

SPM Code of Practice Review Workshop



Mike Scowcroft

Welcome

Agenda

09:00 Registration/ Tea & Coffee

09.30 Welcome & Introduction

Code of Practice Update

09:45 POC and Design Q&A's

10.30 Coffee Break

11.00 Delivery & Self Connect Q&A's

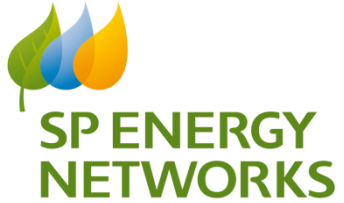
11.30 Inspection & Monitoring Q&A's

12.00 Radar Q& A's

12.30 ICE Update

12.45 Summary and Next Steps

13.00 Close & Lunch



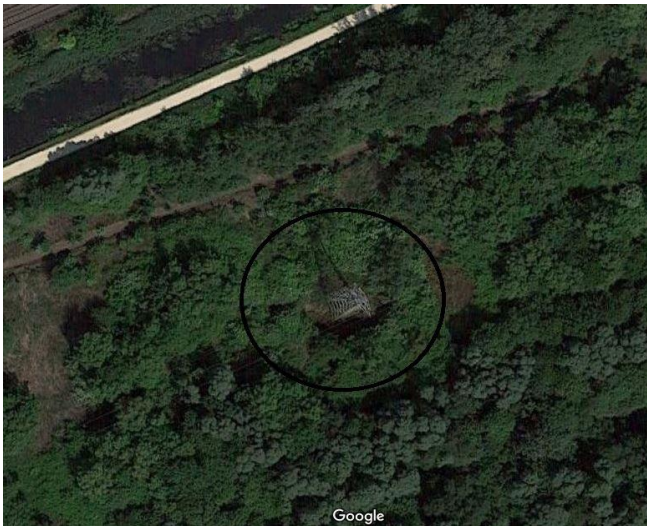
Mike Scowcroft

Safety Contact

Safety Contact



- 132kV Tower incident in Penketh
- A member of the public in his 20s had climbed up the Tower.
- A member of the public had heard his distress calls and notified the Police who then contacted NGC and ourselves
- The circuit was switched off immediately and resources were dispatched



Code of Practice Update

Code of Practice Update

Code of Practice was introduced in November 2015

ICPs are able to:

- self determine POC
- self approve design
- carry out final connection
- work under their own safety rules
- self inspect and monitor

Also, we provide “dual quotes” for all connection offers (except LVSSA and LVSSB)

Code of Practice Update

In September 2016 we published our annual CoP report which is on our website.

