1. SCOPE

This document details SP Energy Networks' Registration of Connection Enquiries and Management Process for 132,000 Volt Contestable Connection Projects. The document details Non-Contestable elements only where knowledge is required to undertake the Contestable elements.

2. ISSUE RECORD

This is a Controlled document. The current version is held on the EN Document Library.

It is your responsibility to ensure you work to the current version.

Issue Date	Issue No.	Author	Amendment Details
July 2019	1	Mark Lyon Dave Burton	Initial issue
December 2025	2	Sofia Cobo de Guzman Claire Witty	General update

3. ISSUE AUTHORITY

Authors	Owner	Issue Authority
Sofia Cobo de Guzman SPM Major Connections Manager Claire Witty SPM Strategic Client Manager	Sofia Cobo de Guzman SPM Major Connections Manager	Kailash Singh Head of Distribution Network Connections Date: 18/12/2025

4. REVIEW

This is a Controlled document and shall be reviewed as dictated by business / legislative change but at a period of no greater than 3 years from the last issue date.

5. DISTRIBUTION

This document is not part of a Manual maintained by Document Control and does not have a maintained distribution list but is published on SPEN's website.

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7. DEFINITIONS AND ABBREVIATIONS

7.1 Definitions

The following definitions shall apply throughout this document:

Agreement for the Adoption of Contestable Works	The agreement entitled Agreement for the Adoption of Contestable Works incorporating the General Conditions (sometimes known as the Construction and Adoption Agreement, Tri-partite Agreement or Bi-partite Agreement).
Applicant	Domestic and non-domestic customers and prospective customers of electricity suppliers, independent connection providers, licensed electricity distributors or any other person requesting connection services specified under SLC 15.
Additional Information	When SPEN undertake the detailed assessment of information provided by the applicant, SPEN may become aware more detailed information on a subject is required. Where SPEN requests such information, the clock is paused and then restarted once the Applicant has provided the information.
Contestable Work	When work is open to competition it is called Contestable work. Contestable work can be conducted by Independent Connections Providers (ICP). Tasks which include the installation of new infrastructure or extensions to the network tend to be contestable.
Handover	A point where all contestable work is complete, transfer of title, ownership, operation and maintenance responsibilities as defined in the Agreement for the Adoption of Contestable Works has been transferred to the Licence Holders SP Distribution plc or SP Manweb plc.
Independent Connection Provider (ICP)	A NERS accredited contractor undertaking design and construction works in association with housing and industrial, commercial and generation sites (referred to by Ofgem as the Applicant).
Independent Distribution Network Operator (IDNO)	An independent distribution network operator.
Minimum Information	Information that SPEN needs in order to progress a request.
NERS Accreditation	National Electricity Registration Scheme operated by Lloyds Register on behalf of the UK Distribution Network Operators (DNOs). Lloyds perform technical assessment of the Service Providers (Applicants) who elect to be assessed for accreditation for contestable works associated with the installation of electrical connections.
Non-Contestable Work	There are certain tasks that SPEN do themselves, so that they can maintain co-ordination and control of their networks. These tasks are called Non-contestable work, as they are not open to competition. Often, tasks that involve reinforcing existing equipment are non-contestable.

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Ofgem	The Office of Gas and Electricity Markets (Ofgem) regulates the monopoly companies which run the gas and electricity networks. It takes decisions on price controls and enforcement, acting in the interests of consumers and helping the industries to achieve environmental improvements.
Point of Connection (POC)	The physical connection between the extended network and the DNOs existing Distribution System.
SP Energy Networks (SPEN)	SPEN own and operate two regulated distribution networks, SPD and SPM, and one transmission network in Central and Southern Scotland, SP Transmission plc (SPT).
SP Distribution plc (SPD)	The Distribution Licence Holder for the distribution service area, for Central and Southern Scotland.
SP Manweb plc (SPM)	The Distribution Licence Holder for the distribution service area for Merseyside, North Wales, Cheshire and North Shropshire.

7.2 Abbreviations

The following abbreviations shall apply throughout this document:

Abbreviation	Definition
132kV	132,000 volts
CDM	The Construction (Design and Management) Regulations 1994
CiC	Competition in Connections
DNO	Distribution Network Operator
HV	High Voltage
ICP	Independent Connection Provider
IDNO	Independent Distribution Network Operator
IEE	Institution of Electrical Engineers
IT	Information Technology
LVAC	Low Voltage Alternating Current
MPAN	Meter Point Administration Number
NERS	National Electricity Registration Scheme
ESO	Electricity System Operator
NGET	National Grid Electricity Transmission
NRSWA	The New Roads and Street Works Act, 1991
OHL	Overhead Line
POC	Point of Connection
RTU	Remote Terminal Unit
SAP	Senior Authorised Person
SCADA	Supervisory Control and Data Acquisition
SLC	Standard Licence Condition
SoW	Statement of Work
SPD	Scottish Power Distribution plc
SPEN	Scottish Power Energy Networks
SPM	Scottish Power Manweb plc
SPPS	Scottish Power Power Systems Ltd
UK	United Kingdom

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8. RELATED DOCUMENTS

This document is one of a suite of specifications relating to this subject area and should be read in conjunction with:

8.1 Statutory Related Documents

- Health and Safety at Work Act 1974
- Electricity Supply Quality Continuity Regulations 2002 and subsequent Amendments
- Electricity at Work Regulations 1989
- Management of Health and Safety Regulations 1999
- IEE Wiring Regulations (Latest Edition)
- Memorandum of guidance on the Electricity at Work Regulations
- Reporting of Injuries, Diseases, Dangerous Occurrences regulations 1995
- Construction (Health, Safety and Welfare) Regulations 1996
- Provision and Use of Work Equipment Regulations 1998
- Supply of Machinery (Safety) Regulations1992
- IEE Code of Practice on In-Service Inspection and Testing of Electrical Equipment
- The Construction (Design and Management) Regulations 2015

8.2 Energy Networks Association (ENA) Documents

- Competition in Connections Code of Practice
- Engineering Recommendation G99 – Connection of Power Generating Modules to DNO Distribution Networks
- Engineering Recommendation G100 – Technical Requirements Customer Export and Import Limitation Schemes
- Engineering Recommendation G5 – Harmonic voltage distortion and the connection of harmonic sources and/or resonant plant to transmission systems and distribution networks in the United Kingdom
- Engineering Recommendation P28 – Voltage fluctuations and the connection of disturbing equipment to transmission systems and distribution networks in the United Kingdom
- Energy Networks Association – Distribution Generation Connection Guide

8.3 SP Energy Networks Operating Regime Document

- Safety Instruction-7, 'Addition to and Removal from the System'

8.4 SP Energy Networks Quality Document

- Recording of Electrical Assets by Contractors (Ref. BUPR-22-015).

8.5 SP Energy Networks Auditing Document

- Inspection and Monitoring of Networks Constructed by Independent Connection Providers. (Ref. ASSET-04-020).

8.6 Other Processes

Please refer to the SP Energy Networks (SPEN) website specifications page for further associated documents:

www.spenergynetworks.co.uk/pages/documents.aspx

www.spenergynetworks.co.uk/pages/distributed_generation.aspx

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9. GENERAL

The data and guidance contained within this document remains the property of SP Energy Networks (SPEN) and may not be used for purposes other than that for which it has been supplied.

This document applies to new installations on the SPM network and is not to be applied retrospectively. This document is not applicable to the SPD network where 132kV is reserved for transmission.

SPEN reserves the right to change the data contained within this document. SPEN accepts no responsibility for any inaccuracies in, or omissions from the document.

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10. INTRODUCTION

10.1 Overview

This document details the process followed by Applicants for contestable connection projects. This process includes the timing of the transfer of information, and details of the requirements for each stage of the application. The diagram below provides a high-level overview of the phases discussed within this process, not all of which will be applicable to every project. Further details on each phase can be found within the applicable sections of this document.

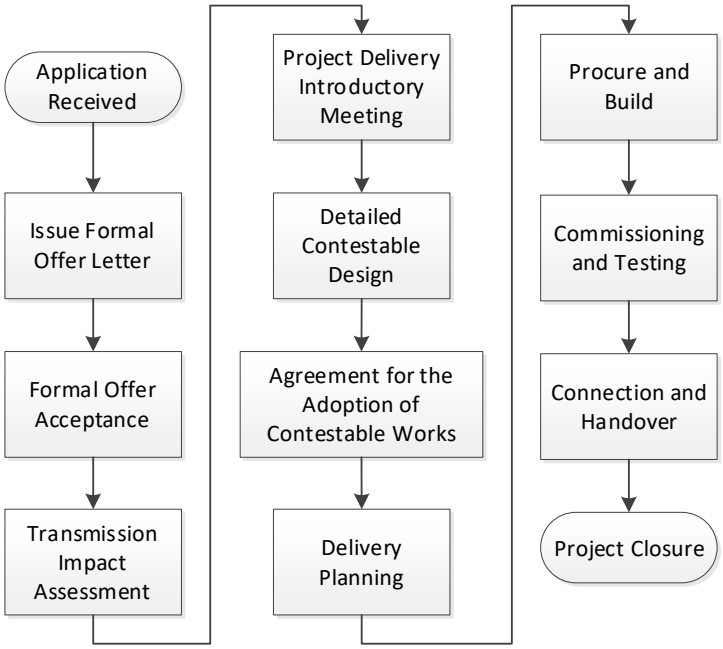

Figure 1: Overview of Process Phases

10.2 Interface Systems

At 132kV RAdAR and ProjectWise are used by SPEN to facilitate the transfer of information between SPEN and Applicants (ICP's, Consultants Individual Customers, DNO's, IDNO's and Affiliates & Related Parties). They are internet-based collaborative IT systems which enable documents to be posted and shared with registered users. These interface systems are configured to enable applicants to view information on their applications only.

