Electrification Without the Retrofit – Revoy’s Electric Dolly Goes Live

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picture: Revoy

A modular leap toward cleaner long-haul logistics

For years, the heavy-duty trucking sector has grappled with a core challenge: how to decarbonize long-haul freight without sidelining billions in existing diesel assets.

Now, California-based startup Revoy may have found a compelling answer — one that’s as elegant as it is practical. Their new electric dolly solution enables fleets to electrify operations without replacing or modifying their existing diesel tractors.

⚙ How It Works

The Revoy dolly is a self-contained, powered module that connects between any standard diesel tractor and trailer. Acting as an intelligent, battery-electric assist unit, the dolly delivers up to 250 miles of electric propulsion — effectively turning a diesel truck into a hybrid, without ever opening the hood.

Inside e´ach dolly:

- A 575 kWh lithium iron phosphate (LFP) battery provides consistent, high-capacity support on long-haul routes
- A dual-motor powertrain adds traction and assists during acceleration, uphill climbs, and regenerative braking
- A suite of advanced driver assistance systems (ADAS) improves safety and control

The dolly supports regen braking, reducing wear on traditional braking systems while recovering energy. It also includes blind spot detection, steering correction in crosswinds, and auto-reversing to ease trailer maneuvering and improve road safety.

But the true breakthrough lies in how Revoy handles energy logistics:

Instead of relying on downtime-heavy charging, the system is designed around rapid battery swaps. In under four minutes, a depleted dolly can be exchanged for a fully charged unit at Revoy swap stations — ensuring near-zero operational disruption.

A Pay-Per-Mile Model Built for Operators

Revoy isn’t just changing the technology — it’s rethinking the business model. The dolly is offered as a subscription-style service, billed on a per-mile basis. This removes upfront investment barriers and aligns perfectly with operating budgets — especially for fleets managing tight margins.

By avoiding capital expenditure, operators gain access to:

- Fuel cost reductions through hybrid operation
- Lower maintenance needs due to regenerative braking
- Compliance benefits as emissions regulations tighten

With its scalable, non-disruptive rollout, Revoy positions its dolly as a “zero-compromise” entry point into fleet electrification — and one that can be deployed immediately.

From Pilot to Road-Ready

Importantly, Revoy’s dolly isn’t theoretical. It’s in active pilot use with major U.S. fleet partners, undergoing real-world testing across long-haul routes. This includes:

- Hauling commercial freight under full payload conditions
- Collecting performance and energy data across varied terrain
- Monitoring driver feedback and integration performance

Initial results suggest positive fuel savings, lower emissions, and seamless compatibility with existing fleet operations.

As Revoy scales its swap station infrastructure and finalizes commercial agreements, the dolly could quickly become one of the most practical and operator-friendly electrification tools on the market.

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