Hub Guide 4 - Due Diligence in Large-Scale Renewable Energy Projects

Introduction

This Hub guide is an introduction to assist anyone undertaking due diligence when looking to develop renewable energy generation for larger-scale power projects. Specialist advice should always be sought, and should be appropriate to the nature, scale and complexity of the project.

Detailed project-development guidance on heat networks, which covers this issue, is available for local authorities on the Heat Networks Delivery Unit Huddle.

The Energy Hub has also developed Hub guides in support of other aspects of energy projects, which are available on our website.

If you have any further enquiries following the brief please see the Greater South East Energy Hub website www.energyhub.org.uk or contact info@energyhub.org.uk.

What is due diligence?

Due diligence in the context of capital projects refers to the consideration and management of risk over the entire project life cycle. In order to manage risk, those looking to develop a renewable energy project need to understand the types of risk that could be involved, their potential impacts on the success of the project and how these can be effectively managed. The sooner a due diligence approach is embedded within the project-development process, the sooner the key risks to the project's success can be identified. This allows more informed decisions to be made, which should speed up the decision-making process and save cost as the project proceeds.

What issues should I consider with the due diligence of my project?

In this guide, due diligence is categorised into the following areas:

- **Legal** – this includes general provisions affecting public authorities that wish to operate commercially, issues specifically associated with energy, project development and operation, and provisions associated with property and land.
- **Commercial** – this covers provisions associated with economic or financial policy, project financing, income generation, acquisitions and disposals, taxation and community participation, and benefit.
- **Technical** – this encompasses provisions associated with policy obligations, the physical state of the environment, the state of the surrounding energy network, and the installation and operational performance standards of the plant and equipment being introduced.

The tables 1-3 appended cover some of the key legal, commercial and technical aspects respectively, which may need to be considered when developing a renewable energy project. When to consider each issue will depend on the nature, scale and complexity of the project, and the organisation's strategic objectives and approach to managing projects.

The tables can be used a checklist when starting your project, and as a record as your project proceeds. Professional advice should always be sought as part of the due-diligence process.

The table immediately below is a suggested route map that identifies when in a project's life each point outlined in tables 1-3 should be considered.

Project stage	Section in Tables 1-3
Concept	L8 L13 C2-C3
Options appraisal and feasibility	L1-L4 L18 C4-C7 T1 T3-T5
Business case	L5-7 L9-L12 C1 C8-C9 T2
Detailed Design & Planning	L16-L17 L19-22 T6
Financing, Procurement & Commissioning	L5-L8 L14-L15

Neither the above route map, nor the appended tables 1-3 are definitive. Nor are they necessarily applicable to your project. How you approach the issues raised in this guide should depend on your specific circumstances. Specialist advice should be sought on these issues as appropriate.

What the Energy Hub can offer you

The Energy Hub can help you in the following ways:

- Online and telephone advice
- Access to case studies, briefings and guidance from authoritative sources
- Signposting to other supporting organisations
- Brokerage and stakeholder engagement
- Project structuring and critical review.

Legal Disclaimer

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TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Public authorities wishing to operate commercially**		
L1	**Powers to undertake activities** Localism Act 2011: Section 1 grants local authorities a General Power of Competence "to do anything that individuals generally may do".	In general terms, as a public authority, the organisation has the power to undertake any legitimate activity unless there is legislation which specifically prohibits it from doing so.	It would be prudent to seek further advice at feasibility stage that the proposed activity is not specifically prohibited.	Does this project comply?
L2	**Commercial activities** The Localism Act 2011: Under Section 3, commercial activities may be undertaken but this must be done through a company and local authorities cannot trade in services that they already have a statutory requirement to provide.	If the organisation, as a public authority, intends to sell for a "commercial purpose" this would have to be done through a company set up by for that purpose.	It would be necessary to establish whether the proposed activities would require us to undertake them using a company. Further advice should be sought at feasibility stage of a project.	Do the activities require a company being set up?

