



Department for
Energy Security
& Net Zero



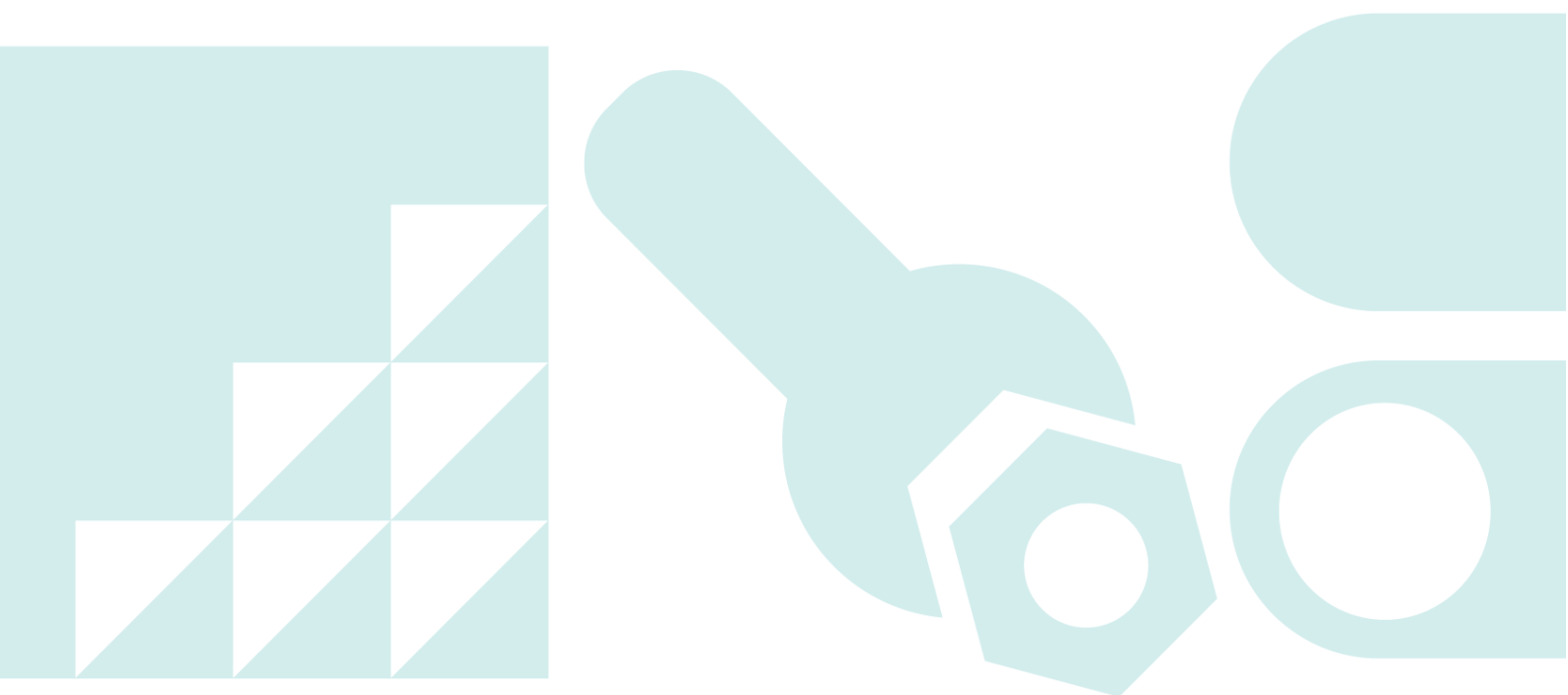
Cabinet Office



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Energy Systems

Developing and delivering your strategy: Skills and capabilities guide



Public Sector
Decarbonisation
Guidance

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What is the purpose of this guide?

This guide has been designed to accompany the theme guides and covers the skills and capabilities that might be required for each of the activities you and your team need to undertake to deliver a decarbonisation programme.

