

ESTABLISHING AND MAINTAINING WORKFORCE COMPETENCY

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Introduction

I have been working in the Electricity Industry for over 30 years now. During my time as a technician through to contract management I have seen many changes both in the structure of the industry and in work practices. My industry involvement now revolves around training and competency development. This is a specialist area since many of our daily work practices and environments are technically challenging and high risk. In other words, there is potential for a small mistake or omission to have a high impact and there are many examples of this in our industry from blacking out our largest city to the disaster of personal harm and fatalities.

We are about to see some major changes to Health and Safety in New Zealand much of which is following established systems in Australia. Our NZQA accredited training establishment in NZ has been privileged to have been invited to establish a Registered Training Organization in Australia in partnership with a major multi-national contracting organisation. During the process we consulted with industry bodies such as VESI (Victorian Electricity Supply Industry) which comprises five distribution networks, E-Oz the Industry Skills Council who sets the national competency standards, various TAFEs and other RTOs. We now have a great insight into the Australian ESI and education industry along with their competency systems. We achieved Australian Skills Quality Authority registration with permission to train and assess across all States of Australia.

Working in the electricity industry can be complex not only due to the technical nature of the work but also due to the hazards associated working on and around in-service equipment, stored energy and the potential of back feeds from other energy sources.

Competency of individuals and the obligations for the different parties are documented through legislation, industry rules and guidelines through to specific and often prescriptive asset owner and employer requirements. On top of all this there have been recent fatality cases taken by the MBIE and the findings have directly questioned training and competency. We must get this right...

We will look at some of these key areas to better understand how we can implement systems and process to have a compliant and safe workforce.

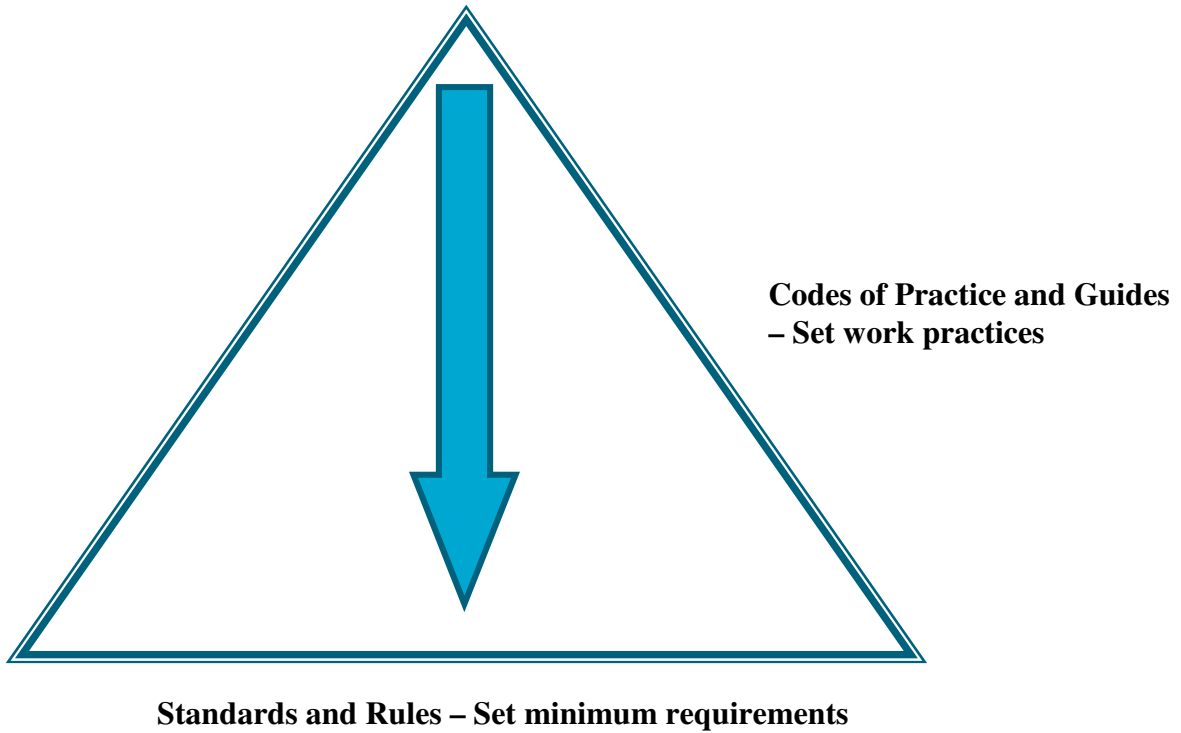
Competency

To start navigating through this we must consider what the main sources of information are that we can look to for guidance.

- Health and Safety in employment Act
- Electricity Act
- Health and Safety Regulations
- Electricity Regulations
- Approved Codes of Practice
- NZ Electrical Codes of Practice
- AS/NZS Standards
- International Standards (ISO/IEEE/IEC)
- Industry Guidance
- Industry Rules

- Asset Owner Policy/Contracts/Standards
- Company Policy/Standards/Procedures

Legal – Acts and Regulations impose duties



Workforce competency can be complex and multi levelled and the further down the list that we get, the more detail that exists.

We need to be competent and to a standard. The important part is how we can train to a standard ensuring that the training is successful and then how we measure competency and then how we maintain competency.



What is competency? There are many definitions and models for competency, to keep it simple we will only look at what the most relevant definitions are in a New Zealand context.

