

LCN Fund Governance Document v.1

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Target Audience: Electricity distribution network operators (DNOs), independent distribution network operators (IDNOs), distributed generators, electricity suppliers and other interested parties

Overview:

This document is Version 1 of the LCN Fund Governance Document referred to at Charge Restriction Condition (CRC) 13 of the Electricity Distribution Licence.

It sets out the regulation, governance and administration of the First Tier Funding Mechanism of the Low Carbon Networks (LCN) Fund.

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Context

In December 2009, we published our Final Proposals for the Distribution Price Control Review (DPCR5). One of the key proposals of the price control was the establishment of the Low Carbon Networks (LCN) Fund to encourage the distribution network operators (DNOs) to use the DPCR5 period (1 April 2010 to 31 March 2015) to prepare for their role in the low carbon economy. As part of the DPCR5 process we consulted on the LCN Fund proposal extensively, and included an Impact Assessment in our Initial Proposals published in August 2009.

The DPCR5 Final Proposals have been accepted by the DNOs and will come into effect on 1 April 2010 subject to the DNOs accepting the associated licence conditions.

This document is version 1 of the LCN Fund Governance Document and sets out the regulation, governance and administration of the First Tier Funding Mechanism of the LCN Fund. Subsequent versions of this document will contain the governance arrangements for the Second Tier Funding Mechanism and the Discretionary Funding Mechanism.

This document is issued by the Authority under Part E (The LCN Fund Governance Document) of Charge Restriction Condition (CRC) 13 of the Electricity Distribution Licence and in accordance with Part F (Procedure for issuing the LCN Fund Governance Document) of CRC 13. This document may be revised and re-issued by the Authority in accordance with Part E of CRC 13.

The DNOs are required by CRC 13 to comply with this document as if it formed part of the licence. However we have attempted to make this document accessible and informative to parties other than the DNOs; especially those who may be looking to partner with the DNOs to use the LCN Fund to try out new technology or commercial arrangements.

Associated Documents

- Electricity Act 1989
- Electricity Distribution Licence Standard Conditions
- Electricity Distribution Licence Charge Restriction Conditions (as applicable to each DNO)
- Electricity Distribution Price Control Review. Final Proposals - Incentives and Obligations (145/09), December 2009

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1. Introduction

The Low Carbon Networks Fund

1.1. In the Final Proposals of the electricity Distribution Price Control Review (DPCR5)¹, we proposed a £500m Low Carbon Networks (LCN) Fund to encourage the distribution network operators (DNOs) to use the DPCR5 period (1 April 2010 to 31 March 2015) to try out new technology, operating and commercial arrangements. The objective of these trials and demonstration projects is to help all DNOs understand how they can provide security of supply at value for money as Great Britain (GB) moves to a low carbon economy, and what role they could play in facilitating the low carbon and energy saving initiatives that are underway to tackle climate change.

1.2. The future use of the electricity distribution networks could change considerably with the increased take-up of low carbon initiatives such as distributed generation (DG), demand side management (DSM), electric space heating, electric vehicles and electricity storage. This could require significant changes to the way the networks are designed and operated, and the commercial role the DNOs play. For example, they may need to introduce more intelligence and automation onto the networks to make sure they can adapt quickly to the changing pattern of network use and connect new users promptly without having to wait for new transformers or lines to be installed. The DNOs may need to enter into contracts with DG and large electricity users to vary their use of the network where there are constraints.

1.3. DNOs also have the opportunity to enhance the business case for low carbon technologies (such as renewable generation) by capturing the benefits on their network of DSM and active network management. Advances in information and communications technology and the new data that will become available through smart meters could enable the DNOs to run the networks more efficiently and in a way that is better able to respond flexibly given that there is uncertainty over how quickly and to what extent the take-up of low carbon initiatives will happen.

1.4. The LCN Fund will enable the DNOs to run trials to explore which technologies and commercial and operating arrangements are likely to provide best value for money for network users while helping to tackle climate change. We anticipate that the projects may highlight the regulatory and legal changes that may be needed to ensure that the networks can meet the needs of users into the future. We expect that these trials will help to inform the business plans that the DNOs submit to us at the time of the next price control review.

¹ Electricity Distribution Price Control Review Final Proposals – Incentives and Obligations - (Reference number: 145/09), December 2009.
<http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=348&refer=Networks/ElecDist/PriceCtrls/DPCR5>

1.5. The LCN Fund consists of two tiers. DNOs will be able to use the First Tier to recover a proportion of expenditure incurred on small scale projects and to recover expenditure incurred to put in place the people, resources and processes to progress innovative projects. The total expenditure that a DNO can recover from the First Tier is subject to an annual limit.

1.6. The Second Tier provides total funding of up to £320m over the five years for a small number of significant 'flagship' projects. Ofgem will hold an annual competition for project funding and the DNOs will compete against each other for an allocation of the funds. The annual process will start with DNOs putting forward outline project proposals for Ofgem to assess whether they meet the eligibility criteria. This will be followed by the annual call for, and submission of, full proposals.

1.7. A Discretionary Funding Mechanism worth £100m over the five year period enables Ofgem to reward successful delivery and projects that bring particular value in helping the DNOs understand what investment, commercial arrangements and operating strategies they should be putting in place to provide security of supply at value for money for future network users, while doing all they can to tackle climate change.

1.8. We have modified the standard conditions and the charge restriction conditions of the Electricity Distribution Licence in order to enable the creation of the LCN Fund. CRC 13 relates specifically to the LCN Fund, and sets out the arrangements for how it is funded through the DNO use of system charges and also other matters relating to the LCN Fund arrangements.

The LCN Fund Governance Document

1.9. This document is the LCN Fund Governance Document and sets out the regulation, governance and administration of the LCN Fund.

1.10. This document will be developed in three stages:

- Stage 1 setting out the First Tier Funding Mechanism,
- Stage 2 setting out the Second Tier Initial Screening Process, and
- Stage 3 setting out the Second Tier and Discretionary Funding Mechanisms.

1.11. This first version of the LCN Governance Fund Document represents Stage 1, and sets out the requirements a DNO must comply with to be eligible under the First Tier Funding Mechanism.

