

SHI-OIL Marine Fuel Bunkering Project

1. Bunkering

- Project Name: SHI-OIL Marine Fuel Bunkering Project utilizing MT Atlantic Sun



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2. Site Description

The project will be executed across designated marine zones and port facilities in Guyana, including Ship-to-Ship (STS) and Ship-to-Port fuel transfers. The area of influence includes:

- SHI-OIL's Fuel Jetty Located at 13-17 Parika Outfall, East Bank Essequibo, which will be main vessel port and storage site for products.



- Marine Zones: Offshore STS locations approved by MARAD and EPA
- Port Facilities: Georgetown, New Amsterdam, Essequibo terminals
- Land Use: Existing industrial and logistics zones
- Receiving Waters: Atlantic Ocean, Demerara River, Berbice River
- Infrastructure: Floating storage units, berths, and inland depots
- Maps: GIS-based maps will identify operational zones, buffer areas, and sensitive ecosystems

3. Project Design

Development Stages:

- *Construction*: Minor retrofitting of berths and installation of containment systems
- *Operations*: Import, storage, and distribution of refined fuel via marine and land-based logistics
- *Closure*: EPA-guided decommissioning and site rehabilitation

Operations & Processes:

- STS and Ship-to-Port bunkering using double-hulled tankers
- Distribution to inland clients via GPS-tracked fleet
- Real-time monitoring of transfers and emissions

Utilities:

- Water: Municipal and onboard supply
- Energy: Diesel generators and grid access
- Communication: Satellite and terrestrial systems

Waste Management:

- Solid Waste: Segregated and disposed via licensed contractors
- Liquid Waste: Bilge and slop managed per MARPOL Annex I
- Hazardous Waste: Stored and treated at certified facilities

4. Project Size

- Capital Investment: USD \$5 million
- Employment: 15 direct jobs (operations, compliance, logistics)
- Production Rate: Up to 1 million liters/day bunkered and distributed

5. Non-Technical Summary

SHI-OIL is expanding its energy logistics footprint by introducing marine bunkering services. This project will enable the import, storage, and transfer of fuel directly to ships and ports, improving national energy access and reducing inland transport risks. It complements SHI-OIL's existing operations that serve remote farms, mines, and communities across Guyana.

6. Project Duration

- Setup Phase: 6–9 months
 - Operational Phase: Minimum 15 years
 - Decommissioning: As per EPA closure protocols
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7. Potential Environmental Effects

Environmental Component Potential Impact

Water	Risk of spills during STS or port transfers
Air	Emissions from tankers and transport fleet
Land/Soil	Potential contamination at storage sites
Natural Resources	Use of refined fuel and energy inputs
Noise	Operational noise near populated areas

8. Mitigation Measures

SHI-OIL will implement robust safeguards to prevent environmental degradation:

- Spill Prevention:
 - Double-hulled vessels
 - Closed-loop transfer systems
 - Containment booms and spill kits
 - Real-time monitoring and emergency protocols
- Waste Management:
 - Zero-discharge policy
 - EPA-certified disposal partners
 - Routine audits and digital waste tracking

- Air & Noise Control:
 - Low-sulfur fuel usage
 - Emission control devices
 - Noise-dampening equipment
 - Water Quality Protection:
 - No ballast water discharge
 - Routine sampling and turbidity monitoring
 - Buffer zones around sensitive habitats
 - Biodiversity Safeguards:
 - GIS routing to avoid nesting zones
 - Seasonal scheduling to protect migratory species
 - Staff training in environmental awareness
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9. Key Environmental Benefits

SHI-OIL's project is designed not only to minimize harm but to deliver tangible environmental gains:

A. Reduced Road Transport Risks

- Fewer fuel trucks on unpaved roads
- Lower risk of inland spills and emissions

B. Controlled Marine Transfers

- Closed-loop STS systems prevent oil slicks
- Real-time monitoring ensures compliance

C. Ecosystem Protection

- Operations routed away from mangroves and estuaries
- GPS geofencing enforces buffer zones

D. Cleaner Energy Access

- Remote communities shift from biomass to regulated fuel
- Safer storage and reduced indoor pollution

E. Lower Carbon Emissions

- Marine transport is more efficient per ton-km
- Optimized routing and low-sulfur fuel reduce CO₂ output

F. Transparency & Oversight

- EPA access to live dashboards and monthly reports
- Community engagement forums for feedback

G. Emergency Resilience

- Coastal hubs enable rapid fuel deployment during disasters
 - Supports hospitals, relief operations, and generators
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