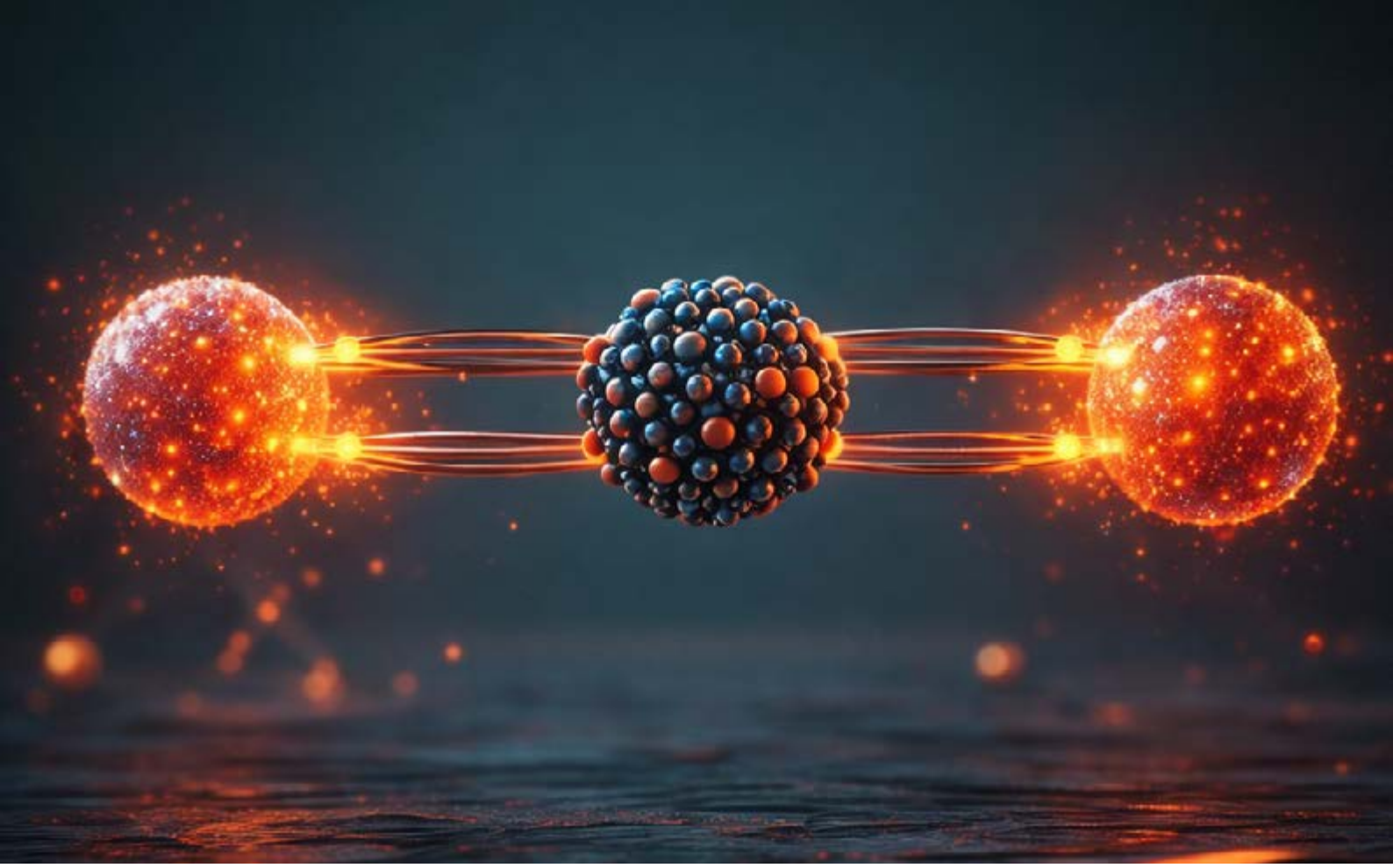

Green waves ahead

Australia's strategic advantage in the race to net zero

By MANISHA TANEJA,
Executive Committee Member – Bulk Liquids Industry Association (BLIA)
Chartering Operations Manager – Bulk Liquids, Incitec Pivot Fertilisers

A Maritime Industry in Transition

The global maritime sector is undergoing its most significant energy shift in decades. Cleaner fuels once seen as experimental are rapidly becoming central to commercial operations. Renewable diesel (HVO), bio-methanol, SAF, Ammonia, FAME biodiesel and emerging advanced technologies are moving from trials to real-world deployment across supply chains.

For Australia's bulk liquids sector, this shift is both a responsibility and an opportunity.