10.2.1 RAdAR

All applications for Contestable Connection projects are required to be processed via the RAdAR system. RAdAR provides visibility of quotation offer, acceptance, confirmation of design approval and energisation.

New applicants will be required to request access to the RAdAR system by downloading and completing the application form on the SPEN website:

www.spenergynetworks.co.uk/pages/trackign_your_project.aspx

and submitting it to either:

CiCAdminNorth@scottishpower.com
CiCAdminSouth@scottishpower.com

10.2.2 ProjectWise

ProjectWise provides full visibility of documentation for Applicants to help manage connections projects from design, through construction to energisation and handover & adoption of the new network.

New Applicants will be sent a link to access the ProjectWise system when they reach the design phase of their project.

10.3 Regulatory Obligations

To enable SPEN to meet its regulatory obligations under the Standard Licence Condition for providing non-contestable connection services (SLC15), and to facilitate the connections market, SPEN requests all applicants to read the process detailed within this document in conjunction with the following SPEN documents:

- CON-04-003 – RAdAR Process for Phased Design Approvals
- CON-04-005 – Register of Adopted Asset Requests (RAdAR) Process for Contestable Connection Projects
- CON-04-006 – Project Completion Process for Contestable Works
- CON-04-009 – Register of Adopted Asset Requests (RAdAR) Process for Self-Determined and Dual Offer Connection Projects

CON-04-005 Appendix 1 details Ofgem Standard Licence Condition 15 timescales for Non-Contestable Connection Projects.

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11. ISSUE FORMAL OFFER LETTER

11.1 Issue Formal Offer Letter Overview

Following the application for a Point of Connection (POC) via RAdAR, SPEN will assess the network and issue details of the POC and Formal Offer. Where the Applicant wishes to proceed based on the POC, formal acceptance and payment in accordance with the offer letter will be required.

The following diagram provides an overview of the process from initial application through to a formal offer with indicative estimates from SPEN. Further detail on each stage can be found within the sub-sections that follow.

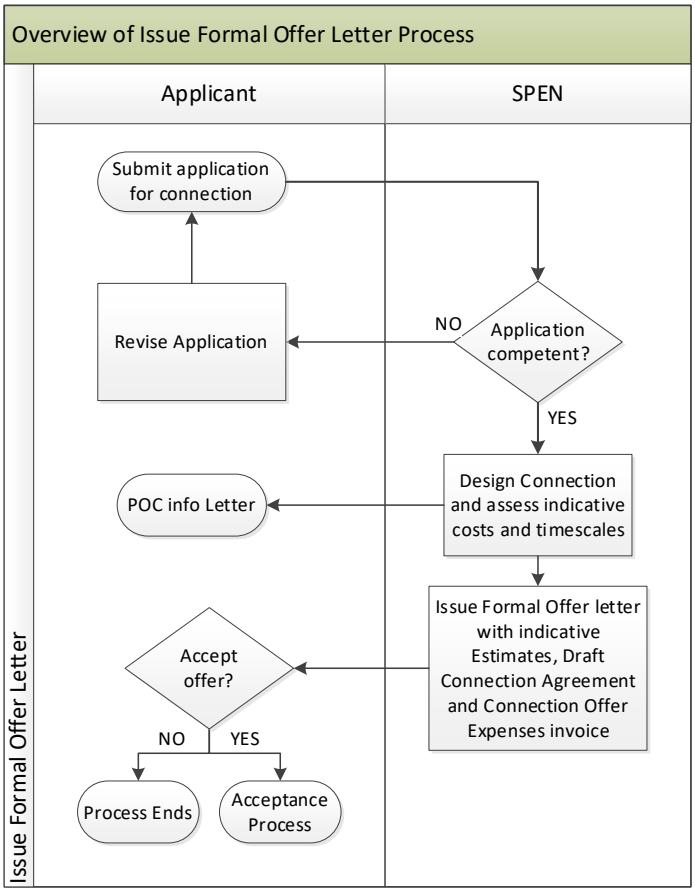

Figure 2: Overview of Issue Formal Offer Letter Process

11.2 Submit Application for Connection

Applicants submit the following information to ensure that their POC quotation requests are compliant:

- A completed POC Application Form, including a G99 form for Generation POC applications;
  - The Applicant must specify which works they wish to complete and from which SPEN will identify the non-contestable works they need to include in the POC Offer;
- A scaled Site Layout Plan (ideally 1:500);
- A Site Boundary Plan (ideally 1:2500) which is clearly marked and indicates the proposed point of connection (including co-ordinates);
- Any additional details and electrical characteristics of the proposed load and/or Generation, as per POC application form;
- A high-level single line diagram;

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- Letter of authority from the landowner where the Applicant is acting as an agent of the Customer (for Generation POC applications)

Note: Plans to be submitted in formats DWG or PDF.

SPEN will assess the submitted information and inform the Applicant of any shortfalls. The shortfalls will require addressing before the application can be progressed further.

Requests for alterations to 'Licensed IDNO' connections; will be processed by SPEN's licensed connections procedures which can be viewed on the SPEN website at the following location:

https://www.spenergynetworks.co.uk/pages/which_type_of_connection.aspx

11.3 Assess Application Competence

11.3.1 Non-Competent Applications

If an Applicant fails to provide Minimum Information required by SPEN they will be notified within the timescales stated in the Standard Licence Condition 15 (SLC15) guidelines. The Applicant will be notified by email, and new updated documentation must be submitted to continue with the application.

11.3.2 Competent Applications

SPEN assess the information provided in the application and confirms the POC category in accordance with Ofgem's SLC15. The definition of the POC categories and timescales for provision of Formal Offers are available in CON-04-005 Appendix 1.

SPEN may identify a requirement for additional information to clarify details in order to progress the application. A request for additional information will pause the time clock application time scale in accordance with SLC15. Upon receipt of the additional information SLC15 timescales will continue.

11.4 Design Connection and Assess Indicative Costs and Timescales

SPEN will carry out an indicative design for the proposed point of connection and carry out studies to identify what impact the proposed demand/generation may have on the SPM distribution network to which it is to be connected. Mitigation measures will also be identified to resolve any issues created by the proposed connection. Based on this information SPEN produce indicative costs and timescales. Whilst every effort is made to ensure these are as accurate as possible, it is important to note that the costs and timescales can change.

This stage includes an assessment of the likely impact on the Transmission System, but no attempt is made to confirm this at this stage.

11.5 Issue Formal Offer Letter with Indicative Estimates

On completion of the non-contestable point of connection design and estimate of associated costs, SPEN will issue the following:

- POC Formal Offer letter including indicative costs and timescales;
- Indicative POC Plans;
- CDM form;
- Sub-Contractor Details;
- 2a Point of Connection Information Letter (refer to Appendix 1 on CON-04-005)

If the design is considered likely to impact the Transmission System, the POC Formal Offer will also include details of the relevant Statement of Work / Modification Application fees.

Offers are time limited. If the offer expires, there is no guarantee that the same offer will be made again.

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11.5.1 Measurement of SL15 Performance for Formal Offer

SLC15 standards 1a-1f and 2a are measured from when a POC Application is submitted by an Applicant to when the Formal Offer Letter is issued taking into account any Paused periods due to requirements for additional information. These measures can be found on CON-04-005 Appendix 1.

11.5.2 POC Charges

Applicants submitting requests for previously quoted Formal Offers, where SPEN incurs additional costs as part of the POC Assessment & re-design process, are subject to additional charges for the POC reflective of the costs incurred by SPEN. All information related to charges for connection can be found on our Statement of Methodology and Charges for Connection to SP Distribution Plc, SP Manweb Plc Electricity Distribution Systems and SP Transmission Plc, available on the SP website:

Connections, Use of System and Metering Services - SP Energy Networks

11.5.3 Connection Offer Expenses

Connection Offer Expenses apply to Formal Offers for connection to the distribution network. All information related to these expenses can be found on the SP website:

https://www.spenergynetworks.co.uk/userfiles/file/Connection_Offer_Expenses_Leaflet.pdf

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12. FORMAL OFFER ACCEPTANCE

12.1 Formal Offer Acceptance Overview

The following diagram provides an overview of the process from Applicant acceptance of the Formal Offer, through to the start of Detailed Design. Note that this diagram is a simplification of the process, and many stages may actually occur in parallel. Further detail on each stage can be found within the sub-sections that follow.

