

Getting Connected

Delivery Phase of
Onshore Contestable Projects
September 2025

EirGrid

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Revision	Date	Description	Writer	Reviewer	Approver
DRAFT issued to industry for feedback.	24/07/24	Initial draft	Mark O'Keeffe	Conor Farrell	N/A
1	12/09/25	Updated following Industry Feedback	John Dawson	Maurice Reay / Conor Mulholland	Brendan Murray

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Useful Links

Customer Information:

Becoming a Customer | Industry | EirGrid

Customer Information

RESS | Customer information | EirGrid

European Integration | Customer Information | EirGrid

Outages | Customer Information | EirGrid

The Grid Code | The Grid | EirGrid

Metering Code (esbnetworks.ie)

Transmission Policies and Standards | Grid Information | EirGrid

Simulation Studies and Modelling Requirements | EirGrid

Schedule 10 Construction, Commissioning and Connection - Contestable

EirGrid Publications:

Becoming Operational

Shaping Our Electricity Future | EirGrid

TSO Regulatory Publications

All Island Ten Year Transmission Forecast Statement

EirGrid SONI Ireland Capacity Outlook 2022-2031

All Island Resource Adequacy Assessment 2025-2034

Electricity Market:

SEMO (sem-o.com)

Trading and Settlement Code (sem-o.com)

Executive Summary

Getting Connected is intended to be a functional, customer orientated document to be used as a guideline to assist in the process of becoming a generator or demand customer with EirGrid. This document does not provide guidance in relation to Offshore Wind projects. The objective of this document is to give customers a sense of the structure and role EirGrid plays in the delivery phase of contestable projects, while giving an overview of the deliverables, roles and responsibilities of the customer themselves. This high-level overview of the customer's obligations is intended to be used as a supplemental guide, so customers may begin to plan their projects from an early stage and prepare for their interactions with EirGrid.

This document gives a high-level overview of topics such as communication protocols, project deliverables, asset transfer etc. These sections serve as a synopsis of some of the various milestones throughout the project life but are not an explicit description of each. A primary point of contact from EirGrid will, at all stages of a project, be available to discuss deliverables in more depth.

1 Introduction

This document is intended to provide information to contracted customers to inform their progression through the delivery phase of their project up to energisation. The document supports the information presented to the customer at the project kick-off meeting and should be viewed in conjunction with the slide pack that is provided by EirGrid at that meeting.

This document is for information purposes only and does not supersede the requirements for each party under other policies, procedures and regulatory approved documentation, such as its connection agreement, the Grid Code, the Metering Code or the Trading and Settlement Code.

A separate document published by EirGrid titled "Becoming Operational Generator Customer Information Pack" is also relevant to customers connecting generation or demand facilities. This document details the obligations and considerations for the customer prior to energisation from an operational and Grid Code perspective. It should also be read in conjunction with this document.

The document is split into eight sections:

Section 2 – Communications Protocol

Customers interact with numerous EirGrid teams as they move through the lifecycle of their project. This section summarises the communications protocol and explains the difference between account level and project level communications.

Section 3 – EirGrid Project Team

This section explains the role of key EirGrid functions that will work with you throughout your project, and who will be the main point of contact at the different stages is also identified.

Section 4 – Project Meetings and Schedules

This section gives a high-level description of how project communications are managed focusing on project meetings and project schedules.

Section 5 – Project Deliverables

Section 5 is to provide the customer with a high-level overview of deliverables that should be met in the Delivery Phase and the activities required to meet those. In addition, the general sequence of deliverables and activities is outlined.

Section 6 – Consents Issue Date

This section describes a major project milestone from both a delivery and contractual standpoint. The minimum requirements to achieve the Consents Issue Date are outlined with brief explanations on each point.

Section 7 – Asset Transfer (if applicable)

Section 7 describes the obligation to perform the transfer of ownership of assets from the customer to ESBN as Transmission Asset Owner (TAO), as per Schedule 12 in the connection agreement.

Appendix A

These tables should be used by the customer throughout the project as each project deliverable becomes relevant. Each deliverable is outlined in its own table outlining the who, what, when and how for the deliverable. This section of the document should be a useful reference point for the customer, which will aid your understanding and effective completion of each deliverable.

Appendix B

This section explains acronyms and abbreviations used in this document and throughout the project delivery phase.

2 Communications Protocol

Customers interact with different EirGrid teams as they move through the lifecycle of their project – offer process, delivery, energisation and operation.

The two primary levels of communication are Account Level and Project Level.

Account Level is the overall business relationship between EirGrid and the customer across the customer's entire development and operational portfolio. The Account Level communications are managed by the Account Manager who is part of the Customer Relations team and who is assigned to new customers at the initial application stage. Meetings at customer account level are managed to ensure that the service provided is meeting expectations and to discuss the range of projects across a customer's portfolio.

While each of the customer's individual projects may have a different Project Manager for the Delivery Phase of the project, the Account Manager will be the same for all the customer's projects.

Project Level is for a specific project and will change as the project moves through the phases of its lifecycle. As such, the primary point of contact also changes for the project depending on its current status. *Figure 1: Project Contact Points* below illustrates how the primary project level contacts change throughout the lifecycle of the project.

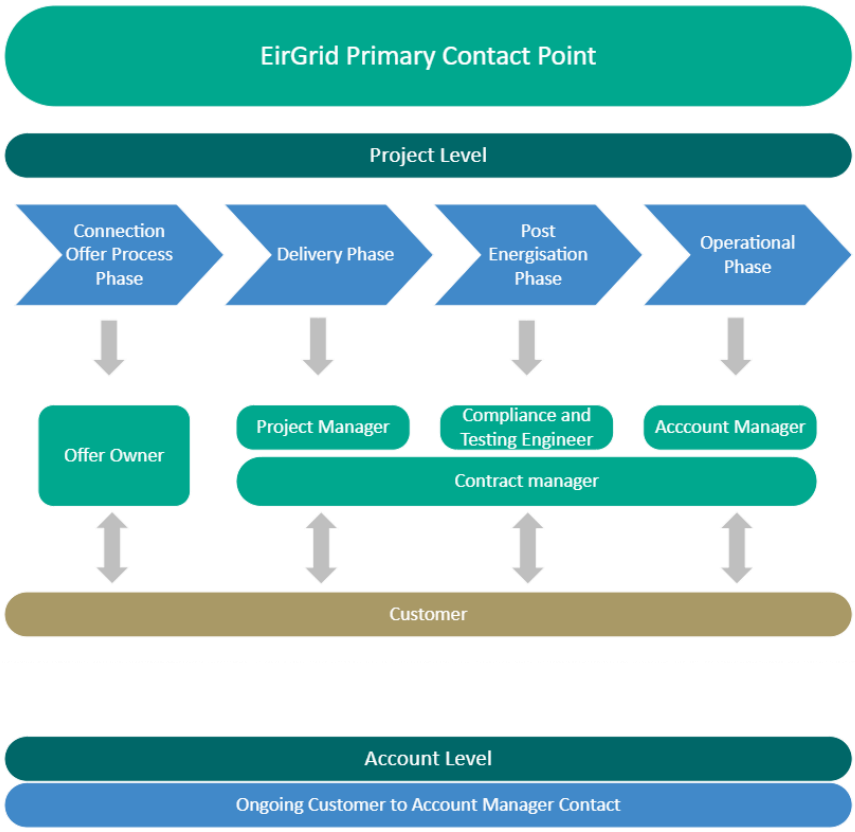


Figure 1: Project Contact Points

During the preparation, issue and execution of the Connection Offer, the customer liaises with the Offer Owner (from the Customers & Connections Team). Once an executed connection agreement is in place, the project moves into the Delivery Phase. This is the key phase of the project to which this document relates. A project team is appointed to the project and the primary project level contact is the Project Manager.

Following the successful energisation, asset transfer and settlement of final outturn pass through costs, the Project Manager will hand over the project to the Compliance and Testing Engineer for Grid Code testing – the Post Energisation Phase. Once the project achieves its Operational Date and an Operational Readiness Certificate (ORC) has been issued, the Compliance and Testing Engineer will hand the project over to the Account Manager for the enduring operational relationship.

In addition to communication with the primary point of contact, the customer will have direct interactions with the Contract Manager assigned to the project and its connection agreement. The Contract Manager will communicate with the customer on contractual issues during all phases post execution of their connection agreement, for example, when payment stages outlined in the Connection Agreement are reached.

2.1 EirGrid's Escalation Procedure

The EirGrid Escalation Procedure for customers is as per *Figure 2: Escalaction Procedure* below. The points of contact for the various levels of escalation will be made available to you by the EirGrid Project Manager at the Project Kick Off meeting. These levels of escalation are defined for customers to raise any issues causing concern or for issues that are not being addressed in a timely fashion to the satisfaction of the customer.

Escalation Level	Escalate to (Person who has responsibility for managing the issue)
Level 1	Team Lead responsible for specific activity
Level 2	Manager of Team responsible for specific activity
Level 3	Functional Director with primary responsibility for specific activity

Figure 2: Escalation Procedure

3 EirGrid Project Team

At the commencement of the Delivery Phase the EirGrid project team will be appointed consisting of the Project Manager, the Client Engineer and the Contract Manager. The role of each member of the EirGrid project team is expanded upon below.

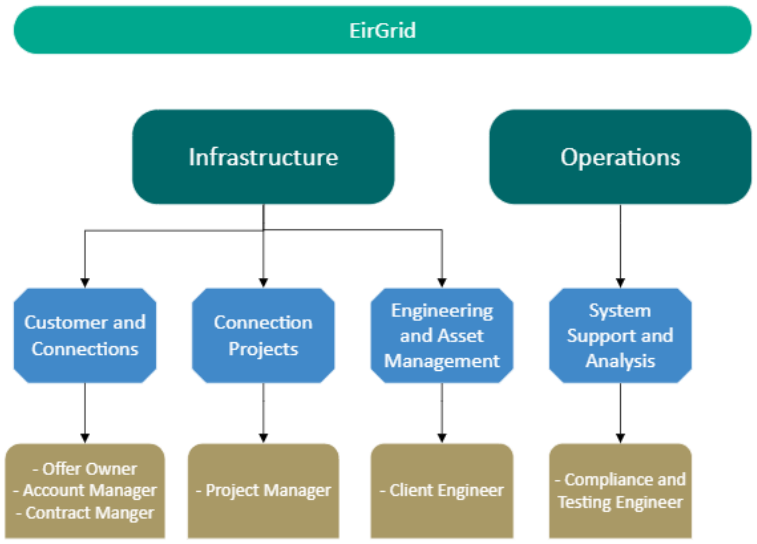


Figure 3: Structure of Teams

3.1 The Role of the Project Manager

The Project Manager is part of the Connection Projects Team and has primary responsibility for the project during the Delivery Phase. The Project Manager will coordinate the project team and is responsible for the project scope, cost, schedule and delivery in accordance with the connection agreement. The Project Manager will work closely with the project team and the customer to ensure all deliverables during this phase of the project are met. They will also manage the EirGrid risks, issues, change control and reporting.

The Project Manager is the primary point of contact for the customer throughout the Delivery Phase of the project other than for connection offer contractual requirements (i.e. payments, bonds etc.) in this case the Contracts Manager is the primary point of contact.

3.2 The Role of the Client Engineer

The Client Engineer is part of the Engineering & Asset Management Team and has primary responsibility for the project technical quality assurance. They are responsible to assess compliance of design, procured material, construction, pre-commissioning and commissioning of all contestable and non-contestable elements of the project with the EirGrid Technical requirements.

3.2.1 Contestable Pack

The Client Engineer is responsible for issuing the Contestable Specification Pack to the customer shortly after the Connection Agreement is signed. Their role is to support the customer in addressing any technical clarifications or queries associated with these specifications - it is the Customer's responsibility to ensure

that all designs, material, construction and pre-commissioning activities are in accordance with the EirGrid Technical Requirements as issued in the Contestable Pack prior to issuance.

Customers may refer to current Standards & Functional Specifications on the EirGrid website here, however not all functional requirements are available publicly due to their sensitivity - and the site may later supersede those issued in the Contestable Pack.

3.2.2 Client Engineer Quality Assurance

In the early project stages, the Client Engineer will review the customer's grid connection planning application prior to submission to the relevant authorities to ensure that all elements relating to the EirGrid Technical Requirements have been considered as part of the planning application. Failure to ensure that the EirGrid review is undertaken is at the risk of the customer and will likely impact the programme, cost and delivery timeframe when issues are uncovered at a later stage, which require resubmission or correction in the detailed design phase.

During the design and construction process the Client Engineer will:

- Review all design submissions for conformance to EirGrid Technical Requirements.
- Monitor material, construction and installation quality and progress against the accepted design, schedule, technical requirements and expected quality standards.
- Maintain and ensure the associated design review and material /construction inspection comments logs are completely addressed before the project moves to the next phase and prior to handover for commissioning to the TAO.
- Completes the design review and construction monitoring as per the Stage Gate process.

As a prerequisite for TAO commissioning, the Client Engineer will:

- Witness factory and site acceptance testing (where required).
- Monitor pre-commissioning quality and progress against the accepted design and EirGrid Technical Requirements.
- Complete pre-commissioning monitoring as per the Stage Gate process.
- Undertake site inspections to ensure site readiness for handover for TAO commissioning, energisation and subsequent end to end testing.

They also support preparation for outages request forms and prepare relay settings requests and Energisation requests.

3.2.3 Design Submission Process

Designs shall be submitted as complete packages for review by the Client Engineer.

A Document Submission log is provided which contains content expected by stage and design package. Customers should review and submit a completed copy of the log as early as possible confirming the respective package submission dates and content. Guidance is provided in the log.

EirGrid provides a SharePoint site for Customers to share project documents, including design package content. The site's folder structure is aligned to the design submission log and includes templates for the document submission log, a transmittal log and combined EirGrid (TSO) / ESBN (TAO) comment log for ease of tracking / administration of deliverables once issued.

Design Reviews typically take 5 weeks for first issue and 3 weeks thereafter. Customers should reflect this in their schedules and anticipate a number of iterations (minimum 3 recommended) to allow for TSO and TAO feedback. The TAO's due diligence review is coordinated by the Client Engineer.

Customers are requested to work closely with Client Engineers during Design to optimise the review process. Workshops can be facilitated upon request for more complex designs to avoid long and extended design review iterations.

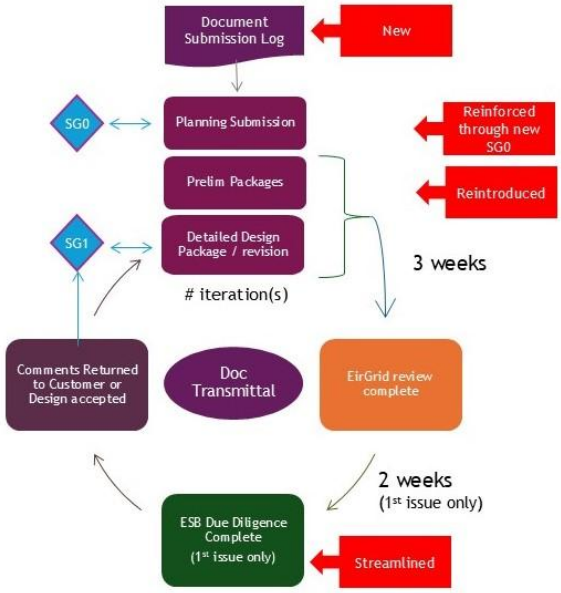


Figure 4: Design Submission Process

3.2.4 Stage Gate Reviews

Stage Gates are the responsibility of the Client Engineer and are important project milestones demonstrating quality assurance checkpoints during the design, construction, pre-commissioning and commissioning stages. They represent the completion and acceptance of EirGrid's (as TSO) and ESBN's (as TAO) review of a particular project phase.

Stage Gate Reviews are the process by which EirGrid provides assurance that contestably built site equipment meets required standards and executes obligations as set out in the Connection Agreement. They provide EirGrid's progressive acceptance that Customers' intended, or installed, assets' are: acceptable, fit for purpose, sufficiently free from known or potential defects, has been designed, constructed and tested in accordance with EirGrid functional specifications and standards, and that any comments raised during EirGrid's (as TSO) and ESBN's (as TAO) reviews or inspections have been addressed.

Failure to enable the Client Engineer's timely assurance or progressing work without Stage Gate approval will likely risk delays in the issuing, or withholding, of the Handover Agreement, Outage scheduling, Energisation Instruction or Operational Certificate.

Formal notification is required from EirGrid to the customer to progress between Stage Gates. Customers should therefore allow time within their programme to plan for Stage Gate review windows.

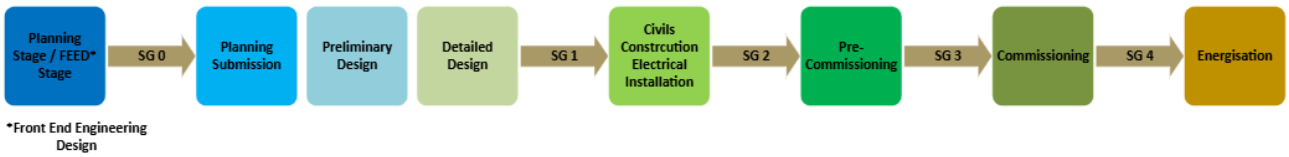


Figure 5: Stage Gate Reviews

*FEED = Front End Engineering Design

3.3 The Role of the Contract Manager

The Contract Manager is part of the Customers & Connections Team and is responsible for managing executed Connection and Transmission Use of System (TUoS) Agreements for projects from execution through to the end of a customer's contractual relationship with EirGrid. This involves monitoring the contracts to ensure that both EirGrid and the customer meet their contractual obligations during the connection process and for the term of the contract.