To date, there has been limited uptake

Code of Practice Update

Dual Offer

Description Of Works	Proposed Quantity	Measure	Customer Contribution	SPD Contribution	Connectable	Non Connectable	Comment
F3 OTHER L.V. SERVICES							
Low Voltage FUSE	4.00	Item	00.00	0.00	Y		
SUPPLY ONLY 60MM DUCT	90.00	m	000.00	0.00	Y		
PICK UP, DELIVER & RETURN CABLE DRUM	1.00	Item		0.00	Y		
35MMF 1-CORE INTERNAL MAINS CABLE	90.00	m	000.00	0.00	Y		
Sub Total			0,000.00	0.00			
F6 OVERHEAD LINE							
High Voltage ANGLE SECTION POLE	2.00	Item	0,000.00	0.00	Y		
High Voltage/Low Voltage POLE STAY	6.00	Item	0,000.00	0.00	Y		
OVERHEAD LINE SURVEY	1.00	km	000.00	0.00	Y		
1-PHASE POLE TRANSFORMER CONNECTION KIT	1.00	Item	0,000.00	0.00	Y		
High Voltage 1-PHASE OVERHEAD LINE (L10)	662.00	m	00,000.00	0.00	Y		
EARTH CABLE GUARDS	1.00	Item	000.00	0.00	Y		
High Voltage 1-PHASE SMART FUSE & HOLDER	1.00	Item	0,000.00	0.00	Y		
High Voltage SECTION POLE	1.00	Item	0,000.00	0.00	Y		
High Voltage TERMINAL POLE	1.00	Item	0,000.00	0.00	Y		
Low Voltage 200A 1-PHASE FUSE UNIT WITH WIRING	1.00	Item	000.00	0.00	Y		
High Voltage/Low Voltage POLE STAY	2.00	Item	000.00	0.00		Y	
ENGINEERING & MANAGEMENT (TOTAL LABOUR)	1.00	Item	0,000.00	0.00		Y	
PROJECT MANAGEMENT (TOTAL LABOUR)	1.00	Item	0,000.00	0.00		Y	
TECHNICAL STAFF (TOTAL LABOUR)	1.00	Item	000.00	0.00		Y	
ESTABLISH High Voltage T-OFF CONNECTION FROM POLE	1.00	Item	0,000.00	0.00		Y	
MAKE 1-PHASE T-OFF FINAL CONNECTION	1.00	Item	000.00	0.00		Y	
Sub Total			00,000.00	0.00			
F7 SUBSTATIONS							
EASEMENT / SERVITUDE FEES	2.00	unit	0,000.00	0.00	Y		
50KVA Split Phase POLE MOUNTED TRANSFORMER	1.00	Item	0,000.00	0.00	Y		
METERING PANEL	1.00	unit	000.00	0.00	Y		
3-PHASE POLE TRANSFORMER CONNECTION KIT	1.00	Item	0,000.00	0.00	Y		
PROJECT MANAGEMENT (TOTAL LABOUR)	1.00	Item	000.00	0.00	Y		
HIRE CRANE OR GRAB LORRY	1.00	Days	000.00	0.00	Y		
LABEL ENGRAVING	1.00	Item	000.00	0.00		Y	
ASSESSMENT AND DESIGN FEE	30.00	unit	0,000.00	0.00		Y	
ENGINEERING & MANAGEMENT (TOTAL LABOUR)	1.00	Item	0,000.00	0.00		Y	
Sub Total			00,000.00	0.00			
TOTAL CONNECTION CHARGE			00,000.00				

Code of Practice Update

Self determination of POC

Market Segment	Self Determination Available (Yes/No)	Comment	Number of DNO Quotes Issued	Number of SLC15 Quotes Issued	Number of Self Determined by Standard Design Matrix	Number of Self Determined by Technical Competence
LV demand	Yes	Subject to restrictions	406	325	0	0
HV demand	Yes	Subject to restrictions	406	282	0	0
HVEHV demand	No	Currently due to technical nature, complexity of designs and significant impact on network	4	22	0	0
EHV132 demand	No	Currently due to technical nature, complexity of designs and significant impact on network	1	0	0	0
DG LV	Yes	Subject to restrictions	22	0	0	0
DG HVEHV	No	Impacted by a high level of Interactivity	128	6	0	0
UMS LA	Yes		5	0	133	0
UMS Other	Yes		290	0	0	0
UMS PFI	Yes		0	0	18	0

Code of Practice Update

Self determination of Design Approval

Market Segment	Self Approval Available (Yes/No)	Comment	Number of SLC15 Designs Approved	Number of Self Approved Designs
LV demand	Yes	Subject to restrictions	46	0
HV demand	Yes	Subject to restrictions	31	0
HVEHV demand	No	Currently due to technical nature, complexity of designs and significant impact on network	1	0
EHV132 demand	No	Currently due to technical nature, complexity of designs and significant impact on network	0	0
DG LV	Yes	Subject to restrictions	0	0
DG HVEHV	No	Currently due to technical nature, complexity of designs and significant impact on network	12	0
UMS LA	Yes		173	0
UMS Other	Yes		0	0
UMS PFI	Yes		0	0

