



## 1st Newsletter - Aug 2026

### Welcome to the first newsletter of the CryoMet project!

**A whole year has flown by in the blink of an eye!** Discover the progress we've made over these first 12 months, and above all, find out first-hand about the project's contribution to advancing liquefied natural gas (LNG) flow metrology.

Are you curious to find out **how we are supporting the safe deployment of liquefied biomethane (bio-LNG) and liquid hydrogen (LH<sub>2</sub>)?** Would you like to know how **we plan to contribute to Europe's transition towards a low-carbon energy system?** Read on!

### Project updates

#### Kick-Off Meeting

The CryoMet project held its Kick-off Meeting on 26 and 27 August 2025 in Delft (the Netherlands), at the premises of the project leader, VSL – the National Metrology Institute of the Netherlands. During the two-day meeting, the project partners established the first steps for this project, which aims to contribute to reliable metrological measurements of liquefied natural gas.



[Click here!](#)

## CryoMet at TEMPMEKO ISMH Symposium 2025



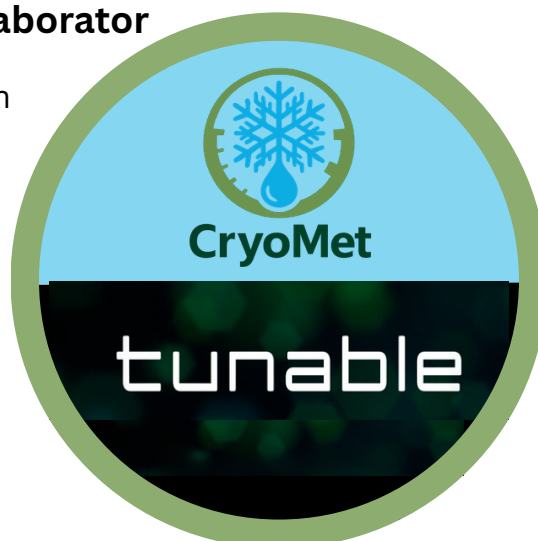
The CryoMet project was presented at the Joint International Symposium on Temperature, Humidity, Moisture, and Thermal Measurements in Industry and Science, (TEMPMEKO ISMH Symposium 2025), held in Reims, France from October 20 to 24. **Radka Veltcheva (NPL)** and representatives of WP3, showcased some of our key initiatives.

[Click here!](#)

## Tunable joins CryoMet as a project collaborator

Tunable will join forces with our partner RISE in WP2 to determine the reliability of (bio-)LNG composition and the online determination of LNG density. Tunable will contribute to our project with equipment, technical support, and expertise related to the measurement of fuel gas quality.

[Click here!](#)



## CryoMet at FLOMEKO 2026



CryoMet showcased the anticipated calibration campaign of the bio-LNG flow meters at the 20th International Flow Measurement Conference (FLOMEKO) at Nara, Japan. Our project coordinator, Menne Schakel (VSL), outlined how CryoMet will develop reference data sets and technical evidence to support the acceptance of measurement methods for LNG, (bio-)LNG, and LH<sub>2</sub>.

[Click here!](#)

## CryoMet WPs

CryoMet will develop reference data sets and technical evidence to support the acceptance of measurement methods for (bio-)LNG and LH<sub>2</sub>. Our work will include results and datasets verification under in-field conditions and by SI-traceable intercomparisons.

Do you want to know the lines of action we will follow to accomplish this aim? CryoMet has been divided into four technical work packages that combine research, validation, and demonstration to deliver next-generation metrology solutions for liquefied energy gases.

### WP1: Liquefied energy gases flow metering reliability

WP1 aims to determine the measurement reliability and uncertainty of (bio-)LNG flow meters in-field. To develop traceable (bio-)LNG and LH<sub>2</sub> meter diagnostics and demonstrate, using SI-traceable

reference datasets, a target accuracy of 0.5% for (bio-)LNG flow meters.

During the first months of the project, five meters have been collected using different technologies (turbine, ultrasonic, Coriolis), with support from flow meter manufacturer partners.