1.12. The First Tier Funding Mechanism provides limited funding to each DNO to use for two purposes:

- to put in place the people, resources and processes to design, develop and implement innovative projects (whether funded under the First Tier or the Second Tier of the LCN Fund or through other means), and
- to fund small scale projects which meet the criteria set out in this document.

1.13. The limit of funding available to each DNO under the First Tier Funding Mechanism is set out in Appendix 1 of CRC 13. It is intended that this value is large enough to fund a reasonable number of smaller projects, but small enough to allow 'arms length' Ofgem review.

1.14. In this document we use the term DNO to refer to entities that are termed distribution service providers (DSPs) in the Electricity Distribution Licence. We have used the term DNO here in order to make the document easier to read.

1.15. Defined terms are capitalised throughout the text, with the definitions set out in Chapter 10.

2. Facilitation of potential External Collaborators' awareness

2.1. We expect DNOs to collaborate with each other and non-DNO parties (External Collaborators) on many of the projects supported by the LCN Fund. DNOs are likely to have to work closely with other parties in the electricity supply chain (from generators to suppliers) to explore what technology or commercial arrangements best address changes in network use and what role they can play in facilitating low carbon and energy saving initiatives such as DSM and DG. Similarly, DNOs may benefit from the technologies used and lessons learned in other industries, including the telecoms and information technology sectors, in which case partnerships with technology providers and others outside the energy industry will be valuable. Other parties such as Local Authorities may be carrying out pilot studies (for example into electric vehicles or zero carbon homes) and these could offer opportunities for DNOs to get a better understanding of how to respond to these developments.

2.2. We require all DNOs to work collectively to publicise the LCN Fund and to provide a platform through which external parties can bring forward ideas to the DNOs for First Tier LCN Projects. Through a vehicle such as the Energy Networks Association (ENA), we expect the DNOs to set up a single website that includes the following minimum functionalities.

- Links to the Ofgem website to allow direct access to this LCN Fund Governance Document, the Registration information (described in paragraphs 3.27 to 3.41) and the Close-Down Reports (described in paragraphs 6.3 to 6.11).
- A place where potential External Collaborators can record their name, contact details and a brief summary of their business so that DNOs can look for potential External Collaborators for LCN Projects.
- A contact point for potential External Collaborators to submit Project ideas that conform to the eligibility criteria for a First Tier LCN Project. The contact point must ensure that the Project idea is sent to a nominated party at each DNO group that is responsible for reviewing each Project idea. A copy will also be submitted to Ofgem.
- A place where a DNO can also record its suggested Projects if it wishes to attract potential External Collaborators.

2.3. Expenditure incurred in complying with this condition can form part of the Allowable Set-up Expenditure (which is detailed further in paragraph 4.5).

2.4. This service is not intended to provide any constraint on, or specify the mechanism as to how a DNO will select project partners, nor should it be used as the sole basis upon which an award of a contract for services provided by an External Collaborator in return for consideration should be made. It is for the DNO to ensure that its actions, in this regard, comply with any applicable procurement rules.

3. First Tier LCN Project

3.1. This Chapter sets out the requirements for a Project to qualify as a First Tier LCN Project.

3.2. In this document we use the terms Project and Solution. Project refers to the trial which is being proposed or undertaken, whilst Solution refers to what the Project is setting out to establish, prove or demonstrate.

Background

3.3. The First Tier Funding Mechanism should be used to explore technologies, commercial and Distribution System operating arrangements that will facilitate GB's transition to a low carbon economy. There will be no initial requirement for a DNO's First Tier Project portfolio to contain a specific percentage split between different types of Solutions. However, it is likely that we will achieve the maximum learning for the industry if the Projects funded across all DNOs cover a broad range of Solutions. Therefore, if at the Two Year Review (explained further in Chapter 9) there is a strong bias towards one type of Solution, Ofgem may decide to specify the balance between types of Projects to be funded through the First Tier Funding Mechanism for the remainder of DPCR5.

3.4. There is no minimum or maximum size for a First Tier LCN Project². First Tier LCN Projects should not last more than three years. Therefore, a DNO cannot recover any expenditure that is incurred more than three years after Registration from the First Tier Funding Mechanism.

Specific Requirements

3.5. There are two sets of criteria (Specific Requirements) that a Project must meet if it is to qualify as a First Tier LCN Project.

Specific Requirements set 1

3.6. A First Tier LCN Project must involve the trialling on the Distribution System of at least one of the following:

- a specific piece of new (i.e. unproven in GB) equipment (including control and communications systems and software) that has a Direct Impact on the Distribution System,
- a novel arrangement or application of existing Distribution System equipment (including control and communications systems and software),

² Although First Tier Funding is subject to each DNO's First Tier LCN Allowance, as explained in Chapter 4.

- a novel operational practice directly related to the operation of the Distribution System, or
- a novel commercial arrangement with a Distribution System User.

Specific Requirements set 2

3.7. In addition, a First Tier LCN Project must meet all of the requirements described below.

(a) Accelerates the development of a low carbon energy sector

3.8. The Solution that the First Tier LCN Project is trialling must make a contribution to the UK's Low Carbon Transition Plan, as set out by the Department of Energy and Climate Change (DECC)³. Wherever possible, a quantitative estimate of this contribution must be made for the level of carbon benefits.

3.9. To reduce carbon in the energy sector, the Low Carbon Transition Plan considers that electricity use may increase. A Solution may involve facilitating the use of electricity instead of an alternative higher carbon energy source. Therefore, a DNO can estimate the carbon benefits across the total energy sector that the Solution could reasonably be expected to deliver.

3.10. A DNO must evaluate the total carbon benefits of the Solution, assuming it is deployed, using a net present value (NPV) analysis. The NPV calculation must use 3.5 per cent as the real discount rate for benefits accruing in the next 30 years and a real discount rate of 3.0 per cent for benefits accruing beyond that time⁴. Benefits can be calculated up to the year 2050, which coincides with the Government's long-term targets for carbon reductions.

3.11. To convert different energy uses into carbon equivalents, a DNO must use the latest conversion factors as published by Defra/DECC⁵. These carbon equivalents must then be converted into monetary values by using the carbon prices provided by DECC⁶, which extend until 2050.

