6	6	6
7	Manufacturing Processes: Casting, Forging, and Machining.	7	7	7
8	Engineering Design: Principles and Practices.	8	8	8
9	Engineering Mathematics: Calculus and Algebra.	9	9	9
10	Engineering Drawing: Orthographic and Isometric Projection.	10	10	10
11	Engineering Computer Graphics: CAD and CAM.	11	11	11
12	Engineering Economics: Cost Estimation and Financial Analysis.	12	12	12
13	Engineering Management: Project Management and Quality Control.	13	13	13
14	Engineering Ethics: Professional Responsibility and Integrity.	14	14	14
15	Engineering Communication: Technical Writing and Presentation Skills.	15	15	15
16	Engineering Safety: Risk Assessment and Hazard Identification.	16	16	16
17	Engineering Innovation: Creativity and Problem Solving.	17	17	17
18	Engineering Sustainability: Environmental Impact and Green Engineering.	18	18	18
19	Engineering Career Development: Skills and Knowledge for the Future.	19	19	19
20	Engineering Industry Visits: Exposure to Real-world Applications.	20	20	20
21	Engineering Projects: Hands-on Experience and Practical Skills.	21	21	21
22	Engineering Seminars: Guest Lectures and Industry Experts.	22	22	22
23	Engineering Conferences: Networking and Knowledge Exchange.	23	23	23
24	Engineering Publications: Journals, Books, and Online Resources.	24	24	24
25	Engineering Standards: Compliance and Quality Assurance.	25	25	25
26	Engineering Regulations: Legal Framework and Industry Practices.	26	26	26
27	Engineering Research: Advancing Knowledge and Innovation.	27	27	27
28	Engineering Education: Curriculum Development and Pedagogical Approaches.	28	28	28
29	Engineering Accreditation: Quality Assurance and International Recognition.	29	29	29
30	Engineering Future: Trends and Challenges in the Industry.	30	30	30

Item	Item Number	Item Title	Item Description	Item Status
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Item	Item Name	Item Description	Item Category	Item Details	Item Status
1	Item 1	Item 1 Description	Item 1 Category	Item 1 Details	Item 1 Status
2	Item 2	Item 2 Description	Item 2 Category	Item 2 Details	Item 2 Status
3	Item 3	Item 3 Description	Item 3 Category	Item 3 Details	Item 3 Status
4	Item 4	Item 4 Description	Item 4 Category	Item 4 Details	Item 4 Status
5	Item 5	Item 5 Description	Item 5 Category	Item 5 Details	Item 5 Status

Year	Battery System Manufacturer (MWh)	Total New Storage (GWh)	Technology or Type	Description	Total TWh
2025	100	100	Li-ion	Global battery market is rapidly expanding, driven by the accelerating adoption of electric vehicles (EVs), the integration of renewable energy, and efforts to stabilize the grid. Total battery demand is projected to surpass 2,000 GWh—a fourfold increase from 2020.	100
2026	150	150	Li-ion	EVs remain the dominant driver, accounting for over 90% of battery consumption, with annual demand reaching 150 GWh.	150
2027	200	200	Li-ion	Energy Storage Systems (ESS) are scaling rapidly, with 40 GWh of new capacity added, doubling the year-over-year growth.	200
2028	250	250	Li-ion	Lithium-ion batteries continue to lead the market, though solid-state and sodium-ion technologies are gaining traction as next-generation alternatives.	250

Source: Press releases & company websites

DEMAND/SUPPLY OVERVIEW

DEMAND COMMENTARY

- The global battery market is rapidly expanding, driven by the accelerating adoption of electric vehicles (EVs), the integration of renewable energy, and efforts to stabilize the grid. Total battery demand is projected to surpass 2,000 GWh—a fourfold increase from 2020.
- EVs remain the dominant driver, accounting for over 90% of battery consumption, with annual demand reaching 150 GWh.
 - Energy Storage Systems (ESS) are scaling rapidly, with 40 GWh of new capacity added, doubling the year-over-year growth.
 - Lithium-ion batteries continue to lead the market, though solid-state and sodium-ion technologies are gaining traction as next-generation alternatives.

China maintains a commanding position, producing nearly 80% of global battery cells, including critical cathode and anode materials.

Technological advancements—particularly in high-nickel and silicon-carbon chemistries—significantly enhance battery energy density, cycle life, and performance.

SUPPLY ANALYSIS

Stable Lead Times

Lead times remain consistent across key battery types:

- Lithium metal batteries: 30-40 days
- Lithium rechargeable batteries: 40-60 days

This stability reflects a well-balanced supply chain with minimal disruption.

