

Zero Petroleum CEO and Founder Paddy Lowe unveils DirectFT® innovation on the world stage at ADIPEC 2025.

Founder and CEO Paddy Lowe to present new findings on next-generation fuel synthesis redefining the future of Power-to-Liquids technology

LONDON, ENGLAND, UNITED KINGDOM, November 2, 2025 /EINPresswire.com/ -- [Zero Petroleum](#), a global leader in synthetic fuel innovation, will unveil new scientific findings at the [ADIPEC 2025](#) – Society of Petroleum Engineers (SPE) Technical Conference, taking place in Abu Dhabi from 3–6 November 2025.

On Monday, November 3rd, Paddy Lowe, Founder and CEO of Zero Petroleum, will deliver a featured presentation titled:

“Direct Fischer–Tropsch (Direct FT): A Novel, High-Yield Synthesis Approach for Replica Fuels.”

This highly anticipated session will introduce new technical data from Zero Petroleum’s proprietary [DirectFT® process](#), demonstrating how air, water, and renewable energy can be transformed into

100% fossil-free, drop-in fuels that perform identically to petroleum-based products. The breakthrough represents a major milestone for sustainable aviation, transport, and industrial mobility.

The research and findings presented will also be published by the Society of Petroleum Engineers (SPE), further amplifying Zero Petroleum’s contribution to advancing the science and scalability of synthetic fuels worldwide.

Redefining the Chemistry of Fuel

For nearly a century, Fischer–Tropsch (FT) chemistry has provided a pathway for synthetic fuel production. Yet, traditional cobalt-based processes have remained limited by scalability, cost, and efficiency.

Zero Petroleum’s DirectFT® process reimagines this approach by eliminating costly post-processing and enabling targeted fuel synthesis in a single step. The result is a more efficient,



scalable, and carbon-neutral alternative to fossil fuels — engineered to meet global performance and certification standards.

Key findings from Zero Petroleum's technical paper include:

- Up to 95% liquid selectivity, producing narrow-range, certifiable fuel fractions
- Stable operation exceeding 30 days, confirming catalyst durability and low coking
- ASTM D4054 certification underway for DirectFT® Jet A-1 fuels via the UK SAF Clearing House

• Full compatibility with existing aviation and transport infrastructure
“DirectFT® is not an evolution of fuel chemistry—it's a reinvention,” said Paddy Lowe, CEO and Founder of Zero Petroleum. “For the first time, we can design and produce fuels from air and water that deliver identical performance to fossil fuels—without any fossil inputs.”

Scalable, Sustainable, and Ready for Global Deployment

Unlike traditional FT systems that rely on complex refining, DirectFT® delivers finished, drop-in fuels in a single, efficient synthesis. Its modular design allows for production to be scaled regionally and aligned with renewable energy availability — transforming how sustainable fuels can be manufactured, stored, and distributed.

Key advantages include:

- Up to 50% lower capital costs than conventional FT plants
- Flexible output configuration for jet, diesel, or gasoline fuels
- Drop-in compatibility with current fuel infrastructure
- Rapid scalability across aviation, marine, and heavy transport sectors

This technological leap positions DirectFT® as a cornerstone of the Power-to-Liquids (PtL) sector



Paddy Lowe CEO Founder



— delivering a practical and commercially viable pathway toward global decarbonization.

Key Milestones and Industry Impact

- First aircraft powered by 100% synthetic fuel, earning a Guinness World Record® in 2021
- Strategic partnerships with Airbus, Boeing, Rolls-Royce, Qantas, ADNOC, Toshiba, and Intertek
- Plant Zero.1 operational near Oxford, UK, with commercial-scale production beginning in 2026

“DirectFT® bridges science, scalability, and sustainability,” said Nilay Shah, Chief Scientific Officer at Zero Petroleum. “It’s a proven, practical route to carbon-neutral fuels that meet real-world energy needs.”

About Zero Petroleum

Zero Petroleum is pioneering the next generation of sustainable energy through its proprietary DirectFT® process — producing 100% fossil-free synthetic fuels including gasoline, diesel, and jet fuel from carbon captured directly from the air and hydrogen derived from water.

Founded by Paddy Lowe, former Formula 1 technical director for Mercedes, McLaren, and Williams, Zero Petroleum combines engineering precision with scientific innovation to deliver fuels that are chemically identical to traditional hydrocarbons — but created entirely without fossil feedstocks.

With Plant Zero.1, the world’s first fully featured synthetic fuel facility near Oxford, UK, and a commercial-scale plant launching in 2026, Zero Petroleum is leading the transition toward a carbon-neutral energy future.

Learn more at www.zero.co.

About ADIPEC

ADIPEC 2025, organized by the Society of Petroleum Engineers (SPE) and held under the patronage of the UAE Ministry of Energy and Infrastructure, will take place from 3–6 November 2025 in Abu Dhabi, UAE.

As the world’s leading platform for energy dialogue, ADIPEC unites policymakers, scientists, and industry leaders to shape the future of global energy. With 15,000 delegates and over 1,500 peer-reviewed technical papers, the ADIPEC Technical Conference remains the foremost forum for advancing the science, engineering, and policy driving the global energy transition.

The 2025 theme, “Decarbonizing. Faster. Together.”, reflects ADIPEC’s mission to accelerate innovation, collaboration, and measurable progress toward net-zero energy systems.

Access and Media Inquiries

The full technical paper, “Direct Fischer–Tropsch (Direct FT): A Novel, High-Yield Synthesis Approach for Replica Fuels,” will be publicly available on November 15, 2025, at www.zero.co.

For media, press, or technical inquiries, please contact:

□ R. Troy Beetz – Global Head of Marketing | troy.beetz@zeropetroleum.com

For investment-related inquiries, please contact:

□ Matthew Moore – Investor Relations | matthew.moore@zeropetroleum.com

Join the Zero Revolution

Zero Petroleum is not just creating a cleaner future — it's delivering a sustainable reality.

Learn more at www.zero.co.

Troy Beetz

Zero Petroleum

+1 310-482-9780

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