Self Determination of Points of Connection user guide

Independent Connection Providers (ICPs) & Independent Distribution Network Operators (IDNOS)

September 2017

Contents

1 Introduction

Electricity North West own, operate and maintain the North West's electricity distribution network but this doesn't mean all the connection work has to be approved and carried out by ourselves.

The industry regulator, Ofgem, approved a new code of practice for connections in July 2015. Under the new code of practice, all Distribution network Operators (DNOs), including Electricity North West, will be required to reduce the extent to which competitors rely on the DNO for connection services. This is designed to encourage competition in the market between DNOs and their competitors.

As part of this, determining the Point of Connection (PoC) process has been reviewed and identified as a service that can be opened up to the market.

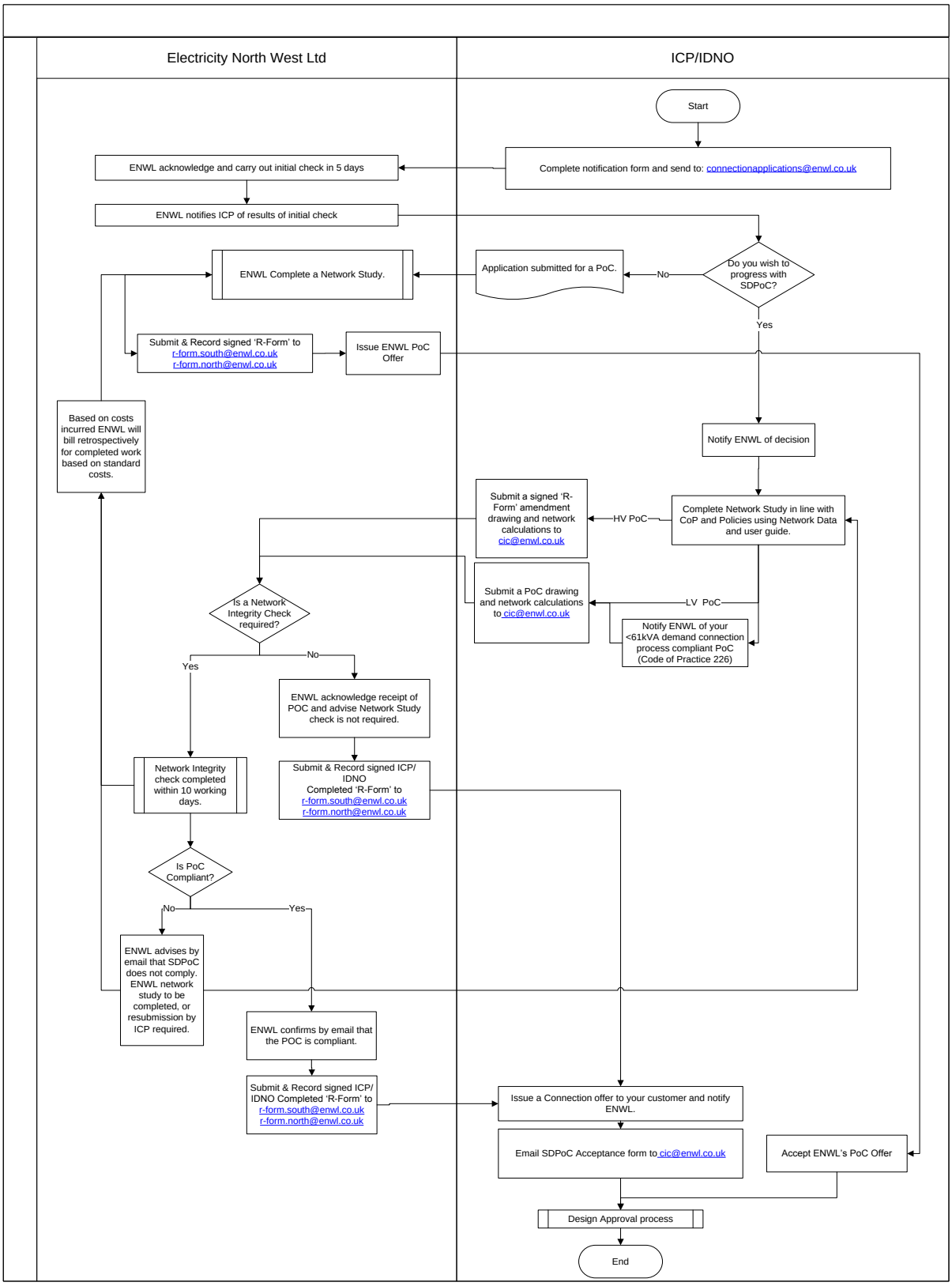
This guide covers the new process Electricity North West has developed to enable Independent Connection Providers (ICPs) to determine the PoC themselves, hereafter referred to as 'Self Determination of Point of Connection' or SDPoC.

