



Code Of Practice Workshop

Workshop Topics

1. Self Determination of POC
2. Self Design Approval
3. RADAR system update



SP ENERGY
NETWORKS

POC Workshop

Self Determination of POC Agenda

- Internet – information available and navigation
- Interpretation, navigation and limitations of
 - GIS
 - Layers
 - GND
 - Power On
- Focus on Section 12 of ESDD-02-021
- Processing a Self POC
- Assessing Low Voltage Networks
- Assessing High Voltage Networks

Guide to

Feel for and navigation of the SPEN internet

Focus on

Getting Connected

Document Library

Competition in Connections

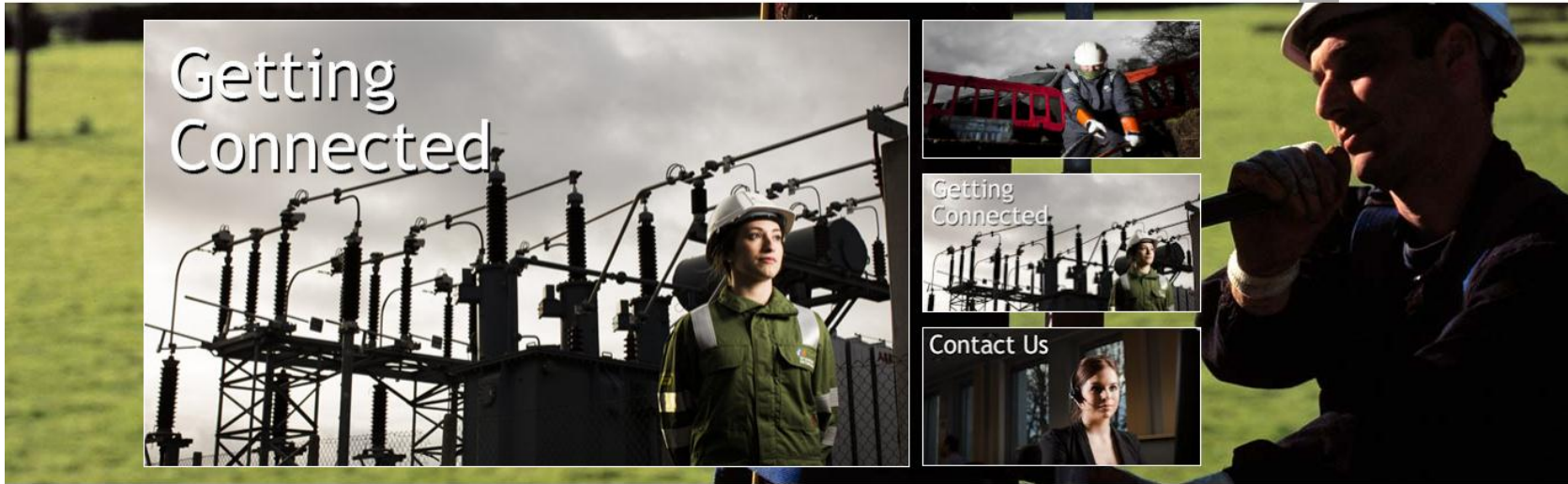
Code of Practise

Long Term Development Statement

<http://www.spenergynetworks.co.uk/>



POWER CUTS | ADVICE | GETTING CONNECTED | INVESTMENT | ABOUT US | CONTACT US



Welcome to **SP Energy Networks**

Latest News

29/01/2016

Storm Gertrude Update

Severe Weather Update

27/01/2016

Do you know who to contact in a power cut?

Building and maintaining awareness of our role and ensuring customers know what to do in the event of a power cut is a key...

Emergency Numbers

In the event of a power cut, use our **postcode lookup** for information or call us on the following numbers:

Central & Southern Scotland

0800 092 9290

Cheshire, Merseyside, North Wales & North Shropshire

Latest Tweets



SP Energy Networks @SPEnergyNetwork 24m
Signs of voltage issues: lighting that is either very dim or very bright, lighting that flickers - please report this to us #safety



SP Energy Networks @SPEnergyNetwork 1h
Our Priority Services Register helps us contact our most vulnerable customers during a #POWERCUT click ow.ly/XIpKb to join.



Getting Connected	
Stakeholder Information	▶
Quote+	▶
Generation	▼
Electricity Disconnections	▶
Document library	▶
Competition in Connections	▶
Regulation & Consents	▶
Contact Connections	▶
Customer Service Performance	▶
Useful Documents	▶
On-Line Quotation Tool	▶



Getting Connected

At SP Energy Networks, getting a new electricity connection is easy.

Simply click on the icons below to access the typical costs, timelines, estimate cost calculators and application forms for your electrical connection project.



Two main areas to locate relevant documents

Our [connections](#) process document explains the standard procedure for connecting to our network.

We have a wealth of experience in a wide range of projects, from one-off connections to large residential, retail and industrial developments, as well as sports stadia and leisure parks.

You are able to obtain a competitive quotation for some elements of the connection works from an Independent Connection Provider (ICP). For further information, view our [competition in connections](#) page.

If you would like help or advice on your options, we will be more than happy to help you. Simply [contact our connections team](#) today.

Upgrading an existing property with solar panels or any other types of generation? Our [generation](#) page provides more information.

[/stakeholder-information.aspx](#)

Key documents related to Self Determination of POC

- ESDD-02-021 [Guidance for Self Determination of Point of Connection and Self Design Approval for Independent Connection Providers](#)
- ESDD-02-012 [Framework for design and planning for low voltage housing developments underground network installations and associated, new, HV/LV distribution substations](#)
-
- CON-04-009 [Register of Adopted Asset Requests \(RAdAR\) Process for Self-Determined and Dual Offer Connection Projects](#)
- CON-04-004 [Register of Adopted Asset Requests \(RAdAR\) for contestable unmetered connection projects](#)
- CON-04-005 [Register of Adopted Asset Requests \(RAdAR\) Process for Contestable Connection Projects](#)

Getting Connected

Stakeholder Information >

Quote+ >

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Electricity Disconnections >

Document library >

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Regulation & Consents >

Contact Connections >

Customer Service Performance >

Useful Documents >

On-Line Quotation Tool >

Document library

Below, you'll find essential documents about SP Energy Networks' competencies and services.

All documents are in Adobe PDF format. Some forms can now be completed with Acrobat reader and emailed to the relevant address.

Completing PDF Forms

- To save the PDF, right-click one of the links below and click 'Save as...'
- Complete the form by typing the relevant information into the blue areas
- Save the changes you make.

Document	Issue	Document Title	Date
ASSET-01-015	Issue 1	New Connections Contractor Approval Policy	2005-08-02
ASSET-01-021	Issue 2	Asset Inspection and Condition Assessment Policy	2015-12-18
ASSET-04-020	Issue 5	Inspection and Monitoring of Networks Constructed by Independent Connection Providers	2015-11-16
BATT-06-001	Issue 4	Approved Equipment Register - Batteries	2014-06-13
BUPR-22-015	Issue 3	Recording of Electrical Assets by Contractors	2015-08-25
CAB-03-032	Issue 2	Specification for the Installation of Low Voltage Internal mains and Services	2012-12-13
CAB-03-036	Issue 1	Technical specification for General Wiring Cables	2014-05-05

Scroll to locate document



Click link to open document

Getting Connected

- Stakeholder Information >
- Quote+ >
- Generation >
- Electricity Disconnections >
- Document library >
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- Regulation & Consents >
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[</stakeholder-information.aspx](#)

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Competition in Connections	▼
Competitions in Connections	▶
Code of Practice	▶
Transformer Loadings	▶
Self Determination of Point of Connection	▶
Who Can Do the Work?	▶
What Work Can be Done?	▶
Who Regulates Our Connection Business?	▶
Tracking Your Project	▼
Steps to Getting Connected	▶
Extending the Scope of ICP Work	▶
Keeping You Informed	▶
Adopted Distributed Generation	▶
Connection Agreements	▶
Construction & Adoption	▶
Gaining Authorisation to SPEN	▶
Utility Map Viewer	▶
How to Contact CiC	▼



Competition in Connections

Competition in the connections market means you have a choice when selecting who provides some elements of your connection process.

These can either be provided by ourselves, Independent Connection Providers (ICPs) or Independent Distribution Network Operators (IDNOs).

Independent Distribution Network Operator

Independent Connection Provider

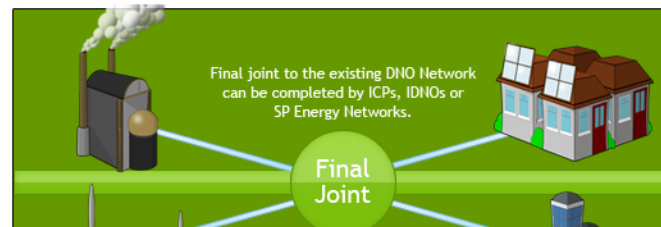
Independent Distribution Network Operator

Independent Distribution Network Operators are accredited companies that can build new electricity networks. An IDNO may continue to own and operate these new networks independently, providing maintenance, repair and supply to their customers.

You'll find more details in this section, including information about **who can do the work** and **what work can be done**. Our leaflet, [Connecting You With a Choice](#), also offers more information.

For your safety, only suitably accredited connection companies can provide connections. Although point of connection quotations can be issued to any customer who requests one, only fully accredited ICPs can present designs for adoption and a point of connection quote cannot be accepted unless it is accompanied with a full design from an accredited ICP.