(b) Has the potential to deliver net benefits to existing and/or future customers

³ The UK Low Carbon Transition Plan: National Strategy for Climate & Energy July 2009. http://www.decc.gov.uk/en/content/cms/publications/lc_trans_plan/lc_trans_plan.aspx

⁴ This is the social time preference rate as set out in the Green Book: Appraisal and Evaluation in Central Government. January 2003. http://www.hm-treasury.gov.uk/data_greenbook_index.htm

⁵ <http://www.defra.gov.uk/environment/business/reporting/conversion-factors.htm>

⁶ A brief guide to the new carbon values and their use in economic appraisal. July 2009. http://www.decc.gov.uk/en/content/cms/what_we_do/lc_uk/valuation/valuation.aspx

3.12. There must be a clear expectation and evidence that the Solution that the DNO is trialling in the First Tier LCN Project has the potential to deliver combined carbon and financial net benefits to existing and/or future customers.

3.13. Net benefits can be calculated up to the year 2050. Where possible, this calculation should be quantified using an NPV calculation using the same discount rates as described in paragraph 3.10 above. This calculation will include the value of the carbon savings calculated in (a) above.

(c) Has a Direct Impact on the operation of a DNO's Distribution System

3.14. The Project Eligibility Assessment (described in paragraph 3.26) must demonstrate that the First Tier LCN Project is expected to have a Direct Impact on the operation of a DNO's Distribution System. If a First Tier LCN Project is halted, then Allowable First Tier Project Expenditure (described in paragraphs 4.6 to 4.20) incurred to date will still be eligible for LCN funding even if the Project has not yet had a Direct Impact on the operation of a DNO's Distribution System.

3.15. Projects that trial schemes where a DNO acts as a finance intermediary as part of the Energy Saving Trust's Pay As You Save (PAYS) pilot schemes⁷ are exempt from this requirement.

(d) Generates new knowledge that can be shared amongst all DNOs

3.16. One of the main purposes of the LCN Fund is to allow learning to be shared amongst the DNOs. The First Tier LCN Project must therefore be expected to generate new knowledge that can be shared amongst all DNOs. This will be assisted by each DNO's knowledge transfer strategies (see Chapter 6).

3.17. We recognise that a Project may generate intellectual property rights (IPRs), either for the DNO or for any External Collaborators (whether for both or jointly). Since our objective is that learning must be shared, the default option for a First Tier LCN Project is that where it generates foreground IPRs (IPRs developed as a result of the Project), royalty free licences for these IPRs must be provided to all other DNOs for use in GB.

3.18. In addition, any royalties earned by the DNO through its share of IPRs generated from a First Tier LCN Project will be shared with customers in proportion to the funds they have contributed to the Project.

⁷ Pay As You Save is an innovative finance solution that aims to give households the opportunity to invest in energy efficiency and microgeneration technologies in their homes with no upfront cost. DECC has asked the Energy Saving Trust to conduct a pilot scheme to trial and assess elements of the PAYS concept. Further information can be found at <http://www.energysavingtrust.org.uk/Home-improvements-and-products/Pay-As-You-Save-Pilots>

3.19. If a DNO wishes to deviate from the default requirement for IPRs for a specific First Tier LCN Project, it will have to get approval from Ofgem at Registration (set out in paragraphs 3.27 to 3.41). For the request to be approved the DNO will have to demonstrate that: a) the Project requires an External Collaborator, where that External Collaborator does not accept the default requirement for IPRs, and despite using reasonable endeavours it has not been able to find an alternative External Collaborator that is willing to share the IPRs with all of the other DNOs; and b) the Solution has a sufficiently large expected net benefit that it will still be expected to deliver value to existing and/or future customers, even if IPRs are not shared.

3.20. We are currently drafting guidance on IPRs. We are also considering working with the DNOs to create a standard agreement for IPRs. We suggest that if any DNO has specific issues regarding IPRs on First Tier LCN Projects that it discusses the Project with Ofgem prior to commencement.

(e) Focuses on network Solutions that are at the trialling stage

3.21. The LCN Fund is specifically targeted at Projects that a DNO would not perform in its normal course of business. The First Tier LCN Project must have a Technology Readiness Level (TRL)⁸ of between 5 and 8. TRL 9 is excluded, as it offers limited scope for new knowledge to be generated and is too low risk. This also prevents the widespread deployment of a technology being funded under the First Tier Funding Mechanism. It should be noted that Projects that have a TRL of 4 and below are considered research and development (R&D), which will often be eligible for funding under the existing Innovation Funding Incentive (IFI).

3.22. For Projects that focus on a commercial Solution, it may not be possible to identify the TRL of the Project. In such cases, the Project is exempt from meeting this requirement.

(f) Does not lead to unnecessary duplication

3.23. A First Tier LCN Project must not unnecessarily duplicate other First Tier LCN Projects already Registered by the DNO group.

3.24. Unnecessary duplication is likely to occur if the new First Tier LCN Project is not expected to lead to recognised new learning. Projects that address the same problem, but use a different Solution, will not be considered as unnecessary

⁸ TRL is a measure used to assess the maturity of evolving technologies. It is graded on a scale from 1 to 9 where TRL 1 is where scientific research begins to be translated into applied research and development and TRL 9 is a proven technology. In this document we use the TRL to refer to the total Project, or combination of technologies being trialled, rather than the TRL of any individual component. This means that existing technology (with a TRL of 9) could be employed in a novel way, thereby giving a TRL of the trial of less than 9. The definitions of the TRLs are set out in UK Low Carbon Energy Technology Strategy: September 2008 available at http://www.decc.gov.uk/en/content/cms/what_we_do/lc_uk/lc_business/env_trans_fund/env_trans_fund.aspx

duplicates. Projects that are at different TRLs will not be considered as unnecessary duplicates.

3.25. Ofgem will monitor the degree of First Tier LCN Project duplication across the DNOs. If, at the Two Year Review, Ofgem deems that there has been excessive unnecessary duplication across the DNOs, then Ofgem may set up a process for disallowing such duplication in future years.

Documentation

3.26. Before Registering a First Tier LCN Project with Ofgem, a DNO must produce a Project Eligibility Assessment, demonstrating that the Project meets the Specific Requirements set out in paragraphs 3.5 to 3.25. This Assessment does not need to be submitted to Ofgem at Registration, but it should be made available to Ofgem upon request.

