Approaches to managing and assuring contractor competence

energy institute

APPROACHES TO MANAGING AND ASSURING CONTRACTOR COMPETENCE

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This publication has been produced as a result of work carried out within the Technical Team of the EI, funded by the EI's Technical Partners. The EI's Technical Work Programme provides industry with cost-effective, value-adding knowledge on key current and future issues affecting those operating in the energy sector, both in the UK and internationally.

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FOREWORD

It is now common to find that many staff on power generation sites and distribution networks are not employees of the duty holder, but are instead employed by one or more contractors. In some cases, the majority of staff will be employed by contractors. There could be a single contracting company (referred to as a contractor) providing a range of services, several specialised contractors, or a lead contractor with a number of subcontractors. In all cases, the core issue is assuring that all work is undertaken by those competent to do so.

While the competence of duty holder staff (core crew) is addressed through the normal means of selection, training, assessment, and development under the direction of the company human resources (HR) department, the situation for contractors is more varied. Larger contractors will have HR departments but many smaller companies do not and so competence is often addressed by means of procurement contracts.

This publication takes a holistic approach to contractor competence assurance, that accounts for not only individual competence, but also the task and working arrangements that support the ability of the contractor to do the job.

It explains the issues relevant to contractor competence and sets out a range of approaches to the challenges involved. Not all approaches need to be taken. Instead, the approaches to use will depend on where in the contract life cycle the user is, and what might work best with the culture of the contractor(s). In general, approaches towards the front of the publication are more suitable earlier in the life cycle.

Where possible, checklists are provided to assist both a client and their contractors in reviewing their processes for contractor competence. In addition, details of relevant past incidents are used to illustrate the issues.

The EI welcomes feedback on its publications. Feedback or suggested revisions should be submitted to:

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EXECUTIVE SUMMARY

CONTRACTOR COMPETENCE

Contractor competence can be defined as the ability of the contractor to do something successfully or efficiently. 'Competence assurance' is confidence (in this case by the duty holder) in the contractor's ability to do something successfully or efficiently.

Practically speaking, contractor skills and knowledge can be divided into:

- trade knowledge and skills;
- major accident hazard (MAH) knowledge;
- plant history knowledge, and
- health and safety knowledge.

'Cultural knowledge' (organisational and national (including language)) could also be added to that.

Everyone has gaps in skills and knowledge. This will be even more true for contractors, who will likely have gaps in their knowledge of the plant history, as well as in MAH knowledge and other areas, simply by virtue of not having worked at this location or for this client before. There will also be practical constraints depending on the available labour pool, budget, etc.

The key point to remember is that competence does not exist in isolation. It should be considered together with the task, the work planning arrangements, and all the other activities that support workforce performance. Client companies can 'bridge the gaps' in competence through specifying the competences of the contractors needed – over which the client usually only has indirect control – and through modifying the work and support arrangements that, in effect, lower the competency requirements – of which the client may have direct control. Both should be considered.

Competency assurance is gained when the client is confident that any competence gaps have been identified and bridged by whatever means are most practical and effective.

THE CONTRACT LIFE CYCLE

During a contract life cycle, there will various opportunities to manage, and gain assurance of, the competence of contractors. The first stage will be before the decision to outsource the work has been made.

Once the decision has been made to outsource the work, the first key stage will be during project tendering, where the client can examine various potential contract companies using pre-qualification checklists, examining track records, etc. The corporate capability maturity model (C2M2) is a useful tool, particularly as it allows the client to see (and bridge) gaps in competence.

Once a contractor has been selected and contracts are being put in place, the client now has an opportunity to specify all the arrangements needed to manage contractor competence, and have these written into the contract. It is also the opportunity to work with the contractor to determine roles and responsibilities, and plan how gaps in competence will be bridged.

When the work starts, now is the opportunity to put into action the arrangements for both checking minimum competency requirements, both formally and more informally (e.g. through supervisors), and to put in place other arrangements to manage any competence gaps identified (expected or unexpected). Typical activities will include site inductions. Other activities might also include overcoming any language issues encountered. Bow ties are very useful tools for planning activities where contractors are involved in safety critical work.

