

**Ofgem MAMCoP Scheme Management Board Meeting
10th Meeting
10:30 am, Wednesday 26 April 2007, at Ofgem, London**

Present	Representing
Stephen Rowe	OFGEM (Chair)
Stephanie Wong	OFGEM
Mark Krull	Logic Certification Ltd (Guest Speaker)
John Martin	Logic Certification Ltd
Mick Curties	Gas Forum
Phil Daniels	Corgi
Trevor Smallpeice	Corgi
Stephen Fraser	Eco - European
Dominic Cummings	Scotia Gas Network
Alan Smith	ES Pipelines
Annette Bunn	National Grid
Philip Kershaw	National Grid
Nicola Wade	HSE
Colin Townsend	Wales & West Utilities
Dave Perriam	Wales & West Utilities
Mike Buss	BSi
Dave Sharp	IGEM

1. Apologies for absence

Peter Fawbert, Steve Brand, Barry Cook, Gandy Steve, John Dale, Ian Smith, Terry Mundy, David Ainsworth, Dina Mihsein

2. Minutes of last meeting and matters arising (not covered on agenda)

Stephen Rowe (SR) opened the meeting and welcomed attendees.

- Alan Smith (AS) pointed out that the ES pipeline contact which published in the 9th MAMCoP Board meeting minutes (17/01/07) is incorrect. The detail should read:

**Michael Carr
ES Pipelines Limited
Hazeldean
Station Road
Leatherhead
Surrey
KT22 7AA
Tel: 01372 227 560
Fax: 01372 377 996**

- Dave Sharp (DS) was unclear about Action (5) – Review of CoP1/c: *'PD suggested that it would be beneficial to put the commercial part into CoP1/c.'* This was clarified by the members of board, to incorporate ACS flow chart competency diagram into CoP1/c.

3. Review of Actions

SR reviewed actions from the previous meeting. (See Action Log).

Action (1) – Generic Approval

Action - closed

Action (2) – Review of CoP 1/c

- Phil Kershaw (PK) apologised for the late submission of the CoP1/c.

Action - closed

Action (3) – Review MAMCoP and CoP

- CoP1a/1b will be reviewed by IGEM and the comments will be circulated to the Board. See item 7.
- NW requested Steve to ask Lloyds if they can provide some specific feedback on the MAM audit process in terms of areas that MAM's are performing well on and possible areas for improvement or additional guidance.

Action (1): Steve Rowe

Action (4) – CoP 1/c

- SR agreed to merge the CoP1/c comments' into one document and circulate the CoP1/c in PDF format for review.
- SR requested feedback or additional comments from the board and wish to receive them in word format.
- SR suggested that version table should be added to the document.
- The final CoP1/c will be published on the OFGEM website.

ACTION (2): Steve Rowe

Action (5) – Equipotential bonding flow chart

Action - closed

Action (6) – Update on Appeal Process

- SR provided update to the board: In term of registration, he is waiting from the lawyer comments. He agreed to circulate the comments in due course.

ACTION (3): Steve Rowe

4. Reports

a. Lloyd's Register

In the absence of Terry Mundy (TM), SR quoted the following:

- All the registered Meter Asset Managers were exposed to surveillance visits between November 2006 and February 2007 and no major deficiencies were identified.
- There are 16 registered Meter Asset Managers and one additional application has been received from INTOTO (formerly Mowlems) but the assessment has not been progressed to date.
- 2 Meter Asset Managers have extended their scopes of registration from scope 1 to 2 and 3 and 2,3 and 4 respectively. (Onstream and Siemens)

- The website address will change within the next two weeks from www.lr.org/mamrs to www.lloydregister.co.uk. The new website address will be forwarded to all registered organisations with the date for the change. The reason for the change is improve the presentation of the site and to introduce more sophisticated search engines.

b. HSE

Nicola Wade (NW) provided an HSE update. The new Minster has agreed the gas review recommendations. A key recommendation is the new registration body is to be offered for tender. The tender is a five year package and the bid will be released in May. A new specification for the gas installer registration scheme is currently been drawn up in consultation with stakeholders. NW highlighted that this would have an impact across MAM/OAMI activities. The tender specification will be published on the HSE website in due course.

Her understanding of the timetable was that the decision for the new registration body will be made by autumn. NW said that there is a possibility that the role of the new body may have more responsibilities and cover wider scope including CO awareness, enforcement role, co-ordinating role, etc. NW was not sure about actual specification details and suggested that MAMs visit the HSE website for information.

The website link is:

<http://www.hse.gov.uk/gas/domestic/safetyreview.htm>

c. CORGI

Phil Daniels (PD) circulated a table of the ACS Metering assessments for March 2007 in the meeting. Please find the attachment in appendix A.

PD highlighted to the board that the main figures of interest are in the 'Grey columns'. He noted that there are considerable numbers of people holding certificates.

Trevor Smallpeice (TS) stated that there are 100 out of 500 being employed for candidates holding CMET1 and MET1 certificates. National Grid seeks further clarification on the wording of this point.

PD highlighted the fact that CCM1 course only covers the course materials and a snapshot of the gas safety and is not a route into the industry. Hence, there are further assessments that will be required to capture whether the candidate has the relevant background work experience and is competent to do the job.

PD said that Corgi will not provide a registered number unless individual has the relevant and sufficient background experience to cover competencies required in individual areas.