VSL completed assembly of their 2-inch and 4-inch lines at their Rotterdam facility and performed calibrations using LNG (see the figure to the left).



[Discover more here!](#)

### WP2: (Bio-)LNG composition and density measurement reliability

WP2 focuses on improving the reliability of (bio-)LNG composition measurements under real operating conditions, including sampling effects, and assessing the accuracy of current measurement methods. The goal is to

demonstrate that LNG density can be determined online with an uncertainty below 0.3% ( $k = 2$ ).

The consortium published a report entitled "*Report A 2.2.1: Literature*

*review on the existing sampling systems including equipment such as vaporisers used in different facilities".* This report describes sampling systems for LNG specifically for the

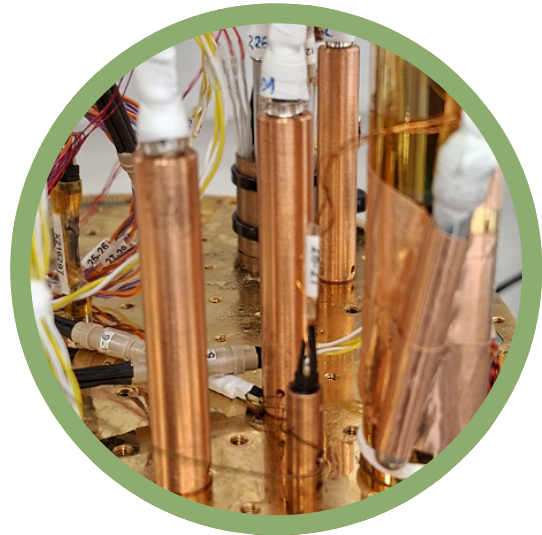
purpose of determining the composition of the LNG.

[Discover more here!](#)

### **WP3: SI-traceable liquefied energy gases temperature measurements**

WP3 focuses on SI-traceable temperature measurements for LNG and LH<sub>2</sub>. The objective is to determine the accuracy of (bio-) LNG in field temperature measurements and to achieve low uncertainty (target is <0.5 K) in industrial conditions while maintaining traceability to the SI unit.

A major milestone has already been achieved with the calibration of twelve industrial thermometers across a temperature range from 77 K to 273 K. Building on these results, the project is now investigating how these calibrations can be reliably extrapolated to the much lower temperatures encountered in LNG (around 111 K) and liquid hydrogen (20 K) applications.



[Discover more here!](#)

### **WP4: SI-traceable liquefied energy gases calibration procedures**

WP4 aims to develop SI-traceable measurement and calibration methods for LH<sub>2</sub>. In addition, the WP seeks to validate the new metrological infrastructure developed for both (bio-)LNG and LH<sub>2</sub>.

A comprehensive literature dataset of hydrogen speed-of-sound measurements has been published on [Zenodo in support of Activity A4.2.1.](#) The dataset compiles experimental speed-of-sound measurements for

normal, para-, equilibrium, and composition-unspecified hydrogen reported in the scientific literature.

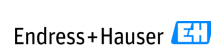
CryoMet is developing a new LH<sub>2</sub> flow metering facility at the [Netherlands Aerospace Centre](#). This will provide a platform for direct comparison of SI-traceable flow measurement standards at industrial flow rates.

[Discover more here!](#)

## CryoMet Consortium

The consortium is made up of 19 partners from 11 countries that include NMIs, universities, research groups and centers. Meet us!

[Click here!](#)



## Contact

Enjoyed reading this first newsletter issue? Stay up to date with the latest CryoMet news, project milestones, and innovations by following us on our channels. Click in the icons below to keep informed!



EUROPEAN PARTNERSHIP



Co-funded by  
the European Union

METROLOGY  
PARTNERSHIP



The project (24GRD07 CryoMet) has received funding from the European Partnership on Metrology, co-financed by European Union Horizon Europe Research and Innovation Programme and from the Participating States. Funded by the European Union, Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or Euramet. Neither the European Union nor the granting authority can be held responsible for them.