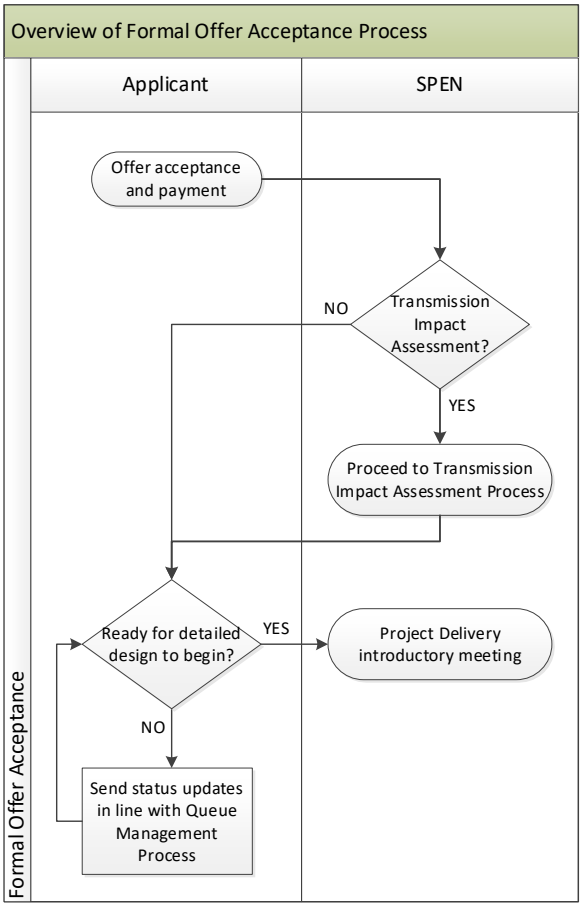

Figure 3: Overview of Formal Offer Acceptance Process

12.2 Payment and Acceptance of Offer

Applicants are required to accept their quotation within three months of the Formal Offer being made. If the Formal Offer has expired, the Applicant will have to re-apply by submitting an application for a new POC quotation.

Applicants may apply for an extension on their quotation for a further maximum period of three months if necessary and this will be granted subject to further review by SPEN.

Upon the Applicant accepting the Formal Offer, the Applicant may have deemed to have entered into an agreement with SPEN.

Before the Applicant can be considered to have accepted the Formal Offer they must have completed the following:

- Payment of non-contestable connection charge in full or in part as detailed in the offer;
- Submitted a copy of proof of payment;

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- Signed, dated and submitted the POC Acceptance included within the quotation;
- Payment of any Transmission Impact Assessment fees (if applicable).

Further information on this process for POC acceptances of Dual Offers can be found in CON-04-009.

12.2.1 Nomination of ICPs

As part of the Formal Offer Acceptance it is the Applicant's responsibility to ensure that the developer appoints an ICP to deliver the contestable element of the project. The Applicant has four months from the acceptance of the Formal Offer to notify SPEN of their ICP appointment.

The ICP is required to hold a suitable NERS-accreditation in order for them to be able to submit their proposed contestable design to SPEN for approval, and to continue with the further phases of the project.

12.3 Transmission Impact Assessment

Upon Formal Offer Acceptance and where the project has a potential to impact on the Transmission System, SPEN will apply for a Transmission Impact Assessment to be carried out as indicated in section 13.

12.4 Confirm when ready for Detailed Design to Begin

Once an Applicant has accepted the Formal Offer, required payments have been made, and impact on the Transmission System assessed (if applicable), SPEN will move toward the Design Approval stage. However, if an Applicant would prefer SPEN to delay the Design Approval process for a period of time, then the Queue Management Process must be followed.

No Designs should be submitted prior to the Project Delivery Introductory meeting and the Delivery Project manager contacting the Customer.

12.4.1 Send Status Updates in line with Queue Management

Once an Applicant has accepted a Formal Offer, SPEN must then assess that network under the assumption that those works will be carried out. To allow for accurate planning and forecasts, Applicants who have yet to enter the Detailed Design stage must provide updates on their Customer Progression Milestones as detailed within SPEN's Formal Offer and in the Queue Management User Guide documented at the following web address:

ENA - Updated Queue Management User Guide (Sep 2025)

Updates, as well as evidence of progress, must be made in line with the timescales agreed and laid out within SPEN's Formal Offer. Applicants who do not progress into Detailed Design within the agreed timescales risk having their Connection Offer being cancelled and withdrawn.

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13. TRANSMISSION IMPACT ASSESSMENT

13.1 Transmission Impact Assessment Overview

Projects connecting at 132kV have the potential to impact the Transmission network. The following diagram provides an overview of the assessment that occurs by SPEN, the Electricity System Operator (ESO) and National Grid Electricity Transmission (NGET), prior to the project entering the Project Delivery Introductory Meeting phase. Note that this diagram is a simplification of the process, and many stages may actually occur in parallel. Further detail on each stage can be found within the sub-sections that follow.

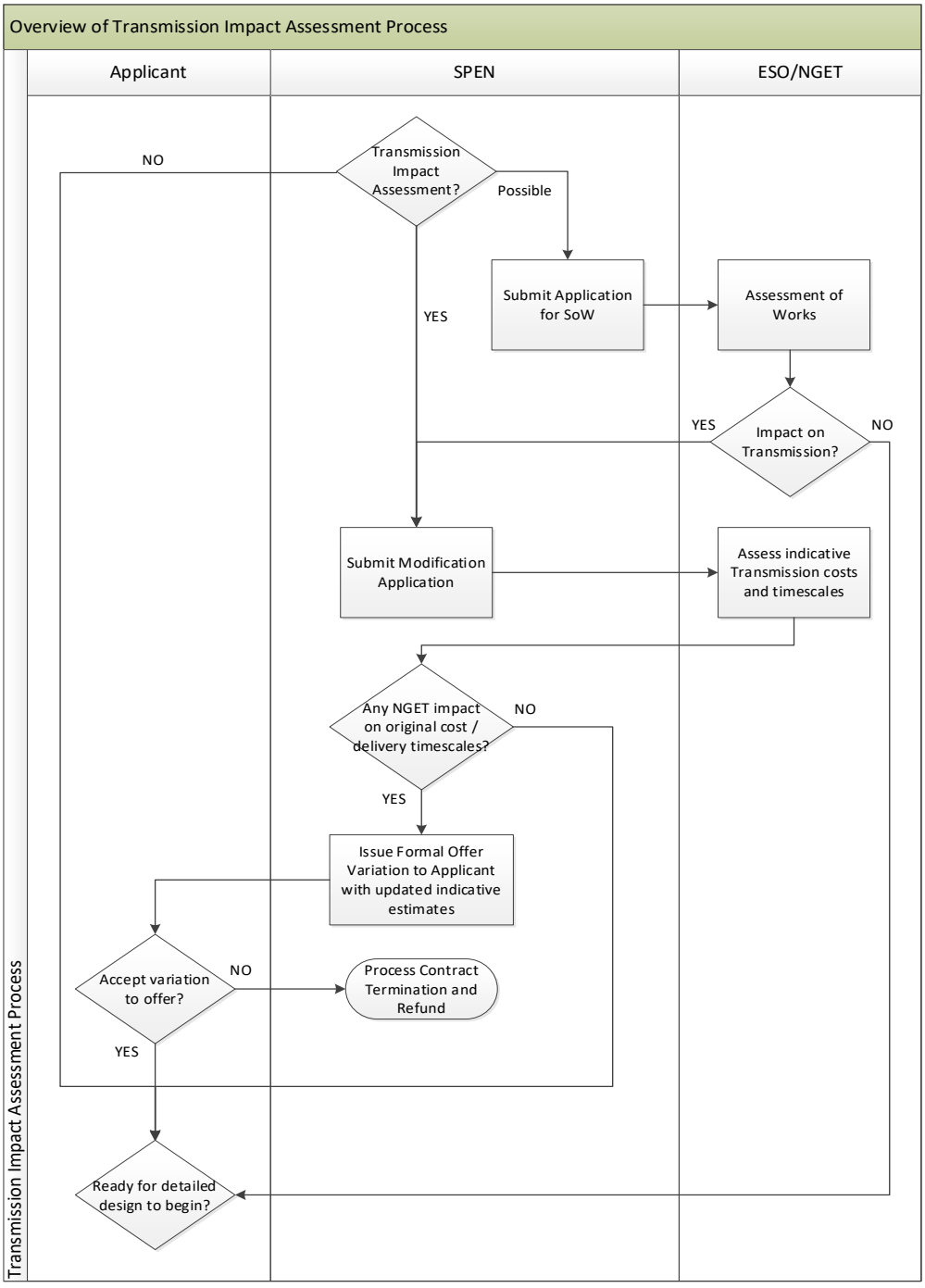

Figure 4: Overview of Transmission Impact Assessment Process

13.2 Potential Impact on the Transmission System

The Formal Offer Letter will have stated whether an Applicants design will require one of the following to be submitted to the ESO, along with the associated fees[1]:

- A Statement of Works (SoW) application;
- Modification application.

These are discussed in further detail within the following two sub-sections.

Where there is no impact on the Transmission System, the project progresses straight to the Project Delivery Introductory Meeting.