Registration process

3.27. In order for a Project to be eligible for funding it must be Registered with Ofgem.

3.28. The Registration process does not involve Ofgem approving Projects. However, we have identified three circumstances where a DNO must seek approval from Ofgem to Register a Project if:

- it is requesting a derogation from the default conditions for IPRs set out in paragraphs 3.17 to 3.19,
- it intends to make payments to itself or to Related Undertakings as set out in paragraph 4.10, or
- it wishes any of the information required to be included in the LCN First Tier Project Registration Pro-forma to be withheld from the Ofgem website for reasons of commercial confidentiality and can demonstrate that it will face commercial harm from disclosure and that the information is considered eligible for exemption under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

3.29. Ofgem will review these submissions and only provide approval where it judges that a satisfactory justification has been supplied. Ofgem will undertake this review and respond to the request within 20 working days of receipt of the properly completed First Tier LCN Project Registration Pro-forma. This period may be extended for Projects that require IPRs approval.

3.30. If the DNO is not seeking approval to Register a Project for one of the reasons identified above, the Project will be Registered on confirmation by Ofgem of receipt of the properly completed LCN First Tier Project Registration Pro-forma. Ofgem will

use reasonable endeavours to confirm receipt of the submission within five working days.

3.31. A Project can be submitted for registration with Ofgem at any time during the Regulatory Year. Projects must start in the same Regulatory Year that they are registered, except where Ofgem has confirmed Registration within 20 working days of the end of the Regulatory Year, in which case the Project may start in the subsequent year.

3.32. Projects must not be started until Ofgem has confirmed Registration.

3.33. A DNO can still register a First Tier LCN Project even if it doesn't expect to incur any Allowable First Tier Project Expenditure. In doing so, it will still be eligible to receive Allowable First Tier Project Expenditure if the outturn costs and benefits are different from expectation.

3.34. The Pro-forma for First Tier LCN Project Registration requires that the DNO submits the information set out in Table 3.1 below.

Table 3.1: Information required for the Registration of First Tier LCN Projects

Information required	Description
Project title	
Predicted end date	The DNOs should provide an estimate of the expected completion date of the Project.
TRL(s)	The TRL(s) of the Project should be stated.
Project background	This should give the origin, motivation and setting for the Project.
Scope and objectives	This section should describe the Distribution System issue that the Project aims to address and the boundaries of the Project. The objectives of the Projects should be clearly defined.
Success criteria	Details of how the DNO will evaluate whether the Project has been successful.
Potential for new learning	Details of what the parties hope to learn and how the learning will be disseminated.
Scale of Project	A DNO should justify the scale of the Project. In particular, it should explain why there would be less potential for new learning if the Project were of a smaller scale.
Geographic area	Details of where the trialling will take place.
External Collaborators and external funding	Details of actual or potential collaborative partners and external funding support as appropriate.
Solutions	This section should set out the different Solutions that will be trialled. The type of Solution should be identified where possible e.g. technical or

Information required	Description
	commercial.
Risks	The DNO should highlight any material, known risks that could impact the Project's cost and/or programme.
Indicative total Allowable First Tier Project Expenditure	An indication of the total Allowable First Tier Project Expenditure that the DNO expects to reclaim for the whole of the Project.
Revenue allowed for in the DPCR5 settlement	An indication of the revenue allowed for within the DPCR5 settlement that is likely to be saved as a result of the Project.
IPR arrangements	If the Project is likely to generate IPRs, the parties should indicate if they do not want the IPRs to be shared with all of the other DNOs. A justification as to why this is the case and why the Project should still be approved must be provided, in accordance with paragraph 3.19.
Related Undertakings	The DNO must set out all payments that it proposes to make to itself or any Related Undertaking. Further, if a payment is to be made to any Related Undertaking that is a Distribution System User, the DNO must demonstrate that it has offered the same terms to similar Distribution System Users on the part of the network that is within the Project boundary and has used reasonable endeavours to identify such Users.

Publication of the First Tier LCN Project Registration Pro-forma

3.35. The DNO must identify any information in the Pro-forma that it does not consent to being published in full. It must demonstrate that it will face commercial harm from its disclosure and that the information is considered eligible for exemption under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

3.36. A DNO will provide this information by completing the First Tier LCN Project Registration Pro-forma as provided by Ofgem.

3.37. All information submitted within the First Tier LCN Project Registration Pro-forma will be made available on the Ofgem website, unless Ofgem has agreed otherwise as part of the Registration process set out above.

First Tier LCN Project Changes

3.38. Once a First Tier LCN Project has been Registered, a DNO will not be able to change the following aspects of the Registered Project, as identified in the First Tier LCN Project Registration Pro-forma:

- Project title,
- Project background,
- scope and objectives,
- success criteria, and
- the IPR arrangements.

3.39. Further, although a DNO can reduce the level of payment that was Registered to be made to a Related Undertaking, it cannot either increase the payment nor make a payment to an additional Related Undertaking without receiving approval from Ofgem.

3.40. However, if a DNO can demonstrate that there will be a benefit to changing other aspects of the Project based on learning once the Project has been started, it may make these changes once it has submitted a revision to the First Tier LCN Project Registration Pro-forma to Ofgem. This must include an explanation of why the change has been made. For the avoidance of doubt, this change could include prematurely terminating the Project.

3.41. This information will be published unless Ofgem approves otherwise based on the DNO demonstrating that it will face commercial harm from disclosure and that the information is considered eligible for exemption under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

4. Allowable First Tier Expenditure

4.1. There are two categories of expenditure that can be recovered from the First Tier Funding Mechanism of the LCN Fund. The first category is expenditure to put in place the people, resources and processes to progress innovative projects. This is set out in paragraph 4.5 below and is called Allowable Set-up Expenditure. The second category is to recover expenditure associated with undertaking First Tier LCN Projects. This is set out in paragraphs 4.6 to 4.20 below and is called Allowable First Tier Project Expenditure.

4.2. The sum of Allowable Set-up Expenditure and Allowable First Tier Project Expenditure is equal to Allowable First Tier Expenditure, as set out in CRC 13 and the formulae below. Allowable First Tier Expenditure that can be claimed from the First Tier Funding Mechanism must not exceed the overall limit set out in CRC 13 and is offered on a 'use it or lose it' basis in any individual year.