New domestic, commercial, industrial and **generation network connections** can be built by an ICP, IDNO or SP Energy Networks. These connections may be adopted by SP Energy Networks or an IDNO.



Drop down to relevant documents or links

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Quote+
Generation
Electricity Disconnections
Document library
Competition in Connections
Competitions in Connections Code of Practice
Transformer Loadings
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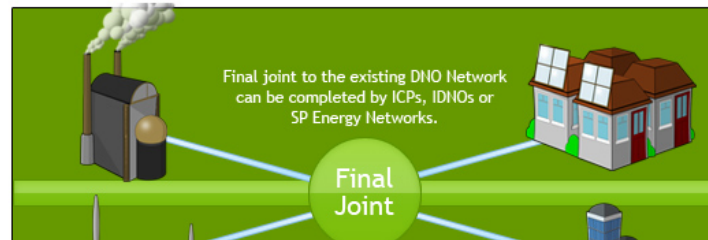
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Points to Note

- Link to ENA published document of COP
- Transformer Loading :- Required to assess S/S loading information
- Self-Determination of POC
 - Link to ESDD-02-021
 - Where self POC can currently be applied
- Utility Map Viewer :- How to gain access to UMV, essential for reviewing SP UMV / Power on / GND
- How to make contact with staff managing CIC applications
 - MPAN request process



POWER CUTS ADVICE GETTING CONNECTED INVESTMENT **ABOUT US** CONTACT US



You are here: [Home](#) | [About Us](#)

About Us
Corporate Governance
What We Do
Stakeholder Engagement
Regulatory Information & Library
Careers
Safety
News
Winter Awareness Campaign



About Us

SP Energy Networks is part of the ScottishPower Group of companies. We provide power on behalf of supply companies through a network of cables and power lines that we own and maintain.

We do it responsibly. We do it with respect for people and for the environment. We do it looking at the long term, not just today. We do it innovatively.

We're dedicated to delivering a safe and reliable electricity supply to all of our customers 24 hours a day, every day of the year. Through our transmission and distribution network we provide power to:

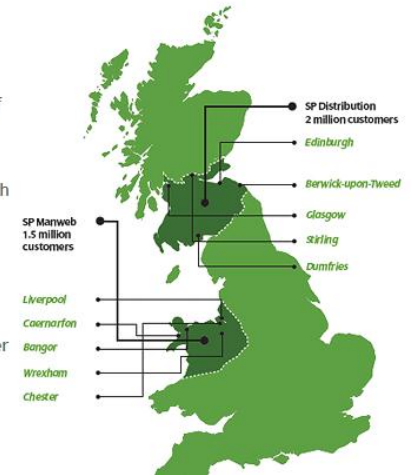
- 1.5 million customers in Merseyside, Cheshire, North Wales and North Shropshire*
- 2 million customers in Central and Southern Scotland*

Our Distribution Network

- It's our job to move electricity to and from homes and businesses over our network. [Click here for more information.](#)

Our Transmissions Network

- We take electricity generated from power stations, windfarms and



Gaining access to Long Term Development Statement





- Free upon registering
- Group loading Information

About Us
Corporate Governance
What We Do
Stakeholder Engagement
Regulatory Information & Library
Distribution Business Plan
Transmission Business Plan
Long Term Development Statement
2014/2015 Transmission Annual Performance Report
2013/2014 Transmission Annual Performance Report
Innovation Funding Incentive Annual Report
Other Reports
Connections, Use of System and Metering Services
Careers
Safety
News
Winter Awareness Campaign

Regulatory Information & Library

You can use this area of the website to access our regulatory documents, including our business plans and long-term statements.

Please use the sub-menu to navigate to the documents or use the links below.

- [Distribution Business Plan](#)
- [Transmission Business Plan](#)
- [Long Term Development Statement](#)
- [2014/2015 Transmission Annual Performance Report](#)
- [Innovation Funding Incentive Annual Report](#)
- [Losses Strategy](#)
- [Other Reports](#)




Utility Map Viewer (UMV) overview.


We will work in the live UMV system to demonstrate the system functions.

Navigating UMV / GND / Power On

NEW RADAR based EnergyNetworks Utility Map Viewer (UMV) -
PRODUCTION




SCOTTISHPOWER



Click Here to Access
North Data

Click Here to Access
South Data

Powered By



esri UK

Navigating UMV / GND / Power On



UMV – User Guide access

The screenshot shows the UMV application running in a Windows Internet Explorer browser. The interface includes a search bar at the top left with the text "Substation by Name" and a search button. A list of substation names is visible on the left side of the browser window. The main area is a map of the United Kingdom, with various regions highlighted in different colors. A red arrow points to a question mark icon in the top right corner of the application's toolbar. A blue dialog box is overlaid on the map, containing the text "Scottish Power UMV", "Version: 11.7.1 (19565)", a "Help file" link, and an "OK" button. The Windows taskbar is visible at the bottom of the screen, showing various application icons and the system clock displaying 10:39.

- How To
 - Search for a location, for example
 - Address
 - Postcode,
 - OS co-ordinates
 - Substation name
 - Navigate and work the zoom functions
 - Interpret the symbols
 - Navigating between UMV / GND / Power On

How To

- Use Information button and what info is available: each asset type:
 - Checking Substation Details
 - Assessing Cable / OHL Sizes and types
 - Identifying Associated Secondary Substation Reference and HV Circuit Monitoring Numbers
 - Service points, cables and Routes (eg assumed)
- Operate the distance measuring tool
- Trace circuits
- Use bookmarks
- Table of Contents – voltages on/off / raster layer etc



**SP ENERGY
NETWORKS**

Summary of Processing Self-Determination of POC

Processing Self-Determination of POC

Summary of Document Content for Self Determination of POC

Primary document Self-Determination of POC:-

[ESDD-02-021 Guidance for Self-Determination of Point of Connection and Self-Design Approval for Independent Connection Providers](#)

Section 11 :- Pre start requirements / guidance

Section 12 :- Registering interest in Self POC for a site
Requesting information from SPEN
Determining Self POC

Section 14 :- Information Exchange

Processing Self-Determination of POC

- Section 14 :- Information Exchange
- Three formal stages of POC notification / information exchange under COP
 1. Point of Connection notice :- ICP commences Self POC
 2. Point of Connection issue :- ICP issue of formal offer to a customer
 3. Point of Connection acceptance :- Customer accepts ICP offer

Processing Self-Determination of POC

- Registering Notice of Point of connection
 - The proposed Point of Connection (12 figure grid reference number) based on ICP initial high level assessment. (For example closest suitable cable to site)
 - Associated high voltage circuit number for their proposed connection or secondary substation name.
 - Highlight the presence of any embedded generation connections.
 - The load, type and number of connections requested together with any disruptive load details.
 - A polygon of the site.
 - Highlight if in ICP's opinion there may be Reinforcement or Enabling works
- Requesting information from DNO at/or during Stage 1
 - Via RADAR
- DNO POC related Costs (at any of the three formal stages)
 - Process / systems design around this being at Customer Acceptance of ICP POC

Processing Self Determination of POC

- Section 12.4 – 12.5:- Establishing LV Point of Connection
 - Matrix **updated from Issue 1** of document
 - Assessing pole-mounted transformer loadings
 - Modelling LV networks
 - Assessing network loadings
 - Assets types / earthing
- Section 12.6:- Determining HV POCs
 - Establishing system capacity
 - Security of supply
 - Quality of supply
 - Modelling HV networks
- Section 12.6.6:- Presentation of Self-Determined POC



Assessment of LV Networks

Overview of Approach

- Check the LV design matrix to determine the extent of assessment required
- Identify a suitable LV cable near to the site
- Confirm the earthing type and arrangements (PME/SNE/TT)
- With the exception of UMS, check the volume / type of customers
- Identify the substation(s) feeding the cable – is it radial or interconnected?
- Confirm there is sufficient transformer capacity available
- Carry out network modelling if required (e.g. using Windebut)

Low Voltage Design Assessment Matrix

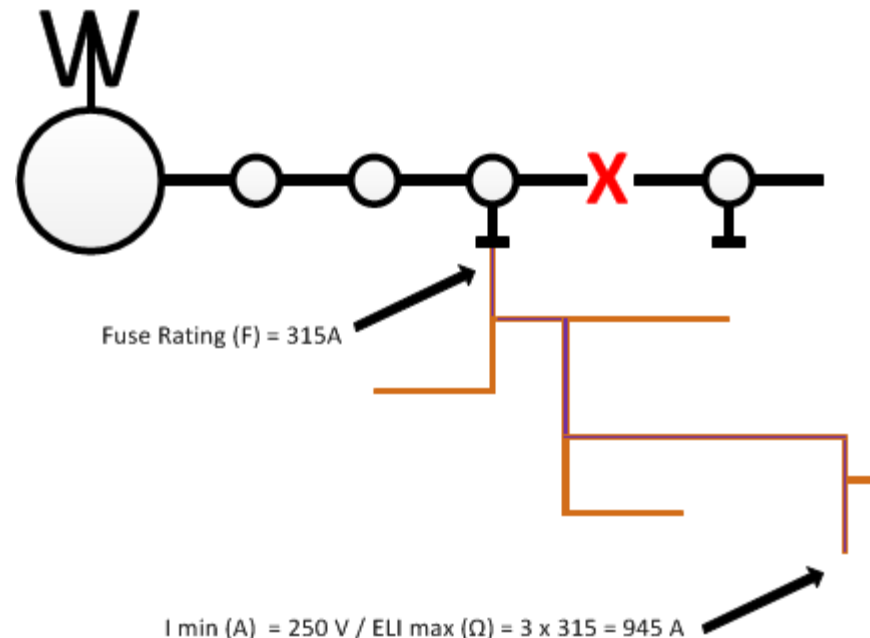
Criteria		System Checks Required (* Where Applicable)					
Load Requirement	Circuit Length from Source Sub Station to POC	Cable Type & ID	Earth Type	Volume / type of Customers	Pole Mounted transformer (PTE)	Substation Capacity & Feeder Loadings	System Study Model required
<=500W (unmetered supplies)	<= 500m	Yes	Yes				
<= 6kW (non domestic only)	<= 250m	Yes	Yes	Yes			
<= 6kW (non domestic only)	> 250m	Yes	Yes	Yes			Yes
Up to 4 Domestic (less than 2kW ADMD)	<= 250m	Yes	Yes	Yes	Yes *		
Up to 4 Domestic (less than 2kW ADMD)	>250m	Yes	Yes	Yes	Yes *		Yes
Single Connection <= 69kW	<= 200m	Yes	Yes	Yes	Yes *	Yes *	
Single Connection <= 69kW	> 200m	Yes	Yes	Yes	Yes *	Yes *	Yes
<= 276 kW Load & all LV Generation	Any	Yes	Yes	Yes	Yes *	Yes *	Yes

