From Energy Shock to Industrial Realignment: Global EV Policy Divergence and Taiwan's Strategic Options

Chiu, Chia-Chi | Research Associate, The Second Research Division, CIER
Wen, Pei-Chang | Research Fellow, Director, The Second Research Division, CIER

I. Introduction: Energy Security and an Era of Supply-Chain Realignment

The 2026 Middle East military confrontation involving the United States, Israel, and Iran has moved beyond a regional security crisis. It has heightened risks to global shipping, intensified volatility in Brent crude prices, and renewed concerns over the geopolitical foundations of energy security.

Yet the current energy shock differs from earlier oil-price cycles. Higher oil prices no longer translate automatically into faster electric vehicle adoption. Instead, the shock is unfolding alongside a broader restructuring of global supply chains, in which security, resilience, and political trust are increasingly displacing cost efficiency as the dominant principles of industrial organization. For Taiwan, this shift implies that traditional strengths in flexible and cost-competitive manufacturing must be complemented by stronger trust-based, traceable, and geopolitically resilient supply-chain capabilities.

II. The United States: A Dual-Track Policy of Federal's Loosening Oil versus State-Level Electrification

The authors provide a critical analysis of the U.S. policy shift under the Trump administration's "H.R. 1, the One Big Beautiful Bill Act" of 2025. This legislation marked a significant retreat from the federal EV-support framework established under the Inflation Reduction Act of 2022, including subsidies for new, used, and commercial EVs. Furthermore, the federal government rescinded the EPA's "Greenhouse Gas Endangerment Finding," based on the administration's argument that unilateral U.S. carbon reductions would have only a "de minimis" effect on global climate outcomes.

A key insight from the authors is the emergence of a **"dual-track" market in the U.S.** At the federal level, the administration has shifted toward expanding fossil fuel extraction and Liquefied Natural Gas (LNG) exports, both to reduce external energy dependence and to support allied countries in diversifying away from Middle Eastern energy supplies. At the same time, a coalition of 24 states led by California continues to support stricter vehicle-emissions rules through California's Advanced Clean Cars II regulations, enabled by the Clean Air Act Section 209(b) waiver framework. This has

created a fragmented regulatory landscape that raises compliance costs for automakers and may complicate long-term EV investment decisions. The result is not a simple federal rollback, but a bifurcated U.S. market in which federal energy policy and state-level climate regulation are moving in different directions.

Additionally, the Treasury, IRS tax-credit rules, together with DOE interpretive guidance on Foreign Entities of Concern (FEOC) further illustrate how clean-vehicle policy has become intertwined with geopolitical risk management. By conditioning tax-credit eligibility on the exclusion of battery components and critical minerals linked to FEOCs, the framework effectively turns supply-chain composition into a condition for market access.

III. The European Union: Pragmatic Consistency and the Toward a Carbon Regulated "Green Fortress"

In contrast to the U.S. rollback, the authors observe that the EU has maintained its long-term climate goals while adopting a more "pragmatic" implementation strategy. The EU's "Automotive Package" (2025) still maintains the 2035 target of a 100% reduction in fleet-wide CO_2 emissions for new passenger cars and light commercial vehicles, while introducing a limited 10% flexibility mechanism for internal combustion engines using **synthetic fuels (e-fuels) or biofuels** post-2035.

The EU's approach is not limited to environmental regulation. Through the Battery Booster initiative, the Battery Passport under Regulation (EU) 2023/1542, and the expansion of the Carbon Border Adjustment Mechanism (CBAM, Regulation (EU) 2023/956) to selected downstream steel- and aluminum- intensive automotive parts by 2028, the EU is seeking to build a more localized and traceable battery value chain.

These measures also have industrial-policy implications: they raise the compliance threshold for non-EU suppliers, such as Chinese major battery and EV manufacturer CATL and BYD, and may reduce the relative competitiveness of firms unable to meet the EU's lifecycle carbon, traceability, and data-disclosure requirements. For the EU, the Middle East conflict has only reinforced the urgency of the green transition as a matter of **national energy security**.

IV. Taiwan's Strategic Positioning: Beyond Component Manufacturing

The most critical portion of the article details the authors' recommendations for Taiwan's industrial strategy. They argue that Taiwan must move beyond the role of an "external supplier" and reinvent itself through three specific dimensions:

1. **Diverse Decarbonization Pathways:** The authors suggest that Taiwan should

avoid viewing EVs as the "sole solution" for carbon neutrality. Instead, the government should adopt a pragmatic "multi-pathway" strategy. This would require pilot programs, fuel-blending standards, lifecycle-emissions accounting, and coordination with energy, transport, and industrial authorities. This approach aims to diversify energy risks while acknowledging the industrial reality of the energy transition.

2. **Market-Specific Localization and Trusted Supply-Chain Positioning:**

    - **For the U.S. Market:** Taiwan should leverage policy support to establish manufacturing bases within the USMCA (U.S.-Mexico-Canada) region. The goal is to transition from an external vendor to a **manufacturing partner within North America and USMCA-linked supply chains,** achieving a strategic position as a "trusted" or "near-shore" partner.

    - **For the EU Market:** The focus must be on **carbon management and certification**. With the potential of CBAM expanding to fasteners and aluminum parts by 2028, the authors emphasize that systematic carbon footprint auditing is now a "prerequisite for market access" rather than an optional green credential.

    Integrating into the "Software-Defined Vehicle" (SDV) Ecosystem: Taiwan should leverage its strengths in semiconductors and ICT to embed itself more deeply in the software-defined and intelligent-vehicle value chain. Instead of remaining a hardware supplier, Taiwan should seek to participate in ecosystem-level technology development for software-defined vehicles. High-potential areas include:

    - **High-efficiency, low-power chips** for Software-Defined Vehicles (SDV).

    - **AI inference chips** for advanced sensing and autonomous driving.

    - **Power semiconductors** for Vehicle-to-Grid (V2G) energy management systems.

V. Conclusion: The Role of Government and Industry Collaboration

The new core of industrial competition lies in **political trust, local supply capability, and technical ecosystem integration**. Taiwan's strategic challenge is therefore not simply to expand its role as an EV component supplier, but to reposition itself as a trusted, low-carbon, and technologically embedded partner in the emerging

automotive value chain. This will require coordinated government support, stronger carbon-accounting capabilities among SMEs, a cross-ministerial supply-chain intelligence platform, and overseas cluster-based infrastructure that lowers the cost of market entry for Taiwanese firms. By aligning with the United States' security-first logic and the European Union's carbon-regulatory approach, Taiwan can strengthen its strategic position in the next phase of global automotive realignment.