

 **electricity**
north west

Bringing energy to your door

C₂C

Capacity to Customers

Change the way you use electricity – and save money

www.enwl.co.uk/c2c





Welcome and Introductions

Steve Cox

Future Networks Manager



- ┆ An Introduction to Electricity North West & the Low Carbon Challenge** **Steve Cox**, Future Networks Manager
- ┆ Capacity to Customers (C₂C)** **Mike Taylor**, Strategic Development Manager
- ┆ C₂C New Connections Process** **Victoria Turnham**, Future Networks Engineer
Mark Crane, Commercial Manager
- ┆ C₂C in Practice – Case Studies** Round Table Case Study Exercise
- ┆ C₂C Project Summary and Next Steps** **Steve Cox**, Future Networks Manager
- ┆ Questions & Answers** **Steve Cox**, Future Networks Manager
- ┆ Connections Seminar (after lunch)**



An Introduction to Electricity North West and the Low Carbon Challenge

Steve Cox
Future Networks Engineer



Who is **switched on** to the needs of our customers. . .

The UK's **2nd** CITY



electricity
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Who is **switched on** to the needs of our customers . . .

The world's **GREATEST** football clubs



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north west

Who is **switched on** to the needs of our customers . . .

One of the UK's **BUSIEST** International Airports



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Who is **switched on** to the needs of our customers . . .

The region's **BUSIEST** Hospitals

The logo for Electricity Northwest, featuring a stylized white 'E' icon to the left of the text 'electricity north west' in a lowercase, sans-serif font. The background of the entire advertisement is a photograph of a modern hospital building with large glass windows and several tall, colorful vertical poles (red, orange, yellow, green, blue, purple) that appear to be part of the building's structure or landscaping.

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Who is **switched on** to the needs of our customers . . .

MediaCityUK

Platform A

Transport Systems

electricity
north west

Who is **switched on** to the needs of our customers . . .

Economic **Investment**



electricity
north west

Connecting the North West

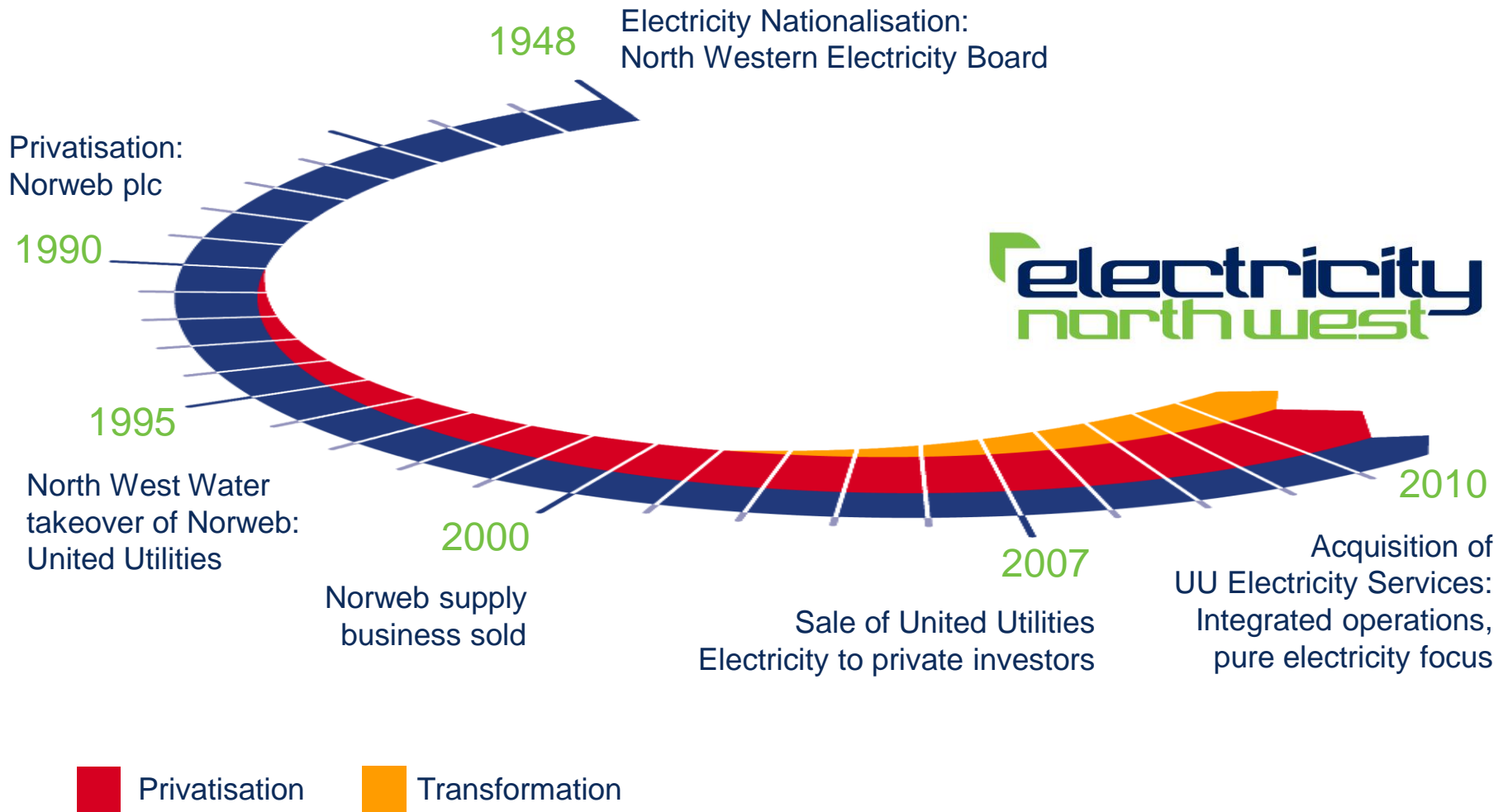
We primarily serve the North West
and we're based here