If you are an ICP wishing to use the Self Determination of Points of Connection (SDPoC) process you should read this guide carefully prior to determining the Point of Connection (PoC).

This guide includes details of the new SDPoC process, including a step by step guide, policy considerations, data sources you will need, how to access that data, tools you will need to manipulate the data and conduct network studies, and legal implications of the new process which you need to consider before making your decision.

2 Self Determination of Point of Connection (SDPoC) Process

2.1 Process flow



3 Registration

It's important to read all of the guidance information in this document which lists and describes what you need to submit with your application. If you have any questions about the information you need to submit, which are not covered in these guidance notes, please contact us at cic@enwl.co.uk

1. You will need to notify us of your wish to determine the new Point of Connection (PoC). We will register your request to determine a new PoC by receipt of email within 5 days.
   Complete an SDPoC Notification form (Appendix 6) and submit the following information with your notification:
   a. Drawing indicating the site location,
   b. X&Y coordinates,
   c. Number of exit points,
   d. Maximum Import Capacity/Maximum Export Capacity, e.
   A polygon showing the location/size of development

   Please note that if your SDPoC complies with ENWL's demand connection process (Code of Practice 226-Low Voltage Network Design-Appendix A), then you only need to notify us once the PoC has been determined.

2. Once we have received the information relating to the new PoC, we will undertake an initial check to see if there might be any engineering complexities or challenges which might affect the connection. The initial checks will cover:
   a. Any other known PoC for this site
   b. Known interactivity in the area
   c. If the site is surrounded by a heavily loaded network
   d. Known engineering difficulties in the area

   We will aim to provide the results in 5 working days. We will contact you to discuss the results of this early check if we find evidence that it may be a complex PoC. Please note that any challenges that are highlighted at this stage do not necessarily mean that the PoC is susceptible to a delay. However it is important for us to receive the right information at the right time to make sure that your connection is completed within the estimated timescales.

3. Depending on the outcome of the initial check you may wish to either undertake the relevant network studies yourself, using information provided by us; or request for us to conduct the network studies on your behalf using the standard process.

Please note that should you wish to undertake the network studies yourself, you will need to ensure that they are completed correctly to avoid additional time spent later in the process checking the results and if necessary, starting the network study again. You will also need to check that you have the correct software applications to open the network data files. For more information on the software you will need, please see Section 4.1 – Access to Asset Data.

3.1 Process for self-determination of PoC

This section outlines the process if you choose to carry out the network studies yourself using our data, and to determine the PoC yourself.

1. You will need to notify us of this decision so that we know this is what you've decided to do, and record it against the PoC registration.

2. Once you've notified us of your decision you can start straight away with the network studies. For information on what data is available to you and how to access it, please see Section 4.

3. If you are applying to design an LV PoC you will need to complete and submit a PoC network drawing[1] as well as network calculations. These must include all calculations and considerations referenced in the relevant policy documents, for the specific connection you are proposing. Your submission will be used to evidence that your PoC is compliant with the relevant policies.