4.3. This is set out in the formulae below,

$$AE_t = \sum_{i=1}^n APE_{it} + ASE_t$$

subject to $AE_t \leq L_{DNO}$

where

AE_t is the Allowable First Tier Expenditure in Regulatory Year t .

APE_{it} is the Allowable First Tier Project Expenditure for Project i in Regulatory Year t .

ASE_t is the Allowable Set-up Expenditure in Regulatory Year t .

L_{DNO} is the First Tier LCN Allowance for the given DNO as set out in Appendix 1 of CRC 13.

4.4. Funding is not provided on an upfront basis. Instead the DNO will adjust its Combined Allowed Distribution Network Revenue by the Allowable First Tier Expenditure incurred by it in that Regulatory Year. This calculation is undertaken each year on an ex post basis based on outturn expenditure.

Allowable Set-up Expenditure

4.5. A DNO can use up to a maximum of 20 per cent of its First Tier LCN Allowance (as set out in CRC 13) in any Regulatory Year to cover expenditure it incurs to put in

place the people, resources and processes to progress innovative Projects. This may include the costs of putting together bids for the Second Tier Funding Mechanism. This is called Allowable Set-up Expenditure. A DNO must be able to demonstrate that it has used the amount claimed under Allowable Set-up Expenditure for the purposes listed above.

Allowable First Tier Project Expenditure

4.6. Expenditure incurred by the DNO as part of a Registered First Tier LCN Project can be recovered from the First Tier Funding Mechanism if it is Allowable First Tier Project Expenditure.

4.7. A DNO is required to fund a minimum of 10 per cent of the Project itself, meaning that a maximum of 90 per cent of Eligible First Tier DNO Expenditure can be recovered.

4.8. Allowable First Tier Project Expenditure is derived from the following formulae.

$$APE_{it} = \min(EDE_{it} - DPCR5_{it}, 0.9 \times EDE_{it})$$

where

APE_{it} is the Allowable First Tier Project Expenditure for Project i in Regulatory Year t .

$DPCR5_{it}$ is the Revenue Allowed for in the DPCR5 Settlement for Project i in Regulatory Year t .

EDE_{it} is the Eligible First Tier DNO Expenditure for Project i in Regulatory Year t , and is derived from the following formula:

$$EDE_{it} = EPE_{it} - UPE_{it} - EF_{it}$$

where

EPE_{it} is the Eligible First Tier Project Expenditure for Project i in Regulatory Year t .

UPE_{it} is the Unrecoverable First Tier Project Expenditure for Project i in Regulatory Year t (as explained in paragraph 4.15).

EF_{it} is the External First Tier Funding for Project i in Regulatory Year t (as explained in paragraph 4.19).

4.9. For expenditure on a First Tier LCN Project to be deemed to be Allowable First Tier Project Expenditure it must be incurred within three years of the date of Registration of the Project (since a First Tier LCN Project should not last longer than three years). A DNO undertaking a multi-year Project must claim Allowable First Tier Expenditure each year in the Regulatory Year in which it was incurred. However, for First Tier LCN Projects starting after 31 March 2012, the LCN Fund only provides guaranteed funding until 31 March 2015.

Eligible First Tier Project Expenditure

4.10. Eligible First Tier Project Expenditure is expenditure on a First Tier LCN Project that is directly related to the distribution of electricity through the licensee's Distribution System, including the purchase of ancillary services that facilitate the distribution of electricity, subject to the restrictions set out in the rest of this condition.

1. If the expenditure relates to equipment (including control and communications systems and software) then:
 - it must be incurred in relation to the procurement, installation, operation and decommissioning of equipment (including control and communications systems and software) owned solely by the DNO,
 - it must be connected to and form part of the existing Distribution System assets owned and operated by the DNO. Equipment (including control and communications systems and software) that is installed and owned by the DNO solely for the purpose of gathering data or sending control signals to assist in the control of the Distribution System will be deemed to be connected to and form part of the Distribution System where such equipment has a communications path to the Distribution System, and
 - it must not be related to the procurement, installation, operation and decommissioning of any device on any customer's premises that measures the consumption of electrical energy and provides such measurement data to a licensed electricity supplier.
2. If the expenditure involves payments to a Distribution System User to remunerate that User for the actions it takes as part of the First Tier LCN Project then:
 - all payments that are proposed to be made to any Related Undertaking must be declared at the time of Project Registration and will require approval from Ofgem before the Project can be Registered,
 - if a payment is made to any Related Undertaking that is a Distribution System User, the DNO must simultaneously offer the same terms to similar Distribution System Users of the part of the network that is within the Project boundary, and have used reasonable endeavours to identify similar Distribution System Users, and
 - the payment cannot be made directly to the DNO or affiliated DNOs undertaking the First Tier LCN Project, except to cover the marginal operating costs of running existing DNO owned generation or storage plants that are solely necessary for the purposes of the Project. Such marginal operating costs must be declared at

the time of Project Registration and will require approval from Ofgem before the Project can be Registered.

Engagement with customers

4.11. It is recognised that access to a customer's premises and the installation of DNO equipment at a customer's premises may be required as part of a First Tier LCN Project.

4.12. Such access and installation of equipment will only be permissible if the DNO first notifies the customer's Electricity Supplier and then obtains the prior consent of the customer, such consent to be formally recorded.

4.13. We expect DNOs to have regard to the smart meter roll-out in their area and to ensure that their First Tier LCN Projects do not interfere with the roll-out in any way. The DNOs must seek to coordinate with current or future roll-out plans and avoid any customer confusion. For the avoidance of doubt, any interaction with a customer or customer premises for the purposes of a First Tier LCN Project must be detailed in advance in a communications plan.

4.14. Each DNO must submit to Ofgem a statement of good practice in respect of such engagement with customers (addressing, inter alia, customer communications, providing information about the trial, request for consent, decommissioning etc) and gain Ofgem's approval of the statement prior to commencing any First Tier LCN Projects that involve customer interaction. The DNO must commit to apply such good practice at all times.

