

Sunoi and BFT pioneer 100% biodiesel for inland shipping

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Sunoi and BFT have converted the inland shipping barge Birjo II to operate entirely on 100% biodiesel, marking a significant step towards reducing the carbon footprint of freight transport on Europe's inland waterways



The project demonstrates how existing vessels could transition towards lower-emission operations without waiting for entirely new fleets or propulsion systems to be developed. By adapting the Birjo II to run on B100, the partners have shown that conventional inland shipping assets can potentially be repurposed to operate on renewable fuel while retaining their existing engines.

Owned by DK Shipping, the Birjo II is a large barge operating on Dutch inland waterways and plays a central role in Sunoi's own logistics chain. The vessel is primarily used to transport biodiesel from Sunoi's production facility in Kampen to storage locations and also carries out direct deliveries to customers.

The conversion creates a particularly integrated model: the barge will transport renewable fuels while being powered by biodiesel itself. It can be fuelled directly at Sunoi's Kampen facility, connecting renewable fuel production, transport and end use within a single operational chain. According to the companies, switching the vessel from fossil fuel to B100 could reduce CO₂ emissions by up to 90 per cent, while allowing the barge to continue normal operations without requiring the replacement of its existing engine.

That practical advantage could prove important for the inland shipping sector, where replacing vessels or installing entirely new propulsion systems can require significant capital investment and operational downtime. The Birjo II project instead focuses on converting an existing vessel to use a renewable fuel that is already commercially produced and available.

The companies describe Birjo II as one of the first barges in the world capable of operating fully on 100 per cent biodiesel. "What makes this project especially valuable for Sunoi is that Birjo II now operates on our own biodiesel while transporting renewable fuels between our locations and customers," said Jeroen Hovius, chief commercial officer at Sunoi.

The project also builds on a long-standing collaboration between Sunoil and BFT, with the two companies positioning the conversion as a potential platform for wider deployment. “Together with BFT, we are continuing a strong long-term collaboration focused on practical solutions that help make inland shipping more sustainable,” Hovius said. “At the same time, this project creates a platform for the conversion and rollout of multiple barges operating on B100 across Europe.”

For the broader biofuels industry, the Birjo II conversion offers an example of how renewable fuels can be deployed beyond road transport. While electrification and alternative propulsion technologies continue to develop, the project highlights the potential role of drop-in or near-drop-in renewable fuels in reducing emissions from existing transport infrastructure.

With the Birjo II now operating on B100 and directly integrated into Sunoil's renewable fuel supply chain, Sunoil and BFT are looking beyond a single vessel. The project could provide a model for converting additional barges across Europe, offering inland shipping operators a potentially scalable route to reduce emissions while continuing to use existing assets.