At connection agreement execution, each contract is assigned a Contract Manager who attends the Project Kick Off meeting and will liaise with the customer throughout the duration of the contract regarding specific contract related obligations such as connection charges, financial security requirements, and insurances.

3.4 Other EirGrid Interactions during Delivery Phase

During the Delivery Phase of the project the customer will have a number of interactions with EirGrid outside of the EirGrid project team. All interactions will be coordinated by the Project Manager except for SEMO interactions.[1] It should be noted that customers should liaise with the Project Manager if other interactions are required. A number of these are briefly mentioned below:

- An Asset Transfer / Ownership Representative (Schedule 12 – Transfer of Ownership) will be assigned to each project to work with the Project Manager and customer to support and ensure that asset transfer requirements are considerably progressed during the delivery phase in advance of energisation. Please refer to A.12 and A.13.
- Team Leads will provide guidance and direction on customer projects and portfolios as necessary to support the Project Manager and/or Client Engineer.
- Account level interactions with the Customer Relations Account Manager as discussed in Section 2.
- Interaction with the Compliance and Testing Engineer who is responsible for managing the Grid Code compliance process with the customer. This commences during the delivery phase of the project and continues into the operational phase. Please refer to A.11.
- Interaction with the System Integrity team will be required to develop the Protection settings, Energisation Instructions and Operation Instructions. Please refer to A.12.
- Interactions with TOP through management and granting of outages. Please refer to A.7.

3.5 General Communications

EirGrid holds a general distribution list for the purposes of communicating industry updates in relation to publications, consultations and events. If a customer wishes to be added to the general distribution list used for general communications, please e-mail info@eirgrid.com.

[1] Generation customers are required to register in the Single Electricity Market (SEM) prior to energisation and this process takes a minimum of 60 business days. To register in the SEM the customer will interact with the SEMO Registration Team. Please refer to A.11.

4 Project Communications

4.1 Meetings

In general, once a project has entered the Delivery Phase, the EirGrid Project Manager will set up meetings with the customer at appropriate intervals. The three primary meetings with the project team are:

4.1.1 Kick Off Meeting

The customer Kick-Off Meeting represents the commencement of the delivery phase of the connection project with the customer. Its purpose is to introduce the EirGrid project team and customer's project team to each other and to inform the customer as to how their project will progress through the early stages of the delivery phase for their project. The project manager will set up and chair the meeting accompanied by various members of the project team, consisting of the Client Engineer, Offer Owner, Asset Transfer Representative and Contract Manager. A typical agenda may include:

- Project overview
- Introduction of EirGrid Project Team
- General Project Milestones & Deliverables including expectations from the project team.
- Project Schedule and Programme
- Infrastructure Agreement
- Transfer of Ownership (Asset Transfer)
- Design Review
- Stage Gate Process
- Project Risks
- Next Steps
- Customer Update (Route to Market, Planning status, Design & Construction programme, EI date)

Typically, a provisional date will be set for the following meetings subject to changes from either party.

4.1.2 Progress Meetings

These meetings are generally held a minimum of every two months prior to the achievement of the Consents Issue Date (A.4) and monthly after the achievement of the Consents Issue Date (CID). The meeting will cover all relevant aspects of the project including project progress, programme, risks, issues, and non-construction elements of the project such as contractual considerations. The meeting will be attended by the Project Manager and the Client Engineer and other relevant EirGrid attendees as required. In general, progress meetings will be held on site following the commencement of construction and it is the customer responsibility to ensure appropriate office facilities are available to facilitate these meetings.

4.1.3 Technical Meetings

These meetings will be held monthly following the appointment of the customer's contractors and usually in conjunction with the progress meeting. The meeting will cover the design, material, construction and pre-commissioning aspects of the project, pertaining to the EirGrid Technical Requirements. The meeting will be attended by the Project Manager and Client Engineer. Additional meetings will be arranged at appropriate times in the project lifecycle, or at the customer's request, by the Project Manager.

4.1.4 Meeting Records

The EirGrid Project Manager will take minutes of all the proceedings in a meeting, including key discussion points and decisions. Formal meeting minutes will be in the format of a structured document capturing the main discussion points of the meeting, agreed actions and action owners. Draft meeting records will be issued by the Project Manager within 5 business days after the meeting takes place. Similarly, the customer has 5 business days to provide comments after receipt of the draft minutes. Meeting minutes will be uploaded to the project extranet site.

4.2 Programme Management

All customer projects are highly dependent on the cooperation of multiple stakeholders. That said, the customer can assist in delivering the timelines of the connection, by executing the connection agreement and ensuring planning is achieved for the connection method in a timely manner and ensuring that customer's designs and construction is carried out in a well-planned and thought-out manner whilst complying with standards and specifications as set out by EirGrid. Providing high quality, complete design packs will help to ensure the EirGrid and ESBN design reviews are completed promptly within the design review cycle, keeping the project programme progressing.

4.2.1 EirGrid Project Schedules

Connection Agreement Schedule

This is provided as part of the connection agreement and is a high-level schedule based on standard lead times detailing milestones from offer execution through to energisation. These timelines are standard, consistent, and equal for all projects, except in the case of any non-standard works. Any non-standard timelines will be noted in the connection agreement. In some cases, the Connection Agreement Schedule may only be updated following receipt of the customer's detailed delivery programme if they have one at Offer stage.

Following execution of connection agreement, it will be the responsibility of the customer to manage Long Stop Dates (LSDs) via Customers & Connections Team based on their delivery programme. The EirGrid Contract Manager will issue a Long Stop Date notice 6 months prior to expiry.

4.2.2 Customer Project Schedules

As per the connection agreement, the customer is required to provide EirGrid with realistic and up to date programmes for the delivery of the contestable elements of the project. The schedule should be issued to EirGrid as soon as possible after the connection agreement has been signed, with a high-level schedule ready for discussion at the customer kick off meeting. As the project progresses the Customer should update the programme and provide additional detail. At a minimum, the Customer Project Schedule should detail the following high-level milestones for the project:

- Submission of planning drawings to EirGrid
- Planning application submission
- Planned submission dates of each individual design package (detailed per package)
- Construction commencement
- Civil works programme
- Earth grid installation
- Delivery to site for major items of plant including switchgear and transformers

- Electrical works programme
- Pre-commissioning
- Planned site handover date
- Target energisation date
- Transfer ownership of assets to TAO

EirGrid will endeavour to accommodate the customer schedule, but this is subject to any network constraints and outage availability.

Customer Success Relies on Timely Delivery: All customer projects shall have a detailed delivery programme in place to ensure EirGrid can facilitate project delivery objectives. The programme must be realistic and developed to take account of EirGrid and ESBN reviews. Similarly, adherence to design review period timelines by EirGrid and issuance of deliverables are also critical to maintaining the programme. EirGrid and ESBN design review timelines are detailed in appendix A.5. If milestones and deadlines are not adhered to, there's a high risk of missing outage slots and reallocation of key ESBN or EirGrid resources to other transmission works which can lead to delays in planned customer energisation dates.

4.2.3 Combined Project Schedule

A combined project schedule based on the EirGrid, ESB and Customer project activities will be developed for the project to contain the critical interface milestones. It is important that all parties have a shared understanding and commitment on the project deliverables and associated timelines.

Development of Combined Project Schedules is currently under review by EirGrid and ESBN. Further details will be shared to industry when the process has been agreed.

4.2.4 Project Dependencies

The connection method chosen to connect the generation or demand customer to the grid may be dependent on specific works being completed prior to energisation, import or export (generation). These dependencies may be listed on the Site Related Connection Equipment (SRCE)/Network Delivery Portfolio (NDP) on EirGrid's webpage. These works can vary but can include:

- Substation Uprate
  - Busbar extension
  - Busbar uprates
  - Bay availability
  - Control room extension
  - Transformer uprates
  - Bus Zone Protection upgrade
- New Substation, delivered by the TSO
- Transmission Network Reinforcement (incl. circuit uprate and fibre related works)

The Project Manager will notify the customer of any updates to the SRCE relevant to their project. Projects may also have dependencies that are not SRCE. Some of these non-standard dependencies can consist of:

- Degree of Contestability/Non-contestability
- Asset Transfer of the Contestable Assets
- Transmission Outage Constraints
- Third Party Stakeholders
- Non-Contestable Equipment Lead Times

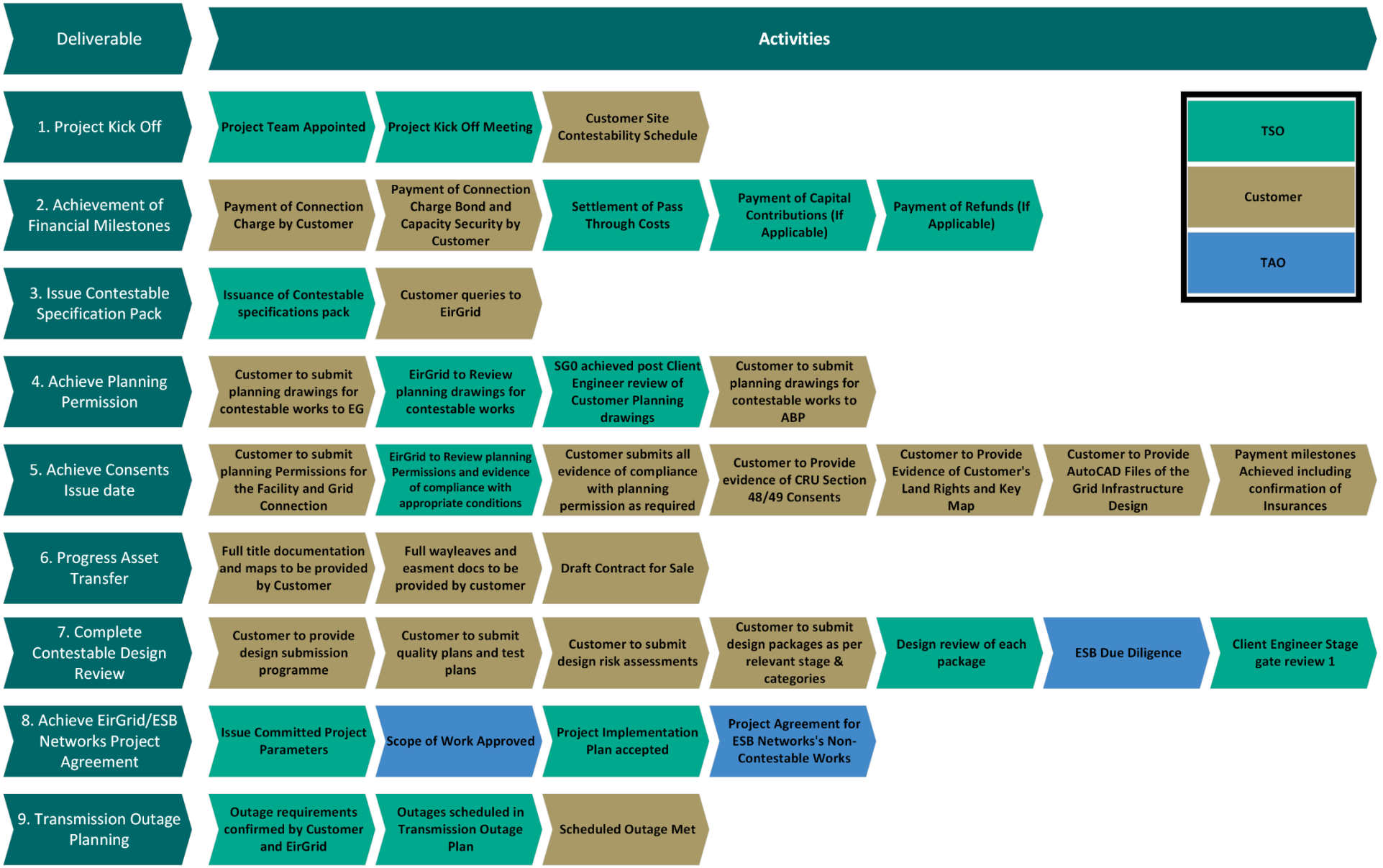
All customers must be familiar with their roles in providing information for outages when preparing the projects to connect to the system (A.7). It is imperative that the schedule is portrayed as accurately as possible to plan for energisation. This will facilitate the meaningful engagement between EirGrid and the TAO on outage scope. If there are any delays which will impact the planned energisation date, it is vital that the customer inform the Project Manager immediately. Failure to meet the outage date requested will result in rescheduling and may lead to postponement of project to a subsequent outage season.[2]

[2] Further information is available in the Outage Information portion of EirGrid's website: https://www.eirgridgroup.com/customer-and-industry/general-customer-information/outage-information/transmission-outages/

5 Project Deliverables

The purpose of this section of the document is to provide customers with an overview of the Delivery Phase of a contestable connection project, such that customers have an indication of what is involved, what they can expect from the EirGrid project team and what the EirGrid project team expects from them.

In *Figure 6: Deliverables and Activities* below, the Delivery Phase is broken down into seventeen distinct deliverables, each of which is further broken down into the activities required to meet the deliverable. In general, the activities listed for each deliverable are in sequence though this is not always the case. For more information on each of the deliverables, see Appendix A.


Deliverable
Activities
1. Project Kick Off
Project Team Appointed
Project Kick Off Meeting
Customer Site Contestability Schedule
2. Achievement of Financial Milestones
Payment of Connection Charge by Customer
Payment of Connection Charge Bond and Capacity Security by Customer
Settlement of Pass Through Costs
Payment of Capital Contributions (If Applicable)
Payment of Refunds (If Applicable)
3. Issue Contestable Specification Pack
Issuance of Contestable specifications pack
Customer queries to EirGrid
4. Achieve Planning Permission
Customer to submit planning drawings for contestable works to EG
EirGrid to Review planning drawings for contestable works
SG0 achieved post Client Engineer review of Customer Planning drawings
Customer to submit planning drawings for contestable works to ABP
5. Achieve Consents Issue date
Customer to submit planning Permissions for the Facility and Grid Connection
EirGrid to Review planning Permissions and evidence of compliance with appropriate conditions
Customer submits all evidence of compliance with planning permission as required
Customer to Provide evidence of CRU Section 48/49 Consents
Customer to Provide Evidence of Customer's Land Rights and Key Map
Customer to Provide AutoCAD Files of the Grid Infrastructure Design
Payment milestones Achieved including confirmation of Insurances
6. Progress Asset Transfer
Full title documentation and maps to be provided by Customer
Full wayleaves and easment docs to be provided by customer
Draft Contract for Sale
7. Complete Contestable Design Review
Customer to provide design submission programme
Customer to submit quality plans and test plans
Customer to submit design risk assessments
Customer to submit design packages as per relevant stage & categories
Design review of each package
ESB Due Diligence
Client Engineer Stage gate review 1
8. Achieve EirGrid/ESB Networks Project Agreement
Issue Committed Project Parameters
Scope of Work Approved
Project Implementation Plan accepted
Project Agreement for ESB Networks's Non-Contestable Works
9. Transmission Outage Planning
Outage requirements confirmed by Customer and EirGrid
Outages scheduled in Transmission Outage Plan
Scheduled Outage Met
TSO
Customer
TAO

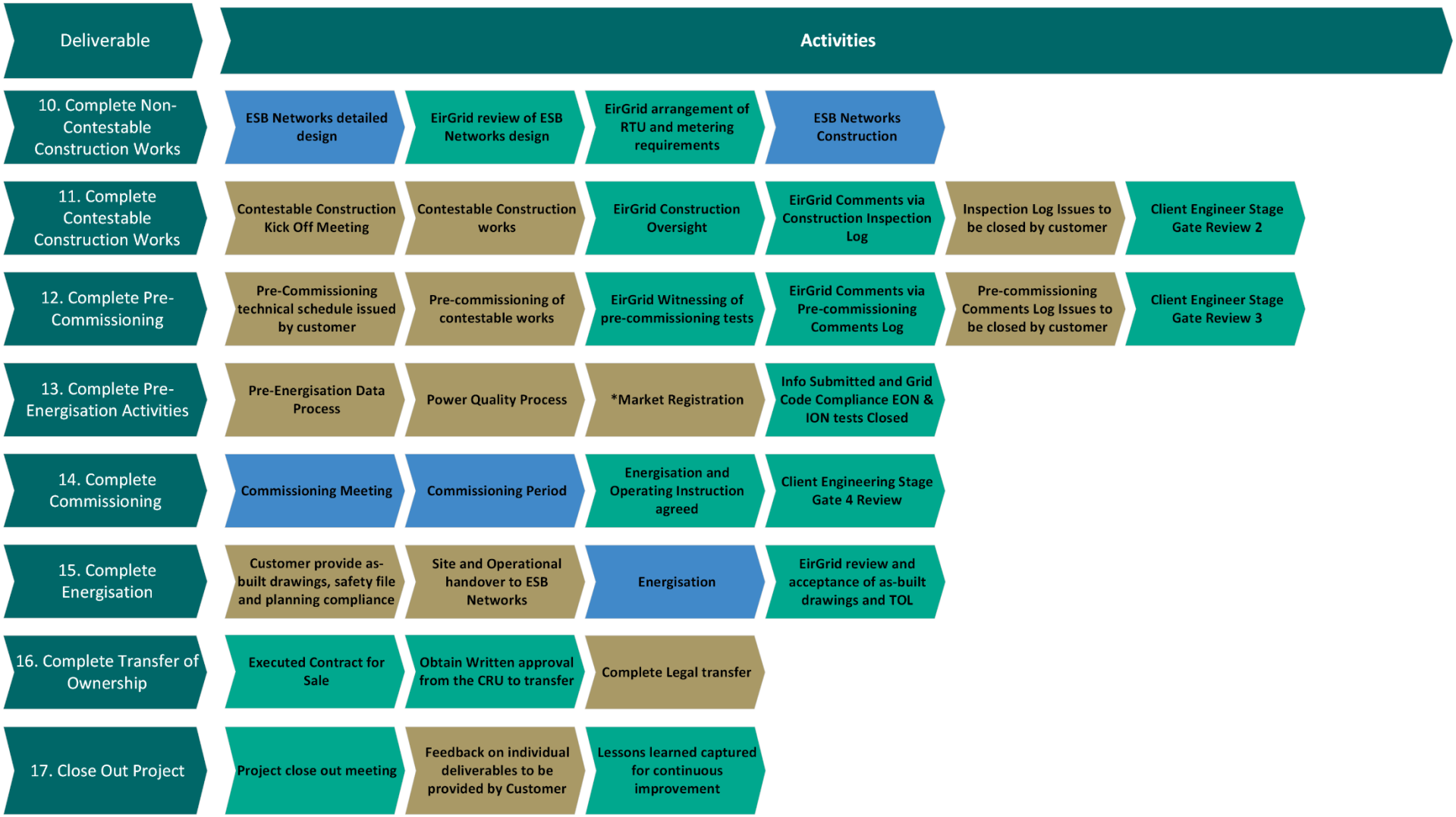


Figure 6: Deliverables and Activities

***Market Registration required for generation Only**

5.1 Indicative Sequence of Deliverables

An indicative sequence for the deliverables is provided in Figure 6 and Figure 7 below. This diagram highlights the sequential nature of a number of the project deliverables which the customer should be aware of and which form part of the Delivery Phase. Please note, the diagram is indicative / illustrative only and does not indicate durations or effort for tasks and the specific project programmes will be individually discussed with the Project Manager.

