

## Smart Meter Installations (Dual Fuel) - non statutory (Wales)

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Issue date: 21 March 2016

Published by  
Energy and Utility Skills

apprenticeship  
FRAMEWORKS ONLINE  
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# Smart Meter Installations (Dual Fuel) - non statutory (Wales)

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# Framework summary

## Smart Meter Installations (Dual Fuel) - non statutory

### Foundation Apprenticeship in Smart Meter Installations (Dual Fuel)

#### Pathways for this framework at level 2 include:

##### Pathway 1: Foundation Apprenticeship in Smart Meter Installations (Dual Fuel)

###### Competence qualifications available to this pathway:

N/A

###### Knowledge qualifications available to this pathway:

N/A

###### Combined qualifications available to this pathway:

B1 - Level 2 Diploma in Smart Metering Dual Fuel

###### This pathway also contains information on:

- Employee rights and responsibilities
- Essential skills



# Framework information

## Information on the Publishing Authority for this framework:

### Energy and Utility Skills

The Apprenticeship sector for occupations in electricity, gas and water supply, and waste management (also includes gas utilisation, recycling and waste water collection and treatment)

Issue number: 2	<b>This framework includes:</b>
Framework ID: FR03816	Level 2
Date this framework is to be reviewed by: 28/09/2017	This framework is for use in: <b>Wales</b>

## Short description

This framework has been developed to support employers in the Government's roll out of installing Smart Meters in all homes in the UK by 2014. The apprenticeship covers the installation of both gas and electric meters and associated equipment, including communication equipment. This is an Intermediate Level apprenticeship only.



# Contact information

## Proposer of this framework

The Metering Industry Network of the gas and power industry propose this framework

### Developer of this framework

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# Revising a framework

## Contact details

Who is making this revision: Liz Pridgeon  
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Your email address: enquiries@euskills.co.uk

## Why this framework is being revised

The review date has been amended

## Summary of changes made to this framework

None

## Qualifications removed

None

## Qualifications added

None

## Qualifications that have been extended

*(no information)*



# Purpose of this framework

## Summary of the purpose of the framework

The UK gas and electricity smart meter installations sector covers the activities associated with the installation of smart meters and associated equipment for the gas and power industries. With the announcement of the Government's target to have smart meters installed in all 27 million homes in the UK by 2020, smart meters are already being offered by some suppliers, but without a universal standard, installed meters may not be able to provide all the benefits envisaged by the government. In addition, they could be rolled out without adequate testing, potentially leading to accidental disconnection from the grid.

With potentially 53 million gas and electricity meters in total across the UK that need to be changed to smart meters, it is critical to facilitate an adequate supply of competent people with the ability to install and commission dual fuel smart meters and communication systems in order to meet the Government targets.

A key requirement for Smart Meter installers is they will have to have dual-fuel capability, know how to commission the communications for the smart meter, pair up the in-home display device (IHD) and explain how it works to the customer. This requires a much broader set of technical and softer skills than is normally expected from a meter installer. All of these skills will be provided within the proposed framework.

Within the smart metering business there is a forecast requirement to either recruit or up-skill approximately 6300 installers between 2014 and 2019. That, coupled with the fact that a high proportion of existing metering workforce are approaching retirement age over the next five years, could see a need for around 4000 new recruits during this period. The Smart Meter Installations (Dual Fuel) Intermediate Apprenticeship provides the opportunity to address the current and future skills requirements of industry, as well as providing apprentices with the skills for sustainable employment within the industry and a real opportunity to progress.

This Apprenticeship supports the delivery of skills required to address the Government's energy challenge and support a low-carbon, resource efficient economy.