Colin Townsend (CT) proposed that people would need accreditation before taking up CCM1. PD responded that the part of the NVQ path route would allow people to take up the course.

d. BSI

No update on BSI standards.

e. IGEM

Dave Sharp (DS) provided an update on behalf of Ian Smith (IS) on IGEM documents as follow:

- ✚ GM/4 (2nd Edition) – Current.
- ✚ GM/5 (2nd Edition) – Current; Robust; Under review and require updating over two years.
- ✚ GM/6 – Current; 2nd Edition is being prepared.
- ✚ GM/7 (2nd Edition) – Current; Robust.
- ✚ GM/8 (Part 1 to 5) – All published. Current.
- ✚ UP/1 (2nd Edition) – Current; Robust.
- ✚ UP/1A (2nd Edition) – Current; Robust.
- ✚ UP/1B (2nd Edition) – Current; Robust.
- ✚ UP/1C (2nd Edition) – Draft for comment being drafted. Expected in summer 2007.
- ✚ UP/2 (2nd Edition) – Draft for comment to be issued in mid-May 2007.
- ✚ TD/4 (4th Edition) – Publication expected in May 2007.
- ✚ UP/16 (risk assessments for DSEAR) – Draft for comment due in May 2007.

DS noted that both GM 5 and GM6 are under review and the documents would be update and align with the current industry's standard. The technical materials will remain the same. DS highlighted that IGEM has involved a lot of work on GM8 and it took nearly four years which is quite significant. Ofgem has supported the GM8 training seminars.

DS provided feedback on the GM8 Seminar which held on 8th March 07. It was a successful event and was sold out completely. The upcoming GM8 Seminar will be on 2nd May 2007. It is also sold out.

Please find the attachment for the technical publications (January 2007) in appendix B.

DS raised an issue associated with meter pulse utilisation (MPU) and stated that any electrical connection work must be carried out by an appropriate qualified person.

5. Submission to ACS Scheme Committee to develop assessment criteria to cover IGE/GM/8 (REGT2. Draft)

PD proposed that he is waiting for GM8 to be implemented before the process begins. PD said that he is content with MAMCoP comments' on REGT 2 draft.

PD raised the issues that he needs MAMCoP board to sign off assessment for ACS accreditation. He was uncertain about whether the course materials match the industrial requirements.

PD consulted the board and has identified the need to ensure operatives have the competence to install, test and commission a range of medium pressure meter supply controls which include the adjustment of active set points for regulators, creep relief valves and slam shut valves against specific design considerations.

PD highlighted that 90% of the new industrial and commercial (I&C) meters are installed but are not commissioned, as the supply pressure regulator

cannot be set as the installation pipe work or consumption data is not available. There is a query raised who should be responsible for setting the pressure regulator.

SR agreed to send out the letter on behalf of MAMCoP Scheme Management Board to ACS Scheme Committee regarding the current training accreditation requirements for the installation & commissioning of the safety controls required to support the requirements for medium pressure commercial/non-domestic meter installations.

DS / Mike Buss (MB) agree to confirm vent stack requirement for I&C metering.

Action (4): Steve Rowe/Dave Sharp/Mike Buss

TS proposed that the new CoP1/c required the Ofgem Approved Meter Installer (OAMI) to set the pressure regulator, and will be conducting the audits on this basis.

Steve Fraser (SF) said that the OAMI is responsible for installation, commissioning and ensure the overall meter performance. If there is any problem, OAMI should inform and give feed back to the Meter Assets Managers (MAMs).

NW highlighted the fact that the meter information such as pressure setting should be passed from the GT to the MAMs and finally to the meter installers. All parties (iGT, MAMs and meter installers) have the responsibility to ensure that the pressure setting of the regulator is appropriate.

DS proposed that for the past six months, there were more enquires on the identities of MAMs and OAMI. He stated that the process of installing a meter was very disjointed as a result of competition.

DS proposed that a meter installed on the gas transporter (GT) network should follow the MAMCoP process or else it should not be installed. However, there were cases that meters have been installed without MAM's notification.

SR asked the question, how much of an issue this is and asked for this to be quantified.

TS proposed that the pressure setting was a matter of general gas safety which could affect the end users. If the regulator is not being set properly, end users may encounter appliance problems.

6. Presentation on Main Equipotential Bonding (MEB) by Mark Krull from LOGIC Certification

Mark Krull (MK) from Logic Certification Ltd gave a presentation on MEB. Please find Appendix C for the presentation slides.

SF raised the issues whether the course is not be recognised by the industry.

MK responded that during the course, the equipment and safety procedure should be complied. The course is accredited by a third party. The course tutor is qualified and profession. The assessors will ensure the any candidates have the competence to do the work.

DS suggested incorporating the MEB course into the MAMCoP. SR responded that we could consider this in part of the general review of the MAMCoP and agreed that the MAMCoP is a sensible place for such training and competence to be referenced, however stated that the MAMCoP board is not an appropriate group to approve or endorse this training course/material. SR suggested that the bodies who approve part P of the building regulations / IEE could perhaps give some guidance in approving the training course. NW felt that it was good to promote awareness of the course however; we should reserve judgement regarding the suitability of the course and be supportive of a framework and not this specific training course.

DS raised a question on what is the response from the IET with respect to the MEB training. MK responded that they received comments and suggestions from IET but did not elaborate any further.

7. Target review for CoP 1a/1b update

TS proposed that IGEM would review CoP 1a/1b. IGEM agreed to undertake the review in solidarity only after the Board review. In term of reviewing CoP1a/1b timescale, SR would like to have the review done before the next MAMCoP board meeting. SR agreed to merge all the comments together into one documents before circulate around the board. SR suggested to the board that the group should review CoP 1a/1b in term of technical issues only. PK suggested that MAMCoP should be aligned with OAMI.

