

Unlocking the Potential Beyond Compliance: Türkiye's Holistic Biofuel Solutions



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Strategic Vision: Bio Bunkering Hub



Geostrategic Bridge

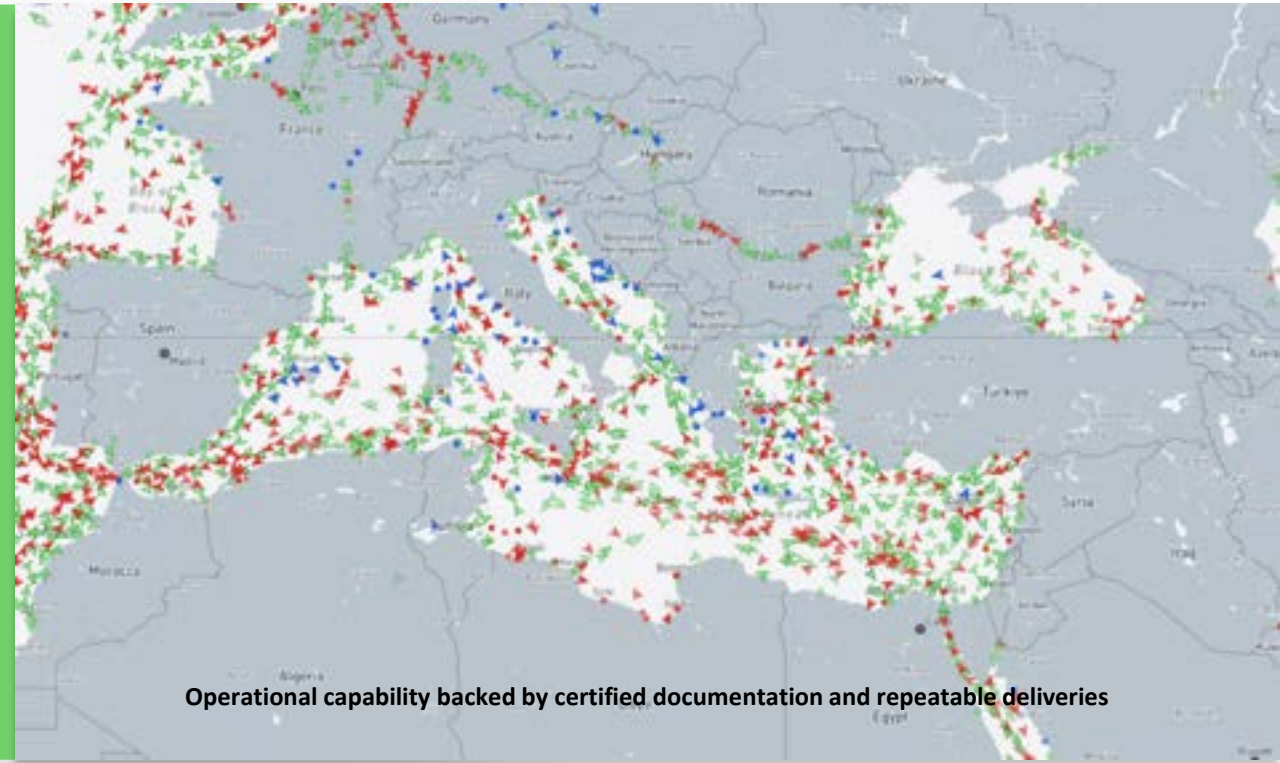
- ✓ Connecting Asia & Europe
- ✓ Critical Energy Hub

The Initiative of Marine Biofuel

- ✓ **Arkas Bunker:** Physical marine fuel supplier since 2006
- ✓ Türkiye's **first ISCC-EU** certified & first bio marine fuel supplier company
- ✓ Public & Private Synergy

Global Commitment

- ✓ Alignment with IMO 2030 & 2050 targets



Operational capability backed by certified documentation and repeatable deliveries

From Local Waste to Global Fuel: Circular Economy Model



DB Tarımsal Enerji as the leading player in Türkiye's biofuel market for the past 20 years,

- Produces biofuels using 100% local feedstock,
- Annual production capacity 100.000 tons of biodiesel, 60.000 tons of sustainable marine fuels, 15.000 tons of refined glycerin.