LV Design Parameters

- Once new load is added ensure that:
 - Voltage is within statutory limits (230V +10% / -6%, 216.2V – 253V)
 - Earth loop impedance (ELI) < 0.35 Ohms (PME) or < 0.8 Ohms (SNE)
 - Minimum fault current $\geq 3 \times$ substation fuse rating
 - Transformer loading(s) $\leq 100\%$ of capacity
 - Cable rating $\leq 100\%$ of capacity
 - P28 flicker for a single phase 9kW load is within permitted 3% limits

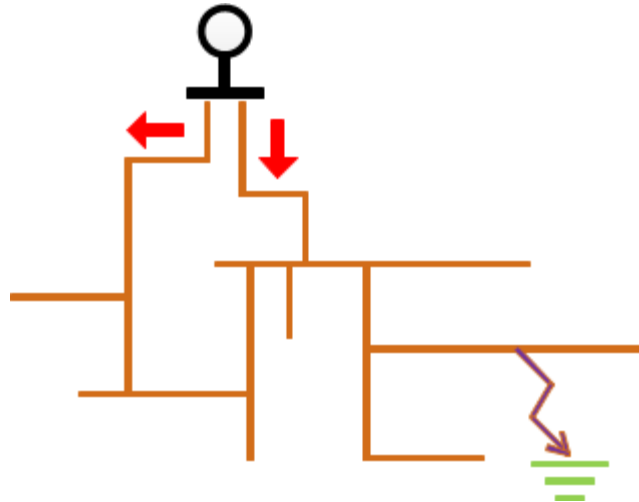
LV Design Do's & Don'ts

- Ensure existing customers are not adversely affected by the additional load or generation on the network.
- Don't reduce substation feeder fuses to keep the minimum fault current above 3 x the fuse rating.



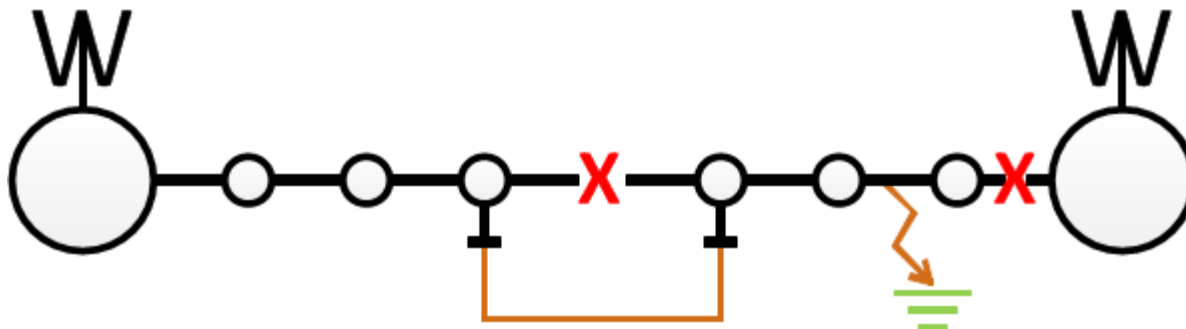
LV Design Do's & Don'ts

- Don't have a loop back onto a substation. If a fault occurs the fault current has two paths back to the fault and will split into two. A 315A HRC fuse has a fusing factor of 1.6 so won't start to operate until 504A is flowing (1.6×315). In this case a total of 1008A would flow from one transformer and the HV protection would operate before the fuses blow causing more customers than necessary to go off supply.



LV Design Do's & Don'ts

- Do not interconnect the overhead LV network.
- Don't interconnect LV across HV groups. This can lead to dangerous fault currents.
- Don't interconnect y-type substations with other substations on the other side of an HV split point or with substations of other feeders within the same HV group. Under fault conditions, this will provide a backfeed onto the HV network via the live LV and supply energy to the fault.



LV Design Do's & Don'ts

- Ensure fuses are sized appropriately and grading applied where necessary.
- For pole mounted transformers > 25kVA assume the demand is 50% of its rating.
- For ground mounted transformers use the transformer loading database but beware data errors.

Transformer Loading Database

Transformer Loadings

Export to PDF Export to Excel

Power Factor: 0.95 Units: kVA

Substation Name		Functional Location			Tx Rating	Num of Cust Fed by Tx		
HIGHGATE STREET		GSS-SN9584/004			300	203 Count		
Date	Red (A)	Yell (A)	Blue (A)	Total (A)	Total kVA	Total kW	kVAr	% Loading
19/03/2013	100	300	200	600	138	131	43	46