We serve approximately
5 million people at 2.4 million
domestic and industrial locations

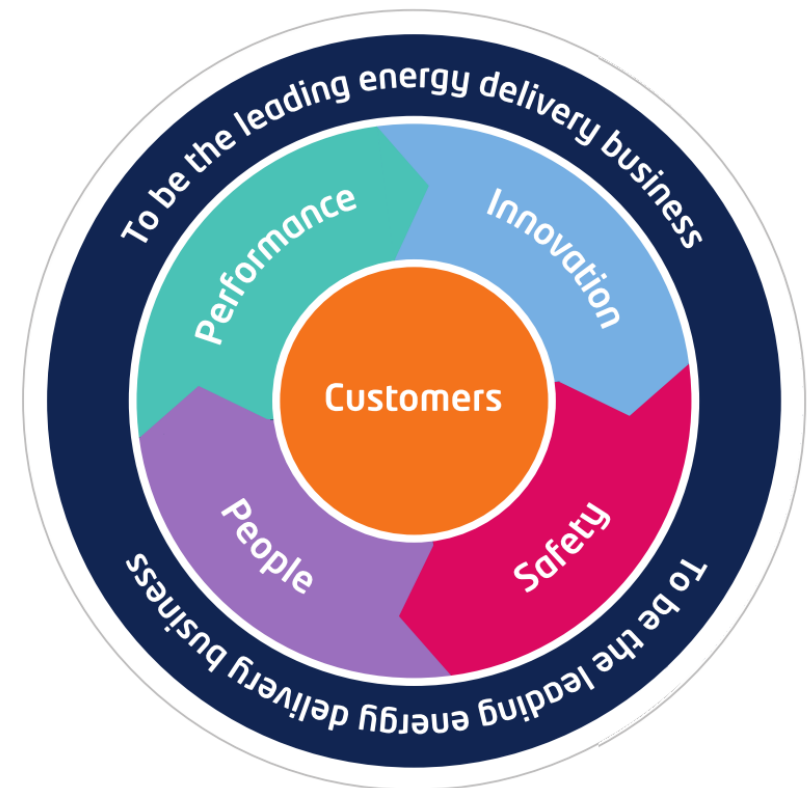
- £9 billion of network assets
 - 58,000km of cable
 - 96 bulk supply substations
 - 363 primary substations
 - 34,000 transforming points



Our Story



- Our values are a set of principles which underpin our culture, our behaviours and how we do business
- They are sharp and concise so that they mean something to the way we do things at Electricity North West
- Each value has an associated strap line to explain how they influence our day to day work
- Our values will support us in our desire to achieve our vision: to be the leading energy delivery business
- They influence everything we do at Electricity North West including our business plan, company scorecard, transformation programme, corporate social responsibility strategy and the RIIO price review