Code of Practice Update

Authorisations

Activities	Option 1 - ICP (Yes/No)	Option 2 - DNO (Yes/No)	Option 3 - Transfer of Control (Yes/No)	Comments
LV Works	Yes	Yes	N/A	
LV Operations	Yes	Yes	N/A	
HV Works	Yes	Yes	Yes	Underground works only
HV Operations	Yes	Yes	Yes	Underground works only
EHV Works	No	No	No	
EHV Operations	No	No	No	
Unmetered Works	Yes	Yes	N/A	
Unmetered Operations	Yes	Yes	N/A	

Code of Practice Update

Purpose of today

- Discuss with you the information that is available
- Identify any blockers to uptake of the CoP

Gary Barnes / Neil Woodcock

POC and Design

Q & A

COP Agenda

Introductions

Update / Interactive Discussion on

1. Self Determination of POC
2. Self Design Approval



Gary Barnes / Neil Woodcock

Self Determined POC Update

Point of Connection Options

POC REQUIRED



**DETERMINED
BY SPEN ON REQUEST**

**SELF DETERMINED
BY THE ICP**



**LICENCED
DUAL OFFER**

**POC
ONLY**



MATRIX

**DETAILED
ANALYSIS**

Market Segments Open to Self POC

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

LV Design Parameters

Table 1: Low Design Assessment Matrix

Loading	Distance From Sub station	Cable Type & Identification	Earth Type	Volume / type of Customers	Pole Mounted transformer (PTE)	Ground Substation Capacity & 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 Service up to 70kW	<= 200m	Yes	Yes	Yes	Yes	Yes	
Single Service up to 70kW	> 200m	Yes	Yes	Yes	Yes	Yes	Yes
Up to 276 kW	Any	Yes	Yes	Yes	Yes	Yes	Yes

Guidance Documents

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

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 Info 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

Self Determined POC Discussion

Access to SPEN Info / Systems

- Transformer Loading Database?
 - UMV (GIS / ICOND)
 - Guidance Documents?
 - Technical Specification Docs?
-
- What can we do to encourage Self Determined POC'S? (Blockers)

Perceived / Actual Barriers to Self POCs

What are the Blockers to You undertaking Self POC

- Unclear on how to progress application?
- Access to relevant information?
- ICP Technical Skills / Knowledge?
- Perceived Risk?
- Cost Prohibitive?
- Timescales