Resilient Supply Base

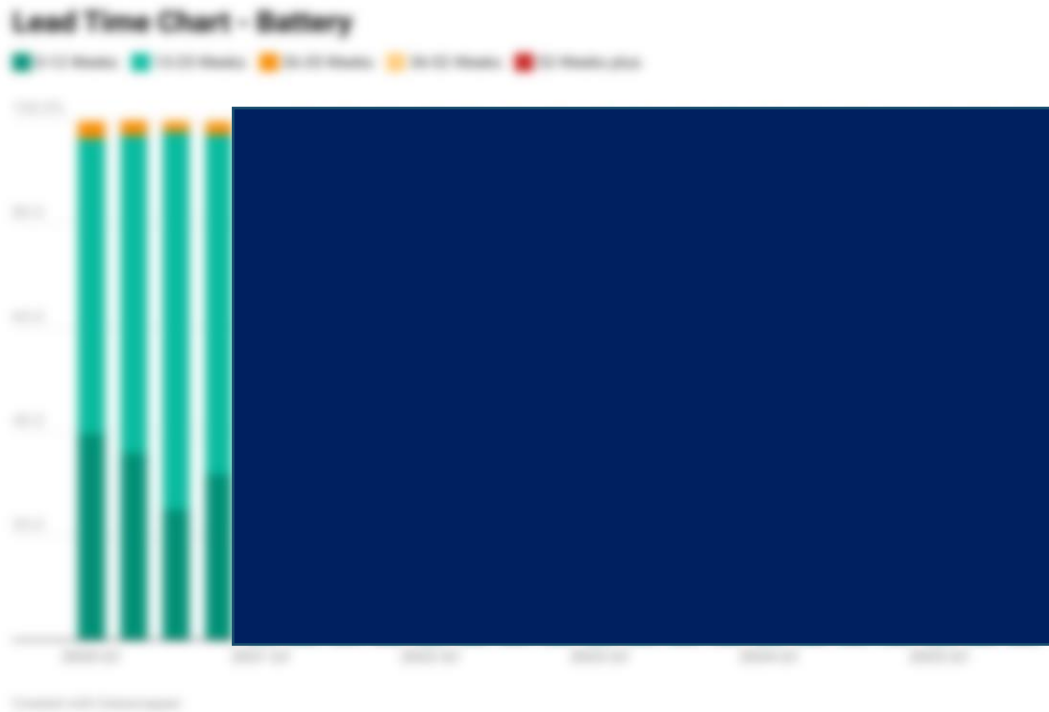
The supplier landscape remains robust, with no significant exits or consolidation trends observed. This indicates a low short-term supply risk for lithium-based battery commodities.

Material Shifts Driven by ESG

Environmental, Social, and Governance (ESG) concerns are reshaping material preferences:

- Cobalt and nickel are facing increasing scrutiny due to concerns over ethical sourcing and environmental impact.
- This is accelerating the industry shift toward LFP (lithium iron phosphate) and manganese-based chemistries, which offer safer, more sustainable alternatives with lower ESG risk profiles.

LEAD TIME CHART



PRICING SITUATION

LITHIUM MARKET CORRECTION

Lithium carbonate prices have declined below USD 45,000 per tonne, marking a four-year low. This drop reflects a persistent supply surplus as production outpaces demand. In China, new energy vehicle (NEV) sales slowed in April, and exports contracted, signaling a deceleration in what was once the world's fastest-growing EV market.

- Top lithium producers: Chile, China, Australia, Argentina
- Major importers: China, Japan, South Korea, United States

COBALT PRICE SURGE

Cobalt prices have surged 38.7% year-to-date, reaching USD 33,700 per tonne by the end of May 2025. This rebound is driven by tightening supply and geopolitical risks, particularly in the Democratic Republic of Congo, which accounts for over 50% of global cobalt production. Other notable producers include Russia, Australia, the Philippines, and Cuba.

COST STRUCTURE AND MARGIN PRESSURE

Cathode materials (Li, Ni, Co, Mn) account for ~60% of the total cell cost, whereas anode materials (primarily carbon) contribute another 12%. While most raw material prices have remained stable, the recent cobalt rally is squeezing margins and limiting further opportunities for cost reduction.