   Please use the R-Form[2] as a template for your HV PoC drawing. Once you have completed the drawing and network studies you will need to submit these cic@enwl.co.uk.

   You must complete all worksheets in the R-form before submitting to cic@enwl.co.uk

4. We may wish to carry out a 'Network Integrity PoC check', to make sure that the network can support the planned connection. This check will apply if the proposed connection is over 500kVA. If the connection is below 61kVA then ENWL have devised a series of process flows which simplifies connections of under 61kVA onto urban undergrounded cable networks. These can be found in Appendix A of Code of Practice 226 - Low Voltage Network Design.

5. If we decide that a Network Integrity check is needed, we will complete this within 10 working days. Provided that the network study is correct and the connection is compliant, we will email to confirm.

   However, if the network integrity check finds that there are errors in the submitted study, or that the proposed connection is non-compliant, a new network study will need to be completed. You have a choice to determine the PoC again, or we will need to complete the network study on your behalf. As each request for a network study is allocated on a first-come first-served basis this may incur a delay.

6. You will need to inform us that the Point of Connection will be used by completing a Self-Determination of Point of Connection Acceptance Form[3]. This will allow us to update our records so that the same PoC is not offered to another customer and the load is reserved.

   Please note that the PoC will be valid for up to 6 months from the date we receive your Acceptance form. If the installation work has not progressed following this time the PoC will be released to other customers.

[1] All templates and documents are available to download from our Self-determination of PoC webpage online
[2] All templates and documents are available to download from our Self-determination of PoC webpage online
[3] All templates and documents are available to download from our Self-determination of PoC webpage online

3.2 ENWL PoC process

This section outlines the process should you wish to request the network studies to be conducted by us to determine the PoC.

1. We will receive and log your request to undertake the study
2. We will conduct the network study ourselves.
3. We will issue you a formal connection offer.

You will then need to formally provide us with your written acceptance of the offer, by email to connectionapplications@enwl.co.uk

4 Network Integrity Check

This section briefly describes the 'Network Integrity check' and outlines the types of connection which will require it.

The Network Integrity check is a high level check that the PoC drawings and network design which you submit are compliant with our policies. We do not check that the SDPoC is the minimum cost design to the end customer.

The voltage level and the type of connection both determine the potential impact and level of overall risk which the new connection poses to our existing network assets and customers. Therefore we take these variables into consideration and decide whether a Network Integrity check is needed based on the voltage and type.

See the network integrity matrix below for which projects will require a Network Integrity check.

Voltage	Type	Conditions for Network Integrity check
Extra high Voltage (33kV & 132kV)	Demand generation or mixed	All submissions subject to check
High Voltage	Demand generation or mixed	All submissions >500kVA subject to check
Low Voltage	Demand generation or mixed	All submissions >100kVA or >24% feeder raring will be subject to check[4]
Low Voltage	Demand generation or mixed	No check required for submissions <100kVA

Additionally, any PoC which will require reinforcement work funded by us will also need to be checked. **If you wish to pursue the SDPoC process with an EHV connection you will need to discuss this directly with one of our design engineers.**

[4] Initially we will check a minimum of 5 PoC designs for each ICP who wishes to undertake this process. Based on the quality of these designs we will review the need to undertake a Network Integrity check in every instance. However if any designs submitted are identified as incorrect, the next 5 designs will automatically be subject to a check.

5 Network policy

All proposed points of connection need to be compliant with all of our network policies. If you wish to determine the point of connection yourself, you will need to make sure that the design you submit for a new connection complies with all of our network policies. The full list of applicable policies is listed on our website here. All points of connection, irrespective of type and voltage will need to be compliant with the following 'common' policies.

