

LNG / BIO-LNG FUEL FOR SOUTH BALTIC PORT AUTHORITIES (2026)

FACTSHEET

QUICK REVIEW

- LNG is currently the most commercially mature alternative marine fuel in Europe
- Bio-LNG provides stronger long-term alignment with EU decarbonisation policy
- Existing LNG infrastructure can generally support Bio-LNG with limited technical modifications, reducing long-term transition costs for ports
- It can also support future renewable methane fuels

TOPIC	LNG / BIO-LNG STATUS
Technology maturity	High
Infrastructure readiness in Europe	High
Compatibility with existing LNG systems	Bio-LNG fully compatible
Fuel EU Maritime compliance potential	Medium for LNG / High for Bio-LNG
Main environmental challenge	Methane slip
Main investment advantage	Existing bunkering technology available
Long-term decarbonisation potential	Strong for Bio-LNG and e-LNG

INTERNATIONAL SAFETY STANDARDS

AREA	MAIN STANDARD
LNG ship safety	IMO IGF Code
LNG bunkering operations	ISO 20519
Ship-to-shore transfer interface	ISO 28460
Crew training	STCW IGF provisions
Ship safety framework	SOLAS Convention

CORE INFRASTRUCTURE

- LNG storage tanks (cryogenic)
- Truck-to-ship, ship-to-ship or terminal-to-ship bunkering capability
- Cryogenic transfer systems
- Gas detection systems
- Emergency shutdown systems
- Firefighting and explosion protection
- Emergency response procedures
- Trained personnel for LNG operations



Contact the DeCoInter project to discuss your port's transition towards alternative fuels and sustainable energy solutions.

<https://bac.pl/decointer/>

INDICATIVE MARKET POSITION (2025–2026)

FUEL	RELATIVE COST POSITION (2025–2026)	LIFECYCLE GHG REDUCTION POTENTIAL *
LNG	Lower-cost alternative marine fuel	Moderate
Bio-LNG	Premium over fossil LNG	High

* Lifecycle emissions performance depends heavily on methane leakage and methane slip management.

EXISTING LNG INFRASTRUCTURE IN THE SOUTH BALTIC REGION

COUNTRY	MAJOR LNG INFRASTRUCTURE	FUTURE LNG DEVELOPMENTS
Lithuania	- Klaipėda LNG Terminal (FSRU Independence) - LNG reloading facilities - Small-scale LNG distribution - Truck loading infrastructure	- Increased Bio-LNG integration into LNG supply chains - Expansion of renewable methane availability
Poland	- Świnoujście LNG Terminal - LNG bunkering operations - LNG distribution infrastructure	- Gdańsk FSRU project - Growth of LNG and Bio-LNG bunkering services
Germany	- LNG terminals at Wilhelmshaven - Brunsbüttel and Lubmin - LNG bunkering capabilities in major ports	- Additional LNG import capacity - Increasing focus on Bio-LNG and e-methane integration
Sweden	- LNG import terminals - LNG bunkering network - LNG supply for ferry and industrial sectors	- Expansion of Bio-LNG production and distribution - Increased renewable methane deployment
Finland	- Hamina LNG Terminal - Tornio Manga LNG Terminal - LNG bunkering infrastructure	Expansion of renewable gas supply chains and Bio-LNG availability
Denmark	- LNG bunkering and distribution - Infrastructure supporting maritime and industrial sectors	Development of renewable methane and Power-to-X projects supporting future Bio-LNG and e-LNG production

The South Baltic region benefits from an established LNG supply network, with operational infrastructure across Northern Europe.

The Northern Europe region is also at the forefront of renewable methane development, supporting the future deployment of Bio-LNG in maritime transport.

As one of the key LNG gateways in the Baltic Sea region, the Port of Klaipėda plays an important role in regional energy security and alternative fuel supply.