

Vocational Education and Training across the Gas sector in Europe

Interim findings

September 2012

Introduction

A key aspect of managing change at work is the anticipation of the evolution of skills and competencies, and changes to occupations. These concepts are central to a successful VET system and thus are a key concern for the social partners in the European gas sector. This report is part of a European Commission funded project seeking to build a better understanding of the Vocational Education and Training (VET) infrastructure across the EU27, providing the sector with a skilled workforce, and to begin discussions with these bodies with a view to creating a Sector Council for the European gas industry.

To overcome the challenges presented by issues such as the current financial crisis, the impact of globalisation, demographic change, changes in technology and climate change, the employers in the sector will require a supply of appropriately skilled workers at the appropriate time. But to anticipate change alone is not enough and, in the absence of an appropriately responsive VET infrastructure to provide vocational training that is relevant to the needs of the sector and is of a high standard, would be pointless. The skills required to maintain the sector's competitiveness and to guarantee Europe's future energy supply will be both sector specific, such as electrical or engineering and transversal, such as leadership and management skills.

So the sector's European social partners, Eurogas, EPSU and IndustriAll have commissioned this research to provide an overview of the VET infrastructure in the sector and to identify those VET institutions whose involvement is necessary in any discussions about a Sector Council.

Existing bodies

There are already numerous institutions within the gas sector which carry out research to identify changes in the demand for skills from the sector in particular countries and others that ensure the occupational standards, the structure and content of qualifications and provision of training are fit for purpose and meet the need of employers and individuals. It is precisely this infrastructure that will make a significant contribution to the sector's ability to adapt to change and the input from both sides of industry and stakeholders is essential to complete this process at the national level.

However, the European Commission has concluded that an organisation at the European level, connecting the national machinery and providing a pan-European picture of emerging skills needs and the changing occupational standards could facilitate, and indeed contribute to, the anticipation and adaptation process. The main objectives of a European Sector Council are establishing a link between vocational training and the labour market at the sector level, promoting continuing training and improving the responsiveness of the education sector in relation to labour market demands and the exchange of information. The Commission has also highlighted the important role of the social partners in this process and ought to be represented on Sector Councils.

Policy context

European VET has been the subject of discussion within the European Commission for a number of years. In 2002, 33 countries signed the Copenhagen Declaration which set out the terms for pan-European cooperation on vocational training. This was followed by a number of other agreements aimed at strengthening the cooperation between EU member states on VET. In 2008, the European Commission launched its "New Skills for New Jobs" initiative to identify the future trends in the supply and demand for skills in the coming years

and so that Member States can orientate their VET systems accordingly. This initiative forms part of the Commission's European Employment Strategy which places VET at the heart of its strategy for growth. This was followed, in 2009, by the publication of 18 sectoral analyses which included changes in the electricity, gas, water and waste¹ sectors. These studies have played a key role in the discussions over the changes to occupational competencies to 2020 and spurred on the debates about the coordination of the supply of, and demand for, skills.

Finally, the Bruges Communiqué² in 2010 set out the European Commission's vision for VET to 2020. Thus there is an impetus to improve existing VET provision and enhance existing cooperation across Europe and to develop a coherent and coordinated European VET system to meet the current and future demands of the sector. In addition, the existence of a European Qualifications Framework, to enhance mobility within the labour market, will provide a useful frame of reference through which discussions at the European level, between the appropriate institutions, can take shape.

According to a study for the European Commission³ the main objectives of a European Sector Council are linking initial vocational training and the labour market at the sector level, promoting continuing training and improving the responsiveness of the education sector in relation to labour market demands and the exchange of information. The Commission report also highlighted that there was a consensus among the stakeholders that the Social Partners have a key role to play in this area and should be represented on the Councils.

Social dialogue and Social Partner engagement

The demand for this research came from the gas sector's European social partners and is one of many such joint ventures between Eurogas, EPSU and one of the predecessors of IndustriAll⁴ (EMCEF) since 2008, when the first study commissioned by the sector's social partners on the impact of the liberalisation of the gas and electricity markets was carried out and has subsequently been proceeded by a study on the possible impact of demographic change in the sector⁵ and an accompanying toolkit⁶. The social partners are also active in the work of their Sectoral Social Dialogue Committee.

¹ "Electricity, Gas, Water and Waste – comprehensive sectoral analysis of emerging competences and economic activities in the European Union", European Commission (2009)

² The Bruges Communiqué on enhanced European Cooperation in Vocational Education and Training for the period 2011-2020, by the European Ministers for Vocational Education and Training, the European Social Partners and the European Commission (December 7 2010)

³ "Sector Councils on Employment and Skills at EU level - a study into their feasibility and potential Impact", Ecorys (2010)

⁴ IndustriAll is a global union federation formed in 2012 by a merger between International Metalworkers' Federation (IMF), International Federation of Chemical, Energy, Mine and General Workers' Unions (ICEM) and International Textiles Garment and Leather Workers' Federation (ITGLWF).

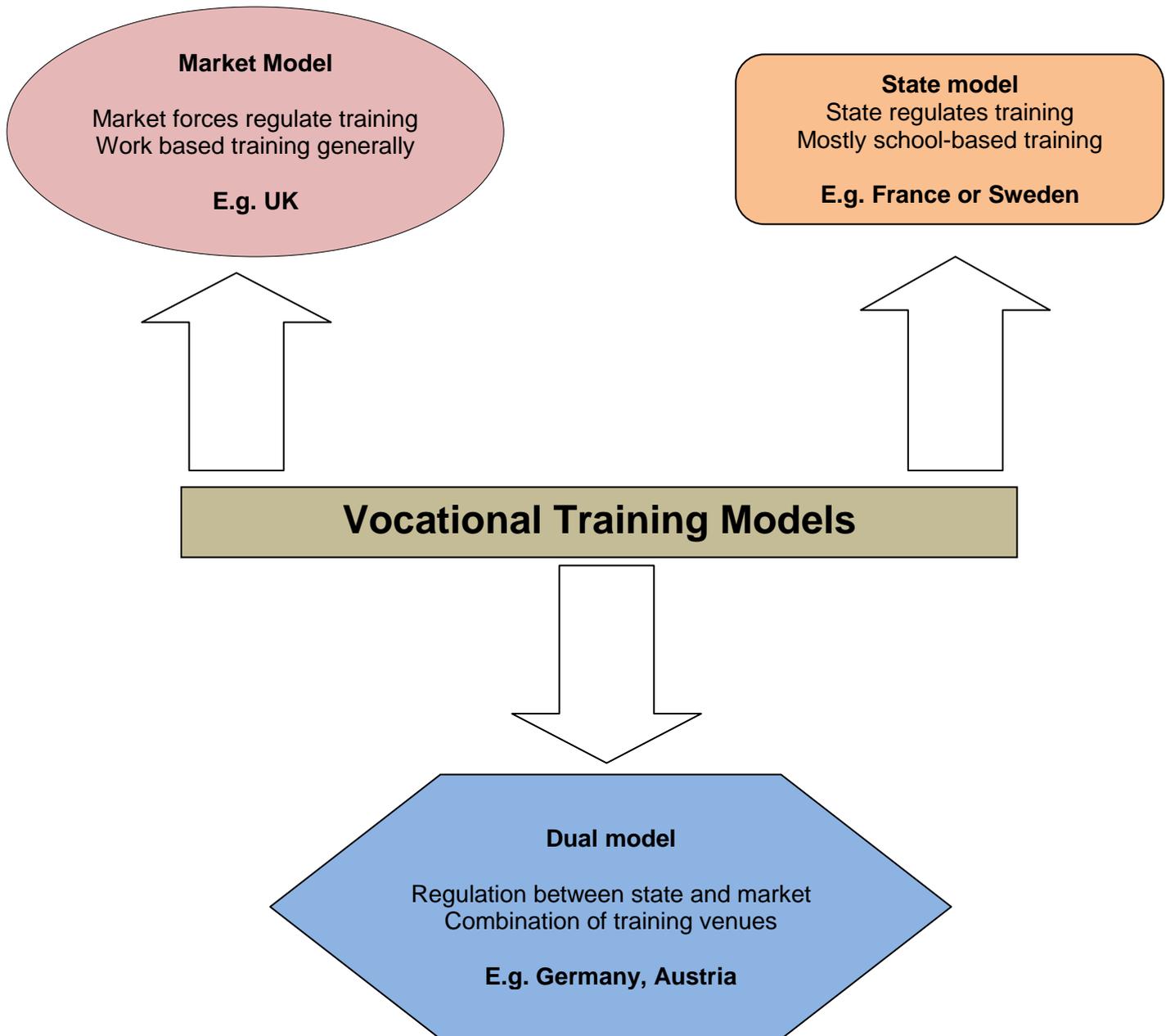
⁵ "Demographic change, age management and competencies in light of the challenges facing the European Gas sector", Tarren. D, EMCEF, Eurogas and EPSU (2009)

⁶ "Demographic change, age management and competencies in the gas sector in Europe", Pillinger. J, Eurogas, EMCEF and EPSU (2009)

Vocational Training in Europe

Vocational training can take place either at school, when an individual first enters the labour market or later in their working life. Initial VET takes place while an individual is still within the compulsory school education system and can be combined with work or not. Some VET systems provide work experience for the individual while they learn and others require the individual to learn and then gain work experience.

Although the VET systems across EU27 are all unique, in the sense that each member state's culture, the development their education system, the structure of their economy and their history play an influential role, it is possible to categorise all European VET systems in the following way⁷:



⁷ Taken from a presentation by Hubert Ertl, Department of Education, University of Oxford (2009).
Link: <http://download.ei-ie.org/Docs/WebDepot/1aKeyNoteHubertErtlShort.pdf>

Other factors that shape the VET system include the location training takes place (school or workplace); the timeframe through which employers base their decisions over training (short- or long-term); the role of social dialogue and trade union organisation; governance (de/centralised).

Report

This report has been written to provide the European social partners in the gas sector with information about the vocational education and training (VET) infrastructure across Europe. The information in the following pages provides a map of the organisations and institutions in Europe on a country by country basis, for those countries where information was available. Each country profile follows a similar structure, providing information on the overall VET system and, where data is available, specific information about the organisations allied to the operation of the VET system in the gas sector.

All of the countries in the following pages have established a similar general VET system: state driven policy, delivered through various public and private institutions that perform functions such as the legal and social regulation of the system, regulatory oversight for the creation of qualifications and standards, universal standards for awarding bodies and finally training delivered through accredited training providers in the workplace or at a technical college or school. However the role of the social partners is not so uniform nor is the provision of labour market data to allow actors in the system to continually adapt to changes in the labour market and to the demands of industry.

In this research a particular focus was given to this later strand of the VET system due to its importance for the current work of the social partners in examining the potential for the establishment of a Sector Council in the sector. Each country profile concludes with a recommendation for the bodies that ought to part of the discussions around the creation of such a Council. In some countries two such bodies are highlighted whereas in others none are recommended. We have drawn attention to those bodies that, within the national and European context are crucial to the formation of a Sector Council or where their experience from their own national system could be considered extremely useful for the future discussions among the social partners.

Austria

VET infrastructure

There are three forms of VET in Austria:

- in-house retraining programmes introduced and financed by employers
- public bodies dedicated to promoting up-skilling, which is then delivered by the Labour Market Service (Arbeitsmarktservice - AMS)
- further education and training financed by individuals.

Individuals have no explicit right to participate in VET and involvement is usually determined by employers and the AMS, in conjunction with individual employees.

Relevant actors in the Gas sector

There are a number of large not-for-profit organisations that deliver training. However the public authorities do play a significant role in VET, and work in cooperation with the social partners to create active labour market policies. Although the AMS doesn't deliver training, it does facilitate the organisation of training through the appropriate institutions.⁸

- *Regulatory Bodies*

The Austrian Association for Gas and Water (ÖVGW) (Die Österreichische Vereinigung für das Gas- und Wasserfach) is the technical arm of the gas industry representation on the basis of voluntary membership. The operational organisation of ÖVGW is composed of Coordinating Committees, Technical Committees, Working Groups and Certification Advisory Councils. One of its Technical Committees is responsible for training (Schulung im Gasfach).

The ÖVGW undertakes its work as a Regulator by representing its members' interests vis-a-vis public authorities, corporations and other institutions, and it generally offers its members advice on business, technical and legal issues; works with decision makers, legislators and public officials; compiles the regulations for the gas and water sectors in Austria and generally promotes safe, clean and efficient supply and use of natural gas, with a particular focus on environmental protection and to the prevention of accidents and damage of any kind.

- *Awarding bodies*

The ÖVGW is an independent certification authority that audits and certifies people, products and companies in the gas industry in accordance with legal requirements - ÖVGW regulations as well as national and international guidelines, standards and certification programs.

- *Training providers*

ÖVGW offers its own basic training on gas skills and offers specialist courses including technical skills regarding gas pipelines and gas turbines; indoor installation - operation, maintenance and repairs, in-house installations - general information and training, seminars and examination for gas detection specialists

Wirtschaftsförderungsinstitut (WIFI)

⁸ Country profile provided by Eurofound at <http://www.eurofound.europa.eu/eiro/studies/tn0804048s/at0804049g.htm>

WIFI Austria is a country-wide versatile professional education and training network (with premises in Niederösterreich, Kärnten, Oberösterreich, Steiermark und Tirol), that also runs international subsidiaries in the whole CEE region (Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Poland, Romania, Serbia, Slovakia, Czech Republic and Hungary). It is Austria's most important qualification and knowledge-transfer centre.

- *Labour Market Information institutions*

The majority of the studies and provision of labour market information for the anticipation of skills and competencies are commissioned by the Labour Market Service (AMS) and undertaken by economic research institutes. For example research into occupations, quantitative short-term and medium-term projections at the national or regional levels and analyses of the skill needs of small businesses. The dialogue, facilitated by AMS, between employers and unions, also adds value to existing labour market data.⁹

Interaction between social partners

The social partners play a role in VET at the local, regional, sectoral and national levels and engage with other stakeholders. The role of the social partners is most significant within the AMS. In addition the Austrian Government, when introducing initiatives in relation to VET, consult with the social partners comprehensively.

Recommendations

Based on this preliminary research, we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

The Labour Market Service (Arbeitsmarktservice)

<http://www.ams.at/kontakt.html>

The Austrian Association for Gas and Water (ÖVGW)

Österreichische Vereinigung für das Gas- und Wasserfach

A-1010 Wien

Schubertring 14

UID ATU37166106

Tel: +43 1 513 15 88-0

Email: office@ovgw.at

Web: www.ovgw.at/

⁹ "Improving the capacity to anticipate EU-wide labour market and skills requirements", European Employment Observatory (2008)

Belgium

VET infrastructure

The VET system in Belgium is structured in terms of geography and language. While vocational training is organised by each of the country's three regions (Brussels, Flanders and Wallonia), the organisation of an individual's initial training is aligned to the three linguistic communities (Dutch, French and German-speaking). As vocational training is the responsibility of the regional administrations, as opposed to the Federal Government and the Federal Minister for Work, vocational training activity is at its greatest at this level. Sector Skills Councils (SSCs) are also organised at the regional level, in the Walloon region and in Flanders. Sectoral Training Funds (STFs) exist in Belgium, but, due to the fact that they comprise a wide range of different organisations, some of which only operate at regional level, their work is difficult to analyse. Although some STFs do provide funding for training in the gas sector, depending on the age of the trainees and their previous training, there is no major STF specifically serving the gas sector. Individual employees can access VET via their employer who, through working with the relevant training providers, is able to provide a structured training programme. The natural gas sector is among those in which the majority of companies provide training to their employees (95%)¹⁰.

Relevant actors in the Gas sector

- *Qualification regulators*

The validation of competencies is generally undertaken by public employment services. These bodies also offer training for low-skilled or unemployed people¹¹ and are listed below:

- *The Regional Vocational Training and Employment Office (Office communautaire et régional de la formation professionnelle et de l'emploi, FOREM) in the Walloon region*¹²
- *The Flemish Public Employment Service (Vlaamse Dienst voor Arbeidsbemiddeling en Beroepsopleiding, VDAB) in the Flemish region*¹³
- *Brussels Region Employment Office (Office Régional Bruxellois de l'Emploi/Brusselse Gewestelijke Dienst voor Arbeidsbemiddeling, ORBEM/BGDA)*¹⁴
- *The German-Speaking Community Employment Office (Arbeitsamt der Deutschsprachige Gemeinschaft, ADG) for the German-Speaking Community.*¹⁵

The Flemish Community has developed its own certification system:

- *The Flemish Social and Economic Council (SERV)*

This body is an advisory and social dialogue organisation operating in Flanders (Belgium). SERV is a bipartite council consisting of trade union representatives and employers' organisations, and is financed by the Flemish government. SERV is a strategic advisory council for topics that are related to those within the social and economic consultation process, including: work and the labour market, the economy, energy and those services necessary for general government policy. SERV has developed a database including

¹⁰ <http://www.eurofound.europa.eu/eiro/studies/tn0804048s/be0804049q.htm>

¹¹ <http://www.eurofound.europa.eu/eiro/studies/tn0804048s/be0804049q.htm>

¹² <http://www.leforem.be>

¹³ <http://vdab.be>

¹⁴ <http://www.actiris.be>

¹⁵ <http://www.adg.be>

professional competency profiles and standards¹⁶. The database is used by VDAB (Public Employment and Training Service of Flanders) for its employment services and agencies and training organisations also use it in their work.

- *Awarding Bodies*

The *ARGB (Association Royale des Gaziers Belges)* brings together the managers of distribution networks and major natural gas suppliers operating in Belgium. The association aims to ensure the safety and efficient operation of natural gas installations. ARGB accredits natural gas installers, through the seal of quality provided by Cerga, and provides training and information on the gas sector¹⁷.

- *Training Bodies*

There are 23 Vocational Training Centres accredited by ARGB.

- *Skills Validation*

The validation of competences *in the Walloon region is organised by a Skills Validation Consortium which* brings together training providers via Validation Centres which organise exams which, when successfully carried out, lead to the issuing of Skill Certificates. These Certificates are important documents for employment in a number of professions across several sectors, including construction which covers heating.¹⁸ A similar certificate can be obtained in the Flemish region, awarded by the Flemish Subsidy Agency for Work and Social Economy (Vlaams Subsidieagentschap voor Werk en Sociale Economie).¹⁹

CEFORA/CEVORA

CEFORA is a funding and a training centre created by the National Auxiliary Joint Committee for White-Collar Workers (Commission Paritaire Nationale Auxiliaire pour Employés/Aanvullend Nationaal Paritair Comité voor Bedienden, CPNAE/ANPCB), the key sectoral joint committee. CEFORA develops and organises open training programmes for white-collar employees on topics covered by the sectoral collective labour agreements.