8. AOB

a. SPAA Update

SR has no further comments and proposed that this was outside of the MAMCoP board, however agreed to feedback with any update from the team that are working with the SPA. Mick Curties (MC) requested an update from SR in the next MAMCoP meeting.

Action (5): Steve Rowe

b. GTI Process

MC raised the issue that GT1 process was not working. He said that there were cases where GT's could not identify the appropriate pipe location / pressure data.

SF added to the point that GT was the one who hold the information and yet he could not tell the customer whether it is low pressure area.

There was a concern that GT needed to provide data to MAMs as well as suppliers. MC suggested that it is essential to improve GT1 process to allow robust and effective communications and installations.

PK responded that they would try to improve the existing system and requested that if any MAM had problem with NG regarding the GT1 process, they should contact PK so that he could investigate.

General Update for MAMCoP provided by Annette Bunn (National Grid)

Since the last MAMCoP National Grid has received a request from EcoEuropean to submit multiple GT1 requests which would potentially involving importing file data from EcoEuropean into our systems. In line with the request National Grid are willing to explore the options of an alternative methodology to the existing fax/email process (to accommodate multiple requests) but in the first instance would need to assess the feasibility of current systems used within the GT1 process for the import and export of data in a spreadsheet format. If this is possible the option would be offered to the industry. We will provide a progress update at the next MAMCoP.

c. Gas supply licence meter work obligation

SR announced to the board that OFGEM is proposing to review on gas supply licence meter work. There are three options:

- 1.** The requirement to use the MAM is removed.
- 2.** Maintain the requirement, introducing the Sunset Clauses
- 3.** Include the requirement to use MAMs.

The board strongly disagree with option 1. NW stated that MAMCoP has provided technical governance and control since the introduction of competition within metering. NW said that the HSE would have serious concerns since the metering market has not changed and that there is still an industry requirement to retain the MAMCoP in line with the IGEM risk assessment. PK would also like it noted that he stated that for the future MAMCoP plus inclusion of I&C should be considered.

9. Next Meeting

Date: 24th July 2007, Time: 10:30 – 14:30, Venue: OFGEM office.

Action Log

<u>Action Ref</u>	<u>Issue</u>	<u>Date when issue originally raised</u>	<u>Action</u>	<u>Owner</u>
1	Review MAMCoP and CoP 1a/b	18/10/2006	<ul style="list-style-type: none"> ✚ All Board members to review and comment upon the CoP1a/1b before the next MAMCoP Board Meeting ✚ Merge all the comments and circulate among MAMs. ✚ To ask Lloyds if they can provide some specific feedback on the MAM audit process in terms of areas that MAM's are performing well on and possible areas for improvement or additional guidance. 	ALL OFGEM(SR)
2	CoP1/c	18/10/2006	<ul style="list-style-type: none"> ✚ Merge the CoP1/c comments into one document. ✚ Additional feedback will be replied to SR using word format ✚ Publish the final version of CoP 1/c on the OFGEM website 	OFGEM(SR) ALL
3	Update on Appeal Process	17/01/2007	John Barrett to provide an update	John Barrett
		17/01/2007	SR circulate lawyer comments' in due course	OFGEM (SR)
4	Submission to ACS Scheme Committee to develop assessment criteria to cover IGE/GM/8 (REGT 2. Draft)	24/04/07	<ul style="list-style-type: none"> ✚ Send out letter to ACS Scheme Committee regarding to the assessment criteria to cover in IGE/GM/8. ✚ BM/DS agreed to confirm vent stack requirement for I & C metering 	OFGEM (SR) BSI (BM) IGEM (DS)
5	SPAA Update	24/04/07	✚ SR provides update on SPAA.	OFGEM (SR)

Appendix A - ACS Metering assessments for March 2007 provided by Phil Daniel

ACS METERING ASSESSMENTS MARCH 2007

Main figures of interest are in the 'Grey Columns'

Assessment Code	Initial Passed	% Initial Passed	Holding Valid Certificate	Passed Re Assess	% Passed Re Assess	Initial Failed	Failed Re Assess	ACS Total Cumulative	ACS from NVQ	Certificates Held ACS & NVQ Cumulative Initial & Re Assess
CMA1 *1.	505	98.44	311	5	100.00	8	0	518		311
CMA2LS	784	97.39	614	43	100.00	21	0	848		614
CMET1 *2.	1011	99.80	968	15	100.00	2	0	1028		968
CMET2 *3.	806	99.51	764	14	100.00	4	0	824		764
CMI1	216	99.54	113	43	100.00	1	0	260		113
MET1 *4.	17636	99.71	15426	1912	100.00	52	0	19600	3414	22648
MET2	553	97.70	367	6	100.00	13	0	572		367
MET3LS	789	97.77	616	46	100.00	18	0	794		616
MET4 *5	839	100.00	780	14	100.00	0	0	853	3048	3901
REG1	451	100.00	451	0	0	0	0	451		451
REG2	To be developed	on completion	of IGEM/GMB	Parts 3 & 4	-	-	-	-	-	0
TOTAL	23590	-	20410	2098	-	119	-	25748	6462	30753

*1. Operatives may hold CESP1. as an alternative core

*2. *3. Operatives holding these competence assessments may be holding the commercial core COCN1.

