

Note on the completion of the Electricity Network Innovation Competition Full Submission documents

This guidance should be used by licensees to develop their formal submissions to the Authority at the Full Submission stage of the competitive process.

From	Ofgem
To	Licensees
cc	
Date	14 th July 2017

- **Before completing the Full Submission document, please refer to the Network Innovation Competition (NIC) Governance Document (v3) and this guidance. Submissions that do not conform to the final revised NIC Governance Document and the Full Submission guidance will not be considered for funding¹.**
- **We are not providing a template for the full submission; we are setting out guidelines to give licensees more flexibility in their presentation approach, including the opportunity to include diagrams etc more easily. We have only provided a prescribed template for the initial summary section.**
- **Full Submissions should be submitted in word and pdf. Printed copies should be printed on both sides; no additional/alternative media should be submitted.**

Presentation guidance

The following margins should be used:

- Top: 2.54cm
- Bottom: 2.54cm
- Left: 2.54cm
- Right 2.54cm.

Only the following header styles should be used:

1. Section heading,

1.1 Sub-heading 1, and

1.2. *Sub-heading 2.*

Normal paragraph text should use Verdana size 10 within the compulsory sections.

It is up to the Network Licensee to decide how much information to include under each section up to the stated maximum number of pages.

Compulsory sections of the submission should follow the structure set out in this document.

The Network Licensee can include images and tables where appropriate. However, any text must be Verdana size 10 and the margins remain 2.54cm, unless text is used as a header in diagrams.

¹ For the avoidance of doubt, this is the only paragraph we have amended since circulating the guidance to the companies participating in this year's competition.

The completed submission (without appendices) should not exceed 55 pages in total. The submission of the document and appendices (excluding any spreadsheets that are submitted) should not exceed 100 pages. We will publish the information contained within the Full Submission as described in the Governance Document.

Section 1: Project Summary (subsections 1.1 – 1.5.5. should appear on the first page and 1.6 to 1.9.2 on the second page)

- **Please use the template provided for this section of the submission**
- **Project Code/Version no:** The Network Licensee must enter a code for the Project in the box provided in the top right hand corner of the first page of the document. This should be the acronym of the Network Licensee group followed by EN (denoting an Electricity NIC Project) followed by a two digit number to denote the number of the submission. This numbering should follow on from previous years.
- **1.1. Project Title**
- **1.2. Project Explanation:** The Network Licensee should provide a high level explanation of the project in no more than 50 words (this will be the basis of the project's description on our website).

Please also include a picture that we can use in the brochure describing successful projects – please submit the image as a separate PNG file. This will not count towards the page count. Please note, this should be a picture/ diagram of how the project will work or its potential benefits rather than a logo based on the project's name. Please see last year's [brochure](#) for examples of the type of image previously used.

- **1.3. Funding Licensee:** the Network Licensee that will receive funding for the Project.
- **1.4. Project Description:** (maximum 300 words): The Network Licensee should provide a summary of the Project, including information on:
 - The Problem(s) it is exploring;
 - The Method(s) that it will use to solve the Problem(s);
 - The Solution(s) it is looking to reach by applying the Method(s); and
 - The Benefit(s) of the project.

These terms are defined in the NIC Governance Document.

- **1.5 Funding**
 - **1.5.1 NIC Funding Request (£k):** This is the amount being requested from the NIC and should match the amount in **cell I85** of the 'NIC Funding Request' tab of the Full Submission spreadsheet.
 - **1.5.2 Network Licensee Compulsory Contribution (£k):** This is 10 percent of the Initial Net Funding required. It is the minimum contribution the Funding Licensee must make to the Total Project Cost and should match the amount on **cell I66** of the 'NIC Funding Request' tab of the Full Submission spreadsheet.
 - **1.5.3 Network Licensee Extra Contribution (£k):** This is the total amount that will be provided by the Network Licensee over and above the 10 percent compulsory contribution specified in the Governance Document and should match the total amount in **cell I37** of the 'NIC Funding Request' tab of the Full Submission spreadsheet.

- **1.5.4 External Funding – excluding from NICs (£k):** This is the amount that will be provided by External Funders and should match the total amount in **cell I25** of the 'NIC Funding Request' tab of the Full Submission spreadsheet. For a bid forming part of a cross-industry venture, this should not include any funding requested from other Innovation Competitions.
- **1.5.5. Total Project Costs (£k):** This is the amount the Network Licensee expects to spend on the whole Project. It should match the number in **cell I37** of the 'NIC Funding Request' tab in the Full Submission spreadsheet.

