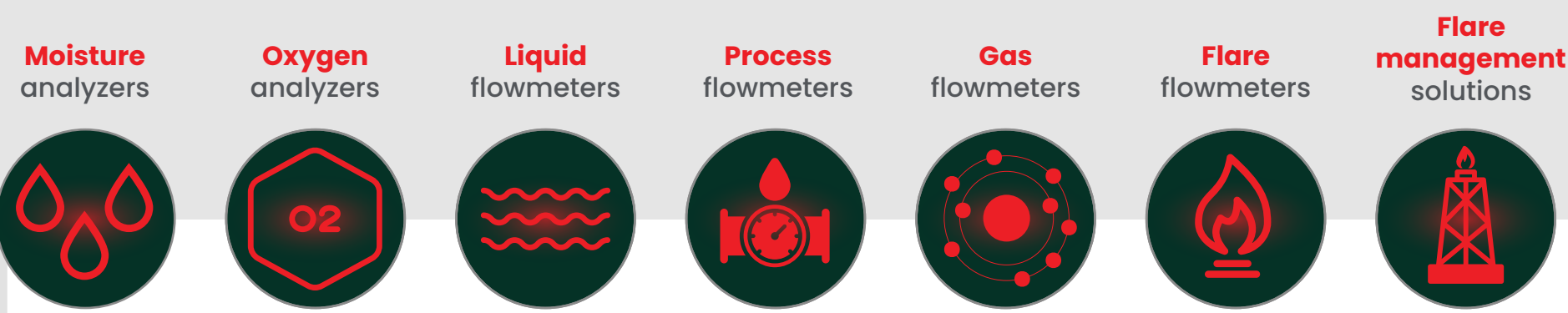


# Reliable measurements for every stage in the LNG process

Panametrics—Pioneers in natural gas moisture analyzers and ultrasonic flowmeters

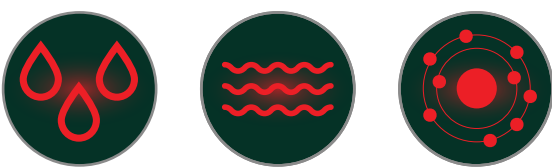
As the demand for natural gas continues to grow, so does the need for reliable and accurate measurements in every stage of liquefied natural gas (LNG) production. But getting those measurements can be challenging. **Panametrics offers a wide range of solutions to meet every need at every stage of production:**



1

## Pretreatment/Dehydration stage

Excessive moisture in LNG can reduce its energy content and decrease overall efficiency. Don't let excess moisture compromise LNG quality and performance.

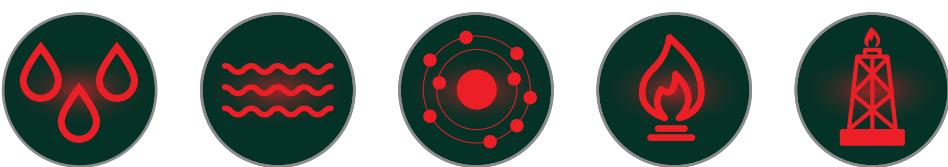


**0.1 PPMv water**  
in natural gas (or dryer)  
after molecular sieve dryers

2

## Liquefaction stage

Precise flow-rate measurements are essential for maximizing production efficiency and minimizing energy waste. That means flowmeters must be able to handle the varying pressure while avoiding any pressure drops, temperature changes, and extreme conditions of the cryogenic process.



**8%** of the feed gas to the LNG plant is consumed by liquefaction<sup>i</sup>

3

## Loading and offloading

Accurate flow measurements during the lengthy loading and offloading of LNG help operators ensure safety and prevent revenue losses due to disputes and discrepancies that can range into millions of dollars.

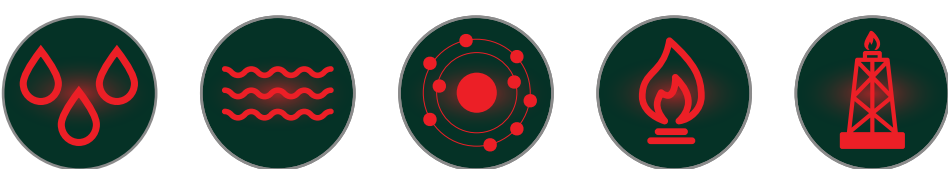


**20 hours to load cargo** into an LNG vessel<sup>ii</sup>

4

## Regasification

Regasification efficiency is crucial because it directly affects the amount of natural gas that can be effectively extracted from a given quantity of LNG. Higher regasification efficiency means a larger portion of the LNG is successfully converted into usable natural gas, maximizing the energy potential and the volume of gas available for distribution.



**98% of destruction and removal efficiency needed for a flare** for proper operation and low emission rate<sup>iii</sup>

5

## Transportation and storage

Accurate and reliable measurements of cryogenic conditions help ensure safe and secure transportation to meet the growing global demand.



**23% share of LNG in the global gas supply by 2050<sup>iv</sup>**

**Panametrics pioneered natural gas moisture analyzers and ultrasonic flowmeters.** We have over 60 years of experience in supporting the liquefied natural gas industry, and we have leveraged that experience to create accurate and effective measurement solutions for every stage of LNG production—from dehydration to regasification.

i <https://www.sciencedirect.com/science/article/abs/pii/B9780124045859000052>

ii <https://www.bs-shipmanagement.com/media-centre/article/147/did-you-know-that-loading-a-gas-tanker-takes-more-than-20-hours/>

iii <https://cdn.catf.us/wp-content/uploads/2021/09/21091747/LNG-Methane-best-practice-29-Sept-2021.pdf>

iv <https://www.mckinsey.com/industries/oil-and-gas/our-insights/global-gas-outlook-to-2050>