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Public authorities wishing to operate commercially**		
L3	**Trading through a company** The Local Government Act 2003: Section 95(1) enables local authorities to trade in function-related activities through a "company".	It would be necessary to establish whether the proposed activities would require the organisation to undertake them using a company structure.	Further advice should be sought at feasibility stage of a project.	Do the activities require a company being set up?
L4	**Power to Trade between local authorities- and other public bodies** The Local Authorities (Goods and Services) Act 1970: Under Section 1, a local authority may supply any public body (which includes another local authority) with goods or materials, administrative, professional or technical services or allow the use of any plant or apparatus agreement.	As a public authority, the organisation can sell goods and services to other local authorities by way of an agreement, and do not need to set up a company to do so.	It would be prudent to seek further advice should be sought at feasibility stage of a project to establish whether a suitable agreement exists or could be established.	Does the project intend to sell to "public body" within the meaning of the Act – and therefore no need to establish a company to trade?

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Public authorities wishing to operate commercially**		
L5	**Power to invest** The Local Government Act 2003: Section 12 gives a local authority the power to invest for any purpose relevant to its functions under any enactment or for the purposes of the prudent management of its financial affairs.	This allows greater flexibility and more local discretion. However, it does not erode nor supersede obligations under any other legislation such as the PCR/UCR. A local authority relying on this power as part of a transaction must ensure that this is consistent with the organisation's investment / financial strategy or that the Strategies are amended to accord with this new proposal.	The organisation is should establish its approach to investment as it applies to the project.	Does the project constitute investment? Will the project be in line with the organisation's financial planning arrangements?

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Public authorities wishing to operate commercially**		
L6	**Procurement** The Public Contracts Regulations 2015: Set the rules applying to the procurement of contracts for services, works and supplies by public bodies. The Utilities Contracts Regulation 2016 applies to procurements of Utilities contracts for services, supplies and works. The Concessions Contracts Regulations 2016: Deal with the award of concessions by public bodies and utilities.	Public procurement rules may apply to any activity where the organisation intends to obtain goods, service or works from third parties.	In all cases, further advice should be sought to determine whether and which regulations could apply and the approach to be adopted.	Does the project involve a public procurement activity and if so to what value? Does the project require setting up a separate delivery organisation?

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Public authorities wishing to operate commercially**		
L7	**State Aid** Article 107(1) of the Treaty on the Functioning of the European Union ("TFEU"): Any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market.	When assessing whether State aid is present in respect of activities, it is necessary to consider whether Article 107(1) is satisfied. A four-part test is applied which is cumulative and State Aid will only exist if all four parts are met. Aid is granted by a Member State or through State resources: • To a certain undertaking; • Thereby creating a selective advantage; and • The transfer of resources distorts or has the potential to distort competition; and • trade between Member States.	Further advice should be sought at feasibility stage to determine whether a potential state aid issue is envisaged.	Following the four-part test, is our project likely to constitute State Aid?

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Public authorities wishing to operate commercially**		
L8	**Project financing**	Depending on the organisation's investment approach, each project should be considered on its own individual merits. However, it is envisaged that each project will be considered against a set of investment outcomes.	Bringing a project to the business case stage can be costly so early planning how the project development will be funded is key. Each project should take into consideration the investment outcomes at project initiation and at key points in the project development.	How will the early stages from concept to business case be resourced? Have financial outcomes been agreed for this project? Does our project satisfy one or more of the outcomes? Have we established when these outcomes should be reviewed during the project development?

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?

Ref	Trading in the energy market			
L9	**Power to produce and sell heat and electricity** Local Government (Miscellaneous Provisions) Act 1976 (as amended by the Electricity Act 1989): Section 11 provides that a local authority may generate and sell heat and electricity and may also purchase and supply heat.	Heat can be generated and sold by local authorities.	It would be prudent to seek further advice as a heat project at feasibility stage.	Is the project involving a heat supply component?
L10		Electricity, whether or not from renewable sources, can be sold in association with heat.	Further advice should be sought at feasibility stage of a project.	Does the project involve heat and power? If not see below.
L11	**Power to sell renewable electricity** Sale of Electricity by Local Authorities (England and Wales) Regulations 2010: Local authorities can to sell electricity generated from renewable sources.	The following can sell electricity generated from renewable sources as listed: http://www.legislation.gov.uk/uksi/2010/1910/made		Does the project involve the sale of electricity generated from the listed renewable sources?