## Aims and objectives of this framework (Wales)

Aim:

- To contribute to the development of a sustainable workforce for the installation of dual fuel smart meters

Objectives:



- To up-skill existing meter installers within the gas and electricity industries
- To attract new entrants into the gas and electricity industries
- To develop occupationally competent workers in the installation of dual fuel smart meters
- To facilitate progression within the industries
- To support the Government's target of replacing all meters in all 27 million households in the UK with smart meters by 2020
- To support the Government's ambition outlined in Skills that Work for Wales for a strong Apprenticeship system



# Entry conditions for this framework

The Foundation Apprenticeship in Smart Meter Installations is open to individuals of any age and does not impose any restrictions to entry. Responsibility for selection and recruitment of apprentices lies with the employer who will have a clear idea of their requirements.

The qualifications included within this Apprenticeship are demanding and many employers will look for applicants who have gained the Welsh Baccalaureate Intermediate Diploma or above to demonstrate an ability to complete the Foundation Apprenticeship.

However, employers are asked to be flexible when recruiting people onto the Apprenticeship. Where employers/providers have robust learner support systems in place (such as tutorials and mentoring programmes), an individual who historically has not done particularly well at reading, writing and numeracy may thrive on an Apprenticeship where the relevance and application of these subjects is understood.

## **Characteristics and attributes:**

- Gas and Electricity can be dangerous if not handled correctly so the safety of apprentices, their work colleagues and the public are of the upmost importance in this job. Apprentices must be very safety conscious and have a very responsible attitude to work.
- These are physically demanding jobs that involve bending and lifting so a basic level of fitness is important to be able to conduct the job efficiently.
- These jobs can involve work outdoors, so apprentices should be prepared to work in any kind of weather.
- Apprentices will need to have good practical skills for handling tools and instruments and be prepared for some hard work. This is a very skilled job and some aspects require significant amounts of concentration.
- Excellent communication skills are needed plus the ability to work within a team and independently.
- The job may involve travelling as apprentices are often field based and will respond to emergencies day or night. Apprentices therefore need to be adaptable and flexible and a driving license is desirable.
- Cable core identification is often coloured and in these circumstances correct colour vision is important. If potential applicants are concerned about colour blindness they should discuss this with the recruiting employer to identify the job role(s) that would be most suitable.
- Apprentices will need to have an interest in the gas and power industry and in



mechanical/electrical/physical equipment and networks.



## Level 2

Title for this framework at level 2

# Foundation Apprenticeship in Smart Meter Installations (Dual Fuel)

### Pathways for this framework at level 2

Pathway 1:      Foundation Apprenticeship in Smart Meter Installations (Dual Fuel)



## Level 2, Pathway 1: Foundation Apprenticeship in Smart Meter Installations (Dual Fuel)

### Description of this pathway

The Foundation Apprenticeship in Smart Meter Installations Dual Fuel requires a minimum total of 75 credits to be achieved.

### Entry requirements for this pathway in addition to the framework entry requirements

There are no additional entry requirements other than the general apprenticeship entry conditions.



Job title(s)	Job role(s)
Smart Meter Installer (Dual Fuel)	Installing and commissioning low pressure gas and single phase electricity Smart Meters, including the installation and commissioning of smart meter communications units.



# Qualifications

## Competence qualifications available to this pathway

N/A

## Knowledge qualifications available to this pathway

N/A



## Combined qualifications available to this pathway

B1 - Level 2 Diploma in Smart Metering Dual Fuel					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B1a	600/1888/4	BPEC	63	322	N/A
B1b	600/1282/1	City & Guilds	63	322	N/A

## Relationship between competence and knowledge qualifications

Learners on this apprenticeship will acquire the underpinning knowledge for the apprenticeship through the combined competence and knowledge qualification. For the combined competence and knowledge qualification there are separate knowledge and competence units within the qualification.

The knowledge unit delivering the knowledge for this apprenticeship is the unit 'Applied Practices and Principles for Installing Low Pressure Natural Gas Smart Meters up to U6 only' and is a unit of 20 credits (150 learning hours).