During the contract, more issues may become apparent, particularly if there has been high staff turnover during a longer project, incidents or near-misses, etc. The initial plans to manage work around the original competence gaps may need to be refined in light of newly discovered issues.

At the end of the contract, there is the risk that any knowledge gained during the project will be lost as the contractor leaves the site and moves on to a new project. The client should find a way to keep hold of that knowledge for next time, e.g. through handover of paperwork and debriefings.

This publication describes a number of approaches that can help manage, and provide assurance of, contractor competence. Not all approaches need to be taken. It is up to the client to determine which approaches will be most suitable, depending on where they are in the contract life cycle, what problems they have encountered, etc.

DECIDING WHEN TO OUTSOURCE TO A CONTRACTOR

The decision to outsource to a contractor should not be taken lightly. It should be seen in light of the core activities of the client. The following questions should be considered:

- Is it a core activity that the client needs to maintain strict control over?
- Is there the internal competence to undertake the work?
- Will outsourcing the work undermine internal competence?
- Will learning gained doing the work benefit the client, the contractor, or both?
- Will that learning benefit competitors?
- Can the work be safety managed if contracted or subcontracted?

CORPORATE CAPABILITY MATURITY

The C2M2 can be used when selecting contactors, and when planning work with contractors. It is a matrix of five levels of competence, covering various aspects of the work, including MAH competence, health and safety capability, procedures, incident reporting, and others. By plotting the contractor on this matrix, it allows the client to see where the gaps are, and therefore what additional arrangements should be in place to bridge any gaps – for example, the client may be able to determine whether it needs to employ supervisors directly.

Once the work has begun, the C2M2 can be revisited in light of new evidence – for example, observed discrepancies between the expected capability of the contractor and the observed capability – allowing gaps to be identified and closed.

CLIENT-CONTRACTOR INTERFACES

Interface agreements ensure that both client and contractor company understand their roles and responsibilities for managing competence requirements, as well as managing risk during the project. Such agreements can help ensure that there is no confusion over who is responsible for doing what, including what to do during emergency situations. It also helps to ensure that neither party becomes responsible for something they are not competent to perform.

Trigger action response plans (TARPs) and responsible, accountable, consulted and informed (RACI) charts are useful tools for doing this. Desktop simulations and walk-throughs are also very useful for making sure the work reflects reality.

BARRIER-BASED SAFETY AND BOW TIE METHODOLOGY

Contractor competence becomes most critical in relation to safety critical elements (SCEs) and safety critical tasks (SCTs). Competence issues can cause challenges elsewhere, but they can be catastrophic when dealing with SCEs and SCTs. Bow tie is a relatively simple methodology to determine the SCEs and SCTs, and what safety controls are in place. This can be used at work planning to determine where contractors are involved in safety critical activities, where contractor competence is relied upon, and what additional safety controls can be put in place.

KNOWLEDGE MODEL

As described in Contractor Competence, practically speaking contractor skills and knowledge can be divided into:

- trade knowledge and skills;
- MAH knowledge;
- plant history knowledge, and
- health and safety knowledge.

This is a useful model, as it makes it possible to determine where the gaps in contractor (and client) competence are and decide how to bridge those gaps, e.g. through induction training, providing contractors with plant history (e.g. why was the plant modified in the way it was?), or fulfilling the competence needs through having a team of people with differing abilities.

WORKPLACE PASSPORTS AND OTHER COMPETENCE VERIFICATION

There are various industry schemes that provide verification of minimum competences. These are often called workplace passports, and can be set up in such a way that individuals without the required competences do not get access to the worksite. They provide other advantages too, such as site security, 'smart' access to equipment, etc. Other schemes for verifying competence also exist. These methods provide some assurance of the contractor's competence, at least for certain aspects such as general health and safety knowledge.

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