03 March 2015 Page 1 of 1



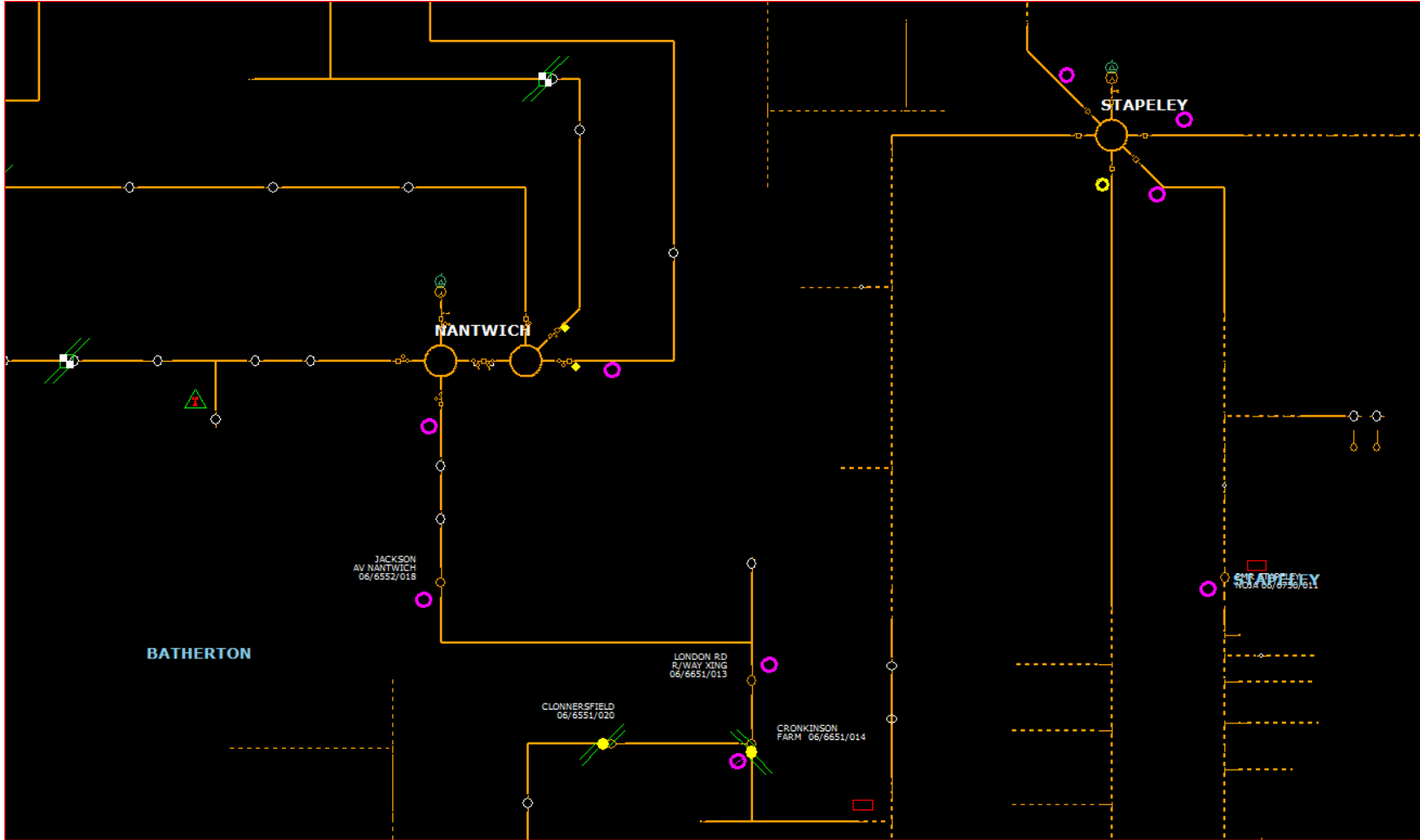
**SP ENERGY
NETWORKS**

Assessment of High Voltage Networks

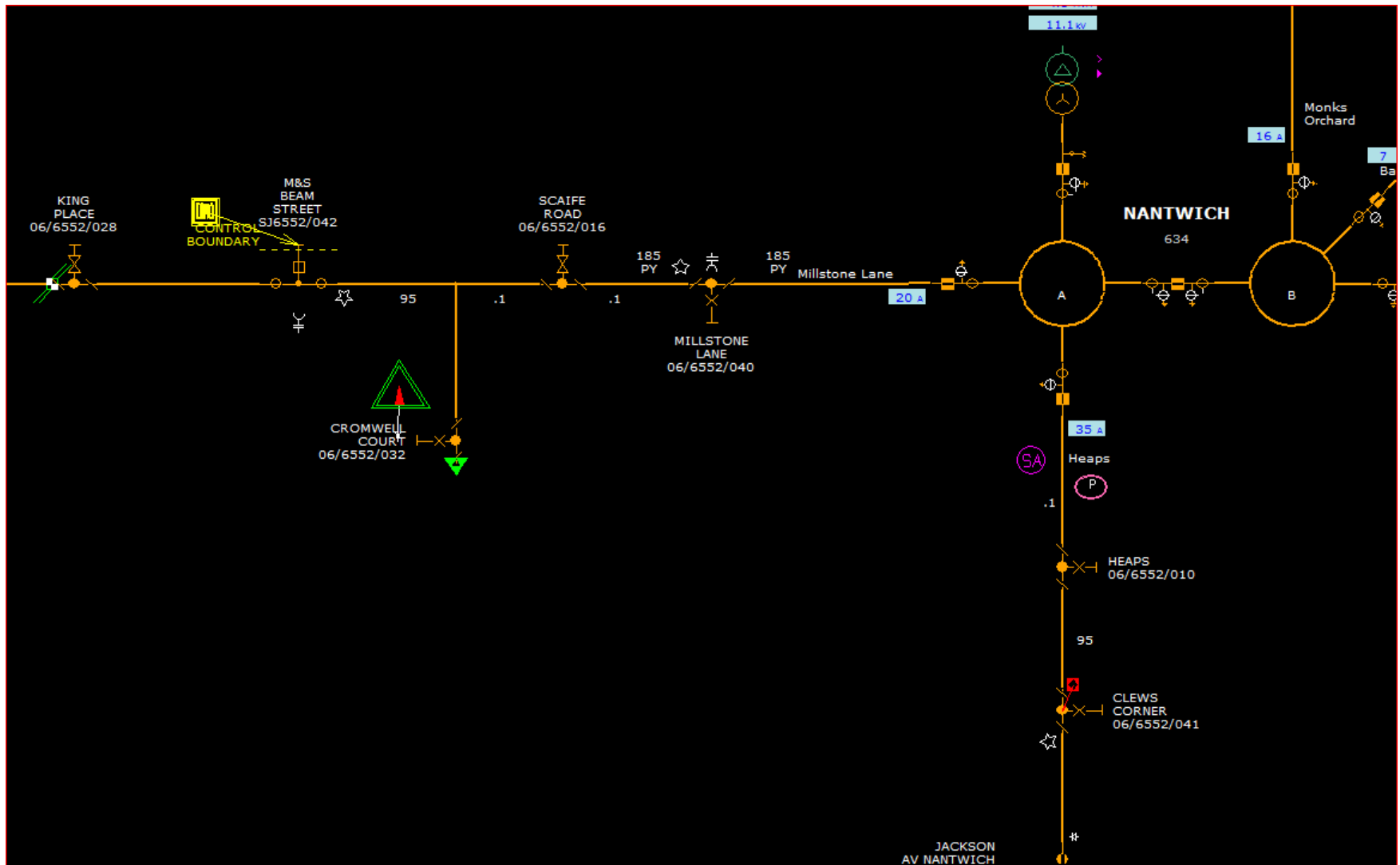
Assessing High Voltage Networks

- Section 12.6 of the POC SELF DETERMINATION AND SELF DESIGN APPROVAL GUIDANCE FOR ICPs with a focus on:
 - Capacity
 - Security of supply ENA ER P2/6
 - Quality of supply
 - Operational considerations
 - Network modelling