- CP012 Electricity Geographical Information System (GIS)
- EPD279 Distribution System Design – General Requirements
- EPD307 Equipment Approved for use on the ENWL Network
- EPD350 Protection of 132kV, 33kV, 11kV and 6.6kV Systems
- ES281 Company Specific Appendices to ENA ER G81
- ES287 Connections to Multi Occupancy Buildings
- ES225 Connections to Embedded Distribution Networks
- CP259 Generation Connected to the ENWL Network
- EPD259 Generation Connected to the ENWL Network
- ES259 Generation Connected to the ENWL Network
- CP258 Connection of Industrial and Commercial Customers
- CP203 Current Ratings of Underground Cables
- CP206 Current Ratings of Overhead Line Conductors
- EPD370 Voltage Control for 132kV, 33kV, 11kV and 6.6kV Systems
- CP285 – R Form Process – Request for Alteration to the HV system

However, we have identified several policies which are specific to types of connection and voltages for your reference. Please see our full online library for the latest versions of the below policies.

Voltage level	Relevant policy documents
HV	ES218 Connections up to 240MVA
	ES217 33kV Connections up to 90MVA
	EPD282 Distribution System Design – HV Network
	EPD281 Distribution System Design – 33kV Network
	CP282 Distribution System Design – HV Network
HV / LV	ES214 Third Party Provided New LV Connections up to 300kVA
LV	EPD283 Distribution System Design – LV Network
	ES212 New Whole Current metered connections up to 60kVA
	ES213 Design of new Connections for Housing Developments
	CP226 LV Network Design
	CP331Protection of LV Distributors and Distribution Transformers
	CP332 LV Service Connections and Application of PME
	CP221 LV Network Design for Domestic Premises with Micro Generation

Please note that this list is not exhaustive and you are responsible for making sure that your design is compliant with all of the relevant policies which may or may not be named in this document.

6 Network Data and Planning information

To carry out the network study you will need to access network data relevant to where the proposed PoC will be. This section outlines the current sources of data you may need to use, where you will be able to locate the data, and any other information you may need to consider when accessing it.

Our Symbology guide[5] identifies and explains symbols used to identify assets in our datasets.

6.1 Long term Development Statement (LTDS)

The Long term Development Statement (LTDS) provides secure internet access to Electricity North West's documents and data. All intellectual property and industrial rights provided ('IP') whether legal or equitable, registered or unregistered, remain the property of Electricity North West.

The LTDS was created to meet the requirements of Licence Condition 25 and has been adapted for the purposes of meeting the requirements of the Competition in Connections Code of Practice. As such we have included some legal information below for your reference, regarding your use of these tools.

Electricity North West hereby grants a temporary, non-exclusive, royalty free licence to use the IP for the sole purpose of furnishing developers with sufficient information to carry out initial assessments on network capability and carrying out contestable works in line with the Competition in Connections Code of Practice. The contents of the documents, diagrams and data sources may not be used for purposes other than that for which they have been supplied. Any information contained within is confidential and shall not be used or disclosed to any person except as is necessary and proper, for the purposes outlined above.

The documents, diagrams and data sources do not represent real-time representations of the network and therefore will only reflect the status of our network on the date of each update.

As such the data may not be accurate to the date it is accessed by you and should be treated accordingly. If you require data accurate to the date of access please contact cic@enwl.co.uk or for further details on the Long Term Development Statement, please contact us at LTDS@enwl.co.uk

[5] All templates and documents are available to download from our Self-determination of PoC webpage online

HV schematics

What?

Navigate to our secure area or Long term Development statement area. If you are already registered, log on and locate 'HV schematics'. If you are not already registered please follow the prompts to request a log in.

Where?

Long term Development Statement (LTDS) secure area. Register for access, or login.

DINIS Network files

What?

Navigate to our secure area or Long term Development statement area. If you are already registered, log on and locate 'HV Network Information' then 'DINIS network data'. If you are not already registered please follow the prompts to request a log in.

You have the options to use DINIS or to convert the data to a file format for an alternative software tool (i.e. IPSA, DigSILENT etc).