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Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Trading in the energy market**		
L12	**Requirement for a licence to provide electricity** The Electricity Act 1989: Section 4 makes it is an offence to generate, transmit, distribute or supply electricity unless authorised to do so by a licence or an exemption. Individual or class exemptions to the general requirement for a licence imposed by section 4 of the Act may be granted by the regulating authority.	A series of exemptions may apply to specific activities: http://www.legislation.gov.uk/uksi/2001/3270/schedule/2/made Exemptions must be sought according to four areas: • Generation • Distribution • Supply • Resale.	For each project generating, distributing, supplying or selling electricity, further advice should be sought to determine whether or not any of the licence exemptions apply.	Does the project fall within any of the exemptions?

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Project Development and operation**		
L13	**Project governance and delivery structure**	How the project governance, management and delivery is structure will be determined by a range of factors including: • Legal rules mentioned previously allowing or preventing the organisation undertaking certain activities either by virtue of it being a public authority or due to the rules that applying in the energy sector • The organisation's strategic objectives • The organisations' appetite for investment risk and reward • Its relationship with others who may be better placed to deliver parts of the project.	The way a project is delivered should be considered early on in the feasibility stage but can really only become clear once the feasibility and viability of the project has been assessed as it moves towards the business case. However, key roles and responsibilities should be established to ensure smooth progression through the organisation's investment decision-making process.	Who is the project commissioner? Who will deliver the project? Who will manage and be responsible for the asset after the project is delivered? What options for project delivery and operational management are available and should be considered?

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Project Development and operation**		
L14	**Construction agreements**	The standard contractual arrangement for delivering major renewable energy projects is the Engineering, Procurement and Construction (EPC) Agreement. For smaller projects, the ICE New Engineering (NEC) Contract can be used.	The nature of the project structure should determine the type of contractual arrangement adopted and any pre or post construction conditions that need to be completed to confirm execution of the contract by the EPC contractor. This could include securing tasks or minimum contractual standards either as pass/fail or subject to liquidated damages: • Connection and energisation • Commission testing (G98/99) • Generation availability • Minimum Performance (PR) Ratio • Provisional, Interim and Final Acceptance Certification (PAC/IAC/FAC) • Workmanship standards	What contract form is most appropriate for this project? What key pre-conditions will be expected? What obligations will the EPC contractor have to rectify defects and for what period? What indemnities would be expected?

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Project Development and operation**		
L15	**Warranties, indemnities, liabilities, insurances and carve outs**	There are a range of mechanism by which each party can protect their interest in the event of the project not be delivered to the originally agreed expectations. These include: • Liquidated damages where the EPC contractor fails to successfully deliver key performance requirements of the project • Excluding certain aspects using carve-out clauses • Written guarantees or warranties covering, for build quality and equipment performance.	The scope of the arrangements applied will depend on the contracting route, as well as the scale and risk of the project.	What arrangements are likely to be needed to manage performance in the build out stage to completion of the project?

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Project Development and operation**		
L16	**Assignment and transfer of rights, obligations and legal arrangements**	Particularly for larger capital projects, Where the project is part of an asset transfer (acquisition or disposal), it is critical that all key legal benefits and responsibilities can be assigned to the intended party on transfer. There may be points in the development or operational life of the project when selling parts or all of the asset may be an attractive option for the organisation.	The status of each key asset and the impact of them changing ownership during the projects development and operational life should be considered in the detailed design. Options should be considered with any risks or opportunities that could arise identified.	Has an asset management strategy been considered?

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Project Development and operation**		
L17	**Operation & Maintenance arrangements**	Following completion of the construction phase, the project will move into its operational phase. Operation and maintenance can be treated in several ways depending on the risk/reward position of the owner/responsible organisation for the asset: • In-house management where there is both capability and capacity • Incorporate alongside the EPC contract • Let separately to the EPC contract	The O&M Contract will establish a set of performance management activities and minimum standards to be met by the employed contractor	Is an O&M arrangement required? How will it be procured? What should be included in the contract? What length of contract term would be appropriate?