13.2.1 Submit a SoW Application

Where there may be an impact on the Transmission System, SPEN submits an application for a SoW to the ESO that contains the connection characteristics, including generation and demand types and capacities, and relevant design information. The ESO liaises with NGET, who will carry out an assessment, and inform SPEN if the project will or will not require intervention.

Where NGET indicate there is no impact on the Transmission System, the project progresses straight to the Project Delivery Introductory Meeting.

The ESO provide NGET's response within 20 working days of receiving the SoW application.

13.2.2 Submit a Modification Application

Where SPEN know there is an impact on the Transmission System, or the ESO indicate this is the case following the SoW Application and a 'complex' Project Progression is required, a Modification Application is submitted to the ESO. This stage allows the ESO to provide a formal modification Offer with indicative transmission costs and timescales to SPEN.

The ESO provide their response within 3 months of receiving a competent application.

13.2.3 Embedded Generators >100MW

Embedded generators >100MW are required to enter into a Bilateral Embedded Generation Agreement (BEGA) with the ESO to have the right to export and operate in the balancing market. For these applications, the Applicant must apply directly to the ESO. SPEN will also get notified of any required transmission works, with indicative transmission costs and timescales.

13.3 Issue a Formal Offer Variation with Updated Indicative Estimates

Following the receipt of a formal offer from the ESO containing indicative costs and timescales for the required transmission works, SPEN will consider whether the overall project indicative estimates originally communicated within the Formal Offer Letter are impacted. If they are, the Applicant will be notified and should they want to proceed with the connection, a Formal Offer Variation will be issued to reflect the ESO estimates, requiring the Applicant to accept the variation (refer to sections 12.1) before the project can continue, unless the Applicant is not ready for the Detailed Design to begin (refer to section 12.4).

If the Applicant does not want to proceed with the acceptance of the Formal Offer Variation, SPEN will proceed with the contract termination and refund of any outstanding balance (excluding any project expenditure to date).

[1] Charging documentation | ESO (nationalgrideso.com)

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14. PROJECT DELIVERY INTRODUCTORY MEETING

14.1 Project Delivery Introductory Meeting Overview

The following diagram provides an overview of the Project Delivery Introductory Meeting phase that occurs following the Transmission Impact Assessment and prior to entering Detailed Design. Further detail on each stage can be found within the sub-sections that follow.

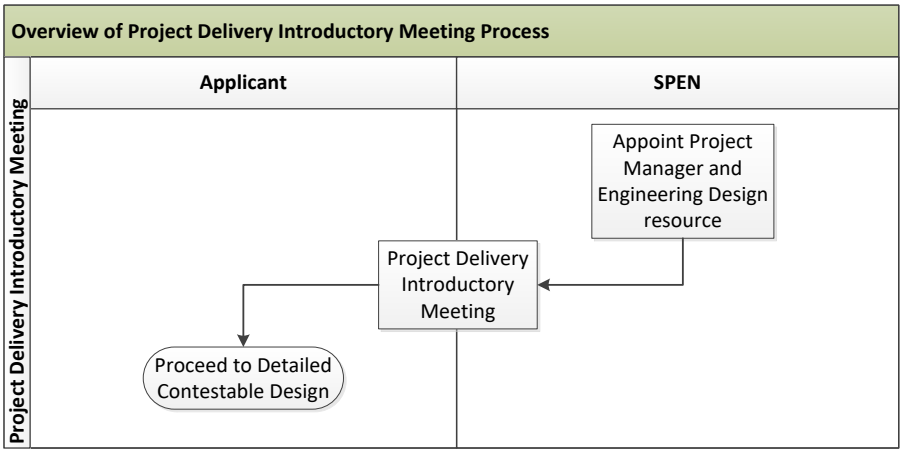

Figure 5: Overview of Project Delivery Introductory Meeting Process

14.2 Appoint Project Manager and Engineering Design Resource

Each project is appointed a Customer Liaison from '132kV programs', a Project Manager and Engineering Design resource. The Customer Liaison will act as the Applicants primary point of contact with SPEN. The Customer Liaison will inform the Applicant of their contact details, and arrange the Project Delivery Introductory Meeting.

14.3 Project Delivery Introductory Meeting

The Project Delivery Introductory Meeting allows appropriate Applicant and SPEN personnel to introduce themselves and individual responsibilities. It also enables discussion of the following:

- The communications protocol between the parties;
- Clarify the process to be followed throughout design and beyond;
- The handover process at the end of the project.

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15. DETAILED CONTESTABLE DESIGN

15.1 Detailed Contestable Design Overview

Due to the often complex nature of 132kV connection projects, SPEN have developed a design approval process. As projects enter this Detailed Contestable Design phase, Applicants will be sent a link to access the ProjectWise system to where they are requested to upload their design documents.

The following diagram provides an overview of the Detailed Contestable Design phase, showing that SPEN undertake their Non-Contestable design after the Applicant's submission (and approval) of the Applicant's overall Contestable design. This phase occurs following the Project Delivery Introductory Meeting and prior to the Applicant receiving their Agreement for the Adoption of Contestable Works. Further detail on each stage can be found within the sub-sections that follow.

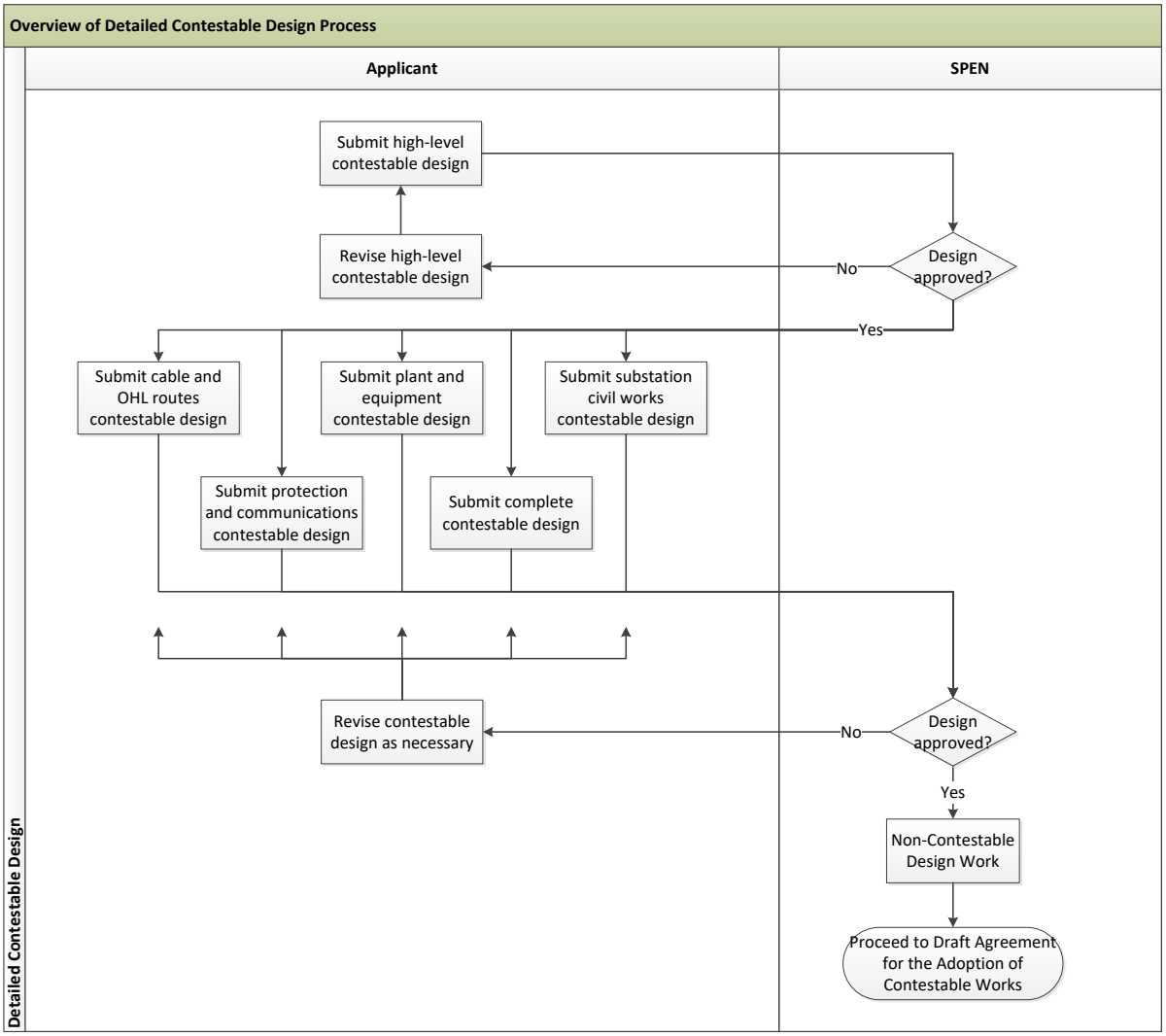

Figure 6: Overview of Detailed Contestable Design Process

When the Applicant is ready to submit either some or all of the elements, they may do so via upload to ProjectWise. Please note that the order is not mandated beyond that of the initial high level design approval and can be submitted for approval as each element becomes available.