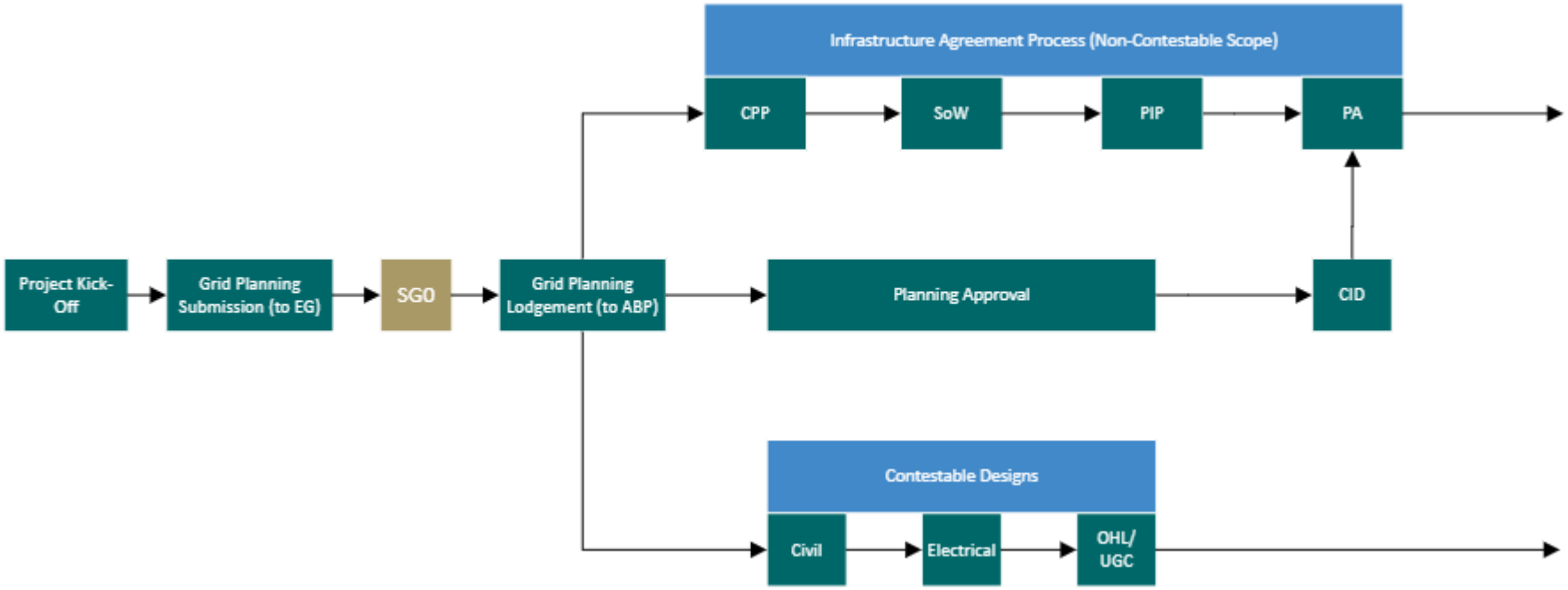


Figure 7: Delivery Phase - Indicative Sequence (From Kick-Off to PA)

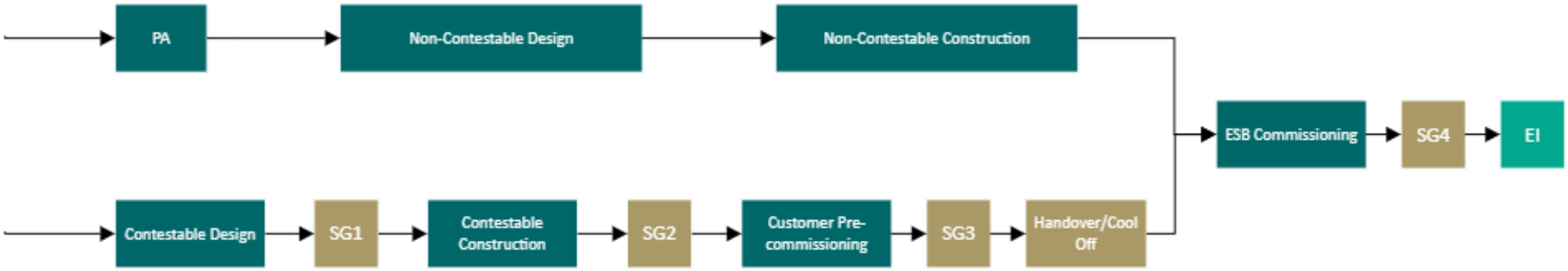


Figure 8: Delivery Phase - Indicative Sequence (From PA to EI)

6 Consents Issue Date

The Consents Issue Date (CID) is a key project milestone from both a delivery and contractual perspective. The scheduled CID is outlined in the customer's connection agreement.

CID is achieved once planning and all other consents for the project have been achieved. This includes the consents for both the non-contestable and the contestable elements of the customer's project and the facility that will be connected to the transmission system.

Each project will be considered on a case-by-case basis with respect to the required consents for CID, however, at a minimum the requirements for achieving CID are as follows:

- **Planning Permission for the Facility** - Planning permission should contain no unacceptable conditions. Following its review of the Planning Permission, EirGrid will require a written update confirming the status of compliance with the pre-commencement planning conditions related to their facility, and confirmation that all planning conditions will be satisfied pre-energisation. The customer should also confirm that the applicable planning permission appeals period has elapsed.
- **Planning Permission for Grid Connection** - Planning permission (or alternative Statutory Consent as applicable) should contain no unacceptable conditions, and the customer should confirm compliance with any financial or other conditions. An unacceptable condition is a time limit placed on the lifespan of the planning permission for the Grid Connection or a requirement for its decommissioning. The confirmation required for the Grid Connection permission should be in the form of a letter from the relevant planning authority. The customer should also confirm that the applicable planning permission appeals period has elapsed.
- **Combined Planning Permission for the Facility and the Grid Connection** – If both the facility and grid connection are combined in the one permission, the same level of review takes place as for the Grid Connection - Planning permission (or alternative Statutory Consent as applicable) should contain no unacceptable conditions and customer should confirm compliance with any financial or other conditions. An unacceptable condition is a time limit placed on the lifespan of the planning permission for the Facility and Grid Connection or a requirement for its decommissioning, or a noise limit which may have implications for the operation of the EirGrid substation. The confirmation required for the Grid Connection permission should be in the form of a letter from the relevant planning authority. The customer should also confirm that the applicable planning permission appeals period has elapsed.
- **CRU Section 48 / 49 Consents** – For generation projects evidence of Section 48/49 (as applicable) authorisation will be required. Where the grid cable for transfer is on customer owned land a section 49 will not be applicable. However, the land must be in the ownership of the contracted customer entity before construction of the cable. Land held under a different customer company name is a separate legal entity and will require a section 49 consent and ultimately the serving of Section 53 wayleave notices.

- **Evidence of the Customer's Land Rights:**
    i. Deed(s) of Transfer / Land Registry Folio(s) / Lease(s) / Deed(s) of Conveyance evidencing the customer's ownership of the grid connection, together with colour copies of maps appended thereto.
    ii. Deed(s) of Easement / Deed(s) of Wayleave / Deed(s) of Right of Way (as applicable), across relevant lands for the customer's access to, and cables access, both to and from the facility, together with colour copies of maps appended thereto.
    iii. If the documents noted at (i) and (ii) above are not yet in place, Option Agreement(s) for the customer's purchase / lease / right of way / wayleave / easement (as applicable) with landowners, for the customer's grid connection, and access to, and cables access, both to and from the facility, together with colour copies of maps appended thereto.
- **Status Update on Schedule 12 requirements for Asset Transfer (Transfer of Ownership)** – See Section A.13 for further details. Customer will be advised that calling CID 'starts the clock' on Schedule 12 requirements.
- **Provision of Additional Land -** If applicable and as per the terms of the Project Connection Agreement
- **Key Map -** Key map showing the location of the substation, facility, underground & overhead cables and rights of way.
- **AutoCAD of the Grid Infrastructure Design referenced in ITM Metres -** This should be in accordance with standard specified for submissions within Section 7.2.4 of document XDS-GFS-00-001 (Functional Specification: 110/220/400 kV Station General Requirements). It is understood that detailed design has yet to be undertaken pre-CID, therefore whatever the latest design at CID stage is what should be submitted. This will generally concur with the design as per the planning permission.
  This is required at CID in order to overlay the CAD design on the maps appended to the documents showing evidence of customer land rights and confirm the grid infrastructure is fully captured within the evidence of customer land rights.
- **Completion of the Contract Milestones:**
    i. Payment of the Connection Charge Bond as defined in Schedule 7A of the connection agreement if applicable.
    ii. Payment of Second Stage Payment as defined in Section 2 of the connection agreement if applicable.
    iii. Confirmation of insurances taken out for the facility, in accordance with the requirements set out in Schedule 6 of the connection agreement.

Note neither the TSO's nor the TAO's representatives will attend the customer's construction site until evidence has been provided that the required insurances are in place.

The Project Manager will issue formal communication to the customer to advise when CID has been achieved. The requirements as listed above need to be either met or waived by EirGrid before starting the works for the facility (not limited to connection works).

The timeframe for planning consents achieved is based on standard local authority timelines and assumes that no additional information is requested.

It should be noted that EirGrid will only enter Project Agreement (A.6) with ESB Networks once CID has been achieved. This will allow the non-contestable elements of the project to progress.

The customer should be aware of the Consents Issue Date Longstop Date as outlined in their connection agreement and the risk to the project if CID is not achieved by this date.

7 Asset Transfer (Transfer of Ownership)

Asset transfer is a key deliverable of any new generation/demand project, the ownership of a site and equipment and/or rights over land, transfer to ESB as Transmission Asset Owner (TAO) including the interactions and parties responsible for its execution is required as per Schedule 12 in the connection agreement.

The connection agreement sets out the obligations on the customer for the transfer of ownership process. The information to be provided can be found in Schedule 12. It is the responsibility of the customer to provide the information as set out by the TSO and TAO, failure to provide the requested documentation/information may lead to project and energisation delays.

To provide a structured approach for managing and coordinating the asset transfer process, EirGrid has developed a standard folder structure. The necessary information and documentation required to enable the asset transfer process is defined within this folder structure, this will be known as the "*Asset Transfer*" folder.

Following the initial project kick off meeting, the Project Manager will create the Asset Transfer folder on the project SharePoint site which all parties (TSO, TAO and customer) will have access to. A breakdown of the contents will be provided to the customer to define clearly the documentation required for asset transfer.

Each project will be assigned an Asset Transfer Representative at the project Kick Off stage. The Asset Transfer Rep will work with the Project Manager and assist in the asset transfer process between parties. The Project Manager will remain as the main point of contact between the customer and the TAO and will facilitate the asset transfer process between both parties. The Asset Transfer Rep will communicate directly with the customer providing clear instruction on the asset transfer proceedings. It is in the best interests of the customer that they collaborate with the Project Manager and Asset Transfer Representative at an early stage in the project on these matters to ensure (in advance of CID) the transfer of ownership to the TAO, and as per contractual timescales outlined In Schedule 12 of the connection agreement.

Asset transfer is a key process during the project delivery lifecycle. Once Consents Issue Date has been achieved, this starts the clock on the deliverables and timelines to be met under the Schedule 12 requirements, as follows:

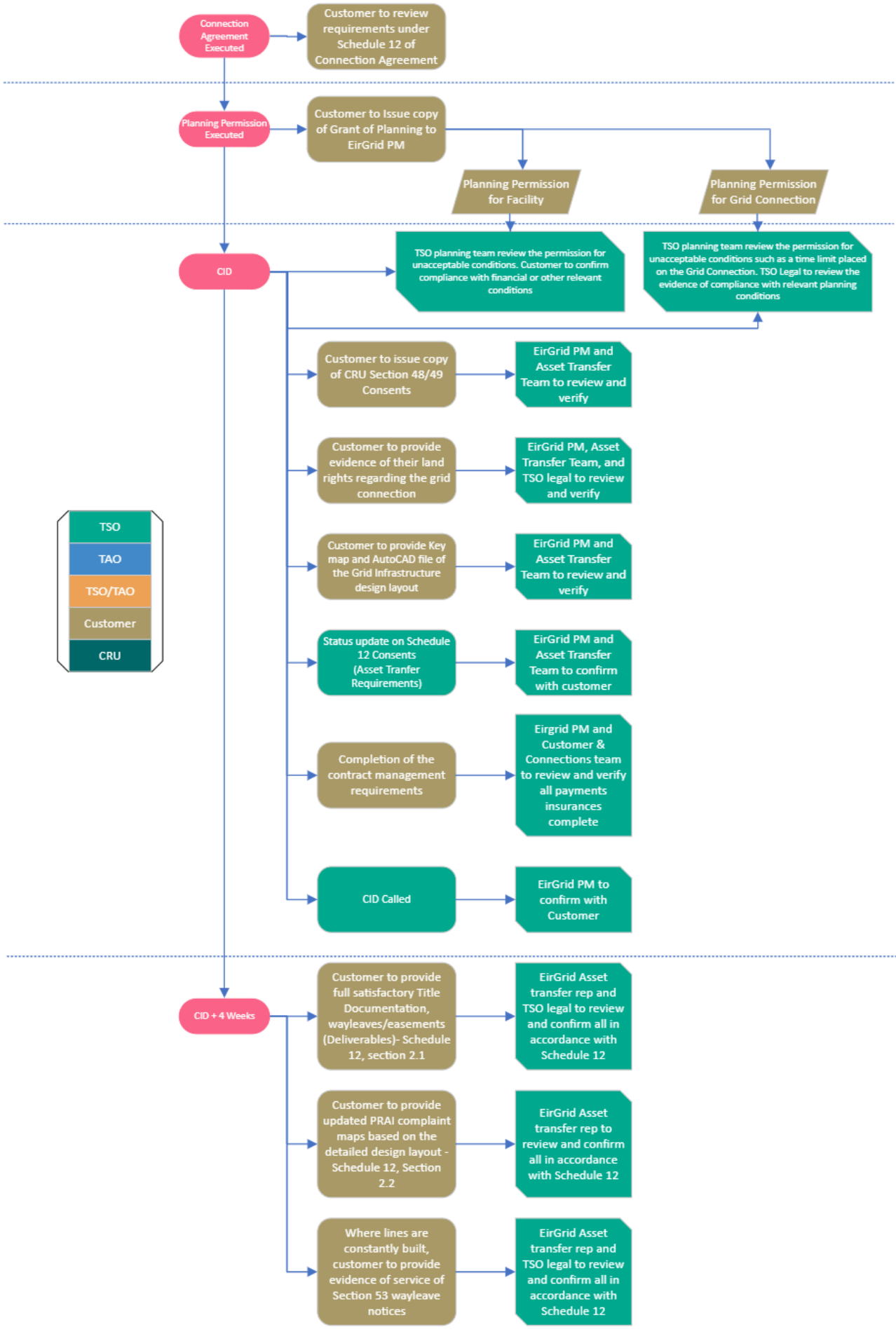
No later than one month after the Consents Issue Date:

- Satisfactory title documentation / maps.
- Requisite rights of wayleave, easement, and access (rights of way).
- Copies of Section 53 notices.

No later than six months after the Consents Issue Date and in any event prior to Energisation:

- A Contract for Sale, in the form agreed with the TAO, duly executed by the customer.
- Transfer of requisite wayleaves, easements, and rights of way (including the equipment, where applicable) to the TAO.

Note the project cannot proceed to energisation until all asset transfer obligations, as outlined in Schedule 12 of the connection agreement, are met.