Most of the theme guides contain some information on skills requirements. This guide does not repeat that information but instead refers to those guides and links together the skills requirements, to help with the planning of your overall decarbonisation programme.

The skills that are required within the various teams involved in your programme will change throughout the different stages of delivery. For example, initially the resource needed is likely to be strategic, requiring more from design professionals. As you move through feasibility and design, you will need procurement and installation expertise to deliver individual projects and eventually you will need operational staff to be involved in the operation and monitoring of progress.

It is worthwhile thinking about how you resource your whole programme as part of the initial stages of developing your strategy. This will help you identify if you need to plan in time for recruitment, arranging secondments or using procurement to bring on board the skills and experience you need.

We welcome your feedback on these resources, please email Energy Systems Catapult at PSDecarbGuidance@es.catapult.org.uk

This table shows the different skills that are likely to be required within each of the different themes, identifying what skills are central for each theme.

Skills and knowledge requirements	1 Strategic definition, planning and briefing	2 Feasibility and design	3 Procurement	4 Funding	5 Installation	6 Commissioning and handover	7 Monitoring and evaluation
Strategic – planning, reporting and tracking	Central skill for theme	Required	Required	Required	Required	Required	Required
Procurement and business case drafting	Required	Required	Central skill for theme	Central skill for theme	Required	Optional	Optional
Organisational and project management skills	Required	Required	Required	Required	Central skill for theme	Central skill for theme	Required
Understanding construction and decarbonisation	Required	Central skill for theme	Required	Optional	Central skill for theme	Central skill for theme	Central skill for theme
Good energy management, monitoring and managing energy data	Required	Central skill for theme	Optional	Optional	Optional	Required	Central skill for theme
Stakeholder engagement and communications	Central skill for theme	Required	Required	Required	Central skill for theme	Central skill for theme	Required

What do these areas include?

Assessing the skills required for each of these areas includes understanding the types of tasks that might need to be undertaken. The table below expands on the different skills highlighted above and the types of activities that might be required. We have not included helpful generic skills such as good interpersonal and communication skills, the ability to prioritise and work at pace etc.

Skills area	Activity or task
Strategic – planning, oversight, monitoring and reporting	<ul style="list-style-type: none">• Strategy development• Reporting with agreed frequency• Legislative compliance• Setting targets and monitoring progress (including understanding your baseline)• Decarbonisation programme ownership and direction setting• Managing and ensuring appropriate skills and resources are available
Procurement and business case drafting	<ul style="list-style-type: none">• Putting together a grant funding application• Drafting a business case• Supporting a tender event, supporting bid evaluation and contract negotiation, requiring not just commercial expertise but also some subject matter knowledge (intelligent customer).• Securing internal sign-offs for spend
Organisational and project management skills	<ul style="list-style-type: none">• Setting up governance structures• Driving delivery of the different elements of the programme• Overseeing the delivery of decarbonisation projects• Managing stakeholders
Understanding construction and	<ul style="list-style-type: none">• How projects should be designed, what technologies are suitable for the specific building or estate, the

decarbonisation	<p>common issues and pitfalls</p> <ul style="list-style-type: none"> • How projects should be delivered including large capital projects, smaller projects and maintenance works
Good energy management, monitoring and managing energy data	<ul style="list-style-type: none"> • Energy management and data collection • Behaviour change programmes
Stakeholder engagement and communications	<ul style="list-style-type: none"> • Developing a comms strategy and key messages for stakeholders • Delivering consistent communication about your decarbonisation programme and projects • Managing stakeholders • Delivering any press or PR activities

Summary of the skills need for each Theme

The following table summarise the needs within each of the key themes and link to sources of useful training for those skills.