ICP Self Design Approval Update

Point of Connection Options

DESIGN APPROVAL REQUIRED



**ASSESSED BY SPEN
ON REQUEST**



**SELF DETERMINED
BY THE ICP**



**LICENCED DUAL
OFFER POC
ACCEPTANCE**

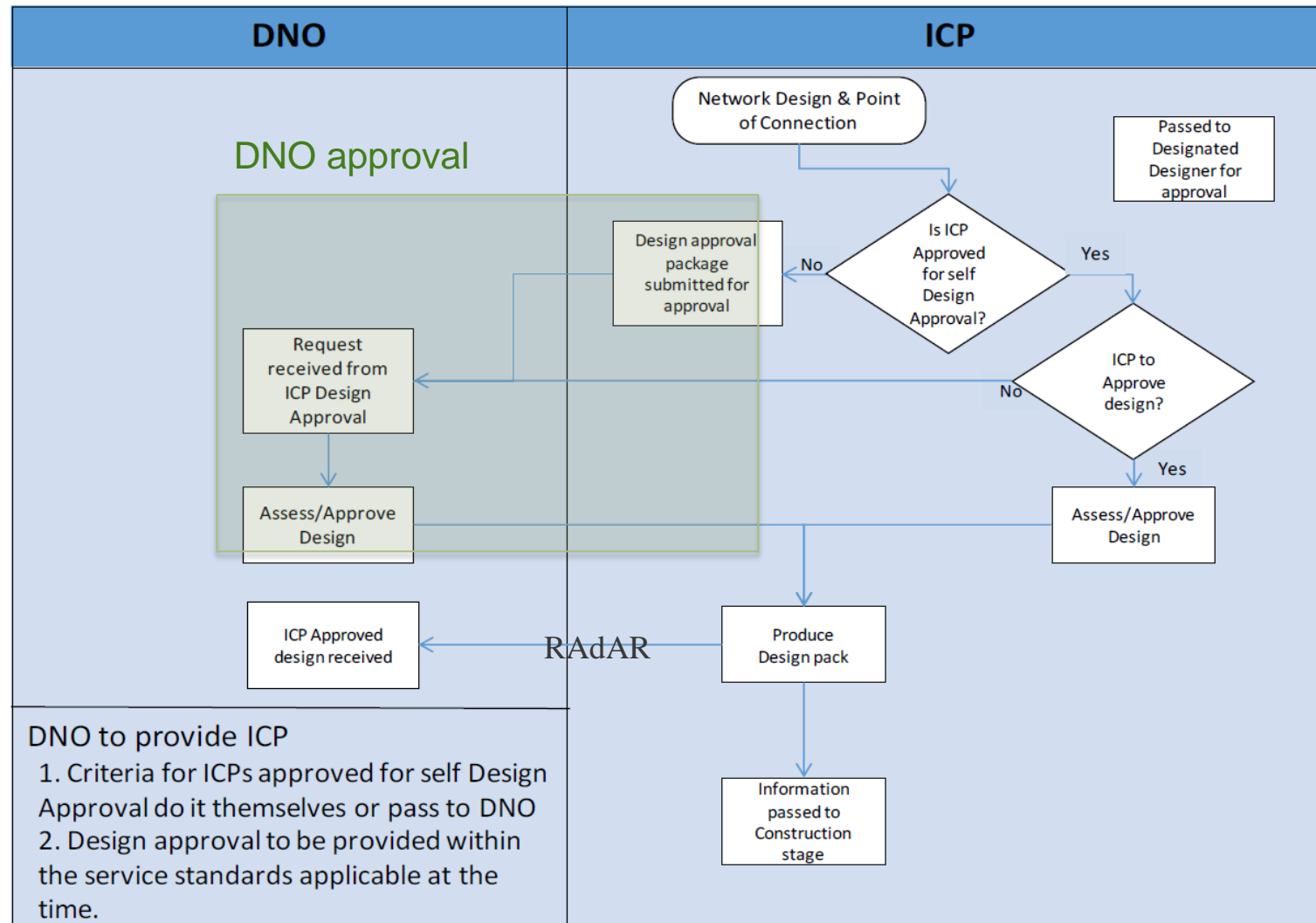
**POC
ONLY**



FRAMEWORK STANDARD

Design Requirements

Connection Design Approval – Process Steps



Market Segments open to Self Design Approval

Summary

Relevant Market Segment	Self Design
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)

Design Requirements

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 facilitate future operation and maintenance of assets
- Includes Construction and Adoptions Agreements / Bi-lateral or Tri-partite Connection Agreements
- Securing of Land Rights as applicable

Processing Self Design Approval

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

Document Guidance

As per the POC but also other 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

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

Connection Agreements

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

Three generation connections,

- LV Generation (G59),
- 11kV and above Generation No Export,
- 11kV and above Generation Export

Two specially for IDNOs,

- LV Including Link Box (230V/400V)
- HV Close Coupled (11kV),

Two for IDNOs or connected customers

- LV Standard (230V/400V),
- HV Standard (11kV)

One for EHV Connections.

- EHV (33kV)

Gary Barnes / Neil Woodcock

Self Design Discussion

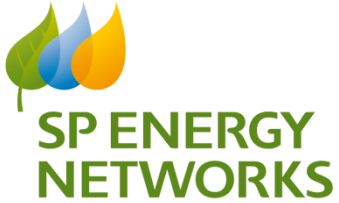
Perceived / Actual Barriers to Self Design

What are the Blockers to you undertaking Self Design

- Unclear on how to progress submission?
- Access to relevant information?
- ICP Technical Skills / Knowledge?
- Perceived Risk?
- Cost Prohibitive?
- Timescales

Self POC / Design Summary

- Any Final Questions
- What next?