Connection Agreement Executed
Customer to review requirements under Schedule 12 of Connection Agreement
Planning Permission Executed
Customer to Issue copy of Grant of Planning to EirGrid PM
Planning Permission for Facility
Planning Permission for Grid Connection
CID
TSO planning team review the permission for unacceptable conditions. Customer to confirm compliance with financial or other relevant conditions
TSO planning team review the permission for unacceptable conditions such as a time limit placed on the Grid Connection. TSO Legal to review the evidence of compliance with relevant planning conditions
Customer to issue copy of CRU Section 48/49 Consents
EirGrid PM and Asset Transfer Team to review and verify
Customer to provide evidence of their land rights regarding the grid connection
EirGrid PM, Asset Transfer Team, and TSO legal to review and verify
Customer to provide Key map and AutoCAD file of the Grid Infrastructure design layout
EirGrid PM and Asset Transfer Team to review and verify
Status update on Schedule 12 Consents (Asset Tranfer Requirements)
EirGrid PM and Asset Transfer Team to confirm with customer
Completion of the contract management requirements
Eirgrid PM and Customer & Connections team to review and verify all payments insurances complete
CID Called
EirGrid PM to confirm with Customer
TSO
TAO
TSO/TAO
Customer
CRU
CID + 4 Weeks
Customer to provide full satisfactory Title Documentation, wayleaves/easements (Deliverables)- Schedule 12, section 2.1
EirGrid Asset transfer rep and TSO legal to review and confirm all in accordance with Schedule 12
Customer to provide updated PRAI complaint maps based on the detailed design layout - Schedule 12, Section 2.2
EirGrid Asset transfer rep to review and confirm all in accordance with Schedule 12
Where lines are constantly built, customer to provide evidence of service of Section 53 wayleave notices
EirGrid Asset transfer rep and TSO legal to review and confirm all in accordance with Schedule 12

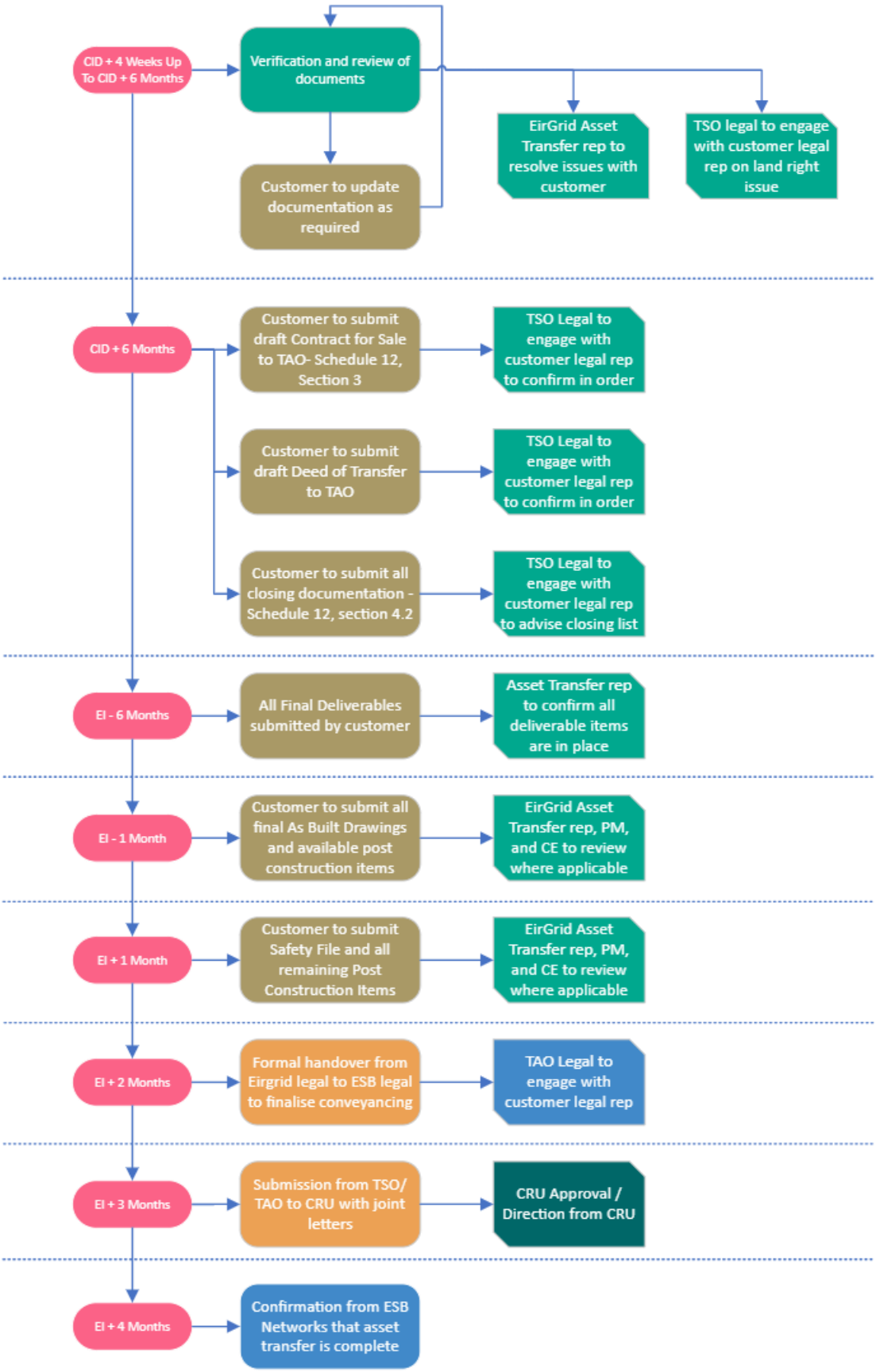


Figure 9: Asset Transfer Process Flow for Customer

Appendix A

Appendix A of this document provides the following table of information for deliverables set out in *Figure 6: Deliverables and Activities*. The information provided on each deliverable is designed to answer the questions below:

Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
What is the deliverable/activity to be completed?	*Who is responsible for the deliverables/ activities?*	*Who should the customer engage within EirGrid?*	*How will the customer engage with EirGrid?*	*When will the deliverables/ activities start and how long will it take?*

Figure 10: Description of Table Headings

The tables included are not intended to be exhaustive but are to provide the customer with a high-level overview of the deliverables and the activities required to meet them as well as the general sequence in which they happen. Moreover, the activity timeline is understood to be an indicative timeline only, as actual activity timelines are project specific and may vary accordingly.

A.1 Project Kick Off

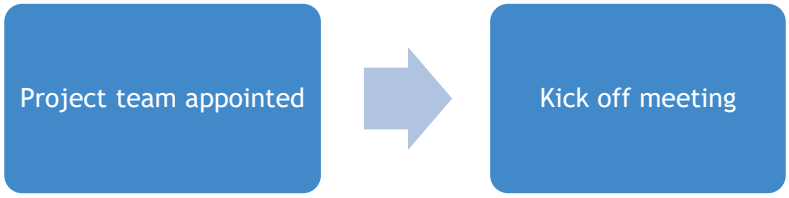
Overview

Once a connection agreement has been executed the project moves into the Delivery Phase which is led by the Connection Project Manager. The first deliverable during this phase is Project Kick Off, of which the key activities are to appoint the EirGrid project team and hold the Project Kick Off meeting between the EirGrid project team and the customer representatives. This is the customer's first opportunity to meet with the EirGrid project team.

In the kick off meeting the customer is expected to provide an overview of their project including information such as work carried out to date, status of planning, project programme, project objectives, project route to market, requirements and expectations, potential risks, introductions to project team and any other pertinent information that supports a successful kick off to the project.

EirGrid will provide information such as a project overview, introduction to the EirGrid team, project milestones, project programme, Infrastructure agreement overview, transfer of ownership, design review process, project risks and next steps for the project.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
Project team appointed	EirGrid	Project Manager	N/A	Within two weeks following connection agreement execution
Kick Off Meeting	EirGrid	Project Manager	N/A	+2 Weeks

Figure 11: Project Kick Off

Additional Information

The Project Manager will contact the customer to arrange the Project Kick Off meeting.

EirGrid will request that the customer provide the contact details of the key customer contact points/customer project team once the offer is executed. In addition, the customer will be requested to provide a high-level customer project programme, showing planning application submission date, detailed design submission date, target EI date etc. for discussion at the Project Kick Off meeting

A.2 Achievement of Financial Milestones

Overview

There are a number of financial milestones to be met during the Delivery Phase. Below is a high-level description of the key financial activities to be completed (if applicable) during this phase of the customer's project.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
Payment of the connection charge by customer	Customer	Contract Manager	Email	Per connection agreement
Provision of security relating to connection charge / capacity by customer	Customer	Contract Manager	Email	Per connection agreement
Settlement of pass-through costs	EirGrid and Customer	Project Manager	Email	Per offer letter and outturn costs
Payment of capital contributions (If applicable)	EirGrid	Project Manager	Email	Per offer letter and in accordance with CER/11/188 (If applicable)
Payment of refunds/rebate (If applicable)	EirGrid	Contract Manager	Email	Per connection agreement or as agreed between Parties (as applicable)

Figure 12: Financial Milestones

A.2.1 Connection Charge

The connection charge to be paid by the customer is outlined in the connection agreement and must be paid in accordance with the payment schedule in the offer letter.

A.2.2 Connection Charge Security

The connection charge security provisions are outlined in the connection agreement and the specific security requirements for the project are outlined in the offer letter and are typically provided prior to CID.

A.2.3 Capacity Security

The Maximum Export Capacity (MEC) for generation customers or Maximum Import Capacity (MIC) for demand customers, are security provisions as outlined in the connection agreement. The specific security requirements for the project are outlined in the offer letter; The MIC security is typically provided prior to

execution of the connection agreement, and the MEC security 1 month prior to energisation or 2 years post CID, whichever is earlier.

A.2.4 Pass Through

The Customer's connection assets and the associated charges are outlined in the Connection Agreement and are designated as either pass-through or non-pass through. Connection charges which fall outside the parameters of regulator approved standard charges are designated as Pass Through costs. These cost estimates are based on desktop studies carried out at connection offer stage. As such, the final charge is subject to project specific outturn costs which may result in an additional cost being passed through to the Customer

An update on the Pass-Through Costs will be communicated by the PM to the customer at Project Agreement stage and Post Energisation as part of project close out. When there is a significant cost variance on Pass Through Line items, Customers will be charged or refunded in accordance with the Connection Agreement.

Customers should be aware that poor performance by the customer (e.g. at design review stage or at construction stage) may have a significant impact on pass through charges as it will likely result in additional time spent on the project by EirGrid and/or ESB Networks and thus additional Pass-through Charges

A.2.5 Capital Contributions (if applicable)

A capital contribution may be due to a customer in certain scenarios. For example, where a customer carries out additional works above their required build as required by the System Operator or in instances where a Demand customer contests their connection method. Capital contributions are outlined in the offer letter.

A.2.6 Refunds (if applicable)

A refund may be due to a customer for project specific reasons and, if known at offer process stage, will be outlined in the offer letter.

A.2.7 Firm Access Methodology

The purpose of the Firm Access methodology is to achieve a balance between granting generators access to the network in advance of transmission reinforcements, providing certainty around market treatment and protecting the end consumer from high costs.

For information on the Firm Access methodology, Customers should review the SEM "Firm Access Methodology in Ireland decision" paper (SEM-23-004) and the CRU "Firm Access - Detailed Methodology"paper (CRU/2023114).

If the Customer is of the view that their generation project has satisfied the criteria to become Firm Access, the Customer should contact the Single Electricity Market Operator (SEMO) at BalancingMarketRegistration@sem-o.com to request a Firm Access Quantity update. This applies to both fully firm and partially firm capacity.

A.3 Issue Contestable Specification Pack

Overview

EirGrid, as a Transmission System Operator (TSO), plans, manages, develops and operates the national electricity transmission grid at 110, 220, 275 and 400kV across the island of Ireland. EirGrid develops and maintains Transmission Investment Policies setting out the acceptable standards and regulations for transmission developments. EirGrid also develops and maintains technical standards, including functional specifications and standard drawings that are available to assist customers proposing to connect to the Irish transmission system. These technical standards govern the design and construction of new transmission assets, namely transmission substations, cables and overhead lines.

EirGrid will issue a Contestable Specification Pack containing the relevant set of functional specifications, standards and project specific specifications, policies and drawings to the customer on which the customer's design of the contested assets will be based. The functional specifications outline the technical parameters which all plant, equipment and installation practices should comply with. The functional specification will issue as a pack with a number of discrete packages covering contestable elements as required for stations, overhead lines and cables, as applicable.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
Issuance of functional specifications	EirGrid	Client Engineer	Project site SharePoint & Email	12 weeks post kick off meeting
Customer queries to EirGrid	Customer	Client Engineer	Email or RFI Log	Project specific
Issuance of protection specifications	EirGrid	Client Engineer	Email	6 weeks post CPP Handover

Figure 13: Issue Contestable Specification Pack

Additional Information

Please note the functional specifications issued by EirGrid are project specific and are not to be used for other projects. The Client Engineer will inform the Customer by email when the functional specifications have been uploaded to the project extranet site.

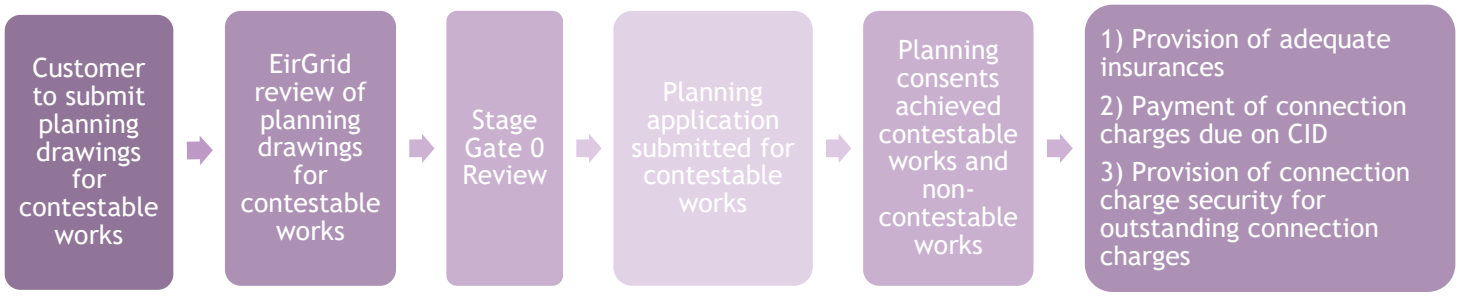
Functional specification requirements are subject to change from time to time based on new technologies, safe working standards or lessons learned during construction, operation and decommissioning. Any changes to specifications are reviewed internally to determine if they need to be applied retrospectively to existing connection projects. Typically this only applies where a health and safety or Network security concern arises.

A.4 Achieve Planning and Consents Issue Date

Overview

The Consents Issue Date (CID) is a key project milestone from both a delivery and contractual perspective. The scheduled CID is outlined in the customer's connection agreement. CID is achieved once planning and all other consents for the project have been achieved. This includes the consents for both the non-contestable and the contestable elements of the customer's project and the facility that will be connected to the transmission system.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
Customer to submit planning drawings for contestable works	Customer	Client Engineer	Email	Recommended minimum 4 weeks prior to lodgement
EirGrid review of planning drawings for contestable works	EirGrid	Client Engineer	Email	+2 weeks
Stage Gate 0 Review[3]	EirGrid	Client Engineer	Email	Prior to Planning submission
Planning application submitted for contestable works	EirGrid	Project Manager	Email	Offer execution + 7 months
Planning consents achieved for contestable works and non – contestable works	EirGrid and Customer	Project Manager	Email	Planning submission + 16 weeks for non – contestable works, per customers programme for contestable works
1) Provision of adequate insurances 2) Payment of connection charges in full 3) Provision of connection charge security.	Customer	Contract Manager	Email	Due on CID

Figure 14: Achieve Planning and Consents Issue Date

[3] EirGrid's Engineering & Asset Management Stage Gate Reviews are held weekly. Customer will be notified if further work is required or whether EirGrid accept the completed designs.

Additional Information

Stage Gate 0 Review

Stage Gate 0 reviews the Connection Point planning packs prior to submission to identify risks early in the planning pack content / assumptions which may otherwise delay the project or drive extensive design rework at a later stage. EirGrid's review will focus on the Customer's proposed siting, connection method, route selection, site and building plan, boundaries, environmental impacts, ground conditions etc of the holistic scheme.

CID

To fulfil contractual requirements to reach CID, it is necessary for customers to obtain Section 48/49 consents from the CRU which is particularly relevant for all cable projects.

Section 48 consent grants applicants the power to lay electric lines across or under a street, road, railway or tramway, and the right to break up any street, road, railway or tramway for that purpose. Section 49 consent grants applicants the power to lay electric lines across or under any land not being a street, road, railway, or tramway.

Pursuant to Section 48 and Section 49 of the Electricity Regulation Act 1999, the CRU has functions relating to the transfer of the ESB's powers under Section 51, Section 52 (1) and Section 53 (1) to (5) and (9) of the Electricity (Supply) Act 1927 (as amended). The CRU is responsible under legislation for assessing and granting these consents. The CRU's role is to ensure everything is in order (such as generator authorisation, licence, connection agreement, planning permission, etc.) before construction starts and the developer exercises rights over the land or road/tram/railway.