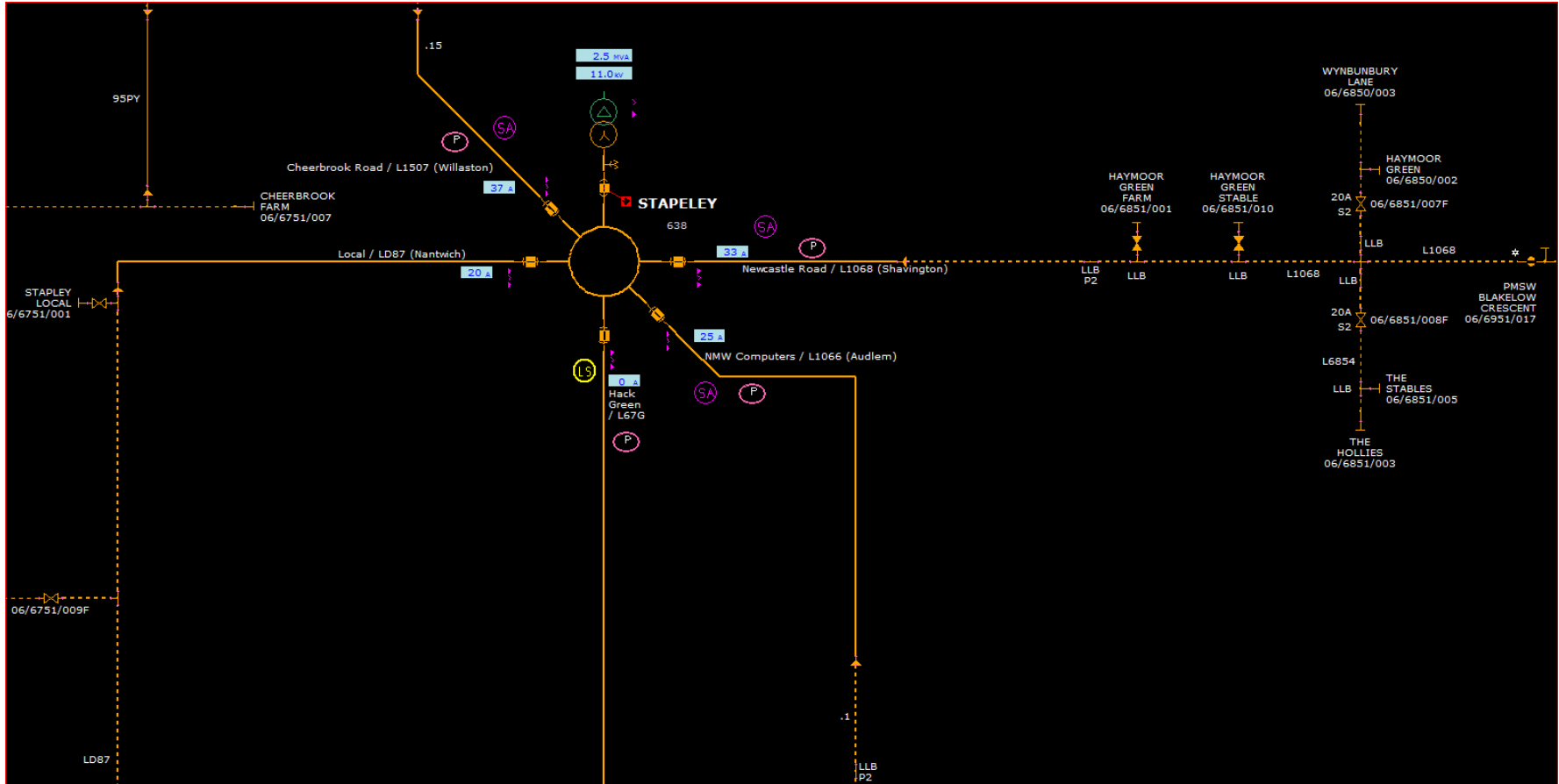
Radial HV Network



Y-Type HV Network



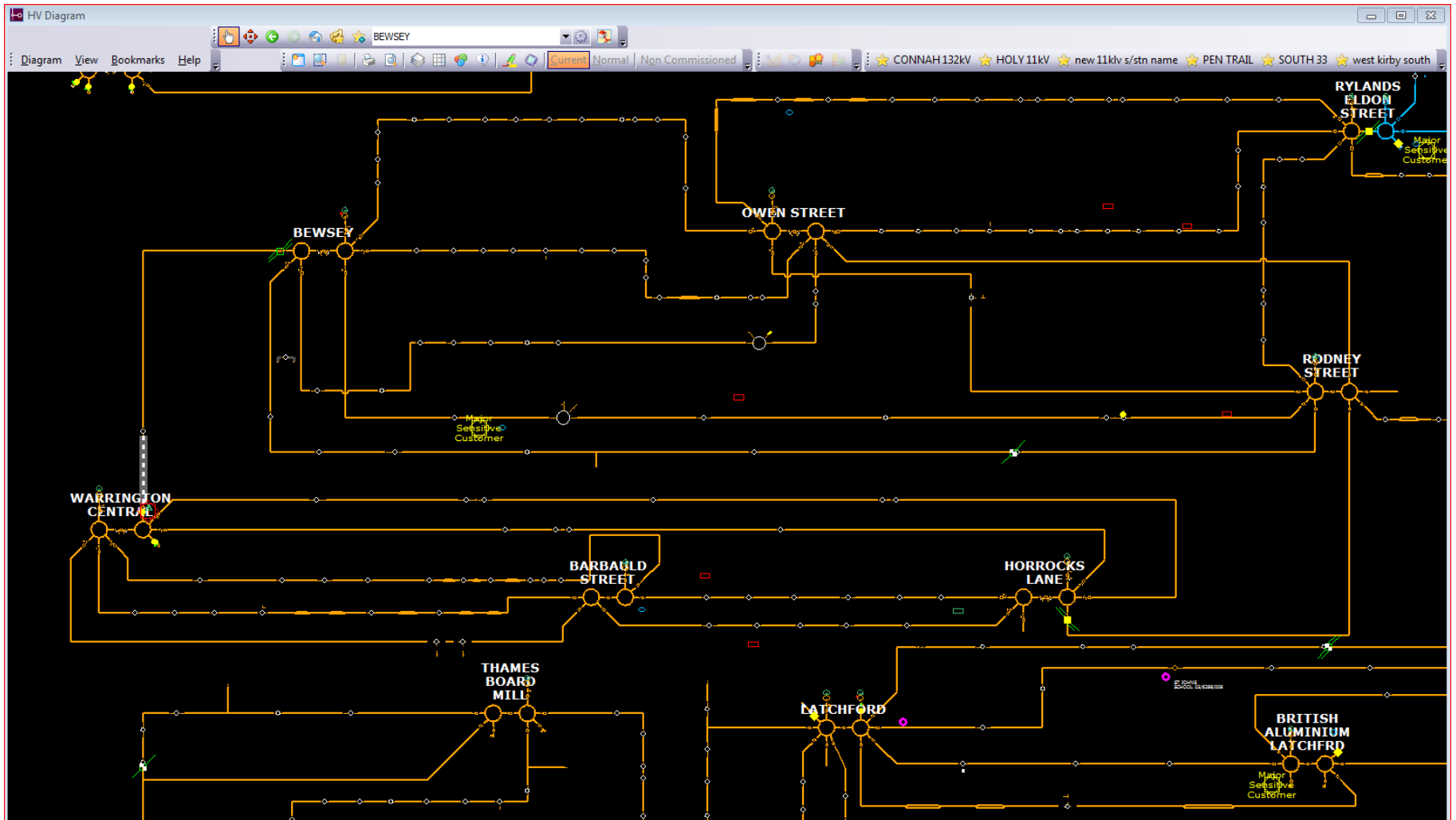
Overhead HV Network



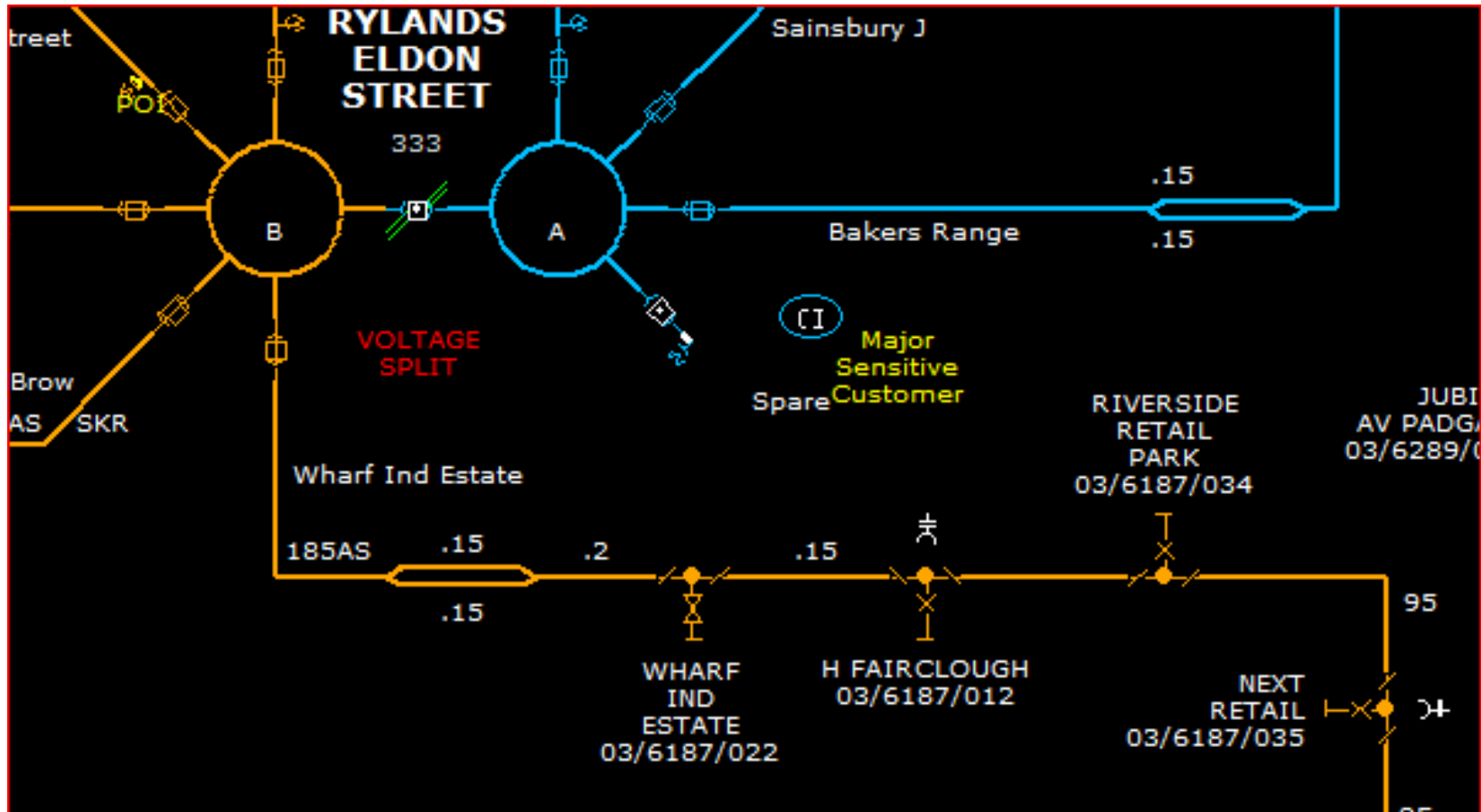
Assessing Simple Radial HV Networks

- Identify preferred Point of Connection
- Check loading of Primary Transformers Supplying the Network (Pi)
- Create model of network from Primary to Primary using ESRI / UTM
- Check loading on the network feeder and populate model
- Perform Load Flow
- Introduce POC
- Repeat Load Flow examining outage conditions (N-1)
- Confirm feeder loading within Feeder rating
- Confirm supply voltage regulation (+/-6% at 11kV)
- Confirm Fault Level (11kV < 250MVA)