As the custodians of the fuels that keep industries moving, bulk liquid operators directly influence the nation's pathway to net zero.

Key Industry Data

- International shipping contributes ~3% of global CO_2 emissions (IMO).
- Biofuel bunkering volumes grew over 400% between 2022 and 2024 across major hubs.
- Renewable diesel (HVO) use in marine trials shows up to 90% lifecycle emissions reduction.
- Australia produces over 1 million tonnes of potential biofuel feedstocks annually (tallow, UCO, agriculture-residue).

Why Renewable Diesel (HVO) Is Gaining Ground

Renewable diesel is emerging as one of the most practical fuels for reducing emissions now. Its properties closely resemble conventional diesel, making it suitable for vessels, port equipment and heavy-logistics operations.

Advantages include:

- Higher energy content and cleaner combustion
- Strong storage stability and handling performance
- Compatibility with existing marine engines
- Significant lifecycle emissions reduction

Performance Data

- HVO delivers 8–12% higher energy density compared to FAME biodiesel.
- Engine manufacturers report no loss of performance at 100% HVO usage.
- Global renewable diesel capacity is projected to exceed 40 billion litres per year by 2030.

HVO delivers the consistency required for large-scale shipping and port operations.

IMO's View: LNG as Transition Fuels

The International Maritime Organisation continues to endorse LNG and LPG as viable transitional options. These fuels aid short-term compliance and improve air quality; however, they still rely on fossil-based supply chains. As global decarbonisation targets tighten, the industry is increasingly recognising that LNG and LPG cannot be long-term solutions.

The momentum is shifting toward renewable diesel, bio-methanol, SAF, ammonia and other synthetic fuels options capable of achieving deeper, faster decarbonisation.

Regulatory & Industry Data

- LNG-powered vessels now make up over 25% of newbuild orders.
- LPG dual-fuel engines are seeing annual growth rates of 15–20%, mostly in VLGC sectors.
- However, lifecycle studies show LNG cuts only ~20% GHG emissions, far below the 70–100% cuts needed for 2050 targets.

Moving Ahead Despite Regulatory Delays

The deferral of the IMO's Net-Zero Framework in late 2025 caused some concern.

Yet industry momentum has not slowed. Shipping lines, charterers and exporters are already integrating cleaner fuels into shipping logistics, operations, procurement and vessel designs.

Australia cannot afford to wait. The transition is already underway.

Biofuels: Scalable, Immediate and Australian-Backed

Bio-methanol and SAF are also advancing rapidly, strengthening the country's position in a broader low-carbon ecosystem.

Domestic Production Data

- Australia produces ~600,000 tonns of tallow annually, one of the world's top exporters.
- National used cooking oil collections exceed 150 million litres per year.
- Bio-methanol demand is expected to grow tenfold by 2035, driven by container shipping. Australia's feedstock position gives it one of the strongest foundations in the region for renewable fuel scaling. Biofuels remain the most practical low-carbon solution available today. They integrate into existing fuel infrastructure and deliver immediate reductions. Australia has a natural advantage with:
- Abundant feedstocks such as tallow, used cooking oil and agricultural by-products
- An expanding national bioenergy sector
- Emerging technologies enabling decentralised fuel production

The Infrastructure Challenge

Decarbonisation will depend heavily on infrastructure readiness.

Australia must modernise:

- Blending and testing facilities
- Storage systems designed for new fuel types
- Carbon tracking and verification technologies
- Intermodal logistics linking ports, transport and storage

Every upgrade strengthens the reliability and resilience of the national supply chain.

Collaboration: The Key to Australia's Leadership

The transition will succeed only through cooperation across ports, fuel suppliers, vessel operators and regulators. Organisations like Bulk Liquids Industry Association (BLIA) and Shipping Australia Limited (SAL) play a crucial role in shaping shared standards, safety frameworks and investment priorities. Australia's size, geography and export profile make national coordination achievable and essential.

Australia's Opportunity to Lead the Region

With strong resource foundations and a strategic location, Australia is well positioned to become a producer of renewable marine fuels including regional biofuel and bio-methanol bunkering hub as a trusted supplier for Asia–Pacific decarbonisation efforts.

Australia can be a pioneer in circular-economy fuel pathways and carbon-tracking system. This is a realistic opportunity not a speculative ambition.

A Transition Already in Motion

Decarbonisation will be complex, but its direction is certain. The bulk liquids industry is at the forefront of this shift. We along with our member organisations are not only moving fuels, but we are also shaping the energy transition that will define Australia's maritime future.

The decisions made today will determine Australia's competitiveness in a clean-fuel global economy.

BULKLIQUIDS
INDUSTRY ASSOCIATION