Unrecoverable First Tier Project Expenditure

4.15. Unrecoverable First Tier Project Expenditure cannot be recovered from Allowable First Tier Project Expenditure. Unrecoverable First Tier Project Expenditure is any Eligible First Tier Project Expenditure incurred in undertaking R&D activities, arising from a failure to conform to technical requirements or arising from an increase in payments associated with a reduction in standards of performance.

R&D activities

4.16. R&D expenditure incurred as part of a First Tier LCN Project is an Unrecoverable First Tier Project Expenditure as a) it is not trialling and b) it can potentially be recovered through the Innovation Funding Incentive (IFI).

4.17. IFI funding does not require the value of IPRs to be shared with all of the other DNOs, whereas this is the default option for a First Tier LCN Project. If a mixture of the First Tier Funding Mechanism and IFI funding is used for a First Tier LCN Project, a DNO must still seek approval from Ofgem if it does not propose to conform to the requirements of paragraphs 3.17 to 3.19.

Technical requirements and standards of performance

4.18. Meeting the criteria for First Tier LCN Projects does not exempt a DNO from complying with its obligation to conform to all technical requirements or standards of performance. If a DNO wishes to seek a derogation from technical requirements or incentive schemes it must do so through the relevant existing mechanisms. Absent such derogation any increase in payments resulting from a reduction in performance that occurs through undertaking a First Tier LCN Project is deemed an Unrecoverable First Tier Project Expenditure.

External First Tier Funding

4.19. If a DNO receives funding from an External Collaborator, third parties or other funding sources that covers Eligible First Tier Project Expenditure that is not Unrecoverable First Tier Project Expenditure, it cannot be recovered from Allowable First Tier Project Expenditure.

Revenue Allowed for within the DPCR5 settlement

4.20. If revenue allowed for within the DPCR5 settlement has been saved through undertaking the First Tier LCN Project, this must be used to cover the expenditure incurred on the First Tier LCN Project and so must be deducted from the Eligible First Tier DNO Expenditure.

5. Annual regulatory reporting for First Tier LCN Projects

5.1. A DNO must report the required details for its First Tier LCN Projects as set out in Standard Licence Condition (SLC) 44C and the LCN Fund reporting instructions and guidance (RIGs).

6. Knowledge transfer

6.1. Facilitating knowledge transfer is one of the key aims of the LCN Fund. Learning should be shared among all DNOs.

6.2. There are three requirements relating to knowledge transfer set out in this document: the Close-Down Report and the Annual Conference described in this section and the treatment of IPRs (as described in paragraphs 3.17 and 3.19). A DNO should also seek other mechanisms to ensure effective dissemination of information and this may be subject to further incentives through the payment of discretionary rewards (as described in Chapter 7).

Close-Down Report

Content

6.3. The DNO must provide a Close-Down Report for each First Tier LCN Fund Project that it Registers. It needs to provide sufficient information for third parties to understand what has been learnt from the Project and should be sufficient to minimise the likelihood that other DNOs will unnecessarily duplicate the Project using the First Tier Funding Mechanism in future. If the First Tier LCN Project generates IPRs that Ofgem has agreed at Registration do not need to be shared, the Close-Down Report must provide sufficient information for other DNOs to determine whether the IPRs would be of value.

6.4. The DNO must submit its Close-Down Report to Ofgem within three calendar months of the expected Project completion date shown on the First Tier LCN Project Registration Pro-forma. If the Project is delayed, the DNO must inform Ofgem and provide the revised date for the submission of the Close-Down Report.

6.5. If a First Tier LCN Fund Project is halted, a Close-Down Report must be submitted for it within three calendar months.

6.6. If a First Tier LCN Fund Project extends beyond three years, a Close-Down Report must be provided three years after the date of Registration, even if the Project has not been completed unless Ofgem agrees otherwise. A further Close-Down Report will need to be submitted once the Project is completed.

6.7. For the avoidance of doubt, a Close-Down Report must still be provided even if the First Tier LCN Fund Project has not delivered its expected benefits.

6.8. A DNO can withhold information from the Close-Down Report if Ofgem agrees that it has demonstrated that it will face commercial harm from disclosure and that the information is considered eligible for exemption under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

6.9. The Close-Down Report should include the following sections in the order that they appear below.

Table 6.1: Information required in First Tier LCN Project Close-Down Reports

Section	Description
Project Title	As per Registration
Project Background	As per Registration
Scope and objectives	As per Registration
Success criteria	As per Registration
Details of the work carried out	Details of what Solutions the DNO trialled. The DNO should also describe the trialling methodology that it used.
The outcomes of the Project	Comprehensive details of the project's outcomes are to be reported. Where quantitative data is available to describe these outcomes it should be included in the report. Wherever possible, the performance improvement attributable to the Trial should be described. If the TRL of the Solution has changed as a result of the Trial this should be reported.
Performance compared to the original Project aims, objectives and success criteria	Details of whether and how the Project helped solve the distribution issue described in the First Tier LCN Project Registration pro-forma. Details of how the Project performed relative to its aims, objectives and success criteria.
Required modifications to the planned approach during the course of the Project	The DNO should state any changes to its planned methodology and describe why the planned approach proved to be inappropriate.
Significant variance in expected costs and benefits	The DNO should describe if any parts of the Project ended up costing more or less than expected (+/- 10%). In relevant cases, the DNO can link the cost changes to the section on required modifications to the planned approach. If costs were different to what the DNO expected, the DNO should provide details of why this was the case. The DNO should discuss whether the benefits of the Project matched the DNO's expectations. This should include any changes to incentive payments and any changes to expected savings in revenue allowed for in the DPCR5 settlement.
Lessons learnt for future Projects	Recommendations on how the outcome of the Project could be exploited further. This may include recommendations of what form of trialling will be required to move the Solution to the next TRL. The DNO should also state if the Project discovered significant problems with the trialled

Section	Description
	<p>Solutions.</p> <p>The DNO should comment on the likelihood that the Solution will be deployed on a large scale in future.</p> <p>The DNO should discuss the effectiveness of any contractual Solutions that formed part of the Project.</p>
Planned implementation	<p>Details on whether and how the DNO plans to modify its Distribution System based on learning from the Project.</p> <p>If the Solution is not ready to be implemented, the DNO should explain what needs to happen before the Solution can be implemented. The DNO can break down the requirements into actions required by DNOs and actions required by non-DNO parties.</p>
Other comments	

Compliance

6.10. In the event that Ofgem considers that a Close-Down Report is of an unacceptable standard, it may ask the DNO to resubmit the Close-Down Report. If Ofgem considers that the resubmitted report is still of an unacceptable standard, Ofgem may reduce the DNO's Combined Allowed Distribution Network Revenue by an amount up to the level of funding allowed for the Project concerned.

