

THE TRUSTED PARTNER FOR FSRUs

The floating storage regasification unit (FSRU) sector is rapidly emerging as a key piece of the liquefied natural gas (LNG) supply chain. Strategically positioned, FSRUs deliver natural gas to national grids and critical energy infrastructure, supporting global energy security. In locations where land-based regasification terminals aren't available, FSRUs can offer a clean, cost-effective and reliable energy source.

An FSRU is a specialized LNG carrier equipped with regasification technology that can be moored near-shore or at a jetty. While FSRUs perform the same function as onshore LNG receiving terminals, their primary cost-

advantage lies in their mobility with fast deployment capability compared to fixed onshore terminals. Additionally, FSRUs can operate as standard LNG carriers when not engaged in regasification, thus maximizing dependability and asset utilization.

With over 160 years of maritime experience with vessels and assets in the water, ABS supports FSRU projects worldwide with specialized services throughout the entire life cycle – from initial concept and design to operation. Our unparalleled knowledge positions ABS as a trusted partner in advancing FSRU projects globally, helping them meet operational, sustainability and safety goals.

COMPREHENSIVE FSRU SERVICES

Classification and Certification

ABS delivers tailored classification and certification services to support the complete life cycle of FSRU operations, meet technical and regulatory requirements, and maintain asset integrity. Key offerings include:

- Technical reviews of project designs and key documentation
- Approvals in principle (AIPs) for innovative FSRU design and/or technologies
- Customized solutions for unique operational challenges
- Long-term asset integrity management and periodic surveys

Refer to the "ABS LNG Regasification Vessels Guide (March 2022)" for guidance on the ABS Modified Tank Entry Program, which allows extended cargo tank entry for FSRU vessels at a single site for long-term use, permitting underwater inspections instead of drydocking.

Early-Stage Support

ABS offers essential FSRU services to help guide decision-making and lay the groundwork for successful execution:



- Concept Evaluation: Project design evaluation to allow ABS and industry standards and operational goals to be met through a thorough analysis and recommendation plan.
- Preliminary Planning and Advice: Expert guidance on navigating regulatory frameworks and defining project requirements.
- Approval in Principle: Acquire approval of innovative designs that are aligned with safety, regulatory and operational criteria.
- Basic Design/FEED Approval: Attain validation on designs developed during Front-End Engineering Design (FEED) phases.

Classification Services

As a class society, ABS provides essential services for compliance and operational readiness.

- Detail Design Approval: Thorough review and validation of engineering designs for compliance with Rules and standards.
- Fabrication Survey: Construction oversight to help structures and systems meet class and regulatory requirements.
- Installation, Start-Up and Commissioning: FSRU
 deployment activation support so compliance and
 safety standards are met at every stage.
- Survey After Construction: Ongoing asset integrity management, including periodic surveys, to maintain floating liquefied natural gas (FLNG) asset classification throughout their operational life.

Engineering and Technical Expertise

With engineering offices located in key maritime regions, ABS offers localized support backed by global resources. Our technical services include:

- Preliminary design reviews and advanced risk assessments
- Engineering analyses of containment systems and mooring design technologies.
- Real-time project oversight enabled by ABS' advanced plan review management systems.

Risk-Based Inspections and Digital Solutions

Safety and operational efficiency are integral to FSRU operations. ABS enhances these priorities through:

- Risk-Based Inspections: Advanced methodologies tailored to global standards.
- Remote Inspection Technologies: Flexible solutions that minimize operational downtime.
- ABS MyFreedom™ Client Portal: Access to realtime engineering and survey data for an improved management experience.

Supporting Sustainability

As a sustainability leader, ABS helps FSRU operators reduce their environmental footprint and meet global decarbonization goals through services such as:

- Life-cycle emissions assessments and strategies for greenhouse gas reduction.
- ABS Sustainability Notation (SUSTAIN) to highlight environmental achievements.

PROVEN EXPERTISE

Leveraging decades of experience classing more than 200 LNG carriers, ABS has developed industry-leading guidance for classing regasification vessels while promoting safety in the expanding LNG market.

THE ABS ADVANTAGE



Global Reach and Local Expertise

With offices around the globe, ABS offers tailored, localized support and timely assistance at major construction and conversion shipyards for FSRU projects.



Unmatched Technical Knowledge

ABS leverages its deep domain experience to address the unique challenges of FSRU operations with precision and insight.



Innovative Technology and Sustainability Leadership

ABS integrates advanced solutions, from cutting-edge inspection technologies to life-cycle sustainability planning, to help clients achieve operational, safety and environmental objectives.

PARTNER WITH ABS FOR YOUR FSRU PROJECTS

As the global energy market evolves, FSRUs are expected to be essential to meeting future energy demands. Contact globalgassolutions@eagle.org today to learn how we can support your FSRU project and contribute to its success.