END MARKET OVERVIEW

Industry	Battery Type(s)	Applications	Expected Demand	Supply Commentary
Automotive	Lithium-Ion (Li-ion) (NMC, LFP, NCA, LMO)	Main traction batteries for Battery Electric Vehicles (BEVs), Plug-in Hybrid Electric Vehicles (PHEVs), Hybrid Electric Vehicles (HEVs). Specific chemistries like LFP are gaining traction for cost and safety.	The automotive Lithium-ion battery cell market is projected to be worth about \$130 billion in 2025. Strong growth is driven by EV market expansion.	Raw material supply (lithium, cobalt, nickel) and cost volatility remain key challenges, alongside potential overcapacity in battery manufacturing in 2024, possibly leading to price pressures in 2025.
	Lithium Polymer (Li-Po)			
	Lead-Acid	Starting, Lighting, Ignition (SLI) in Internal Combustion Engine (ICE) vehicles; auxiliary power in some EVs.	Mature market, demand influenced by ICE vehicle sales and aftermarket replacements.	Mature and stable supply chain with high recycling rates
	Lithium Metal (Emerging/Developmental)	Potential for next-generation EV batteries (higher energy density).	Early commercialization phase, demand for 2025 is small but expected to grow significantly in the long term as technology matures for EV applications.	Supply chain is still developing; reliant on scaling new anode technologies and, in some cases, solid-state electrolytes. Availability of high-purity lithium metal is a factor.
Consumer Electronics	Li-Ion	Smartphones, laptops, tablets, wearables, IoT devices, power tools, portable audio devices, medical diagnostic devices.	Continued high demand for smartphones, laptops, tablets, IoT devices. Growth is significantly driven by emerging markets.	Raw material supply for electrolytes, cathodes, anodes. Supply chain is stable but cost pressures remain. Recycling rates are improving.
	Li-Po	Wearables, smart watches, portable audio devices, medical diagnostic devices.		
	Li-Ion	Smartphones, laptops, tablets, wearables, IoT devices, power tools, portable audio devices, medical diagnostic devices.		
	Li-Ion	Smartphones, laptops, tablets, wearables, IoT devices, power tools, portable audio devices, medical diagnostic devices.		
Industrial	Li-Ion	Power tools, material handling equipment, forklifts, autonomous guided vehicles (AGVs), drones, industrial IoT devices.	The global market is projected to be around \$100 billion in 2025. Continued electrification is a major segment.	Stable supply chain and stable demand. Competition is heating up in some segments.
	Li-Po			
	Li-Ion			
	Li-Ion			
Aerospace	Li-Ion	Aircraft, spacecraft, satellites, defense systems, autonomous systems.	Stable demand in 2025, focused on specialized applications in premium defense & aerospace.	Limited commercial supply. Manufacturers are in pilot or early production stages.
	Li-Po			
	Li-Ion			
	Li-Ion			

Category	Product Line	Applications	Expected Demand	Supply Comments
[A]	Product Line 1	Application 1.1 Application 1.2 Application 1.3 Application 1.4 Application 1.5	Expected Demand 1.1 Expected Demand 1.2 Expected Demand 1.3 Expected Demand 1.4 Expected Demand 1.5	Supply Comments 1.1 Supply Comments 1.2 Supply Comments 1.3 Supply Comments 1.4 Supply Comments 1.5
	Product Line 2	Application 2.1 Application 2.2 Application 2.3 Application 2.4 Application 2.5	Expected Demand 2.1 Expected Demand 2.2 Expected Demand 2.3 Expected Demand 2.4 Expected Demand 2.5	Supply Comments 2.1 Supply Comments 2.2 Supply Comments 2.3 Supply Comments 2.4 Supply Comments 2.5
	Product Line 3	Application 3.1 Application 3.2 Application 3.3 Application 3.4 Application 3.5	Expected Demand 3.1 Expected Demand 3.2 Expected Demand 3.3 Expected Demand 3.4 Expected Demand 3.5	Supply Comments 3.1 Supply Comments 3.2 Supply Comments 3.3 Supply Comments 3.4 Supply Comments 3.5
[B]	Product Line 4	Application 4.1 Application 4.2 Application 4.3 Application 4.4 Application 4.5	Expected Demand 4.1 Expected Demand 4.2 Expected Demand 4.3 Expected Demand 4.4 Expected Demand 4.5	Supply Comments 4.1 Supply Comments 4.2 Supply Comments 4.3 Supply Comments 4.4 Supply Comments 4.5
	Product Line 5	Application 5.1 Application 5.2 Application 5.3 Application 5.4 Application 5.5	Expected Demand 5.1 Expected Demand 5.2 Expected Demand 5.3 Expected Demand 5.4 Expected Demand 5.5	Supply Comments 5.1 Supply Comments 5.2 Supply Comments 5.3 Supply Comments 5.4 Supply Comments 5.5
	Product Line 6	Application 6.1 Application 6.2 Application 6.3 Application 6.4 Application 6.5	Expected Demand 6.1 Expected Demand 6.2 Expected Demand 6.3 Expected Demand 6.4 Expected Demand 6.5	Supply Comments 6.1 Supply Comments 6.2 Supply Comments 6.3 Supply Comments 6.4 Supply Comments 6.5