# Transferable skills (Wales)

## Essential skills (Wales)

	Minimum level	Credit value
Communication	1	6
Application of numbers	1	6
IT	Not applicable	

## Progression routes into and from this pathway

### Progression routes into the pathway:

Applicants may come from a range of routes including:

- work or work experience either in the gas or power sector or from other engineering sectors
- training and/or experience which could include a portfolio showing what they have done
- academic qualification(s) such as the Welsh Baccalaureate
- achievement of Essential Skills Wales
- successful completion of a Young Apprenticeship

Individuals must meet the entry conditions (see entry conditions) of the Intermediate Level Apprenticeship and the recruiting employer.

Existing members of the workforce may also progress into this Foundation Apprenticeship.

### Progression routes out of the pathway:

The apprentice's knowledge about career pathways, information sources and the names of relevant professional bodies are developed as part of the Employee Rights and Responsibilities component of this Foundation Apprenticeship.

Throughout any career in the gas and electricity industries, individuals will be provided with the necessary on-going and off job training, including refresher training and new skills training, to enable them to carry out their job role competently.

On completion of the Foundation Apprenticeship under normal circumstances graduate apprentices may continue to work as a competent dual fuel smart meter installer.

Employers have indicated they would like a Level 3 Apprenticeship to be developed in the



future and, subject to funds, this is likely to be developed over the next 12 months. Once this has been developed, graduate apprentices can progress on to the Level 3 Apprenticeship.

Graduate Apprentices can also progress horizontally within either the gas or electricity industries to complete competence qualifications at the same level or higher level units relevant to the job role or progression into another job role.

Progression opportunities available could include:

- Level 3 Energy Assessor
- Level 3 Electrical Meter Installer (HV/CT)
- Level 3 Electrician Trainee
- Level 3 Team Leader
- Core Gas Safety Certificate (CNN1 - required to progress within the gas industry)
- Level 2 Electrical Distribution Trainee
- Level 2 Plumbing and Heating Trainee

For further information on careers within the gas and electricity industries please visit [www.euskills.co.uk/careers](http://www.euskills.co.uk/careers)



# Employee rights and responsibilities

The nine outcomes of Employee Rights and Responsibilities (ERR) must be met by all apprentices.

They ensure that the apprentice:

1. knows and understands the range of employer and employee statutory rights and responsibilities under employment law and that employment rights can be affected by other legislation. This covers the apprentices' rights and responsibilities under the Disability Discrimination Act, other relevant equalities legislation and Health and Safety;
2. knows and understands the procedures and documentation in their organisation which recognise and protect their relationship with their employer. Health and Safety and Equality and Diversity training is an integral part of the apprentices' learning programme;
3. knows and understands the range of sources of information and advice available to them on their employment rights and responsibilities. This includes details of Access to Work and Additional Learning Support;
4. understands the role played by their occupation within their organisation and industry;
5. has an informed view of the types of career pathways that are open to them;
6. knows the types of representative bodies and understands their relevance to the industry and organisation and their main roles and responsibilities
7. knows where and how to get information and advice on their industry, occupation, training and career;
8. can describe and work within their organisation's principles and codes of practice;
9. recognise and can form a view on issues of public concern that affect their organisation and industry.

EU Skills has developed an ERR workbook to support delivery of this unit.

Use and completion of this workbook is a compulsory outcome of this Foundation Apprenticeship and needs to be evidenced at the point of certification.

The workbook can be downloaded from EU Skills website: [www.euskills.co.uk](http://www.euskills.co.uk)



*The remaining sections apply to all levels and pathways within this framework.*

# How equality and diversity will be met

## Under-representation

The gas and power industries are affected by a gender imbalance. No data is available from the Gas Safe Register in terms of the gender and ethnicity of the gas utilisation workforce, however it is accepted that females are under-represented. 27% of the gas transmission and distribution sub-industry is female compared to the 43% UK average. 7% of the workforce is from a black or minority ethnic (BME) background compared to 8% of the UK average. In the power industry females constitute only 26.8% of the workforce compared to the 43% UK average. Females are even more poorly represented in technical roles at 1.7% of the workforce compared the UK average of 8.6%. In addition, only 4% of the power industry workforce is from a black or minority ethnic (BME) background compared to 8% of the UK workforce.