Theme Guide	Skills and capabilities
Theme 1 guide – Developing and delivering your strategy	Detail how to assess and plan the delivery of a decarbonisation programme and strategy, including thinking about skills, capabilities and resources as part of your strategy
Theme 2 guide - Feasibility and design	Offers guidance on the skills required for carrying out a design or feasibility study
Theme 3 guide – Procurement	Outlines the skills that are needed for navigating procurement processes
Theme 4 guide – Funding	Offers guidance on planning resource for the delivery of projects and overseeing of other theme tasks including theme 2 and theme 5
Theme 5 guide – Installation	Covers the skills requirements for the installation of projects
Theme 6 – Commissioning and handover and Theme 7 - Monitoring and evaluation	Cover what skills are required to manage the commissioning, handover and ongoing monitoring of site decarbonisation energy reduction.
The role of facilities management in decarbonisation	Contains some information about the types of skills and knowledge that could be outsourced to others, including considering how much “ownership” of a decarbonisation programme should be outsourced.
Stakeholder engagement and communications guide	Contains information about the activities required to deliver a comprehensive comms and engagement plan.

Theme 1 - Strategy

The skills required to deliver a strategy are likely to include:

Strategic thinking and planning – the ability to understand the ambitions of your organisation and put together a decarbonisation programme which will fit within the organisational structure and governance.

Influencing – ability to influence senior stakeholders to enable the delivery of your strategy and programme.

Knowledge of energy and decarbonisation – the strategy will require actions to be taken across the building or estate, and technical knowledge of the energy use and measures used to decarbonise will be key. This will include:

1. Knowledge of energy consumption and standard practices of energy consumption analysis
2. Knowledge of carbon modelling (and an ability to model going forward, though using our tools will simplify the burden)
3. Knowledge of decarbonisation measures and how and where they may fit within the estate. Our guide '[What could decarbonisation look like for you?](#)' is a helpful starting point.

This means that including someone who is subject matter fluent within the team is important. If this is not possible, there are training programmes available to upskill team members to help them become 'intelligent customers'. Using secondees or procuring support are also options for ensuring you have the right skills.

Knowledge of reporting frameworks - identifying and developing a reporting structure. This will enable suitable data to be collected regularly and then shared to ensure that progress over the overall programme is tracked. Reporting on progress will be critical throughout until Net Zero is met.

Project management, stakeholder engagement and communications – these skills and capabilities are required throughout your programme and individuals with the appropriate skills and qualifications should be sought. For example, a project manager who is [PRINCE 2](#) or [AMP](#) qualified, or a comms professional with a [CIPR](#) or [CIM](#) qualification or enough relevant experience. This information is not repeated

for each theme.

How to assess if a training course is right for your needs?

There are several ways to assess the needs of both your team and those outside it who are likely to be involved in delivering your decarbonisation programme. You can also seek out training through professional institutions and associations. Many provide regular newsletters and deliver online training courses which start at one-hour webinars, through too much longer training courses with associated qualifications.

In addition, trade associations and manufacturers often offer Continued Professional Development sessions (CPD) which are approved and will contribute to ongoing learning associated with professional qualifications.

Information sources and regular updates/training	What does it provide you with?
Office of Government Property (OGP)	OGP author the property profession capability framework which offers insight into the types of skills and capability for different roles.
The Energy Managers Association (EMA)	EMA offer information on energy management competencies, a skills review which enables an individual to assess their skills gaps.
Energy Institute	Provides a wealth of training from different levels of knowledge which can be picked up as either part of a wider course or module by module to learn about areas which are you want to understand further.
CIBSE	Offers regular training sessions on technical areas. They link to their technical guidance on how to develop and design a system plus manage energy. These are technical guides which are charged for unless you are a member.

<u>APSE</u>	Offer regular webinars on technical subject matter which can help with areas you are considering. You can sign up for their regular newsletter.
Trade associations and manufacturers	<p>Trade associations and manufacturers often offer CPD (continued professional development) sessions which can provide information about a particular technology.</p> <p>The Trade Association Forum (TAF) is the representative body of associations in the UK and a members directory can be found on their <u>website</u>.</p>

Theme 2 – Feasibility and Design

The theme 2 guide provides information on the types of skills that will be required to deliver the different types of studies listed below. This will help you to think about what, if any, support you might need.