Publication

6.11. The Close-Down Reports will be made available on the Ofgem website.

Annual conference

6.12. The DNO must work collectively with such other DNOs as are subject to this Governance Document to organise an annual conference that will be held for the DNOs, External Collaborators and interested third parties. Expenditure incurred in organising this annual conference can form part of Allowable Set-up Expenditure. The DNO must (subject to any confidentiality or IPR arrangements approved in Registration) deliver presentations and answer questions on all First Tier LCN Projects that have been completed since the previous annual conference as well as provide updates on those First Tier LCN Projects that are still ongoing.

7. Discretionary reward

7.1. Discretionary rewards may be made to DNOs for First Tier LCN Projects that are judged by Ofgem (as advised by the Expert Panel established to make recommendations to the Authority on the Second Tier funding awards and discretionary rewards) to have best met a set of reward criteria. These criteria will include the degree of learning that the Projects have delivered, the extent to which the learning can be deployed and evidence of particularly successful collaborations, including the extent to which the Project has involved the DNO reaching out beyond the energy industry to form new relationships and to learn from the experience of other sectors.

7.2. Discretionary rewards will be funded through the Discretionary Funding Mechanism, the guidance for which will be contained in Stage 3 of this governance document.

8. First Tier LCN Project audits

8.1. Ofgem does not intend to monitor or review every First Tier LCN Project. However we reserve the right to conduct audits on selected Projects.

8.2. For each First Tier LCN Project that is selected for audit, it will be necessary for the DNO to demonstrate that:

- the Project is compliant with the appropriate conditions in the relevant Electricity Distribution Licence and the RIGs,
- Allowable First Tier Project Expenditure has been calculated in accordance with the rules set out in paragraphs 4.6 to 4.20,
- the Project has been well managed, and
- the reporting requirements have been met.

8.3. If Ofgem does not consider that the DNO has met these requirements for a First Tier LCN Fund Project, the DNO's Combined Allowed Distribution Network Revenue may be reduced up to the level of funding for the Project concerned.

8.4. It is good practice for the DNO to formally record the processes and criteria, which are used to assess, select, initiate and close First Tier LCN Projects. This record should be made available for audit on request by Ofgem. The level of documentation can be proportionate to the level of expenditure claimed by the DNO.

9. Two Year Review

9.1. Ofgem will undertake a review of the LCN Fund after it has been in operation for two years. This will take into account the conclusions of the RPI-X@20 Project as it relates to funding of innovative Projects. It is possible that, following this review, we will make changes to aspects of the LCN Fund operations and governance. However, any changes will not be retrospective, and will not affect any Projects approved or being undertaken.

9.2. As stated in paragraph 3.25, in the Two Year Review Ofgem will also assess the degree of First Tier LCN Project duplication across the DNOs and if we deem that the level of unnecessary duplication has been excessive we may set up a process for disallowing such duplication in future years.

10. Definitions

Affiliate

As defined in the Electricity Distribution Licence.

Allowable First Tier Expenditure

Allowable First Tier Expenditure is the total expenditure that can be recovered from the First Tier Funding Mechanism. It includes Allowable Set-up Expenditure and Allowable First Tier Project Expenditure.

Allowable First Tier Project Expenditure

Expenditure incurred by the DNO as part of a Registered First Tier LCN Project can be recovered from the First Tier Funding Mechanism if it is Allowable First Tier Project Expenditure.

Allowable Set-up Expenditure

Allowable Set-up Expenditure is expenditure incurred by a DNO to put in place the people, resources and processes to progress innovative Projects. This may include the costs of putting together bids for the Second Tier Funding Mechanism. Allowable Set-up Expenditure is subject to an annual limit.

Close-Down Report

The report that a DNO must provide for each First Tier LCN Fund Project that it Registers at the end of the Project (whether the Project is finished, halted or extends past three years).

Combined Allowed Distribution Network Revenue

As defined in the Electricity Distribution Licence.

Customer

As defined in the Electricity Distribution Licence.

Direct Impact

Where the deployment of the Solution will cause a directly related measurable change in the operation of the Distribution System in a controllable way.

Distribution System

As defined in the Electricity Distribution Licence.

Distribution System User (User)

For the purposes of this document means any of the following entities that the DNO has a direct or indirect contractual relationship:

The holder of a Generation Licence,
The holder of a Supply Licence,
The holder of an Electricity Distribution Licence,
Demand customer, or
GB System Operator.

Distribution Network Operator (DNO)

As defined for distribution services provider (DSP) in the Electricity Distribution Licence.

Electricity Supplier

As defined Electricity Distribution Licence.

Eligible First Tier DNO Expenditure

The expenditure calculated using the formula set out in paragraph 4.8.

Eligible First Tier Project Expenditure

The expenditure on an Eligible First Tier LCN Project according to the criteria set out in this document.

External Collaborators

Non-DNO entities that contribute funding and/or other resources to the DNO Project.

External First Tier Funding

Funding from an External Collaborator, third parties or other funding sources that covers Eligible First Tier Project Expenditure that is not Unrecoverable First Tier Project Expenditure.

First Tier Funding Mechanism

The mechanism by which First Tier LCN Projects are funded.

First Tier LCN Project

A Project that satisfies the criteria set out in paragraphs 3.1 to 3.25.

LCN First Tier Allowance

The LCN First Tier Allowance is an annual limit on the amount of funding that a DNO can recover from the First Tier Funding Mechanism.

Project

The trial which is being proposed or undertaken.

Project Eligibility Assessment (PEA)

Documentation prepared by the DNO prior to initiation of a First Tier LCN Project, demonstrating that the Project and funding comply with all criteria and conditions set out in this document.

Regulatory Year

As defined in the Electricity Distribution Licence.

Related Undertaking

As defined in the Electricity Distribution Licence.

Second Tier Funding Mechanism

The mechanism by which Second Tier LCN Projects are funded.