John McWilliams

Delivery & Self Connect

Q & A

Delivery & Self Connect Q & A

What are the issues?

- Whereabouts?
- As-laid documents?
- Correct Forms?
- Notification of Completion of works?
- Test Certificates?
- Commissioning Documents ?

Inspection & Monitoring

Q & A

Inspection and Monitoring

Scheme 1 - SPEN Inspection

A random sampling approach based on activity risk is adopted within SPEN. All work selected from the daily whereabouts will be inspected in the following order:

1. Level 1 / New Entrants / any future EOCW activities
2. Level 2
3. Level 3

Inspection and Monitoring

Scheme 2 - Self Inspection

After a satisfactory performance in Scheme 1, an ICP has the option to move onto the 'Self Inspect' scheme where an ICP can construct a network with minimum or no inspection and monitoring from SPEN.

Inspection and Monitoring

Scheme 1 - Satisfactory performance:

- Less than 5 Items Of Concern
- Less than 20% of all audits with an IOC identified
- Zero safety critical failures

Scheme 1 - Unsatisfactory performance:

- If an ICP fails to meet the criteria set above.

Inspection and Monitoring

Scheme 2 - Self Inspect

After a satisfactory performance in Scheme 1, an ICP has the option to move onto the 'Self Inspect' scheme where an ICP can construct a network with minimum or no inspection and monitoring from SPEN.

Inspection and Monitoring

Scheme 2 - Satisfactory performance:

- Completion of a 6 month period with all works recorded and accounted for as per scheme guidelines.

Scheme 2 - Unsatisfactory performance:

- If an ICP fails to meet the criteria set above.

Inspection and Monitoring

Where an ICP fails to meet the criteria at Scheme 2, Level 4, they will move over to Scheme 1 Level 3 and charged accordingly.

SPEN reserve the right to inspect all works on all sites, irrespective of scheme or inspection level. This will not affect the associated Inspection and Monitoring charges identified within the Connection Charging Statement.

Inspection and Monitoring

A decision to move inspection levels to either more or less frequent inspections is ultimately at the discretion of SPEN, after discussion at local level with the ICP. However, as a guide:

- The inspection level for all ICPs will be reviewed periodically
- Any change in the level will be confirmed to the ICP in writing
- Persistent failures or Safety Critical failures will result in an immediate review of the ICP inspection level.

Inspection and Monitoring

- Working practices that could have the potential to compromise the integrity of the SPEN network
- Failure to document work that has been carried out
- Inadequate storage or control of materials
- Work being carried out which does not comply with SPEN's specifications, or if unable to meet those requirements failure to seek approval before proceeding with those works.

Inspection and Monitoring

Any ICP that is inactive for over a one year period shall automatically have their inspection level lowered to the next level.

ICP's who work across both SPEN licenced areas have separate reviews to their levels, e.g. they can be level 2 in SPD and level 1 in SPM.

Inspection and Monitoring Q & A

- Failure to keep SPEN informed about works programme
- Contestable works performed which are outside the ICP's registered scope
- Action not taken to satisfactorily close previously identified IOC

RAdAR Q & A

RAdAR Q & A

Proposed RAdAR Changes:

- Update to the system to reflect Dual Offer Unmetered Quotes being issued.
 - No changes to the existing processes.
- The main alterations will be to the naming conventions of sections in the system.

POC	Design	Construction	Connection
POC Request		Standard	
Register		Dual Offer	
Templates		Self Determined	
		Single Site UMS	
		Bulk Contract Unmetered	

