

Updating Gas Industry Qualifications and Certificate of Competence Framework

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GANZ Training Committee

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Note: Detailed Paper available.

Disclaimer!

- ▶ The gas industry is full of adorable cats.
- ▶ The goal has been to get industry agreement - preferably by consensus, sometimes by majority.

HERDING CATS:

"A futile attempt to control that which is inherently uncontrollable."



National Certificate Qualifications in 2010

- ▶ Gas Industry (Gas Distribution) (Level 2)
- ▶ Gas Network Operations (Leakage Control) (Level 3)
- ▶ Gas Network Construction (Service Laying) (Level 3)
- ▶ Gas Network Operations with optional strands in Operations and Maintenance, and Field Auditing (Level 3)
- ▶ Gas Measurement (Level 3)
- ▶ Gas Network Operations (Gas Pressure Control) (Level 4)
- ▶ Gas Network Construction (Mains Laying) (Level 4)
- ▶ Gas Transmission Operations (Level 2)
- ▶ Gas Transmission Operations (Pipeline) (Level 3)
- ▶ Gas Transmission Operations (Mechanical) (Level 3)
- ▶ Gas Transmission Operations (I&E) (Level 3)
- ▶ Gas Transmission Operations (Mechanical) (Level 4)
- ▶ Gas Transmission Operations (I&E) (Level 4)

*Must be completed
by December 2020*

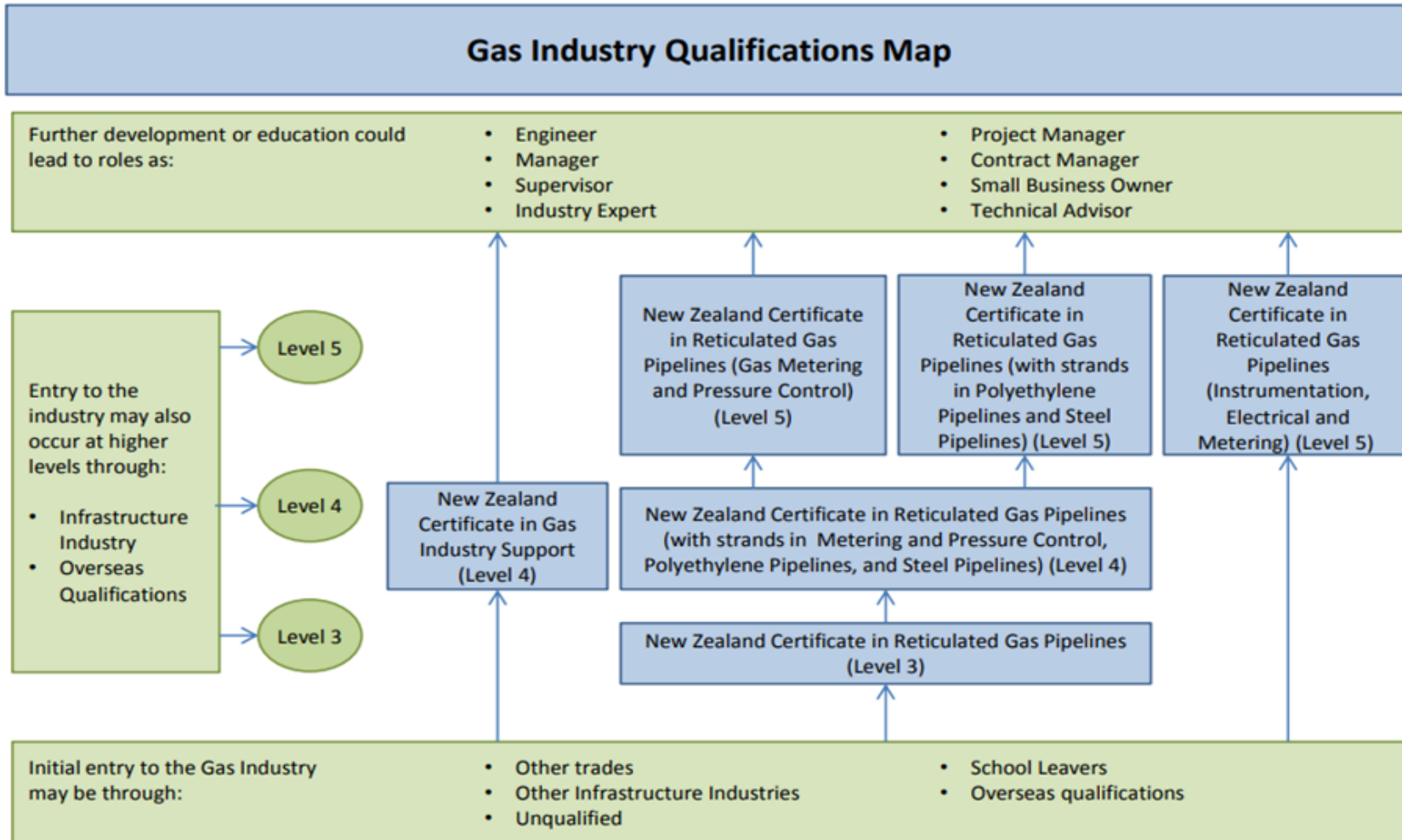
Targeted Review of Qualifications (TROQ)