Please note the data files available on this site are large files (250MB) and therefore a strong broadband connection is required for the download. The data we provide is the best that we can make available; however the data may not be wholly accurate and as such should treated accordingly. If you need more up to date information please contact us at cic@enwl.co.uk.

Where?

Long term Development Statement (LTDS) secure area. Register for access, or login.

HH and HV circuits data

What?

The data is annual half hourly maximum demand (observed, not true). Engineering judgement should be used when analysing feeder current data, as averages may be skewed by anomalies caused by outages or faults. We recommend that you plot the data to identify outliers.

Where?

Long term Development Statement (LTDS) secure area. Register for access, or login.

Substation Information

What?

This data source provides information for every distribution substation: customer numbers, annual maximum demand and feeder fuse size. Please note that this data is a snapshot in time. The data is updated quarterly and therefore will only reflect the current status and modifications to the network as of the date it is updated.

The data we provide is the best that we can make available; however the data may not be wholly accurate and as such should treated accordingly. If you need more accurate information please contact us at cic@enwl.co.uk

Where?

Long term Development Statement (LTDS) secure area. Register for access, or login.

Policy documents

What?	**Where?**
Please note that you are responsible for ensuring that your PoC complies with all relevant policies.	Please access our secure area for our policy library. Register for access, or login.

7 Access to our asset data records

The data is updated monthly and indexed to search by a number of references including post code, substation name or number, road, motorway junction.

To register, complete the form on our website.

Once registered, you will receive an email from us with a link to download the data via SFTP. Please note that the link is only valid for up to 7 days and will expire after this time. The link to data is issued every month approximately in the 3rd week. Depending on when you register you may not receive the link for some weeks (if you register shortly after the link is issued for instance).

The data will be provided as a 'ProViewer_Data' file and therefore you will need to install the 'MapInfo ProViewer' application (or the full 'MapInfo Professional' version) on your PC. 'MapInfo ProViewer' is free to download from the Pitney Bowes website.

To enable the download you must ensure that you have installed the latest version of Java script available, as you would with any other plug-in download. We also recommend that you have a strong broadband which allows for large downloads as the data can amount to 2.5-3.0 GB.

We strongly recommend that you read the 'Data Management ProViewer Instructions' document which is also provided with the link to our data. This document includes our 'Distribution Network Database License' (also found on our website) a procedural overview, detailing the extracting, loading and viewing of the dataset.

8 Liabilities

In the standard PoC process, we would conduct the necessary network studies and ensure compliance with our policies.

In the new process we will not have the same level of visibility of each PoC. For those SDPoC which are not subject to a Network Integrity check we will be doing a periodic retrospective audit to ensure compliance with our policies and practises. This will be a random audit conducted every six months. This will not stop any SDPoC progressing, it is a retrospective check. Findings of any audit will be fed back to the ENWL audit panel who will meet on a six monthly basis.

If you determine your own PoC and it is not audited by us, you will be liable for any consequential loss or damages which occur, and are due to a non compliant network design or connection. For more information please refer to our standard Adoption Agreements.

9 Wayleaves and easements

We recommend that you read our published guidance notes on Wayleaves and Land Rights, which is accessible on our website.

10 Substation locks and notices

If you determine your own HV PoC ENWL will not be providing you with a quotation which includes substation locks and notices. Therefore it will be your responsibility to procure these items to ENWL specification.

- ES309 - Locks for Substations and Associated Plant

- ES356 - Notices and Nameplates

- CP615 - Substation, Circuit and Plant Identification

ENWL procure substation padlocks from Abloy UK. ENWL procure switchgear locks from J H Blakey of Brierfield. ENWL procure signs and labels from Cowen Signs. Other manufacturers are available.

11 Contact / FAQ

If you have any queries relating to the new SDPoC process which we have not already answered through this guide, please do not hesitate to contact us on cic@enwl.co.uk