SLC15 design approval timescales apply to each element of the phased design approval process from receipt of each proposed design, as per CON-04-005. In addition, SPEN have 5 working days from the date the design approval documentation was submitted, to check this meets with the Minimum Information criteria and approve/not approve the Minimum Information and inform the Applicant.

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Applicants that fail to provide Minimum Information will be informed that a non-compliant request has been submitted and the deficiencies indicated. SPEN may identify a requirement for additional information to clarify details within the design in order to progress with approval. A request for additional information will pause the application time scale clock in accordance with SLC15. Upon receipt of the additional information SLC15 timescales will continue.

Once the Applicant has received Full Design Approval confirmation by the Project Delivery Manager, the Applicant/ICP will be required to upload that confirmation document to RAdAR, which the Project Delivery Manager will then approve.

15.2 Submit High-Level Contestable Design

Applicants will have four months from the formal date of acceptance to submit their design approval documentation or the first part of their phased design, consisting of a high-level single line diagram indicating the proposed connection arrangement. If this is not received within the required timescale, SPEN reserves the right to refund the payment, minus the POC Offer Expenses Fee, Admin fees and any other costs that SPEN have incurred. The quotation will then become expired and the Applicant will be required to re-submit their POC Application if they wish to proceed further with the development.

High-level documentation to be uploaded at this stage shall include:

- Copy of signed and dated POC Quote Acceptance section, included with the quotation;
- Confirmation of third party/developer registered company addresses;
- Confirmation from the developer of the ICP's appointment as the preferred accredited connection installer;
- Engineering Report;
- Schematic of proposed electrical system, indicating single/double substations and proposed size of transformer;
- Confirmation of POC positions;
- Confirmation of proposed protection system;
- Indicative Cable and Overhead Line Routes.

Any relevant surveys can be initiated at this time after confirming payment has been received for any works involved.

15.3 Submit Cable and Overhead Line Routes Contestable Design

The Applicant submits the following information for the Cable and Overhead Line Routes Contestable Design:

- Cable Specifications;
- Plans of Cable Routes by Voltage (including auxiliary cables);
- Ducting Specifications and Layout Road Crossings;
- Volt Drop Calculations;
- Pole Specifications and OHL Routes Plans by Voltage;
- Joint Specifications, Positions and Terminations;
- A full itinerary of equipment and materials, including types, sizes and ratings employed;
- One Plan per Voltage Level to include all elements identified above;
- List of drawings submitted, with version control (to include drawing name/ref, voltage, revision number and date).

15.4 Submit Plant and Equipment Contestable Design

The Applicant submits the following information for the Plant and Equipment Contestable Design:

- A full itinerary of plant, equipment and materials, including types, sizes and ratings employed;
- General Layout Arrangement Plan;

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- Individual Plant and Equipment Specifications;
- Circuit Diagrams for Plant and Equipment Specifications;
- Battery;
- LVAC;
- Fuses.

15.5 Submit Substation Civil Works Contestable Design

The Applicant submits the following information for the Substation Civil Works Contestable Design:

- List of drawings submitted, with version control (to include drawing name/ref, voltage, revision number and date);
- Site Layout Drawings (both plan and elevation views);
- Transformer Bunding;
- Drainage Layout;
- Fencing Details;
- Heating and Light Details;
- Signage Details;
- Civil Drawings, Details and Calculations, including loading characteristics;
- Substation Earthing Schematic and Calculations – including earthing studies conducted by an SPEN-approved contractor;
- Earth Mat Details;
- Fence Earth Details;
- Environmental Report;
- Noise Abatement Assessment;
- Planning Application;
- Foundation Plans;
- Fire Regulations.

15.6 Submit Protection and Communications Contestable Design

The Applicant submits the following information for the Protection and Communications Contestable Design:

- List of drawings submitted, with version control (to include drawing name/ref, voltage, revision number and date);
- Full suite of Wiring Diagrams;
- INO Interface (SCADA);
- RTU Drawings;
- Communications (fibre) Drawings;
- 132kV Switchgear Control Relay Panel Circuit Diagrams, Wiring Diagrams and General Arrangements;
- Panel Circuit Diagrams, Wiring Diagrams and General Arrangements;
- Battery Schematic Wiring Diagrams;
- Multicore/Multipair Cable Schedules and Layout;
- Marshalling Kiosk Circuit Diagrams, Wiring Diagrams and General Arrangements;
- All Other Ancillary Circuit Diagrams, Wiring Diagrams and General Arrangements.

15.7 Rejection of Contestable Design

If an Applicant's Contestable Design is assessed as not meeting SPEN standards and/or requirements, the design will be rejected and the Applicant provided with a written response identifying the deficiencies of their design.

The Adoption and Connection Agreements details can only be finalised when the final phase of the design approval process has been approved by SPEN.

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16. AGREEMENT FOR THE ADOPTION OF CONTESTABLE WORKS

16.1 Agreement for the Adoption of Contestable Works Overview

When an Applicant's Contestable Design has been assessed as satisfactory, SPEN review the anticipated costs and timescales and issue an Agreement for the Adoption of Contestable Works. Where the Applicant wishes to proceed, formal acceptance of the agreement and payment as required in the Contract.

The following diagram provides an overview of the phase. Further detail on each stage can be found within the sub-sections that follow.

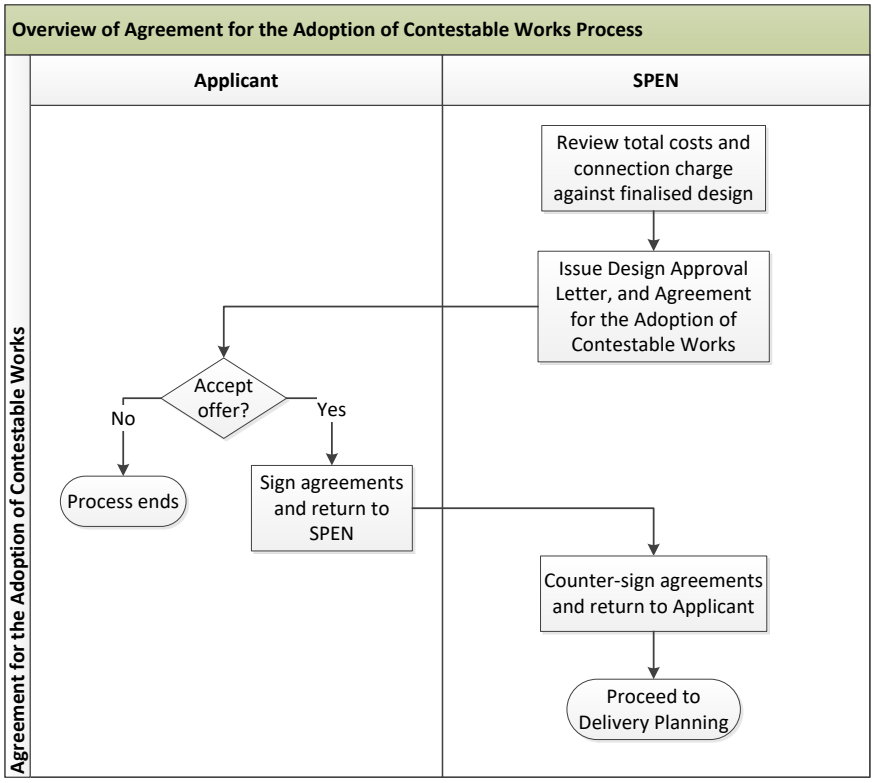

Figure 7: Overview of Agreement for the Adoption of Contestable Works Process

16.2 Review Total Costs and Connection Charge against Finalised Design

Following approval of the contestable design and completion of the non-contestable design, SPEN will consider whether the overall project indicative estimates originally communicated within the Formal Offer Letter are significantly impacted.

SPEN reserve the right to amend the charges applicable to the project as a result of any amendments or variations to the design not known at the time of approving the design. All costs incurred by SPEN will be subject to SPEN's General Terms and Conditions, in particular to the phased design approval process Extra Costs and Effect of Termination, in the event that the Applicant does not proceed to construction.

16.3 Issue Design Approval Letter, and Agreement for the Adoption of Contestable Works

When an Applicant's Contestable Design has been assessed as satisfactory, SPEN issues the following documents:

- Design Approval Letter;

- Agreement for the Adoption of Contestable Works;
- Connection Agreement (if an ICP or customer site);
- Bi-lateral agreement (if an IDNO site);
- A dependency on Transmission works being complete prior to connection (if applicable).
- A dependency on any other planned works impacting the delivery timescale of the POC.

In circumstances where the costs have increased, a Formal Offer Letter Variation will be issued for the additional costs.

Any Variation Payment of the Non-Contestable Connection charge should be made as detailed within the Variation letter and paid in full or in part in line with the agreed payment milestones.

The Distributor reserves the right to terminate the quotation in circumstances where Applicant fails to sign and return the Adoption Agreement and make payment of the Non-Contestable Connection charge within the requisite period.

