

Alternative Power Report

August 18, 2026

News on Alternative Power Sources



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Moving from ICE To Alternative Power

As manufacturers continue to shift their equipment production from ICE to alternative power sources, they need the latest information. That's why analysts at Power Systems Research continue to revise our global data and forecasts to provide the freshest picture available.

China's Electric Truck Moment Has Arrived

And It's About To Hit Global Diesel Demand

By Guy Youngs, Forecast & Adoption Lead



Commercial trucks operate for longer hours, carry heavier loads and burn far more fuel per vehicle than passenger cars but freight diesel is even more important when looking at global diesel demand.

China's heavy-truck electrification program is targeting 40% new-energy heavy-truck sales by 2030, more than 1.6 million vehicles in operation and roughly 20% of the national heavy-truck fleet. The plan also targets 18% of highway freight volume, which is the more revealing number. China is not merely trying to put electric drivetrains into one-fifth of its trucks. It is concentrating them in commercially active fleets and high-volume freight operations

This is the distinction that oil demand models risk missing. Yes, a few electric trucks in demonstrations are a signal that adoption is coming, but electric trucks tied to corridors, depots, grid capacity and repeatable operating routes are a diesel replacement system.



Source: *CleanTechnica* [Read The Article](#)

PSR Analysis: For a great many years, heavy trucks have been treated as hard to replace with battery systems, a last bastion of diesel. But no more, China is showing us all what can happen, and this should be a strong warning to the oil giants and the legacy truck manufacturers. **PSR**

Editor's Note: This monthly report includes news and analysis about EV and alternative power sources such as batteries and fuel cells from analysts at Power Systems Research.

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A \$5M Startup Claims Rare Earth-free Electric Motor

Many of the big car manufacturers have tried to make an electric motor that runs without any Rare Earth Elements (REE). REE are critical to so much of our modern world and so much of the electric revolution, and China dominates this market.

So, when a small Indian start up, (called Vimag Labs and based out of Bengaluru in the southern Indian state of Karnataka), secures its fifth Indian patent for an electric motor that runs without any rare-earth magnets, people start to listen.

Source: *Electrek* [Read The Article](#)

PSR Analysis: Most EVs use a Permanent Magnet Synchronous Motor which uses REE, but the trick isn't making REE free motors, but rather doing it as efficiently as a Permanent Magnet Synchronous Motor. If this works (and it's a big if) then it could side step the REE supply issue. **PSR**

2030: More than a Million Worn Out Batteries

Global EV sales have grown massively in recent years, and this has been boosted further by the war on Iran, which continues to send oil and gas prices soaring. By 2030 over 1 million EV batteries are expected to reach the end of their life. And since this is expected to reach 14 million batteries by 2040, it is one of the world's fastest-growing waste streams.

EV batteries contain minerals such as lithium, cobalt and nickel, which raise environmental and social concerns relating to their disposal.

EV batteries can be recycled, but it is very difficult and costly. Batteries must be prepared before recycling and this involves discharging, dismantling and separating its components.

Source: *MSN* [Read The Article](#)

PSR Analysis: Europe is looking at this problem with several projects underway in the UK and Europe, but the questions remain: can this be done quickly, economically,

and in doing so, create a new resource stream for the future? Only time will tell. **PSR**

CATL Building Battery Swapping Hubs for EV Trucks

A new joint venture between Octopus Energy and CATL, has been created to develop automated battery-swapping hubs for heavy trucks across Europe. Octopus is a UK-founded energy and technology group while CATL is the world's largest electric-vehicle battery manufacturer.