Category	Sub-category	Application	Expected Demand	Supply Comments
[2]	1.1.1.1	1.1.1.1.1	1.1.1.1.1	1.1.1.1.1
	1.1.1.2	1.1.1.2.1	1.1.1.2.1	1.1.1.2.1
	1.1.1.3	1.1.1.3.1	1.1.1.3.1	1.1.1.3.1
[3]	2.1.1.1	2.1.1.1.1	2.1.1.1.1	2.1.1.1.1
	2.1.1.2	2.1.1.2.1	2.1.1.2.1	2.1.1.2.1
	2.1.1.3	2.1.1.3.1	2.1.1.3.1	2.1.1.3.1
[4]	3.1.1.1	3.1.1.1.1	3.1.1.1.1	3.1.1.1.1
	3.1.1.2	3.1.1.2.1	3.1.1.2.1	3.1.1.2.1
	3.1.1.3	3.1.1.3.1	3.1.1.3.1	3.1.1.3.1
[5]	4.1.1.1	4.1.1.1.1	4.1.1.1.1	4.1.1.1.1
	4.1.1.2	4.1.1.2.1	4.1.1.2.1	4.1.1.2.1
	4.1.1.3	4.1.1.3.1	4.1.1.3.1	4.1.1.3.1

Category	Primary Segment	Applications	Expected Demand	Supply Commentary
Automotive	Electric Vehicle (EV)	Powertrain, chassis systems, air management, structural frame, interior, exterior, body-in-white, battery pack, motor, transmission, drivetrain, suspension, steering, brakes, lighting, infotainment, safety systems, etc.	Strong demand in a recessionary, high-value segment of the market	EVs will drive stronger qualification and sales. However, focus is on supply chain security and stability. High performance cells will have dedicated, smaller-scale production runs.
	Internal Combustion Engine (ICE)	Engine, transmission, drivetrain, chassis, suspension, steering, brakes, lighting, infotainment, safety systems, etc.	Steady demand for ICE vehicles, but slower growth	Steady demand for ICE vehicles, but slower growth
Industrial	Manufacturing	Automated assembly, material handling, packaging, etc.	Steady demand for industrial automation	Steady demand for industrial automation
	Logistics	Material handling, packaging, etc.	Steady demand for logistics equipment	Steady demand for logistics equipment

IMPACT OF TARIFFS

SHARP PRICE INCREASES

Tariffs on imported lithium-ion batteries—particularly those from China—have surged, rising from 10% to as high as 125%. This has significantly increased costs for electric vehicles (EVs), energy storage systems (ESS), and other battery-reliant technologies.

STRATEGIC SHIFTS IN SUPPLY CHAINS

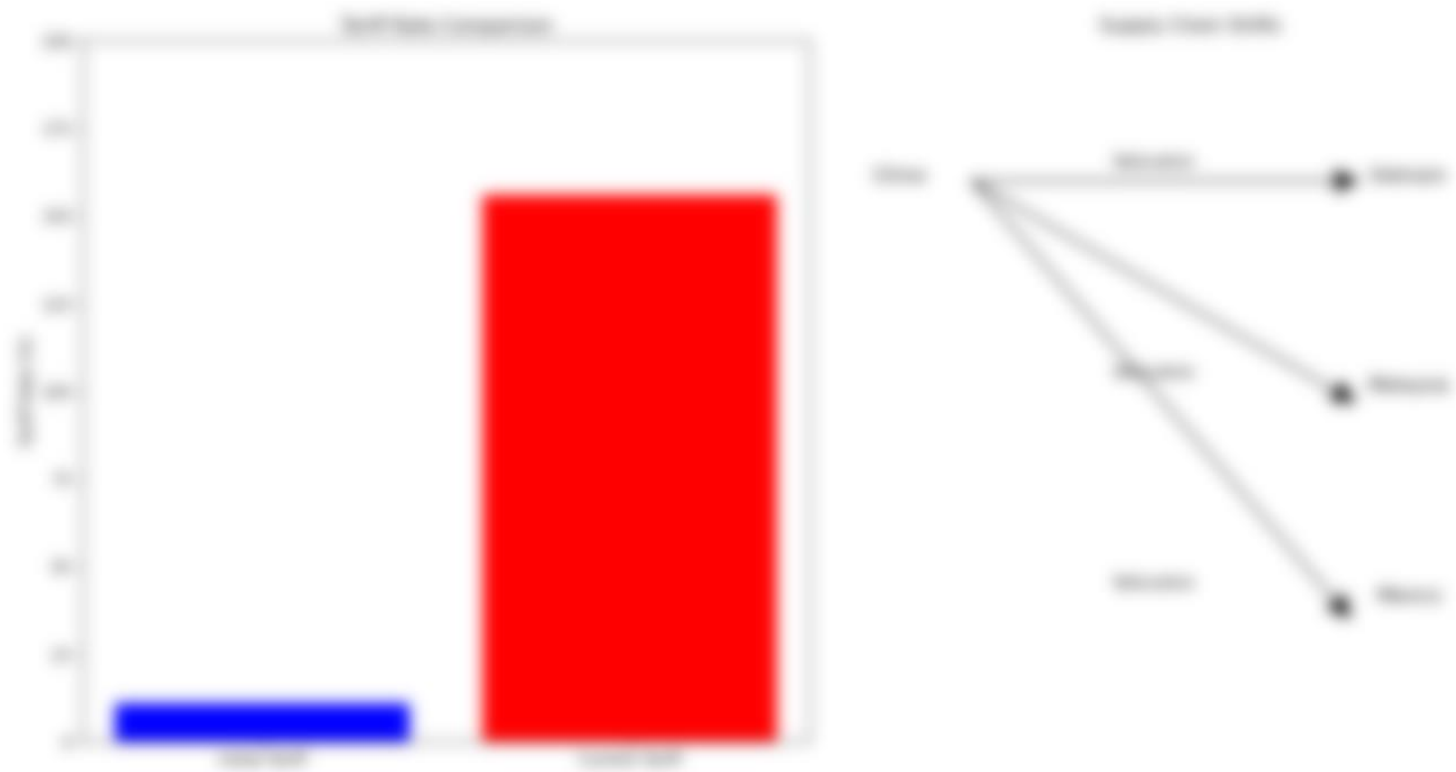
To mitigate tariff impacts, companies are:

- Diversifying suppliers beyond China
- Relocating production to countries like Vietnam, Malaysia, and Mexico
- Stockpiling inventory in anticipation of further tariff hikes

COMPETITIVE PRESSURE ON U.S. INDUSTRY

The U.S. battery sector faces mounting challenges in maintaining cost competitiveness. Rising tariffs are straining domestic manufacturers and integrators, particularly in:

- EV production, where battery costs constitute a significant component
- Grid-scale storage, where project economics are extremely sensitive to component pricing



KEY TAKEAWAYS

- **EU Battery Regulation (2023/1542):** Since February 2024, this regulation has mandated a Battery Passport for all EV and industrial batteries by 2027. It aims to enhance transparency in material sourcing, carbon footprint, and end-of-life tracking.
- **Shift Toward Next-Gen Technologies:** Manufacturers are accelerating their investment in solid-state batteries and alternative chemistries to reduce reliance on lithium and cobalt, while improving energy density, safety, and lifecycle performance.
- **Sustainability and Circular Economy:** Battery recycling initiatives are gaining momentum. Governments are promoting second-life applications and closed-loop systems to reduce waste and support cleaner energy ecosystems.
- **Emerging Constraints:** While global battery demand remains strong, production bottlenecks, geopolitical tensions, and trade barriers may impact pricing, availability, and the resilience of the supply chain.

CABLES

HEATMAP

		Q3'25	Q4'25	Q1'26	Q2'26
MARKET DYNAMICS					
Harness	Low complexity				
	High complexity				
Molded cables					
RF-Coaxial					
LVDS					
High Speed					
FFC-Ribbon					
Power cord					
SUPPLY ANALYSIS					
Harness	Low complexity				
	High complexity				
Molded cables					
RF-Coaxial					
LVDS					
High Speed					
FFC-Ribbon					
Power cord					
PRICING SITUATION					
Harness	Low complexity				
	High complexity				
Molded cables					
RF-Coaxial					
LVDS					
High Speed					
FFC-Ribbon					
Power cord					

Market Dynamics: ■ Stable Supply Chain Risk; ■ Potential Supply Chain Risk; ■ High Supply Chain Risk
Pricing Situation: ■ Decreasing Pricing; ■ Stable Pricing; ■ Increasing Pricing
Supply Analysis: ■ Increasing Capacity/Supply; ■ Stable Capacity/Supply; ■ Decreasing Capacity/Supply

MARKET DYNAMICS

CABLE MARKET ESTIMATES:

- The global wire and cable market is valued at USD 229.09 billion in 2025. It is projected to grow to approximately USD 295.07 billion by 2034, advancing at a compound annual growth rate (CAGR) of 4.20% during the forecast period, published by Precedence Research in April 2025.
- Artificial Intelligence and Machine Learning are driving the demand for cables in data centers. Adopting advanced technologies, real-time data processing, and increasing internet access has driven demand for data center cables. Integrating IoT and AI further enhances efficiency, making these technologies essential for businesses, especially in emerging economies.
- The growing reliance on digital tools, IoT devices, and mobile technologies has accelerated market expansion. Businesses are increasingly relying on connected solutions, contributing to the growing demand for robust data infrastructure.

