

Single Phase Flow Capability

Drivers / Challenges

Ensuring a secure, sustainable energy supply / Reducing emissions and mitigating climate change

Targets / Impact / KT

Industry guidance on cryogenic flow measurement / support for standards

Industry guidance on high viscosity flow measurement / support for standards

Industry guidance on emissions measurement / support for standards

Traceable calibration of cryogenic flowmeters to ensure accurate metering of majority of UK's future gas supplies

Accurate 'heavy oil' metering – impact on UK tax revenues & maximising recovery of UK oil&gas reserves

Accurate stack emissions measurement enabling compliance with environmental regulations and facilitating trading schemes

Deliverables

Characterisation of cryogenic facility

Sampling of LNG flows

Performance data for flowmeters with fluids up to 1500 cSt

EMRP LNG proposal

Performance of flowmeters in cryogenic service

New capability: oil flow standard facility up to 1500 cSt

Alternative techniques for mass emission determination





Technologies

New capability: Small-scale cryogenic facility – **02/10**

New Capability: Oil flow standard facility up to 600cSt – **03/10**

New capability: Small-scale flow facility to 1500 cSt – **09/09**

Performance of stack emissions measurement using existing techniques – **03/10**

- Project 08/1.1 
- Project 08/1.2 
- Project 09/01 
- Project 08/2.2 

Enabling Science

Underpinning metrology, traceability and standards plus increasing knowledge of physics, chemistry and fluid dynamics of single phase fluids

2009 2010 2011 2013 2015