The joint venture says its first UK hubs will open in 2027, with more than 30 planned across Europe by 2035

CATL already has a heavy-truck battery-swapping platform called Qiji, which focusses on standardizing battery blocks and swap machinery. CATL is trying to make the battery block the common object around which truck chassis, stations, battery inventories and operating systems are designed

Source: *CleanTechnica* [Read The Article](#)

PSR Analysis: Given that freight operators run regular routes, this system has a valid operating plan, but whether or not European freight companies will get behind it, is a completely different ball game. However, in China, CATL has made this work with 305 swap stations at the end of 2025. **PSR**

Laos Went 100% EV Overnight Using Drastic Approach

Laos has done something no other country has tried: it has banned the import of new gas and diesel passenger cars outright. Since June 1, nearly every new car cleared for import has to be electric, and the ban runs through the end of the year

Hold on I hear you cry, what about Ethiopia? In 2024 Ethiopia banned the import of all fossil-fueled cars. In truth, there isn't a lot of difference but in the Laos ban public transport vehicles, construction machinery, project-related trucks, and other specialized vehicles are exempt. This is a passenger-car policy, aimed squarely at the segment where affordable electric alternatives already exist, reports *electrek*.

Source: *Electrek* [Read The Article](#)

PSR Analysis: Laos, like Ethiopia, generates a large portion of its electricity needs via hydroelectric power, and



struggles to pay for diesel/petrol imports. Given the Iran-USA conflict, and the resultant high price for oil, this policy seems to make a great deal of sense. What happens after the six-month period will be the critical factor. **PSR**

This huge US E-waste Deal Could Unlock Rare Earths for EVs

Currently, China dominates the Rare Earth Element (REE) market with shares of 80% to 100%, depending on the element. China uses this dominance to support its geo-political aims, and given the need for REE to support our modern lifestyle and the EV revolution, many countries are now looking at developing alternative supply chains

Electronic waste (or E-waste) is a potentially huge source of REE and critical minerals such as lithium, but the problem is that most of it is still discarded into landfill without those materials being recovered. Recycling these products can develop a domestic supply faster than developing and licensing a new mine would.

As a result, electronics recycler ERI and rare earth recycling company Cyclic Materials have signed a global partnership agreement to recover REE and other critical minerals from high volumes of e-waste

Source: *Electrek* [Read The Article](#)

PSR Analysis: As governments push to reduce their dependence on imported REE and strengthen domestic supply chains, companies are rushing to explore the potential of E waste, and any progress in this field will reduce reliance on imported minerals. **PSR**

Saft and Mana Target Anode-Free Sodium-Ion Batteries

A joint development agreement covering anode-free sodium-ion cells has been established between Mana Battery (a US start-up) and Saft (a French battery manufacturer).

The companies will combine Mana's proprietary electrolyte and anode-free cell technology with Saft's expertise in cell design, prototyping, manufacturing, testing and qualification.

The anode-free design is assembled without an anode. During the initial charge, sodium supplied by the cathode is deposited onto the negative current collector to form a metallic sodium anode within the battery.

Source: *BEST Magazine* [Read The Article](#)

PSR Analysis: Removing a conventional anode can reduce cell weight and volume and increase energy density. But as usual, commercialization depends on making the process sufficiently efficient to provide an acceptable cycle life. **PSR**

Will We Soon See Sodium-Ion Batteries on Electric Bikes?

In the last five years or so, Sodium batteries have been talked about as the next best thing, and gradually they have gone from laboratories into manufacturing.

They show a great deal of promise with lower costs, improved safety, and reduced dependence on critical minerals like lithium, cobalt, and nickel which are prevalent in Lithium batteries. But, at the moment, they