*4. Operatives holding this competence assessment through the ACS route will be holding the domestic core CCN1.
Operatives holding this competence assessment through the NVQ route will have been downloaded through 6012-02 or 6012-22 pathway route or 6012-04 emergency service route or 6012-44 renewable emergency service route.
(NB 6012-04 are renewed as 6012-44 & should not be added together)

*5. Operatives holding this competence assessment through the NVQ route will have been downloaded through 6012-03 or 6012-33 pathway route or 6012-04 emergency service route or 6012-44 renewable emergency service route.
(NB 6012-04 are renewed as 6012-44 & should not be added together)

Appendix B – Technical Publication provided by Ian Smith

JANUARY 2007

IGEM
Institution of
Gas Engineers & Managers

TECHNICAL PUBLICATIONS



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IGEM has published technical standards since the 1960s and these are now established as trusted gas industry standards. Drafting is carried out by expert Panels representing a cross section of the relevant parts of the industry, including regulatory bodies in many cases. The drafts are issued for peer review prior to publication and, therefore, take into account the often broad range of views within the industry. However, the professional status of IGEM ensures the standards demand the highest possible levels of safety and quality within reasonable cost. The majority of the publications relate to how to comply with aspects of relevant legislation such as the Pipelines Safety Regulations, the Gas Safety (Installation and Use) Regulations, the Dangerous Substances and Explosive Atmospheres Regulations, etc. and, equally, the majority are recognised by regulatory bodies such as HSE, Ofgem and CORGI as "appropriate standards" as referred to in such legislation.

The **SCOPE** allows an "at a glance" view of the subject of the publications and aspects covered. In general, the advice is set at an intermediate to high level although some books, such as IGE/GM/6, give detail on "standardised" installations and, hence, contain more prescription.

The full list of available publications follows the **SCOPE**.

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Nth Impression	Refers to a re-print with enhancements. Previous impressions remain current.
POA	Price on application (usually denotes that the document had yet to be published at the time of printing this list).

SCOPE OF IGEN TECHNICAL PUBLICATIONS

TD series	Upstream of and including ECV	Planning/design/ construction	Testing/ commissioning	Operation maintenance	Natural Gas	LPG	Other gases	Other fuels	Operational safety	Operational management	Risk and safety assessments	Load/stress analysis	Labelling/markings	Records	Corrosion and damage	Alterations	Connections	Legal & Standards	Steel pipe	PE pipe	Other pipe materials	Electrical	Pipe/meter sizing
TD/1 Ed 4	Transmission pipelines. 16 bar < MOP ≤ 100 bar	✓	✓	✓	✓				✓	✓	✓		✓	✓	✓	✓		✓	✓			✓	✓
TD/1 Ed 4 S1	Steel pipe and components. Storage and transportation								✓	✓					✓			✓	✓				
TD/3 Ed 4	Distribution pipelines. MOP ≤ 16 bar	✓	✓	✓	✓	✓			✓	✓			✓	✓	✓	✓	✓	✓	✓	✓			✓
TD/3 Ed 4 S1	PE pipe and components. Storage and transportation								✓	✓					✓			✓	✓				
TD/4 Ed 3	Services. MOP ≤ 7 bar	✓	✓	✓	✓	✓							✓	✓	✓	✓	✓	✓	✓	✓			✓
TD/12 Ed 2	Stress analysis											✓						✓	✓				
TD/13	Pressure regulating installations	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓
TD/101	Management of UIP activities									✓								✓					
GM series	Downstream of ECV except GM/4 and GM/7 which are also upstream																						
GM/4 Ed 2	Flow metering practice. MOP > 38 ≤ 100 bar	✓	✓	✓	✓								✓	✓	✓			✓	✓			✓	✓
GM/5 Ed 2	Electronic gas meter volume conversion systems	✓	✓	✓	✓								✓	✓				✓	✓			✓	✓
GM/6	Standard diaphragm and RD meter installations. > 5 m ³ h ⁻¹ MOP ≤ 75 mbar	✓	✓	✓	✓								✓	✓	✓			✓	✓			✓	✓
GM/7 Ed 2	Electrical connections and hazardous area classification. MOP ≤ 100 bar	✓		✓	✓						✓		✓	✓				✓	✓			✓	✓
GM/8 Pt 1	Meter installations. I&C – Design. MOP ≤ 38 bar	✓			✓									✓	✓		✓	✓	✓			✓	✓
GM/8 Pt 2	Meter installations. I&C – Location and housing.	✓		✓	✓									✓	✓		✓	✓	✓			✓	✓
GM/8 Pt 3	Meter installations. I&C – Installation and commissioning.	✓	✓		✓				✓	✓			✓	✓	✓		✓	✓	✓			✓	✓
GM/8 Pt 4	Meter installations. I&C – Operation and Maintenance.			✓	✓				✓	✓				✓	✓		✓	✓	✓			✓	✓
GM/8 Pt 5	Meter installations. I&C – Notices and labels. MOP ≤ 38 bar				✓								✓	✓			✓	✓	✓			✓	✓
UP series	Downstream of ECV																						
UP/1 Ed 2 RWA	Strength testing, tightness testing and purging MOP ≤ 16 bar (I&C)		✓		✓	✓	✓		✓	✓				✓				✓	✓	✓	✓	✓	✓
UP/1A Ed 2 RWA	Strength testing, tightness testing and purging MOP ≤ 46 mbar (I&C)		✓		✓				✓	✓				✓				✓	✓	✓	✓	✓	✓
UP/1B Ed 2	Tightness testing and purging (domestic). MOP ≤ 21 mbar		✓		✓									✓				✓	✓	✓	✓	✓	✓
UP/1C	Strength testing, tightness testing, and purging MOP ≤ 16 bar (I&C)		✓		✓									✓				✓	✓	✓	✓	✓	✓
UP/2	Installation pipework, boosters and compressors MOP ≤ 7 bar (I&C)	✓		✓	✓	✓							✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
UP/3 Ed 2	Gas fuelled spark ignition and dual fuel engines. MOP ≤ 400 bar	✓	✓	✓	✓		✓						✓	✓	✓		✓	✓	✓	✓		✓	✓
UP/4 Ed 2	Commissioning of gas fired plant (I&C)		✓		✓	✓	✓		✓	✓	✓			✓				✓	✓			✓	✓
UP/6	Compressors. MOP ≤ 400 bar	✓	✓	✓	✓								✓	✓	✓		✓	✓	✓	✓		✓	✓
UP/7 Ed 2	Gas installations in framed buildings (D, I&C)	✓			✓	✓								✓	✓			✓	✓	✓		✓	✓
UP/8	Gas installations in caravan holiday homes etc (D)	✓			✓									✓	✓			✓	✓	✓		✓	✓
UP/9 Ed 2	Gas turbines (I&C)	✓	✓	✓	✓		✓						✓	✓	✓		✓	✓	✓	✓		✓	✓
UP/10 Ed 2	Gas appliances in industrial and commercial pressures (I&C)	✓			✓	✓	✓						✓	✓				✓	✓	✓		✓	✓
UP/11	Gas in educational establishments (C)	✓		✓	✓				✓					✓	✓			✓	✓	✓		✓	✓
UP/12	Gas fired process plant (I&C)	✓	✓	✓	✓			✓					✓	✓	✓		✓	✓	✓	✓		✓	✓
UP/16	Generic risk assessments (DSEAR) (I&C)										✓			✓				✓	✓			✓	✓