FVB/FFC

FVB is a fund that facilitates training to blue-collar workers in the construction sector²⁰. FVB does not provide training itself, but undertakes an intermediary role between the sector and training organisations. The FVB is managed jointly by the social partners and its main activities are research, coordinating the various relevant actors, providing information and funding for training.

- *Advisory Bodies*

The National Labour Council (Conseil National Du Travail, NAR) and the Central Economic Council (Conseil Central de l'Economie, Centrale Raad voor het Bedrijfsleven), together with joint educational committees at sectoral level, are advisory and negotiating authorities for vocational training in Belgium. The Central Economic Council has recently submitted at least three reports on CVT²¹.

Interaction between social partners and above bodies

¹⁶ <http://competent.be/competentieteam>, <http://www.serv.be/serv>

¹⁷ <http://www.gaznaturel.be/consommateurs/le-gaz-naturel/notre-organisation>

¹⁸ <http://www.cvdc.be>

¹⁹ <http://www.ervaringsbewijs.be>

²⁰ <http://www.constructiv.be>

²¹ <http://www.ccecrb.fgov.be>

According to the Belgian General Federation of Labour (Fédération Générale du Travail de Belgique/Algemeen Belgisch Vakverbond, FGTB/ABVV), the institutional structure of the vocational training system is not uniform from region to region and there are no connections between the different measures adopted in the three regions²². The involvement of trade unions is relevant at the regional level, through their participation in advisory and social dialogue organisations, such as the Flemish Social and Economic Council.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

ARGB (Association Royale des Gaziers Belges)
Rodestraat 125
B-1630 Linkebeek
Belgium

Tel: +32 2 383 02 00
Web: www.gaznaturel.be

Le Forem - the Regional Vocational Training and Employment Office in Walloon Region
Boulevard Tirou 104
6000 Charleroi

Tel: 0800/93.947, 07120 61 11, 071/20 65 85
Web: www.leforem.be

SERV - The Flemish Social and Economic Council
Wetstraat 34-36
1040 Brussels
Belgium

Tel: + 32 2 20 901 11
Email: serv@serv.be
Web: www.serv.be

²² <http://www.eurofound.europa.eu/eiro/studies/tn0804048s/be0804049q.htm>

Bosnia and Herzegovina

VET infrastructure

There is no integrated VET infrastructure in the gas sector of Bosnia and Herzegovina. The national energy regulator is not involved in vocational education and training²³. Training is organised mainly by high schools. There is an ongoing process of reforming adult learning under several strategic frameworks: Sarajevo Declaration on Lifelong Learning and Adult Education; the VET Development Strategy 2007-2013; the Strategic Direction for Education 2008-15²⁴. The process of developing the National Qualification System started in 2008²⁵. In companies, individual employees are provided with vocational training by their employers, delivered by internal or external training providers. From 1998 to 2010, vocational education and training reform was approached through projects funded under Phare, CARDS and IPA, supported by key donors including the EU²⁶.

Relevant actors in the Gas sector

Gas Association of Bosnia and Herzegovina

The Gas Association is a non-profit association with the mission to promote technical and economic progress of the gas industry. It has no specific training functions.

- *Qualification bodies*

Vocational profiles are under development by the *Agency for Development of Higher Education and Quality Assurance*. According to the European Training Foundation, the *VET Department of the Agency of Pre-School, Primary and Secondary Education* is supposed to have a database of adult education providers and a commission for qualifications in accordance with the catalogue of occupations but these are not yet in place²⁷.

- *Training providers*

Vocational training in the gas sector is provided by educational institutions and the Research and Development Center of Gas Technology, set up by a consortium of companies from the gas industry.

Research and Development Center of Gas Technology (IGT)²⁸

The Center is providing technical expertise and vocational training to the natural gas sector. IGT was established by natural gas companies "ENERGOPETROL Sarajevo", "SARAJEVO-GAS", "TOPLANE-SARAJEVO" and "UNIS-Tvornica plinskih uredjaja". IGT states that training of personnel in the gas industry has an outstanding significance among its functions due to the low coverage of this matter in higher education institutions. IGT also has research and consulting functions in diverse fields of application of natural gas, as well as for the introduction and implementation of a Quality Assurance System (QAS) in the gas industry.

European Training Foundation Work Programme in Bosnia and Herzegovina²⁹

The European Training Foundation (ETF) is an EU agency specialised in the VET field. It has been closely involved in the VET reform process in Bosnia and Herzegovina, providing assistance to authorities in the formulation and implementation of human capital

²³ <http://www.reers.ba/en/node/338>

²⁴ <http://uil.unesco.org/home/programme-areas/lifelong-learning-policies-and-strategies/news-target/adult-learning-in-bosnia-and-herzegovina/65a280576b40cbbc06f1721446669218/>

²⁵ [http://www.etf.europa.eu/webatt.nsf/0/C12578310056925BC125753900361541/\\$file/NOTE7N5DKB.pdf](http://www.etf.europa.eu/webatt.nsf/0/C12578310056925BC125753900361541/$file/NOTE7N5DKB.pdf)

²⁶ [http://www.etf.europa.eu/webatt.nsf/0/13DE66C4FED34DBFC12579D6005E5C31/\\$file/BA%20VET%20reform%20impact%20assessment.pdf](http://www.etf.europa.eu/webatt.nsf/0/13DE66C4FED34DBFC12579D6005E5C31/$file/BA%20VET%20reform%20impact%20assessment.pdf)

²⁷ [http://www.etf.europa.eu/webatt.nsf/0/13DE66C4FED34DBFC12579D6005E5C31/\\$file/BA%20VET%20reform%20impact%20assessment.pdf](http://www.etf.europa.eu/webatt.nsf/0/13DE66C4FED34DBFC12579D6005E5C31/$file/BA%20VET%20reform%20impact%20assessment.pdf)

²⁸ <http://www.igt.ba/onama.html>

²⁹ http://www.etf.europa.eu/web.nsf/pages/Bosnia_and_Herzegovina

development policies. Its key policy areas of intervention were: vocational education and training system modernisation, social inclusion in education and adaptability of enterprises and education-business partnerships.

*German Adult Education Association Institute for International Cooperation dvv international, Office in Sarajevo*³⁰

DVV's Institute for International Cooperation supports adult education structures in South Eastern Europe. The Office in Sarajevo is involved in the following activities: didactical and methodological development of adult education in cooperation with the Education Office of the Canton Sarajevo, development of communication and network structures in adult education, construction of systems for quality development. The work of dvv international is financed primarily by the German government and the European Union.

Interaction between social partners and above bodies

According to the European Training Foundation, despite initiated reforms, the quality of vocational training remains a challenge, particularly in terms of learning outcomes, the accreditation of training providers and the teaching and learning process. The reform process must bring vocational training closer to the labour market needs. Unfortunately, social partners have only recently been involved in the reform process and they need to enhance their capacities if they are to play an equal role in the process. Adult training, like all types of vocational training, still has to become a topic of social dialogue in Bosnia and Herzegovina.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

Research and Development Center of Gas Technology
Gradačaćka 142
71000
Sarajevo

Telephone : +387-33-610-600
E-mail: iqt@bih.net.ba

Mr Hajdina SKUFCA
Secretary
Gas Association of Bosnia and Herzegovina
Gradacacka 142
71000
Sarajevo

Tel: +387 33 71 55 80
Email: gasbih@bih.net.ba

³⁰ http://www.dvv-soe.org/index.php?option=com_content&view=article&id=996&Itemid=637

Bulgaria

VET infrastructure

The VET system in Bulgaria is still evolving, through the process of acquiring European best practices through projects and exchanges. This process is carried out by the National Agency for Vocational Education and Training, which is a specialised body responsible for the quality of the provision of vocational education and training. The Agency has issued licenses for 16 vocational high schools and 37 vocational training centres in gas sector. Individual employees can access VET via their employer and trade unions can facilitate this. In general, Bulgarian training institutions are still struggling to gain the necessary equipment, textbooks, well-qualified instructors and the latest training methods.

Relevant actors in the Gas sector

The State Energy and Water Regulatory Commission³¹ is the main energy regulatory body, responsible for the main developments, regulation, performance, price policy and security of supply in the national gas market.

- *Qualification regulators*

National Agency for Vocational Education and Training (NAVET)³²

This Agency is a specialised body established by Law and has the responsibility of maintaining quality of VET, cooperating with the social partners in implementing coordinated policies for continuing vocational training and introducing successful European practices and improving access to VET for the unemployed and the employed. The National Agency for Vocational Education and Training grants one of two kinds of licenses to vocational centres - a licence to provide and certify vocational training or a licence to provide and certify vocational information, consultation and guidance.

- *Training Bodies*

Centre for Vocational Training of the Bulgarian Gas Sector³³

This is the main vocational training provider in the gas sector and provides training for Technicians of energy equipment and installations, Fitters of energy facilities and installations, Stokers, Drillers and technical Driller. Other providers of training include the Technical University of Ruse, the University of Mining and Geology in Sofia, a Technical College, 16 Vocational high schools and 37 Vocational Training Centres.

Bulgarian Gas Centre

Established in 2009, the Bulgarian Gas Centre expects 1,200 employees in the gas sector to be trained annually. The Centre offers elementary and specialised training, qualifications and certification of courses in gas technology, collects, analyses and provides statistical data and consults with stakeholders, participates in the harmonisation of technical standards and in national and international science-research projects.

Other vocational training centres

The information system of the National Agency for Vocational Education and Training provides the full list of training centres that are licensed to provide vocational training in the gas sector and specifies those professions for which licenses are granted. The training centres covering most of the relevant professions in the gas sector are the Centre for

³¹ <http://www.dker.bg/index.php>

³² <http://www.navet.government.bg/bg>

³³ <http://bgc.bg/courses.php?lang=bg>

Vocational Training of Bulgarian Gas Sector (Sofia), CVT of the Association "National Business Development Network" (Sofia) and CVT of the company "Ruveks" (Sofia).

Interaction between social partners and above bodies

Trade unions are actively involved in the development of VET policies in Bulgaria through long-term agreements for partnerships between NAVET and all nationally representative employees' organisations, employers' organisations and state institutions. This makes the creation of common positions across a range of issues relating to workforce development possible. The Bulgarian Gas Centre is not directly linked to a trade union and there are no sectoral skills councils in Bulgaria.

The National Agency for Vocational Education and Training (NAVET)³⁴ is a specialised body established by Law and aims to maintain quality of VET, cooperate with the social partners in implementing coordinated policies for continuing vocational training and introducing successful European practices.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

NAVET - National Agency for Vocational Education and Training
125 Tzarigradsko schosse Blvd
Block 5, fl. 5
1113 Sofia
Bulgaria

Tel: + 3592 971 20 70 (Office of the President of the NAVET)
Email: napoo@navet.government.bg, agencia@navet.government.bg

Training Centre BULGARIAN GAS CENTRE Ltd.
1 Pozitano Str.
1301 Sofia
Bulgaria

Tel: 003592 42 83 256
Email: office@bgc.bg, naidenov@bgc.bg

³⁴ <http://www.navet.government.bg/bg>

Croatia

VET infrastructure

There is no integrated VET infrastructure in the Croatian gas sector. The Croatian energy regulator is not involved in vocational education and training³⁵. Training is organised by high schools, expert associations and by companies in cooperation with educational institutions³⁶. The Agency for Vocational Education and Training is currently implementing sector qualification profiles with the support of sector councils, some of which are indirectly related to the gas sector. In large companies, individual employees are provided with vocational training by their employers, delivered by internal or external training providers.

Relevant actors in the Gas sector

- *Qualification regulator*

Sector profiles are under development by the Agency for Vocational Education and Training and experts engaged within the project "Strengthening the institutional framework for development of VET occupational standards, qualifications and curricula". Other relevant institutions are also involved, and include the Croatian Bureau for Statistics, the Croatian Employment Service, the Financial Agency and the Ministry of Science, Education and Sports etc.

- *Agency for Vocational Education and Training*

The Agency for Vocational Education and Training, and Adult Education, is a public institution, founded in June 2010 with the aims of developing qualifications based on competences and learning outcomes, to align the provision of education with the needs of the labour market and to build a VET system that enables lifelong learning and mobility³⁷. The Agency has also developed a Vocational Education and Training Information System VETIS, compiling all relevant data regarding VET schools, students, employees, equipment, buildings, facilities etc.³⁸

- *Sector Councils*

The Sector Councils are composed of partners and advise and provide expertise in expressing and presenting the needs of industry, defining the necessary vocational qualifications, analysing existing and necessary competences within sectors and sub-sectors and providing its opinion to the Agency for Vocational Education and Training concerning the content of vocational qualifications. There are 13 established Sector Councils, including one for the Geology, Mining, Oil and Chemical industries and one for Construction and Geodesy³⁹.

- *Training providers*

Vocational training is generally provided by educational institutions and expert associations.

Croatian Energy Association

The Croatian Energy Association (HED) is an expert association, which gathers, on a voluntary basis, experts and scientists in the energy industry. Its activities comprise providing material and expert support to junior experts in the field of energy, offering expertise and organising expert exchanges, expert visits and education, and granting scholarships to

³⁵ <http://www.hera.hr/english/html/activities.html>

³⁶ <http://www.ina.hr/default.aspx?ID=345>

³⁷ <http://www.aso.hr>

³⁸ <http://www.aso.hr/default.aspx?id=266>

³⁹ <http://www.aso.hr/default.aspx?id=1255>

students. It also has a role in the production of the regulation proposals, by-laws, recommendations, guidelines, instructions and standards⁴⁰.

Croatian Gas Association

The objective of the Croatian Gas Association is to promote the gas industry through raising the level of knowledge and education and stimulating the exchange of experiences and information for the gas industry as a whole, and for its individual members. The Association's board comprises independent members and representatives of companies active in the gas sector⁴¹.

Interaction between social partners and above bodies

The social partners have an advisory role in the development of the national qualifications framework through their participation in the Sector Councils. These Councils include representatives of employers, chambers of commerce, trade unions, professional associations, universities, vocational education institutions and other stakeholders. Though there is no specific Sector Council for the gas sector, the footprint of a number of other sectors overlap and cover parts of the gas sector. Training provided by the expert associations is not a matter for the social partners..

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

Agency for Vocational Education and Training
Radnička cesta 37b
10 000 Zagreb
Croatia
Tel: +385 1 62 74 666
Email: ured@asoo.hr

Acting director: Ivan Šutalo
Tel: +385 1 62 74 603
Email: ivan.sutalo@asoo.hr

Croatian Gas Association
Heinzelova 9/II
10000 Zagreb
Croatia
Tel: +385 1 6189 590; 01 6189 592; 01 6189 594
Email: hsup@hsup.hr; cph@cph.hr

Croatian Energy Association
Zagreb
Savska cesta 163
Croatia
Tel: +385 1 6040 609
Email: hed@eihp.hr

⁴⁰ <http://www.hed.hr/activ.html>

⁴¹ <http://www.hsup.hr/aboutus.htm>

Czech Republic

VET infrastructure

The system of vocational education is linked to the gas system via ISO rules, and industry technical regulations (TPG, TDG and TIN). The Czech government intends to interconnect Czech qualifications with the EU labour market via the European Qualifications Framework (EQF). As of July 2011 all qualification standards for partial qualifications are submitted for approval to the Ministry of Education, Youth and Sports in both Czech and English versions.

Relevant actors in the Gas sector

- *Regulatory bodies*

Energy Regulatory Office

The Energy Regulatory Office (Energetický regulační úřad) is the administrative authority responsible for regulation in the energy sector. It was created in 2001 under Act No. 458/2000 of 28 November 2000, on the Conditions of Business and State Administration in Energy Industries and Changes to Certain Laws (the Energy Act) as amended. This body is responsible for granting licenses to gas companies with a workforce of appropriately qualified staff. This body handles applications for licenses, changes to licenses and the revocation of licenses, and subsequent proceedings.

Czech Gas Association (Český plynárenský svaz)

The CGA cooperates with universities (supports research), secondary schools, and vocational training schools. It also organises educational events and training and issues certificates and registers products and organisations, and it offers advisory services on technical issues

The Bureau for Vocational Education

The BVE is a professional body established by the Czech Gas Association and responsible for strategic and methodological work for vocational education in the gas sector (referred to as OPV - odborného plynárenského vzdělávání). Its activities are aimed towards existing and potential employees of gas companies, who work in specialised professions, as well as employees elsewhere involved in the provision and operation of specialist gas equipment. The Bureau oversees educational centres and ensures the quality of skilled gas education (OPV).

This body also shapes the curriculum in accordance with the needs of the country's gas industry and cooperates with critical educational institutions. It assesses and makes recommendations on legislation relating to education, cooperating with the Czech Republic Ministry of Education and it sets the basic criteria for the selection of lecturers teaching at OPV centres and the conditions for eligibility of these training centres. The body is also involved in proposals for the development of teaching materials, textbooks, educational videos, computer software, etc. and assesses the performance of teaching materials. The results of the Bureau's research are then transmitted by the CGA to the training centres and other educational establishments.

- *Awarding Bodies*

GAS s.r.o. is managed by the Czech Gas Association, and was created in 2005. The body's main focus is to oversee the performance of joint activities in the sector in relation to technology, law, education, counseling and the provision of information. It also provides accreditation to training providers.

Česká společnost pro svařování produktů (ČSSP)

This is an Authorised National Body and as such provides qualifications and examinations for welding personnel in the Czech Republic.

Czech Welding Society ANB

This organisation provides qualification and examinations for welding personnel.

- *Labour Market Research*

Sector Skills Council for Energy, (Sektorová rada pro energetiku - SR)

The gas industry's Sector Council is an association of representatives from major employers, professional organisations, educators and other professionals in the sector, and is one of a number across the economy. SCs are generally expected to become spokespeople to represent the interests of employers in the sector and the energy sector's body continuously monitors trends in the labour market and identifies the key changes in terms of the needs of the sector, especially in the field of human resource development. It actively supports the development of education and vocational skills by communicating the needs to the government and educational institutions. Finally, as with other Councils, the Energy Sector Council creates and implements sectoral agreements which are strategic documents setting out the needs of the sector and the roles of the sector's stakeholders in meeting those needs. One of the key activities of the Sector Skills Council is the creation, and implementation, of a National System of Professions (NSP) and a National Register of Vocational Qualifications (NSK).