The NIC spreadsheet calculates the NIC Funding Request in three steps.

Step one: **Initial Net Funding required**

= Total Project Cost - Licensee Extra Contribution - External funding

Step two: **Outstanding Funding Required**

= Initial Net Funding Required - Licensee Compulsory Contribution – Direct benefits

Step three: **NIC Funding Request**

= Outstanding Funding Required – interest

Note - The Licensee needs to work out the exact amount of extra contribution it wishes to make before it can calculate its compulsory contribution. The Licensee compulsory contribution is 10 percent of the Initial Net funding Required. The Licensee needs to know the amount of its extra contribution to work out the Initial Net Funding Required.

- **1.6. List of Project Partners, External Funders and Project Supporters:** The Network Licensee should separately list the Project Partners, External Funders and Project Supporters that are involved in the Project. If relevant, the Network Licensee should also list the value of the contribution each is providing to the Project.

If the Project is being led by a Non-Network Licensee, then please make this clear by adding the word 'lead' in brackets next to their name.

- **1.7. Timescale**
 - **1.7.1. Project Start Date**
 - **1.7.2. Project End Date**
- **1.8. Project Manager Contact Details**
 - **1.8.1. Contact Name & Job Title**
 - **1.8.2. Email & Telephone Number**
 - **1.8.3. Contact Address**
- **1.9. Cross-sector Projects (only include this section if your project is a cross-sector Project).**
- If your Project is one part of a wider cross-industry venture please include this section. A cross-industry venture consists of two or more Projects which are interlinked with one Project requesting funding from the Network Innovation Competition (NIC) and the other Project(s) applying for funding from the other NIC.

- **1.9.1. Funding requested the from the other NIC (£k, please state which other competition)**
- **1.9.2. Please confirm whether or not this NIC Project could proceed in the absence of funding being awarded for the other Project.**
- **1.10. Technology Readiness Level (TRL)**
 - **1.10.1** This is the TRL at the Project Start Date. If the project is trialling a number of technologies/ techniques with different TRLs then the level for the project as a whole should be entered.
 - **1.10.2** This is the expected TRL at the Project End Date. As per the above this should be for the project as a whole instead of individual components.

Sections 2-8

- We will use these sections of the full submission to assess the Project against the evaluation criteria in the Governance Document.
- The guidance for each Section sets out which of the criteria we will use that Section to assess. The full set of criteria is below:

(a) Accelerates the development of a low carbon energy sector and/or delivers environmental benefits whilst having the potential to deliver net financial benefits to future and/or existing Customers

(b) Provides value for money to electricity customers

(c) Generates knowledge that can be shared amongst all relevant Network Licensees

(d) Is innovative (ie not business as usual) and has an unproven business case where the innovation risk warrants a limited Development or Demonstration Project to demonstrate its effectiveness

(e) Involvement of other partners and external funding

(f) Relevance and timing

(g) Demonstration of a robust methodology and that the Project is ready to implement

When completing sections 2-8, where possible you should seek to clearly identify how the project meets each of the criteria. The criteria we are testing in each section is outlined on the subsequent pages.

Section 2: Project Description

- This section must not exceed 10 pages.
- We will use this section to assess performance against the following criteria: (a), (b), (c), (d), (f) and (g).

2.1 Aims and objectives

The Network Licensee must describe its Project in a manner that enables someone with limited experience of energy networks to understand it. The Network Licensee should break down the Project into:

- The Problem(s) which needs to be resolved;
- The Method(s) being trialled to solve the Problem;
- The Development or Demonstration being undertaken; and
- The Solution(s) which will be enabled by solving the Problem.

If the Project forms part of a cross-industry venture, the Network Licensee should include details of how this bid fits into the cross-industry venture as a whole. The Network Licensee must also describe the overall high-level aims of the cross-industry venture.

2.2 Technical description of Project

The Network Licensee must provide a technical overview of the Method being deployed and outline why it is innovative. The Network Licensee can choose to supplement this with information it provides in the appendices.