In circumstances where the costs have decreased, a Formal Offer Letter Variation will be issued and the variation reconciled at the end of the project.

16.4 Sign Agreements and Return to SPEN

If the Applicant wishes to discuss the contents of the Contract Approval Documents or Signed Agreements Documents before accepting them, the Applicant is to contact their relevant Customer Liaison.

16.4.1 Variation Payments

The Applicant sends any variation payments of the Non-Contestable charge, together with the signed Contract Acceptance form, issued with the Design Approval Letter to the address stated within their Formal Offer Letter Variation.

16.4.2 Documentation Upload

The Applicant signs and uploads the following documentation into ProjectWise within the requisite period, i.e. one calendar month from receipt of the Design Approval Letter.

- Copy of variation payment of non-contestable connection charge;
- Copy of completed Contract Acceptance Form;
- Generation Connection Agreement;
- CDM information;
- Sub-contractor details.

Applicants are required to obtain the appropriate signatures for all of the remaining agreements and documents previously issued by SPEN. Applicants are required to scan and upload the following entire signed documents into ProjectWise:

IDNO Sites

- Bi-lateral Connection Agreement.

ICP Sites

- Connection Agreement.

16.4.3 Documentation Hard Copies

Applicants send signed hard copies of the Agreement for the Adoption of Contestable Works (two copies of the bi-partite agreement or three copies of the tri-partite agreement) to SPEN 132kV Programmes to the address stated within their Agreement for the Adoption of Contestable Works.

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Applicants also send the signed hard copies of the Bi-lateral Connection Agreement (IDNO) or the Connection Agreement (ICP), if required, to the same address.

16.5 Counter-sign Agreements and Return to Applicant

If the contract acceptance documents do not meet SPEN requirements, the Applicant will be informed of the deficiencies.

If SPEN assesses Applicant's signed documentation as satisfactory, SPEN counter-signs the agreements and sends hard copies of the signed agreements to Applicants for their records.

Note that Applicants are unable to progress to the next stage until the design acceptance has been completed and approved by SPEN.

16.6 Design Variations

Where there is requirement to submit a variation to a previously approved design, the Applicant will be required to resubmit their design accounting for the variation. They are to include those documents that remain relevant from the original design approval request, and make it clear which design documents have changed from the original approval.

Applicants submitting revisions to previously approved designs which require modifications, or changes to agreements, or where SPEN incurs additional costs as part of the approval process, are subject to an additional Design Approval charge for every revision request. Applicants are advised to contact the Project Manager to confirm any additional charges incurred.

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17. DELIVERY PLANNING

17.1 Delivery Planning Overview

All parties develop their individual Procurement and Build Programmes, then meet to ensure there are no contentious issues. The following diagram provides an overview of Delivery Planning, which starts once all agreements have been signed and prior to the start of Procurement and Build. Further detail on each stage can be found within the sub-sections that follow.

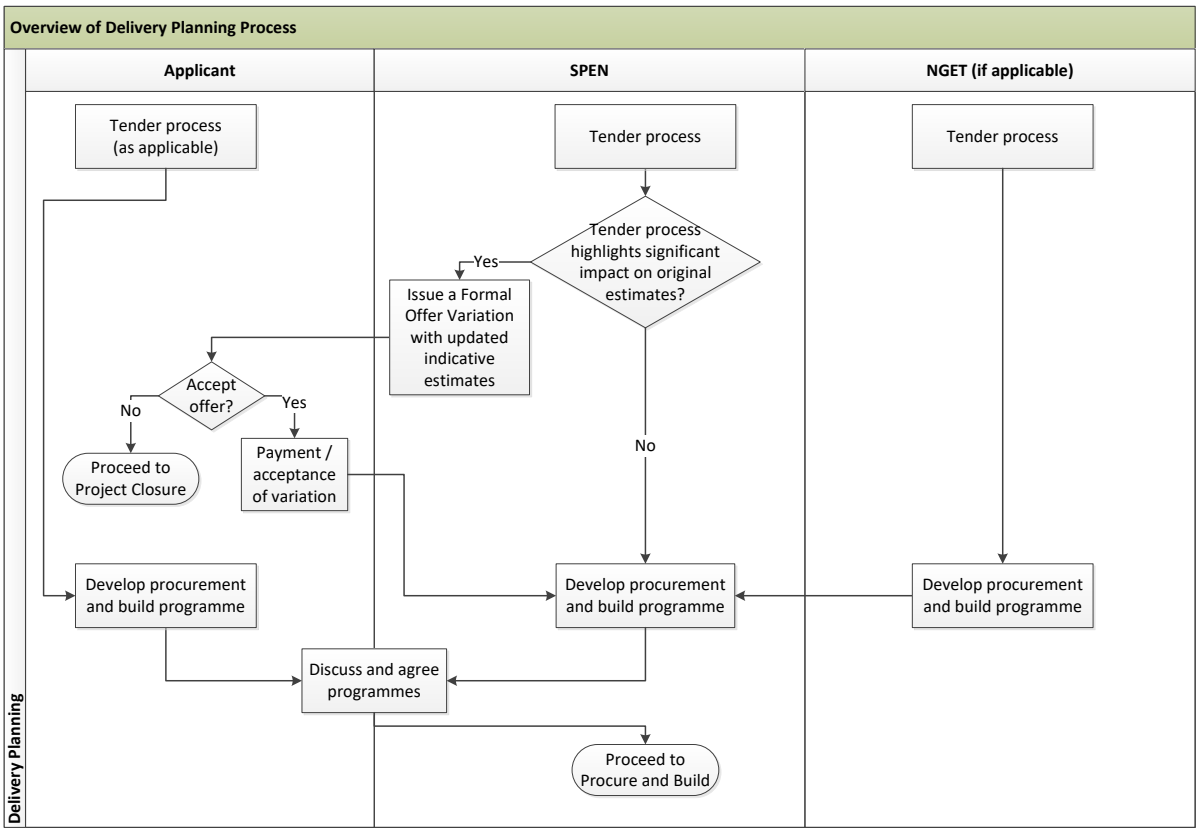

Figure 8: Overview of Delivery Planning Process

17.2 Tender Process

All parties initiate their own tendering process (as applicable) to their respective contractors to confirm the likely timescales and costs associated with their respective designs.

17.2.1 Issue Variation of Costs

Following the receipt of tender returns, SPEN will consider whether the overall project indicative estimates previously communicated are significantly impacted. If they are, a Variation Letter will be issued with the updated estimate. The Applicant will be required to make payments in line with the agreed payment milestones within the Variation Letter in order for SPEN to progress the project (refer to section 16.4.1).

In the event that the Applicant does not wish to continue, the project will enter into the Project Closure phase.

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17.3 Develop Procurement and Build Programme

Following the receipt of contractor indicative timescales, all parties develop their procurement and build programmes, outlining when the various elements of their design will be available and integrated on site.

17.3.1 Discuss and Agree Programmes

SPEN meet with the relevant Applicant personnel to discuss the various build programmes. The aims of the meeting are as follows:

- Manage the interface between work;
- Agree on a coordinated programme for completion of the work;
- Agree on Safety roles and responsibilities;
- Make sure the work meets the required standards.

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18. PROCURE AND BUILD

18.1 Procure and Build Overview

All parties procure and build their individual sections of the design, regularly updating each other regarding their progress. The following diagram provides an overview of the Procure and Build phase, which starts once a coordinated build programme has been agreed. Further detail on each stage can be found within the sub-sections that follow.