The National System of Professions (Národní soustava povolání - NSP)

The national system of professions (NSP) is managed under the auspices of the Czech Ministry of Labour and Social Affairs. The organisation maintains an online open-access catalogue of occupations within the sector across the national labour market of the Czech Republic. The system serves as a source of current information for employers in strategic human resource management and contains detailed descriptions of the particular requirements for workers in the form of general and professional competencies. The main source for processing this information is the work of the Sector Councils. Sector councils are formed by experienced professionals representing different areas of the labour market (employers, professional organisations, trade unions, guilds etc).

The NSP seeks to strengthen the role of employers in the development of human resource administration within the database of professions - the primary source of information on the requirements of the labor market. It also provides information on the demands of the labour market and does this by communicating accurate and comprehensive information. The NSP involves experts from stakeholders, including the social partners, in the process of collecting and processing information on skill needs in the labour market through the Sector Councils.

National Register of Vocational Qualifications (NSK) Národní soustava kvalifikací

The competence requirements of the labour market are transmitted to educational institutions in the form of a National Qualifications Framework (NSK). By relying on the NSK, organisations involved in education can equip future graduates with the knowledge and skills that are demanded by employers. The body holds a publicly accessible register of all full and partial qualifications and their corresponding assessment standards, and includes a number of gas occupations. This body seeks to create a process of lifelong learning and supporting recognition and validation of informal learning. The NSK can be used by people pursuing the validation of their knowledge and skills, acquired throughout their working life, either through formal studies or through self-study.

Interaction between social partners and above bodies

There is relatively little opportunity for social partners to influence key decisions on VET. The Council for Economic and Social Agreement, at the national level, creates an opportunity for the social partners to engage in discussions around VET and in practice they tend to contribute to ongoing work around the legal regulations of VET and on government policies. Regionally the social partners participate in Regional Councils for Social and Economic Agreement and Councils, but their involvement is at the discretion of the regional administration.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

Mgr. Marcel Navrátil
Sector Skills Council
TREXIMA, et al. Ltd.
Czech Republic

Email: navratil@trexima.cz

Czech Gas Association
Novodvoska 803/82
142 00 Prague 4
Czech Republic

Email: cpsvaz@cgoa.cz

Denmark

VET infrastructure

The provision of adult VET is through the labour market training system (*arbejdsmarkedsuddannelserne* - AMU), and is offered by 24 independent centre and vocational schools. All AMU courses are financed by contributions paid by all working adults and based on a percentage of gross pay. Private companies can gain certification to offer AMU courses. The National Labour Market Authority (*Arbejdsmarkedsstyrelsen* - AMS), within the Ministry of Labour, oversees all AMU training. Over the years the role of Government in VET has reduced and is now limited to managing the VET framework. On the other hand, vocational schools and AMU centres have more autonomy than in the past.

As a result of reforms just over a decade ago there is now a greater reliance on employers to provide and fund VET. The introduction of new Labour Market Training Fund (*Arbejdsmarkedets Uddannelsesfinansiering*) means that employers will be eligible to receive financial support when employees participate in VET. The fund is overseen by a board on which the social partners are represented in equal numbers. Through their participation on the board the social partners are able to influence policy via their recommendations to the Ministers for Labour and Education.

Relevant actors in the Gas sector

- *Regulatory bodies*

Danish Safety Technology Authority Sikkerhedsstyrelsen

The Danish Safety Technology Authority (DSTA) was founded in 2004 by the Danish Ministry of Economics and Business Affairs and focuses on the technological safety aspects regarding fires, accidents and explosions. Its mission is to set the standards in safety technology in Denmark. DSTA manages and enforces all the Danish gas regulations specifying minimum requirements for handling gas installations. The work with gas installations and servicing of gas equipment is restricted to authorised companies and plumbing installers. On its website DSTA runs a database of all such authorised entities.

Accreditation for Foreign Nationals

Gas specialists who gained their qualifications outside Denmark, in another EU or EEA country, and who wish to obtain authorisation in Denmark, may apply for approval to the DSTA.

The Danish Accreditation and Metrology Fund (DANAK)

The Danish Accreditation and Metrology Fund, established in 2002, is a public sector company handling the administration of accreditation. Its remit is based on a contract with The Danish Safety Technology Authority and DANAK was founded and is managed jointly by the industry and public authorities. DSTA has designated DANAK as Denmark's national accreditation body and oversees it to ensure it meets EU requirements for national accreditation bodies. DANAK maintains a register of accredited companies.

The Continuing Education Committee for Technical Installations and Energy (Efteruddannelsesudvalget for Tekniske Installationer og Energi - ETIE)

ETIE was established by Danish technical installation associations, and those relevant in the context of this report are TEKNIQ Installatørernes Organisation; Blik- og Rørarbejderforbundet (pipes); Dansk EI-Forbund (electricity). ETIE is responsible for preparing analyses and

proposals for the development of skills for the labour market. ETIE can develop and implement technical/vocational teacher training and makes recommendations on specific and interdisciplinary education.

- *Awarding bodies*

Danish Gas Technology Centre Dansk Gasteknisk Center (DGC)

DGC is a publicly limited company offering technological consultancy in the fields of energy and the environment, although its main focus is gas utilisation. The centre offers consultancy services, development, training and information for the gas sector. DGC's interest is mainly natural gas, residential gas, biogas, hydrogen and LPG, but it also covers combinations of gas fuels with renewable energy. It was established by the Danish gas companies in 1988 and is now owned by five corporations: HMN Naturgas, DONG Energy, Energinet.dk, Naturgas Fyn and Křbenhavn's Energi.

DGC acts as a Notified Body (approving authority) or the EU Gas Appliance Directive and the Boiler Directive - in the field of gas, plumbing and heating and electricity. Its laboratory is accredited under DANAK for measurement and safety testing of equipment and gas installations. The laboratory is also accredited for gas analysis.

- *Training providers*

Danish Gas Technology Centre Dansk Gasteknisk Center (DGC)

The Gas Technology Centre has a long tradition of organising courses and conferences, for the domestic as well as the international markets.

Danish Gas Association Dansk Gas Forening (DGF)

The Danish Gas Association (DGF) was established in 1911 and its objective is to promote efficient, environmentally sound and safe uses of gas. The association has around 450 members active in gas supply, gas applications or related areas.

EVU

EVU is the secretariat of the Technical Committee for Electricity and Plumbing training which services the Danish Union of Electricians, TEKNIQ and Blik- og Rřrarbejderforbundet on education issues. TEKNIQ, Blink and Rřrarbejderforbundet have spent years focusing on continuous education in the field of plumbing so that employees can maintain their knowledge on technological developments. These organisations have together crafted and revised several courses targeted at companies and individuals and these courses are then implemented by a set of technical schools across Denmark.

Danish Mechanical and Electrical Contractors' Association TEKNIQ Installatřrernes organisation

The association (established in 2002) is the fourth-largest trade/employers' organisation in Denmark. It represents around 2,800 mechanical and electrical contractors in the electricity and the plumbing, heating and ventilating industries – about 1,700 electrical contractors and about 1,100 plumbing, heating and ventilating contractors. Its members cover a wide field and, in terms of size, range from the micro business to large mechanical and electrical contractors with more than 2,000 employees.

Blik- og Rřrarbejderforbundet is a 120-year old association of plumbers, pipe fitters, HVAC installers, HVAC and energy installers, plumbing, roof and facade installers, climate and environmental engineers and stainless industrial plumbers.

Labour market training (AMU)

Labour market training (Arbejdsmarkedsuddannelser, AMU) is a nation-wide scheme supervised by the Danish Ministry of Education and services many sectors including the gas sector. The scheme is aimed at both unskilled and skilled workers. The teaching is both practical and theoretical, and can be organised on a full time or part time basis and consists of short-term courses that can be taken individually or as a package, as required.

Online portals

EfterUddannelse.dk is Denmark's nationwide training course database and application / registration portal for vocational adult and continuing education. Through this portal, workers and students can browse courses, conduct online enrollments, and digitally apply for unemployment-related allowances for the period . The portal is also used by the educational institutions. The courses are offered by technical schools, trade schools, AMU centers, and some private providers.

Teknisk Erhvervsskole Center (TEC)

TEC is a large vocational college with a 135 year history and dedicated focus on future challenges and demands. It is a product of a merger between six institutions and it offers a wide scale of educational programmes, accredited by the Danish Ministry of Education. It works with the social partners, companies and relevant institutions in and outside Denmark.

Interaction between social partners and above bodies

The social partners play an active and central role in the VET system and their participation is made possible through their representation on a number of bodies, such as Vocational Education Training Council (*Erhvervsuddannelsesrådet*), National Trade Committees (*de faglige udvalg*) and Local Training Committees (*de lokale uddannelsesudvalg*).

In addition to being represented on the above bodies, the social partners play a key role within the following:

- Labour Market Institution for the Financing of Education and Training - advises the Ministers of Labour and Education
- National Training Council - advises the Minister of Labour on all issues related to labour market training
- Retraining Councils - these Councils perform an important role in connecting labour market training provision with the needs of the labour market. The social partners make recommendations on the needs in specific sectors and on the need for new training programmes.
- National Labour Market Council - advises the Minister of Labour and contributes to the planning of labour market policies.
- Regional Labour Market Councils - advisory bodies to the public employment services.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

The Continuing Education Committee for Technical Installations and Energy
Efteruddannelsesudvalget for Tekniske Installationer og Energi ETIE
Højnæsvej 71
2610 Rødovre
Denmark
Tel: 36 72 64 00
Email: mail@etie.dk
Web: <http://www.etie.dk/>

Teknisk Erhvervsskole Center
Nordre Fasanvej 27
2000 Frederiksberg

Tel: 3817 7000
Email: tec@tec.dk
Web: <http://www.tec.dk>

Finland

VET infrastructure

Vocational adult education and training is organised into Upper Secondary and Additional VET. Education or training can either be certificate-based or non-formal. Upper Secondary VET is certificate-based, while on the other hand additional VET may be either. The competence-based qualification system is designed to give employed adults to gain a qualification without necessarily attending any formal training. Within the Finnish VET it is possible to study for a competence-based vocational qualification, further a vocational qualification and specialist vocational qualification, or only parts of these through the competence test system. Within this process any competences acquired, e.g. at work, is recognised and validated through a competence test which is completed by demonstrating the competence required within the chosen profession. An Education Fund exists, administered by the social partners, the purpose of which is to support employee vocational studies by providing financial support and to develop the vocational qualification system through the granting of scholarships for competence-based qualifications.

Relevant actors in the Gas sector

- *Regulating Body (or Bodies)*

The details of the qualification and the extent of training are determined by the Ministry of Education and Culture. The authority to provide VET is granted by the Ministry.

The National Board of Education designs the core curricula and sets the requirements of competence-based qualifications, which describe the aims and key content of the qualifications.

The Ministry of Employment and the Economy sets the long term and annual goals and objectives for FINAS (see below) and nominates the Accreditation board.

- *Awarding Bodies for the Gas Sector*

FINAS is a national accreditation body. The top management of FINAS consists of the Accreditation Board and the FINAS Director. FINAS is an operationally and economically independent department within the organisation of the Centre for Metrology and Accreditation (MIKES).

FINAS (Finnish Accreditation Service) is according to the law (921/2005) a national accreditation body responsible for organising the accreditation activities according to the international criteria.

FINAS is independent and impartial from the clients, related bodies and other interested parties. Impartiality of FINAS strategy and policy making is ensured by involvement of the Advisory Committee for Accreditation Matters, where the interested parties are represented, in defining and developing of accreditation policies and procedures.

- *Training providers in the Gas Sector*

Finish Gas Association provides training, collects and publishes statistics on the gas sector, and provides research and information to stakeholders.

Finnish Energy Industries Federation (Energiateollisuus), provides personnel related training for its members. In addition, it provides statistics on a monthly, quarterly and annual basis on market issues, as well as information on labour market dynamics).

- *Labour Market Research*

The Development Plan for Education and University Research, which the Government approves every 4 years, is prepared through quantitative anticipation information on skills needs, which are produced by the Finnish National Board of Education (FNBE).

The FNBE uses forecasts of changes and natural wastage in the total labour force to predict changes across sectors. Quantitative skills anticipation information is also provided by the Labour Force 2025 project, which is coordinated by the Ministry of Labour, and the aim of which is to anticipate the needs of the labour force until 2025.

The important governmental bodies for skills anticipation are national education and training committees and the Advisory Board for Educational Co-operation. Their task is, among others, to monitor, evaluate and anticipate the development of vocationally oriented education and training and competence required in working life in their own field. The labour market partners, both employers and employees, are represented in the education and training committees.

Interaction between social partners and above bodies

The social partners participate in the planning and development of education through their involvement on the following bodies:

- Council for Lifelong Learning – this is an expert body, from within the Ministry of Education and Culture, which is concerned with the interface between education and work as well as the conditions for lifelong learning and the development of adult education.
- National Education and Training Committees - these operate with the Finnish National Board of Education. These Committees were established to develop and foster relationships between VET and the world of work.
- Qualification Committees - these bodies operate under the Finnish National Board of Education and were created to organise and supervise competency tests for adults participating in VET.
- Consultative Committees - these operate within vocational institutions and their role is to develop the institution itself, and its contacts with the local business community.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

Advisory Board for Educational Co-operation
(details to follow)

National Education and Training Committees
(details to follow)

France

VET infrastructure

The VET system in France has developed into two distinct systems of Sector and Transversal Councils – one for initial and one for continuing training. Both systems involve the social partners, and their role in the system for continuing training is almost exclusive. Links between the two systems are developing at the regional level, though regional coordination committees on employment and vocational training. The professional union for gas, the French Gas Association, one of the oldest in the world, participates in the provision and development of training and refresher courses for engineers and other professionals in the gas industry. Due to its monopolistic position in the French gas sector, GDF Suez also has an important role in providing vocational training through its training centres. A number of other private training providers are also active in the French gas sector.

Relevant actors in the Gas sector

French Gas Association (Association française du gaz)

The French Gas Association (AFG) has over 1,300 members from the French and foreign gas industry⁴², allied industries (equipment and appliances manufacturers, installation companies, consultancy offices, etc.) and gas companies and associations, etc. AFG has the responsibilities for developing and promoting the French gas industry, encouraging technical activities of interest to the gas sector, participating in providing and developing training and refresher courses for engineers and other professionals in the gas industry, co-ordinating the standardisation of work for the gas industry etc. Nine regional AFGs provide technical communication and generally promote the French gas industry.

- *Training Bodies*

Compétences & Formations AFG (CFAFG)

The training body of the French Gas Association, CFAFG became an independent subsidiary in 2006. Its main objectives are to:

- Keep up with changes and the evolution of competences for all professionals in the gas chain: transmission, storage, distribution, utilisation, management, trading.
- Recommend individual professional training, according to the changes in the sector
- Optimise companies' performances by offering customised services,
- Develop the skills in the gas industry by increasing expertise and know-how,
- Teach new knowledge and tailor this to the companies' specific needs,
- Maintain the standards of expertise expected by technicians, engineers and managers.
- Offer technical and managerial skills to gas professionals.

- *Qualification regulators*

The *Gas Skills and Training Committee of the French Gas Association* is responsible for the identification of training needs in the gas sector (excluding exploration), strategic thinking on mutual recognition of skills and their certification (ECTS, B.A.D.G.E, V.A.E, Certificat de Qualification Professionnel), the implementation of periodic conferences on gas sector related subjects for professionals (industrial risk prevention, etc..), and the creation of new training modules for policy makers of gas management. The Committee also advises its members regarding their training needs (within AFG, but also outside the AFG) and ensures

⁴² Standing members are: Altergaz, Comité français du butane et du propane (CFBP), EDF, GDF SUEZ, GrDF, GRTgaz, Poweo, Total, Total Infrastructures Gaz France (TIGF).

their work is connected to the four business committees of AFG (*commissions métiers*), gathering their views and needs, but also involving them in the work of the committee⁴³.

National Council for Lifelong Learning CNFPTLV (Conseil National de la Formation Professionnelle Tout au Long de la Vie)

The CNFPTLV is a forum for dialogue between the state, economic and social partners and regional councils on legislation and regulations related to VET. It produces reports, undertakes benchmarking exercises, creates databases and makes recommendations⁴⁴.

Regional coordination committees on employment and vocational training CCREFP (Comité de Coordination Régional de l'Emploi et de Formation Professionnelle)

There are 22 CCREFPs in France, that bring together representatives of the state, the region, the social partners, the regional chambers of agriculture, commerce, industry and trades and of the Académies within the region.

Agency for the Management of the Environment and Energy ADEME (Agence de l'Environnement et de la Maîtrise de l'Énergie)

ADEME is a public agency under the joint authority of the Ministry for Ecology, Sustainable Development and Energy and the Ministry for Higher Education and Research. Its purpose is to encourage, supervise, coordinate, facilitate and undertake work with the aims of protecting the environment and managing energy supply.

- *Awarding Bodies*

Besides the CFAFG, a range of other bodies are providing training in the gas sector, in partnership or independently.

Training Centre of GDF Suez Énergies France

This training centre offers continuing vocational training in specific areas, related to prevention, efficiency and energy management.

Qualigaz

Offers training on gas installation, including techniques, validation, the Quality Visa sheet (Fiche visa qualité), and the operation of heating systems and maintenance of installations⁴⁵.

Scientific and Technical Committee of Climatic Industries COSTIC (Comité scientifique et technique des Industries Climatiques)

COSTIC offers training related to the use of natural gas for providing heating, such as courses on Climatic Engineering and Technical Building Equipment⁴⁶.

- *Other accreditation and training bodies*

Cofrac is the national accreditation body issuing ISO/CEI 17024 certificates in a range of fields, including some related to natural gas⁴⁷. *AFNOR* also issues ISO/CEI 17024 certificates and offers training for activities related to the use of natural gas⁴⁸.

Coprotec is a private company linked to a public association, based on a public-private partnership. It offers continuing training in conventional energies (gas management, stove building and disposal of combustion products, regulations relating to gas installations,

⁴³ <http://www.afgaz.fr/site/page-afg-284.html>

⁴⁴ <http://www.cnfptlv.gouv.fr/>

⁴⁵ http://www.qualigaz.com/category/formations/decouvrez_nos_offres_ formations/

⁴⁶ <http://www.costic.com>

⁴⁷ <http://www.cofrac.fr/fr/activites/certification.php>

⁴⁸ <http://www.boutique-formation.afnor.org/>

combining conventional and renewable energies), but also in sustainable development and safety. The courses enable professionals to obtain a certificate to validate their skills⁴⁹.