Project Highlights



- **Duration Period** : 2 years of R&D activities
- **Local Waste-Based Feedstock**: 100%
- **Fuel Type**: distillate and residual
- **First Delivery**: May 16, 2024
- **Standards & Certifications**:
 - ISO 8217:2017
 - ISCC EU &RSB EU Certificate
- **GHG Performance**:
 - 5.96 g CO₂-eq/MJ
 - 93.7% Emission Reduction Potential

Strategic Pillars of the Project

Policy Making And Compliance With Regulations

The local legal framework was established, and efforts were made to ensure that these laws comply with international standards. Today, Türkiye is recognized as one of the countries where biofuel bunkering is actively implemented.

Technical Standards and End-Use Compatibility

Project partners collaborated to have third-party authorities in different countries evaluate and approve product samples.

Compliance with EU Sustainability Standards

Compliance with EU sustainability standards was ensured at all stages of the supply chain, from feedstock selection to the final product, following EU biofuel criteria and certification.

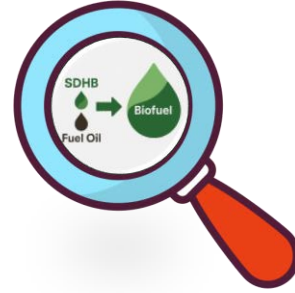
Feedstock

On the production side, feedstock availability and diversification are key priorities for scalability.

Strong Partnerships

*A strong partnership with **Arkas Line and Arkas Bunker** has been maintained to achieve sustainability objectives.*

Integrity & Certification: An Unbroken Chain of Trust



Verified Supply Chain

End to End Certification
(Arkas Bunker is the first
ISCC EU certified marine fuel
supplier)