GL Series	All upstream except GL/8 (also upstream) and GL/9 (downstream)	Planning	Design	Construction	Pipeline	Commissioning	Natural Gas	LPG	Other gases	Operational safety	Operational management	Risk and safety assessments	Operations	Maintenance	Labelling/markings	Records	Standards	Legal	Electrical
GL/1 Ed 2	Planning distribution systems. MOP ≤ 16 bar	✓	✓				✓										✓	✓	
GL/2	Planning transmission MOP > 16 bar	✓	✓				✓										✓	✓	
GL/3	Network emergency procedures						✓			✓	✓					✓	✓	✓	
GL/4	Management and audit procedures						✓			✓	✓					✓	✓	✓	
GL/5 Ed 2	Managing new works, modifications and repairs						✓			✓	✓					✓	✓	✓	✓
GL/6	Non-routine operations						✓			✓	✓					✓	✓	✓	
GL/8	Reporting and investigating incidents						✓	✓	✓		✓					✓	✓	✓	
GL/9	Responding to cessation of gas supply						✓			✓	✓						✓	✓	
G series	"Upstream" and "downstream"																		
G/1	Defining the end of the Network, meter installation, etc.						✓										✓	✓	
G/5	Gas installations in flats and other multi-dwelling buildings	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓	✓	✓	✓
SR series	Most apply to "upstream" and "downstream" situations																		
SR/4 Ed 2	Low pressure gas holders lighter than air gases.	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓		✓	✓	✓	
SR/9 Ed 2	Safe working practices for PRTs	✓					✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
SR/10 Ed 2	Dealing with escapes of gas into underground plant	✓			✓		✓	✓	✓	✓	✓	✓				✓	✓	✓	
SR/12 Ed 2	Handling of methanol	✓	✓							✓	✓						✓	✓	
SR/14 Pt 1	High pressure gas storage - above ground	✓	✓	✓	✓	✓	✓			✓	✓		✓	✓		✓	✓	✓	
SR/14 Pt 2	High pressure gas storage - buried pipe arrangements	✓	✓	✓	✓	✓	✓			✓	✓		✓	✓		✓	✓	✓	
SR/15 Ed 4	Integrity of safety-related systems		✓				✓			✓	✓	✓				✓	✓	✓	✓
SR/18 Ed 2	Safe working for the integrity of pipelines and installations	✓					✓	✓	✓	✓	✓						✓	✓	✓
SR/20 Ed 2	Dealing with reported gas escapes	✓			✓		✓	✓	✓	✓	✓					✓		✓	
SR/22	Purging fuel gases	✓	✓	✓			✓	✓	✓	✓	✓					✓	✓	✓	
SR/23	Venting Natural Gas	✓	✓	✓				✓		✓	✓					✓	✓	✓	
SR/24	Risk assessments											✓					✓	✓	
SR/25	Hazardous area classifications		✓				✓					✓				✓	✓	✓	✓
SR/26	Horizontal directional drilling and impact muling	✓								✓	✓						✓	✓	
SR/28	Trenchless techniques	✓								✓	✓						✓	✓	