Of note to a customer project is Section 53, which applies to land which is not 'a street, road, railway, or tramway'. The ESB would have powers to enter that land and lay an electric line following seven days after having served a Wayleave Notice under Section 53(3) of the 1927 Act. Customers, could in theory, enter onto private lands and lay a cable if they hold Section 49 consent without having first obtained the consent of the landowner concerned, provided the customer serves the required Notice on the landowner. However, your entry on private land gives rise to a right of the landowner for statutory compensation under Section 53(5) of the 1927 Act, in default of agreement. It would therefore be advisable for customers to obtain the consent of the landowner prior to laying the cable on their lands, and to have that consent confirmed by way of deed (in addition to the required Section 48 or 49 consent) in return for compensation which satisfies the requirement of Section 53(5).

A.5 Complete Contestable Design Review

Overview

Following the issuance of the contestable specification packs, the customer is obliged to provide EirGrid with all relevant designs for review and comment. Designs should be submitted as complete packages at each stage for:

1. Planning submission
2. Preliminary Design
3. Detailed design (including pre-Construction information)

The contestable specification pack sets out expected content for each pack including supporting information. There are separate design packages for electrical, earthing & lightning, civils, cables and OHLs.

Part of the design review process involves a parallel due diligence process with ESB Networks as the Transmission Asset Owner who may also provide comments on the designs. Correspondence as outlined below needs to be sent to the appropriate Project Manager and Client Engineer.

Ensure that the email subject header contains the CP Number, Project title and Subject title. The following documents are necessary for the proper design review process to take place:

- Design Submission Log (expected content by design stage and package)
- Design submissions by Stage (per above) and Package (Electrical / Earthing & Lightning / Civils / Cable / Overhead etc)
- Comments logs

During the Design Review process Customers are requested to work closely with EirGrid Client Engineers to optimise the process. Workshops can be facilitated upon request with TSO/TAO/Consultants where necessary to avoid long and extended design review iterations.

Milestones to achieve SG1



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
Customer to provide design submission programme and expected drawing list for each design package	Customer	Client Engineer	Project site SharePoint	4-6 weeks prior to design review commencement
Customer to submit quality plans and test plans	Customer	Client Engineer	Project site SharePoint	2 weeks prior to design review commencement
Customer to submit design risk assessments	Customer	Client Engineer	Project site SharePoint	As per agreed programme
Customer to submit design packages as per relevant categories	Customer	Client Engineer	Project site SharePoint	As per agreed programme

Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
Design review of each package[4]	EirGrid	Client Engineer	Project site SharePoint	+3 weeks per package
ESBN Due Diligence review of each package	ESBN	Client Engineer	Project site SharePoint	+2 weeks per package (post EirGrid review)
Customer to resubmit revised designs	Customer	Client Engineer	Project site SharePoint	+3 weeks per package (typically 3 iterations)
EirGrid design acceptance	EirGrid	Client Engineer	Project site SharePoint	Prior to Stage Gate 1 Review
Stage Gate Review 1[5]	EirGrid	Client Engineer	Email	Prior to commencing Construction

Figure 15: Complete Contestable Design Due Diligence

Additional Information

Quality Assurance Requirements

The customer shall demonstrate that the design, construction, testing and installation of any asset connecting to the high voltage transmission system is safe by design and residual risks are sufficiently identified to allow for the safe energisation, operation, maintenance and alteration of the asset.

Customers are expected to conduct self-assurance against the contestable pack and should review the project requirements as standards may change over time. EirGrid review is for due diligence only.

Submission of Design Packages

The project SharePoint page (created by the PM) must be used to submit and share the design review packages. Complete design packages which are in compliance with the design submission programme must be submitted. Incomplete or poor-quality design packages will not be reviewed and the design review phase will be placed on-hold until a complete package of high quality is received risking delays to Stage Gate Acceptance and therefore project schedule.

A master document transmittal register is provided in the contestable pack which should be developed and maintained by the customer through the life of the project. Each document submission should include an update to the corresponding document transmittal register.

The design submission log included in the Contestable Pack sets out expected package content in detail for each stage. EirGrid's design review and acceptance via Stage Gate Review must be carried out prior to construction commencing. Customers commencing construction prior to an accepted Stage Gate Review do so entirely at their own risk.

EirGrid will comment on the design packages but will not carry out a detailed design check. EirGrid's review of the customer design submissions is intended as an acceptance not as an approval. The customer is

[4] Review time per package is 5 weeks (3 weeks for EirGrid followed by 2 weeks for ESBN). Each iteration submitted by the customer there after takes an additional 3 weeks to review. The number of iterations required is based on the quantity and complexity of queries generated from the design review. Customer should allow sufficient schedule time for a minimum of 3 iterations.

[5] EirGrid's Engineering & Asset Management Stage Gate Reviews are held weekly. Customer will be notified if further work is required or whether EirGrid accept the submitted designs.

ultimately responsible for ensuring that the design is compliant with the EirGrid functional specifications. Customers should note:

- One complete design submission package can be facilitated by EirGrid per 3 business week period.
- Technical schedules are key indicators of acceptability of design and should be prioritised in terms of submission schedules.
- Relevant test reports are a key design requirement and should also be prioritised in the design submissions.

Where assets are due to be transferred to ESBN as asset owner, ESBN will also carry out a high-level due diligence of the design packages following the EirGrid review. Any additional comments from ESBN will be managed by EirGrid and resolved with the customer as necessary.

Format of Design Submissions

The format of Design Submissions will be such that:

1. All drawings and documents should contain a number, title and Rev in the file name, along the lines of e.g. PRJNo-DWG-XX-Bridge-XX-XX-Rev03 or PRJNo-RPT-XX-XX-Bridge report-XX-Rev03
2. File names do not contain invalid characters e.g. | # { } % & <TAB>" ~ + \ / : * ? " < >
3. File names are not of a length that prohibits uploading onto SharePoint sites (> 256 characters)
4. Numbering sequences should be reflected per the provided folder structures.

EirGrid Design Review Comments Log

EirGrid will issue comments on the design review submissions via the design review comments log within 3 weeks of receipt. The format of this document is not to be altered by the customer. ESBN due diligence comments will be captured on the same comment log maintained by EirGrid.

Derogations

If Customer finds that they are, or will be, unable to comply with any provision of EirGrid's standards, requirements or functional specifications, then they shall make all reasonable efforts required to remedy non-compliance as soon as reasonably possible. Customers should communicate any non-conformances against Contestable pack requirements to EirGrid as early as possible.

EirGrid maintains a derogation process for tracking and reviewing any requests for derogation to standards. Customers should liaise with the Client Engineer on the process. Derogation request accepting is not automatic, and any rejected derogation requests will be expected to be resolved.

ESBN Due Diligence review of each package

The timeline for receipt of contestable designs will be provided by EirGrid to ESBN as soon as these are available from the customer.

A copy of the contestable designs will be issued to ESBN when received by EirGrid and in advance of EirGrid's full contestable design review. The designs shall be submitted in the form of complete design packages e.g. planning, electrical, Earthing & Lightning, civil, OHL, UGC etc. This initial receipt is for information purposes rather than to trigger any level of Due Diligence.

Following EirGrid's design review (within 3 weeks of receipt) EirGrid will issue EirGrid's Design Review Comments Log to ESBN in their entirety. Once received ESBN will begin their Due Diligence.

ESBN will provide Due Diligence on the customer design submission and EirGrid's design review. The review period for completing due diligence is 2 weeks. ESBN will add TAO comments to the EirGrid comment log which will then be returned to the Customer.

The Due Diligence process on the Design Review phase can only formally be closed out once all issues identified by both EirGrid and ESB have been addressed. This mechanism will be captured through the closing out of all the comments raised by EirGrid and the TAO in comment logs. The customer is responsible for addressing design queries and providing solutions to issues identified. All comments in the EirGrid Design Review Comments Log should be satisfactorily addressed or closed out prior to commencement of construction.

A.6 Achieve EirGrid/ESB Networks Project Agreement

Overview

ESB Networks are responsible for completing the non-contestable works for the project with the exception of TSO RTU and metering works which are the responsibility of EirGrid via ESB Telecoms.

There is a legal agreement in place between EirGrid and ESB Networks, the "Infrastructure Agreement" (IA), which sets down the terms under which ESB Networks provides infrastructure services to EirGrid. There are a number of key documents associated with organising works under the IA and these are:

Committed Project Parameters (CPP)

EirGrid will compile and issue the CPP to ESB Networks to outline the works required to be completed by ESB Networks to deliver the project. This includes the functional specifications and the necessary consents for the project.

Define Scope of Work phase (SOW)

After receiving the CPP, ESB networks will develop the non-contestable Scope of Works for the project. The SOW outlines the tasks and activities required to complete the project including technical specifications, construction methodologies and any enabling works necessary for project execution.

Project Implementation Plan (PIP)

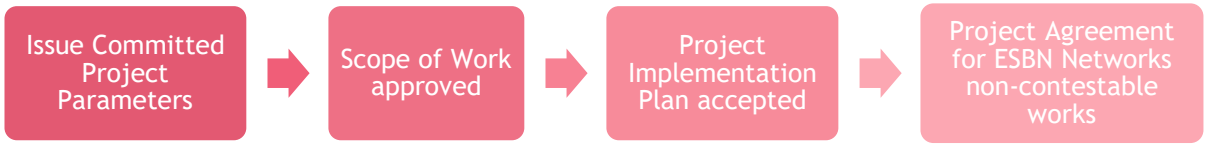
ESB Networks will compile and issue a PIP to EirGrid to outline the plan to deliver the works to be completed by them. This plan also includes a high-level sequence of transmission outages required for the connection of the project to the transmission system.

Project Agreement (PA)

Following acceptance of the CPP and PIP by EirGrid and ESB Networks both parties will enter into an agreement to deliver the works required to be completed by ESB Networks through the signing of a Project Agreement. This will commence activities under the Non-Contestable Construction Works, as outlined in A.8.

The timeline for the CPP – PA is project specific and will vary accordingly but a minimum of 9 months should be allowed for.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
Issue Committed Project Parameters	EirGrid	Project Manager	Email Notification	Project Specific
Scope of Work approved	EirGrid	Project Manager	Email Notification	Project Specific
Project Implementation Plan Accepted	EirGrid	Project Manager	Email Notification	Project Specific
Project Agreement for ESB Networks non-contestable works	EirGrid	Project Manager	Email Notification	Project Specific

Figure 16: Achieve EirGrid/ESB Networks Project Agreement

Additional Information

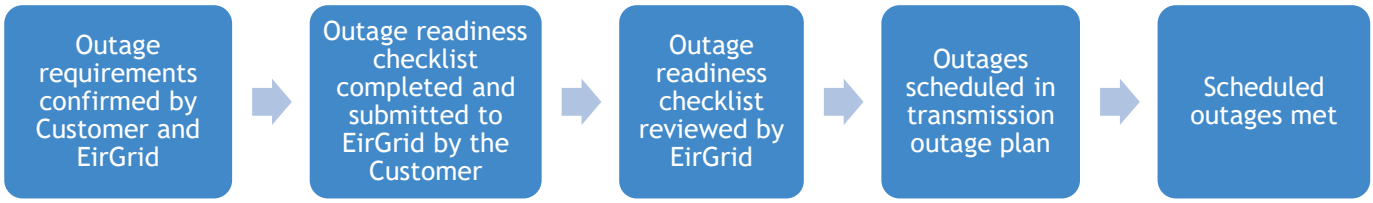
The customer does not have any obligations as part of the delivery of the Infrastructure Agreement. However, it should be noted that EirGrid will not enter PA if the necessary 2nd stage payment of the connection charge has not been paid and if the deliverable Consents Issue Date (A.4) has not been achieved.

A.7 Transmission Outage Planning

Overview

Any system outages that are required to facilitate the construction and energisation of a customer's project must be carefully planned. EirGrid develop and manage an annual programme of transmission outages and the planning process begins a year before the given calendar year outage season. Key information is required from the customer such as detailed project and pre-commissioning programmes including outage dates and durations at an early stage. Risk to an energisation date is best mitigated via early engagement and accurate scheduling. Informing the Project Manager of a targeted energisation date early in the project life allows them to communicate this to the transmission outage planning team. There is always a risk that outages may not always be granted in certain areas of the transmission network where there are multiple competing outages in a region, or where security of supply or safe operation of the system is priority. This may result in delays to the works schedule and ultimately the EI.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
Outage requirements confirmed by customer and EirGrid	EirGrid, ESBN and Customer	Project Manager	Email	Mid outage year 1
Outage readiness checklist completed and submitted to EirGrid by the Customer	Customer	Project Manager	Email	Q4 of TOP year 1
Outage readiness checklist reviewed by EirGird and comments addressed by Customer	EirGrid	Project Manager	Email	4 weeks
Outages scheduled in transmission outage plan	EirGrid	Project Manager	Email	Q4 of TOP year 1
Scheduled outages met	EirGrid, ESBN and Customer	Project Manager	Email	As per project programme

Figure 17: Transmission Outage Planning

Additional Information

System outages required for the completion of non-contestable works will be provided by ESB Networks via the PIP (refer to A.6). Customers should be aware that the outages required for non-contestable works can be significant and are driven and determined by ESB Networks. In some instances, completion of customer works are required to schedule outages to facilitate system testing ahead of energisation.

EirGrid require that a project has all necessary planning consents and has reached Project Agreement (refer to A.6) prior to December in the year before the required outage.

It is imperative that the customer allows adequate time for construction for contestable works such that planned outages are met as missing an outage may delay the final energisation of a plant. The customer should be aware that any delay in missing an outage slot can have a significant programme impact as a re-scheduled outage must be co-ordinated and analysed as part of the overall transmission outage programme before it can be deemed feasible or not.

Works that the customer require in their facility may require outages on the transmission system such as customer earth grid compound testing (Further information is available in the Policy Statement on Options for Connecting Customers to the Transmission Network).[6]

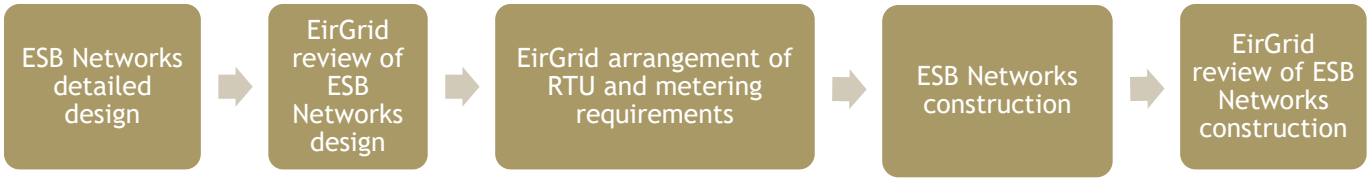
[6] Further information on how we plan for generator and transmission outages can be found here.

A.8 Complete Non-Contestable Construction Works

Overview

Non-contestable construction is the responsibility of ESB Networks with the exception of RTU and metering works which are the responsibility of EirGrid to organise via ESB Telecoms. The non-contestable works for ESB Networks will include both a design and construction phase.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
ESB Networks detailed design	EirGrid	Project Manager	General update at progress meetings	Commences once project agreement (A.6) is reached
EirGrid review of ESB Networks design	EirGrid	Client Engineer	General update at progress meetings	2 weeks
EirGrid arrangement of RTU and metering requirements	EirGrid	Project Manager	General update at progress meetings	Project Specific
ESB Networks construction	EirGrid	Project Manager	General update at progress meetings	Project Specific
EirGrid review of ESB Networks construction	EirGrid	Project Manager	General update at progress meetings	Project Specific

Figure 18: Complete Non-Contestable Construction Works

Additional Information

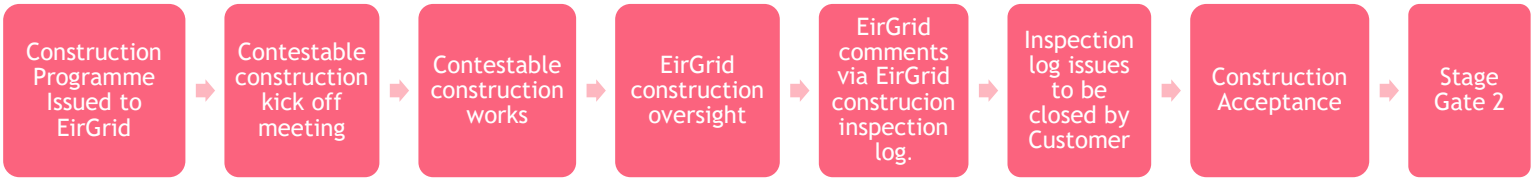
In general, the customer will be kept updated on the non-contestable works programme at progress meetings. However, if there are any major changes to this programme that may impact the customer the Project Manager will contact the customer as appropriate.