## Barriers to entry and progression

Unfounded social perceptions about the suitability of technical roles within the industry for women provide the only barrier to entry and progression for these under-represented groups.

## Solutions to entry and progression

Apprenticeships are seen as a vital route to encourage and facilitate a greater diversity of individuals into the industry. This Apprenticeship does not discriminate. Employers/providers must be able to demonstrate that there are no overt or covert discriminatory practices in selection and employment. All promotional, selection and training activities must comply with relevant legislation, in particular, the Equality Act 2010.

Equal opportunities policies and procedures will contribute to the Employee Rights and Responsibilities component of this Apprenticeship. It is recommended that employers/providers conduct an exit interview if the Apprentice leaves the Apprenticeship before completion.

The larger employers in the industry are actively involved in initiatives to increase the representation of women and BME groups in the industry. Energy & Utility Skills will support these initiatives by promoting specifically to these groups. Take up will be monitored through analysis of statistical returns from the National Apprenticeship Service (NAS) and through internal registration data. Where questions arise concerning policy and practice, Energy & Utility Skills will work closely with NAS to identify causes and to implement positive action where appropriate.



Energy & Utility Skills will continue to host stands at careers fairs where we can promote this Apprenticeship to all groups including females and BME. In addition we have developed a number of case studies of successful women working in the gas sector, which we are using to encourage new female entrants.

These case studies can be accessed at: <http://www.euskills.co.uk/careers/>

Energy & Utility Skills and power industry employers have established the National Skills Academy for Power to develop the capacity, capability, quality and consistency of training and education to deliver the skills needs of a sustainable UK power industry. One of the National Skills Academy's strategic objectives is to:

"Increase the attractiveness and diversity of the sector to future and existing employees, learners and trainers, demonstrating clear recognised career and development paths and 'connecting up' the promotion of the sector to new recruits and learners in line with the education system through schools, careers advisors and Further and Higher Education."

The National Skills Academy for Power has established the Sector Attractiveness Working Group with the purpose to:

"Broaden the "pool" of potential employees in the power industry through increased sector profile and attractiveness."

The working group has produced a sector attractiveness strategy which focuses on two key activity areas: stakeholder engagement and learner engagement. It will identify solutions to entry and progression.

The National Skills Academy for Power is working with industry employers and the UKRC - the UK Government's lead organisation for the provision of advice, services and policy consultation regarding the under-representation of women in science, engineering, technology and the built environment (SET) - to identify ways to attract women to the power industry.



# On and off the job training (Wales)

## Summary of on- and off-the-job training

Learning hours attached to the Foundation Apprenticeship refers to the time taken by the apprentice to develop the practical skills and underpinning knowledge to demonstrate competence in their job role. Learning hours should:

- achieve clear and specific outcomes which contribute directly to the successful achievement of the framework and this may include accredited and non-accredited elements of the framework;
- be planned, reviewed and evaluated jointly between the apprentice and a tutor, teacher, mentor or manager; allow access as and when required by the apprentice either to a tutor, teacher, mentor or manager;
- be delivered during contracted working hours;
- be delivered through one or more of the following methods: individual and group teaching; e-learning; distance learning; coaching; mentoring; feedback and assessment; collaborative/networked learning with peers; guided study.
- be recorded e.g. in a log book or diary.

**The industry would expect the Foundation Apprenticeship to take between 6 and 9 months to complete of which 8 months is the average. Where this is the case a minimum of 474 learning hours must be completed over the duration of the Apprenticeship.**

It is anticipated that these learning hours will be broken down as follows:

21 - induction

322 - combined qualification - Level 2 Diploma in Smart Meter Dual Fuel Installations

45 - level 1 Essential Skills Wales in Application of Number

45 - level 1 Essential Skills Wales in Communication

30 - related to completion of the Employment Rights and Responsibilities workbook

3 - progress reviews (at least one hour every 12 weeks for the duration of the programme)

8 - mentoring (at least one hour every month for the duration of the programme)



Of the total minimum learning hours listed above, this framework prescribes the minimum number of learning hours, which must be delivered on the job and the minimum number of learning hours, which must be delivered off the job.