Socotec is a private company providing training to a wide range of sectors, having established 22 training centres throughout France⁵⁰.

Interaction between social partners and above bodies

The French Gas Association has a central role in defining policies related to VET in the gas sector. Within the Association, the Gas Skills and Training Committee is responsible for developing VET strategies and linking the various elements of the VET infrastructure in the Sector. Trade unions are involved in Regional coordination committees and the National Council for Lifelong Learning, in which they can influence VET policies.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

Compétences & Formations AFG
62 rue Courcelles , Paris 75008
France
Tel : 01 44 01 87 87

Energy Formation de GDF SUEZ
Laurent Le-Boterff
Tel: 02 40 85 82 66
Mail: laurent.le-boterff@gdfsuez.com

Marie-Claire SPECIEL
Tel: 02 40 85 82 35
Mail: marie-claire.speciel@gdfsuez.com

Martine FARCY
Tel: 02 40 85 81 15
Mail: martine.farcy@gdfsuez.com

Qualigaz
Le forum
131/135 avenue Jean Jaurès
93305 Aubervilliers Cedex
Tel: 0826628628
Email: formation@qualigaz.com

⁴⁹ <http://www.professionnels-energie.fr/>

⁵⁰ <http://www.socotec.fr/formations/guide-des-formations>

Germany

VET infrastructure

There is an extensive framework for VET at all levels of the country. At regional (Länder) level there are VET Committees, which include employer and union representatives. These Committees provide advice to the *Länder* government on VET. The *Länder*, and several regions in different *Länder*, pursue their own region-specific activities for early identification (e.g. regional monitoring of qualification developments, surveys on skill needs).

In addition to the vast majority of VET schools there is a growing number of privately funded organisations providing VET, such as those allied to the church. However these bodies are overseen by the state. Studies into the skills needs and qualification development are undertaken by sector specific associations (for example the Association of Engineers), foundations (such as the *Hans-Böckler* Foundation) and other stakeholders.

Relevant actors in the Gas sector

At the national level the Ministry of Education and Research (Bundesministerium für Bildung und Forschung - BMBF) has ultimate responsibility for the development of VET policy, the overall coordination of the VET system and supporting legislation. However any requirements for occupational specific training are set out by the relevant government Ministry, in conjunction with the BMBF.

The Federal Institute for Vocational Education and Training (BIBB) is the key VET body at national level. The BIBB undertakes studies and research on company VET and also provides a consultancy role to the German government.

- *Regulatory bodies*

Deutscher Verein des Gas- und Wasserfaches e.V. Technisch-wissenschaftlicher Verein (DVGW)

The DVGW (Deutscher Verein des Gas- und Wasserfaches e. V. – Technisch-wissenschaftlicher Verein – German Technical and Scientific Association for Gas and Water) provides technical and scientific support. All the activities of the DVGW focus on safety, hygiene and environmental protection.

Standardisation

The practical work in the gas sector is based on the technical rules of the DVGW, which closely co-operates with DIN Deutsches Institut für Normung (German Institute for Standardisation) and is able to influence the creation of European regulations. It supports Eastern and Central European countries within the process of adjustment to the European regulation system.

Certification

The certification process according to DVGW specification is widely accepted by the utility companies, network operators and pipeline construction companies.

DVGW vocational training centre

DVGW offers all members and interested persons a programme for education and further training. A network of DVGW members elicits information on the current training needs in the fields of regulation and standardisation, testing and certification, research and development as well as the changing demands from companies.

- *Awarding bodies*

DVGW CERT GmbH has been a subsidiary of the DVGW since 2007 and is the largest gas and water industry certification body in Europe, covering all the certification procedures required in these sectors. Together with test laboratories, the company certifies and monitors gas and water industry products, quality and environmental management systems as well as companies and individual experts.

- *Training providers*

DVGW partner and approved training centres deliver direct access to relevant information in the areas of regulation, certification and education. These centres provide a wide range of training courses and examinations. The DVGW's training and advanced training program trains approx. 25,000 participants annually and is made available via the Internet or for members via the Internet-based personnel development tool and is updated almost daily.

- *Labour Market Research*

There is a well developed research infrastructure that provides information on the effectiveness of the VET system and the anticipation of skills. The Federal Institute for Vocational Education and Training (BIBB), a recognised centre of excellence for research into VET, identifies future challenges in VET, promotes new practices in both national and international vocational systems, and develops both initial and continuing vocational education and training.

Interaction between social partners and above bodies

A defining feature of the German VET system is the relationship between the government employers and trade unions. The social partners exert a large degree of influence over VET – both its form and content:

- *At the national level*

The Main Board of the Federal Institute for Vocational Education and Training (Bundesinstitut für Berufsbildung - BIBB) advises the German Government on all matters related to VET, including the creation of occupational standards and training regulations.

- *At Länder level*

Vocational training committees, with representation from employers and trade unions and the *Länder* authority, advise and exert influence over VET within local government.

- *At regional level*

So-called Competent Bodies (Zuständige Stellen), including Chambers of Industry and Commerce for the industrial sector, the Chambers of Crafts, Professional Boards for the liberal professions as well as the federal and local authorities. These Bodies monitor the effectiveness of VET training centres, monitor company level training, promote VET and offer advice to companies wanting to train and the tutors delivering the training. Each Body includes a tripartite vocational training committee which is consulted on key VET issues.

- *At sectoral/enterprise level*

Codetermination rights within company level collective bargaining has the right to influence wages of trainees, the development, planning and implementation of company training, the appointment of tutors, the introduction of company level education and training initiatives and the negotiation of employment contracts for those completing their training.

The involvement of employers and trade unions is key for introducing change to the VET system. As qualifications or regulations change, experts from the social partners participate in Committees to discuss and influence these changes.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

Federal Institute for Vocational Education and Training (BIBB)

BIBB - Bundesinstitut für Berufsbildung

Federal Institute for Vocational Education and Training

Postfach 201264

53142 Bonn

Greece

VET infrastructure

The Greek VET sector was very fragmented until recently, with a range of institutions performing similar duties of establishing strategies and coordinating policies for the development of VET. In 2011, three of these organisations were merged into a single body responsible for the coordination of the national VET policy. A National Quality Framework for lifelong learning and occupational profiles are still under development. There are at least two organisations that meet the characteristics of transversal skills councils, but no Sectoral Skills Councils. Forecasts of labour demand and supply are carried out using data from the Greek National Statistical Service. An employer survey was used to identify future skills gaps, but the survey is not carried out on a regular basis.

Relevant actors in the Gas sector

In Greece only one company and its subsidiaries operate in the sector, the Public Gas Corporation (DEPA). There are no sectoral level agreements in the natural gas sector, as there are no sectoral collective employee or employer organisations⁵¹. There is one union active in DEPA, the Union of DEPA Employees – SEDEPA, which is party to an enterprise-level agreement.

- *Qualification regulators*

All VET qualifications have to meet certain criteria and to be accredited by the *National Organisation for the Certification of Qualifications and Career Guidance*, under the supervision of the Ministry of Education, Lifelong Learning and Religious Affairs. The competent body for the recognition of professional rights at vocational education and training levels is the *Organization for Vocational Education and Training* (OEEK).

National Organisation for the Certification of Qualifications and Career Guidance (E.O.P.P.E.P.)

E.O.P.P.E.P. is a legal entity that coordinates the national policy in the areas of counseling and guidance, certification qualifications and structures for lifelong learning. It is the competent national coordination body responsible for formulating standards, rules and procedures for quality assurance consulting services and guidance under the *National Quality Framework for lifelong learning*⁵². E.O.P.P.E.P. also operates as the national structure competent for European Networks administering issues of Qualifications & European instruments of transparency, mobility and LL Guidance & Counseling.

*Hellenic Qualifications Framework*⁵³

Among the key anticipated results of the NQF implemented by the E.O.P.P.E.P. are descriptors for each level and sector developed and referenced to the HQF levels, the development of 200 new Occupational Profiles, fully compatible with the credits/modules approach and an online Database for Occupational Profiles fully operational⁵⁴.

*Organisation for Vocational Education and Training OEEK*⁵⁵

The organisation is responsible for the establishment and operation of vocational training institutes and the determination of training programmes curricula. OEEK also provides initial or supplementary vocational training, observes and evaluates the requirements in specialised personnel for each sector of the economy, in co-operation with other agencies. It

⁵¹ <http://www.eurofound.europa.eu/eiro/studies/tn0702017s/gr0702019g.htm>

⁵² <http://www.ekep.gr/english/index.html>

⁵³ <http://en.ngf.gov.gr/Home/TheHellenicQualificationsFramework/tabid/103/Default.aspx>

⁵⁴ http://www.eqavet.eu/Libraries/Information_seminars/Nikos_Georgiadis_EOPPEP.sflb.ashx

⁵⁵ <http://www.oEEK.gr/index2.html>

also conducts studies and maintains statistical information and documents on issues related to vocational education and training⁵⁶.

National Database of Learning Opportunities “PLOIGOS”⁵⁷

The Database provides information on all educational levels in Greece and is linked, through the European Commission General Directorate of Education & Culture, to the European Information Portal on Learning Opportunities “PLOTEUS” II.

National Resource Centre for Vocational Guidance - Euroguidance Centre of Greece (EKEP-NRCVG)

EKEP is a body for the coordination, support, certification and enhancement of the actions taken by those offering services in education, training and employment. In addition, EKEP is an information resource centre for education and vocational guidance. It is governed by representatives from two supervising Ministries, the Pedagogical Institute, the Greek Manpower Employment Organization and social partners⁵⁸.

- *Labour Market Research*

Employment Observatory Research – Informatics S.A. (PAEP)

This private company, resulting from a merger between National Employment Observatory and the

National Institute of Labour in 2002, functions under the supervision of the Minister of Labour and Social Affairs. Employers’ and employees’ representatives are amongst its board of directors and the organisation covers the whole economy and aims at both the forecasting of education and training needs and at studying the labour market.

National System for Linking Vocational Education and Training with Employment ESSEEKA

ESSEEKA is a large framework system, established by law, aimed at labour market needs, technical vocational education, initial vocational training, continuing vocational training, the accreditation of vocational training and competences and a system of occupational guidance. A 2007 report by ECOTEC shows that ESSEEKA, besides a first step towards setting up a ‘High Level Committee’, remained inactive since the law was passed⁵⁹.

- *Training providers*

In Greece, continuing training is provided through Vocational Training Centres (KEK, either privately owned or state-run), Employment Promotion Centres (KPA, under the Ministry of Labour) and in service training modes⁶⁰. The continuing vocational training programmes include theoretical training and practical exercises in firms; the trainees are subsidised for the duration of the programme.

The Department of Petroleum Technology and Natural Gas of the Technological Educational Institute⁶¹

This is the only specialized higher-education department in the country that offers studies on this field, ranging from exploration and extraction, to transportation, storage and production of energy and certain raw materials.

⁵⁶ http://www.ecvet.net/c.php/ecvet/experts_and_teams/area_team_leaders/oeek.rsys

⁵⁷ <http://ploigos.eoppep.gr>

⁵⁸ <http://www.ekep.gr/english/EKEP/main.asp>

⁵⁹ ECOTEC Research & Consulting Ltd. (2007) ‘European inventory on validation of non-formal and informal learning, Greece’, p. 4-5.

⁶⁰ http://www.eurasment.eu/IMG/pdf/VET_Systems_Index_Final_EN.pdf

⁶¹ <http://petrotech.teikav.edu.gr/>

Interaction between social partners and above bodies

Social partners play a significant role in VET, given that they survey the market and its needs and report back to OEEK, suggest the development of new qualifications needed and participate in the structuring of the training guides that govern vocational education. There are Tripartite Advisory Committees (consisting of employers, employees and OEEK), whose main task is to survey the labour market at local level and consequently propose the introduction of new qualifications in public Vocational Training Institutes or the withdrawal of older qualifications, when demand drops. In addition, a national consultation process has been launched for the development of a National Qualifications Framework, involving social partners. The *Continuing Vocational Training Fund* (LAEK) is managed by a tripartite committee with technical support from Manpower Employment Organisation (OAED) and manages funds from both employers and employees.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

National Organisation for the Certification of Qualifications and Career Guidance

41 Ethnikis Antistaseos Avenue
142 34 N. Ionia
Athens
Greece

Tel: +30 210 27091158

Email: info@nqf.gov.gr

Web: www.eoppep.gr

Hungary

VET infrastructure

The VET system in Hungary includes a range of public educational institutions, private training companies and regionally integrated vocational training centres within large companies. The Register of Qualifications, maintained by the cross-sectoral National Council for Vocational and Adult Training, indicates which competencies are required by industry in order to maintain a balance between demand and supply of skills in the economy. Regional Development and Training Committees exist to adjust the content of the training programmes to meet the demands of the regional economy. However, there are no Sectoral Committees and the gas sector is only partially covered by this infrastructure. In addition there are no Sectoral Training Funds and funding for training is only available from the general Labour Market Training Fund. Individual employees can access vocational training from their employer, some of them being able to provide integrated (internal) vocational training courses.

Relevant actors in the Gas sector

The energy regulatory authority, Hungarian Energy Office (Magyar Energia Hivatal), is not directly involved in the development of VET policies in the Hungarian gas sector⁶².

- *Qualification regulators*

National Institute for Vocational and Adult Education NIVE

The Institute has the role to develop the VET system in Hungary through research and regulation. It functions under the supervision of the National Labour Office. After the input from the *National Council for Vocational and Adult Training (a structure of social dialogue at the national level)*, NIVE registers the standards in the national qualifications register (*Országos Képzési Jegyzék, OKJ*)⁶³.

*The Adult Training Accreditation Body (Felnőttképzési Akkreditáló Testület, FAT)*⁶⁴

This body within the *National Institute for Vocational and Adult Education* has the function to issue accreditation to vocational education and training providers and to assure quality in adult training at national level.

Regional Development and Training Committees - Seven regional development and training committees exist (*regionális fejlesztési és képzési bizottságok, RFKBs*) to administer VET at the regional level, ensuring a link with labour market demands.

- *Awarding Bodies*

County labour centres (*megyei munkaügyi központ*) of the National Employment Service (Nemzeti Foglalkoztatási Szolgálat, NFSZ) register and inspect adult training providers and programmes⁶⁵.

A database of registered training providers is available on-line⁶⁶.

The Federation of Technical and Scientific Societies - MTESZ

MTESZ has the aim of coordinating the work of 40 professional societies, to facilitate their collaboration and to protect their interests. Almost all Hungarian professional-scientific organisations belong to this Federation.

⁶² <http://www.eh.gov.hu/>

⁶³ https://www.nive.hu/index.php?option=com_content&view=article&id=297

⁶⁴ https://www.nive.hu/index.php?option=com_content&view=article&id=183

⁶⁵ http://www.cedefop.europa.eu/EN/Files/4103_en.pdf

⁶⁶ https://www.nive.hu/index.php?option=com_jumi&view=application&fileid=8

MTESZ has an Adult Education Advisory Board and 20 nationally accredited training centres for adult education⁶⁷.

Hungarian LPG Association - Provides training to professionals from companies in the LPG sector⁶⁸.

The Natural Gas Engineering Department of the University of Miskolc

The Department is the only academic institution in Hungary responsible for education and training in natural gas engineering. It offers education and research activities covering the entire range of the natural gas supply, from transmission, via storage, to distribution including the gas market and gas utilisation⁶⁹. It cooperates with many private companies operating in the gas sector.

Integrated vocational training centres

A number of private companies have internal vocational training centres. For instance, E.ON owns and manages regional integrated vocational training centres (TISZK) in Nagykanizsa, Szigetvár and Szabadbattyán⁷⁰.

Interaction between social partners and above bodies

At national level social partners can influence the content of formally recognised qualifications, through their participation in the National Council for Vocational and Adult Training, which comprises representatives of employers' organisations, trade unions, the training system and regional and national level authorities. Social partners can influence the content of training programmes at the regional level through their involvement in transversal Regional Development and Training Committees, whose members comprise regional level employers' organisations, trade unions and training providers. These Committees produce lists of "supported qualifications", which receive financial support, and thus can influence the content of vocational training provided.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

National Institute for Vocational and Adult Education NIVE
1085 Budapest, Baross utca 52nd
1476 Budapest
PO Box: 75
Tel: +36 1 434-5700
Email: info@nive.hu

The Federation of Technical and Scientific Societies – MTESZ
1055 Budapest Kossuth tér 6-8.
Tel: (061) 4747 908
Email: mtesz@mtesz.hu

Natural Gas Engineering Department of the University of Miskolc
H-3515 Miskolc – Egyetemvaros, Hungary
Tel: +36 46 565 078
Email : gastitkar@kfgi.uni-miskolc.hu

⁶⁷ <http://www.mtesz.hu>

⁶⁸ <http://www.mpe.mtesz.hu/>

⁶⁹ <http://www.gas.uni-miskolc.hu/eng/>

⁷⁰ <http://www.eon-hungaria.com/en/press/releases/2011/further-e-on-cooperation-with-emergency-management>

Italy

VET infrastructure

The system of vocational education and training is highly decentralised and, while the main provision of VET is from within the regions, there are broadly three levels of VET:

- National – the institutional framework for VET is determined
- Regional – the planning and provision of VET
- Company – training plans are defined and implemented

CVT in Italy is undertaken through the Training Plan (Piano Formativo) agreed between the social partners, which can be agreed at individual, company, territorial or sectoral level. This training is financed by 20 Interprofessional Funds (Fondi Interprofessionali), into which employers make voluntary contributions.⁷¹ These employer contributions are paid to the National Institute for Social Security (Istituto Nazionale di Previdenza Sociale). These Funds can only be established by the agreement of the social partners and their governing boards are populated in equal numbers by employers and unions.

The actors within the VET system and their responsibilities are listed below:

- Ministry of Education, University and Research – defines the overall principles and the performance levels of the system
- Ministry of Labour – ensures the appropriate levels of services of the education and training system
- Regions and autonomous Provinces – these have exclusive jurisdiction of VET
- Social Partners - contribute to design and implementation of labour market policies, particularly for VET.

Relevant actors in the Gas sector

- *Regulatory bodies*

The *Contratto Nazionale del Gas-Acqua* (National Contract for gas and water) is negotiated every four years between the social partners and defines the National Occupational Standards (NOS) as well as other aspects of VET regulation (labour relations, employment, training, etc).

- *Awarding Bodies*

The government is the awarding body for the gas sector and its remit includes qualifications achieved through schooling and university, as well as certificates awarded through relevant courses run by regional governments or bodies to which regional governments outsource this role to.