A.9 Complete Contestable Construction Works

Overview

The Contestable Construction Stage commences once the customer starts works on site. The key EirGrid activity during this phase is the construction oversight process for which the Client Engineer is responsible. During this phase monthly progress meetings will typically take place on site.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
Construction Programme Issued to EirGrid	Customer	Project Manager	Email	Within 30 business days of CID or as per Connection Agreement
Contestable construction kick-off meeting	EirGrid	Project Manager	Meeting (On Site)	On commencement of construction
Contestable construction works	Customer	Client Engineer and Project Manager	Email and Progress Meetings	Project Specific
EirGrid construction oversight	EirGrid	Client Engineer	Site Attendance and FAT Attendance	Monthly or as required/appropriate
EirGrid comments via EirGrid construction inspection log.	EirGrid and Customer	Client Engineer	Email	Weekly or as required/appropriate
Inspection log issues to be closed by customer	Customer	Client Engineer	Site Inspection	Prior to commencement of pre-commissioning
EirGrid acceptance of construction	EirGrid	Client Engineer	Email	Prior to Stage Gate 2 Review
Stage Gate 2 Review[7]	EirGrid	Client Engineer	Email	Prior to commencement of pre-commissioning

Figure 19: Complete Contestable Construction Works

Additional Information

Construction Programmes

The Customer is required to issue a Construction Programme to EirGrid outlining the design, construction, pre-commissioning and testing of the Customers connection works. The programme should be issued within 30 business days of achieving CID or as per the timeline outlined in the Connection Agreement. EirGrid require that the customer provides a construction programme as EirGrid (or their representatives) will

[7] The construction completion Stage Gate Review 2 may be combined with the Pre-commissioning (Stage Gate Review 3) based on the complexity of the project / works. Client Engineer will advise if this is the case.

require this to witness construction activities. This will include (but is not limited to) earth grid installation, cable duct installation, concrete pouring and foundation installation, high voltage equipment installation and earth connections. EirGrid will issue any comments on issues identified in the construction phase on a project specific Construction Inspection Log.

Should it become apparent that the actual progress of construction does not align with the construction programme, the Customer is required to submit an updated programme to accurately reflect the progress of the construction and with updated timelines to reflect any delays.

Quality Plans and Compliance with Functional Specifications

The customer is responsible for adhering to their own quality plan and for compliance with EirGrid's functional specifications.

EirGrid will carry out a construction oversight role on site and provide comments but customers should be aware that this is a due diligence review and not an approval of the works.

Customers should be aware that if the contestable works are not fit for purpose or do not meet the functional specifications, remedial works may be required and this may result in system outage slots being lost and lead to project delays. Relevant requirements relating to standard and quality of construction is contained within the EirGrid functional specifications.

Factory Acceptance Tests

The Client Engineer will witness factory and site acceptance testing. The customer is obliged to provide EirGrid with timely notice to allow attendance at Factory Acceptance Tests for Plant/Equipment.

Snags

All snags will need to be identified and categorised as follows:

Category 1 – Snags that are to be completed by the customer prior to commissioning commencing.

Category 2 – Snags that are to be completed by the customer prior to energisation.

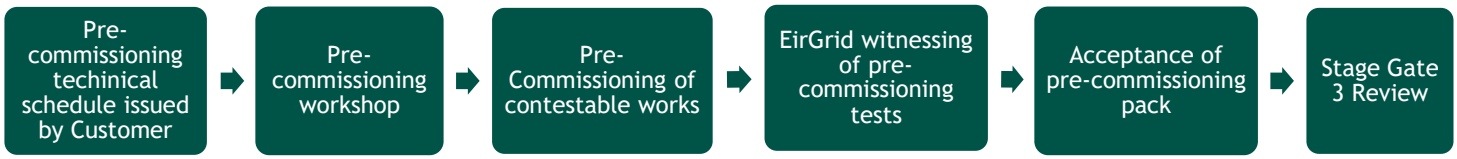
Category 3 – Snags that are to be completed by the customer prior to agreed timeframe post energisation.

A.10 Complete Pre-Commissioning

Overview

The customer completes pre-commissioning of the contested asset prior to the commencement of the commissioning and energisation phase.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
Pre-commissioning technical schedule issued by customer	Customer	Client Engineer	Email	At least 2 weeks prior to agreed handover date
Pre-commissioning workshop	EirGrid and Customer	Client Engineer	On Site	Prior to pre-commissioning commencing
Pre-commissioning of contestable works	Customer	Client Engineer and Project Manager	On Site	Project Specific
EirGrid witnessing of pre-commissioning tests	EirGrid and Customer	Client Engineer	On Site	As agreed
EirGrid acceptance of pre-commissioning pack	EirGrid	Client Engineer	Email	Prior to Stage Gate 3 Review
Stage Gate 3 Review	EirGrid	Client Engineer	Email	Prior to Commissioning

Figure 20: Complete Pre-Commissioning

Additional Information

The design comments log and construction inspection logs must be closed out prior to pre-commissioning. The pre-commissioning log must be closed and notice received of EirGrid's Stage Gate 3 acceptance before commissioning can commence.

The pre-commissioning schedule developed by the Customer is a key document in terms of demonstrating readiness for handover to ESB Networks for commissioning. EirGrid require that the Customer adheres to the functional specification requirements for pre-commissioning handover. EirGrid may wish to witness key tests within this schedule and as such it is the responsibility of the Customer to include them in the project schedule and inform EirGrid when the tests will be taking place and if there was any change to the original planned dates.

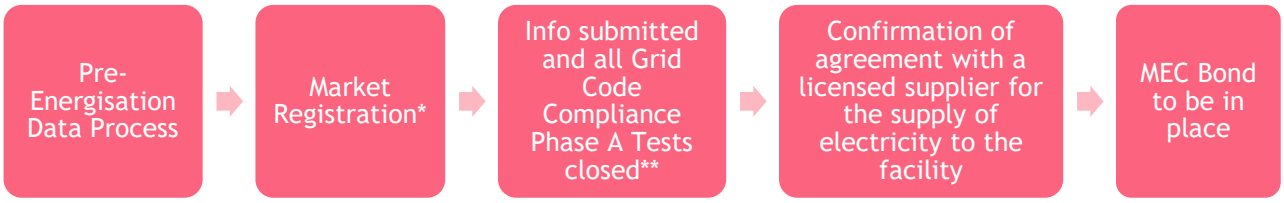
It is important that pre-commissioning is rigorously implemented to ensure issues do not arise during the commissioning stage. Customers should be acutely aware that any delay at this stage of the project significantly increases the risk of missing the commissioning or outage and energisation windows.

A.11 Complete Pre-Energisation Activities

Overview

There are a number of key activities that must be completed by the customer in advance of energisation. The sections below contain the key deliverables that must be met with a further breakdown on the Pre-Energisation Data required detailed in A.11.1.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
Pre-energisation data process	EirGrid and Customer	Project Manager	Email	See sub-section A.11.1 below
Market registration	Customer	*SEMO and Contract Manager	Email	60 business days prior to energisation
**Info submitted and all grid code compliance EON/ION requirements closed	Customer	Project Manager	Email	As required but must be prior to energisation
Confirmation that there is a current and enforceable agreement in place with a licensed supplier for the supply of electricity to the facility	Customer	Contract Manager	Email	Prior to energisation
MEC Bond to be in place	Customer	Contract Manager	Email	At least 1 month prior to energisation

Figure 21: Complete Pre-Energisation Activities

Additional Information

*Note that market registration is applicable for generation customers only. Generation customers are required to register in the Single Electricity Market. As part of this process the customer will interact with the SEMO Registration Team. The registration application pack must be completed in full and validated by SEMO before the registration process starts. The registration process can take up to 60 business days to complete from the date of receipt of the completed application. Confirmation of SEM registration is a contractual requirement necessary prior to energisation. Any energy generated prior to a unit's commencement date cannot be settled in the market as per the Trading & Settlement Code. Please find further information on the SEMO website here. To begin the Balancing Market Registration process, call and ask to speak to a Registration representative or email balancingmarketregistration@sem-o.com.

**Customers should be aware of their specific obligations for Grid Code Compliance EON/ION at an early stage in the project to ensure that all of the related requirements are closed in advance of energisation. Please refer to the EirGrid website for further detail regarding information that is required to be submitted by the Customer to EirGrid.

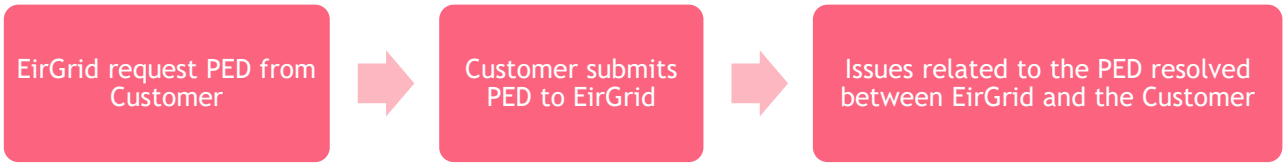
Although the Project Manager will remain the primary point of contact, customers can expect to interact closely with the EirGrid Compliance and Testing Engineer in relation to Grid Code Compliance EON/ION. The Compliance and Testing Engineer will attend a progress kick-off meeting at an early stage in the project to initiate actions required under this activity.

A.11.1 Pre-Energisation Data

Overview

Facilities apply to connect to the grid using either submitted or assumed data. This data is used to assess the impact of the connection on the Transmission System. In general, each connection agreement contains a clause on "Pre-Energisation Data" (PED) which states whether the agreement is completed using assumed or submitted data. If an application is completed using assumed data, generic application data is assumed by EirGrid for the purposes of carrying out the connection studies. Submitted data is the full set of technical information provided by a generator including parameters for turbines, transformers, internal networks, etc.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
EirGrid request PED from customer	EirGrid	Project Manager	Email	18 months prior to energisation
Customer submits PED to EirGrid	Customer	Project Manager	Email	12 months prior to energisation
Issues related to the PED resolved between EirGrid and the customer	EirGrid and Customer	Project Manager	Email	6 months prior to energisation

Figure 22: Pre-Energisation Data

When requesting PED, EirGrid will also provide the customer with Power Quality Limits and Minimum System Strength Data.

PED information the customer provides to EirGrid as part of the full application form includes:

- Power Quality Compliance Report.
- Fault Ride Through ('FRT') Compliance Report including the dynamic model used in their FRT studies with site specific parameters.
- Site-specific parameters for WECC generic model and validation report.
- EMT Model and validation report

Whilst the Project Manager will remain the primary contact point it is likely that the customer will interact directly with the EirGrid planning department on queries and issues relating to power quality and dynamic models.

Figure 23: EON / ION Checklist Flowchart below further outlines the PED process.[8]

Additional Information

Power Quality

All facilities are obliged to comply with the power quality limits issued by the TSO. Power quality refers to the quality of the electrical supply as presented at the generator interface and must be maintained within the acceptable levels set out in the EirGrid Grid Code. In order to achieve this, the TSO will provide limits to each new facility connection provided at their interface point with the Transmission System. The facility must then demonstrate their compliance with these limits in a Power Quality Compliance Report which is reviewed by EirGrid.

Minimum System Strength and Fault Ride Through

Minimum System Strength data is provided by EirGrid to controllable individual transmission customers. The data provided relates to minimum system strength conditions that can be reasonably expected at the transmission connection node. This data is provided to the controllable generators in order for them to carry out their own dynamic studies to demonstrate compliance with the Fault Ride Through (FRT) Grid Code requirements of their plant under the system conditions expected to arise at their connection node. All controllable transmission and distribution generators are requested to submit the following:

- FRT compliance report demonstrating that their facility complies with the FRT requirements defined in the Grid Code.
- Accurate Dynamic Model of the facility in PSS/E format including the appropriate control parameter settings, as identified in the FRT study.

Customers should be aware that any delays in the provision of PED may drive an offer modification charge payable by the customer or may impact on the customer's target energisation date.

WECC 2nd Generation Model Parameters

All Power Park Modules (PPMs) are required to submit site-specific parameters for WECC second generation generic models to accurately represent the dynamic behaviour of the plant and to assess the impact and performance of the facilities on the transmission system in real time operations. EirGrid provides a spreadsheet titled "WECC-Model-Submission-Spreadsheetv1.0.xlsx" to the customers to be used in the parameter submissions.

Customers are required to submit an initial version of the WECC model parameters at least 3 months before the scheduled energisation of the facility. After the completion of Grid Code Compliance (GCC) Tests, a validation report should be submitted no later than 6 weeks demonstrating that the provided set of model parameters reflect the site-specific configuration of the plant. If any control parameters have been re-tuned during commissioning tests, these should be highlighted in the report and the updated parameters and set values should be submitted to EirGrid.

Electromagnetic Transient (EMT) Model

Due to the shift from synchronous generation to Inverter Based Resources there are increasing operational risks to the dynamic stability of the power system, therefore EMT models are now required to enable EirGrid conduct detailed stability and reliability studies.

[8] Please refer to the EirGrid website for further information on Pre-Energisation Data here.

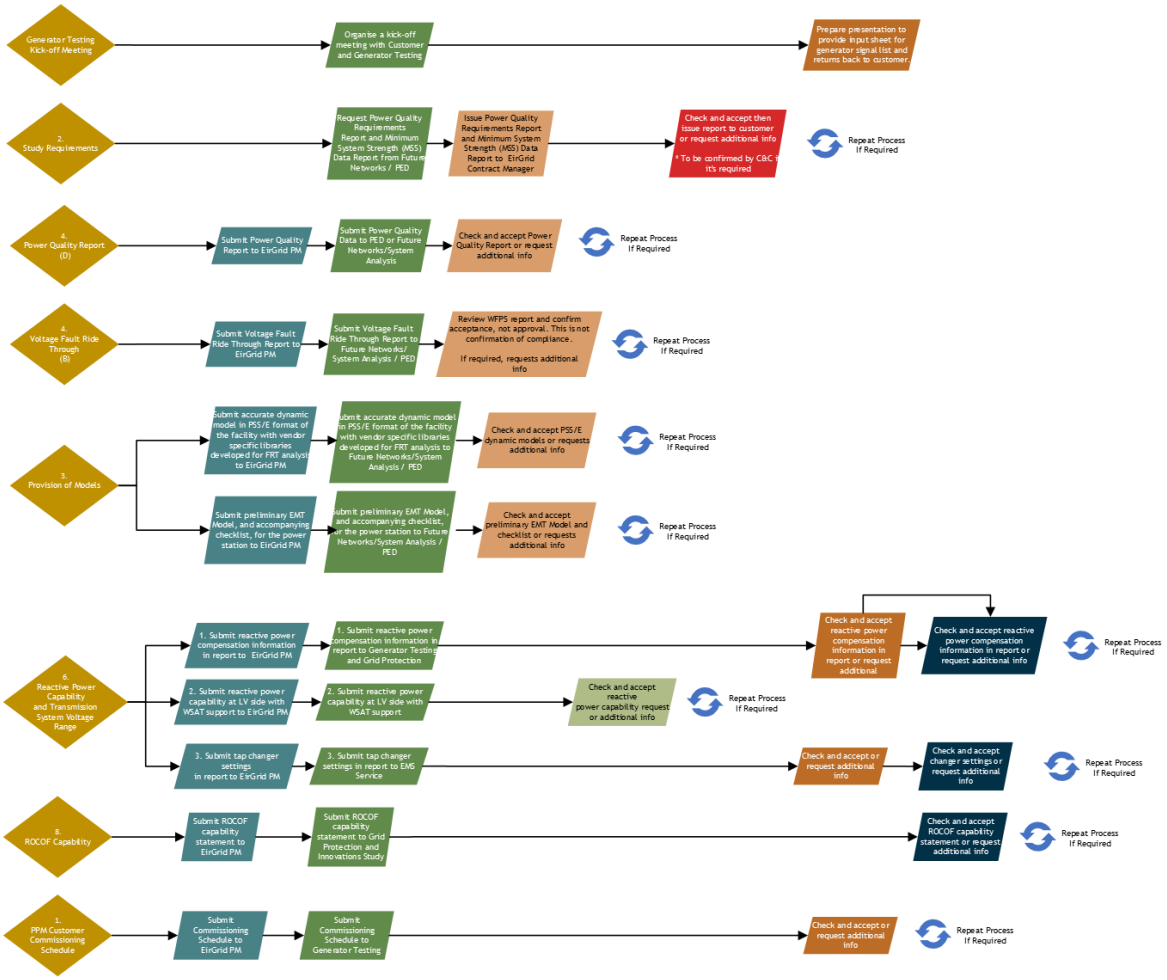
All new connections to the Transmission System will be requested to submit an EMT model in compliance with EirGrid specifications at least 3 months before the scheduled energisation of the facility. Existing plants may also be required to provide EMT models in cases where screening studies conducted by EirGrid identify operational risks that require further detailed analysis, or in situations where the plant has participated in an observable oscillation in the system.

Please refer to the EirGrid website for further information regarding the EMT model specifications here.

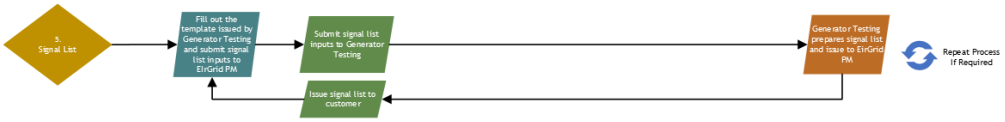
Requirements for EMT model validation are currently under development and will be published soon.