Wires & Cables Market (USD Billion)



Source: Precedence Research

RECENT DEVELOPMENTS (JULY 2024 – JUNE 2025)

Date	Customer Manufacturer MFG	End User Company E	Deal Type	Description	Deal Value
10/1/2024	ABB Switzerland	ABB Switzerland	Contract	ABB has signed a long-term off-grid power supply agreement for hydro to supply two carbon capture units in 2025 to 2035. The deal, the first since hydro announced a \$1.1-billion investment in its Harnley, Nevada facility, guarantees ABB a supply of an estimated 275,000 kilowatts of hydro's electricity a primary investment with an option for additional volume, valued at approximately \$1.1 billion. The agreement, entered into with renewable energy, has a carbon footprint significantly below the industry average. The partnership aims to support Harnley's efforts to upgrade its power grid infrastructure with sustainable materials, enhance supply chain security, and advance the energy transition.	
10/1/2024	ABB France	ABB France	Contract	ABB has entered into exclusive negotiations to sell its industrial cable division, Lyndis, to French private equity fund Lohr Capital for an enterprise value of \$1.1 billion. The proposed sale marks a significant step in ABB's strategy to become a "Pure Infrastructure Player." Lyndis is a major player in specialty industrial cables for transportation, energy, and automation, with a global presence, 1,000 employees, and over \$1.1 billion in annual sales.	Enterprise \$1.1B net
10/1/2024	ABB France	ABB France	Contract	ABB has secured a major framework agreement with French Transmission System Operator RTE, valued at over \$1.1 billion. The agreement covers the supply, installation, and commissioning of a fleet of high-voltage direct current (HVDC) cables valued at \$800 million and 1,000 medium-voltage cables. These cables will connect three offshore wind farms – Corda, Morlaix 1 & 2 and Morlaix – to the French transmission network.	\$1.1B net

Date	Cable Manufacturer	End User Company	Cable Type	Description	Deal Value
Apr 2024	WBT Germany	Hydro Norway	Cablecast	Swedish company Hydro and power cable provider WBT have signed a long-term offtake agreement for Hydro to supply two carbon-dominant wire rods to WBT from 2026 to 2030. This deal, the first since Hydro announced a \$500-million investment in its Harstad, Norway facility, guarantees WBT a supply of an estimated 275,000 tonnes of Hydro's 60/40 carbon-dominant wire rods, with an option for additional volumes, valued at approximately \$100 million. The dominance produced with renewable energy has a carbon footprint significantly below the industry average. The partnership aims to support Europe's efforts to upgrade its power grid infrastructure with sustainable materials, enhance supply chain security, and advance the energy transition.	
Apr 2024	Sumitomo France	Lyondr France	Cablecast	Sumitomo has entered into exclusive negotiations to sell its industrial cable division, Lyondr, to French private equity fund Lohr Capital for an enterprise value of \$500 million. The proposed sale marks a significant step in Sumitomo's strategy to become a "Pure Electrification Player." Lyondr is a major player in specialty industrial cables for transportation, energy, and automation, with a global presence, 1,000 employees, and over \$700 million in annual sales.	\$500 million
Apr 2024	Sumitomo France	EDF France	Cablecast	Sumitomo has secured a major framework agreement with French Transmission System Operator RTE, valued at over \$100 million. The agreement covers the supply, installation, and commissioning of 100 km of high-voltage direct current (HVDC) overhead cables and 100 km of HVDC overhead cables. These cables will connect three offshore wind farms – Centre Manche 1 & 2 and Dorcas – to the French transmission network.	\$1.1 billion

Date	Utility Manufacturer / ITC	End User Company	Deal Type	Description	Deal Value
Apr-24	WGL Energy	Hydro Services	Contract	WGL Energy, a leading utility provider, has signed a long-term off-take agreement for Hydro to supply low-carbon hydrogen gas to WGL from 2026 to 2035. The deal, the first since Hydro announced a \$100+ million investment in its Danbury, Vermont facility, guarantees WGL a supply of an estimated 275,000 tonnes of Hydro's H2-based hydrogen annually, with an option for additional volumes, valued at approximately \$100 million. The agreement, produced with renewable energy, has a carbon footprint significantly below the industry average. The partnership aims to support WGL's efforts to upgrade its gas and infrastructure with sustainable materials, enhance supply chain security, and advance the energy transition.	
Apr-24	Enbridge Energy	Enbridge Energy	Contract	Enbridge has entered into exclusive negotiations to sell its industrial utility division. Enbridge is French private equity fund Lazard Capital for an enterprise value of \$100 million. The proposed sale marks a significant step in Enbridge's strategy to become a "Pure Distribution Player." Enbridge is a major player in specialty industrial utility for transportation, energy, and automation, with a global presence, 1,000 employees, and over \$100 million in annual sales.	Energy, \$100 million
Apr-24	Enbridge Energy	WGL Energy	Contract	Enbridge has secured a major transmission agreement with French Transmission System Operator RTE, valued at over \$100 million. The agreement covers the supply, installation, and commissioning of 100 km of high-voltage direct current (HVDC) cables and 100 km of 1000-volt cables. These cables will connect three offshore wind farms – Cap de la Hague 1 & 2 and Humbly – to the French transmission network.	\$100 million