Study types:

1. Desktop analysis
2. Building audit or site survey
3. Specialist technical site survey
4. Feasibility studies
5. Detailed design
6. Investment grade proposals

In summary, to be able to understand what the scope of work needs to be for a feasibility or design study, the team will need to be able to understand the:

- Technical subject matter
 - What study to commission
 - What to ask for within the commission
 - How to scrutinise the deliverables when they arrive
 - When to be satisfied and sign a job off
- How do develop a business case to get approval for next steps
 - What information needs to go into it (some technical and some governance)
 - Where will that information come from (what numerical information will need to be provided)
- How can the work be procured?
 - What should go into the tender specification
 - How should the tenders be evaluated

If you don't feel that you/your team can cover all of these, then the training options listed in 'From Theme 1' may be helpful. You should also consider whether these skills could be found elsewhere within your organisation, or perhaps by seeking a secondment or technical support from another organisation which isn't involved in

the delivery of the study.

The most likely types of qualifications or experience that might be relevant are included in the table below, with a further list of relevant professionals included under Theme 5.

Skills qualifications or experience	What does it provide you with?
Architect	Architects design new buildings and the spaces around them, and work on the restoration and conservation of existing buildings.
CAD technician	Computer-aided design (CAD) technicians use software to design structures, machinery, goods and components, often supporting other professions to draw up and model solutions.
Chartered engineers	Lots of chartered engineers from EI, CIBSE and other bodies will have experience in delivering these types of studies.
Energy management professionals	EI and EMA members will have experience in energy management.
ESOS lead assessors	DESNZ has register of ESOS approved lead assessor bodies. Each of those bodies have a register of lead Assessors. The register of professional bodies who approve lead assessors can be found here .
Mechanical, electrical or public health building services engineer	Building services engineers design, fit and maintain the heating, lighting and power systems in buildings such as offices, hospitals and shopping centres.
Quantity Surveyor or Cost consultant	Quantity surveyors or cost consultants oversee construction

or estimator	<p>projects, managing risks and controlling costs.</p> <p>Estimators work out how much it will cost for a company to supply products and services to its clients.</p>
Structural Engineer	<p>Structural engineers help to design and build large structures and buildings, like hospitals, sports stadiums and bridges.</p>
Surveyor	<p>RICS members are likely to be able to help in planning and delivering a project including about the design, construction, maintenance and repair of buildings.</p> <p>Surveyors may full fill all sorts of roles from project managers overseeing site works to acting as building control officers.</p>

Whilst qualifications help to demonstrate ability, those without qualifications shouldn't be precluded and suitable experience could include working on and delivering similar projects. Remember that some individuals or organisations may have preferences toward particular technologies or approaches; impartial consideration of which options best meet your objectives is key.

Theme 3 - Procurement

Experience required to manage and run a procurement in most cases will be provided by your organisation's procurement team. However, there are likely to be a number of activities you will need to support the procurement team with. This includes writing a tender specification and evaluating the tenders. Both of these activities are likely to need technical expertise on decarbonisation technologies and solutions so your team can ensure that what potential installers are proposing are sound and deliverable options and the benefits being set out are credible.

The following are areas you will also need to ensure are adequately supported by your team.

- identifying what resources are needed to support the procurement
- developing the procurement strategy
- writing a high-quality tender and the evaluation of bids
- the ongoing activities of contract/supplier management
- implementation and monitoring of the project as it is delivered
- compliance and benefits tracking after project completion

These skills could come from your strategy team, or teams who are already involved in delivering construction or maintenance projects across your estate.

You will also want to consider the other stakeholders that will be involved directly or indirectly in procurement activities, for example the legal team and the governance structures that will ultimately sign-off the spend. Useful skills in this area are likely to include the following and may be found within your strategy team:

- identifying stakeholder expectations and working out how to meet them
- gaining their buy-in throughout all stages of the process
- ensuring that they support the contract after it has been implemented.