2.3 Description of design of trials

The Network Licensee must provide details on how the Project will be designed to ensure that the results are statistically sound and sufficiently robust to capture learning from Projects. For example, if the extrapolation of an outcome demonstrated in the Project is required to solve the Problem, the Network Licensee must clearly show that the approach it is taking to undertake such an extrapolation is statistically and technically sound, reliable and verifiable. The Network Licensee can supplement these details with further information in the appendices.

2.4 Changes since Initial Screening Process (ISP)

The Network Licensee must outline any changes it has made since its Screening Submission, particularly where they relate to:

- The scale of the Project, funding required, other partners or External Collaborators involved in the Project;
- The Project being part of a cross-industry venture; and
- The IPR arrangements proposed for the Project.

Section 3: Project business case

- This section must not exceed 6 pages.
- We will use this section to assess performance against the following criteria: (a), (b), (d), (f) and (g).

The Network Licensee must present a clear business case justifying the merits of undertaking the Project and must set out how the Project links to changes it wants to make to its business in the next 5-10 years. The Network Licensee is free to construct this case as it wishes. It can be supplemented with further details in the appendices.

If the Project relates to a cross-industry venture, the Network Licensee should briefly state what the merits are of undertaking the cross-sector Project as a whole and, where relevant, also present the merits of its specific bid. This can be supplemented with further details in the appendices.

Section 4: Benefits, timeliness, and partners

- This section must not exceed 10 pages.
- We will use this section to assess performance against the following criteria: (a), (b), (d), (e) and (f).
- These criteria should be used as headings in this section. Sub-criteria can be used as sub-headings as appropriate.

The Network Licensee must identify how its Project performs against each of the evaluation criteria in the Governance Document (for more detail on each criterion please refer to the Governance Document).

(a) Accelerates the development of a low carbon energy sector and/or delivers environmental benefits whilst having the potential to deliver net financial benefits to future and/or existing Customers

(b) Provides value for money to electricity customers

A Summary Table should be included to help demonstrate how the Project will meet this criterion.

The table should provide a summary of the costs of the work to be undertaken at each substantive Project stage (as determined by you). To maintain consistency throughout the submission, each Project stage should be identifiable from the 'descriptions' column in the annual project costs tabs of the Full Submission spreadsheet. Where a labelling or numbering system is used (e.g. A1, A2) this system should be used consistently through the text and supporting analyses.

The table should include as a minimum (in 2017/18 prices):

- Total costs for each Project stage.
- The costs for each Project stage should be analysed by staffing and equipment costs and, where appropriate, other substantive expenditures (e.g. sub-contractors).
- Staffing costs for each Project stage, indicating the number of staff expected to be used (FTEs by stage), the number of days required, the cost per day and the total personnel cost. Where outside suppliers are being used (e.g. consultants, contractors), their costs should be presented in a similar format.
- A brief statement on the basis on which these costs have been calculated to help enable assessment against the value for money criteria.
- If the project involves a Non-Network Licensee this statement should demonstrate that the third party's costs (including consultants) are competitive and reasonable.

(d) Is innovative (ie not business as usual) and has an unproven business case where the innovation risk warrants a limited Development or Demonstration Project to demonstrate its effectiveness

(e) Involvement of other partners and external funding

The Expert Panel expect any long term return to the other partners if the project is successful not to exceed a reasonable return on their financial contribution. Where there is the potential for the project to deliver significant profits to the other partners, the Expert Panel would expect to see transparent and suitable profit sharing arrangements put in place. This might include identifying any potential revenues generated under the project

that could be subject to the 'Returned Project Revenues' provision (see section 8 of the NIC Governance Document).

(f) Relevance and timing

The guidance below should be taken into account by the Licensee, as appropriate, when presenting the project against any of the evaluation criteria.

It should be clearly justified within the submission why a particular Base Case Cost (alternatively referred to as the counterfactual) has been chosen. Where possible, we would expect the chosen Base Case Cost presented to be based on the cheapest option available to the licensee rather than just traditional reinforcement. In particular, the Expert Panel would like the submission to be clear that the project team have considered similar technologies (including those currently under development) to demonstrate they have stated an appropriate figure for the Base Case Cost.

Where possible, The Expert Panel would also like a breakdown of the costs and benefits of each of the project's work packages and the anticipated break-even points.

