**Customer Connections – Policies**

EirGrid as TSO, plan, manage, develop and operate the national electricity transmission grid at 110, 220, 275 & 400kV across the island of Ireland, acting as a Transmission System Operator TSO.

EirGrid develops and maintains Transmission Investment Policies setting out the acceptable standards and regulations for Transmission developments. Below is a non-exhaust list of policies that may be of interest to Customers seeking connections.

**Transmission Policy Documents**

|  |  |  |
| --- | --- | --- |
| **No.** | **Drawing Title**  | **Document Number** |
| **1** | Policy on Harmonics | Policy\_Statement\_12\_ Harmonics |
| **2** | Access to TSO Current and Voltage Instrument Transformer Cores | Policy\_Statement\_13\_CT\_VT\_Cores\_Protection  |
| **3** | Policy on Wind Turbine Clearance to OHL’s | Policy\_Statement\_15\_Wind\_Turbine\_Clearance |
| **4** | Policy on Calculation of the Maximum Fault Level for Substation Earth Grid Design  | Policy\_Statement\_17\_Earth\_Grid\_Fault\_Level |
| **5** | Policy Statement on Busbar Configuration for 110, 220 and 400 kV Transmission Substations  | Policy\_Statement\_3\_Busbar\_Configuration |
| **6** | Policy Statement on Circuit Development  | Policy\_Statement\_16\_Circuit\_Development  |

**Customer Connections – Standards**

EirGrid maintains and develops drawings and technical standards and functional specifications for connections to the Irish Transmission System. These standards govern the design and construction of new transmission assets namely Transmission substations, cables and overhead line feeder circuits.

Below is a non-exhaust list of commonly used technical standards on 110 kV and 220 kV Transmission connections for demand and generation customer’s to consider when developing their connection projects and associated planning applications.

**Technical standards information on Transmission grid connections**

|  |  |  |
| --- | --- | --- |
| **No.** | **Drawing Title**  | **Drawing Number** |
| **1** | Standard 110 kV AIS Customer SLD | XDN-SLD-STND-005 |
| **2** | 110kV AIS Loop Station – Initial C-shape build (Layout) | XDN-LAY-ELV-STND-H-001 |
| **3** | 110kV AIS Single Transformer Bay Tail Station Layout | XDN-LAY-ELV-STND-H-003 |
| **4** | 110 kV Single Bay Extendable to C-type station | XDN-LAY-ELV-STND-H-006 |
| **5** | 110kV AIS Station Typical Control Room Layout | XDN-CR-STND-H-001 |
| **6** | 110 kV GIS Station Layout (12 Bay) | XDN-LAY-ELV-STND-H-010 |
| **7** | 110 kV GIS Station Layout (8 Bay)  | XDN-LAY-ELV-STND-H-012  |
| **8** | 220 kV AIS Standard Layout | PG406-D020-123-001-000  |
| **9** | 220 kV and 110 kV GIS Station Layout  | XDN-LAY-ELV-STND-F-003 |
| **10** | 220 kV GIS Station Layout Design Standard  | XDN-LAY-ELV-STND-F-004 |
| **11** | [Transmission Line and Solar Farm Guideline Clearances](https://buzz.grid.ie/sites/GridDevelopment/tem/drawing_library/Approved%20Drawings/IPP%20Drawing%20Pack/Solar%20Farm%20Guideline%20Clearance%20Drawings%20-%20Jan%202019/Transmission%20Line%20and%20Solar%20Farm%20Guideline%20Clearances.pdf) | MMD-373966-E-SK-XX-11, 12, 12, 21, 22, 23 |
| **12** | 110 kV Underground Cable Functional Specifications  | CDS-HFS-00-001 |

It should be noted that requirements can change based on new technologies, safe working standards or lessons learned during construction, operation and decommissioning.

There are a wide variety of potential transmission connection solutions. The layouts provided here are concept designs of the most commonly acceptable solutions and are provided for guidance only.

For contestable substations, EirGrid does not specify the substation technology type (AIS or GIS) to be built. AIS substations are open-terminal air –insulated, whereas GIS substations are metal enclosed gas-insulated. GIS substations are located indoors and AIS substation are generally located outdoors.

This is for the customer to decide based on their particular site constraints, planning considerations, cost of implementation and other project specific requirements.

Detailed project specific documentation will only be provided to applicants who have executed a connection offer with EirGrid.

Customers are encouraged to issue their planning drawings to EirGrid technical teams for review to incorporate technical feedback in advance of finalising their planning submissions and are also encouraged to check that they are using the most up to date information.

For further information on the connection offer process please refer: [**http://www.eirgridgroup.com/customer-and-industry/becoming-a-customer/**](http://www.eirgridgroup.com/customer-and-industry/becoming-a-customer/)

For customers currently engaging with EirGrid in the connection offer process, further detailed specifications and standards can be made available on the EirGrid Extranet page. (Requests for access to the EirGrid extranet page for Transmission standards should be submitted to info@eirgrid.com.)

**Recently Published Standards**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Document Title**  | **Document Number** | **Date on revision**  |
| **1** | 110kV AIS Single Transformer Bay Tail Station Layout | XDN-LAY-ELV-STND-H-003 |  |
| **2** | 110 kV Single Bay Extendable to C-type station | XDN-LAY-ELV-STND-H-006 |  |
| **3** | 110kV AIS Station Typical Control Room Layout | XDN-CR-STND-H-001 |  |
| **4** | 110 kV GIS Station Layout (12 Bay) | XDN-LAY-ELV-STND-H-010 |  |
| **5** | 110 kV GIS Station Layout (8 Bay)  | XDN-LAY-ELV-STND-H-012  |  |
| **6** | 220 kV AIS Standard Layout | PG406-D020-123-001-000  |  |
| **7** | GIS Functional Specification  |  |  |
| **8** | General  |  |  |
| **9** |  |  |  |
| **10** |  |  |  |