- ▶ Mandatory Review commenced in 2013 with NZQA, MITO and Industry involvement
- ▶ Review Drivers:
 - ▶ Provide a viable career pathway leading to good job opportunities.
 - ▶ Attract potential employees.
 - ▶ Young people entering the gas workforce wanting to obtain recognised qualifications.
 - ▶ Qualifications that provide quantified training, skills and knowledge.
 - ▶ NZQA desire to reduce the total number of qualifications.
 - ▶ NZQA desire to remove Level 2 qualifications
- ▶ Alignment with the CoC Framework not a key consideration in the review.
- ▶ Numerous workshops held and broad consultation across industry.

TROQ Output

- ▶ Review completed in 2017.
- ▶ Career pathway defined
- ▶ Qualifications reduced from 15 National Certificates to 6 New Zealand Certificates
- ▶ Qualifications redefined as *Reticulated Gas* rather than Transmission & Distribution.
- ▶ Qualification levels raised:
 - ▶ Level 2 removed
 - ▶ Level 3 = Assistant Technician
 - ▶ Level 4 = Trade Technician
 - ▶ Level 5 = Advanced Trade Technician
- ▶ Over 100 Unit Standards reviewed adjusted and/or replaced.
- ▶ Significant changes

Career Pathway & Qualifications



NZQA Qualification Approval

1. NZ Certificate in Reticulated Gas Pipelines (Level 3)
2. NZ Certificate in Reticulated Gas Pipelines (Level 4) with strands in:
 - ❑ Metering & Pressure Control
 - ❑ PE Pipelines
 - ❑ Steel Pipelines
 - ❑ Optional strand in Gas Incident Response
3. NZ Certificate in Gas Industry Support (Level 4)
4. NZ Certificate in Reticulated Gas Pipelines (Level 5) with strands in:
 - ❑ Metering & Pressure Control
 - ❑ PE Pipelines
 - ❑ Steel Pipelines.

Qualification Programmes

Qualifications describe Graduate Profile Outcomes (GPO's) the learner must achieve and the indicative number of credits:

E.g. Reticulated Gas Pipelines Level 3

Graduate Profile Outcomes	Indicative Credits
Apply knowledge of health & safety, first aid and environmental impact	50
Excavate/Reinstate trenches	20
Interpret & produce asset information	10
Apply common corrosion control & protection activities	5
Assist in jointing, construction, maintenance & repair of pipeline & piping facility.	40
Communicate professionally with external people	5

Industry and MITO develop programmes that specify the unit standards required to achieve the GPO's.

Qualification programmes approved by NZQA.

Post TROQ Position.

New qualifications and revised unit standards published on the NZQA framework in September 2017.

Confusion for industry:

- ▶ Implications for the CoC Framework?
- ▶ How will qualification programmes be developed?
- ▶ How will training and assessment be done?