Safety Manual – Electricity Industry (SM-EI)

Competent

An employee is competent when they can demonstrate to their employer, at any time, that they have the necessary knowledge, skills and experience to carry out the work safely and to the standards used by the employer.

Notes:

1. The standard that the employer uses for assessing competence shall comply with regulatory requirements and shall, as a minimum, be an industry standard where such a standard exists.
2. Where qualifications are a legal pre-requisite for determining competence, such qualifications will be included in the standard.
3. Competence shall be regularly assessed, consistent with industry intervals and practices, so that the employer can be confident that competence is being maintained.
4. Competence for significant activities or roles is recorded in Documentation of Competence. A competent employee may need to also hold other documentation, e.g. a licence or a certificate of competence under appropriate regulations.

New Zealand Qualifications Authority (NZQA)

Competency

The ability to apply particular knowledge, skills, attitudes and values to the standards of performance required in specified contexts.

We can see from these two different definitions that there is some common ground and it can be looked at in many ways, consider this:

Competency = Knowledge x Skills x Attitude x Environment

If any one of the above values is 0 then competency cannot exist.

What about the standards that we measure to? There are many however, we can see from the definitions above that the standards are important as they set what we measure to.

- AS/NZS Standards
- Codes of practice
- Best Practice Guidelines
- Industry Guides
- Asset Owner Policy
- Manufacturer Instructions

- Employer Procedure / Guides / Standard Operating Procedures (SOP's) etc.
- NZQA Unit Standards
- More?

Establishing Competency.

Where do we start with this? As with any measurement, the measurement must be conducted using a controlled process to a known value to have credibility. It also helps if there is an element of independence that will remove the possibility of any bias. Consider the process of getting a warrant of fitness for your vehicle, this is a robust process to a standard by a qualified, competent inspector that has independence. Have we got a system that can do this for competency in the workplace?

- Is current practice robust enough?
- Is there is uniform approach?
- Is the process quality assured and auditable?
- Is the process free from bias?
- What about training, does this need to be conducted to a standard and by a competent trainer and if so how can this be achieved?

Recently a Judge criticised a DoL investigation into a fatality and said that they failed to question the validity of training that took place. Can we take this as a warning that we need to take training seriously? In our schooling system there are robust systems in place to ensure that only the correctly qualified and experienced teachers are used to educate and assess. Why isn't there the same level of quality assurance required in industry?

- If you are an asset owner that sets a standard of competency do you also set quality standards around how competency is going to be trained and measured?
- If you are an employer have you got systems in place to ensure that training and assessment has credibility and quality assurance?

Measuring Competency

Although I have raised a number of questions there is some good news, we have a quality assurance system in New Zealand to support Training and Assessment in Industry. The system comes under the Education Act and the quality is administered and monitored by the New Zealand Qualifications Authority (NZQA) who are the custodians of the directory of assessment standards (DAS). We also have Industry Training Organisations (ITO's) they are established under the ITO Act and exist to set standards and qualifications and moderate the outcomes. It's also worth noting that ITO's by law are not allowed to provide training. We have quality assured Tertiary Education Organisations (TEO's) who can provide training and assessment under the Education Act.

- We must measure to a standard or standards and there are plenty of these.
- The process must be conducted by an appropriate person, a competent one, one who has subject matter expertise and assessment expertise. This is a person that not only knows the work activity but also knows how to read and interpret standards, what competency is, how to measure and document it.

- Measurement of competency is multi-dimensional we often measure multiple inputs (knowledge, skills, attitude, values, experience) to triangulate and achieve credible results.
- The systems must be open and transparent, quality controlled and free from bias.
- Could a competency expire, have limitations or need a periodic refresher cycle?

Monitoring Competency

There is also another critical level of competency and this is monitoring in real time? Measurement of competency post training is often a one off event or as discussed in some instances repeated on a “refresher” cycle. Our workforce must be able to demonstrate competency at any time. A critical element of achieving this comes under the banner of “Supervision” and is a key requirement of SM-EI. Supervision is well documented in Section 4 of our SM-EI. The supervisor must understand workplace competency, what it is, and the factors that can have an impact on competency such as fatigue, distractions, physical fitness, dehydration, stress, overload etc. The supervisor is responsible for selecting employees that are competent to do the work. A question to ask is, do we give our supervisors the skills to execute their supervision responsibilities successfully?

Where to next?

I stated earlier that we are about to see one of the biggest changes to workplace Health and Safety in many years and New Zealand is following Australia in many of these areas. Training and Competency in Australia can only be accessed through a Registered Training Organisation, and trainer/assessors MUST hold the most recent version of the training qualification as well as the most recent vocational qualification. We don't have anywhere near that level of compliance in New Zealand. There is currently a review of the NZQA Adult Education qualifications and it's looking like they will be more robust and provide a stronger framework for our Trainers and Assessors in the workplace.

Summary

Establishing, maintaining and monitoring workplace competency is not straight forward and simple, it's complex, it needs to be done correctly, it must be able to stand the test of credibility and quality and it is also ongoing.

Competency in itself is multi levelled, it can be dynamic and measurement is often multi-dimensional.

When implemented correctly competency systems will provide companies and individuals with a level of security reducing risk and providing for ongoing quality assurance to all stakeholders. Bottom line is a safer and more productive workforce with fewer errors and less waste.

There will be a higher level of responsibility applied to competency and safety by the newly established WorkSafe New Zealand and the current level of Health and Safety in New Zealand is not good enough.

How many organisations could honestly say that at any time their workforce is competent for the activity taking place and that they have quality assured information available to prove this?