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Property and land**		
L18	**Land ownership**	Land ownership and property rights can be a significant factor in the success of a renewable energy project. It can affect the financial value of the project as determining what the land can be used for. Obtaining information about the title, and other legal constraints on the use of the development should be part of the feasibility to establish potential risks to the project and who needs to be considered in any engagement.	A Land Registry Search should be undertaken at an early stage even if the land is in your ownership to establish the legal status. N.B. This will only show information for property transactions since 1993.	Who owns the land in and adjacent to the project? What restrictions have been placed on the use of the land? Has a Land Registry search been undertaken, or should one be commissioned to establish title ownership both for the development site and adjacent land?
L19	**Restrictive covenants**	A restrictive covenant can apply to the project or adjacent land which could preclude or restrict the project development. As a project progresses, subject to the level of public awareness, the level of risk that a covenant is in place and going to be triggered general falls.	There are several options to address the potential triggering of a covenant: • Taking no action • Negotiating a release • Taking out insurance to compensate against loss should the covenant be triggered.	Are there any restrictive covenants in place that could affect the project development or operation?

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Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Property and land**		
L20	**Church of England ownership and rights over land in England**	The Church Commissioners, who hold much of the Church of England's investments, use Ordnance Survey geographic tools to manage their land assets and mineral rights. See" Land ownership" and "Mineral Rights"	A check should be undertaken to establish whether they have an interest in the development or any land that could affect the project.	Has a Church Commissioners' database search been undertaken, or should one be commissioned to establish title ownership both for the development site and adjacent land?
L21	**Mineral rights**	Minerals are defined in the Town and Country Planning act as "'*all substances in or under land of a kind ordinarily worked for removal by underground or surface working, except that it does not include peat cut for purposes other than for sale*.' With the exception of oil, gas, coal, gold and silver, the state does not own mineral rights in the UK. Generally, minerals are held in private ownership, and information on mineral rights, where available, is held by the Land Registry together with details of land surface ownership.	A Land Registry search should be undertaken. See "Land ownership".	

TABLE 1: DUE DILIGENCE – LEGAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Property and land**		
L22	**Access and rights of way**	In addition to ownership, land may be subject to third party access rights, for example footpaths allowing the public right of way, or traversing of services by statutory undertakings like utility companies or other bodies like the Environment Agency or Internal Drainage Boards	A search including of Land Registry and Local Authority Search should highlight key information. This should be considered at the feasibility stage since the information that they yield will determine whether the project can progress, the level of risk to the project arising from specific issues and help to inform risk management strategies e.g. using insurance as a tool to mitigate potential claims.	Have Land Registry and local authority searches been undertaken? If information has been identified which could affect the project has a risk management strategy been developed including identifying the options available to mitigate specific legal risks?

TABLE 2: DUE DILIGENCE - COMMERCIAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Provisions associated with economic or financial policy**		
C1	**Clean Growth** The Clean Growth Strategy 2017:	The Strategy calls for the public sector to be a leader in reducing carbon emissions, play a key role in demonstrating best practice, promoting transparency over emissions reporting and catalysing markets in energy efficiency by implementing measures at scale.	The project should be designed to ensure that it delivers clean growth which demonstrates energy efficiency and carbon reduction in line with our commitments and position as a community leader.	Does the project demonstrate our leadership to improve energy efficiency and carbon reduction?
C2	**Commercial/economic strategic priorities**	Each project should take into consideration of our strategic objectives at project initiation and as the project progresses.	As stated.	Have we identified how our project relates to our organisation's strategic objectives Does our project satisfy the our commercial and/or wider economic objectives?

TABLE 2: DUE DILIGENCE - COMMERCIAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Project Financing**		
C3	**Project finance arrangements**	The organisation will have a range of options for financing the project depending on our financial strategy, strategic objectives, scale of the investment and at what point the project has reached in the project phasing. Project delivery structure should inform financing arrangements.	Consideration of financing options should be identified as early as possible in the project development. The options and preferred route should be set out in the Business Case.	Is there a project financing plan covering each project stage? • Concept • Up to business case • Development • Build-out • Operational • Life-cycling • Decommissioning.
C4	**Financial returns**	In general, each key strategic project is considered on its own individual merits. However, it is envisaged that each project should be considered against a set of investment outcomes set out in the organisation's investment strategy.	Each project should take into consideration each of the investment outcomes in at project initiation.	Does our project satisfy one or more of the organisation's financial outcomes?