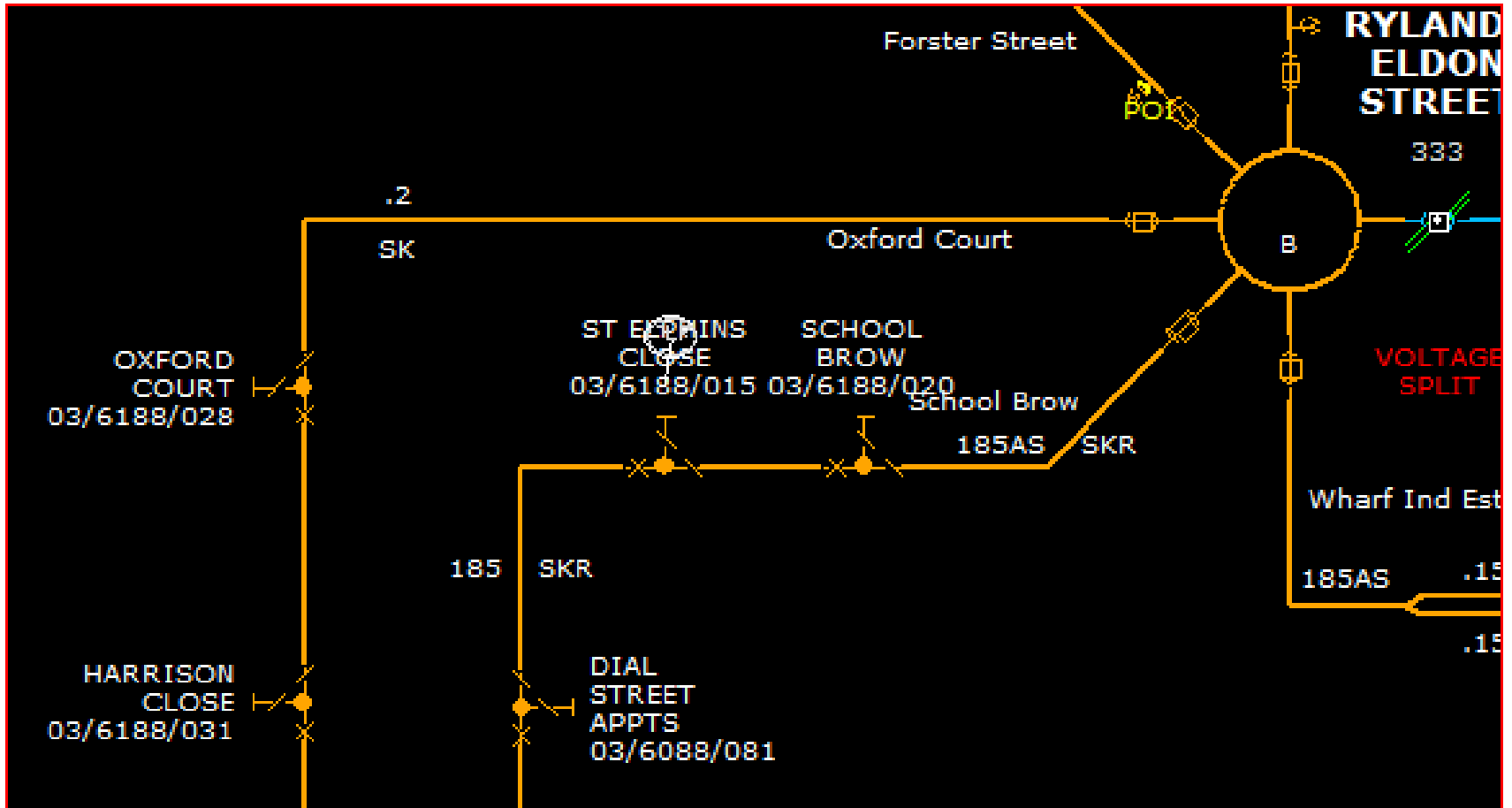
Interconnected HV Network



Interconnected Y-Type HV Network



Interconnected X-Type HV Network



Assessing Complex Interconnected HV Systems

- (Less Than 1MVA – ER P2/6) Class A
 - SP LV req - group demand minus 75 customers within 3 hrs
 - SP HV cable fault group demand minus 250 customer or 500kVA
 - SP OHL line or pole S/S group demand minus 90 customer
 - ER P2/6 restoration within repair time only
- >1MVA =<12MVA – ER P2/6 Class B
 - Within 3 hrs of a fault group demand minus 1 MW
 - >12MVA=<60MVA ER P2/6 Class C
 - Within 15 Minutes :- Smaller of group demand minus 12MW or 67% of group maximum demand MW
 - Within 3 Hrs group demand

System Performance Criteria See ESDD-01-202

- Identify preferred Point of Connection
- Check loading of Primary Transformers supplying the network (Pi)
- Create model of network group using Geo-field
- Check loading on the network feeders and populate model
- Perform load flow
- Introduce POC
- Repeat load flow examining all outage conditions (N-1)
- Confirm feeder loading within feeder rating
- Confirm supply voltage regulation (+/-6% at 11kV)
- Confirm fault level (11kV < 250MVA)



Self - Determination of POC Summary

Code of Practice Summary

Relevant Market Segment

Self Determination of POC

LV Demand	Yes*
HV Demand	Yes*
HV EHV Demand	No
EHV and 132kV Demand	No
LV DG	Yes*
HV DG	No
UMS LA	Yes
UMS Other	Yes
UMS PFI	Yes

* Subject to the following restrictions:

- Where the requirement for reinforcement is identified
- There exists interactivity with other quotations

- Questions



Design Approval Workshop

Self Design Approval Workshop Agenda

- Internet – information available and navigation
- Approving the design
- Construction and Adoption Agreements
- Connections Agreements
- Site Responsibility Agreements

Summary of document content for Self Approval of Design

Primary document Self - Assessment of Design:-

[ESDD-02-021 Guidance for Self-Determination of Point of Connection and Self-Design Approval for Independent Connection Providers](#)

Section 13 :- ICP Self Assessment of Design

Section 14 :- Information Exchange

- Guide to
 - Feel for and navigation of the SPEN internet
 - Focus on
 - Getting Connected
 - Document Library
 - Design Approval Standards
 - Commercial Documentation
 - Adoption and Connection Agreements

<http://www.spenergynetworks.co.uk/>

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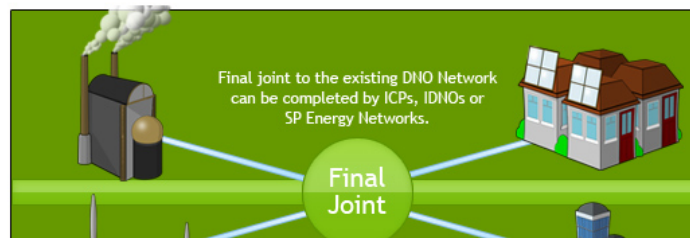
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- CON-04-005 [Register of Adopted Asset Requests \(RAdAR\) Process for Contestable Connection Projects](#)

Documents that may have relevance to Self - Assessment of Design (not exhaustive list)

- BATT-06-001 [Approved Equipment Register - Batteries](#)
- CAB-06-001 [Approved Equipment Register - Cables & Cable Accessories](#)
- CON-09-005 [Site Responsibility Agreement Template](#)
- EART-01-002 [Low Voltage Earthing Policy and Application Guide](#)
- EART-02-003 [Earthing and Bonding at Secondary Substations](#)
- ESDD-02-011 [Application of Overhead Line Switchgear and Protection Systems](#)
- SUB-03-013 [Specification for prefabricated substation housings for 12kV and 36kV switchboards](#)
- SUB-03-017 [General Specification For The Civil Engineering And Building Design And Construction Of Secondary Substations](#)
- SUB-03-018 [Specification for Prefabricated Glass Reinforced Plastic Enclosures](#)
- SWG-06-001 [Approved Equipment Register - Switchgear](#)
- TRAN-06-001 [Approved Equipment Register- Transformers & Bushings](#)

- Getting Connected
- Stakeholder Information
- Quote+
- Generation
- Electricity Disconnections
- Document library
- Competition in Connections**
- Competitions in Connections
- Code of Practice
- Transformer Loadings
- Self Determination of Point of Connection
- Who Can Do the Work?
- What Work Can be Done?
- Who Regulates Our Connection Business?
- Tracking Your Project
- Steps to Getting Connected
- Extending the Scope of ICP Work
- Keeping You Informed
- Adopted Distributed Generation
- Connection Agreements
- Construction & Adoption
- Gaining Authorisation to SPEN
- Utility Map Viewer
- How to Contact CiC



Competition in Connections

Competition in the connections market means you have a choice when selecting who provides some elements of your connection process.

These can either be provided by ourselves, Independent Connection Providers (ICPs) or Independent Distribution Network Operators (IDNOs).

Independent Distribution Network Operator

Independent Connection Provider

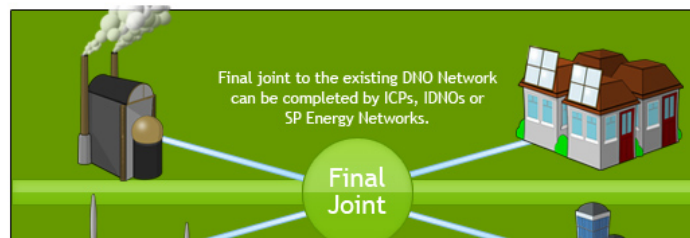
Independent Distribution Network Operator

Independent Distribution Network Operators are accredited companies that can build new electricity networks. An IDNO may continue to own and operate these new networks independently, providing maintenance, repair and supply to their customers.

You'll find more details in this section, including information about **who can do the work** and **what work can be done**. Our leaflet, [Connecting You With a Choice](#), also offers more information.

For your safety, only suitably accredited connection companies can provide connections. Although point of connection quotations can be issued to any customer who requests one, only fully accredited ICPs can present designs for adoption and a point of connection quote cannot be accepted unless it is accompanied with a full design from an accredited ICP.