Financial Benefits

- A clear narrative describing the benefits and how they were calculated should be included and, where relevant, set out the context for the benefits (e.g. compared with the overall value of GB losses).
- Only one scenario about the future network development should be used and the narrative should explain why the scenario is appropriate. The narrative can refer to the sensitivity of the outcome to other scenarios.
- The information in the main body of the text should be prepared on a Net Present Value (NPV) basis. The appropriate discount rate to be applied is 3.5% for the first 30 years and 3.0% thereafter. Figures should be presented in real terms using 2017/18 prices.
- The benefits (in NPV terms) should be presented on a cumulative basis for the years 2030, 2040 and 2050.
- A summary of this NPV analysis should also be included in the appendices. Within this summary, there should be enough information for the Expert Panel to use it in conjunction with the Full Submission Spreadsheet to independently conduct the analysis.

Carbon/environmental benefits

- A description of the assumptions made (for example, the additional capacity to be released) should be included. Where these are quantified, they need only be quantified for the years 2030, 2040 and 2050. They should be presented on a cumulative basis. It should be clear what area the benefits refer to, e.g. the Transmission System.
- Where the carbon benefits are quantified, these should be expressed in terms of tonnes equivalent of carbon dioxide emitted on a cumulative basis for the same years (2030, 2040 and 2050).

The figures presented should be consistent with those in Appendix 1: Benefits Tables.

Cumulative is defined as the sum of the benefits (financial or carbon/environmental) that are projected to have accrued by the specified dates e.g., by 2030, 2040, etc. since the start of the Project. Please follow the guidance below when presenting your figures.

Section 5: Knowledge dissemination

- This section must not exceed 5 pages.
- We will use this section to assess performance against criterion (c).

The Network Licensee should indicate clearly at the top of the first page of this section if it does not intend to conform to the default Intellectual Property Rights (IPR) arrangements.

5.1 Learning generated

The Network Licensee must outline the level of incremental learning expected to be provided by the Project and the applicability of the new learning to the other Network Licensees.

Where the proposed project relates to a specific new piece of technology, (i.e. the demonstration of a new product rather than a system change) the Panel will place more weight on formal confirmation of support from other network companies rather than just 'standard' letters of support. This could include evidence that other network companies have been involved in the shaping of the project and are committed to taking an active interest in the project/ potentially rolling out the technology on their network.

If the project is addressing an issue that is fundamental to the operation of a network company, where possible, the Panel would welcome a clear explanation of how, collaboration across licensees is being encouraged to ensure there is the potential for the project to provide benefits to the GB network as a whole.

5.2 Learning dissemination

The Network Licensee must outline its plans for learning dissemination, both to other Network Licensees and to other interested parties.

5.3 IPR

The Network Licensee must set how it intends to conform to the default IPR arrangements. The Network Licensee must also explain its approach to agree fair and reasonable terms for the future use of any Background IPR and Commercial Products needed for other Licensees to reproduce the Project outcomes.

If a Network Licensee wishes to deviate from the default requirement for IPR, it must demonstrate how the learning from the Project can be meaningfully disseminated to other Licensees and other interested parties. This must take into account any potential constraints or costs caused, or resulting from, the proposed IPR arrangements. The Network Licensee must justify why any non-default IPR arrangements provide value for money for consumers.

Section 6: Project Readiness

- This section must not exceed 10 pages.
- We will use this section to assess performance against criterion (g).

NOTE: The Network Licensee should include a detailed Project plan, risk register, risk management and mitigation plans, and contingency plans as part of the appendices.

The Network Licensee must provide the following in this section:

- Evidence of why the Project can start in a timely manner;
- Evidence of the measures a Network Licensee will employ to minimise the possibility of cost overruns or shortfalls in Direct Benefits;
- A verification of all information included in the proposal (the processes a Network Licensee has in place to ensure the accuracy of information can be detailed in the appendices);
- How the Project plan would still deliver learning in the event that the take up of low carbon technologies and renewable energy in the Trial area is lower than anticipated in the Full Submission; and
- The processes in place to identify circumstances where the most appropriate course of action will be to suspend the Project, pending permission from Ofgem that it can be halted.

If the Project is part of a cross-industry venture, the Network Licensee should link, where appropriate, the information above to the overall cross-industry venture.

Section 7: Regulatory issues

- This section must not exceed 3 pages.

