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LIQUEFIED PETROLEUM GAS (LPG) FOR SOUTH BALTIC PORT AUTHORITIES (2026)

FACTSHEET

QUICK REVIEW

- LPG is an established fuel in the global energy sector and is increasingly being explored as an alternative marine fuel.
- LPG offers lower air pollutant emissions than conventional marine fuels and can use parts of existing gas infrastructure, but long-term decarbonisation potential depends on renewable LPG availability.
- LPG infrastructure is generally less complex than LNG infrastructure because LPG storage does not require extreme cryogenic temperatures.
- Long-term compliance with EU climate policy may depend on renewable LPG availability.

TOPIC	LPG STATUS
Technology maturity	Medium–High
Infrastructure readiness in Europe	Established in gas sector
Compatibility with existing fuel systems	Partial compatibility
FuelEU Maritime compliance potential	Moderate
Main environmental challenge	Fossil fuel lifecycle emissions
Main investment advantage	Existing global LPG infrastructure
Long-term decarbonisation potential	Limited for fossil LPG / Higher for renewable LPG

CORE INFRASTRUCTURE

- Pressurised LPG storage tanks
- LPG bunkering systems
- Fuel transfer pipelines and hoses
- Gas detection systems
- Emergency shutdown systems
- Fire protection systems
- Ventilation systems
- Hazardous area management
- Emergency response capability
- Personnel training for LPG operations

INFRASTRUCTURE DEVELOPMENT CHALLENGES

Maritime LPG deployment may require:

- Dedicated bunkering infrastructure
- Port safety adaptation
- Vessel compatibility development
- Integration with future renewable LPG supply chains

INTERNATIONAL SAFETY STANDARDS

AREA	MAIN STANDARD
Gas-fueled ship safety	IMO IGF Code
Gas carrier safety	IGC Code
Crew training	STCW Convention
Ship safety framework	SOLAS Convention
LPG transfer operations	International gas handling standards

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PRODUCTION PATHWAYS AND COST BENCHMARKS

FUEL	PRODUCTION	RELATIVE COST POSITION (2025-2026)	LIFECYCLE GHG REDUCTION POTENTIAL
Conventional LPG	Produced primarily as a by-product of natural gas processing or petroleum refining	Moderate	Moderate
Renewable LPG	Produced from renewable feedstock and waste-based fuel pathways. Renewable LPG remains limited in availability but may support lower lifecycle emissions in the future.	Premium renewable fuel	Higher reduction potential

EXISTING LPG INFRASTRUCTURE IN THE SOUTH BALTIC REGION

COUNTRY	MAJOR LPG INFRASTRUCTURE	FUTURE LPG DEVELOPMENTS
Lithuania	Established LPG import, storage and distribution infrastructure	Limited expansion expected; focus increasingly shifting towards renewable fuels
Poland	Extensive LPG import terminals, storage facilities and distribution networks	Potential integration of renewable LPG pathways
Germany	Mature LPG supply chain and industrial infrastructure	Stable infrastructure with limited major maritime expansion plans
Sweden	Existing LPG storage and industrial applications	Gradual exploration of renewable LPG opportunities
Finland	LPG import and storage infrastructure supporting industrial users	Limited development expected compared with hydrogen and e-fuels
Denmark	LPG storage and distribution facilities	Potential future role for renewable LPG integration

Key Regional Trend

LPG infrastructure is already mature across the region. Future investments are expected to focus primarily on renewable LPG and integration with broader decarbonisation strategies rather than large-scale expansion of conventional LPG infrastructure.

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

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