In addition, another important organisation that has the power to award relevant professional standards/qualifications within the sector is CIG (Comitato Italiano Gas), whose members include representatives of employers, workers, and national government.

Finally, there are 14 non-governmental (private) bodies recognised by Accredia (whose members include all relevant social partners) that act as awarding bodies for those firms

⁷¹ Although voluntary the contribution rate is fixed and is expressed as a percentage of the gross annual salary per employee within the company.

seeking to carry out roles in the production and distribution of gas (including personnel qualifications).

- *Training providers*

Training providers include regional governments, employers themselves, and other types of organisations (public or membership based). Training providers will therefore include a mix of region-specific organisations as well as organisations operating nationally, or indeed globally.

- *Labour Market Research*

The Institute for the Development of Vocational Training of Workers (*Istituto per lo sviluppo della formazione professionale dei lavoratori*) is a national research centre under the supervision of the Ministry of Labour and Social Policy.

The National Council for the Economy and Labour (Consiglio Nazionale dell'Economia e del Lavoro)

The Council consists of representatives from the social partners, the self-employed, employees, social services and voluntary organisations. As well as its advisory role, at the request of Parliament, the Government and the Regional Administrations the Council also prepares documents on legislation, major economic issues, labour and social policies and environmental issues, but, more importantly, produces periodic reports, studies and analyses on the economic trends, the labour market and bargaining.

Interaction between social partners and above bodies

The actions of the social partners can be categorised as follows:

- Consultation and concertation both at National and Regional levels
- Participation on bipartite bodies, both at National and territorial levels, which were established by 13 National Labour Contracts (NLCs) which take some responsibility for the VET system

As a result of their significant degree of control over the Interprofessional Funds, the social partners have taken on a greater role for the planning of VET. They are central to the negotiations of the *Contratto Nazionale del Gas-Acqua* and play an important role in defining the regulatory framework of the sector, including professional qualifications. The social partners are represented in the key decision making institutions as are civil society organisations, particularly consumer organisations, which are also involved in the decision making process.

The social partners participate in a joint committee (at national, regional or local level) through which they have the opportunity to influence representatives of the Ministry of Labour and Social Policy and the Regional Representation Bodies. The joint committee creates and strengthens the links with the National Committee for Higher Technical Education and Training to ensure the system is fit for purpose.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

Institute for the Development of Vocational Training of Workers
Corso d'Italia
33 – 00198 Roma
Tel: +39 06 85447 1
Web: <http://www.isfol.it/>

Malta

VET infrastructure

The Malta Qualifications Framework (MQF) has two learning pathways from Levels 1 to 5 with General Education and Vocational Education and Training. From Level 6 to Level 8 the dividing line between General Education and VET does not exist thus indicating that there is one Higher Education area in Malta.

Relevant actors in the Gas sector

- *Qualification regulators*

Malta Resource Authority - Article 4 of the MRA Act establishes the functions of the Authority and gives wide ranging responsibilities essentially involving regulation of practices, operations and activities in the energy, water and minerals sectors. This broadly can be considered to incorporate the regulation of Retailers and operators in the regulated sectors including: operators of petrol stations, gas and kerosene delivery entities, off-shore bunkering companies, private operators of desalination plants and operators of road tankers;

- *Awarding Bodies*

The Malta Qualifications Framework (MQF) has a regulatory function as all level rated qualifications undergo a quality process. The Malta Qualifications Council (MQC) is the National Contact Point (NCP) of the Malta Qualifications Framework (MQF) and the European Qualifications Framework for Lifelong Learning.

There are two different level rating processes, one for foreign qualifications and one for home-grown qualifications. The level-rating of qualifications that are awarded by a foreign awarding body takes place after the Malta Qualifications Recognition Information Centre (MQRIC) confirms that the qualification in question is mutually recognised. There are a number of standards which home-grown qualifications must satisfy, which have to be approved by MQC and by an independent evaluator representing the Malta Resources Authority.

- *Training providers*

Education and Training providers have to be officially licensed by the Ministry of Education, Employment and the Family, via the MQC. Foreign awarding bodies are widely represented in Malta, so learners do not have to travel abroad to achieve a foreign qualification. When a protocol is signed between MQC and the public or private education and training providers the level rated qualifications are listed in the Malta Register of Regulated Qualifications which is available on the MQC website.

The Employment and Training Corporation and the Directorate for Lifelong Learning of the ministry of Education, Employment and the Family offers a number of qualifications to the unemployed as well as to those who are in employment but feel the need for up-skilling for job retention or for job mobility.

- *Labour Market Research*

Malta Qualifications Recognition Information Centre (MQRIC)

The mission statement of the MQRIC is to oversee the development of the National Qualifications Framework in the context of lifelong learning and to work in partnership with learners, employers and training and education providers to achieve and maintain excellence as a contribution towards the national effort for competitiveness. Part of its work includes collective and publishing information on labour market dynamics in the gas sector in Malta.

Interaction between social partners and above bodies

One of the two unions involved in this sector-related collective bargaining is the General Workers' Union (GWU). The GWU, affiliated to IndustriAll, is by far the largest trade union in Malta. It has a wide representation reaching most of the sectors in the Maltese economy and is especially strong in state owned or controlled enterprises and corporations.

The Chemical, Energy and Printing Section of the GWU represents Gas Storage workers at Enemalta and employees at Multigas Limited. Enemalta is the national provider of energy in Malta. Multigas Limited is a private company responsible for the production and supply for a range of industrial and medical gases. GWU negotiates collective agreements with both Enemalta and Multigas Limited.

The Enemalta Professional Officers Union (EPOU) is also involved in collective bargaining in this sector. It represents professional employees of Enemalta, which are mainly engineers.

The only employer association which is the General Retailers and Traders Union (GRTU) which represents self-employed gas distributors, which total 31 - of which 30 are males and one female. The GRTU is a national organisation of independent private businesses. The trade unions GWU and EPOU and the employer association GRTU are usually consulted by the MRA and by Enemalta Corporation.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

Malta Qualifications Council
Casa Leoni
476, St Joseph High Road
St Venera
Malta
Tel: +356 2754 0051
Email: mqc@gov.mt

Netherlands

VET infrastructure

There are, in broad terms, three levels of organisation in the Dutch vocational education and training system:

- national (ministries, umbrella organisations, support or advisory organisations, examination institutions and national social partner organisations)
- sectoral (social partner organisations by sector, national expertise centres for vocational training and the labour market)
- regional/local (schools, private training centres, municipalities, regionally organised social partner organisations).

The Ministry of Education, Culture and Science (Ministerie van Onderwijs, Cultuur en Wetenschap, OCW) has overall responsibility for the country's education system, including vocational education and adult education.

The Ministry of Education, Culture and Science has a policy of decentralisation of its responsibilities. It finances and monitors publicly funded VET institutions, who each receive a lump sum for vocational education and are then responsible for the overall management of the institution, including personnel policy.

The national expertise centres for vocational training and the labour market (*Kenniscentrum Beroepsonderwijs Bedrijfsleven*) are intermediary organisations organised on a sectoral basis. Each of the 19 has a board consisting of representatives of both employers and employees and (in most cases) education.

Relevant actors in the Gas sector

- *Regulatory bodies*

Quality Centre for Examinations (Kwaliteitscentrum examinering - KCE)

The KCE has overall responsibility for ensuring that the training offered within the VET system is of a certain standard and that organisations offering training are doing so to a universal level of professionalism. At the sector level it works with sectoral examination bodies to maximise the use of existing knowledge in any particular field. These bodies are composed of experts from educational institutions and the social partners.

- *Awarding bodies*
(to be completed)

- *Training providers*
(to be completed)

- *Labour Market Research*

Research Centre for Education and the Labour Market (ROA)

This is a research institute and part of the Maastricht University School of Business and Economics. The Centre undertakes research into the "interaction between labour demand and supply, occupational careers, and performance within organisations. ROA also contributes to both academic discussions and the public debate on education and labour market issues."⁷²

⁷² <http://www.roa.unimaas.nl/>

Interaction between social partners and above bodies

The role of the social partners in VET can be described as advisory and has the potential to influence networks, VET bodies and institutions, Councils and Boards. The role of employers and unions is especially important in supporting the move to the knowledge society. The main advisory body of Government at the national level is the Social Economic Council (Sociaal Economische Raad – SER) which offers advice on significant social and economic issues. Its status is underpinned by law dating back to 1950 and the Council represents the interests of trade unions and employers.

At sector level, the social partners are represented on Colo, the association of so-called expert centres of vocational education, training and the labour market. Colo has a tripartite board seating an equal number of employer and employee representatives.

Committees also exist in each sector on which the social partners and education representatives have equal representation (*paritaire commissies*). These Committees set out occupational profiles which are transformed by providers into educational profiles.

At the regional level, the majority of Regional Training Centres have regional representatives from the social partners on their supervisory board.

At company level the social partners participate in collective negotiations and training measures increasingly form part of the final agreement. The social partners are also involved in sectoral bodies that monitor the quality of examinations and they are increasingly involved in, or initiate activity through cooperation between training and industry.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

Research Centre for Education and the Labour Market
Maastricht University School of Business and Economics
P.O. Box 616
6200 MD Maastricht
The Netherlands

Tel: +31 (0)43 3883647

Email: secretary-roa-sbe@maastrichtuniversity.nl

Web: www.roa.nl

Norway

VET infrastructure

Norway has a decentralised VET system, the delivery and operation of which is responsibility of the country's 19 counties. The social partners play an active role in the development of VET policies at all levels.

The overall responsibility for policy development, the financing and administration of the VET system is held by the Ministry of Education and Research (Kunnskapsdepartementet), which is advised by the National Council for Vocational Education and Training (NCVET). The NCVET provides advice to the Government on the overall national VET framework and individual counties and municipalities oversee the development of VET plans, the delivery of VET and its financing.

Relevant actors in the Gas sector

DSB is responsible for matters which are covered by the The Act relating to Prevention of Fire, Explosion and Accidents involving Hazardous Substances and the Fire Services' Duties connected with Rescue Operations (LOV-2002-06- 14-20)

Anyone who designs, constructs, manufactures, installs, operates, alters, repairs, maintains or controls the equipment and facilities used for handling hazardous materials (including gas) must have the necessary expertise. The same applies to anyone who handles hazardous materials beyond that intended for their personal use.

Their expertise should include knowledge of relevant regulations and the technical execution and operation of equipment and facilities. Competence shall be documented by certificates or diplomas.

Where there are recognised standards of competence (see: Norwegian Gas Norm), the content of these shall be applied as a minimum. Competence shall be maintained so that they are updated on new regulations, new methods and developments in the field in general. Companies must ensure that employees have the necessary expertise and must provide training so that all tasks can be performed safely, both during normal operation and abnormal situations and operating conditions. The training shall also include procedures and precautions for incidents and accidents.

- *Regulatory bodies*

The Directorate for Civil Protection and Emergency Planning - Direktoratet for samfunnssikkerhet og beredskap (DSB)

The Directorate for Civil Protection and Emergency Planning (DSB) is the national public authority with overall responsibility for assessing risk in Norway in general. DSB promotes preventive measures on accidents, crises and other undesirable incidents. It ensures sufficient emergency planning and the efficient management of accidents in the event of crises. DSB is therefore an important actor in the gas sector as it must oversee the implementation of the law in relation to working with hazardous materials, including gas.

Norwegian Accreditation (NA) Norsk Akkreditering

Norwegian Accreditation (NA) is the that accredits laboratories and sampling organisations; certification bodies; inspection bodies and environmental organisations. NA represents Norway on three European and international bodies - the European co- operation for Accreditation (EA), the International Laboratory Accreditation Cooperation (ILAC) and the International Accreditation Forum (IAF).NA issues accreditation for the National Institute of Technology and Nemko awarding bodies.

Norwegian Gas Norm Norrsk Gassnorm

Norwegian Gas Norm (established in 2005) is owned by seven leading Norwegian gas companies: AGA AS; Gasnor AS; Lyse Gass AS; AS Norske Shell; Primagaz AS; Statoil Norge AS; Yara Praxair AS. These companies have worked cooperatively and have developed standards jointly.

The Norm ensures that the government's safety requirements are being complied with. Uniform standards and regulations for the design, installation, inspection and operation / maintenance of gas facilities are produced by the Norm. Each of the seven companies has a representative on the Board, which in turn appoints an Advisory Board responsible for maintaining the effectiveness and appropriateness of the Norm and deals with appeals to decisions about the registration scheme by companies in the sector. The Norwegian Gas Norm provides curriculum for vocational training courses on gas.

The Institute of Technology (specifically the Norwegian Gas Centre (NGS)) is responsible for the operation of the Norwegian Gas Norm.

- *Awarding bodies*

Norwegian Gas Norm

The Norwegian Gas Norm requires that gas professionals and academics hold a certificate of competency, issued by an accredited certification body. Accredited certification bodies issuing personnel certificates of competence for gas professionals must apply a procedure determined by the Norm.

The Institute of Technology Teknologisk Institutt Sertifisering AS

The National Institute of Technology (TI) is Norway's leading provider of courses and training in the gas sector. TI offers a variety of courses for both the upstream and downstream sub-sectors. It assists companies in their efforts to meet the requirements of the Regulations, and according to TI, only the National Institute of Technology offers certificate-oriented education for the Norwegian Gas Norm.

Nemko

Nemko is an accredited test laboratory and is highly recognised for assessing and accrediting competencies in the oil and gas industry. As an independent certification body Nemko verifies that an individual has the necessary expertise in the form of basic education, professional experience and theoretical and practical knowledge in accordance with Norwegian Gas Norm.

- *Training providers*

Norsk Gassenter

The Norwegian Gas Centre was created in 2002 and was taken over in 2009 by the Technological Institute (IT). The centre offers courses and training covering all aspects of the new regulations concerning energy, including certified training in accordance with the standards set by the Norwegian Gas Norm, training covering other requirements stipulated in the regulations, specific topic-based courses and customised education for the business needs of energy companies.

- *Labour Market Research*

Norwegian Gas Association

The Norwegian Gas Association is part of the Norwegian Petroleum Society and deals with current issues concerning the gas sector and disseminates information about the sector to Norway's petroleum industry. On behalf of the industry, the board of the NGA serves as the formal link with the International Gas Union (IGU). NGA's mission is to serve as the NPF's professional forum for companies and individuals interested in the production, transport and use of natural gas. The NGA organises member meetings on relevant gas projects and on market, economic and industry policy developments. NGA's members' list can be found with the following link:

<http://www.npf.no/index.php?c=181&kat=Member+companies>

Interaction between social partners and above bodies

The engagement of the social partners in the governance and operation of VET in Austria is significant. A total of nine Vocational Training Councils (Faglige råd), made up of representatives from the public sector and representatives of employers and trade unions monitor the performance and effectiveness of the nine VET programmes offered, ensuring that the skills required are delivered through the qualifications and training programmes offered. In addition, the social partners occupy the majority of the positions on county VET committees and occupation specific examination boards.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

Norwegian Gas Association
Lilleakerveien 2 A
NO-0283 Oslo
Email: post@npf.no

Poland

VET infrastructure

The Ministry for Education has the ultimate responsibility at the national level, creating the legal framework for VET and setting out the core curricula and, with the Department for Vocational Education and Continuing Training, oversees the overall implementation of VET policy. The National Observatory collects and analyses information on the developments in the VET system and the labour market and produces reports on the operation and effectiveness of VET in Poland.

The Public Employment Service (<http://www.psz.praca.gov.pl>) also plays an important role in the VET system and is a key institution for analyses of the evolution of skills and competencies across the economy.

Relevant actors in the Gas sector

Qualification Commissions are appointed every 5 years by the Energy Regulatory Office and by the Ministers and heads of agencies. These Commissions are then established within the bodies reporting to, or supervised by, those Ministers or agency heads. The updated register of the qualifying Commissions, published on the website of the Energy Agency, contains information on the composition of each Commission, the scope of their powers and their geographic jurisdiction. At present there are around 160 active qualifying Commissions.

- *Regulatory bodies*

Energy Regulatory Office (Urząd Regulacji Energetyki)

In accordance the Polish Energy Act, specialists in network, equipment and installation operations should possess qualifications, accredited by a certificate, issued by appropriate qualifying Commissions.

The Ministry of Economy

The Ministry sets out the type of work that requires specific qualifications, the required scope of knowledge and competency, the process of accreditation and the organisations eligible to become qualifying Commissions. Different categories of certificates are issued for exploitation and for supervisory activities.

- *Awarding bodies*

The Association of Scientific and Technical Engineers Oil and Gas Industry

The Association of Scientific and Technical Engineers Oil and Gas Industry is the largest such body registered in Poland. As such it serves the Polish oil and gas industry by integrating and educating its community, international networking, stimulating R&D projects and promoting sustainable development.

Three legitimate qualifying commissions established at NOT's regional organisational units are empowered to attest eligibility and grant permissions for gas specialists related to the supervision and operation of equipment, installations and grids listed in Group III of the aforementioned Ordinance of 28th April 2003 issued by the Ministry of Economy.

Polish Welding Centre of Excellence (Instytut Spawalnictwa)

Instytut Spawalnictwa (IS) is the key welding R&D organisation in Poland and is the only welding organisation in Poland that has the status of a Centre of Excellence. IS acts as an

Authorised National Body - in European Federation for Welding, Joining and Cutting (EWF) and International Institute of Welding - authorised for qualification of welding personnel.

The organisations Certification Centre, separate from the Institute's core structure, is accredited by the Polish Centre for Accreditation, as well as authorised by the European Federation for Welding, Joining and Cutting (EWF) and the International Institute of Welding. This body is in charge of certification / qualification of welding personnel.

Association of Polish Engineers and Mechanical Technicians

The Association of Polish Engineers and Mechanical Technicians (established in 1926) is a voluntary, democratic and self-governing and continuous public-utility organisation. It brings together around 10,000 engineers and mechanical technicians, engineers of all specialties and related professions. There are 28 legitimate qualifying commissions established at SIMP's regional subsidiaries which are empowered to accredit eligibility and grant permission for gas specialists for the supervision and operation of equipment, installations and grids.

Association of Vocational Training Centres (ZDZ)

The Association of Vocational Training Centres is the largest country-wide educational, scientific and technical non-public network of 24 regional training centres, focusing on lifelong learning. Thirteen legitimate qualifying commissions have been established at ZDZ's centres which are permitted to accredit eligibility and grant permissions for gas specialists related to the supervision and operation of equipment, installations and grids.