The Network Licensee must indicate clearly at the top of the first page of this section if it might require a derogation, licence consent, licence exemption or a change to the current regulatory arrangements in order to implement the Project.

If a Network Licensee may require a derogation, licence consent, licence exemption or changes to the regulatory arrangements, either as a requirement of the Project, or as contingency in the event that the Project is not successful, then it must provide details of the derogation, licence consent, licence exemption or change to the regulatory arrangements it may require. This must be of sufficient detail to enable Ofgem to judge whether the request can be granted.

Section 8: Customer Impact

- This section must not exceed 4 pages.
- We will use this section to assess performance against criterion (g).

The Network Licensee must outline any interaction or engagement with a Customer or Customer's premises as part of the Project, or any direct impact the Project may have on Customers (e.g. through charging or contractual arrangements or supply interruptions).

If Project implementation requires planned interruptions, the Network Licensee must detail the expected number and duration of any interruptions or power quality issues to Customers' supply that will be required and the reason for these interruptions. It should also indicate if there is any risk of the Project causing unplanned interruptions, the potential number and duration, and the potential cause of these issues.

The Network Licensee must set out the steps it has undertaken to investigate alternative ways to implement the Project which could reduce or avoid the need for Customer interruptions. A Network Licensee must discuss the alternatives it has investigated and provide a summary of why these alternatives were rejected.

Where a Network Licensee wishes to request protection from any incentive penalties associated with the planned interruptions it has identified, it must include the value of the penalties in its Funding Request.

If a Project involves significant interruptions to Customers' supply, then we would expect further details to be provided in the appendices.

Section 9: Project Deliverables

This section must not exceed 5 pages.

The Network Licensee must set out its proposed Project Deliverables. The Network Licensee should have no more than ten Project Deliverables for the Project. The Network Licensee should propose a percentage of the NIC Funding Request to be assigned to each Project Deliverable. The proposed percentage should be proportionate to the Project Deliverable.

When drafting Project Deliverables, the Network Licensee should:

- Ensure they are specific to the project.
- Be clear on what the supporting evidence is, such that stakeholders (and the independent third party verifier at the end of Project) know what form the evidence takes (eg written report, spreadsheet or physical asset).
- Not duplicate requirements of the NIC Governance Document or Project Direction e.g publication of a Project Progress.

A common Project Deliverable is also **required** by all Network Licensees. This will also be assessed by the independent third party verifier to ensure that some of the NIC Governance Document and Project Direction requirements have been met. It is the same for all Projects in this year's competition and the text provided in the table below must be used, as presented, by the Network Licensee. If this Project Deliverable has not been achieved, Ofgem will consider whether it is appropriate to return Project Funding to customers as Disallowed Expenditure or treat non-delivery as a breach of the licence. The Network Licensee does not need to assign a percentage of the NIC Funding Request to this Project Deliverable.

The Network Licensee must present the Project Deliverables using the table structure below.

Within the table structure, we have also provided an example to illustrate the types of Project Deliverables we would consider appropriate. The example is looking at the installation of a piece of equipment, getting it working, and analysing the resulting data. We recognise that project types can be very different and as such the Project Deliverables may be too.

Table [x]: Project Deliverables

Reference	Project Deliverable	Deadline	Evidence	NIC funding request (% , must add to 100%)
1	Install data concentrators necessary to develop and deploy statistically robust templates.	20/01/17	Report on communications being established between data concentrators and control centre with voltage data consistently being received. Statistical robustness of templates confirmed by letter from academic partner.	10%
2	Back office systems upgraded and communications path to sensors ready for data collection.	29/06/17	All control centre and other back office IT integration has been completed and licensee has visibility of monitoring equipment outputs evidenced by all commissioning paperwork correctly completed.	5%
3	Data sent securely in the format specified in the Full Submission to academic partner for analysis and modelling.	Between 29/06/18 and 4/2/19	Data sets received by academic partner in the format specified for statistical study and confirmation of receipt by the academic partner. Any changes to the data format specified in the Full Submission after the Project Direction is issued must be recorded, justified and available to the independent verifier.	20%
4	Understand effects of stresses on the network from the installations.	01/04/19	Analysis from academic partner in the form of a report to demonstrate stresses on the network and statistically prove or disprove the hypothesis set out in the full submission. Any changes to the hypothesis specified in the Full Submission after the Project Direction is issued must be recorded, justified and available to the independent verifier.	10%

