
Fiscal Metering and Hydrocarbon Allocation Governance Training Course

3 – 7 October 2027
Manama





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Ref: 25_11337 Date: 3 – 7 October 2027 Location: Manama Fees: 4300 GBP

Programme Summary

Fiscal metering and hydrocarbon allocation governance is a five-day training course for metering, production, commercial and finance leaders at strategic level, culminating in a measurement governance plan for their own custody transfer and allocation points. Every barrel and cubic metre sold or shared between partners is valued through a meter, so small systematic errors become large financial exposures. The approach links meter selection, proving, uncertainty, allocation and audit into one accountable system. Mars Training Centre UK delivers this programme in fiscal metering and hydrocarbon allocation governance.

The Business Case

Measurement disputes between operators, partners and buyers are costly and slow to resolve, and unexplained losses erode revenue quietly. Many organisations treat metering as an instrument task rather than a commercial control. Leaders who set clear uncertainty limits, insist on traceable proving and govern allocation transparently protect revenue and partner trust.

- Revenue Assurance: Limits systematic over- or under-registration at sales and custody transfer points.
- Unaccounted-For Volumes: Reduces unexplained losses through balance monitoring and early investigation.
- Partner and Customer Disputes: Lowers the frequency and duration of measurement claims through agreed procedures and audit trails.

Principles and Evidence Base

- ISO 5167 Differential Pressure Devices: Provides the reference for orifice metering compared with other technologies in Session 1.
- ISO 17089-1 Ultrasonic Meters for Gas: Frames the selection and verification of ultrasonic gas metering in Sessions 1 and 2.
- OIML R 117 Dynamic Measuring Systems for Liquids Other Than Water: Guides the design and proving of liquid custody transfer systems in Session 2.
- JCGM 100 Guide to the Expression of Uncertainty in Measurement: Structures the uncertainty budgets built in Session 3.



Intended Participants

- Executives accountable for the accuracy of hydrocarbon sales and export measurement.
- Senior leaders who negotiate or approve custody transfer and allocation agreements with partners.
- Heads of production accounting who reconcile metered volumes with financial results.
- Leaders responsible for measurement audits and for resolving measurement disputes.

The programme serves metering, production operations, commercial, joint-venture and finance functions across upstream production, gas processing, pipelines and export terminals.

Learning Outcomes

1. Participants will be able to evaluate meter technologies for custody transfer duties against accuracy, cost and maintenance demands.
2. Participants will be able to appraise metering system design, proving and calibration arrangements for traceability.
3. Participants will be able to construct a measurement uncertainty budget and set acceptable limits for a fiscal point.
4. Participants will be able to design an allocation method that is transparent and defensible between partners.
5. Participants will be able to diagnose the causes of unaccounted-for gas and liquid losses.
6. Participants will be able to justify a measurement governance plan to an executive committee or joint-venture board.

Programme Structure

Day 1: Fiscal Metering Principles and Technologies

Which meter technology suits which custody transfer duty, and why does it matter commercially?

- The Commercial Role of Custody Transfer Measurement
- Orifice Metering Under ISO 5167
- Ultrasonic Meters for Gas Under ISO 17089-1
- Coriolis and Turbine Meters for Liquid Service
- Technology Selection Matrix for Fiscal Duties

Day 2: Metering System Design, Proving and Calibration

How is a metering station built and verified so that every reading is traceable?

- Metering Station Architecture and Flow Computers
- Meter Proving Methods and Proving Frequency
- Liquid Measuring Systems Under OIML R 117
- Sampling, Density and Gas Composition Analysis
- Calibration Traceability and Verification Records



Day 3: Measurement Uncertainty and Loss Control

How large is the measurement error, and where do unexplained volumes go?

- Uncertainty Budgets Using JCGM 100
- Systematic Versus Random Measurement Error
- Mass Balance and Line Pack Reconciliation
- Unaccounted-For Gas Investigation Methods
- Measurement Deviation Reporting and Correction

Day 4: Hydrocarbon Allocation and Custody Transfer Agreements

How are shared volumes divided fairly, and how are measurement rights written into contracts?

- Allocation Methods: Pro-Rata, By-Difference and Uncertainty-Weighted
- Allocation Systems and Data Flow Controls
- Measurement Clauses in Custody Transfer Agreements
- Witnessing, Joint Inspection and Measurement Audits
- Measurement Dispute Resolution Routes

Day 5: Applying Fiscal Metering Governance

How are technology, uncertainty and allocation brought together into one governance plan?

- Reviewing a Gas Export Metering Station Case Against Session 2 Practice
- Applying an Uncertainty Budget to a Participant Fiscal Point
- Testing an Allocation Method on a Shared Pipeline Scenario
- Defining Measurement Roles, Indicators and Audit Cycles
- Measurement Governance Plan Presentation

Methodology

The programme relies on data workshops built on metering records, proving reports and allocation statements from upstream fields, gas plants and export terminals. Participants calculate uncertainty, trace losses and test allocation rules on worked data sets. Session 5 combines the work into a governance plan reviewed by peers.

- Suggested activity: Building an uncertainty budget for an ultrasonic gas sales meter.
- Suggested activity: Investigating a rising unaccounted-for gas trend on a transmission pipeline.
- Suggested activity: Allocating commingled crude between three fields with different meter quality.



Capstone Output

Each participant completes a measurement governance plan for their own custody transfer and allocation points. It sets uncertainty limits, proving and calibration intervals, loss monitoring triggers, allocation rules, audit cycles and accountable roles, ready for adoption by operations, commercial and finance leadership.

Frequently Asked Questions

Is fiscal metering governance training suitable for commercial and finance leaders without an instrumentation background?

Yes. It is designed for strategic leaders who depend on metered volumes for revenue and partner settlements. No instrumentation qualification is assumed.

Which standards does fiscal metering and hydrocarbon allocation training rest on?

It rests on ISO 5167 and ISO 17089-1 for gas metering, OIML R 117 for liquid measuring systems and JCGM 100 for measurement uncertainty.

How is the plan from fiscal metering and allocation governance training used at work?

You can present it to operations, commercial and finance leadership as the basis for measurement policy, audit schedules and allocation rules across your custody transfer points.