PoS Transfer

Global Validity

Traceability Mechanism

Mass Balance Transparency

Independent Audits

No Double Counting

Regulatory Compliance

EU ETS



Fuel EU Maritime



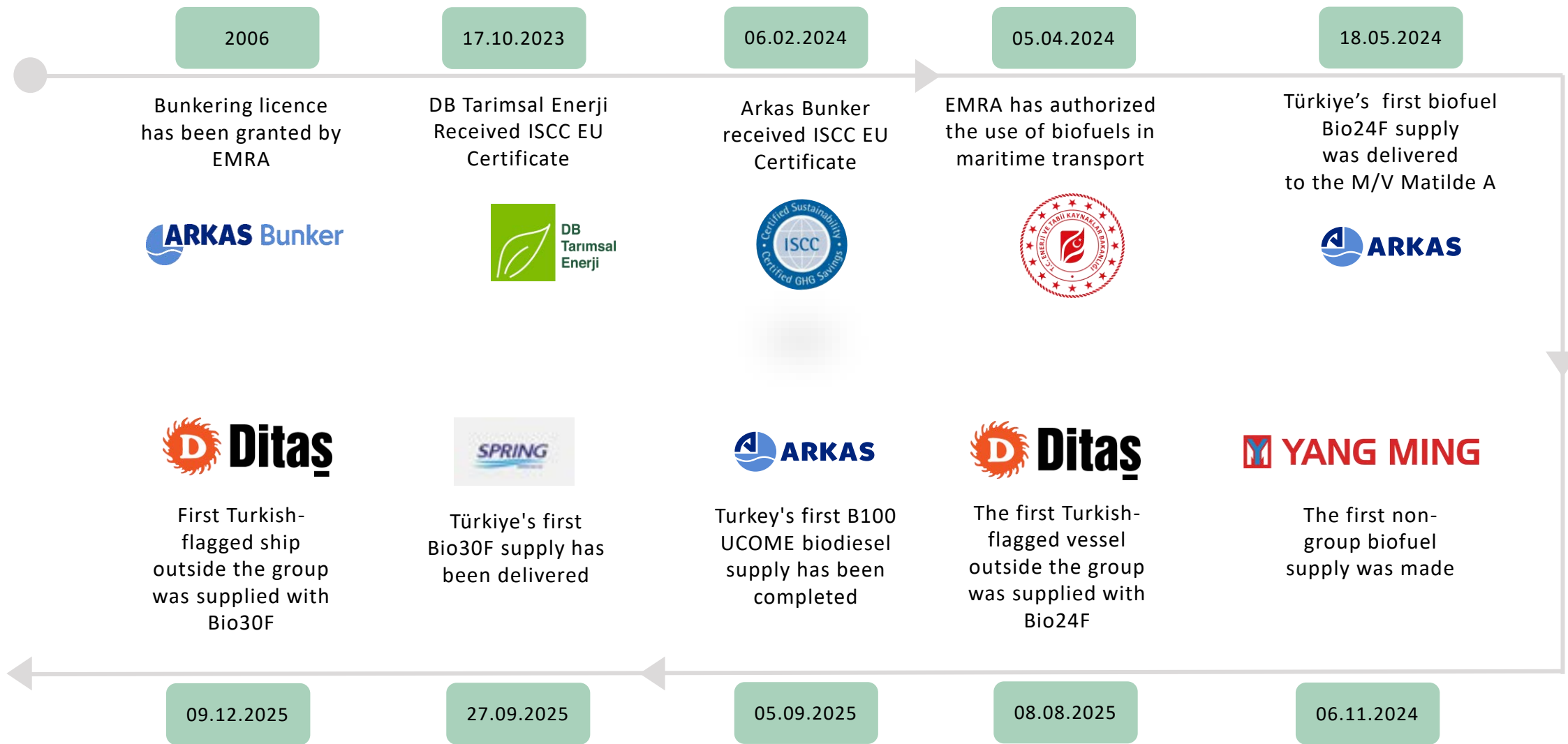
CII Ratings



Sustainability Goals



Our Biofuel Journey



Execution: Operational Excellence & Infrastructure

Robust Infrastructure

- › **Arkas Bunker** owned barge fleet
- › Dedicated loading terminal

Proven Success

- › Milestone: Türkiye's first biofuel supply executed by **Arkas Bunker** in May 2024
- › No technical issues were reported: Arkas Bunker completed biofuel deliveries without any technical problems or complaints.

True «Drop in» Solution

- › No engine mods/ No CAPEX
- › Plug & Play



Firsts in Our Biofuel Journey

- › Türkiye's first company in the marine fuels sector to receive ISCC EU Certification
 - › Türkiye's first Bio24F supply
 - › Türkiye's first Bio30F supply
- › Türkiye's first UCOME Biodiesel supply

Execution: Operational Excellence & Infrastructure



Bio30F

Bio24F



What's Next: Opportunities & Open Questions

Opportunities

Production & Technical Experience

3.724 tons produced; proven laboratory and onboard ship performance

Renewable Energy Management

Biorefinery powered by local renewable Energy sources;
GHG reduction: Year 1- 92.3%, Year 2-93.7%

Fully Supply Chain Management

Cost-effective Operations and decarbonisation

Local Feedstock Advantage

Feedstock diversification and accessibility in Türkiye

Open Questions

Regulated Industry

First scope and implementation timeline

Policy & Incentives

Development of regulatory framework, policy support, and market formation in Türkiye

Long-term Demand Planning

Ensuring long-term market balance and demand visibility

Voluntary Market Mechanism

Book & claim system and other emerging mechanisms

Conclusion: Ready for the Future



Scalability

- ✓ Capacity aligned with 2026–2030 demand growth



Holistic Solution

- ✓ Waste management + Production + Bunkering



Trusted Partner

- ✓ Certified and traceable delivery framework



TÜRKİYE IS READY FOR

Bio

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