Reference	Project Deliverable	Deadline	Evidence	NIC funding request (% , must add to 100%)
5	Complete statistical comparison of data flows against templates and report on findings.	10/5/19	Report produced by academic partner demonstrating the templates are statistically robust and relevant and reusable by other DNOs.	15%
6	Report on ability of DNOs to use proxy meters to reflect local area generation output.	1/7/19	Report produced by academic partner to demonstrate the ability to understand network headroom to absorb low-carbon stresses using the templates.	20%
7	Provide live data of distributed generation on licensee's network to system operator to assist them with improved forecasting and generation scheduling in the future.	3/10/19	Data on embedded generation load on network areas sent to, and received by, system operator on a near-real time basis. Confirmed by letter from system operator to network licensee.	20%
[Note this is a common Project Deliverable to be included by all Network Licensees as drafted below]				
N/A	Comply with knowledge transfer requirements of the Governance Document.	End of project	<ol style="list-style-type: none"> 1. Annual Project Progress Reports which comply with the requirements of the Governance Document. 2. Completed Close Down Report which complies with the requirements of the Governance Document. 3. Evidence of attendance and participation in the Annual Conference as described in the Governance Document. 	N/A

Section 10: List of Appendices

The Network Licensee must provide a list of the appendices which it has submitted alongside the Pro-forma. This must list the name of each appendix and give a short summary of its contents.

Appendices

The fully completed Pro-forma (without appendices) should not exceed 55 pages in total. The total length of the submission including the Pro-forma and appendices (but excluding any spreadsheets) should not exceed 100 pages.

The Network Licensee is free to include any further supplementary information it wishes in the appendices. The relevant sections of the Pro-forma should clearly sign-post where in the appendices the reader should turn to.

Appendix 1: Benefits Tables

The Network Licensee must complete up to three summary tables of the benefits the Licensee expects the project to deliver; one for the anticipated financial benefits; one for anticipated capacity released (if applicable to the project) and one for the anticipated carbon benefits. The information contained in these tables should be consistent with the figures quoted in the main body of the Full Submission. The tables should be included as the first appendix of the submission.

The tables require the Licensee to indicate the anticipated benefits of each Method being trialled at four time points -2030, 2040 and 2050, on a cumulative basis.

- The **financial benefits** table should include the estimated net financial benefit of the project. The financial benefits should be stated in £million. The Licensee should calculate the benefits using the method set out in NIC governance documents. Benefits should be on real time values for the presented 2017/18 prices and stated in NPV terms using a discount rate of 3.5% for the first 30 years and 3.0% thereafter. Carbon benefits should not be monetised in this table – carbon benefits should be captured separately in the carbon benefits table.
- The **capacity released** table should include the estimated capacity released by the project compared to the most efficient method currently in operation on the National Electricity Transmission System/ on the Distribution System. If the Network Licensee considers the capacity calculation is not applicable to the project it must provide (or reference somewhere in the Full Submission) a qualitative explanation in place of the calculation, including justification for why the calculation is not applicable.
- The **carbon benefits** table should summarise the total carbon benefit the project is expected to deliver and should be stated in CO2 equivalent. The carbon benefits table includes additional space to summarise any additional environmental benefits which cannot be expressed as CO2 equivalent.

Each table should summarise the benefits that the Licensee describes and explains in the Pro-forma. The Licensee should use the 'Cross-references' column to indicate where the

calculations and assumptions underlying the benefits are explained in detail. The Licensee should include page references.

The Licensee should use the 'Notes' column to indicate the circumstances where the benefits may be greater or less than those indicated – this should include higher and lower limits. The Licensee should use this section to reference other relevant information contained elsewhere in the submission.

These tables provide a common format for the Licensees to clearly present project benefits in way that is easily accessible for the Expert Panel. The Licensee **should not** amend the row and column headings. However, the Licensee may add/remove rows to reflect the number of Methods being trialled.

We recognise that innovation projects, by their nature, are different from one another. We note that this can make it difficult to present the benefits they deliver in a completely consistent way. The Licensee should complete the summary tables as fully as possible in a way that sensibly captures the benefits of its project. The Pro-forma should be used to explain and provide further detail about the benefits captured in the tables.