Source: Press releases & company websites

DEMAND/SUPPLY OVERVIEW

DEMAND COMMENTARY

- The rapid rise of AI and automation is transforming industries and fueling soaring demand for high-performance cable assemblies to support advanced systems and connectivity.
- The rapid adoption of AI and automation across industries fuels demand for high-performance cable assemblies. AI-driven machines, such as robotic arms, rely on numerous sensors and actuators, requiring robust and reliable cable connections for both data and power. Advanced robots require specialized cables that can handle high currents, withstand extreme temperatures, and maintain consistent compatibility. Applications like self-driving cars require high bandwidth, shielded cables to handle real-time data from multiple sensors. AI workloads rely on data centers driving soaring demand for high-density, high-bandwidth cable assemblies to handle growing data and connectivity needs.
 - Key Cable Types in Demand
 - Industrial Ethernet cables for real-time machine communication
 - Sensor cables: Transport data from vision systems, lidar, proximity, and ultrasonic sensors
 - Power cables: Deliver energy to robots and mills in harsh environments
 - Coaxial cables: enable high-frequency, low-loss data transfer
 - Fiber optic cables: Provide high-speed, 100+ megabit data transmission over long distances
 - High-Speed Cables: Specifically used in Data Centers. Shielded shield cables, like the F-cable that doubles the data transfer rate of FCoE cables
 - As AI, automation, and AI expand, the cable assembly market will grow, driven by the need for faster, more durable, and flexible connectivity solutions.

SUPPLY ANALYSIS

Supply Landscape Overview

- Global Cable Supply Under Strain: The supply of cables—encompassing exceptionally high-performance, high-voltage, and fiber optic types—is struggling to keep pace with surging global demand driven by AI, automation, renewable energy, and electrification trends.
- Manufacturing Concentration: Most cable production remains concentrated in Asia, with China, India, and South Korea leading the way in output. However, geopolitical tensions and a push for localized manufacturing are shifting dynamics.