You may also wish to consider if it is worth upskilling your procurement team, governance structures and legal team on the basics of decarbonisation to make them feel more comfortable with the material they are dealing with on your project.

Theme 4 - Funding

One of the critical success factors for securing funding is the ability to write a strong business case. There are often individuals who specialise in this type of activity, and having access to someone with those skills, even on a part time basis could be of huge benefit. They should be familiar with the processes your organisation uses to sign off spend of differing amounts, and skilled at preparing, for example, cost/benefit analysis, strategic, economic and financial cases for spend. These estimated costs and benefits are likely to have been developed (in progressively greater detail) during the following stages of the work, for example:

- When a strategy is put together
- During feasibility and design studies
- During a tender exercise

These numbers should be checked against best practice and could be checked using the [tools](#) provided as part of this suite of guidance. It is likely that you will be required to provide additional numerical outputs to show the carbon benefits such as simple payback, net present value and carbon abatement.

A person with experience in business case writing may also have skills that are helpful in applying for external grant funding, whose applications are often similar to drafting a business case. For large capital spend programmes the business case development process may take several years and go through several 'stages or gates' with sign off required each time. You will need to work closely with your project manager to ensure that the appropriate timings are factored in.

The other skill that will be important is the ability to pull together overall budgets for your programme. The Theme 4 guide – Funding covers this at a high level. Over time your budgeting will become more accurate and as a consequence your business case and the benefits you hope to realise will change, requiring constant consideration and updating.

Theme 5 – Installation

Making sure that you have the right skills within your organisation or supply chain to oversee installation projects, both from a construction and technology perspective, is essential to managing delivery risk. This is likely to be the most expensive and intense part of your decarbonisation programme and needs to be overseen appropriately. You may need additional project management support for individual installations for example.

Consider what type of project you are undertaking and what type of skills and knowledge might be required. This will be dependent on the type of technology you are installing and potentially what kind of contractor supporting you. A good prompt might be to consider the list of construction professionals and what they do. It is also to remember to keep the occupant view central to your programme, not just the decarbonisation elements. This will ensure that the solutions you install meet the needs of the occupants and don't lead to resistance to your overall programme.

You may need to procure specialist support at this time, requiring you to draft a description of the specific needs and skills required and work with the procurement team to secure the resource.

Resource	What does it provide you with?
Sample specifications for technology deployment	Approaches to providing information to forecast the costs of delivery to engage more effectively with contractors and to ensure that services quoted will meet the requirements of your project - including considerations of any constraints
Construction and trades list	A National Careers Service list of all the relevant trades people and what their areas of specialism are.



Theme 6 – Commissioning and handover

When a project is nearly finished and becoming operational, it's important to make sure that any contractor has finished what is expected of them properly. Activities at this point are likely to include checking for defects and ensuring that they are rectified. This requires someone who is fastidious but also knows and understands construction/development projects, therefore the skills listed in Theme 5 are likely to be similar.

These skills will also help ensure that the site is commissioned appropriately and is running with agreed set points before it is handed over.

When handing over, the site operator and person that will be responsible for using the site/building/project should be present. They must have a good understanding of subject matter to ensure that they are able to operate it properly. This should primarily come from the installer but could also include being provided with some CPD sessions, going on a seminar, watching online training/webcasts or going on a training course.



Theme 7 – Monitoring and evaluation

Operation and evaluation require two core roles: someone who knows and understands how to manage the building/site/project and its systems, and someone with the ability to capture and analyse performance data to demonstrate that things are operating as they should and that energy and carbon savings are being made.

The first role is likely to need to be on the site on a day-to-day basis, operating and delivering good energy management. The second could be someone who is monitoring performance of the whole estate to fulfil an analysis and reporting role.

Both must work closely together. The skills required are likely to be good understanding of basic energy management and building systems, as well as analytical and communication skills.



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