Federation of Engineering Associations (NOT)

NOT (Chief Technical Organisation) is the largest Polish engineering association (39 members). It represents the technical community, integrates Polish technicians and engineers and works to strengthen the role of technical professions. In fulfilling its statutory duties, NOT grants specialist status for engineers and technicians, conducts vocational training of technical and managerial staff and issues opinions on draft legislation. Seven legitimate qualifying commissions established at NOT's regional centres are responsible for accrediting eligibility and granting permissions for gas specialists related to the supervision and operation of equipment, installations and grids.

- *Training providers*

SITPNIG Centers for Training and Expertise (OSiR)

The aims of the Centres for Training and Expertise, established by SITPNIG, are to utilise the intellectual potential and improve the professional qualifications of engineers and technicians through vocational training, improvements in professional skills and qualifications and offering technical advisory services. There are fifteen SITPNIG OSIRs active in Poland.

OSIR training (either basic or specialist and supplementary) prepares the candidate to fulfill specific professional positions or roles. Additionally, OSIR centres offer training on safety and basic life support. The SITPNIG-embedded qualifying commission conducts professional exams for the supervision and operation of gas equipment and installations.

IS-accredited training providers

As of September 2011, more than 700 organisations accredited by the Polish Welding Centre of Excellence (Instytut Spawalnictwa) to offer training in welding. IS keeps a publicly available registry of these bodies.

- *Labour Market Research*

ManpowerGroup

Manpower conducts quarterly surveys to measure management's short-term plans on employment change. The Manpower survey has been conducted worldwide for 50 years and is regarded as one of the most reliable piece of research on employment in the world. The latest edition of the survey (barometer) in Poland features a sample of 750 employers (including gas companies). The participants are asked for their views on recruitment / redundancies for the upcoming three months.

Public Employment Service (PES)

The main provision of quantitative information concerning the labour market is provided by the Public Employment System. PES produces reports on the supply and demand of skills in occupations at both the national and regional level.

Interaction between social partners and above bodies

The social partners include clauses on VET in their sectoral agreements and, at the national level, the Board of National Education and Institutions of Social Dialogue consult and engage in discussions over VET issues. Social dialogue bodies also exist at the regional level to feed into the operation of the VET system at this level, and at the District level.

The social partners also contribute to the work of the Employment Council (Naczelna Rada Zatrudnienia), providing advice to the Minister responsible for labour market issues. The Council is responsible for reviewing draft legislation on the labour market and mitigating the impact of unemployment.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

None

Portugal

VET infrastructure

The education and training system in Portugal is centrally administered in that the definition of major policies and education curricular and guidelines on teaching and the funding of training. Continuing vocational training is offered at the sectoral level by organisations from the private sector, employers, cooperatives and other associations.

The Labour Code legally enshrines the obligations of employers to ensure that, every year at least 10% of those workers employed on permanent contracts participate in training courses, and asserts the legal right for every worker to receive a minimum of 35 hours certified training each year. The individual right to vocational training is guaranteed by the Labour Code (*Código de Trabalho*), which seeks to ensure that individuals' rights are exercised, regardless of their occupational status.

Relevant actors in the Gas sector

The Ministry of Labour and Social Solidarity (MTSS) is responsible for defining, managing and implementing policies on employment, vocational training, industrial relations, working conditions and social security. It performs its tasks via central, regional and local services and advisory bodies. The Institute for Employment and Vocational Training (IEFP) is the national public employment service responsible for implementing active employment policies, particularly those pertaining to vocational training and reports to the Ministry for Labour.

- *Regulatory Bodies*

The National Qualifications Agency (ANQ).

This body is answerable to both the Ministry of Labour and Social Solidarity and the Ministry of Education. Its mandate is to coordinate the implementation of policies on education and vocational training for young people and adults and to set up and manage the system for the recognition, validation and certification of skills.

- *Awarding Bodies*

The Directorate General of Employment and Labour Relations (DGERT)

DGERT is a central service within the state administration whose mission is to support policies on employment, training and professional certification and professional relationships, including working conditions and health, safety and welfare at work and it also monitors and promotes collective bargaining and conflict prevention.

Directorate General for Energy and Geology

The accreditation bodies within the gas sector in Portugal are the Directorate General of Employment and Labour Relations (DGERT) and the Directorate General for Energy and Geology. The Directorate General for Energy and Geology awards certificates for particular occupations, for example Gas Installers.

- *Training providers*

Training is provided by a number of public organisations, including the social partners, and private education institutes, for example DEFT.

- *Labour Market Research*

DGERT

This Government agency produces a wide range of labour market information.

The Centre for Employment and Vocational Training (Observatório do Emprego e Formação Profissional <http://www.oefp.iefp.pt>)

The CEVT is a tripartite advisory body which aims to contribute to the debate on employment and vocational training.

The Observatório do Emprego e Formação Profissional (R. A. Açores) (<http://www.azores.gov.pt/Portal/pt/entidades/srtss-drtgp-oefp/>)

The Direcção Regional de Formação Profissional (R. A. Madeira) and the Instituto Regional do Emprego (R. A. Madeira), provides regional statistical data.

Interaction between social partners and above bodies

The social partners have a seat on the administrations, general councils and monitoring committees of the official bodies responsible for implementing, monitoring and funding vocational training policies: on the IEFP's Administrative Board, the Audit Commission, regional advisory boards and individual Vocational Training Centres' advisory boards; on the General Council of the Instituto de Gestão do Fundo Social Europeu [Institute for Management of the European Social Fund – IGFSE]; on the General Council of the ANQ and on the sectoral qualifications councils, which will be working alongside the ANQ.

Social partners are also responsible for running various training activities that serve national policies. Apart from all the training provided by the joint-management centres, which they run in conjunction with the Employment and Vocational Training Institute, they also provide training under Integrated Training Plans. These are a structured combination of actions promoted and coordinated by the social partners with a seat on the Standing Committee for Social Dialogue – CPCS and implemented by them and their associated sectoral and regional organisations. Many of the guiding principles laid down by the National Action Plan for Employment – PNE are being pursued and applied in this way.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

The Centre for Employment and Vocational Training
Direcção-Geral do Emprego e das Relações de Trabalho
Praça de Londres
n.º 2 - 7.º andar
1049-056 LISBOA

Tel: 21 844 14 00

Email: dgert@dgert.mtss.gov.pt

Employment and Vocational Training Institute
To be added

Republic of Ireland

VET infrastructure

The VET infrastructure is bi-partite in nature, as all of the various bodies responsible for VET include employer and trade union representatives. There is a general partnership approach that devolves responsibility for the delivery of VET policies throughout the country's regions.

Relevant actors in the Gas sector

VET falls mainly within the scope of the Departments of Education and Science (DES) and Enterprise, Trade and Employment (DETE). However the provision of initial VET in schools and organisations of further education is, although overseen by the DES, devolved to 33 Vocational Education Committees (VECs).

The Government agency, Foras Áiseanna Saothair (FAS), supports people into work and is governed by a board, appointed by the Minister for Jobs, Enterprise and Innovation, which is composed of representatives from employers and trade unions. FAS provides a wide range of services among which are training, a skills database and research on labour markets.

The Irish Vocational Education Association (IVEA) was introduced by Statute in 2001 "to promote the development of education and training and to promote the development of education and training and youth work in Ireland."⁷³ The IVEA serves the 33 Vocational Education Committees mentioned above.

The Energy Institute (EI) is a chartered institute and is the professional body for the international energy industry, whose "purpose is to develop and disseminate knowledge, skills and good practice towards a safe, secure and sustainable energy system."⁷⁴

- *Regulatory bodies*

The Higher Education Authority (HEA) supervises and funds educational programmes in universities and so-called third-level education institutions, including and the country's 14 Institutes of Technology (ITs). These ITs play a key role in the provision of apprenticeship training.

- *Awarding Bodies*

The National Qualifications Authority (NQAI), the Higher Education and Training Awards Council (HETAC) and the Further Education and Training Awards Council (FETAC), provide accreditation and certification for all IVET courses, other than those made in respect of primary and secondary level schooling and third level university education.

- *Training Providers*

The most significant national provider, FAS, provides a wide range of general or specialist courses across Ireland, that are delivered through a range of methods – day courses, evenings, part-time etc.

The 33 Vocational Education Committees manage and operate so-called second level schools, Further Education colleges and a range of adult and further education centres delivering education and training.

- *Labour Market Research*

⁷³ <http://www.ivea.ie/about/objects.shtml>

⁷⁴ <http://www.energyinst.org/about-us>

FAS manages a National Skills Database which provides information on the supply and demand of skills across industry. The Expert Group on Future Skill Needs provides Government with advice on present and future skills needs and other appropriate labour market information required. This includes skills foresight and benchmarking and data collection and analysis of supply and demand.

Interaction between social partners and above bodies

As is outlined above, the social partners appear to work jointly across a number of areas within VET and collective agreements, such as the Croke Park Agreement, frequently contain references to VET. The precise nature of their interaction and engagement can only be assessed through further research and interviews.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

FÁS Head Office
27-33 Upper Baggot Street
Dublin 4

Tel: +353 (0)1 607 0500
Fax: +353 (0)1 607 0608
<http://www.fas.ie>

Romania

VET infrastructure

The VET system in Romania is vertically integrated with a national regulatory body, serving also as an awarding body, and 14 authorised providers of vocational training for the gas sector. A Sectoral Committee for Electricity, Heat, Oil and Natural Gases has been established by the sectoral partners in order to approve qualifications, to validate occupational standards, to promote CVT, to participate in the creation of national strategies in the sector and to carry out occupational studies. Individual employees can access VET via their employers or trade unions.

Relevant actors in the Gas sector

- *Qualification regulator*

ANRE, the Romanian Energy Regulatory Authority (Autoritatea Națională de Reglementare în domeniul Energiei) is the national body that awards the relevant certificates and qualifications. According to ANRE Order no. 89 of 2009⁷⁵, the professionals performing activities such as project design and execution and the exploitation of installations for the production, underground storage, transportation, distribution, and utilisation of natural gas must be authorised by commissions appointed by ANRE. The quality of an authorised technician is obtained through examination by ANRE, and regional bodies can only provide preparatory trainings in order to prepare for the ANRE's commissions examinations. The exams for distribution and transportation certificates are scheduled twice per year in several locations across Romania.

- *Awarding Bodies*

Several bodies provide training in the gas sector and individuals seeking to must provide evidence nationally for the authorisation of installation, at whatever requested degree, is allowed only after the candidate proves that they attended a specialised course organised by a vocational training provider or an institution of higher education⁷⁶. In line with the Regulation for the authorisation and verification of workers that perform activities of designing, execution and exploitation in the natural gas sector, approved by the ANRE Order No. 89 from 25/11/2009, only the following higher education institutions and companies are able to provide vocational training:

Sectoral Committee for Electricity, Heat, Oil and Natural Gases (Comitetul Sectorial Energie Electrica, Termica, Petrol si Gaze).

The Committee is composed of the following social partners:

- Oil and Gas Employers' Federation
- Energetics Employers' Federation
- National Trade Union Petrom Energy
- Trade Union Federation "Gaz Romania"
- National Trade Union Federation from Electricity "Univers"
- Trade Union Federation Termoelectrica
- Federation of Free and Independent Trade Unions Energetica

This Sectoral Committee has the responsibility of ensuring the qualitative match between supply and demand by developing occupational standards, to approve new / revised

⁷⁵ <http://www.legex.ro/Ordin-89-12.11.2009-100785.aspx>

⁷⁶ Natural persons that already have the quality of authorized installer but who do no longer comply with the requirements of the regulation in force can attend a new authorization session for the same degree only if they prove that they attended a course organized by a vocational training provider.

vocational qualifications, carrying out studies on qualitative and quantitative trends on the labour market, to promote vocational training.

National Scientific Research Institute for Labour and Social Protection INCSMPS (Institutul Național de Cercetare Științifică în domeniul Muncii și Protecției Sociale)

INCSMPS' main object of activity is to carry out research with theoretical-applicative character in fields of national interest regarding the human resources management, social development and social protection in Romania. As yet there no regular mechanism for forecasting skills needs, this body could undertake the function in the future.

Interaction between social partners and above bodies

Social partners interact within the Sectoral Committee for Electricity, Heat, Oil and Natural Gases. Their recommendations are then passed to the regulatory authority. An EU-funded project on the implementation and validation of a National Framework of Qualification was carried by the National Authority for Qualifications between 2009 and 2012⁷⁷. We could not find relevant outcomes of the projects for the qualifications in the gas sector.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

ANRE – National Regulatory Body
Str. Constantin Nacu nr. 3
Sector 2, Bucuresti
Cod postal 020995
Tel: +4021-311.22.44 or +4021-327.81.00
Email: anre@anre.ro

Sectoral Committee for Electricity, Heat, Oil and Natural Gases (Comitetul Sectorial Energie Electrica, Termica, Petrol si Gaze)
B-dul Alexandru Ioan Cuza nr. 44
Sector 1, Bucuresti
Tel: 021/ 252.00.66
Email: office@fppetrolgaze.ro

President: Eduard FLORIA; Representative: Silviu SARGHI; Expert: Liliana Andreescu
Piata Valter Maracineanu
nr. 1 - 3, intrarea B, etaj 2, cam. 162,
Sector 1, Bucuresti, 010155
Tel: +40372129028
E-mail: liliana.andreescu@anc.gov.ro

⁷⁷ <http://www.scriptmedia.ro/cncfpc/>

Serbia

VET infrastructure

Vocational education and training system in Serbia is under development and there is no integrated system for the gas sector. The Energy Agency of the Republic of Serbia is not involved in providing vocational training. Besides institutions of higher education, several other professional organizations provide trainings, including the Gas Association of Serbia and the Association of Energy Sector. The Center for Vocational and Adult Education of the Institute for Improvement of Education has not yet covered the gas sector in its project of development of national qualification framework. There is no Sector Skills Council for natural gas.

Relevant actors in the Gas sector

Unlike in some other Central and Eastern European countries, the energy regulator is not involved in providing vocational training or licensing vocational training organisations⁷⁸.

- *Qualification regulators*

There is no qualification regulator for the gas sector. The national qualifications framework is under development by the Institute for Improvement of Education.

Institute for Improvement of Education

The Institute for Improvement of Education has been established in 2004 and comprises the Centre for VET and Adult Education, Centre for Developing Programmes and Textbooks, and Centre for Professional Development of Employees in Education⁷⁹.

Within the Institute, a work group for the development of national qualifications standards was established in November 2010, with the aim to define the scope of the national qualification framework, levels and descriptors, structure and types of qualifications, development and revision of qualifications and their standards, methodology for development etc. Qualification Standards for 14 pilot educational profiles have been developed (not including natural gas sector), and Sector Committees have started work in late 2011 on other economic activities.

Center for Vocational and Adult Education of the Institute for Improvement in Education

This Center supervises policies in the field of adult education and is engaged in developing and monitoring vocational education and training⁸⁰.

Vocational Education and Training Reform Programme

The Programme is being implemented in Serbia since 2003, and administrated by the Ministry of Education, in cooperation with the European Union. The aim of the reform is the development of vocational education and training based on the needs of the economy and the labour market. The Programme lists technical schools that provide vocational training in Serbia⁸¹.

- *Training providers*

Several professional organisations are involved in providing vocational training for their members.

- *The Association of the Energy Sector (Savez energeticara)*

⁷⁸ <http://www.aers.rs/Index.asp?l=2&a=16.1>

⁷⁹ <http://www.zuov.gov.rs/>

⁸⁰ <http://www.zuov.gov.rs/m-centri>

⁸¹ <http://www.vetserbia.edu.rs/school.htm>

The Association of the Energy Sector offers vocational trainings to energy professionals at different levels⁸². The trainings are intensive and include theoretical instruction, practical training and study visits.

Gas Association of Serbia

The Gas Association of Serbia and Montenegro is a voluntary technical organization of engineers and other experts involved with gas and gas mixtures. The Association helps its members enhance their technical and scientific knowledge, verify and certify that knowledge. It also initiates and proposes to the relevant national agencies and organizations solutions for the various issues in the field of gas industry (especially legislation, standards, quality management, measures etc.)⁸³.

Provincial Secretariat for Energy and Mineral Resources of the Autonomous Province of Vojvodina

In the province of Vojvodina professional the validation of professional skills in the gas sector is performed by the Provincial Secretariat for Energy and Mineral Resources⁸⁴.

Interaction between social partners and above bodies

Generally, the social partners highlight the lack of consultations by the government during the law-making process, but their involvement in policy-making has improved with the creation of education councils⁸⁵. A National Council for VET and Adult Education was established in 2010 as a tripartite body with the tasks to monitor, support and guide activities which represent a link between education and employment, and their impact on economic development.

First Sector Committees with the participation of social partners (representative companies, craftsmen and their associations, representative branch trade unions, universities, Ministry, National Employment Service, VET schools, Ministry of Education) were created in 2011 as expert and advisory bodies with the main role to determine the need for qualifications in the labour market in Serbia and contribute to the development of the national qualifications framework. Yet, there is no Sector Committee for the gas sector, but the experience of other sectors should be applied later.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

The Association of the Energy Sector (Savez energeticara)

11000 BEOGRAD, Knez Mihailova 33

Tel: 011/21-83-315

Email: savezenergeticara@eunet.rs

Institute for Improvement of Education

Fabrisova 10, Beograd, 11000, Serbia

Tel: 011/2068-000

Email: info@zuov.gov.rs

⁸² <http://www.savezenergeticara.org.rs/en/obuka-energetskih-kadrova/>

⁸³ <http://www.gasas.org.rs/lang/en/Ciljevi.asp>

⁸⁴ http://www.psemr.vojvodina.gov.rs/index.php?option=com_content&view=article&id=46&Itemid=53&lang=rs

⁸⁵ [http://www.etf.europa.eu/webatt.nsf/0/C12578310056925BC125771C0036D0A9/\\$file/NOTE858DQ6.pdf](http://www.etf.europa.eu/webatt.nsf/0/C12578310056925BC125771C0036D0A9/$file/NOTE858DQ6.pdf)

Slovakia

VET infrastructure

Initial VET tends to be financed by Government, whereas funding for CVET tends to come from those set to directly benefit (employer or individuals). Reforms in the last decade have altered the traditional provision of VET in Slovakia, including a drive towards decentration, particularly on curriculum, since 2008. The National Institute for Certified Measurement in Education (NÚCEM), introduced by the 2008 Education Act, is responsible for monitoring and assessing the quality of education through the use of standardised tests. Contrary to a typical VET system, training providers are not regulated by the state and the issue of the quality of training has been largely neglected.