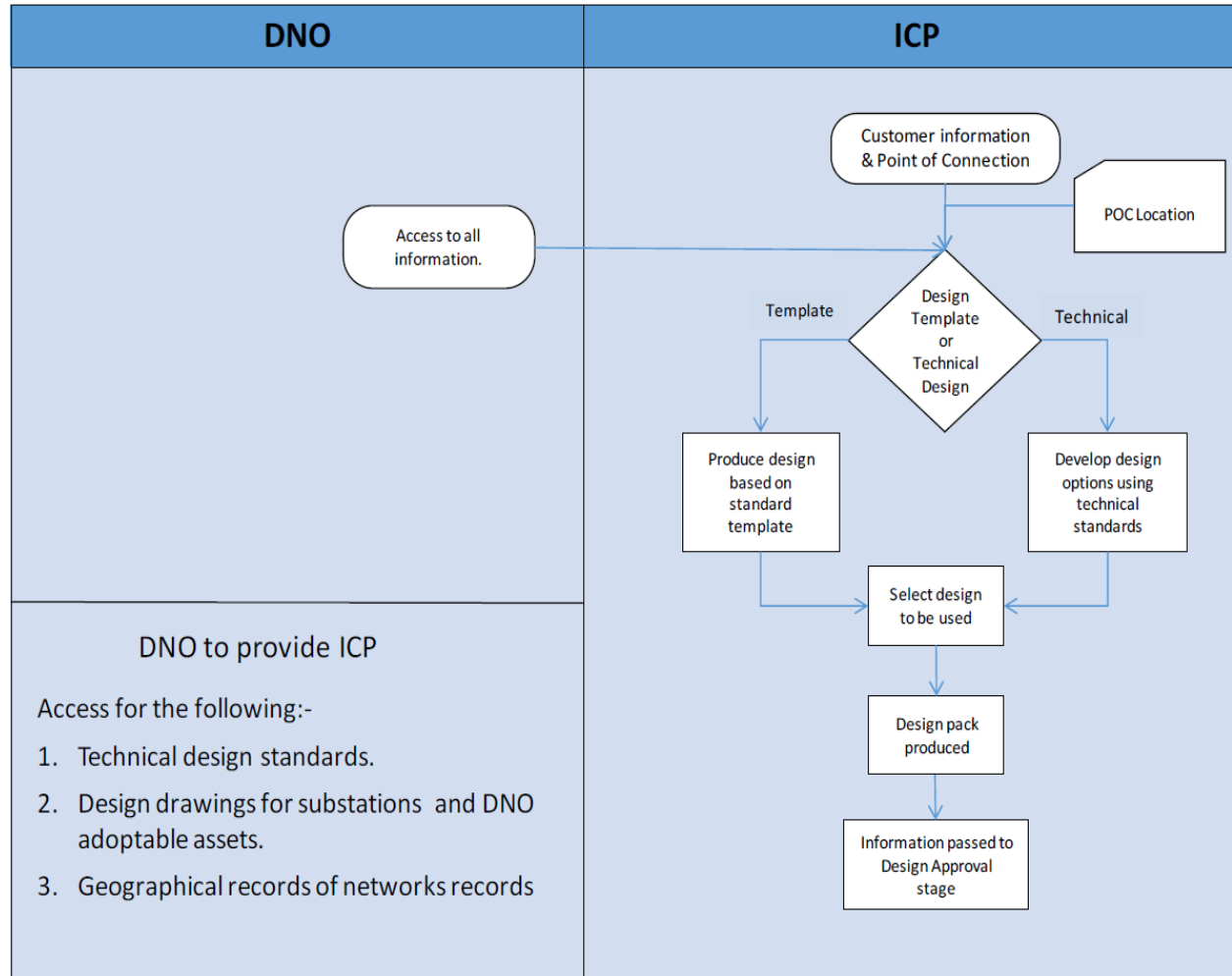
New domestic, commercial, industrial and **generation network connections** can be built by an ICP, IDNO or SP Energy Networks. These connections may be adopted by SP Energy Networks or an IDNO.



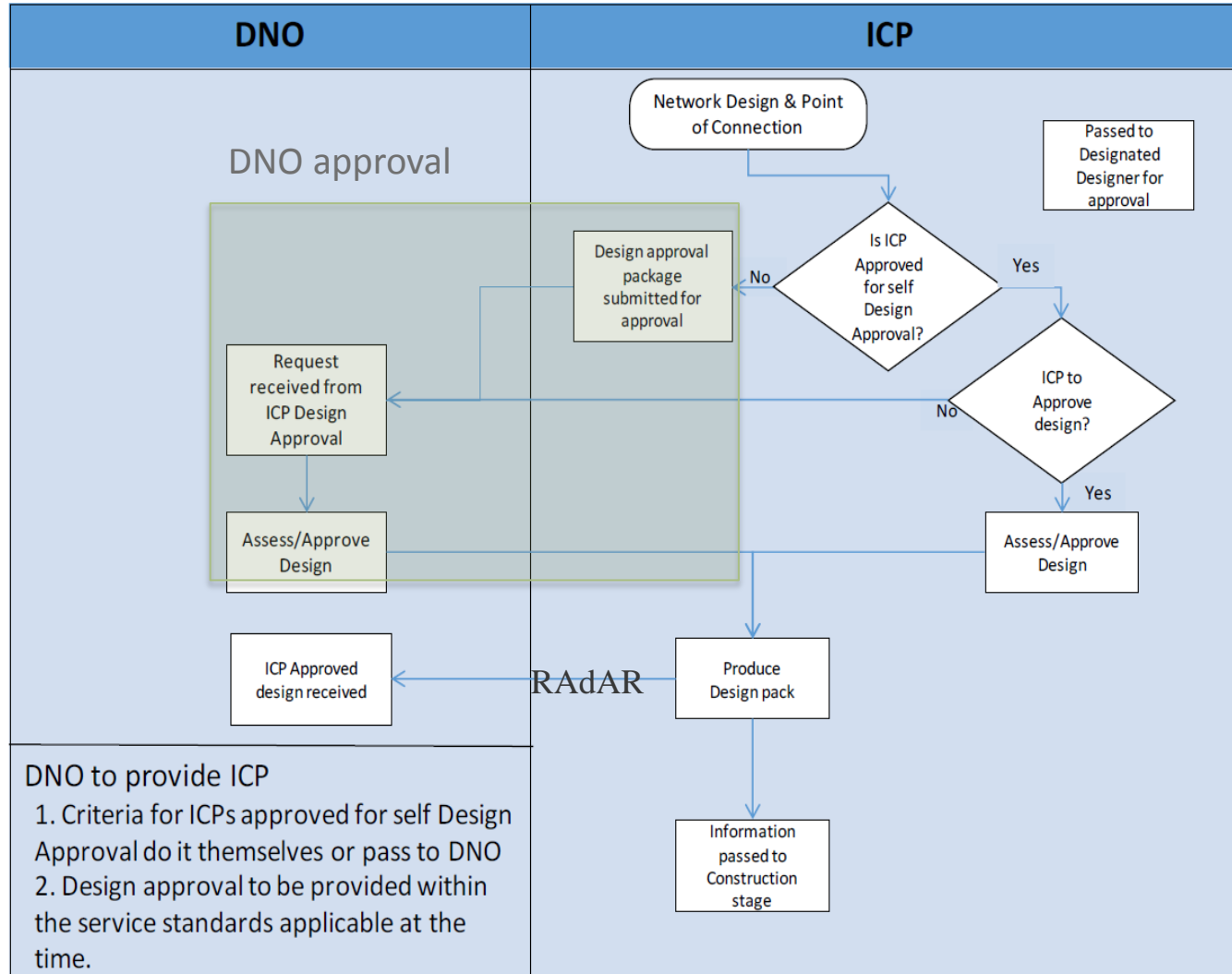


Design Requirements (Self - Approval)

Connection Design – Key Process Steps



Connection Design Approval – Process Steps



Key Document – “Guidance for self - determination of point of connection and self design approval form independent connection providers.” – ESDD-02-021

Self - assessment should ensure that the proposal:

- Complies with SPEN specifications
- Meet the customers requirements
- Good industry practice
- CDM regulations have been headed.
- Consideration given to surface types, cable and line routes to minimise access costs.

Guidance on all these aspects are readily available:

<http://www.spenergynetworks.co.uk/pages/document.asp>

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POWER CUTS ADVICE GETTING CONNECTED INVESTMENT ABOUT US CONTACT US

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Getting Connected

- Stakeholder Information
- Quote+
- Generation
- Electricity Disconnections
- Document library**
- Competition in Connections
- Regulation & Consents
- Contact Connections
- Customer Service Performance
- Useful Documents
- On-Line Quotation Tool

Document library

Below, you'll find essential documents about SP Energy Networks' compet services.

All documents are in Adobe PDF format. Some forms can now be completed with Acrobat reader and email address.

Completing PDF Forms

- To save the PDF, right-click one of the links below and click "Save as...".
- Complete the form by typing the relevant information into the blue areas
- Save the changes you make.

Document	Issue	Document Title	Date
ASSET-01-015	Issue 1	New Connections Contractor Approval Policy	2005-08-02
ASSET-01-021	Issue 2	Asset Inspection and Condition Assessment Policy	2015-12-18
ASSET-04-020	Issue 5	Inspection and Monitoring of Networks Constructed by Independent Connection Providers	2015-11-16



Approved Equipment Register - Switchgear

SWG-06-001
Issue No. 5

Approved Equipment Register - Switchgear		Ref No	SWG-06-001
		Issue No	5
		Issue Date	28/01/2015
Content List	Equipment Description	Lead Engineer	Review date
9.1	GIS (Gas Insulated Substation)	Kevin Butler	Mar-15
9.2	Open Terminal Circuit Breakers	Kevin Butler	Mar-15
9.3	Disconnectors	Kevin Butler	Mar-15
9.4	Earthing Substiles	Kevin Butler	Mar-15
9.5	Current Transformers (Postage open terminal)	David Walker	Mar-15
9.6	GIS Current Transformers	Patrick Dolan	Mar-15
9.7	Capacitor Voltage Transformers (Protection, General Instrumentation)	Patrick Dolan	Mar-15
9.8	Electromagnetic Voltage Transformers (General Instrumentation)	Patrick Dolan	Mar-15
9.9	Measurement Transformers (a) T-Test Meters	Patrick Dolan	Mar-15
10.1	Circuit Breakers (with Voltage sensing on MV/LV)	Kevin Butler	Mar-15
10.2	Bus/Mat Units	Frank Berry	Mar-15
10.3	LV/ET Renewable Substation for associated substations	Alan MacGregor	Mar-15
10.4	Disconnectors & Switch Disconnectors for associated substations	Alan MacGregor	Mar-15
10.5	Pole Mounted Auto Reclosers	Alan MacGregor	Mar-15
10.6	Pole Mounted Auto Reclosers	Alan MacGregor	Mar-15
10.7	HV Fuses/Letals	David Kilday	Mar-15
11.1	Distribution Circuit Breakers (with Voltage)	Frank Berry	Mar-15
11.2	LV Manual Fuses	Frank Berry	Mar-15
11.3	LV Underground/LA Boxes	Frank Berry	Mar-15
11.4	LV Cables	Gordon MacKenzie	Mar-15
11.5	LV Service Switch Disconnectors	Frank Berry	Mar-15
11.6	LV Fuses/Letals	David Kilday	Mar-15
11.7	Earth Fault Indicators & Associated CTS	Frank Berry	Mar-15
11.8	LV Service Distribution Boards for Multiple Occupancy Premises	Gordon MacKenzie	Mar-15
12	Vehicle Equipment		Mar-15
Author	Owner	Issue Authority	
Gordon MacKenzie - Project Manager	David Neilson - Substation Manager	Donald Miller - Head of Asset Management	



Some basic design rules.