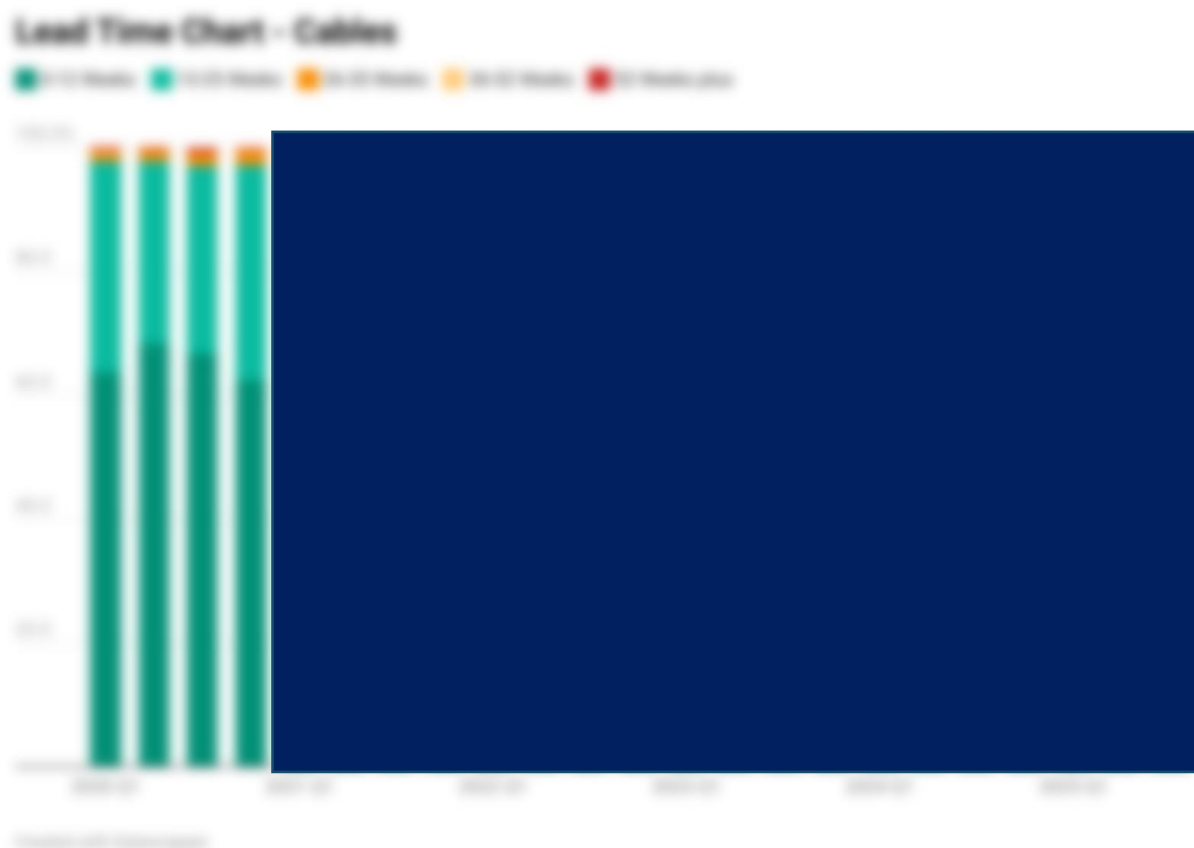
Key Supply Chain Challenges

- **Raw Material Constraints**
 - **Copper & Aluminum:** Supply volatility due to mining disruptions, export restrictions, and increasing demand from green technologies.
 - **Polymers & Plastics:** Used for insulation and sheathing, facing supply tightness due to refinery and petrochemical capacity issues.
- **Production Bottlenecks**
 - Limited capacity expansion in recent years, especially for specialized cable types.
 - High lead times for new equipment and facilities delay the supply ramp-up.
- **Logistics & Distribution Issues**
 - Port congestion and freight rate volatility continue to impact delivery timelines.
 - Heavy, bulky cables require specialized transportation, adding complexity.

Regional Supply Trends

- **Asia-Pacific:** Continues to dominate production but faces export slowdowns due to trade restrictions and growing domestic consumption.
- **Europe:** Scaling up domestic production for strategic autonomy, especially in energy and defense cables.
- **North America:** Reinvesting in cable manufacturing to support grid modernization, data center growth, and EV infrastructure.
- **Middle East & Africa:** Emerging as a strategic production and export hub, particularly for aluminum-based cables.

LEAD TIME CHART



PRICING SITUATION

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Monthly Copper Price Trend (USD/lb)

Price (USD/lb)



Sourced from Bloomberg

END MARKET OVERVIEW

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IMPACT OF TARIFFS

Tariffs have a significant impact on the cable industry, influencing both costs and supply chain dynamics. Key effects include:

INCREASED COSTS FOR RAW MATERIALS

- Tariffs on essential materials, such as copper, aluminum, and polymers used in cable manufacturing, result in higher input costs.
- These increased costs are often passed on to consumers, raising the overall price of finished cables.

SUPPLY CHAIN DISRUPTION

- Tariffs targeting imports from major cable-producing regions (e.g., China) can disrupt supply chains, causing delays and prompting companies to seek alternative sources.
- They also reduce availability, especially for specialized cables that may not be produced domestically at scale.

SHIFT TOWARD LOCAL MANUFACTURING

- In response to tariffs, many companies shift production or sourcing to domestic or tariff-exempt countries, promoting local investment and potentially increasing short-term costs due to limited local capacity.

COMPETITIVE DISADVANTAGES

- Domestic manufacturers that rely on imported materials or components may face competitive disadvantages compared to fully localized or vertically integrated competitors.

MARKET VOLATILITY

- Tariff uncertainty can contribute to price volatility, complicating budgeting and procurement for cable buyers in sectors like construction, telecom, and data centers.

ENVIRONMENT OF CHANGING STRATEGIES

- Anticipating tariffs may lead to stockpiling, temporarily distorting demand and supply, and putting pressure on inventory and logistics.

In summary, tariffs on cables and their components increase production costs, disrupt global supply chains, and drive regional shifts in manufacturing, all of which impact pricing, availability, and long-term investment strategies within the industry.

KEY TAKEAWAYS

- The global wire and cable market, valued at USD 229.99 billion in 2025, is expected to reach USD 295.07 billion by 2034, driven by rapid AI, IoT, and automation adoption.
- Demand is surging for high-performance cables—such as industrial Ethernet, server, power, coastal, fibre optic, and high-speed data cables—particularly in data centers and smart manufacturing. However, supply struggles to keep pace due to raw material constraints, production bottlenecks, and logistics challenges.
- Most cable manufacturing remains concentrated in Asia, but geopolitical shifts are prompting regional diversification. Tariffs further exacerbate costs and supply disruptions, encouraging companies to reassess their sourcing strategies and consider localized production, which may lead to increased short-term costs and market volatility.
- Prices have risen sharply due to copper and aluminum volatility, energy costs, and freight disruptions, with elevated pricing expected through 2026 before potentially stabilizing as capacity expands.