



Department for
Science, Innovation
& Technology



NMS Flow Programme update

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Aberdeen, 2026-06-10





Flow Programme

Core

R&D

Knowledge
Transfer

Traceability

Research



Development



Knowledge Transfer

- Publish practical guides, papers and case studies
- Online repository for FP research
- Webinars with engaging panel-led discussions
- Focus Groups across UK
- Represent the UK on major international metrology committees

Standards

- Share outputs that industry can actually use
- Develop new CEN CCUS metering standard
- Chair revision of OIML and ISO standards
- Representation at Energy Institute and InstMC committees
- Keep the UK visible in international flow metrology

Enhance National Measurement Capability

- Widen NEL's accredited calibration capability across fluids, pressures, temperatures and flow rates
- Close key traceability gaps and improve uncertainty

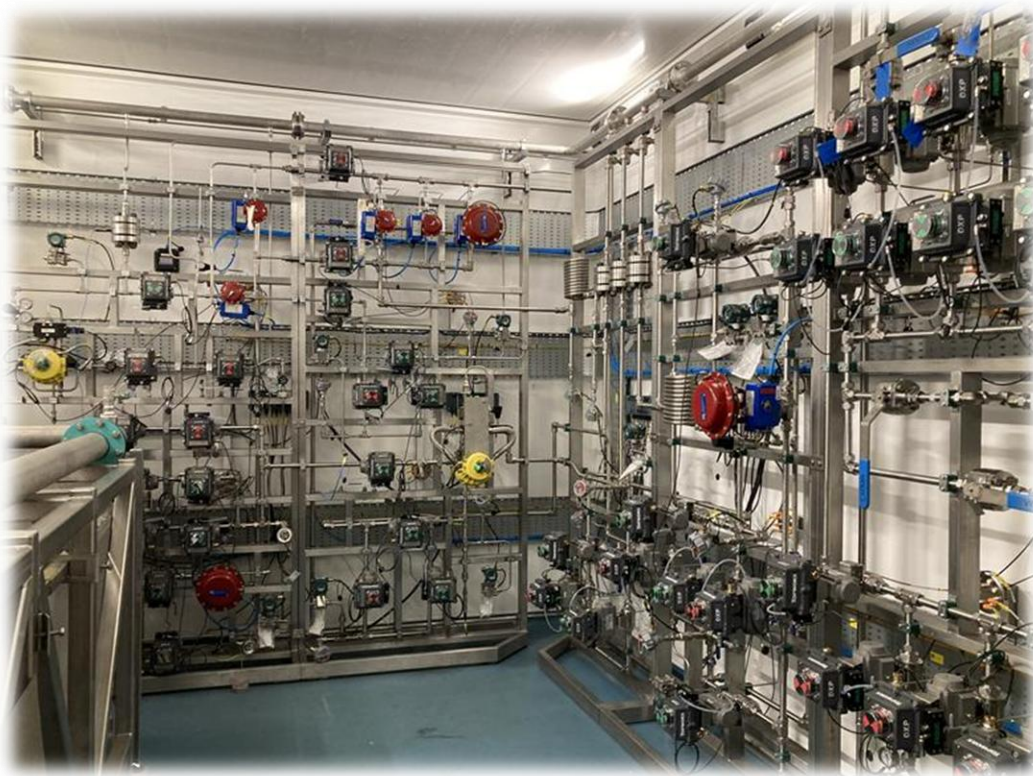
Achieve UKAS Accreditation

- Many facilities are accredited, but some gaps remain
- Addressing these gaps will boost confidence and competency across more areas of operation

Modernize and Optimise CMC Values

- Many CMCs have remained static for years
- Reduce uncertainties through targeted upgrades and better calibration approaches





Primary Gas Facility Development (PVTt)

- Commission UK primary gas standard and establish in-house calibration capability

Secondary Gas Facility Development

- Modernise CO₂ and N₂ calibration capability with new master meters and data systems

Secondary Density Facility

- Complete FEED and detailed design for density facility

Water Facility Development

- Define concept and FEED for new primary water standard

EPAT Facility – Coriolis Reference Upgrade

- Develop FEED for upgraded reference metering system

Research projects

Establish UK High-Pressure Gas Primary Standard (LDV)

- Develop LDV primary standard for high-pressure gas flow

Flare Combustion Efficiency Modelling

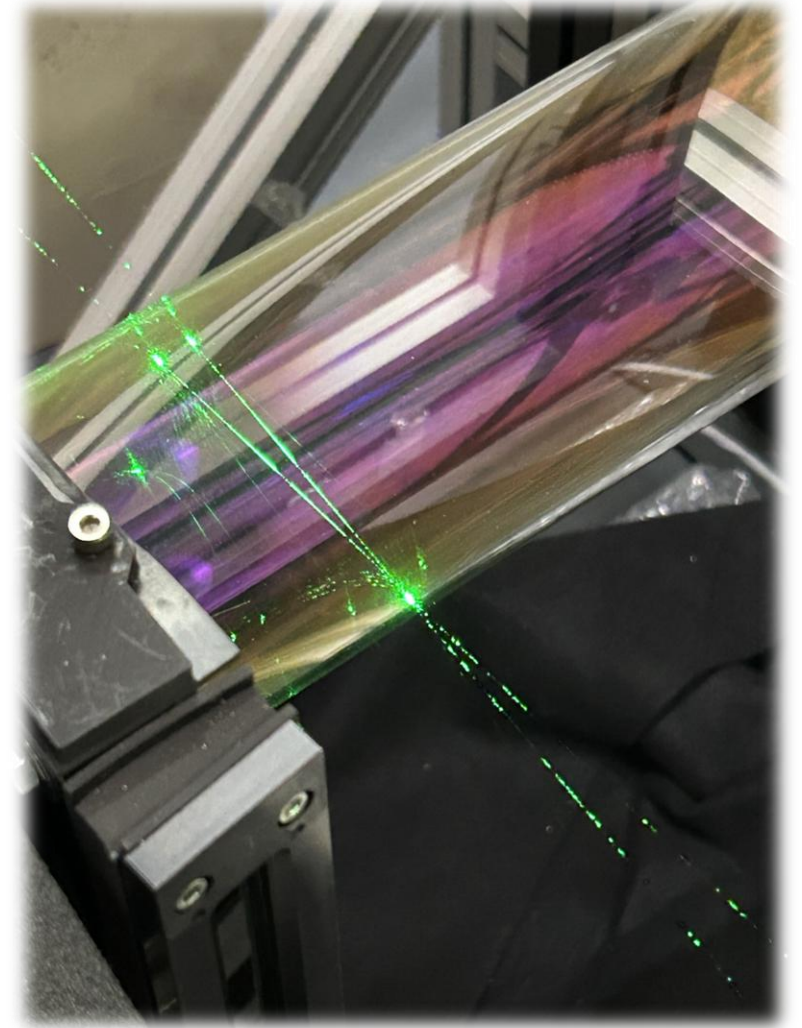
- Improve emissions reporting using CFD and experimental validation rather than fixed assumptions

Digital Flow Meter Calibration Standards

- Develop calibration methods for digital flowmeters

Flow Measurement for CCUS

- Improve CO₂-rich flow measurement towards $\sim\pm 1\%$ uncertainty.





Thank you



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