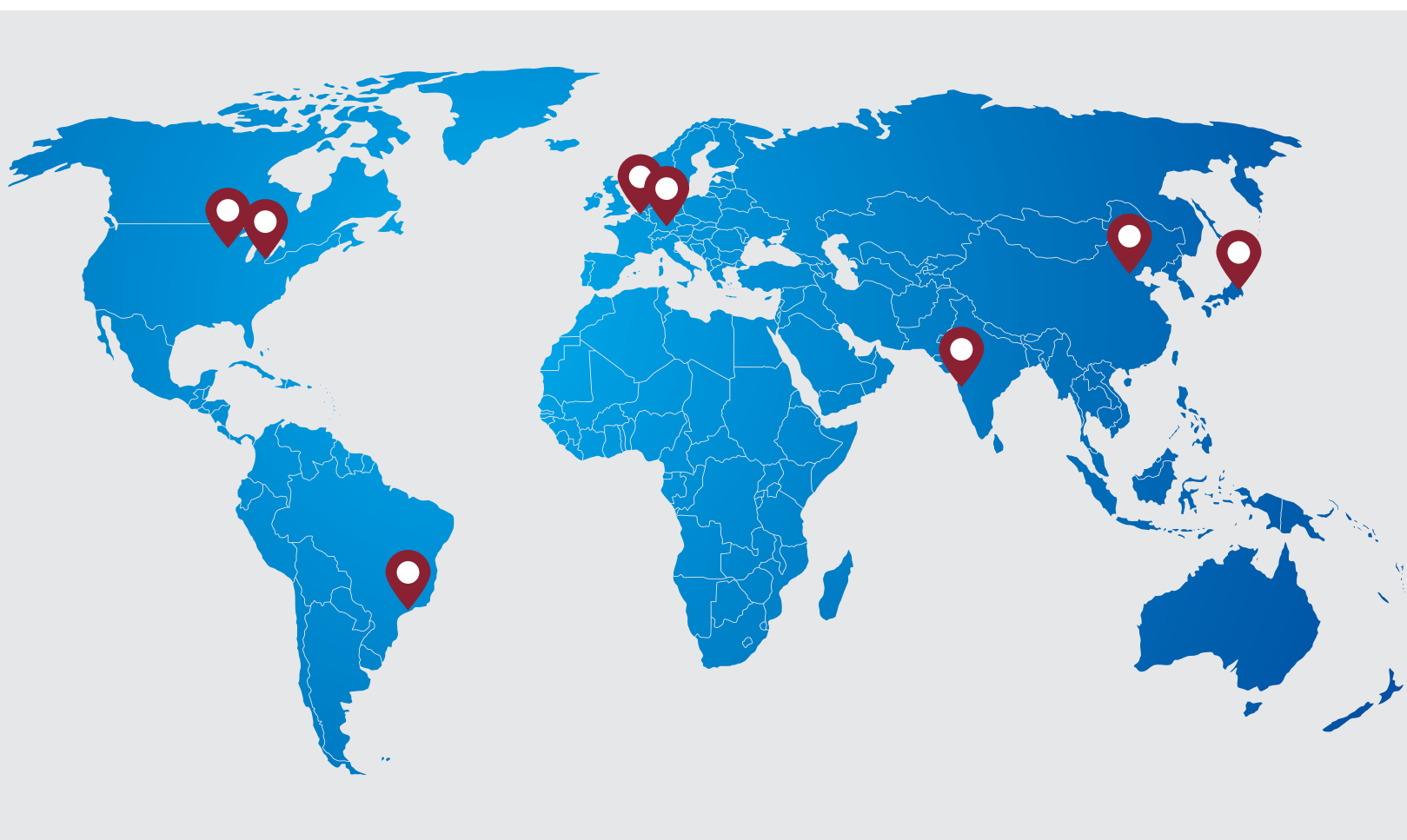
don't have the energy density that is needed for two wheeled transport. Sodium-ion cells generally store around 140-180 Wh/kg, with the very latest designs expected to approach 200 Wh/kg. On the other hand lithium batteries are in the region of 200-280 Wh/kg commonly seen in premium lithium-ion cells used in electric bicycles, reports *electrek*.

Source: *Electrek* [Read The Article](#)

PSR Analysis: Don't write off sodium batteries though – they can be used in other applications where weight or size are not so critical, and sodium batteries are getting close to lithium batteries, so it isn't a question of they can't be used, but rather a "not yet" scenario. **PSR**

A Final Note

Egonic reveals aluminum core of alternative battery technology – [Click Here](#)... **Electric, Autonomous Trucks**, and there's 800 of them: inside this week's BIGGEST deal - [Click Here](#)... **Electric Mining Truck** uses sodium-ion batteries - [Click Here](#)... **Lower Saxony's** hydrogen trains are now a battery exit strategy problem - [Click Here](#)... **Two Solid-State EV battery Leaders** are joining forces to scale 'breakthrough' tech- [Click Here](#). **PSR**



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