TABLE 2: DUE DILIGENCE - COMMERCIAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Income generation**		
C5	**Energy sales arrangements**	Options for power sales: • Self-consumption "behind the meter" • To the wholesale market using a commercial Power Purchase Agreement (PPA) with a licensed supplier or energy trading business • To a third party offtaker via a private wire using a private Power Purchase agreement • "Sleeved" either to your own organisation or a third party via a licensed supplier. Options for heat sales: • Self-consumption • To an offtaker using a heat sales agreement • Value bundled into property tenancy/rental agreement	This will depend on the nature of the contractual relationship. Each sales option has a different revenue profile based on risk and the state of the market or consumption tariff at the time of entry and at each review point during any agreed term.	What is our appetite for revenue generation? Is there a potential power or heat offtaker in proximity? What contractual flexibility do we require? What length of term do we wish to enter into? What other benefits do we wish to gain e.g. embedded cost avoidance, community benefit? What is the potential offtaker's energy requirements and long-term operating viability?

TABLE 2: DUE DILIGENCE - COMMERCIAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Income generation**		
C6	**Income generation opportunities arising from participating in the energy market –** • **Capacity Market** • **Contracts for Difference** • **Ancillary and Flexibility services**	The Capacity Market's remit is to ensure that sufficient firm capacity has been contracted to avoid a supply shortfall during periods of high demand. Contracts for Difference (CfD) scheme, which provides support for new low carbon electricity generation projects. By agreeing fixed rates for a certain number of years, settled at auctions, CfD is aimed at incentivising companies to commit to producing low-carbon energy. To keep the network in balance (voltage and frequency), the Transmission and more recently the Distribution Network operators pay those who can provide demand flexibility, either by reducing demand or increasing or storing generated power to be put onto the network when conditions require it. These services are let under open tendered contracts.	The project may be able to factor revenue stacks into the financial model alongside power sales. However, these are highly competitive and volatile in respect of price and contract term.	What revenue streams are compatible with our project? Can the value be calculated? How stable or the revenues that could be generated?

TABLE 2: DUE DILIGENCE - COMMERCIAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Acquisitions and disposals**		
C7	**Acquisitions and disposal of assets**	The project may involve a capital asset like a solar farm or wind turbine. These assets can be bought, sold, shared, leased or franchised under a range of governance structures and contractual arrangements. The organisation may maintain its own assets on an asset register in accordance with an asset management strategy or policy. How capital assets are provided will affect how they are accounted for in the financial model, for example affecting borrowing arrangements, taxation and capital allowances.	The project team should establish whether any assets will be required to deliver the project and what would be the potions for their provision. These provisions can be changed throughout the project life.	What capital assets will we need to deliver the project? What options should we consider for their provision? What strategies should we consider for their management during and at the end of the project life? What financial and taxation assumptions will we need to take account of during the project life?

TABLE 2: DUE DILIGENCE - COMMERCIAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Taxation**		
C8	**Taxation**	These include, but are not restricted to the following: • Capital allowances arise as a result of expenditure on plant and machinery and can be used by a taxpayer as a deduction against taxable profits over a period of time. • Stamp Duty Land Tax is payable on the grant of a lease over the land on which the project will operate. • VAT – Services are generally subject to 20%. Electricity supply sales are generally standard rated (at 20%) with a reduced rate (of 5%) for supplies into residential properties. The status of the organisation may affect its tax rate.	Tax is a complex area requiring specialist knowledge. The nature and operating status of your organisation will affect what taxes are liable and reliefs or allowances are available.	What will be the likely delivery options for the project? What taxation arrangements will apply? How do we take account of tax in our financial model?

TABLE 2: DUE DILIGENCE - COMMERCIAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Taxation**		
	Taxation (continued)	• Business Rates – energy projects have different rateable values and the rate will also be affected by the status of the organisation which is liable. • Corporation Tax is tax imposed on the net income of a company.	

TABLE 2: DUE DILIGENCE - COMMERCIAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Community participation and benefit**		
C9	**Community participation and benefit**	There are a range of options that allow the local community to participate in the project: • Neighbours • Consultees in statutory or voluntary engagement activities • Recipients of one-off or regular funding from the project revenue • Investors • Development partners • Operating partners.		What role do we see the local community playing in our project? Have we engaged with the local community? If not, will we engage and if so at what point in the project development process?