D is domestic
I is industrial
C is commercial

IGEM TECHNICAL PUBLICATIONS LIST

ITEM and EDITION	TITLE AND COMMUNICATION NO.	DATE	STANDARD 2007 PRICE £	MEMBER/IA 2007 PRICE £
RECOMMENDATIONS ON TRANSMISSION AND DISTRIBUTION PRACTICE				
IGE/TD/1 Ed 4 (add Amendments)	Steel pipelines for high pressure gas transmission (1670)	2001	159	119
IGE/TD/1 Ed 4 Supplement 1	Handling, transport and storage of steel pipe, bends and fittings (1671)	2001	48	36
IGE/TD/3 Ed 4 (add Amendments)	Steel and PE pipelines for gas distribution (1677)	2003	123	92
IGE/TD/3 Ed 4 Supplement 1	Handling, transport and storage of PE pipe and fittings (1682)	2003	57	43
IGE/TD/4 Ed 3	Gas services (1562) Receive IGE/G/1 free of charge.	1994	57	43
IGE/TD/12 Ed 2 (add Amendments)	Pipework stress analysis for gas industry plant (1681)	2003	85	64
IGE/TD/13 (add Amendments)	Pressure regulating installations for transmission and distribution systems (1672)	2001	150	112
IGE/TD/101	Adoption of pipe systems by a GT - management of UIP activities (1674)	2002	57	43
IGE/TD series	Set of Amendments. Download at www.igem.org.uk	2006	FREE	FREE
GAS MEASUREMENT PROCEDURES (ALL INCLUDE IGE/G/1 FREE OF CHARGE)				
IGE/GM/4 Ed 2	Flowmetering practices. Inlet pressure exceeding 38 bar and not exceeding 100 bar (1719) Receive IGE/G/1 free of charge.	2006	113	85
IGE/GM/5 Ed 2	Selection, installation and use of electronic gas meter volume conversion systems (1669)	2000	85	64
IGE/GM/6	Specification for low pressure diaphragm and rotary displacement meter installations with badged meter capacities exceeding 6 m ³ /h (212 ft ³ /h) but not exceeding 1076 m ³ /h (38000 ft ³ /h) (1635)	1996	104	78
IGE/GM/7 Ed 2 (add amendments)	Electrical connections and hazardous area classification for gas metering equipment (1702)	2004	85	64
IGE/GM/8 Part 1	Non-domestic meter installations. Flow rate exceeding 6 m ³ h ⁻¹ and inlet pressure not exceeding 38 bar Design (1706) Receive IGE/G/1 free of charge	2005	132	99
IGE/GM/8 Part 2	Locations, housings and compounds (1707)	2005	57	43
IGE/GM/8 Part 3	Installation and commissioning (1708)	2006	76	57
IGE/GM/8 Part 4	Operation and maintenance (1709)	2006	57	43
IGE/GM/8 Part 5	Notices and labels (1710)	2005	57	43
IGE/GM Series	Set of Amendments. Download at www.igem.org.uk	2005	FREE	FREE
UTILIZATION PROCEDURES				
IGE/UP/1 Ed 2 Reprint with Amds	Strength and tightness testing and direct purging of industrial and commercial gas installations (1716)	2005	85	64
IGE/UP/1A Ed 2 Reprint with Amds	Strength and tightness testing and direct purging of small low pressure industrial and commercial Natural Gas installations (1717)	2005	66	49
IGE/UP/1B Ed 2	Tightness testing and direct purging of small Natural Gas installations (1714)	2006	57	43
IGE/UP/1C	Strength and tightness testing and direct purging of industrial and commercial Natural Gas meter installations (1705)	2007	POA	POA
IGE/UP/2 Reprint with Amendments	Gas installation pipework, boosters and compressors on industrial and commercial premises (1598)	1994	95	71
IGE/UP/3 Ed 2	Gas fuelled spark ignition and dual fuel engines (1720)	2006	76	57
IGE/UP/4 Ed 2	Commissioning of gas fired plant on industrial and commercial premises (1653)	1999	48	36
IGE/UP/6 (add Amendments)	Application of positive displacement compressors to Natural Gas fuel systems (1646)	1998	76	57
IGE/UP/7 Ed 2	Gas installations in timber framed and light steel framed buildings (1722)	2006	76	57
IGE/UP/8	Gas installations for caravan holiday homes, residential park homes and permanently moored boats (1647)	2001	66	49
IGE/UP/9 Ed 2	Application of Natural Gas and fuel oil systems to gas turbines and supplementary and auxiliary fired burners (1705)	2004	76	57
IGE/UP/10 Ed 2	Installation of gas appliances in industrial and commercial premises (1676)	2002	30	22
IGE/UP/11	Gas installations in educational establishments (1704)	2004	57	43
IGE/UP/12	Application of burners and controls to gas fired process plant (1713)	2006	104	78
IGE/UP/16	Generic risk assessments for DSEAR	2007	POA	POA
IGE/UP Series	Set of Amendments. Download at www.igem.org.uk	2005	FREE	FREE