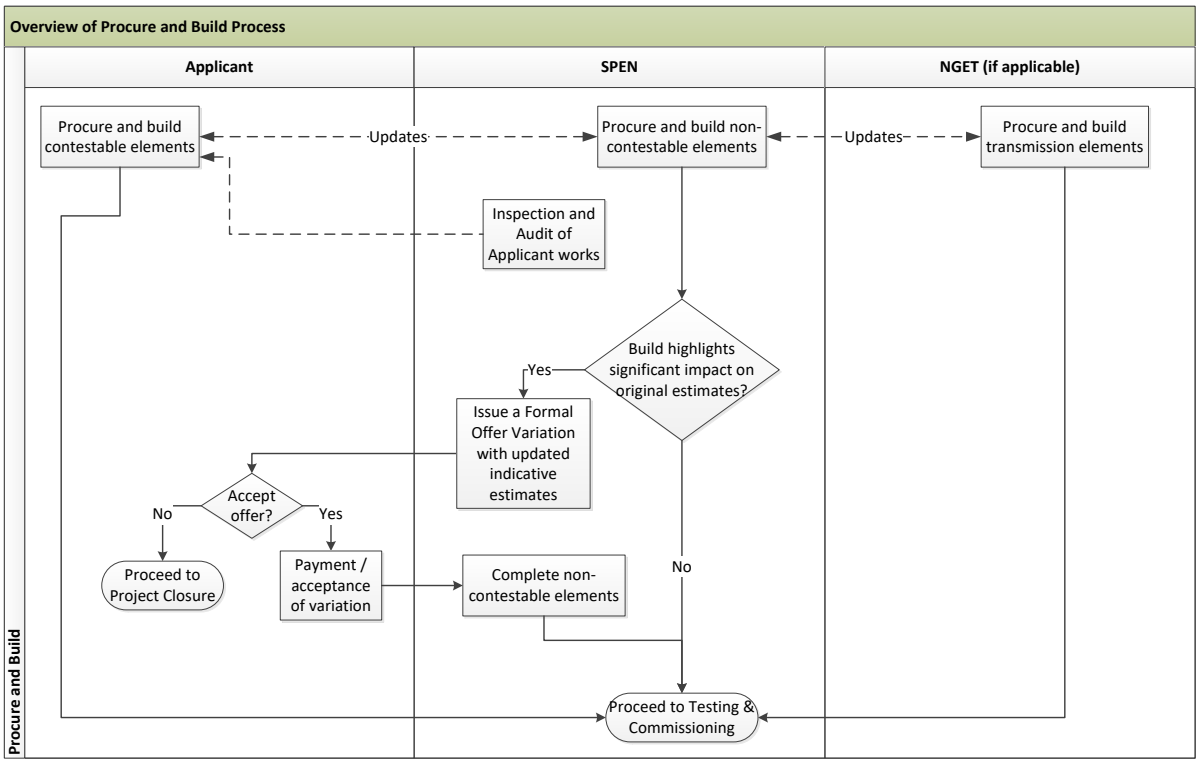

Figure 9: Overview of Procure and Build Process

18.2 Procure and Build Detail

Contracts are placed with selected suppliers and all parties begin construction in line with the agreed programme.

Applicant's whereabouts and work programmes are submitted to SPEN every week via ProjectWise – no later than midnight on Thursday of the week prior to the works commencing.

Applicants are obliged to notify SPEN about their installation works. Failure to do so may result in the Applicant being required to satisfy SPEN that the installation meets the appropriate standards and specifications.

Applicants undertaking work on a SPEN site must supply contact details for all site staff within their whereabouts.

18.2.1 Inspection and Audit of Applicant Works

SPEN prepare weekly audit programmes, utilising the Applicant's whereabouts and work programmes as a basis for their audit.

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18.2.2 Issue Formal Offer Variation Letter

If during construction it becomes apparent that the approved design may need alteration, for example the preferred route is not viable, SPEN will consider whether the overall project indicative estimates previously communicated are significantly impacted. If they are, a Variation Letter containing revised costs will be issued with the updated estimate. The Applicant will be required to make payments in line with the agreed payment milestones within the Variation Letter in order for SPEN to progress the project (refer to section 16.4.1).

In the event that the Applicant does not wish to continue, the project will enter into the Project Closure phase.

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19. TESTING AND COMMISSIONING

19.1 Testing and Commissioning Overview

A testing schedule is discussed and agreed; following which testing of contestable works can begin.

The following diagram provides an overview of the Testing and Commissioning phase, which starts once a coordinated build programme has been agreed, and completes following successful final commissioning. Further detail on each stage can be found within the sub-sections that follow. Note that this diagram is a simplification of the process, and many stages may actually occur in parallel, with some testing of completed works taking place whilst other works are still in construction.

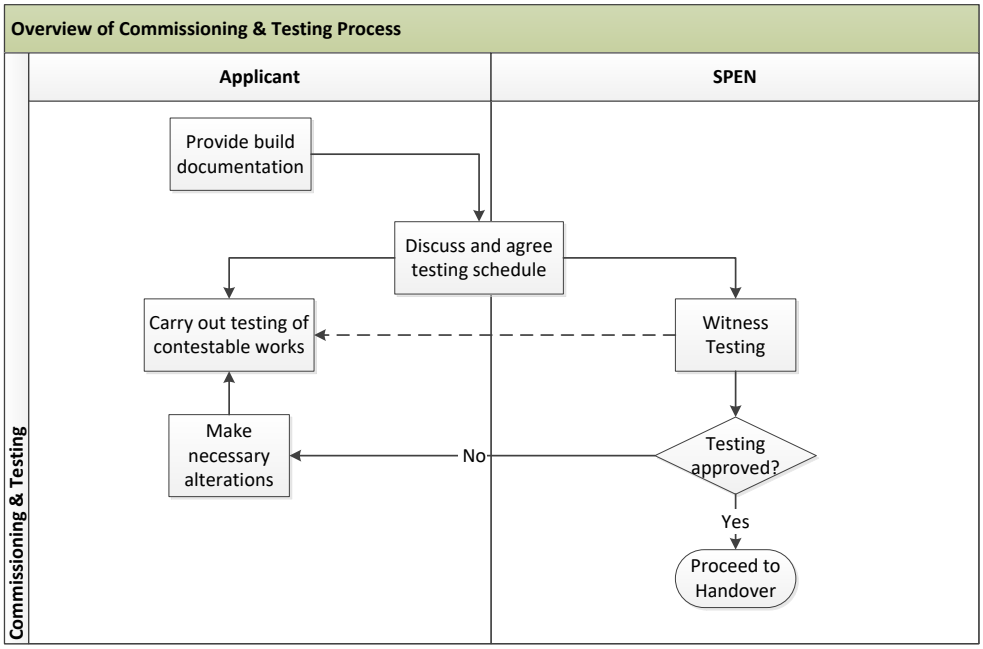

Figure 10: Overview of Commissioning & Testing Process

19.2 Provide Build Documentation

All As-Laid or constructed plant, equipment and overhead line and underground cable records must be supplied to SPEN Data Management in accordance with BUPR-22-015 Recording of Electrical Assets by Contractors.

The Applicant is also to inform SPEN of any works undertaken by uploading the relevant As-Laid plans to ProjectWise. In addition, all equipment Guarantees and Warranties are required.

SPEN will check the as built records to deem if they are acceptable.

19.3 Discuss and Agree Testing Schedule

SPEN meet with the Applicant to discuss their testing schedule. The aim of the meeting is as follows:

- What tests the Applicant is to undertake (test details are contained within G99);
- The tests SPEN wish to witness;
- Clarify testing dates;
- Agree expected test outcomes.

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19.4 Carry out Testing

Applicant's whereabouts, including commissioning and witness testing, are submitted to SPEN every week via ProjectWise – no later than midnight on Thursday of the week prior to the testing commencing.

Testing information, including procedures and test results, are submitted to SPEN for review. SPEN assesses the submitted information and may identify a requirement for additional testing.

Once all commissioning and testing of Applicant equipment is complete, the project moves to the Connection and Handover phase.

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20. CONNECTION AND HANDOVER

20.1 Connection Handover Overview

The Final Connection Agreement is issued to the Applicant, who sign and return it, along with all necessary documentation prior to energisation. The following diagram provides an overview of the Handover phase, which starts once testing and commissioning of Applicant equipment is complete. Further detail on each stage can be found within the sub-sections that follow.

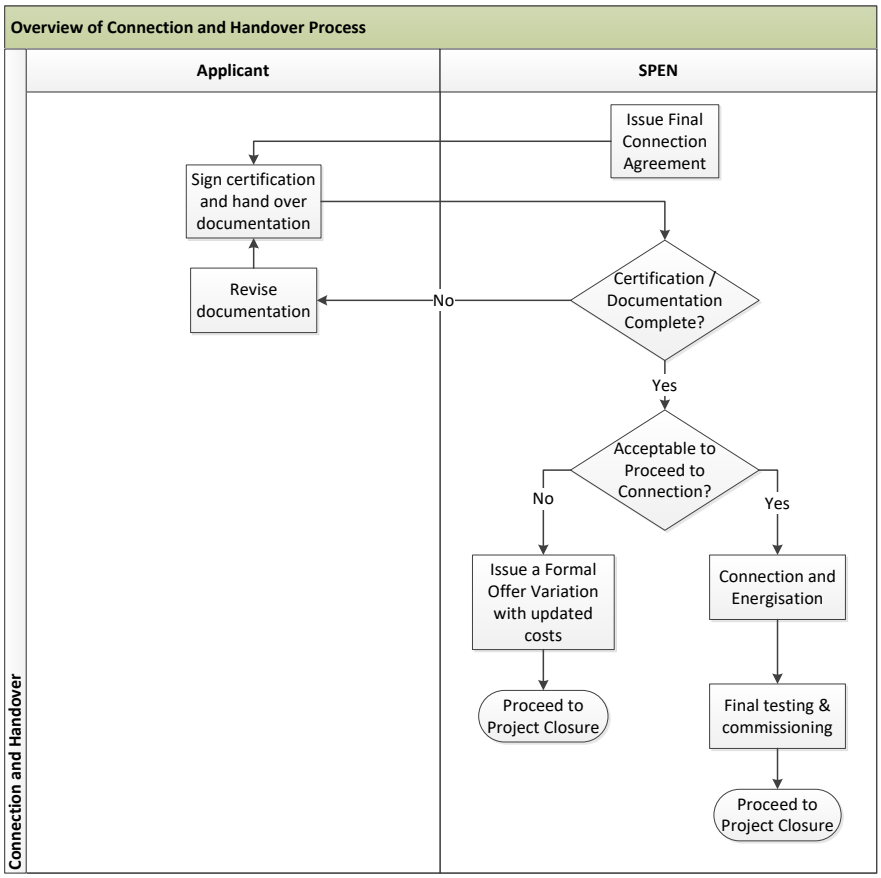

Figure 11: Overview of Connection and Handover Process

20.2 Issue Final Connection Agreement

On approval of all Applicant commissioning and testing work, SPEN issues the Final Connection Agreement, indicating the planned contractual start date.