Although the Ministry of Education remains responsible for the development of VET strategies, the supply of sub-national strategies to the four-partite National VET Councils advisory bodies affiliated to self-governing regions and similarly of a four-partite National VET Council affiliated to the government to cover trans-regional topics. These councils consist of representatives of State administration, self-governing administration, employers and representatives of trade unions and/or employees.

Relevant actors in the Gas sector

In the Slovak Republic business in the energy sector may only be conducted on the basis of a licence issued by the Regulatory Office for Network Industries. According to the law people who are awarded a licence must meet certain conditions and they must have a professional qualification for performing their duties, evidenced by a certificate and a master's degree in a technical field and they must meet the technical preconditions for performing the activities for which a licence is requested.

The law also states that to manufacture, transport, distribute, store, and supply gas individuals are required to provide a certificate of competency, issued by an accredited gas organisation, and documentary evidence of at least three years experience in the gas sector.

- *Regulatory bodies*

Regulatory Office for Network Industries (Úrad pre reguláciu sieťových odvetví)

This body determines and approves the method, procedures and conditions for the transportation and distribution of gas; the provision of ancillary services in the gas sector; access and the connection of new gas generating companies to the system or network; and access to underground gas storage facilities and the storage of gas.

Ministry of Education, science, research and sport

The Slovak Ministry of Education grants accreditations for training bodies to carry out training to obtain professional capability to do business in the energy sector (gas industry).

Ministry of Economy (Ministerstvo hospodárstva SR)

A Decree states the scope of training and knowledge required to test professional competence in the energy business (production, distribution, storage and gas supply), details of the activities of the Examining Board and the contents of the certificate to demonstrate competency

- *Awarding Bodies*

Slovenská inovačná a energetická agentúra (SIEA)

This agency is a state subsidised organisation established by the Ministry of Economy. On behalf of the Ministry of Economy, SIEA organises examinations to demonstrate professional competence for specialists in thermal energy and electricity and gas.

SIEA's tests are provided by the Slovak Innovation and Energy Agency (SIEA) in accordance with the Decree of the Ministry of Economy, which establishes the scope of the training and knowledge required for the examination of professional competences in the energy business; details of the establishment and operation of examination boards; and the content of certificates of competency.

SIEA runs a register of qualified people in the energy sector.

Slovenská plynárenská agentúra, s.r.o

The Slovak Gas Agency obtained the accreditation of the Ministry of Education for training and certification of competences in the gas industry and for the examination of professional competences in energy. The Agency oversees education and training in the sector.

- *Training providers*

Slovenský plynárenský a naftový zväz (SGOA)

The Slovak Gas and Oil Association (established in 1993) is an independent association of companies and experts active in gas and oil sectors, registered with the Slovak Ministry of Interior. SGOA represents its members in technical, economic, legislative and legal forums and represents member companies in the sector and who are involved in the industrial and communal use of natural gas in Slovakia, as well as in research, design, construction, and operation of installations.

- *Labour Market Research*

National Observatory of Vocational Training (SNO)

The Slovak National Observatory for Vocational Training was created by the European Training Foundation in Turin, in cooperation with the Ministries of Education and Labour, Social Affairs and Family. The main objectives of this, and other identical Observatories across Europe⁸⁶, are to:

- Gather, analyse and disseminate information on VET policies.
- Prepare regular qualitative and quantitative reports on the developments in VET
- Create links between national VET initiatives
- Improve the flow of information and strengthen the links between the needs of the labour market and the supply of vocational training
- Identify vocational training policy opportunities
- Contribute to the identification of areas for bilateral/multilateral co-operation
- Define priority areas for future work in VET
- Establish links with Observatories elsewhere to exchange knowledge and expertise on VET

Sectoral Council for Energy, Gas and Electricity (Sektorová rada pre energetiku, plyn a elektrinu)

The main task of the Council is to create and regularly update the national standards of professional skills by outlining the current needs of employers in the area of vocational skills and the practical experience required to perform specific jobs. According to the Council, the creation of those national standards is currently under way.

⁸⁶ National Observatories have been established in PHARE and TACIS (CEE Member States) and MEDA (Mediterranean) countries.

Interaction between social partners and above bodies

The social partners participate in the work of the Council of Economic and Social Agreement (CESA), in which there are 21 members representing the Government, the Federation of Employers' Association and the Confederation of Trade Unions, with an equal share of seven members each.

However, social dialogue specifically focused on VET is novel within and so social dialogue within VET is not particularly well established at the national, as well as at the sectoral or company levels.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

Ing. Sona GERTHOFFEROVA
Sector Council for Energy
Trexima
Bratislava, spol. s r.o.
Slovakia

National Observatory of Vocational Training
State Institute of Vocational Education /
Slovak National Observatory of Vocational Training
Bell 54 / a
831 01 Bratislava

Tel: (02) 54 77 67 74
Email: sno@siov.sk

Slovenia

VET infrastructure

The VET system in Slovenia is designed to meet the following needs:

- It offers individuals a 'second chance' at gaining an education, such as *matura* courses, vocational courses and master craftsmen examinations
- It oversees the certification system for the assessment and award of national vocational qualifications
- It is responsible for non-formal education and training.

The VET system has recently undergone significant change, including the creation of a single qualifications framework and this has been incorporated into the VET credit system, introduced in 2006.

The responsibility for CVET is shared between:

- Ministry for Education and Sport
- Ministry for Higher Education Science and Technology
- Ministry for Labour, Family and Social Affairs

While the roles of these Ministries overlap within the CVET system, overall responsibility for VET with Slovenia rests with the Ministry of Labour, Family and Social Affairs (Ministrstvo za delo, družino in socialne zadeve).

Four National Councils, comprised of experts to assist the decision-making process and to prepare new laws and regulations, are the link between the VET system and Government. The four councils are: the Council of Experts for General Education, the Council of Experts for Adult Education, the Council of Experts for Higher Education and the Council of Experts for Vocational and Technical Education.

These councils play a key role in the VET system and their main responsibilities are to:

- Introduce publicly recognised education programmes and participate in the decision-making process for new programmes (for example, by producing new content for the curriculum)
- Determine appropriate reading material for schools
- Determine the standards for private schools
- Prepare proposals for change to the Minister for Education and Sport.
- In addition these councils of experts have the power to create Commissions to act as working groups for specific areas within their remit.

The National Institute for Vocational Education and Training is a publicly funded institution, jointly established by the Slovenian government and the country's Chambers of Craft. The institute carries out research into the labour market, develops methodologies and offers advisory services. It is also the body through which the social partners engage.

Relevant actors in the Gas sector

- *Regulatory bodies*

The Energy Agency (Javna agencija Republike Slovenije za energijo)

According to Article 6 of the Slovenian Energy Act, a license must be granted for those wanting to carry out professional activities in the energy. This includes activities such as the storing of gaseous, liquids and solid fuels; transmission of energy and fuels through networks; production, trading in and distribution of liquid fuels; and supply of electricity, gas or heat. In addition, those wishing to work within the sector must be qualified in order to be granted a license to perform their duties. Both types of licenses are awarded by the Energy Agency and the Minister for Energy prescribes the criteria and populates the committee which oversees the necessary examinations.

The Ministry of the Economy

This Ministry regulates professional training and proficiency tests for the management of energy facilities. Its policy sets out the qualifications and experience required of workers who carry out services and manage energy facilities, as well as the program of training and examination required by gas workers to ensure security, reliability and/or energy efficiency.

- *Awarding bodies*

Association of Slovenian Energy Experts (Zveza društev energetikov Slovenije)

The official examining body falls within the scope of the Association of Slovenian Energy Experts (ZDES), which handles all the administrative and organisational work around professional examinations. ZDES offers professional training on the operation and maintenance of natural gas facilities.

The rules governing professional training and proficiency tests for the management of energy facilities is focused on workers who operate and maintain energy facilities, whose jobs require special expertise, training and examination under the auspices of the Commission of the Ministry of Economy. Gas personnel must be educated in the correct technical expertise and safety operation and must be familiar with the technical requirements of these devices and measures for rational energy consumption. For employees who operate and conserve natural gas facilities, such as operators and service staff dedicated to gas distribution networks and facilities at these networks, ZDES organises professional education and training seminars on the safe conduct of the management and maintenance of such facilities.

- *Training providers*

All providers must be registered with the National Examination Centre to be permitted to deliver training and for the learner to be awarded a recognised certificate.

Plinovodi

Plinovodi d.o.o. manages the natural gas transmission network. Large industrial users and distributors, providing natural gas to 41 municipalities with a population of almost 1 million people, are connected to the Plinovodi network. Plinovodi is part of the GEOPLIN Group - the biggest supplier of natural gas in Slovenia with a long-established tradition as one of the key companies in the country's energy industry.

- *Health and Safety institutions*

IVD Maribor p.o. Institute for Occupational Safety and Environmental Protection Maribor.

IVD Maribor is one of the two oldest and largest institutions in the field of security in Slovenia. The Institute is engaged in research, development, expertise and measurements, tests and the inspection of equipment and technologies, the analysis of environmental impact, as well as the protection of building from fire and explosions. IVD Maribor offers training on safe and healthy working conditions for workers dealing with natural gas, liquefied petroleum gas and other gases (such as installers and servicemen of gas installations and appliances).

CPV, varstvo pri delu, požarna varnost, varstvo okolja, d. o. o.

This body organises training and examinations in the field of occupational safety, transport safety and fire protection.

- *Labour Market Research*

National Institute for Vocational Education and Training (Center RS za poklicno izobraževanje)

Broadly speaking the Institute studies and analyses developments in the labour market and prepares occupational profiles and standards. It also develops new approaches to teaching and of delivering module based training. One of the Institutes key tasks is to track and analyse trends in labour markets and prepare occupational profiles and occupational standards that underpin vocational and technical education and the certification of national qualifications.

Interaction between social partners and above bodies

The involvement of the social partners in CVT is coordinated by the Ministry of Labour, Family and Social Affairs. The Chambers of Commerce and Industry and the Chamber of Crafts of Slovenia represent employers and undertake technical and developmental work in VET. They also prepare the occupational standards and oversee the examinations for the status of master craftsmen, foremen and managers. They organise exams and award certificates for those craft-related occupations that do not require a master craftsmen examination. Both chambers also function as organisers and providers of non-formal vocational education and training.

The role of trade unions is limited by law to that of partners in the process of certifying national vocational qualifications. However the social partners are increasingly participating in discussions around VET and contributing to the VET system's development and are represented on a number of national bodies.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

National Institute for Vocational Education and Training
(Center RS za poklicno izobraževanje)

Ob železnici 16

SI-1000 Ljubljana

Tel: (386-1) 586 42 00

Email: info@cpi.si

<http://www.cpi.si/>

<http://www.refernet.si/>

Spain

VET infrastructure

The law on VET provides for three different types of training:

- Demand training

This covers training programmes that are organised by employers that meets the specific training needs of employers and individual employees. Employers plan and manage the necessary training for their employees and this training is funded via a levy system from the contributions employers take from workers. It is therefore not a subsidy but a training levy that workers must pay. The training content ought to be related to the company's sector and may be general or specific.

On the other hand, employers should grant individual training permits to workers who wish to learn and develop new skills to encourage their personal and professional development.

- Offer training

This type of training provides workers (both employed and unemployed) with a tailored training programme according to labour market needs, the productivity and competitiveness of the employer and the aspirations of workers.

- Employment linked training

Employees learn new skills through a joint process, which requires the individual worker to spend half their working time training and the other half working.

Relevant actors in the Gas sector

The VET system in Spain is driven by the National System for Qualifications and VET (*Sistema Nacional de Cualificaciones y Formación Profesional, SNCFP*), which provides measures to promote the supply of VET and to develop skills accreditation. The SNCFP connects the demand for skills from industry and employees with the provisions of skills in the labour market and promotes training and the mobility of workers.

The National Catalogue for Qualifications (*Catálogo Nacional de Cualificaciones Profesionales, CNCP*), developed by SNCFP, lists the qualifications across 26 branches, covering all sectors of the economy. The catalogue includes the contents of VET for each qualification available for inclusion within training programmes. The National Institute for Qualifications (*Instituto Nacional de Cualificaciones, INCUAL*) is responsible for defining, developing and updating the catalogue of qualifications and each region in Spain has its own regional institute for Qualifications.

The General Council for VET (*Consejo General de Formación Profesional, CGFP*), which is an advisory body to Government, is composed of members of government, employers and trade unions and the Council has the power to propose VET programmes, but the Government has the final say.

The Government has established 26 working groups – one for each branch of the catalogue-where technology and training experts work together to define qualifications. The regional governments play an important role in Spain as they participate in process of building the content of the branches of the catalogue, which of course are closely aligned to their economic interests.

- *Training providers*

The bodies that can provide training are: Civil Service (National and regional authorities), Government- owned corporations, employers, trade unions and bodies receiving funds from Government training programmes.

SEPE

SEPE, the Public Employment Service in Spain (*Servicio de Empleo Público Estatal*) is responsible for the management, development and monitoring of programmes and measures within the government's Employment Policy. On issues related to VET it receives technical support and the full cooperation from the Tripartite Foundation (see below). Regional authorities can task specific bodies to manage and oversee certain aspects of professional training, like the Regional Public Employment Offices for example. SEPE and the Regional Public Employment Services work together through a Sector Conference on Labour Issues.

In relation to professional standards, SEPE offers three certificates for occupations in the gas sector:

- Installation and maintenance of gas networks.
- Management of network installation and maintenance.
- Installation, commissioning, maintenance, inspection and review of installations and gas appliances.

Tripartite Foundation

The publicly funded Tripartite Foundation is a key component of the organisational and institutional structure in which VET is developed throughout Spain. The body comprises representatives from Government (SEPE experts) and representative from the social partners.

The Foundation has several priorities including collaborating and providing technical assistance to SEPE in the management and improvement of training; promoting VET for employment and supporting initiatives from employers and trade unions; advising SMEs on how to access VET programmes; and collaborating with Regional Governments on training issues. The Foundation helps to provide workers with the necessary skills required in the labour market; to improve productivity and competitiveness in all sectors of the economy and to promote qualifications.

Funds used to finance VET for employment come from a levy collected by Social Services, the European Social Fund and other specific contributions established within the budget of SEPE.

The Spanish Economic and Social Council

The Council (*Consejo Económico y Social*, CES) is a statutory governmental advisory body in the socioeconomic and employment sphere.

The council consists of 61 members, appointed by the government from the social partners and government administration, and these members participate in working committees for each sector of the economy. Social services, the employment committee and energy committee are able to issue relevant reports to Government and therefore can influence the Gas sector.

Interaction between social partners and above bodies

The social partners populate bodies across all sectors and so are able to influence the VET system. However, collective bargaining over training plays a key role in Spain and is an additional sphere in which the social partners can influence VET. Within the collective

bargaining framework, by agreement between employers and trade unions, legislation provides for the establishment of sectoral joint committees (*Comisiones Paritarias*) which could be established at the national or other levels.

These joint committees have several tasks:

- To be aware of the VET taking place in their respective fields.
- To establish criteria and priorities on which VET is offered to employees.
- To play a role in the management of VET, through the state joint committee.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

None

Sweden

VET infrastructure

Central Government sets the national goals and produces guidelines, while education authorities, with providers, are responsible for ensuring these goals are implemented. In 2009 the National Agency for Higher Vocational Education (Myndigheten för yrkeshögskolan) took over responsibility for ensuring that the supply of higher level VET programmes meet the demands of the economy. Bi-partite labour market councils, with representatives from social partners and other relevant actors, play an important role in the analysis and identification of labour market needs and the Public Employment Service offers a range of services for job seekers.

The two main routes for adult VET in Sweden are:

- Higher vocational education (previously called advanced vocational education until 2009)
- Upper secondary initial VET, through Municipal adult education

In addition there are some smaller programmes for adult VET such as supplementary education, post-secondary education and folk high schools. Finally VET for adults is also delivered through joint sectoral training boards which manage apprenticeship programmes for electricians, automotive mechanics and plumbers, and are organised by the social partners.

Relevant actors in the Gas sector

- *Regulatory bodies*

The Swedish Civil Contingencies Agency (Myndighet för samhällsskydd och beredskap)

The Swedish Civil Contingencies Agency has issued a set of regulations on the professional handling of gas, which emphasise the need for qualified personnel to conduct such operations.

The Swedish Work Environment Authority (Arbetsmiljöverket)

The Swedish Work Environment Authority (SWEA) is responsible for reducing the risks of ill-health and accidents in the workplace and to improve working conditions. SWEA's provisions relate to technical, chemical, organisational and psychosocial factors.

- *Awarding bodies*

The Swedish Gas Association (Energigas Sverige - Svenska Gasföreningen)

Energy Gas Sweden is a subscription funded professional association for companies in the bio-gas, CNG, LPG, natural gas and hydrogen industry dedicated to promoting a greater use of gas and acts as a spokesperson for the gas sector. Energy Gas Sweden certifies individuals as competent for the professions of installation manager, inspector / auditor and PE-welder. It also certifies organisations that work with gas installations and maintains an official register of those qualified as gas technicians, as well as organising professional training.

Swedish Welding Commission (Svetskommissionen)

The Swedish Welding Commission is a non-profit-making organisation that supports companies, research institutes, government and other public agencies as well as others. It has around 400 member companies who represent a number of different industrial sectors - the engineering industry, the steel manufacturing industry, and manufacturers of products for welding and cutting.

The aims of the Commission are to promote the research and development of Swedish welding and cutting technology and standardisation, education and information – though the main areas of its activity are R&D and standardisation.

Nemco Sweden

Nemko is an accredited test laboratory and a certification body which is highly recognised for testing and certification in the oil and gas industry.

SWEDAC

Swedac is a governmental authority whose objective is to make products and services safe and reliable. Its duties are varied and focus on quality, the environment, safety, health and efficient use of resources. SWEDAC reviews and approves certification bodies, inspection bodies and laboratories.

- *Training providers*

The Swedish Gas Association (Energigas Sverige - Svenska Gasföreningen)

Energigas has established a framework for qualified courses in the gas technology. In addition to its own training, Energigas approves gas courses offered by third parties (such as EGN- and EWF 581-based training for plastic pipe welders). The Energigas courses are addressed at prospective gas installers, installation managers and inspectors and the courses are based on the industry developed training curricula.

Hydrosafe AB

Hydrosafe AB serves gas companies with both documentation, procedures, and courses approved by the Swedish Gas Association. The company trains managers and their deputies as well as operation and maintenance personnel working with gas.