GAS LEGISLATION GUIDANCE				
IGE/GL/1 Ed 2 (add amendments)	Planning of gas distribution systems of MOP not exceeding 16 bar (1718)	2005	57	43
IGE/GL/2	Planning of transmission and storage systems operating at pressures exceeding 7 bar (1627)	1996	57	43
IGE/GL/3	Network emergency procedures (1628)	1996	48	36
IGE/GL/4	Management and audit procedures (1629)	1996	48	36
IGE/GL/5 Ed 2	Procedures for managing newworks, modifications and repairs (1715)	2005	48	36
IGE/GL/6	Non-routine operations (1631)	1996	48	36
IGE/GL/8 (add amendments)	Reporting and investigation of gas related incidents (1633)	1996	57	43
IGE/GL/9	Guidance for large consumers in dealing with Natural Gas supply emergencies. Download at www.igem.org.uk	2006	FREE	FREE
IGE/GL Series	Set of Amendments. Download at www.igem.org.uk	2005	FREE	FREE
GENERAL GAS PROCEDURES				
IGE/G/1 2nd Impression	Defining the end of the Network, a meter installation and installation pipework (1723)	2006	57	43
IGE/G/1 1st Impression	Optional set of Enhancements (1703). Download at www.igem.org.uk	2006	FREE	FREE
IGE/G/5 (add amendment)	Gas Installations in flats and other multi-dwelling buildings (1712) inc. Receive IGE/G/1 free of charge.	2006	95	71
IGE/G Series	Amendments. Download at www.igem.org.uk	2006	FREE	FREE
SAFETY RECOMMENDATIONS				
IGE/SR/4 Ed 2	Low pressure gasholders storing lighter-than-air gases (1624)	1996	24	18
IGE/SR/9 Ed 2	Safe working practice for PRIs (1654)	1999	48	36
IGE/SR/10 Ed 2	Dealing with escapes of gas into underground plant (1660)	1999	48	36
IGE/SR/12 Ed 2	Handling of methanol (1661)	1999	48	36
IGE/SR/14	High pressure gas storage Part 1 – Above ground storage vessels (1600) Part 2 – Buried pipe arrays(1601)	1999 1995	66 66	49 49
IGE/SR/15 Ed 4	Integrity of safety-related applications in the gas industry (1711)	2005	76	57
IGE/SR/18 Ed 2	Safe working practices to ensure the integrity of gas pipelines and associated installations (1678)	2002	48	36
IGE/SR/20 Ed 2	Dealing with reported gas escapes (1650)	1998	48	36
IGE/SR/22	Purging operations for fuel gases in transmission, distribution and storage (1625)	1999	76	57
IGE/SR/23	Venting of Natural Gas (1623)	2000	66	49
IGE/SR/24	Risk assessment techniques (1655)	1999	66	49
IGE/SR/25	Hazardous area classification of Natural Gas installations (1665)	2000	76	57
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IGE/SR/26	Horizontal directional drilling and impact moling (1662)	1999	66	49
IGE/SR/28	Trenchless techniques (1680)	2002	85	64
IGE/SR/28	Operators Guides (set of 11 encapsulated Guides)	2003	18	13
CERTIFICATES OF STRENGTH AND TIGHTNESS TESTING AND DIRECT PURGING TO IGE/UP/1 EDITION 2 AND IGE/UP/1A EDITION 2 (shrink wrapped pads of 25 triplicate certificates)				
StT/UP/1A	Certificate of strength testing for IGE/UP/1A	2004	18	13
TT/UP/1A	Certificate of tightness testing for IGE/UP/1A	2004	18	13
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TT/UP/1	Certificate of tightness testing for IGE/UP/1	2004	18	13
DP/UP/1	Certificate of direct purging for IGE/UP/1	2004	18	13
BRITISH GAS PLC PUBLICATIONS				
IM/28	Appliances in Commercial Garages.	1993	20	15

ADVANTICA LTD TECHNICAL STANDARDS

IGEM currently stocks 26 Advantica Ltd Standards. These are the standards referenced in IGE/TD/1 Ed 4, IGE/TD/3 Ed 4, IGE/TD/4 Ed 4 (forthcoming), IGE/TD/13 and IGE/TD/101 but many may be used in conjunction with other IGEM technical publications.

Advantica - formerly BG Technology Ltd - is a leading provider of technology and engineering services to customers in gas, pipelines and associated industries internationally, with its origins in research, technology and engineering.

For further information visit the web site at www.advanticatech.com.

These standards are published by Advantica Ltd, and IGEM acts only as an agent for their sale.

There were formerly 42 of these Advantica Standards. 16 have been withdrawn but up to date equivalent versions are free to download (along with 49 further gas distribution standards) at www.gasindustrystandards.com.

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B4/E	Carbon and carbon manganese steel bends 50 mm to 400 mm inclusive nominal size produced from seamless pipe for operating pressures greater than 7 bar	2002	30
B7/E	Carbon and carbon manganese steel bends equal to or greater than 450 mm normal size for operating pressures greater than 7 bar	2002	30
B11/E	Carbon and carbon manganese steel bends 200 mm nominal size and above produced from pipe by induction bending for operating at pressures above 7 bar	2002	30
E17/E Part 1	Insulation joints – Joints equal to or greater than 80 mm nominal size operating at pressures greater than 7 bar for class ratings 150, 300 and 600	2002	30
E17/E Part 3	Insulation joints – Joints less than 80 mm nominal size operating at pressures greater than 7 bar for class ratings 150, 300 and 600	2002	30
ECE3/E	Technical specification for transportable electricity generator sets, including generators combined with compressors	2002	43
F1/E	Carbon and carbon manganese steel forgings and forged components for operating pressures greater than 7 bar	2002	30
F3/E	Carbon and carbon manganese steel reducers 50 mm to 1050 mm inclusive nominal size for operating pressures greater than 7 bar	2002	30
F8/E	Carbon and carbon manganese steel butt welding end caps	2002	30
L1/E	Seamless line pipe 40 mm to 100 mm inclusive nominal size for operating pressures greater than 7 bar	2002	30
LC8/E Part 4	Methods of repairing leaking ferrous gas mains – pipe repair clamps, split collars and under pressure branch connections	2002	43
LX1/E	Submerged-arc welded pipe 1400 mm to inclusive nominal size for operating pressures greater than 7 bar	2002	30
LX4/E	Seamless pipe 150 mm to 450 mm inclusive nominal size for operating pressures greater than 7 bar	2002	30
LX5/E	Electric-welded pipe 150 mm to 450 mm inclusive nominal size for operating pressures greater than 7 bar	2002	30
PRS 1/E Issue 3	Brass and copper fittings	2002	43
PRS 3/E	Meter regulators for gas flow rates not exceeding 6 m ³ /h and inlet pressures less than 75 mbar	2004	30
PRS 6/E	Semi rigid and flexible meter connectors	2004	30
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PT5/E	Procedure for pressure testing small bore pipework	2002	30
T1/E	Carbon and carbon manganese steel tees equal to or greater than 450 nominal size produced from plate for operating pressures greater than 7 bar	2002	30
T2/E	Carbon and carbon manganese steel tees 50 mm to 450 mm inclusive nominal size produced from plate for operating pressure greater than 7 bar	2002	30
V6/E Part 1	Steel valves for use with Natural Gas at normal operating pressures above 7 bar part 1 – 100 mm nominal size and above	2002	30
V6/E Part 2	Steel valves for use with Natural Gas at normal operating pressures above 7 bar part 2 – 80 mm nominal size and below	2002	30
WP1/E	Procedure for weldability testing of pipe fittings for service at pressures above 7 bar	2002	30
DAT6/E	Carbon and carbon manganese steel pipe for operating pressures greater than 7 bar	2002	30
DAT39/E	Refurbishment of butt fusion machines	2002	43