20.3 Sign Certification and Hand Over Documentation

The Applicant returns the following to SPEN:

- Signed Final Connection Agreement;
- Completed Technical Compliance Report;
- Signed Project Completion and Handover Certificate;
- Confirmation of all planning and legal consents granted to SPEN, including all applicable leases, licences and land rights;
- Previous audit failures – details of remedial works completed;
- CON-09-002 Completion certificate for new cable installation;
- As constructed records;

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- Safety Instruction-7, 'Addition to and Removal from the System' (for IDNO supplies if applicable);
- SUB-02-013 Appendix 4 (IDNO only);
- Daily/Weekly Whereabouts received for contestable works carried out/completed;
- Site responsibility schedule;
- Asset titles.

Applicants must meet all of the above conditions a minimum of five working days prior to the connection date.

In circumstances where Applicants have not concluded land rights at least three months prior to the agreed date of connection, the connection will be rejected and, in accordance with SLC 15, SPEN will consider associated costs incurred and invoice accordingly.

For IDNO Substation Connections where the Land rights remain outstanding but all other conditions have been met SPEN will consider the option to proceed, based on completion of connection works without energisation.

If Applicants fail to provide all requested documents, SPEN will communicate with the Applicant to notify of any deficiencies.

Where it is deemed unacceptable to proceed with connection SPEN will consider associated costs incurred and issue a Formal Offer Variation Letter accordingly.

20.4 Connection and Energisation

When an Applicant meets all conditions in accordance with the timescales, SPEN carries out the connection/phased energisation as planned.

20.5 Final Testing and Commissioning

This is the final testing of the fully integrated system, ensuring there are no issues before proceeding to Project Closure.

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21. PROJECT CLOSURE

21.1 Project Closure Overview

The Applicant and SPEN check that all remedial actions have been completed, and the necessary paperwork has been supplied. The following diagram provides an overview of the Project Closure phase, which starts once the Handover phase is complete. Further detail on each stage can be found within the sub-sections that follow.

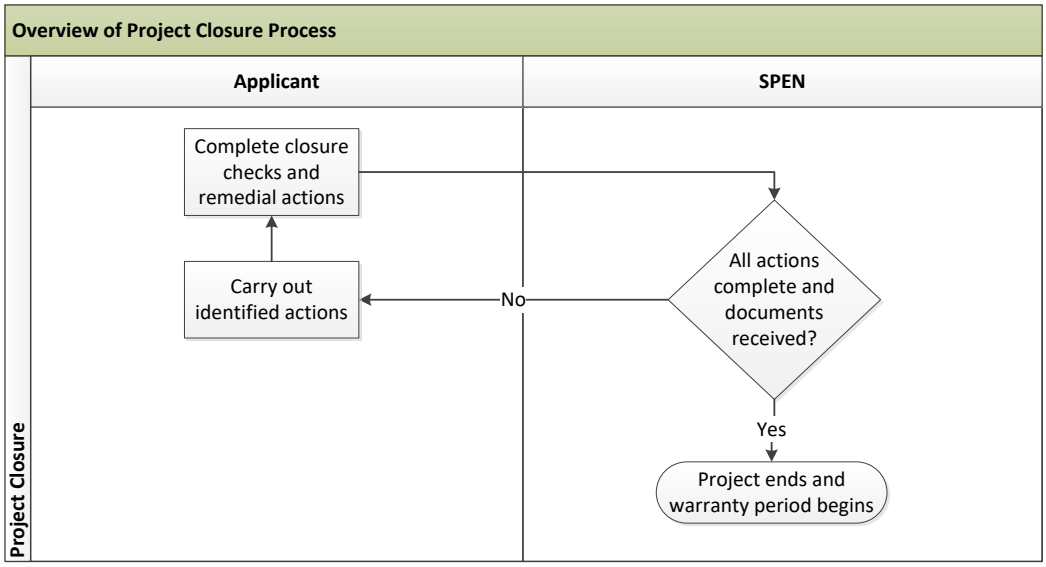

Figure 12: Overview of Project Closure Process

In certain instances, a project may comprise of distinct phases or payment milestones. These phases shall be agreed at the design stage with SPEN and shall be recorded within the Agreement for the Adoption of Contestable Works and project file documentation as appropriate.

The Applicant Design Engineer shall create a master drawing clearly showing the distinct phases of the project. Each agreed phase of the works shall be accompanied by a completed Handover Certificate uploaded into ProjectWise at the completion of each phase. The closure of each distinct phase will need to be confirmed as complete at the closure of the overall project.

21.2 Project Closure Checks and Remedial Actions

This shall be completed once for the overall project or project phase. Each item must be agreed by the SPEN Project Manager confirming the requirements have been met in full. The requirements for each of the section are detailed below.

21.2.1 Construction

The Applicant confirms the following as complete:

1. The Contestable Works, or such part thereof, have been constructed, installed, commissioned, tested and completed in accordance with the Approved Design and using materials and workmanship in accordance with the Agreement for the Adoption of Contestable Works;
2. The Applicant has rectified all defects or other matters previously notified to them;
3. All Exit Points from which an electricity supply may be taken are registered in accordance with the specifications and procedures listed in the Agreement for the Adoption of Contestable Works;
4. Confirm individuals possessing appropriate training, knowledge and experience have constructed, installed and commissioned in accordance with all applicable procedures required by Lloyds / NERS appropriately approved organisations;

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5. Substation checklist, if applicable, is completed;
6. Any SPEN plant, apparatus, cable or conductor has been returned to SPEN;
7. All reinstatements have been completed in line with the requirements of the New Roads and Street works.

21.2.2 Documentation

The Applicant confirms the following as complete:

1. The Applicant has delivered to SPEN that true, accurate and complete "as-laid plans" of the Contestable Works or the part thereof which is to be handed over, (as the case may be), in accordance with the SP Energy Networks BUPR-22-015;
2. The Applicant has provided the CDM file (or section relating to the Contestable Works or the part thereof which is to be handed over, (as the case may be) to SPEN;
3. The Applicant will confirm that, if required by SPEN, the Customer(s) has entered into an Agreement with SPEN in relation to the connection of that Exit Point to the Distribution System;
4. SPEN approved network design is uploaded to ProjectWise;
5. Asset Quantities uploaded to ProjectWise.

21.2.3 Land Rights

The Applicant confirms the following as complete:

1. Land Rights and Good Title has been provided to SPEN by the Applicant over the Contestable Assets to be handed over in accordance with the requirements of the Agreement for the Adoption of Contestable Works;
2. The Applicant has obtained and passed to SPEN all of the Statutory Consents required in order to allow SPEN to subsequently maintain, repair, replace, renew or use, the Contestable Works;
3. As constructed records.

21.2.4 Finance

The Applicant confirms the following as complete:

1. There are no outstanding debts or reservation of title in respect of the Applicant's Works;
2. All applicable costs have been paid to SPEN;
3. All additional work requested by SPEN has been paid;
4. Where Applicant costs are to be passed to SPEN, all invoices have been received, checked and anomalies corrected.

21.2.5 File Closure

The Applicant confirms the following as complete:

1. The Applicant has warranted to SPEN that all necessary Intellectual Property Rights have been acquired in accordance with the Agreement for the Adoption of Contestable Works;
2. Upon issue of the Closure Certificate, absolute unencumbered title to the Applicant Works and all materials forming part thereof, will automatically transfer to SPEN.

Each section requires signing by the Project Manager confirming the requirements have been met in full.

On receipt of confirmation of connection completion, the Applicant/ICP will be required to follow the relevant steps in RAdAR, as described in CON-04-005.

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21.3 Confirm Actions Complete and Documents Available

Design and construction audits shall be conducted by SPEN in accordance with ASSET-04-020 Inspection and Monitoring of Networks Constructed by Independent Connection Providers. Monitoring and Auditing will be based on random sampling. Any required remedial actions subsequent to monitoring and auditing must be completed prior to the batch being released for payment.

21.4 Project Ends and Warranty Period Begins

Once SPEN has confirmed to the Applicant projects have been closed in accordance with the Agreement for the Adoption of Contestable Works, the required documents uploaded into ProjectWise and confirmation the Non Contestable charges have been received by SPEN, the Project will be closed. No further work can be carried out on this project.

21.4.1 Dispute Process

Attempts should always be made to resolve problems between the Applicant and the SPEN designated Customer Liaison. If unresolved it should then progress through line management. Management shall escalate significant issues and frequently occurring problems with the Applicant.

All correspondence relating to disputes shall be confirmed in writing (Email is acceptable) and every effort shall be made to address such dispute as quickly as possible. The roles of the Applicants Site Representative and Project Manager shall be declared by the Applicant.

21.4.2 Warranty Period

The warranty period is as defined in the Agreement for the Adoption of Contestable Works.

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