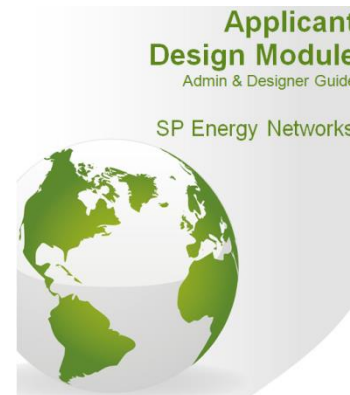
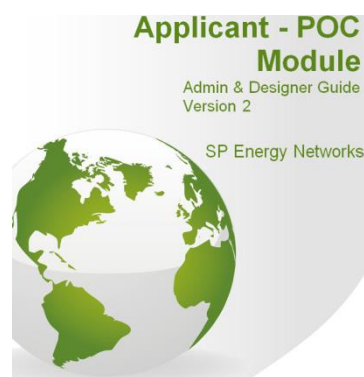
Design	Construction	Connection	Project Closure
Design Request		Standard Metered	
Register		Single Site UMS	
Templates		Bulk Contract UnMetered	

- Requirements have been sent to Webnet, Development finished and the system is going through UAT.

RAdAR Q & A

RAdAR Training Material:

- Training material for RAdAR is being revised to align with the changes and hopefully make it more “User Friendly” to understand.
- A separate manual will be created for each module in the system. Process documents will remain the same.



- The original Trifold manuals will be archived and replaced by these single training manuals. These will be stored on the website at the same location at the link below:-

http://www.spenergynetworks.co.uk/pages/radar_training_materials.asp

Questions?