GAS DISTRIBUTION COMPETENCY PROTOCOL

A document prepared by the New Zealand Gas Industry to provide a framework for competency in relation to safe work on Distribution Networks

Certificate of Competence Framework

- ▶ Established by GANZ in 2006
- ▶ Set of minimum competency requirements
- ▶ Defines permitted work activities
- ▶ Specifies supervision levels required (Red or Green Card)
- ▶ Voluntary framework but widely adopted
- ▶ Refresher training required for CoC's need to be renewed every two years
- ▶ Last updated in 2011/12

Current CoC's

- Authorised Restricted Access
- Network Induction
- Networks General
- Construction Pipelaying
- Construction Service Laying
- Construction of Mains and Services
- Standard Pressure Control
- Advanced Pressure Control
- Leakage Survey
- Leakage Response
- Network Operations
- CP Survey
- Odorant Survey
- Mark-outs, stand-overs & locations survey

Most of the CoC's stipulate one or more of the existing gas qualifications as a prerequisite requirement.

Framework does not cover Transmission field activities

Framework currently administered by MITO

CoC's - Current Holders

Authorised Restricted Access	377
Network Induction	12
Networks General	75
Construction Pipelaying	32
Construction Service Laying	47
Construction of Mains and Services	78
Networks Standard Pressure Control	20
Networks Advanced Pressure Control	27
Leakage Survey	10
Leakage Response	59
CP Survey	8
Odorant Survey	14
Mark out, stand-overs and location survey	11
Network Operations	30
Field Supervision and/or Auditing	2
GMS Disconnection/Reconnection GIP001	26
GMS Leakage Response	11
Total CoCs	839

CoC Pro's & Cons

▶ Pros:

- ▶ Consistent measure of competence compared to qualifications
- ▶ Raised the standards of work in the Industry
- ▶ Well regarded by the majority and transportable
- ▶ Requirement in service provider contracts has driven engagement in qualifications and created a demand for training and assessment services

▶ Cons:

- ▶ Requirements for obtaining and retaining not universally understood.
- ▶ Lack of available training and assessment resources
- ▶ Can be a barrier to entry for some service providers
- ▶ No uniform consequences on non-participation or non-compliance
- ▶ Last reviewed in 2011

GANZ Report

September 2017:

GANZ commissioned an assessment of the NZ Gas Industry, including:

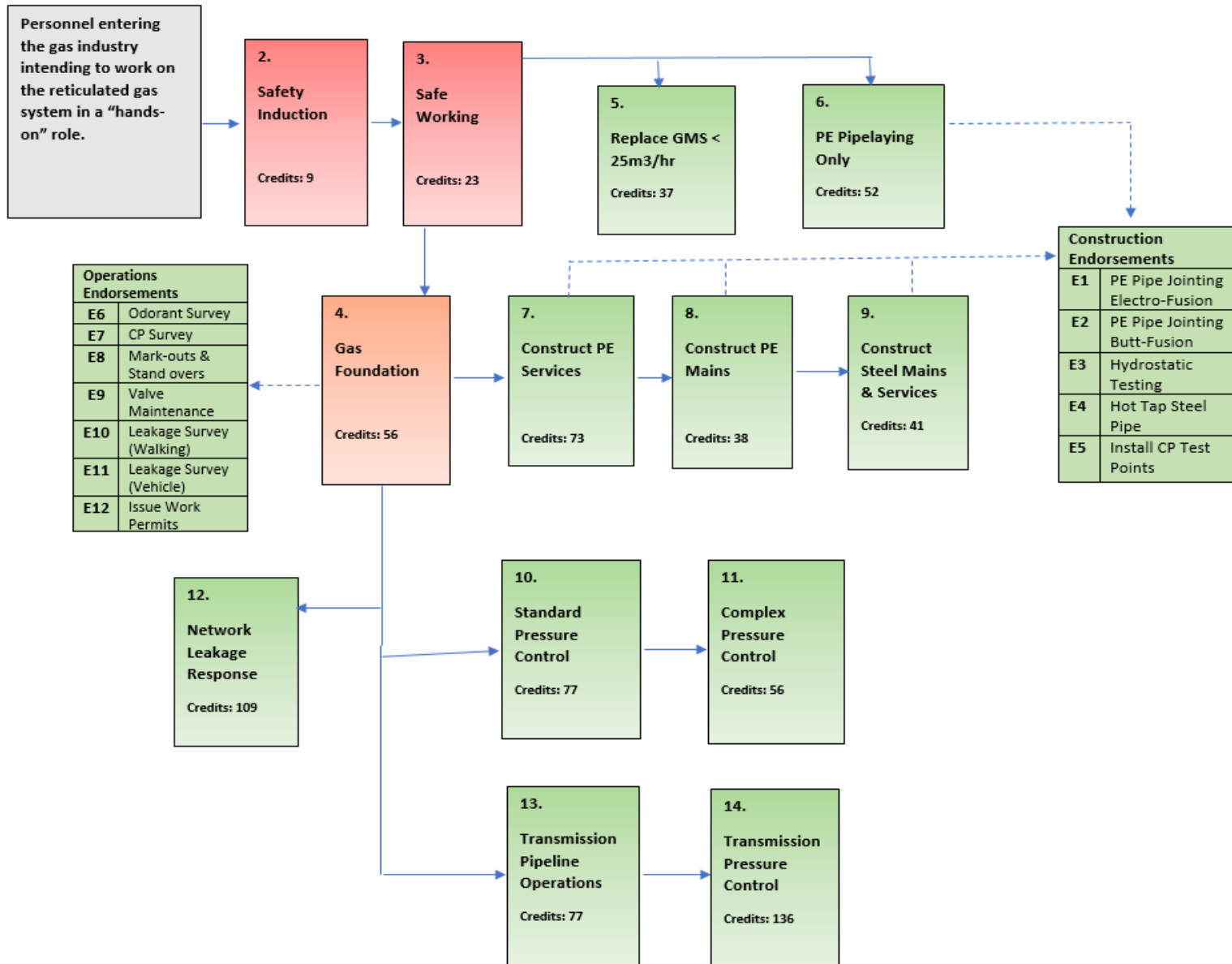
- Qualifications framework
- COC framework
- Training, assessment & providers
- Industry Training Organisations

December 2017:

Report to GANZ recommended CoC Framework be retained, but reviewed in light of the changes to the qualifications.

CoC Review

- ▶ Industry Review Group established under auspices of GANZ Training Committee in Feb 2018.
- ▶ CoC Types and Pathway developed using the revised unit standards
- ▶ Supervision levels redefined
- ▶ “Endorsements” introduced
- ▶ Qualifications not a prerequisite for a CoC but some alignment.
- ▶ Transmission field activities included