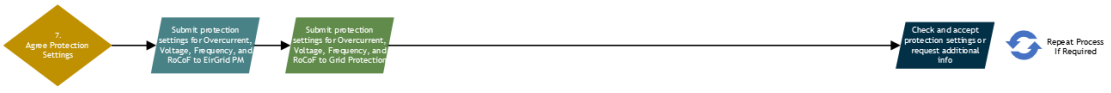
Energisation - 18 Months



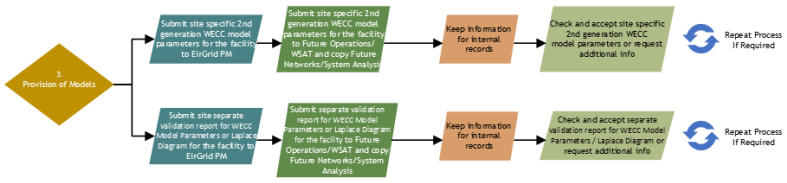
Energisation - 12 Months



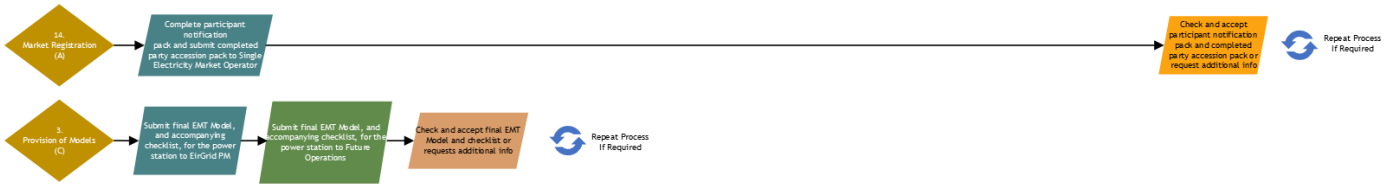
Energisation - 9 Months



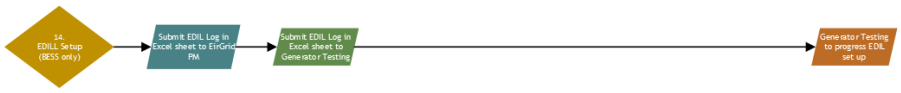
Energisation - 4 Months



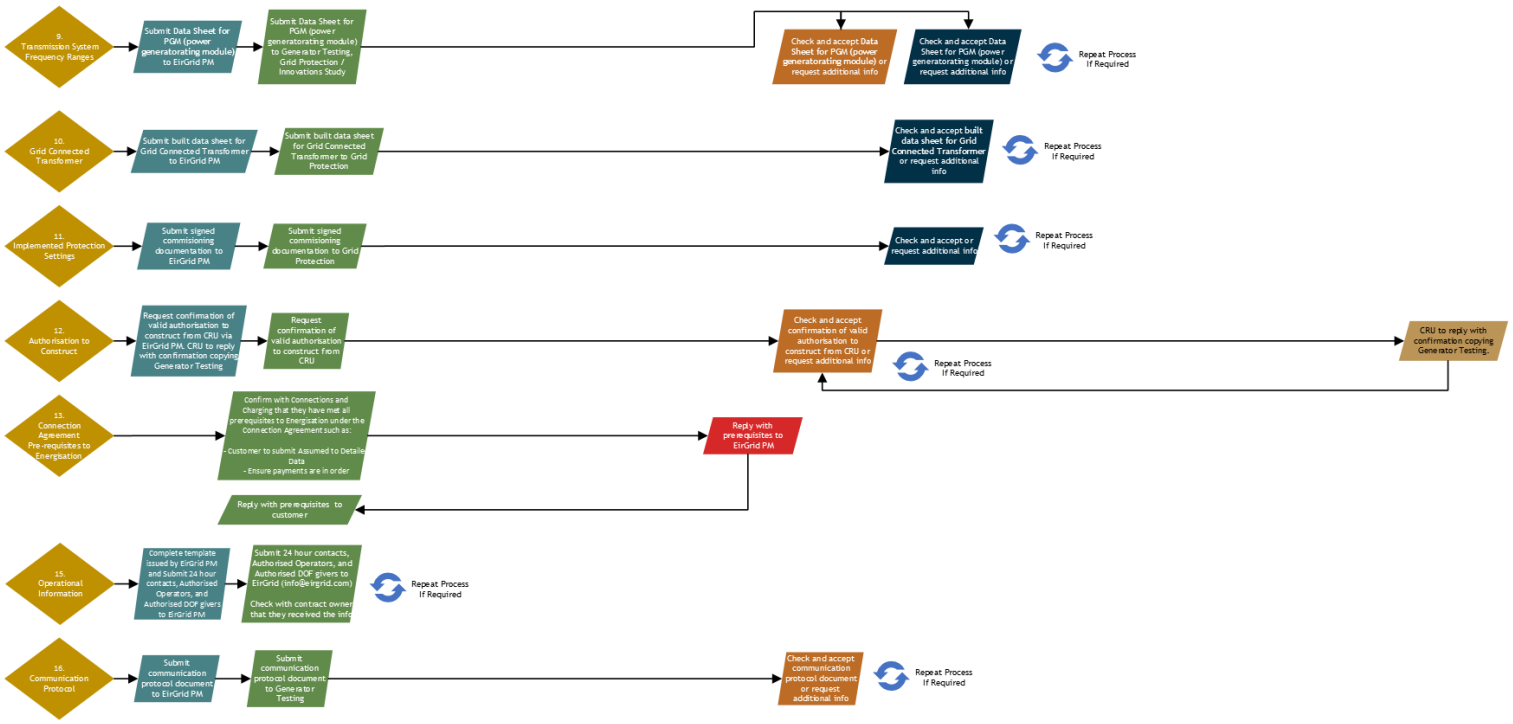
Energisation - 3 Months



Energisation - 2 Months



Advance of Market Effective Date - 6 to 8 Weeks



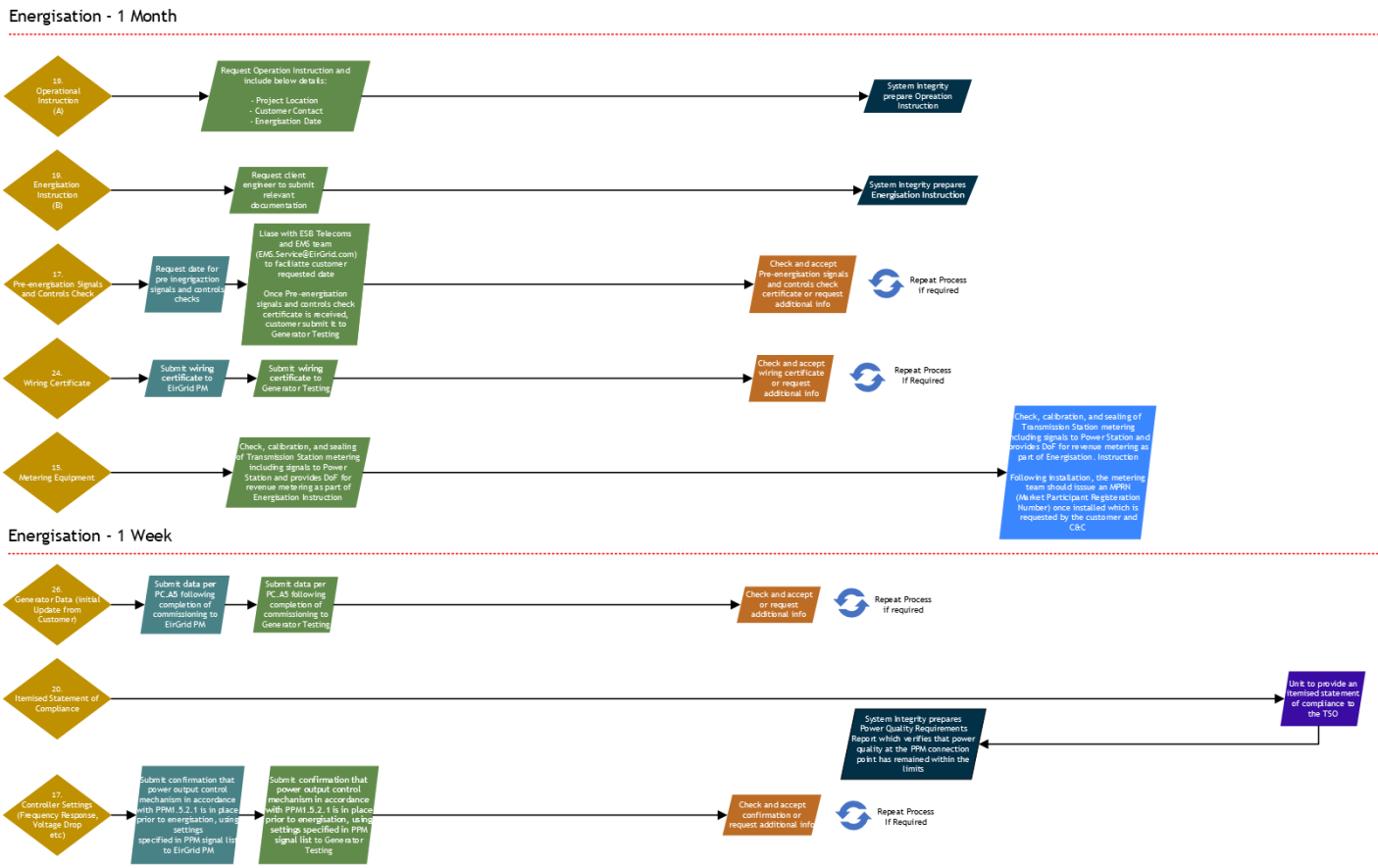


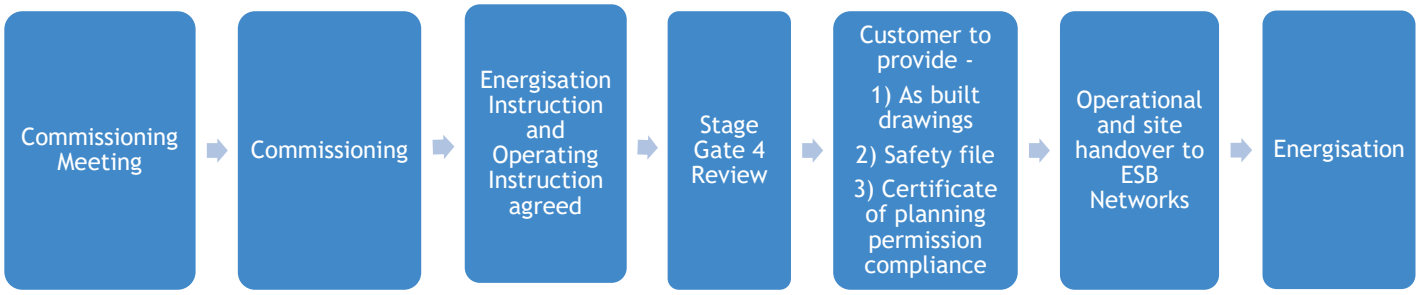
Figure 23: EON / ION Checklist Flowchart

A.12 Complete Commissioning and Energisation

Overview

Commissioning and Energisation is carried out by ESB Networks and is non-contestable work.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
Commissioning meeting	Customer and EirGrid	Project Manager	Meeting	Prior to commencement of commissioning works
Commissioning	EirGrid	Project Manager	Email with discussion at progress meetings	Project Specific
Energisation Instruction and Operating Instruction agreed	EirGrid	Project Manager	Email and site meeting	Prior to Energisation
Stage Gate Review 4	EirGrid	Client Engineer	Email	Prior to Energisation
Customer to provide the Safety File incl. 1) As built drawings 2) equipment O&Ms 3) any other relevant information / documentation	Customer	Project Manager	Sharepoint / Email	2 weeks prior to agreed handover date
Operational and site handover to ESB Networks	Customer and EirGrid	Project Manager	On site	As agreed by all parties
Energisation	EirGrid	Project Manager	Email with discussion at progress meetings on site and via email	Project Specific

Figure 24: Complete Commissioning and Energisation

Additional Information

EirGrid will arrange a commissioning meeting to provide all necessary commissioning and safety documentation to ESB Networks and assess if pre-commissioning is sufficiently complete to allow site handover to ESB Networks proceed. EirGrid and ESB Networks require a 2 week "cooling off" period between the completion of pre-commissioning (Stage Gate 3 achieved) and the commencement of the commissioning period. The customer should submit the pre-commissioning pack to EirGrid a minimum of 3 weeks prior to the planned handover date to allow time for an EirGrid review.

The commissioner will commission the contestable constructed components with assistance from the customer. The customer will nominate a point of contact responsible for the design of the project and who will be available on site to deal with any design queries the commissioner may have.

EirGrid's Power System Operational Planning department will visit site and liaise with the customer in relation to the agreement of the energisation instruction and the operation instruction. The Project Manager will coordinate this.

A safety file for station familiarisation will be developed by the customer for EirGrid and sent to ESB Networks.

An interface kiosk testing date will be agreed between the customer and EirGrid. This typically takes place three weeks prior to energisation. A fully commissioned customer site (no simulated signals) is a pre-requisite for this testing to take place.

The customer will remain the PSCS for the site for the full duration of ESB Networks commissioning.

In advance of energisation of the site related connection equipment and pending property transfer from the customer to the TAO, transfer of the operational control of the site related connection equipment from the customer to the TSO and TAO must take place.

In order to effect the Energisation of the asset EirGrid must provide acceptance of the works being completed in accordance with the accepted design, standards and functional requirements and that pre-commissioning and commissioning test results were satisfactory. Stage Gate 4 Review is therefore required prior to Energisation and should be scheduled accordingly to avoid delays in Energisation dates / their required outage windows.

The Handover Agreement forms part of the connection agreement General Conditions– Clauses 23.2 and 23.3 and requires approval by EirGrid Director of Operations and the customer in advance of transfer of Operational control.

Following energisation, the harmonic distortion at customer point of connection is to be monitored for three months[9].This monitoring period will take place after issuance of the Operational Readiness Confirmation to ensure that any resultant harmonic distortion is within the limits allocated to the customer. This procedure should be followed for all inverter-based resources connecting to the system.

[9] The Policy on Harmonics is currently being reviewed; therefore, this monitoring period might be updated. Please, check latest information on EirGrid's website.

A.13 Complete Transfer of Ownership

Overview

Under the connection agreement the customer is obliged to transfer ownership of site and equipment and/or rights over land to ESB Networks as Transmission Asset Owner. This process is commenced in advance of CID (A.4) and is completed following energisation. Both the customer and EirGrid have a number of obligations as part of this process and approval must be sought from the CRU before the formal completion of the transfer takes place.

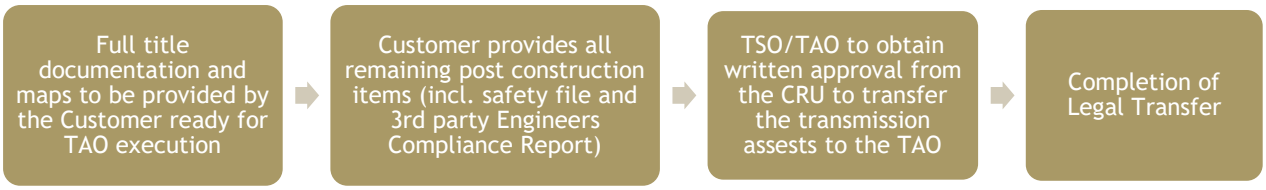
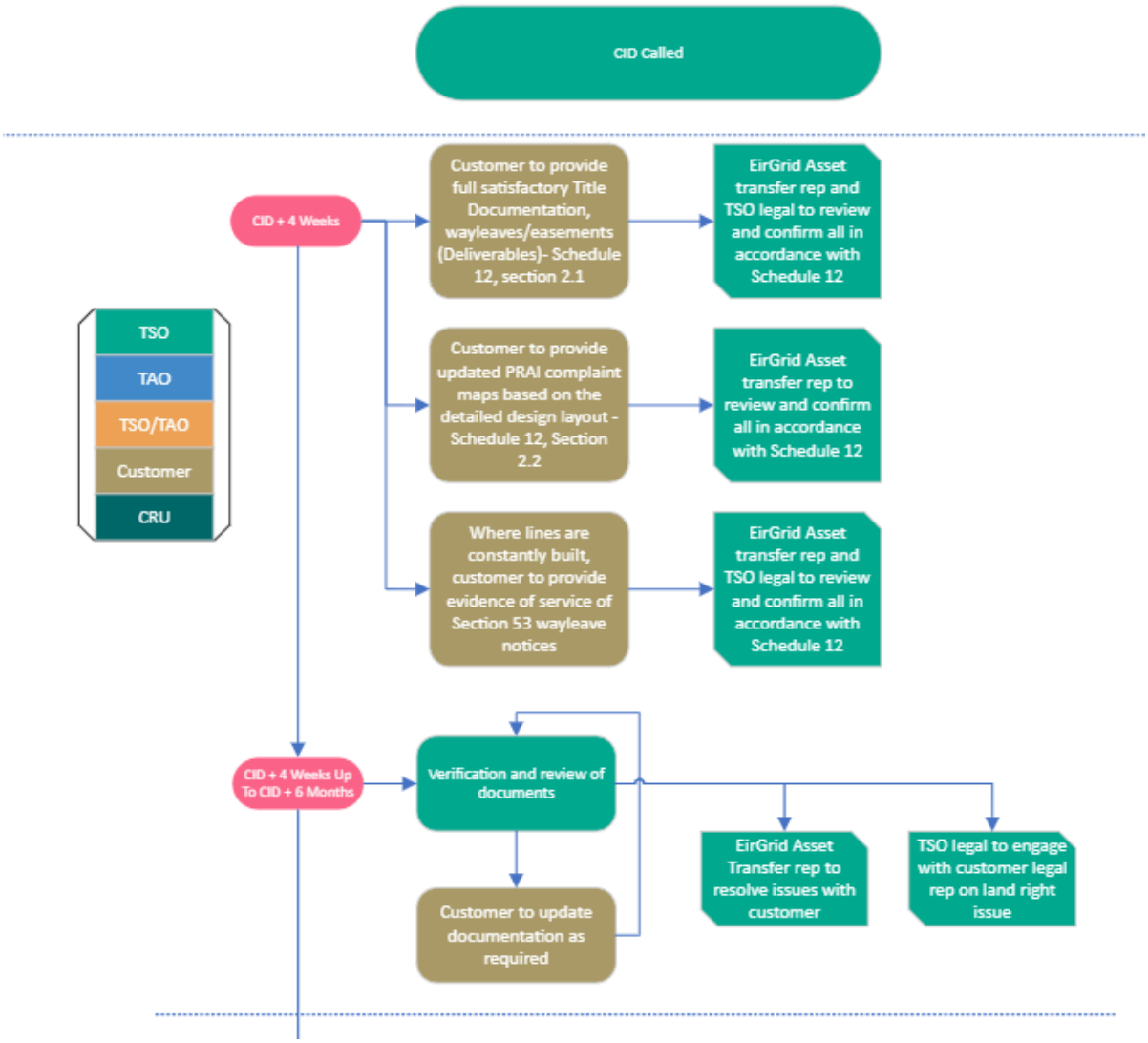