Solution

What the Project is setting out to establish, prove or demonstrate.

Unrecoverable First Tier Project Expenditure

Unrecoverable First Tier Project Expenditure is any Eligible First Tier Project Expenditure incurred in undertaking R&D activities, arising from a failure to conform to technical requirements or arising from an increase in payments associated with a reduction in standards of performance.

Working Day

As defined in the Electricity Distribution Licence.

Appendices

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Appendix 1 – The Authority’s Powers and Duties

1.1. Ofgem is the Office of Gas and Electricity Markets which supports the Gas and Electricity Markets Authority (“the Authority”), the regulator of the gas and electricity industries in Great Britain. This Appendix summarises the primary powers and duties of the Authority. It is not comprehensive and is not a substitute to reference to the relevant legal instruments (including, but not limited to, those referred to below).

1.2. The Authority's powers and duties are largely provided for in statute, principally the Gas Act 1986, the Electricity Act 1989, the Utilities Act 2000, the Competition Act 1998, the Enterprise Act 2002 and the Energy Act 2004, as well as arising from directly effective European Community legislation. References to the Gas Act and the Electricity Act in this Appendix are to Part 1 of each of those Acts.⁹

1.3. Duties and functions relating to gas are set out in the Gas Act and those relating to electricity are set out in the Electricity Act. This Appendix must be read accordingly¹⁰.

1.4. The Authority’s principal objective when carrying out certain of its functions under each of the Gas Act and the Electricity Act is to protect the interests of existing and future consumers, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the shipping, transportation or supply of gas conveyed through pipes, and the generation, transmission, distribution or supply of electricity or the provision or use of electricity interconnectors.

1.5. The Authority must when carrying out those functions have regard to:

- the need to secure that, so far as it is economical to meet them, all reasonable demands in Great Britain for gas conveyed through pipes are met;
- the need to secure that all reasonable demands for electricity are met;
- the need to secure that licence holders are able to finance the activities which are the subject of obligations on them¹¹;
- the need to contribute to the achievement of sustainable development; and
- the interests of individuals who are disabled or chronically sick, of pensionable age, with low incomes, or residing in rural areas.¹²

1.6. Subject to the above, the Authority is required to carry out the functions referred to in the manner which it considers is best calculated to:

⁹ entitled “Gas Supply” and “Electricity Supply” respectively.

¹⁰ However, in exercising a function under the Electricity Act the Authority may have regard to the interests of consumers in relation to gas conveyed through pipes and vice versa in the case of it exercising a function under the Gas Act.

¹¹ under the Gas Act and the Utilities Act, in the case of Gas Act functions, or the Electricity Act, the Utilities Act and certain parts of the Energy Act in the case of Electricity Act functions.

¹² The Authority may have regard to other descriptions of consumers.

-
- promote efficiency and economy on the part of those licensed¹³ under the relevant Act and the efficient use of gas conveyed through pipes and electricity conveyed by distribution systems or transmission systems;
 - protect the public from dangers arising from the conveyance of gas through pipes or the use of gas conveyed through pipes and from the generation, transmission, distribution or supply of electricity; and
 - secure a diverse and viable long-term energy supply.

1.7. In carrying out the functions referred to, the Authority must also have regard, to:

- the effect on the environment of activities connected with the conveyance of gas through pipes or with the generation, transmission, distribution or supply of electricity;
- the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed and any other principles that appear to it to represent the best regulatory practice; and
- certain statutory guidance on social and environmental matters issued by the Secretary of State.

1.8. The Authority has powers under the Competition Act to investigate suspected anti-competitive activity and take action for breaches of the prohibitions in the legislation in respect of the gas and electricity sectors in Great Britain and is a designated National Competition Authority under the EC Modernisation Regulation¹⁴ and therefore part of the European Competition Network. The Authority also has concurrent powers with the Office of Fair Trading in respect of market investigation references to the Competition Commission.

¹³ or persons authorised by exemptions to carry on any activity.

¹⁴ Council Regulation (EC) 1/2003

Appendix 2 - Glossary

D

Demand side management (DSM)

Demand side management is any mechanism that allows a customer's demand to be intelligently controlled in response to events on the power system. Such events would include lack of network capacity or insufficient generation.

Department of Energy and Climate Change (DECC)

Distributed Generation (DG)

Any generation which is connected directly into the local distribution network, as opposed to the transmissions network, as well as combined heat and power schemes of any scale. The electricity generated by such schemes is typically used in the local system rather than being transported for use across the UK.

Distribution Price Control Review 5 (DPCR5)

Distribution price control review 5. This price control is expected to run from 1 April 2010 until 31 March 2015.

E

Energy Networks Association (ENA)

ENA is the industry body funded by UK gas and electricity transmission and distribution licence holders. It lobbies on common issues in the operating environment, both at domestic and European levels, and provides technical services for the benefit of members.

G

Great Britain (GB)

I

Independent Distribution Network Operator (IDNO)

Any electricity distributor whose licences were granted after 1 October 2001. IDNOs do not have distribution services areas.

Innovation Funding Incentive (IFI)

Scheme established under SLC 46 and CRC10 of the licence. The IFI is intended to encourage DNOs to invest in appropriate research and development activities that are designed to enhance the technical development of distribution networks (up to

and including 132 kV) and to deliver value (i.e. financial, supply quality, environmental, safety) to end consumers.

Intellectual property right (IPR)

L

Low Carbon Network (LCN) Fund

Funding to encourage the DNOs to innovate to deliver the networks we will need for a low carbon economy.

N

Net present value (NPV)

Net present value is the discounted sum of future cash flows, whether positive or negative, minus any initial investment.

R

Reporting instructions and guidance (RIGs)

A document that is published as part of the price control settlement which sets out further detail on how the price control is to be implemented and how compliance with it will be monitored.

Research and development (R&D)

RPI-X@20

An Ofgem project to fundamentally review regulation, following 20 years of regulation under the RPI-X approach whereby allowances are pegged to a certain amount below RPI inflation.

T

Technology readiness level (TRL)

Technology readiness level is a measure used to assess the maturity of evolving technologies. It is graded on a scale from 1 to 9. TRL 1 occurs when scientific research begins to be translated into applied R&D with TRL 9 describing a proven technology.