CoC No.	CoC Title & Permitted Activities	Asset Range	Pre-requisite Requirements	Supervision Required	Renewal Period	Reference	Knowledge and Skills	US Level	US Credits
Unique identifier for CoC Card	The type of work being undertaken and a description of the activities the holder is authorised to do or not do.			Refer GIP009 for more information.	How often reassessment is required.	Unique identifier for knowledge.	The training and assessment required to achieve the competency. This primarily includes unit standards. Alternatives are accepted where a clear alignment to the framework is proven.		
3	Safe Working								
	Permits the holder to assist and work under the direct supervision of a person who holds a relevant CoC for the works being undertaken. This CoC is a prerequisite for all other CoC's.	Gas Distribution Assets & Gas Transmission Pipelines. Gas Transmission Stations where the holder has undergone a site specific safety induction.	Safety Induction	Direct	2 Yearly	6401 6402 3271 3490 2396 11328 18426 30265	Provide First Aid Provide basic life support Suppress fire with hand extinguishers Complete an Incident Report Select, use, maintain portable h/held power tools Gain approvals/notifications for works Demonstrate knowledge of hazards associated with confined spaces Apply health and safety risk assessment to a job role	2 1 2 2 2 3 3 3	1 1 1 1 4 3 4 8
4	Gas Foundation								
	Permits the holder to assist and work under the indirect supervision of a person who holds a relevant CoC for the works being undertaken. The holder may also carry out additional tasks that they hold a relevant unit standard for as authorised by the asset operator but excludes carrying out any tasks that the holder does not hold a relevant unit standard for.	Gas Distribution Assets & Gas Transmission Pipelines. Gas Transmission Stations where the holder has undergone a site specific safety induction.	Safety Induction Safe Working	Indirect	2 Yearly	10995 11327 12502 12507 17588 25510 20869 20877 20878 30370 30367 30380 GAS XX08 GAS XX10	Draft information for as-built drawings for a gas network Respond to concerns/enquiries to industry operations Use pressure gauges and monitoring equipment Use hand held gas leakage detection equipment Apply for, accept and carry out work according to a work permit in the workplace Operate an atmospheric testing device to determine a suitable atmosphere exists to work safely DKO notifiable works and work permits typical of infrastructure work sites DKO working safely under temp traffic management Assist with temporary traffic management Alternate to 20877 and 20878; NZTA approved Traffic Controller Card DKO gas pipelines & networks DKO gas & risks & safety precautions for working with live gas Interpret & use gas terminology, signage, plans and drawings to identify assets in a gas network Read and interpret gas metering equipment for a gas network Demonstrate knowledge of gas metering equipment in a gas network	3 3 3 3 3 3 3 2 1 3 3 3 3 3	5 4 4 5 4 4 3 2 2 6 6 6 4 3

Qualification Programme Development

- ▶ Industry Review Group continued from CoC Review to develop programmes for the new qualifications.
- ▶ Process:
 - ❑ Identify required unit standards
 - ❑ Review unit standard content and to ensure fit for purpose.
 - ❑ Develop new unit standards as required. (16 developed to date)
 - ❑ Unit standard changes sent out for industry consultation.
 - ❑ Programme and revised unit standards require NZQA approval.

Significant input from industry volunteers. Time consuming process. Not a perfect process

Draft Level 3 Programme (Part shown)

Graduate Profile Outcome	Indicative Credits	Unit Std.	Title	Level	Credits
<p>Apply knowledge of health and safety, basic first aid, environmental impact awareness and risk assessment requirements to ensure the safety of people and property while performing work in the gas industry.</p> <p>Programme and assessment will include the following: confined spaces public roads personal protective equipment permit to work systems fire suppression techniques knowledge of gas, and the safety precautions for working with live reticulated gas.</p>	50	3271	Suppress fire with hand extinguishers and fixed hose reels	2	1
		9631	Use personal protection equipment in a petrochemical workplace	2	2
		12507	Use hand-held gas leakage detection equipment in a gas network	3	5
		11328	Gain approvals/notifications for works	3	3
		12526	Use fresh air distance breathing apparatus in a gas network	3	3
		17588	Apply for, accept, and carry out work according to a work permit in the workplace	3	4
		17590	Issue worksite specific work permits	3	6
		18426	Demonstrate knowledge of hazards associated with confined spaces	3	4
		20869	Demonstrate knowledge of notifiable works and work permits typical of infrastructure works sites	3	3
		20877	Demonstrate knowledge of working safely at sites under temporary traffic management	2	2
		20878	Assist with temporary traffic management for low volume and Level 1 roads	2	1
		25510	Operate an atmospheric testing device to determine a suitable atmosphere exists to work safely	3	4
		30265	Apply health and safety risk assessment to a job role	3	8
		30367	Demonstrate knowledge of gas, and the risks and safety precautions for working with live gas	3	6
GPO Total					52
Excavate and reinstate trenches on a gas worksite	20	GAS XX01	Demonstrate and apply knowledge of excavation, backfill and compaction for a gas network.	3	10
		31448	Operate and maintain small plant for infrastructure works	3	10
		GPO Total			
Interpret and produce asset information on a gas worksite	10	10995	Draft information for as built drawing in a gas network	3	5
		30380	Interpret and use gas terminology, signage, plans and drawings to identify assets in a gas network	3	6
		GPO Total			
Apply common corrosion control and protection activities to protect/maintain assets.	5	GAS XX02	Demonstrate and apply knowledge of cathodic protection in a gas network.	3	5
		GPO Total			