Hydrosafe's clients include many municipal utilities and companies such as Statoil, Preem, Volvo, AGA, Stora Enso, Outokumpu, SSAB, Scania, Korsnäs, SKF, ABB, Hydro, EON, Swedish Biogas, Scandinavian Biogas and Akzo Nobel.

Statoil

Statoil offers Energigas-approved courses for gas installations managers.

Technologisk Institut

The Technology Institute (Technologisk Institut) is fully owned by the Danish Technological Institute. Every year it trains thousands of managers and employees (basically technicians or engineers) in two main areas: technology and management. The Institute offers open and customised courses in many areas, including the energy sector and organises conferences and seminars. Technologisk Institut offers advanced professional training on management and security at gas oil plants.

Swedish Gas Centre (Svenskt Gastekniskt Center AB)

The Swedish Gas Centre (Svenskt Gastekniskt Center AB, SGC) coordinates the technical development of gas and promotes broad and effective use of energy.

SGC is owned by the Energigas Sverige and a number of gas and energy companies and its operations are financed by its owners and the Swedish National Energy Agency (Statens Energimyndighet), and by a large number of industrial sponsors.

The purpose of the SGC is to coordinate and streamline the Swedish investments in research, development concerning energy gases. SGC also informs the sector about new findings and results of development activities and establishes contacts with international companies and organisations involved in the development of gas technology.

SGC development activities are primarily focused on renewable methane, biogas and biomethane via gasification and methanation, but other energy gases, biopropan, hydrogen, natural gas, LPG etc. are also of interest.

GasAkademin

GasAkademin is SGC's knowledge arm that has issued a series of gas manuals to meet the growing need for information, knowledge and relevant training materials for the gas sector. The series is comprised of nine manuals which were written by experts and the quality of each volume has been verified by a reference group of representatives from the gas industry and governmental agencies.

- *Labour market Research*

Arbetsformedlingen

The Swedish Employment Service (arbetsformedlingen) provides trends and forecasts for changes in the labour market.

Interaction between social partners and above bodies

Sweden has a reputation for a significant degree of social partner involvement in VET and CVT (Continuing Vocational Training) – for example through joint employer/union advisory committees or by certifying VET occupations at sectoral level. There is however very little formality in the discussions between the partners.

But while VET policy has been developed by Government, training for adults has also been influenced by the work of the social partners and a significant part of VET activity is as a result of social partner engagement. For example the validation and granting of qualifications is undertaken by the social partners.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

Arbetsformedlingen
Halsingegatan 38
13 99 Stockholm

Tel: +46771 60 00 00

<http://www.arbetsformedlingen.se/>

United Kingdom

VET infrastructure⁸⁷

The VET system in the UK is structured with the objective that the demand for skills from industry should be met by the supply of qualifications, which are built on the occupational standards required by industry. The vehicles through which the supply side meets the demand for skills are the Sector Skills Councils (SSCs), whose coverage spans virtually all sectors of the economy. To complete the equation funding from Government for VET is channelled to those qualifications in most demand by industry. Individual employees can access VET via their employer who, with the relevant training providers, is able to provide a structured training programme. Employers can access funding to cover some or all or the costs of training, depending on the age of the trainee and their previous training.

Relevant actors in the Gas sector

Due to the occupational spread of the gas sector and the sectoral structure of UK Skills Councils, there is an overlap between occupations that appear in two or more SSCs. For example, EU Skills (energy sector) and Summit Skills (building trades) are both responsible for improving training for the engineering occupations.

- *Qualification regulators*

There are four regulatory bodies across the UK that oversee the standards of qualifications and these are Ofqual in England, SQA in Scotland, DCELLS in Wales and CCEA in Northern Ireland. These organisations have the power to grant the status of qualification awarding body to those that fulfil certain criterion.

- *Awarding Bodies*

There are a number of Awarding Bodies that operate at the national level within the gas sector. These all tend to work in conjunction with EUSkills (see below) in developing the Standards within the industry.

- *OPITO*

The Oil and Gas Industry Training Organisation, tends to deal with the offshore part of the gas sector.

- *EAL*

This Awarding Body offers qualifications for gas sector workers in the following areas:

- core knowledge and skills
- metering
- installation and maintenance of a wide range of domestic systems and appliances
- gas emergency service first call operatives

Two other Awarding Bodies – Edexcel and ABC Awards – both offer qualifications that could be appropriate for the gas sector. However their relevance would be marginal as they both focus on engineering and process manufacturing industries.

- *Labour Market Research*

Energy and Utility Skills (Sector Skills Council for the Gas Sector)

Energy and Utility Skills (EUSkills) is the Sector Skills Council covering the gas, power, waste management and water sectors in the UK – specifically for the sector it focuses on transmission and distribution. It is a government funded body that aims “to raise employer engagement, demand and investment in skills, to ensure that we have authoritative labour

⁸⁷ Excludes offshore part of the industry

market information for all of our industries and to develop National Occupational Standards (NOS) to ensure that qualifications meet employer needs.”⁸⁸ EUSkills is not a training provider, but instead sets the National Occupational Standards for the industry’s qualifications and influences the types of courses that are delivered through its industry-wide membership and various boards. It also produces its own LMI to anticipate future trends in skills and then feeds this data into its work and funding system. Employers make up the majority of the Board’s membership but there is also a trade union seat. EUSkills covers a very wide range of occupations related to gas transmission, distribution and utilisation.

Cogent

Cogent is the Sector Skills Council for the chemical, pharmaceutical, nuclear, petroleum, polymers and life science industries. Like EU Skills, Cogent is not a training provider but defines the occupational standards and qualification structure for the industries within its footprint and also undertakes labour market research to provide forecasts on skills and occupations for the future.

The Engineering and Construction Industry Training Board (ECITB)

The ECITB is a statutory body, national training provider and a qualifications awarding body for the engineering and construction workforce. It is a registered charity and its income is derived from a levy on engineering construction companies – in fact the ECITB is one of the very few surviving Industrial Training Boards introduced in the 1970s. It works with the government and the sector’s employers and, through these relationships and its LMI, provides businesses with regional support to ensure the skill needs of the future are met.

The National Academy for Power

The energy sector has also a dedicated national provider, regulated by Government and employer-led. This was created after the SSC through a government initiative to create a VET system that was employer-led and able to respond to the demands of industry. Again, trade unions play a role within the organisation and can influence its strategy. The Academy has several priorities including creating industry wide collaboration to overcome skills gaps in the UK Power Sector; increasing the awareness of the Power Sector as a career; mapping and planning jobs, qualifications and training; addressing the barriers to career mobility; and working on initiatives to produce more qualified, competent and fully trained employees that receive consistent training.

Interaction between social partners and above bodies

EU Skills has a board comprising a number of employer representatives, a trade union representative and a representative from Higher Education. EU Skills has developed a sub grouping of industry representatives specifically for its Gas responsibilities. Within the Gas sector, employer and employee representatives sit upon the Gas Network Skills Forum which discusses issues around skills and competencies for those employed in the <7 bar gas industry. The Gas Safe Register is the official gas registration body for the UK and the Standards Consultation Forum ensures that all industry stakeholders are consulted in the process of setting the standards for competencies in relation to the Register. The Standards Consultation Forum is provided with the views of the gas industry, in response to consultations, via the Gas Industry Liaison Group whose membership is open to those in the industry affected, or impacted, by the process of setting criteria for competencies.

Recommendations

Based on this preliminary research we would recommend the following bodies are invited to participate in a meeting to discuss the creation of a Sector Council for the gas sector:

⁸⁸ <http://www.euskills.co.uk/home/about-us/>

Energy & Utility Skills Limited

Friars Gate
1011 Stratford Road
Shirley
Solihull
B90 4BN

Tel: 0845 077 99 22

Email: enquiries@euskills.co.uk

Engineering and Construction Industry Training Board

Blue Court
Church Lane
Kings Langley
Hertfordshire
WD4 8JP

Tel: 01923 260000

Email: ecitb@ecitb.org.uk

National Skills Academy for Power

Friars Gate
1011 Stratford Road
Shirley
Solihull
B90 4BN

Tel: 0845 01 323 01

Email: enquiries@power.nsacademy.co.uk

Web: www.power.nsacademy.co.uk

List of bodies recommended

Country	Organisation	Capacity	Contact details
Austria	The Labour Market Service (Arbeitsmarktservice)		To be added
	The Austrian Association for Gas and Water (ÖVGW)	Regulator, Awarding Body and Training Provider	Österreichische Vereinigung für das Gas- und Wasserfach A-1010 Wien Schubertring 14 UID ATU37166106 Tel: +43 1 513 15 88-0 Email: office@ovgw.at Web: www.ovgw.at/
Belgium	Association Royale des Gaziers Belges	Awarding Body	ARGB (Association Royale des Gaziers Belges) Rodestraat 125 B-1630 Linkebeek Belgium Tel: +32 2 383 02 00 Web: www.gaznaturel.be
	Regional Vocational Training and Employment Office in Walloon Region	Qualification regulator	Le Forem Boulevard Tirou 104 6000 Charleroi Tel: 0800/93.947, 07120 61 11, 071/20 65 85 Web: www.leforem.be
	Social and Economic Council	Bipartite advisory and social dialogue council	SERV - The Flemish Social and Economic Council Wetstraat 34-36 1040 Brussels Belgium Tel: + 32 2 20 901 11 Email: serv@serv.be Web: www.serv.be
Bosnia and Herzegovina	Research and Development Center of Gas Technology	Training Provider and Research	Research and Development Center of Gas Technology Gradačanka 142 71000 Sarajevo Telephone : +387-33-610-600

			E-mail: igt@bih.net.ba
	Gas Association of Bosnia and Herzegovina	Trade association	Gas Association of Bosnia and Herzegovina Gradacacka 142 71000 Sarajevo Tel: +387 33 71 55 80 Email: gasbih@bih.net.ba
Bulgaria	NAVET - National Agency for Vocational Education and Training	Accreditation and quality	NAVET - National Agency for Vocational Education and Training 125 Tzarigradsko schosse Blvd Block 5, fl. 5 1113 Sofia Bulgaria Tel: + 3592 971 20 70 (Office of the President of the NAVET) Email: napoo@navet.government.bg, agencia@navet.government.bg
	Training Centre BULGARIAN GAS CENTRE Ltd.	Research and Training	Training Centre BULGARIAN GAS CENTRE Ltd. 1 Pozitano Str. 1301 Sofia Bulgaria Tel: 003592 42 83 256 Email: office@bgc.bg, naidenov@bgc.bg
Croatia	Agency for Vocational Education and Training	Qualification and VET development	Agency for Vocational Education and Training Radnička cesta 37b 10 000 Zagreb Croatia Tel: +385 1 62 74 666 Email: ured@asoo.hr
	Croatian Gas Association	Trade body	Croatian Gas Association Heinzelova 9/II 10000 Zagreb Croatia Tel: +385 1 6189 590; 01 6189 592; 01 6189 594 Email: hsup@hsup.hr; cph@cph.hr
	Croatian Energy Association	Expertise	Croatian Energy Association Zagreb Savska cesta 163 Croatia

			Tel: +385 1 6040 609 Email: hed@eihp.hr
Czech Republic	Sector Skills Council for Energy	Labour Market Research	Energy Sector Council Mgr. Marcel Návrátil TREXIMA, et al. Ltd. Czech Republic Email: navratil@trexima.cz
	Czech Gas Association	Links with Universities	Czech Gas Association Novodvoska 803/82 142 00 Prague 4 Czech Republic Email: cpsvaz@cgoa.cz
Denmark	The Continuing Education Committee for Technical Installations and Energy	Labour Market Research and development of skills	The Continuing Education Committee for Technical Installations and Energy Efteruddannelsesudvalget for Tekniske Installationer og Energi ETIE Højnæsvej 71 2610 Rødovre Denmark Tel: 36 72 64 00 Email: mail@etie.dk Web: http://www.etie.dk/
	Teknisk Erhvervsskole Center	Vocational College	Teknisk Erhvervsskole Center Nordre Fasanvej 27 2000 Frederiksberg Tel: 3817 7000 Email: tec@tec.dk Web: http://www.tec.dk
Finland	Advisory Board for Educational Co-operation	Labour Market Research	Advisory Board for Educational Co-operation (details to follow)
	National Education and Training Committees	Connect work and VET	National Education and Training Committees (details to follow)
France	Compétences & Formations	Training Provider	Compétences & Formations AFG 62 rue Courcelles , Paris 75008 France Tel : 01 44 01 87 87
	GDF Suez	Training Centre	Energy Formation de GDF SUEZ Laurent Le-Boiterff Tel: 02 40 85 82 66 Mail: laurent.le-boterff@gdfsuez.com

	Qualigaz	Training Provider	Qualigaz Le forum 131/135 avenue Jean Jaurès 93305 Aubervilliers Cedex Tel: 0826628628 Email: formation@qualigaz.com
Germany	Federal Institute for Vocational Education and Training	National body for Labour Market Research (Government body)	Federal Institute for Vocational Education and Training (BIBB) BIBB - Bundesinstitut für Berufsbildung Federal Institute for Vocational Education and Training Postfach 201264 53142 Bonn
Greece	National Organisation for the Certification of Qualifications and Career Guidance	Standards and quality	National Organisation for the Certification of Qualifications and Career Guidance 41 Ethnikis Antistaseos Avenue 142 34 N. Ionia Athens Greece Tel: +30 210 27091158 Email: info@nqf.gov.gr Web: www.eoppep.gr
Hungary	National Institute for Vocational and Adult Education	Development of VET under Ministry	National Institute for Vocational and Adult Education NIVE 1085 Budapest, Baross utca 52nd 1476 Budapest PO Box: 75 Tel: +36 1 434-5700 Email: info@nive.hu
	The Federation of Technical and Scientific Societies	Adult education advisory role	The Federation of Technical and Scientific Societies – MTESZ 1055 Budapest Kossuth tér 6-8. Tel: (061) 4747 908 Email: mtesz@mtesz.hu
	Natural Gas Engineering Department of the University of Miskolc	Academic training	Natural Gas Engineering Department of the University of Miskolc H-3515 Miskolc – Egyetemvaros, Hungary Tel: +36 46 565 078 Email : gastitkar@kfgi.uni-miskolc.hu
Italy	Institute for the Development of Vocational Training of Workers	National research centre	Institute for the Development of Vocational Training of Workers Corso d'Italia 33 – 00198 Roma Tel: +39 06 85447 1

			Web: http://www.isfol.it/
Malta	Malta Qualifications Council	Oversee development of Qualifications framework	Malta Qualifications Council Casa Leoni 476, St Joseph High Road St Venera Malta Tel: +356 2754 0051 Email: mqc@gov.mt
Netherlands	Maastricht University School of Business and Economics	Labour Market Research	Research Centre for Education and the Labour Market Maastricht University School of Business and Economics P.O. Box 616 6200 MD Maastricht The Netherlands Tel: +31 (0)43 3883647 Email: secretary-roa-sbe@maastrichtuniversity.nl Web: www.roa.nl
Norway	Norwegian Gas Association	Trade Body	Norwegian Gas Association Lilleakerveien 2 A NO-0283 Oslo Email: post@npf.no
Poland			
Portugal	The Centre for Employment and Vocational Training	Tripartite Advisory Body	The Centre for Employment and Vocational Training Direcção-Geral do Emprego e das Relações de Trabalho Praça de Londres n.º 2 - 7.º andar 1049-056 LISBOA Tel: 21 844 14 00 Email: dgert@dgert.mtss.gov.pt
	Employment and Vocational Training Institute	Social Partner institute	Employment and Vocational Training Institute To be added
Republic of Ireland	FÁS	Labour Market Research and Skills database	FÁS Head Office 27-33 Upper Baggot Street Dublin 4 Tel: +353 (0)1 607 0500 Fax: +353 (0)1 607 0608 http://www.fas.ie
Romania	National Regulatory	Awarding Body	ANRE – National Regulatory Body

	Body		Str. Constantin Nacu nr. 3 Sector 2, Bucuresti Cod postal 020995 Tel: +4021-311.22.44 or +4021-327.81.00 Email: anre@anre.ro
		Social Partner body	Sectoral Committee for Electricity, Heat, Oil and Natural Gases (Comitetul Sectorial Energie Electrica, Termica, Petrol si Gaze) B-dul Alexandru Ioan Cuza nr. 44 Sector 1, Bucuresti Tel: 021/ 252.00.66 Email: office@fp petrolgaze.ro
Serbia	The Association of the Energy Sector	Training Provider	The Association of the Energy Sector (Savez energeticara) 11000 BEOGRAD, Knez Mihailova 33 Tel: 011/21-83-315 Email: savezenergeticara@eunet.rs
	Institute for Improvement of Education	Develops and monitors VET	Institute for Improvement of Education Fabrisova 10, Beograd, 11000, Serbia Tel: 011/2068-000 Email: info@zuov.gov.rs
Slovakia	Sector Council for Energy	National Occupational Standards	Sector Council for Energy Trexima Bratislava, spol. s ro Slovakia
	National Observatory of Vocational Training	Observatory	National Observatory of Vocational Training State Institute of Vocational Education / Slovak National Observatory of Vocational Training Bell 54 / a 831 01 Bratislava Tel: (02) 54 77 67 74 Email: sno@siov.sk
Slovenia	National Institute for Vocational Education and Training	Labour Market Research	National Institute for Vocational Education and Training (Center RS za poklicno izobraževanje) Ob železnici 16 SI-1000 Ljubljana Tel: (386-1) 586 42 00 Email: info@cpi.si http://www.cpi.si/

			http://www.refernet.si/
Spain			
Sweden	Arbetsformedlingen	Swedish Employment Service	Arbetsformedlingen Halsingegatan 38 13 99 Stockholm Tel: +46771 60 00 00 http://www.arbetsformedlingen.se/
United Kingdom	Energy & Utility Skills Limited	Sector Skills Council	Energy & Utility Skills Limited Friars Gate 1011 Stratford Road Shirley Solihull B90 4BN Tel: 0845 077 99 22 Email: enquiries@euskills.co.uk
	Engineering and Construction Industry Training Board	Training Board	Engineering and Construction Industry Training Board Blue Court Church Lane Kings Langley Hertfordshire WD4 8JP Tel: 01923 260000 Email: ecitb@ecitb.org.uk
	National Skills Academy for Power	Academy training provider	National Skills Academy for Power Friars Gate 1011 Stratford Road Shirley Solihull B90 4BN Tel: 0845 01 323 01 Email: enquiries@power.nsacademy.co.uk Web: www.power.nsacademy.co.uk