Alternative Power Report

July 22, 2025

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.

Repsol Cancels 200MW Green Hydrogen Project

Cites Technical and Economic Barriers

By Guy Youngs, Forecast & Adoption Lead

Repsol has hit the brakes on its ambitious 200MW green hydrogen project in Puertollano, Spain, pulling the plug due to a mix of economic and technical hurdles. While the project passed the environmental test, the company says it just doesn't add up financially or practically.

The decision, however, throws a spotlight on the bigger picture: scaling up hydrogen production in Europe is proving trickier than expected. Between sky-high upfront costs, immature tech, murky policy frameworks, and a shaky market, the road to a sustainable energy economy is anything but smooth.

Source: *Hydrogen Fuel News* **Read The Article**

PSR Analysis. Across Europe, Hydrogen projects are being delayed or cancelled. This itself is not news as many hydrogen buses have been replaced with electric ones, once the government support has ended. What is of interest here is that it is clear that hydrogen's future is questionable without governmental support. The support is needed financially and to help with regulations, lower the economic barriers, and rethink how these innovations are brought to market. **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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New power source installations vary across industry segments. Contact PSR for data on your specific application needs.
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Ethiopia Updates ICE Vehicle Import Ban, Includes SKD and CKD Kits

Over a year ago, Ethiopia became effectively the first country in the world to ban the import of internal combustion engine vehicles. This was an immediate ban on the import of all ICE cars. The motivation wasn't environmental, but economic: A high fossil fuel import bill of over US$5 billion a year, was taking a huge chunk of the country's scarce foreign currency resources. Energy security and self-sufficiency were other major drivers.

Ethiopia's ban covered fully built units and left out semi-knocked down (SKD) and completely knocked down (CKD) ICE vehicle kits. That meant companies importing SKD and CKD kits for local assembly could still do so.

This month, the Ethiopia's Ministry of Industry updated the notice to include bans on Semi-knockdown (SKD) or completely knockdown (CKD) ICE powered automobiles, three wheeled vehicles and motorcycles.

Source: *CleanTechnica* **Read The Article**

PSR Analysis. Ethiopia recently commissioned the first units from the Grand Ethiopian Renaissance Dam (GERD) which will generate a significant surplus of energy once completed, together with the removal of subsidies on fossil fuels. Ethiopia plans to introduce 15% VAT and 15% excise on fossil fuels. Almost by accident, Ethiopia has taken a huge step towards being the first ICE free country, but it should be noted trucks still are exempt. **PSR**

UN Rapporteur: Criminalize Fossil Fuel Disinformation

The latest report from Elisa Morgera, the UN special rapporteur on human rights and climate change, explains why the need to transition away from fossil fuels is urgent. It also does something else: It calls for prohibiting fossil fuel companies from lobbying or advertising and it goes on to call for making the spread of climate disinformation a crime.

Source: *CleanTechnica* **Read The Article**

PSR Analysis. While the suggestions from this report are extraordinary, in today's world it's unlikely that there will be political support for these suggestions. **PSR**

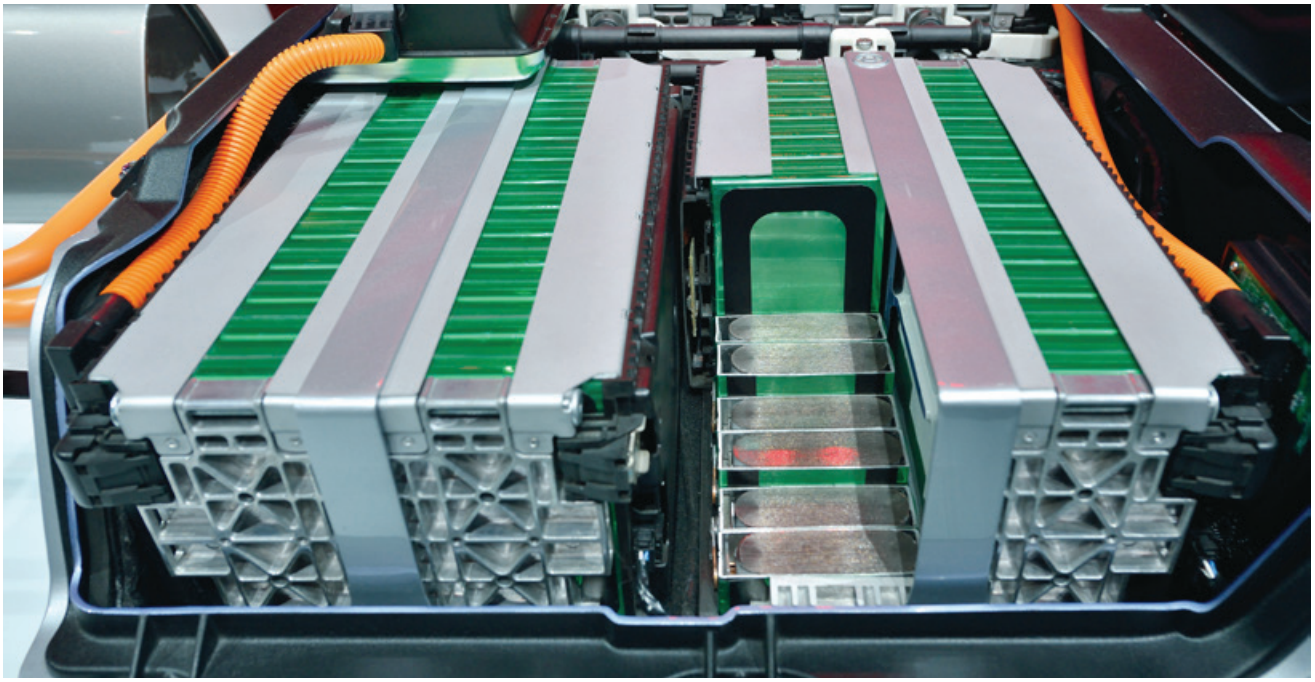
Rare-Earth Metal that Increases Battery Energy Density Identified

Researchers at McGill University in Canada have increased a battery's energy density by adding a rare-earth metal to an anode.