Qualification Enrolment & Support

- ▶ Learners enter a Training Agreement with ITO to complete the approved qualification programme.
- ▶ ITO develop resources to support the unit standards:
 - ❑ **Unit Standard Workbook** - provides information to support the learner with on-the-job training.
 - ❑ **Unit Standard Assessment** - the assessment that must be completed by the learner
 - ❑ **Unit Standard Evidence Guide** - used by the workplace assessor to verify and sign-off the assessment
- ▶ The NZQA Framework is fundamentally an “open-book” assessment process.
- ▶ Assessors need to be registered with MITO to complete the assessments.

Current Status - CoC

- ▶ Draft Revised Protocol nearly finalised - yet to be approved by the GANZ Training Committee
- ▶ New CoC Protocol can't be fully implemented until training and assessment material for all the unit standards in the Protocol is available. **This is a significant amount of work to get through.**
- ▶ Implementation date yet to be decided.
- ▶ Grandfathering from old CoC's will be applied where practicable.
- ▶ Future administration of CoC's will need to be managed outside of MITO.

Current Status - Qualifications

- ▶ Level 3 Programme developed. NZQA approval required
- ▶ 20 unit standards for Level 3 Programme revised. NZQA approval required.
- ▶ Training and Assessment Material for Level 3 qualification being developed by MITO.
- ▶ Industry need to review this Training & Assessment Material.
- ▶ Learners will be able to sign-up to the Level 3 Qualification in 2020. 🙌

Current Status - Qualifications

- ▶ Changes to Level 4 qualification needed:
 - ❑ Metering & Pressure Control
 - ❑ Pipeline Operations & Maintenance
 - ❑ PE Construction
 - ❑ Optional Strands in Steel Construction & Gas Incident Response

- ▶ Changes to Level 5 qualification needed:
 - ❑ Metering & Pressure Control
 - ❑ Supervision

- ▶ More work is required to finalise the Level 4 and 5 qualifications and programmes.

The End Goal...

Qualifications Available

- Qualification Programmes determined by Industry/MITO & approved by NZQA
- Unit Standards reviewed by Industry and approved by NZQA

Learner Signs up to Training Agreement. MITO provides:

- Workbooks for all unit standards
- Assessments
- Evidence Guides
- Above reviewed by Industry

Learner works through qualification programme

- Workplace exposure and on-the-job training
- Formal training as required
- Access to Assessors
- Record of Learning with NZQA

CoC Obtained

- Unit Standard obtained (open-book)
- Capstone type assessment undertaken (closed-book)
- Application for CoC Card
- CoC Card issued (administered by GANZ?)
- Periodic refresher/assessment to ensure current competence

Hurdles to overcome

- ▶ Industry support and involvement in development of training and assessment resources.
- ▶ Engagement with qualifications v focus only on the CoC
- ▶ Administration of CoC beyond MITO
- ▶ Availability of Assessors.

What can you do...?

1. Consider your Assessor needs:

- ❑ Having Assessors available to assess learners will be key.
- ❑ Ideally, in-house Assessors
- ❑ Assessors must be registered with MITO.
- ❑ MITO will endeavour to have contract Assessors available.

2. Support the Industry:

- ❑ Get involved.
- ❑ Help with the review of unit standards, workbooks, assessments and evidence guides to make sure the material is as good as it can be.

Thoughts to keep in mind....

- ▶ A common industry approach is a worthwhile goal.
- ▶ A lot of work has been done over the past two years. **There is still a lot of work to do.**
- ▶ Voluntary industry representatives do this work on top of their day jobs.
- ▶ Despite industry consultation not everyone will be happy with everything.
- ▶ The general rule is that Silence does constitute acceptance.
- ▶ It is not too late to get involved.

Questions

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