TABLE 3: DUE DILIGENCE - TECHNICAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Policy obligations**		
T1	**Environmental policy considerations** The UK Climate Change Act 2008 established a target for the UK to reduce its emissions by at least 80% from 1990 levels by 2050. The resulting UK carbon budgets are also consistent with reductions needed to meet the Paris Climate Change Agreement: to limit global warming to below 2°C with ambition to not exceed 1.5°C. Home Energy Conservation Act 1995. Climate Emergency declarations/ net zero carbon targets. Organisational strategies and policies.	Your organisation will fall under nationally set obligations and commitments to reduce its carbon emissions and energy use in its own operations and in the community. In addition, your organisation may also have taken decisions to adopt environmental standards, targets or implement systems to manage its environmental performance including its use of energy and reduce Greenhouse Gas emissions.	Each relevant project should identify the carbon reduction potential at feasibility stage.	Does the project contribute to carbon emission reduction targets or other statutory or locally adopted policies relating to carbon or energy? Is the project likely to have an impact on energy in the wider community?

TABLE 3: DUE DILIGENCE - TECHNICAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Policy obligations**		
T2	**Planning policy and related regulations**	The project may be subject to policies adopted by the Local planning Authority in response to the National Planning Policy Framework (NPPF).	Each project should consider the national and local planning context.	Is the project likely to be subject to local planning policies? Does the site in any areas of constraint or special designation? Is it likely to require a screening opinion under the Environmental Impact Regulations?

TABLE 3: DUE DILIGENCE - TECHNICAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Physical state of the environment**		
T3	**Site physical considerations**	Any development will have an impact on and in turn be impacted by the local area, dependent on the nature of the development and the local geography. Factors for consideration include the following: • Topography • Flooding, water and drainage • biodiversity issues • Land condition • Visibility and visual appearance • Noise and vibration.	These issues as a minimum should form part of the feasibility assessment of the project. Any risks, or opportunities for enhancement, should be identified and quantified if possible. More detailed assessment and evaluation can then be costed into future phases of the project development.	Have these issues been identified in the project development process? At what point will they be considered? How will we gather and assess the information?

TABLE 3: DUE DILIGENCE - TECHNICAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Physical state of the environment**		
T4	**Access to the public highway**	See also “Legal considerations”. Access to the public road, and possibly rail network, will be important at all stages of the project, for example, to allow surveys to be undertaken and materials and people to be able to access the site as the project build-out proceeds to fully operational status.	Access can fundamentally affect site development. An early understanding therefore of its impact on the project is critical.	Can the site be accessed from the highway currently? Are there any physical restrictions to gaining access? If so, what options are possible to overcome these restrictions? Who needs to be involved and at what stage in the project should they be engaged?

TABLE 3: DUE DILIGENCE - TECHNICAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**State of the surrounding energy network**		
T5	**Network connection capacity (electrical)**	Renewable energy generation plant generally needs to connect to the power network. Connections are approved by either the Distribution Network Operator (DNO). The generating capacity and type of equipment being connected will require testing to meet the connection code that applies (G98/G99). Once the project has been approved by the Network Operator the connection offer becomes a connection agreement.	A connection application will need to be submitted to obtain DNO-TSO approval and an offer. Early engagement with the Network Operator is crucial to understand the technical and commercial impact of grid connection on the project.	Is connection possible? How much is connection going to cost? Are they any alternative options?

TABLE 3: DUE DILIGENCE - TECHNICAL ISSUES

Provision	How does it apply to the project?	How can we meet the provisions?	What questions do we need to ask?
Ref	**Installation and operational performance standards of the plant/equipment being introduced**		
T6	**Plant and equipment installation and operational standards**	The equipment will be designed to meet certain installation and performance standards which will be defined in the delivery contract, usually an EPC contract where it is a major project.	The design and operational standards will be applied will depend on the type of technology being employed, the availability of the technology in the market at the budgeted price and the environment within which it will be located. For example, for a solar farm, design standards will be based around irradiance rates for the location, warranted equipment output, expected losses across the plant to the point of measurement of output and other constraints that will have an impact on the predicted performance. The way that the equipment is installed and maintained will also have a major bearing on its long-term performance.	What performance standards are we expecting to achieve?