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Overview

- Who are we
- Demand for course
- Requirements
- Provision
- Certification
- Approval



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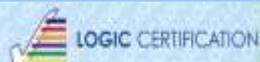
Who are we

- Logic Certification is a UKAS accredited personnel certification body operating to ISO 17024, involved within the gas, electrical, plumbing and renewable sectors
- We produce training and assessment packages for our 85 Logic approved assessment centres to nationally recognised standards



MEB Course – Why?

- Request from Wale & Western Utilities for a course relevant to gas meter installations
- Request from United Utilities for a course relevant to gas meter exchanges
- Requirement for operatives to be able to complete the re-fitting or extending of the MEB safely, and when able, without the need to have an electrician attend site because of the scheduling and cost problems this may cause



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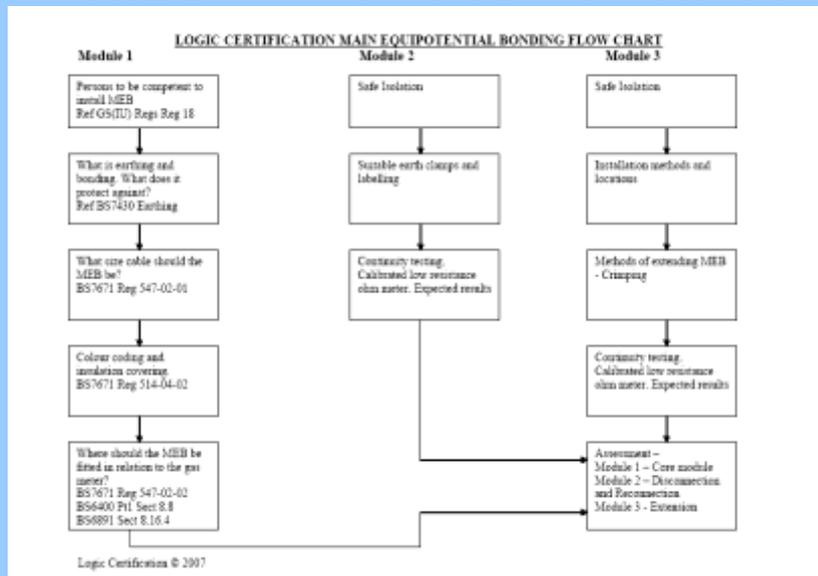
Regulatory Requirements

- **BS7671:2001** Requirements for Electrical Installations.
- **IEE On site guide**
- **HSR 25** - Memorandum of Guidance on the Electricity at Work Regulations
- **GS38** - HSE Electrical Test Equipment for use by electricians Guidance Note
- **BS6400:2006** Installation, exchange, removal of gas meters
- **BS6891:2005** Installation of domestic pipework
- **Gas Safety (Installation and Use) Regulations**
- **BS7430:1998** Code of practice for earthing



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MEB Course Flow Chart



Knowledge areas covered

- Regulations and principles
- Safe working procedures and safe isolation
- Inspection and identification of systems, components and materials
- Practical competence to complete repositioning and alteration
- Practical competence to complete extension of MEB
- Testing and recording of results required under BS7671



Course Duration

- Expected duration 1 day with ability to deliver to 12 candidates at one times (subject to approval)
- Cost to be negotiated directly with the training provider



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Assessment of competence

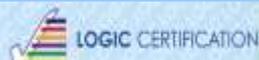
- Written assessment containing 20 multiple choice questions
- Practical assessment of ability to correctly identify the required components, safe isolation, crimping where necessary, testing of system and recording of results



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Required facilities

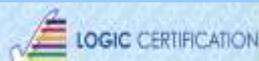
- Practical training and assessment and visual identification board
- Test meter to required resolution (ie.MT1887A) resistance=0.01?
- Various cables, crimps, crimping tool
- Relevant standards
- Relevant recording certificate



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Delivery

- Logic Certification has over 50 approved electrical centres around the UK
- Logic Certification can approve utilities directly as approved centre if required
- Logic Certification will certificate and provide ID cards to all successful candidates

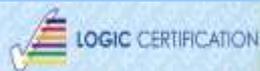


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Final Requirement

Consensus amongst the utilities and acceptance of common qualification across all parties

QUESTIONS??



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Appendix D – OFGEM Letter 'Gas Supply Licence Meter Work Obligation' provided by Steve Rowe