Figure 25: Complete Transfer of Ownership Overview



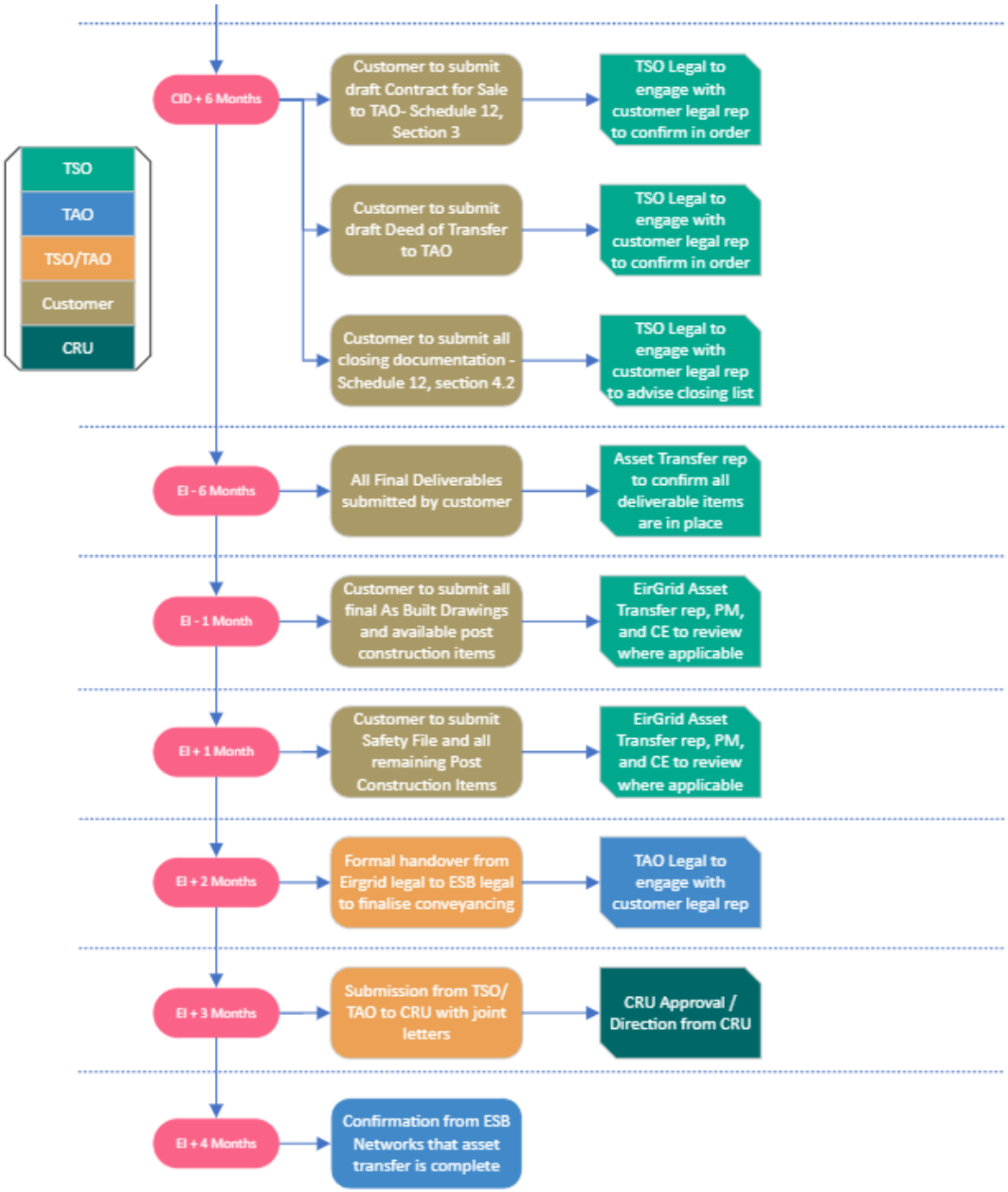


Figure 26: Complete Asset Transfer Process Flow Chart

A.14 Project Close Out

Overview

Following energisation of a project there is a formal close out procedure with the customer. The key milestone is the Project Close Out Meeting. At this meeting and as part of a feedback process the deliverables and activities that are outlined in this document will be discussed with the customer and the customer will be asked for feedback on each. This information will be used by EirGrid to inform and drive continuous improvement of our engagement with customers and the Delivery Phase of a project in general. Final outturn passthrough costs will also be settled as part of project close out.

Milestones



Activity	Activity Owner	EirGrid Engagement Owner	Engagement Type	Activity Timeline
EirGrid and Customer meeting	EirGrid and Customer	Project Manager	Meeting	Within 2 months of energisation
Feedback on individual deliverables to be provided	EirGrid and Customer	Customer Relations Account Manager	Email	One month following close out meeting
Final Outturn Passthrough costs settled	EirGrid and Customer	Project Manager	Email	6-12 months post energisation

Figure 27: Project Close Out

A.15 Flexible Demand Arrangement

Large energy users may be subject to the Flexible Demand Arrangement. Flexible Demand is the portion of a Customer's electrical load that can be varied on instruction as set out in the Customer's Connection Agreement.
A Demand Customer may be instructed by EirGrid to reduce their load if there is a constraint identified on the Transmission System.
Customers that are subject to the Flexible Demand Arrangement will receive a project specific "Flexible Demand Operating Protocol" from EirGrid post execution of the Connection Agreement. This document will outline the communication arrangements, activation / deactivation procedures and signal list requirements for the scheme to function.
As a guide, a template Flexible Demand Operating Protocol is available on the EirGrid website.

Appendix B

B.1 Abbreviations and Acronyms

Abbreviation	Explanation
C&C	Customers & Connections
CE	Client Engineer
CRU	Commission for Regulation of Utilities
CID	Consents Issue Date
CP	Connection Project
CPP	Committed Project Parameters
DSO	Distribution System Operator
EON	Energisation Operational Notification
EI	Energisation Instruction
ESB	Electricity Supply Board
EMS	Electricity Management System
EMT	Electromagnetic Transient
FAT	Factory Acceptance Tests
FEED	Front End Engineering Design
FON	Final Operational Notification
GC	Grid Code
GCC	Grid Code Compliance
Hz	Hertz
IA	Infrastructure Agreement
ION	Interim Operational Notification
MEC	Maximum Export Capacity
MIC	Maximum Import Capacity
NDP	Network Delivery Portfolio
NOSS	Notification of System Studies
OHL	Overhead Line
OPMO	Offer Process Management Office
ORC	Operational Readiness Certificate
PA	Project Agreement
PED	Pre-energisation Data
PIP	Project Implementation Plan
PM	Project Manager
PPM	Power Park Module
PSCS	Project Supervisor Construction Stage

RTU	Remote Terminal Unit
SCRs	Short Circuit Reinforcements
SEM	Single Electricity Market
SEMO	Single Electricity Market Operator
SLD	Single Line Diagram
TAO	Transmission Asset Owner
TOL	Technical Operating Limits
TOP	Transmission Outage Plan
TSO	Transmission System Operator
TUoS	Transmission Use of System
WECC	Western Electricity Coordinating Council

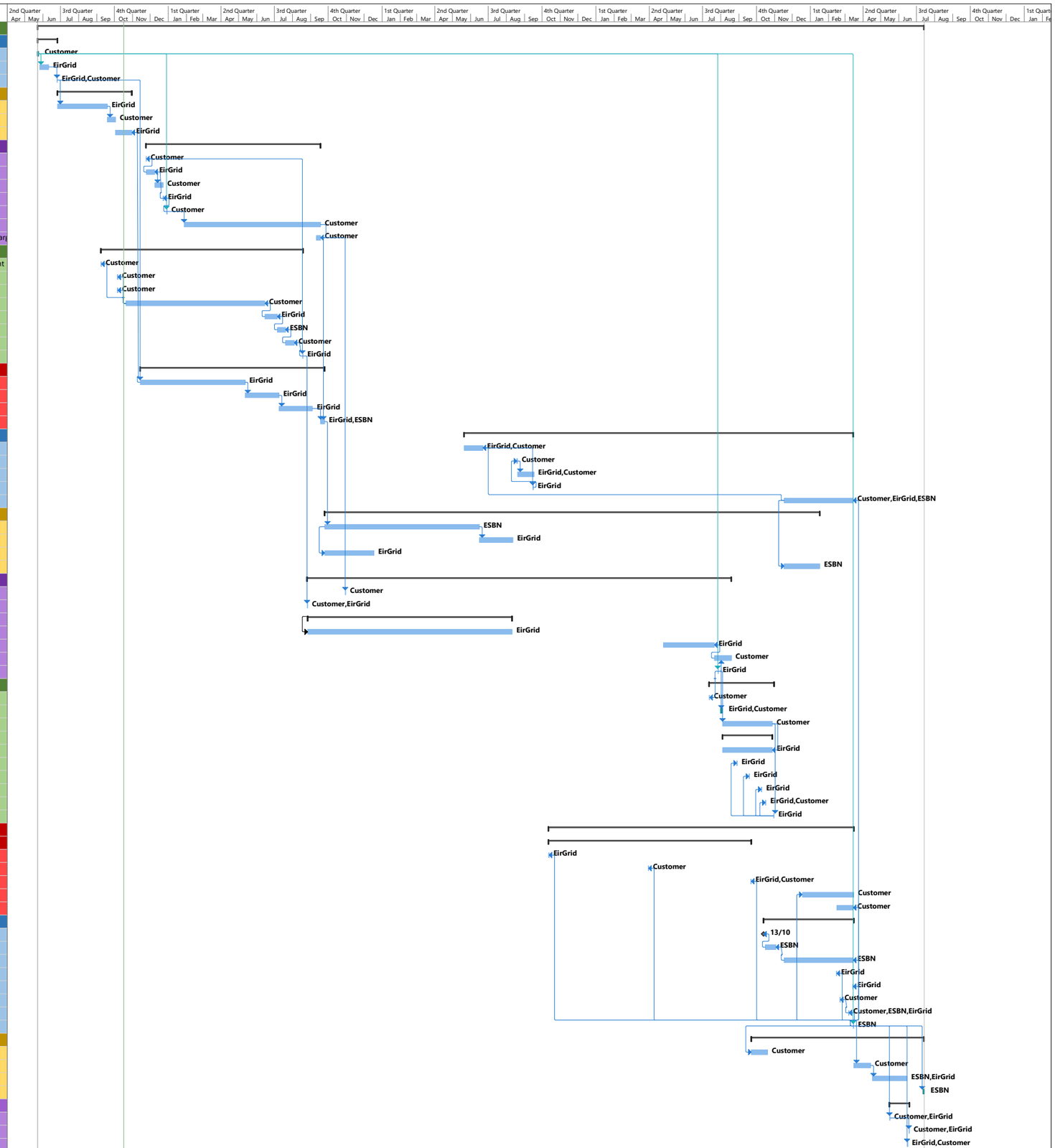
Figure 28: Abbreviations and Acronyms

Appendix C

C.1 Sample Programme

Indicative schedule based off deliverables and milestones outlined in Section A.

ID	Task Mode	Task Name	Comment
1		**CPXXXX - Customer Connection Project - YYY kV Station**	**Timelines are indicative and based off a typical 48 month connection project**
2		**A.1 Project Kick Off**	
3		Connection Agreement Signed	
4		Project Team Appointed	Within 2 weeks following Connection Agreement execution
5		Kick Off Meeting	2 weeks following assignment of project team
6		**A.3 Issue Contestable Specification Pack**	
7		Issuance of functional specifications	12 weeks post kick off meeting
8		Customer queries to EirGrid	Project specific timeframe
9		Issuance of Protection specifications	6 weeks post CPP handover
10		**A.4 Achieve Planning and CID**	
11		Submission of planning drawings for contestable works to EirGrid	Recommended minimum 4 weeks prior to lodgement
12		EirGrid review of planning drawings for contestable work	2 weeks
13		Customer Updates planning drawings as required	project specific
14		Stage Gate 0 review	Prior to planning submission
15		Planning Application submitted for contestable works	7 months default based off CA timeline
16		Planning consents achieved for contestable works	8 months default based off CA timeline
17		Completion of contract requirements	Due on CID. Incl. 1) Provision of adequate insurances 2) Payment of connection charg
18		**A.5 Contestable Design Review**	
19		Customer to submit design submission programme and expected drawing list for each design pack	Required for each design package 4-6 weeks prior to design review commencement
20		Customer to submit quality plans and test plans	2 weeks prior to design review commencement
21		Customer to submit design risk assessments	As per agreed programme
22		Customer to submit design packages as per relevant categories	As per agreed programme
23		Design review of each package	3 weeks per package.
24		ESBN Due Diligence review of each package	2 weeks post EirGrid review
25		Customer to submit revised designs	+3 weeks per package. Allow for minimum of 3 iterations
26		Stage Gate 1 Review	Prior to commencing construction
27		**A.6 Achieve EirGrid/ESB Networks Project Agreement**	
28		Issue CPP	Project specific
29		Scope of Work approved	Project specific
30		PIP Accepted	Project specific
31		Project Agreement for ESB Networks non-contestable works	Project specific
32		**A.7 Transmission Outage Planning**	
33		Outage requirements confirmed by Customer and EirGrid	Mid outage year 1
34		Outage readiness checklist completed and submitted to EirGrid by the Customer	Q4 of TOP year 1
35		Outage readiness checklist reviewed by EirGird and comments addressed by Customer	4 weeks
36		Outages scheduled in TOP	Q4 of TOP year 1
37		Scheduled outages met	As per project programme
38		**A. 8 Complete Non-Contestable Construction Works**	
39		ESB Networks detailed design	Commences once PA is reached
40		EirGrid review of ESB Networks Design	Project Specific
41		EirGrid arrangement of RTU and metering requirements	Project Specific
42		ESB Networks construction	Project Specific
43		**A. 9 Complete Contestable Construction Works**	
44		Construction Programme Issued to EirGrid	Within 30 business days if CIS or as per Connection Agreement
45		Contestable Construction Kick-Off Meeting	Post Stage Gate 1, prior to commencement of construction
46		**Contestable Construction Works**	
53		EirGrid Construction Oversight	incl. site visits. Monthly or as required / appropriate
54		EirGrid comments via construction comment log	Weekly or as required / appropriate
55		Inspection log issues to be closed by customer	Prior to commencement of pre-commissioning
56		Stage Gate 2 Review	Prior to commencement of pre-commissioning
57		**A.10 Complete Pre-Commissioning**	
58		Pre-commissioning technical schedule issued by customer	2 weeks prior to agreed handover date
59		Pre-commissioning workshop	Prior to pre-commissioning commencing
60		Pre-commissioning of contestable works	Project specific
61		**EirGrid witnessing of pre-commissioning tests**	
62		Site visits and EirGrid witnessing of pre-commissioning tests	As agreed
63		CE audit 1	9 weeks before commissioning handover
64		CE audit 2	6 weeks before commissioning handover
65		CE audit 3	3 weeks before commissioning handover
66		EirGrid Handover	pre-stage gate 3
67		Stage Gate 3 Review	Prior to commissioning
68		A.11 Complete Pre-Energisation Activities	
69		Pre-energisation data process	
70		EirGrid request PED from customer	18 months prior to energisation
71		Customer submits PED to EirGrid	12 months prior to energisation
72		Issues related to the PED resolved between EirGrid and the customer	6 months prior to energisation
73		Market registration	60 business days prior to energisation
74		Grid code compliance EON/ION requirements closed	As required but must be prior to energisation
75		**A.12 Complete Commissioning and Energisation**	
76		ESBN Commissioning meeting	Prior to commencement of commissioning work
77		ESBN 2 week cool-off period	
78		ESBN Commissioning	Project specific
79		Energisation Instruction and Operating Instruction agreed	Prior to Energisation
80		Stage Gate Review 4	Prior to Energisation
81		Customer to provide station handover pack	2 weeks prior to agreed handover date.
82		Operational and site handover to ESB Networks	Project specific, as agreed by all parties
83		Energisation	Project Specific
84		**A.13 Complete Asset Transfer**	
85		Full title documentation and maps to be provided by the Customer ready for TAO execution	6 months pre EI
86		Customer provides all remaining post construction items	(incl. safety file and 3rd party Engineers Compliance Report)3 months post EI
87		TSO/TAO to obtain written approval from the CRU to transfer the transmission assests to the TAO	3 months post EI
88		Completion of Legal Transfer	4 months post EI
89		**A.14 Project Close Out**	
90		EirGrid and Customer meeting	Within 2 months of energisation
91		Feedback on individual deliverables to be provided	One month following close out meeting
92		Final Outturn Passthrough costs settled	3 months post energisation


2nd Quarter Apr May Jun
3rd Quarter Jul Aug Sep
4th Quarter Oct Nov Dec
1st Quarter Jan Feb Mar