The scientists added a small amount of neodymium (Nd) to the anode in a bid to increase its energy density without compromising safety. This resulted in a 19% increase in energy density.

Source: *BEST Magazine* **Read The Article**

PSR Analysis. While increasing the energy density of a battery is generally very good news, there have to be several caveats. First, it needs to be successfully commercialized and second, the rare earth neodymium, is another rare earth material which China dominates, so there is a potential bottleneck as China uses the minerals in geo-political bargaining. **PSR**



Maersk Institute Was Right About Ship Batteries But Wrong On Price

In September 2024 the Maersk McKinney Møller Center produced a pre-feasibility study on battery-powered vessels. The report identified battery-hybrid propulsion as an essential part of shipping's decarbonization toolkit. It demonstrates a clear understanding that batteries offer significant efficiency gains over internal combustion and that partial electrification can sharply reduce greenhouse gas emissions and local air pollution.

However, the core assumptions underpinning the economic modelling, specifically regarding battery system prices, are incorrect. The Maersk study built its economic analysis on a battery system price of around $300 per kWh. Even their sensitivity tests only considered costs down to only $200 per kWh. Their conclusion was that at these price points, the economics of battery-electric hybrids for maritime transport, particularly on deep-sea and medium-range routes, appeared marginal or at best cost-neutral.

In July 2025, the most recent auctions for large-scale lithium iron phosphate (LFP) battery storage systems in China cleared at just $51 per kWh.

Source: *CleanTechnica* **Read The Article**

PSR Analysis. Re-evaluating the calculations to allow for actual price points for battery storage demonstrates that battery-electric hybrids transition from being marginally competitive to significantly cost-effective. The next question is how long will it take for the global shipping industry to start constructing charging stations along all the major shipping routes. **PSR**

New Zinc-Ion Battery Offers Longer Lifespan

Researchers at the University of Technology Sydney (UTS) and the University of Manchester in the United Kingdom have applied the 'Jahn-Teller effect' to create a longer-lasting zinc-ion battery.

The Jahn-Teller effect is a physical phenomenon that introduces asymmetry in individual ions, for example in transition metals such as copper and manganese.

The invention increases the lifetime of rechargeable batteries, thanks to less stress of ion insertion in electrode materials.

Source: *BEST Magazine* **Read The Article**

PSR Analysis: Zinc-ion batteries are generally considered a safer, cheaper, and more environmentally friendly alternative to lithium-ion batteries, so with this technology enabling 5,000 charge/discharge cycles, Zinc-Ion batteries are going to start appearing in machines around the world. **PSR**

Hyundai's Secret Stash of Rare EV Minerals Provides Flexibility

Hyundai saw the storm coming and has been preparing for an industry upheaval. With a stockpile of rare EV minerals, Hyundai claims it has "far more wiggle room" as the industry braces for supply chain disruptions stemming from China's new export restrictions

During a private investor call, a Hyundai official said the company has been stockpiling rare earth minerals from China while export restrictions were still slightly relaxed.

Source: *Electrek* **Read The Article**

PSR Analysis. Since China dominates the market for Rare Earths, accounting for about 90% of the world's rare earth minerals, Hyundai was once again ahead of the pack and is not expected to impacted by China's export licenses for Rare Earths, unlike Ford and BMW. **PSR**

Hydrogen's Brutal Month: Billions Lost As Mega-Projects Collapse

The last month or so has been a particularly rough period for the hydrogen industry and its advocates. There has been a large series of cancellations and project halts around the globe. The cumulative scale of these decisions underscores how challenging and economically vulnerable the hydrogen-for-energy sector has become. Over this period, projects valued at tens of billions in multiple countries have collapsed or been shelved indefinitely, erasing significant planned hydrogen production capacity.

One of these projects, Australia's high-profile CQ-H2 green hydrogen export project at Gladstone became the most notable casualty at the start of July. The US$ 8.13 billion venture was aimed at providing substantial hydrogen exports to Japan and South Korea, but the project quickly unraveled when Stanwell Corporation withdrew support, citing ballooning costs and questionable market viability. Gladstone was positioned to become Australia's hydrogen export flagship but now serves as a stark symbol of hydrogen's broader economic uncertainties. PSR

Source: *CleanTechnica* **Read The Article**

PSR Analysis: These cancellations/project halts represent a broader recognition by industry leaders and governments

that hydrogen, particularly for transportation and energy export, is confronting fundamental economic and technical barriers. Is hydrogen dead in the water? For vehicles, maybe but for industry, probably not. But in these uncertain times, companies are reluctant to invest heavily in hydrogen, and without heavy investment, the promise of hydrogen becomes very remote. **PSR**

A Final Note

Australia's largest green hydrogen project collapses: What went wrong with CQ-H2 – **Click Here**… **Sodium batteries** are coming for your fossil fuels – **Click Here**… **Stellantis** joins growing list of hydrogen mobility retreats – **Click Here**… **E-quipment** highlight: Kubota mini excavator goes from diesel to EV and back – **Click Here**. **PSR**

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