- Allow 2m wide strip for the cable route.
- A 5m access area adjacent to cable route.
- Avoid trees, bushes, landscaped areas, adjacent walls.
- New development should not have cables in roadways , unless crossing in ducts.
- No overhead apparatus built within falling distance plus 5m of any building, structure, or perimeter.
- Pole top operational equipment must be no more than 2 spans from any roadway.

- Design Plans uploaded through RAdAR

- Self - approval ‘probationary period’ – ICP must achieve 5 error clear designs.

.....all guidance available within published documents

Legal Agreement Documents :- Self Design Approval.

Legal Agreements Self Design Approval

- New Adoption Agreements to reflect the new process
 - ICPs to take responsibility for the work they do
e.g. POC, design approval, self inspection
- Option to sign framework agreement, followed by site specific schedules
- One agreement for housing and I&C projects
- New agreements published on the website
- Option still remains for bi-partite or tri-partite

Construction and Adoption Agreements

Site Specific Schedules:

- ICP indicates what work they have undertaken, e.g. POC, design approval, self inspection and monitoring etc.
- This “switches on” the relevant liability clauses in the Adoption Agreement

Connection Agreements

Explanation of different types of documents:-

There are nine Connection Agreement templates for each of SPD and SPM.

- four generation connections,
 - LV Generation (G59),
 - 11kV and above No Generation,
 - 11kV and above Generation No Export,
 - 11kV and above Generation Export
- two specially for IDNOs,
 - HV Close Coupled (11kV),
 - LV Link Box (230V/400V)
- Two for IDNOs or connected customers
 - LV Standard (230V/400V),
 - HV Standard (11kV)
- one for EHV Connections.
 - EHV (33kV)



Self Design Approval Summary.

Summary

Relevant Market Segment	Self determination of POC
LV Demand	Yes*
HV Demand	Yes*
HV EHV Demand	No
EHV and 132kV Demand	No
LV DG	Yes*
HV DG	No
UMS LA	Yes
UMS Other	Yes
UMS PFI	Yes

***Subject to the following restrictions:**

- Where Contestable design requires incorporation of a constraint and monitoring scheme
- Diversion of Existing Assets (Affecting Existing Substation Assets)



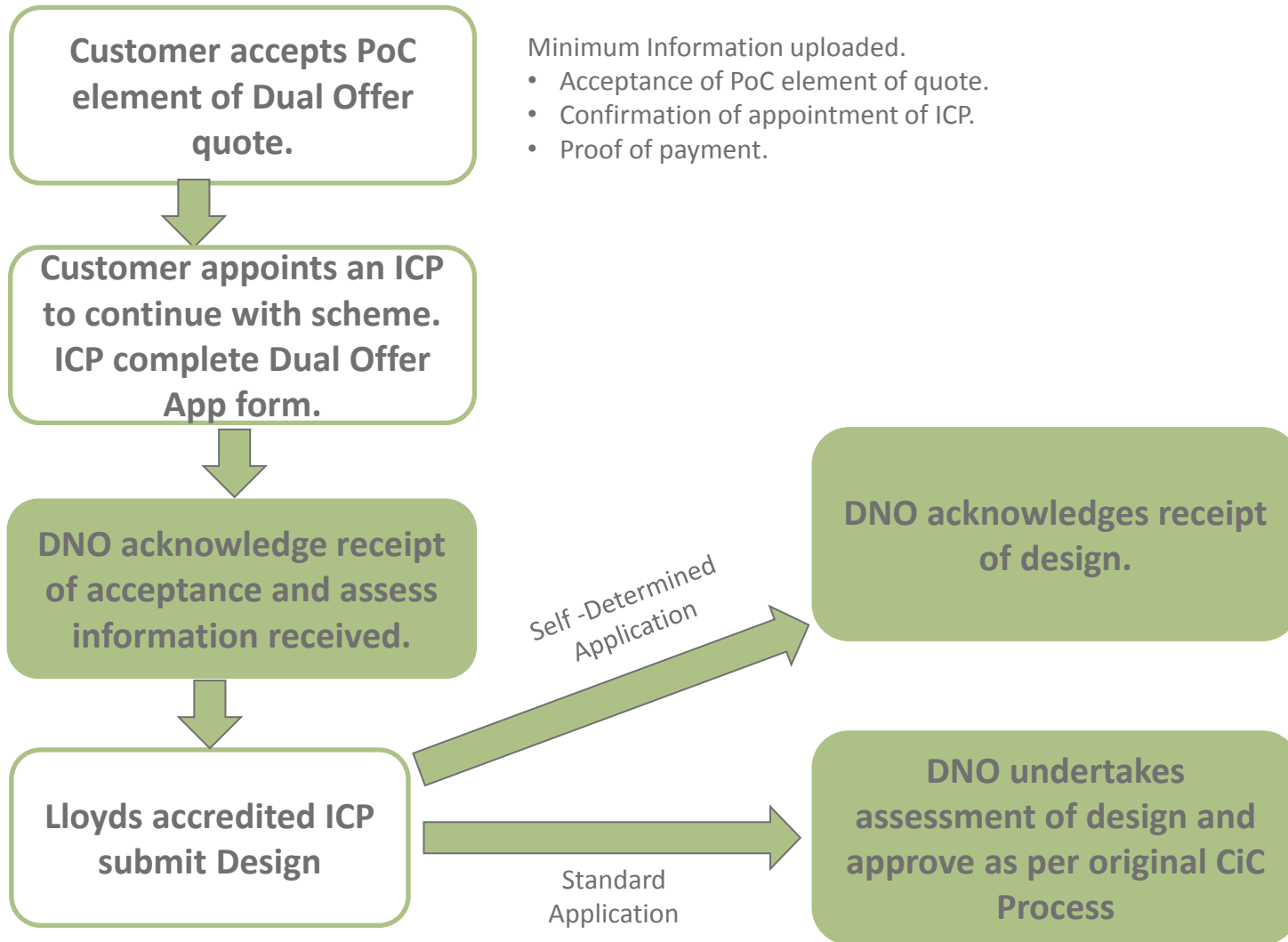
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RAdAR Updates

Agenda – RAdAR Updates

- Focus on CON-04-009 document guidance.
- Processing Dual Offers.
- Self - Assessment of PoC process.
- Self - Assessment of Design process.

Dual Offer - RAdAR Process



RAdAR Dual Offer Process Demonstration.

ICP Self Assessment of PoC - RAdAR Process

Type of Enquiry (Please indicate intention to complete contestable closing joint works)

Please specify type: Final Submission Information Only

Type of Enquiry *:

Do you wish SP to complete the contestable final closing joints? *: Yes No

Tick if you wish the non contestable diversion works to be included in your POC offer (if applicable)?

Please note: where this is not selected, it is your responsibility to contact SP Network Connections to arrange for a formal "Full Works Offer" to be issued for the diversions

ICP to complete online "info only" application to inform DNO of intention to Self-Assess.

ICP submits request for information.

DNO returns requested information

ICP received all information required to complete PoC.

No information required by ICP to complete PoC.

Information uploaded to inform DNO of "Quote issued to customer"

DNO acknowledge PoC submission, issue quote for any works done by SP.

ICP submits "Final Submission" once customer quote accepted.

RAdAR PoC Self - Assessment Process Demonstration.

ICP Self-Assessment of Design - RAdAR Process

- For the ICP to assess their own design the Self - Determined option of the PoC application form needs to be completed as below:

Please complete Self Determination options

Design Approval *: ICP ▾ Closing Joints *: SP ▾

Diversions *: SP ▾ Enabling Works *: SP ▾

Inspections *: SP ▾ Operational Support *: SP ▾

AddInfo Supplied: No Yes

There is a drop down list for each category to enable the ICP to choose to self-determine the design or for SP to Approve.

- When the ICP has completed a design that they are self assessing, the information that is required is contained with CON-04-009.
- When the job is input into RAdAR it will look as below:

Select to Cancel	Project No.	Design Request Ref	Design Type	Site Name	SPEN (QAS) Ref	Site Address	Post Codes (1-2)	Region	Request Date	Design Request Type	Design Acceptance Status	Cancelled	Date Actioned	Design ICP	Admin	Designer	POC Applicant's Name	Applicants Name
<input type="checkbox"/>	N999999	SELF_DES_11016	Self Determine	TEST	110116	TEST	G1	Glasgow	11/01/2016	Original	Pending	No		LV demand		Alastair Oldfield	Demo ICP	Demo ICP

- SP will then “Acknowledge” the design when the design documents have been submitted.

<input type="checkbox"/>	N999999	Demo ICP	110116	TEST	TEST	11/01/2016		Acknowledged	N/A	N/A			LV demand	SELF_DES_11016		Fully Adopted	Original	G1	123456,654321	Demo ICP
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SP ENERGY
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COP Workshop Summary

Summary of Areas Covered

- Self - Determination of POC
 - Internet
 - LV POC
 - HV POC
- Self - Design Approval
 - Internet
 - Design Approval Principles
 - Legal Agreements
- RADAR System Update
 - Dual offers
 - Self - Determination of POC