We are not specifying what assumptions the Licensee should use. The Licensee should clearly explain and justify the assumptions it uses to estimate the benefits of a project. We will assess the robustness of these assumptions during the Full Submission evaluation process.

The summary tables **do not** change or replace the requirements set out in the NIC Governance Documents. The nature of our and the Expert Panel's assessment of the Full Submission will not change.

Other appendices requirements

Below are the minimum requirements we would expect to see in the appendices:

- Maps and network diagrams to help explain the technical detail of the Project.
- A detailed Project plan, risk register, contingency plan and organogram.
- Further detail on Project Partners including what they add to the Project, how much they are contributing financially to the Project, the status of any contractual relationship, the role of the Project Partner in the Project and how their funding relates to the benefits from the Project.
- Further detail on the estimates a Network Licensee has used to calculate the Base Case costs. This should include a brief description of the Base Case method and an explanation of why that is the most efficient method in use on the National Transmission System/ on the Distribution System of delivering the Solution (at the scale being tested in the trial). A Network Licensee can expand on the description of costs detailed in the Full Submission Spreadsheet or provided in Section 4 of the Pro-forma and provide a qualitative account of how the Method Costs differ from the Project costs and why.

Licensees should note the following requests from the Expert Panels regarding the appendices:

- As per page 8 a summary of the NPV analysis should be provided. Enough information should be included in this summary so that it can be used in conjunction with the data in the Full Submission Spreadsheet to enable the Panel to independently calculate the Net Present Value of each Method.
- A breakeven analysis would also help illustrate what level of benefits, and broader up-take of learning from the project, would be required to cover the cost of the NIC funding requested.

Full Submission Spreadsheet

The Network Licensee must ensure that the completed Full Submission spreadsheet is in a printer friendly format and does not need to be re-sized in order to be read when printed.

Front Sheet

A Network Licensee must enter its name and the date on which the Full Submission Spreadsheet is submitted. The tab also describes the colour coding of cells that is used throughout the Full Submission spreadsheet.

NIC Funding Request

This tab summarises the Project costs by linking through to other cells in the workbook. The only entry cell is D85 where a Network Licensee must insert the current Bank of England Base rate. Cells C89 to J89 contain the RPI forecast which a Network Licensee must use to forecast costs in future years.

The macro button will calculate the NIC Funding Request.

Direct Benefits

A Network Licensee must provide a description of Direct Benefits in column B and enter the value of that benefit in columns C-H (depending upon the year in which the Direct Benefit is anticipated to be realised). No Direct Benefits can be claimed outside of RIIO-X1 price control period. Rows can be added where there are multiple sources of direct benefit.

Project Cost Summary

All tables in this tab should link through to the 'NIC Funding Request' tab. A Network Licensee must add a new row for each additional project partner in each year and ensure these cells link to the tabs for 2017-18 to 2022-23. There are no input cells in this tab.

2017/18 – 2022/23

There is a tab for each regulatory year from 2017-18 through to 2022-23.

In each year tab, a Network Licensee must add an additional row for each line item of expenditure. The Licensee should ensure that the "description", "task" and "workstream" columns are identical for all regulatory years and the Whole Project tabs even if there is no expenditure in those areas in a given regulatory year. This will ensure the Whole Project tab sums correctly. All expenditures should be included so that the Total Cost in column Q is equal to the Total Project Cost in that year. It must describe the line item in column B, explain the task it is related to in column C, and the workstream it is related to in column D. These line items should be the same and in the same order in each year tab and in the 'Whole Project' tab.

Network Licensees must then outline the cost of this line item in columns G-P according to the categories of expenditure which the line items falls into. We have set guidance on cost categories towards the end of this document. Network Licensees must allocate each line item of expenditure to one of the columns marked G - P.

Columns R - X outline the different sources through which Project expenditure can be financed. For each line item, Network Licensees must outline the percentage of expenditure which each of these sources will finance.

The total cost of each line item (columns G - P) must be multiplied by the percentage of expenditure from each source (columns R - X) to complete columns Z - CL. Where new rows are added, Network Licensees must ensure that the formulae are copied down.