Louise Edwards

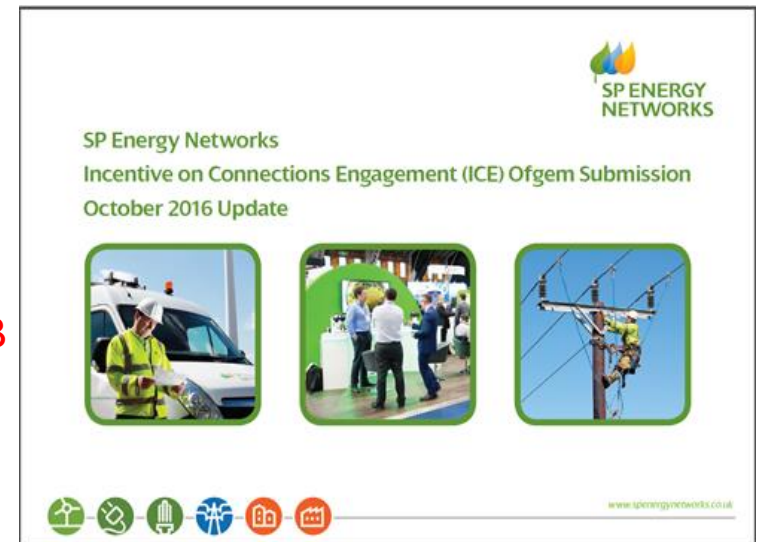
ICE Update

What is ICE – Incentive on Connections Engagement

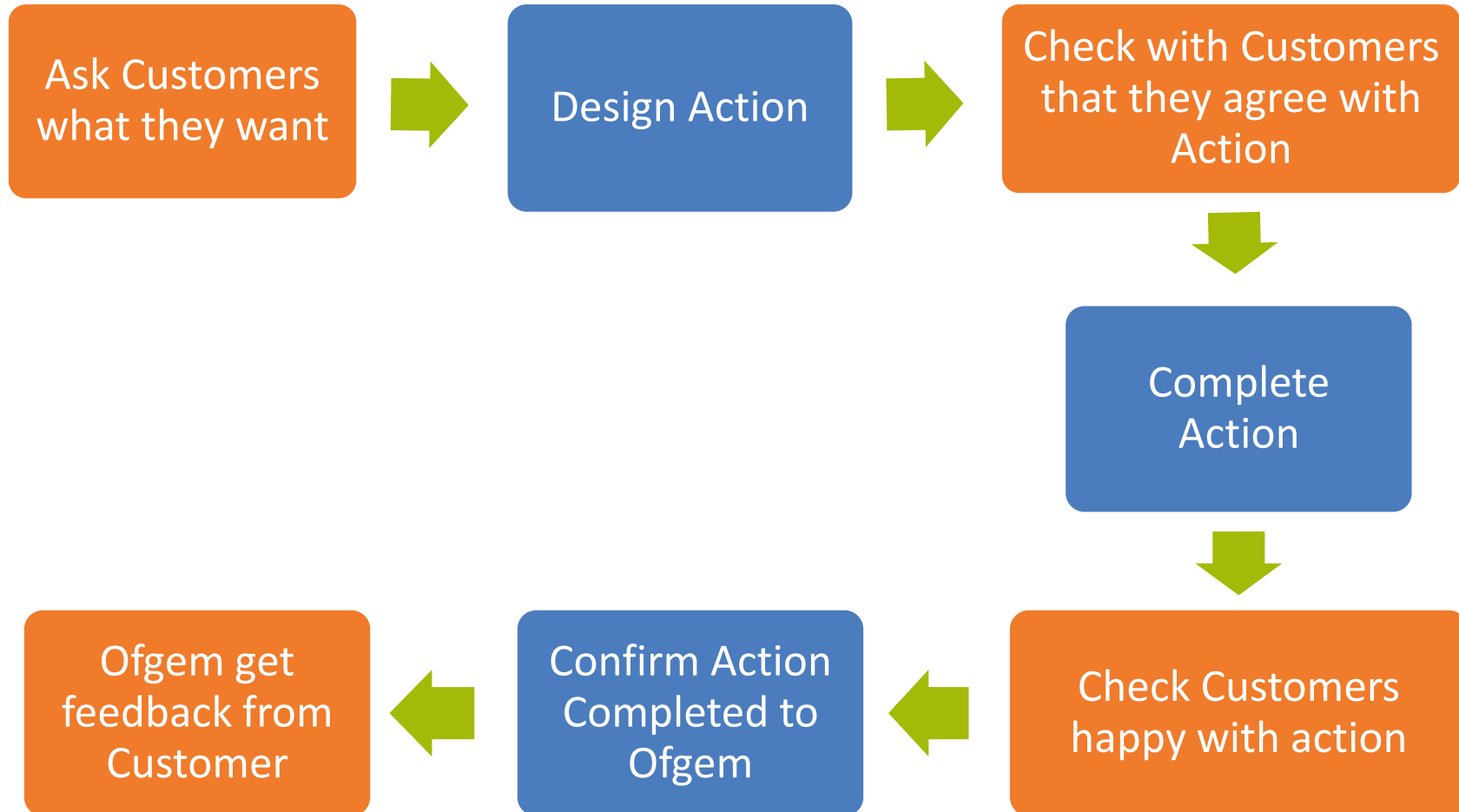
- ICE was introduced on 1st April 2015
- *Penalty only incentive*
- ICE is all connections activity **except LVSSA and LVSSB**

What must we do?

- Understand and meet the needs of **our major connection customers** in terms of time to connect, information provision, choice and customer experience...
- Our ‘**Looking Forward**’ report has to be submitted to Ofgem every April
- Mid-year submission every October which allows us to review our actions and add any additional actions in line with Stakeholder feedback.
- Submit a ‘**Looking Back**’ report at the end of each year detailing all our actions and evidence that they have been completed.



2016/17 Workplan's



ICE Stakeholder engagement

Stakeholder engagements held to date

- DG constraints workshops
- DG fora - Cardiff
- Community work shops / partnerships
- District days
- Site visit with Climate Change, Environment & Rural Affairs Committee
- ICP workshops / CoP awareness sessions



Future engagements being planned

- Best practice shared DNO workshops - Electricity storage, alternative connections tech days
- More detailed engagement with Welsh Government committee for Community Energy Projects

Next Steps to prepare 2017/18 ICE Plan

Jan

- Annual Survey carried out by Explain

Feb- March

- Creating work plan from annual surveys, DG & ICP Workshops and specific Stakeholder feedback

April

- 2017/18 work plan submission

May

- External work plan endorsement
- Looking back/ forward submission



Mike Scowcroft

Close