Once the minimum on and off job learning hours have been met, delivery of the 115 outstanding learning hours required to meet the total minimum 474 learning hours can be either on or off the job. This flexibility is included to ensure that the Apprenticeship accommodates the need of industry employers and reflects the nature of the apprentices' job role.

Apprenticeships are focused upon outcomes and not time served. The expected time taken to complete the minimum mandatory outcomes is indicative only. The pace of the apprentice's progress and the actual learning hours will depend on their ability and the support they receive. In addition, some employers/providers may include a longer induction period or more frequent progress reviews, which will increase the Apprenticeship duration and the learning hours therefore changing the proportions of learning hours delivered on and off the job.

EU Skills recommends that a plan is developed at the outset of the Apprenticeship to determine how the learning hours requirement will be met. It is also recommended that the apprentice keeps a record of learning hours.

When claiming an Apprenticeship completion certificate, providers will be required to submit a signed declaration form to EU Skills. This declaration states that the provider has delivered the Apprenticeship in line with EU Skills' intentions for the minimum off the job and total learning hours as specified in this framework. The declaration form and Apprenticeship completion certificate request form are available to download from [www.euskills.co.uk](http://www.euskills.co.uk)

## Off-the-job training

Off the job learning hours are the hours associated with learning that takes place "away from the immediate pressures of the job" for example, in a training room on the employers' premises.

Over the duration of the Foundation Apprenticeship a minimum of 183 learning hours must be completed off the job.

Off the job training undertaken before the apprentice started their Apprenticeship may count towards the off the job training required for the Apprenticeship, if it was undertaken in relation to a qualification within this framework. The learning hours associated with the qualification can be counted towards the framework learning hours.

## How this requirement will be met



Off-the-job learning hours will be recorded and evidenced through:

30 - ERR Workbook

150 - Applied Practices and Principles for Installing Low Pressure Natural Gas Smart Meters up to U6 only - specific knowledge unit within the Level 2 Diploma in Smart Metering Dual Fuel

3 - Progress reviews

Total off-the-job learning = 183 learning hours

Off-the-job learning hours may also be recorded and evidenced through:

- Certificate of achievement for the Essential Skills Wales

## On-the-job training

On the job learning hours refer to the time taken to develop the practical skills applied in the context of the apprentices' day-to-day job role. It can be seen as the time the apprentice spends undertaking activities that are routine for their job role and that provide the opportunity to learn, develop and practice skills.

The minimum on the job learning hours for the Foundation Apprenticeship are 176 learning hours, which are broken down as follows:

172 – competence units within the combined competence qualification

4 - Induction

Total on the job learning hours = 176

## How this requirement will be met

On-the-job learning hours will be recorded and evidenced through:

Certificate of achievement for the competence qualification

Successful completion of the Foundation Apprenticeship



# Wider key skills assessment and recognition (Wales)

## Improving own learning and performance

This is not a mandatory outcome of the framework because these skills are not essential for effective performance in the job role: however, apprentices are encouraged to complete this wider key skill where they are able to and providers should support apprentices that wish to do so.

## Working with others

This is not a mandatory outcome of the framework because these skills are not essential for effective performance in the job role: however, apprentices are encouraged to complete this wider key skill where they are able to and providers should support apprentices that wish to do so.

## Problem solving

This is not a mandatory outcome of the framework because these skills are not essential for effective performance in the job role: however, apprentices are encouraged to complete this wider key skill where they are able to and providers should support apprentices that wish to do so.



## Additional employer requirements

Although not a mandatory part of this framework, employers have indicated that, as Smart Meter Installers will be taking enquiries from the general public on matters of energy efficiency, it would be desirable if the following qualification was achieved by the Apprentice in the completion of this framework:

Level 2 Award in Energy Efficiency in the Workplace. This is a 2 Credit (12 learning hours) qualification and is available from the following Awarding Organisations:

City & Guilds - Reference 600/2376/4

Edexcel - Reference 600/0550/6



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