A Network Licensee must replace the 'Project Partner 1', 'Project Partner 2' and 'Project Partner 3' with the names of their Project Partners or External Funders. A Network Licensee may need to add new columns if it has more than three Project Partners or External Funders who are providing funding. These additional Project Partners or External Funders must also be named and a Network Licensee must add a new row in the 'Project Cost Summary' tab for each additional Project Partners or External Funders.

A Network Licensee must ensure that once it has completed these tabs for each line item of expenditure, the Total row is linked through to the relevant year table in the 'Project Cost Summary' tab. The Total row in each year tab is set to sum all the cells above it.

Whole Project

A Network Licensee should link each yearly tab to the 'Whole Project' tab so that the Total Cost columns (G - P) in the Whole Cost Project are the sum of the yearly costs of each line item. A Network Licensee will also need to calculate the funding sources in columns R to W using the data in the yearly tabs and the Total Cost in columns G - P.

A Network Licensee must complete this tab in the same way as the '2017-18' to '2022-23' tabs. This tab should include each line item of expenditure for the Project. This tab also contains two extra columns hidden in the '2017-18' to '2022-23' tabs. These are in columns E and F. In column E, a Network Licensee must enter the unit cost of any item described as 'Equipment'; the number of person days of any costs described as 'Labour'; the payment per user* of any costs described as 'Payments to users'; and the expected length of any contract and contractor days required for costs described as 'Contractor'.

In column F, Network Licensees must provide a brief description of the role of that line item in the Project. This could take the form of the function of a piece of equipment, the staff type of labour costs, or the tasks or role to be performed by Contractors.

There is a check in columns CN-CW to ensure that the total amount allocated to each funding source is equal to the total cost of each line item. A Network Licensee must copy the formula in columns CN-CW to ensure that such a check is undertaken for each line where they have entered data.

* There should be an individual line item for each type of payment to users.

Project Direction costs

A Network Licensee must complete this tab to produce a list under each cost category of the line items and the total costs which would be funded by the NIC, the Network Licensee Compulsory Contribution/Direct Benefits and any Network Licensee Extra Contribution. This tab forms the basis of the Project Budget that will be included in the Project Direction in the event that the Project is awarded funding. This list must be linked directly to the relevant cells of the 'Whole Project' sheet – the cost data will be in columns CA-CF of this sheet (under Outstanding Funding Required) whilst the line item description will be in column D. Network Licensees will need to insert rows to add line items under each cost category. The table should include every line item in the whole project which is being funded by the NIC, the Network Licensee Compulsory Contribution, any Network Licensee Extra Contribution and any Direct Benefits.

When drafting the Project Direction, Ofgem will take into account any lower level costs contained in this tab and may decide to merge them into one line item against which Network Licensees will report.

Cost Categories

The following guidelines should be followed when considering the category under which Project costs should be described. A Network Licensee must not include any costs which have been funded as part of any previous price control.

Labour

The costs of Network Licensee staff working on the Project.

Equipment

The equipment, materials and consumables that will be purchased for the sole purpose of carrying out the Project.

Contractor

The costs of any non-Network Licensee staff who are employed to work on the Project.

IT/Communications

The purchase, development, installation and maintenance of computer and telecommunications systems and applications for the purposes of the Project. Includes:

- IT/Telecoms Network and/or Services Provision
- IT/Telecoms Network and/or Services Maintenance
- Telecoms Voice and Data Network Usage
- Telecoms Telecontrol Network
- IT Servers Support Services
- IT Environmental Control Systems
- IT Clients Support/services
- Telecoms Management
- IT Management

- IT Applications maintenance and running costs
- IT New Application software and upgrade costs

IPR Costs

Costs of assessing, evaluating and licensing intellectual property which is anticipated to be produced as part of the Project.

Travel & Expenses

Any travel and expenses costs which are not business as usual. For instance, if the Project was in a remote location and required extensive travel for contractors or Network Licensees' employees. It would also cover any long distance (overseas) trips planned as part of the Project or required for contractors or staff to undertake work in the Project.

Payments to users

Any monetary payment or discount which is provided to a Customer or user of the GB transportation system in return for a predetermined action which the Network Licensee has requested.

Contingency

Costs which a Network Licensee has included in the Project budget to cater for any cost over-runs.

Decommissioning

Costs of removing or decommissioning any part of the Project, e.g. equipment or IT infrastructure

Other

Project costs which do not fit with any of the categories above.