Customer

To delight our customers in everything we do



People

To work together openly, honestly, and in a professional manner to achieve exceptional results



Safety

To protect our people, our customers and our environment



Performance

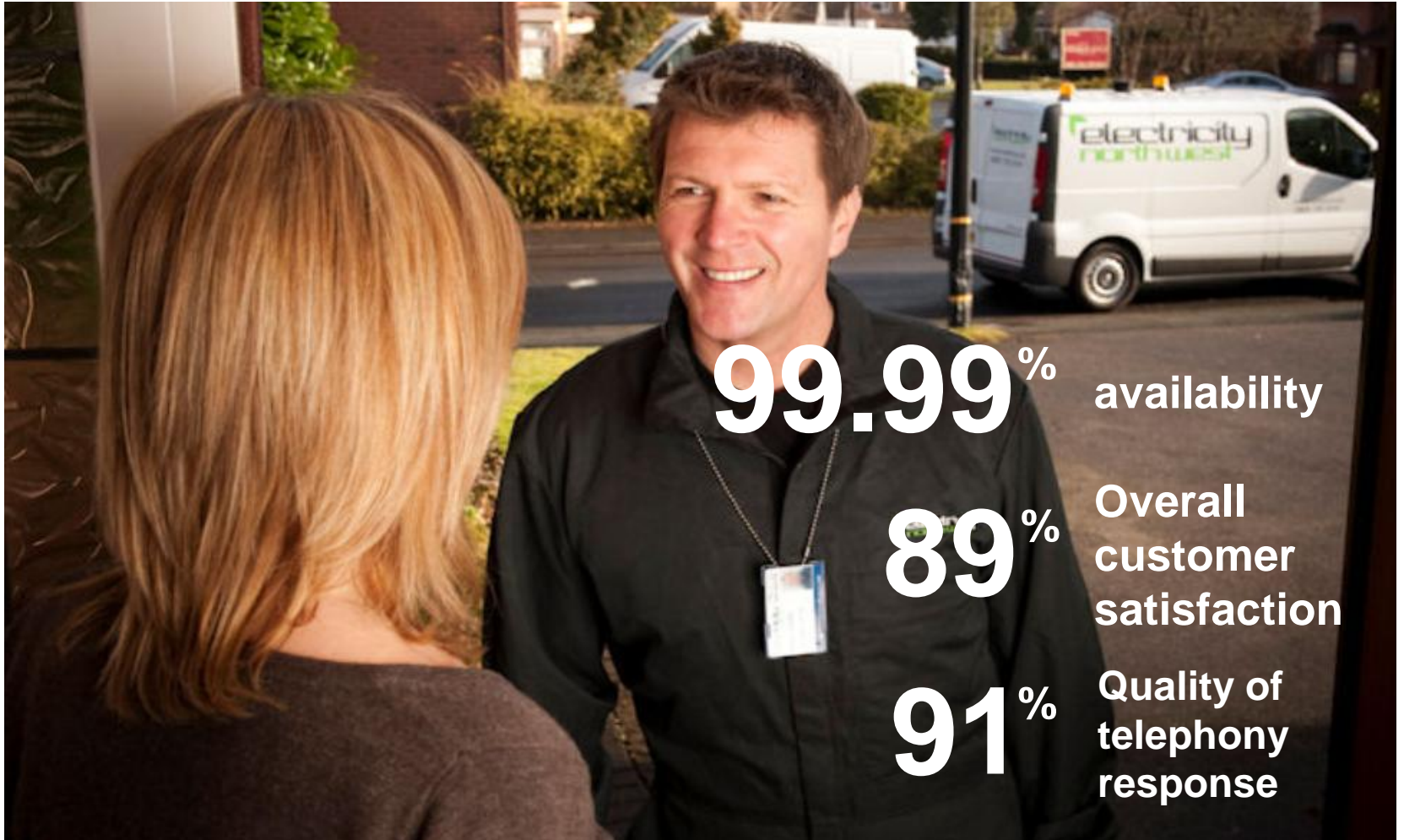
To exceed expectations in how we perform, today, tomorrow and in the future



Innovation

To constantly challenge and improve how we do things





99.99% availability

89% Overall customer satisfaction

91% Quality of telephony response



Investing in the region:

Workforce Renewal:

£20 million investment to 2015



Workforce Renewal:

250

Apprentices,
Graduates and
Trainees to 2015



- ✔ Committed to employee and contractor safety
- ✔ OHSAS 18001 certification
- ✔ Zero harm culture
- ✔ Support both Health & Safety Executive's 5 year strategy and the Energy Network Association's (ENA) 'Powering Improvement' health and safety strategy
- ✔ Behavioural based safety training
- ✔ Committed to customer safety
- ✔ Website – safety and incident reporting area
- ✔ Bright Sparks education programme – safety awareness for children



79% response rate

67% satisfaction

87% management is approachable



Ipsos MORI Electricity North West Employee Opinion Survey 2012



Performance

To exceed expectations in how we perform, today, tomorrow and in the future.



- £30m investment in Research & Development (R&D)
- 20 ongoing projects
- Developing new equipment and technologies to deliver step changes in customer service
- Leading our industry on the path to a low carbon future



A man wearing a white hard hat and a dark jacket with the 'electricity northwest' logo stands in a grassy field. Behind him is a white van with 'electricity northwest' branding and a ladder on its roof. In the background, several wind turbines are visible against a blue sky with scattered clouds.

Hugely **significant year** for Electricity North West
A new, **dynamic** and **innovative** company
A **rich** and **valuable** heritage

“We have supported our customers over the past **100 years**, and will do so over the next **100** – this underlines our commitment to customers **TODAY, TOMORROW** and the **FUTURE**”

- ▣ Low carbon future context
- ▣ Capacity to Customers (C₂C) project

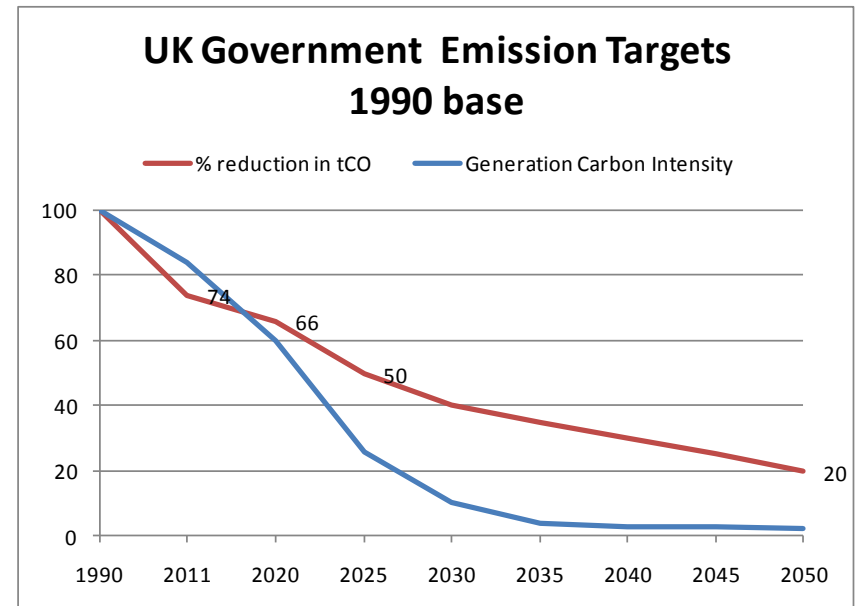
2011 position 1/3rd Electricity, 1/3rd Gas, 1/3rd Oil

- 2020 **34%** reduction in CO₂
 - 40% from Wind / PV & new Nuclear
 - 5% Transport 120,000 EV / Hybrid
 - 26M Smart Meters fitted

- 2050 **80%** reduction in CO₂
 - Doubling in electricity demand

- RIIO-ED1
 - Traditional reinforcement unaffordable
 - DG represents the most immediate challenge

- Challenge to identify 'smart' ways of efficiently meeting customers' future needs



- Electricity North West is leading work on developing **smart solutions** to our future challenges
- Our strategy is to deliver additional value from existing assets, and we have been awarded over £20million of funding from Ofgem, our regulator, for our two flagship projects:

C₂C Capacity to Customers

CLASS Customer Load Active System Services

- C₂C** is our focus today and we need your assistance in unlocking the value that this project can bring to you and your business



Session 1: Capacity to Customers (C₂C)

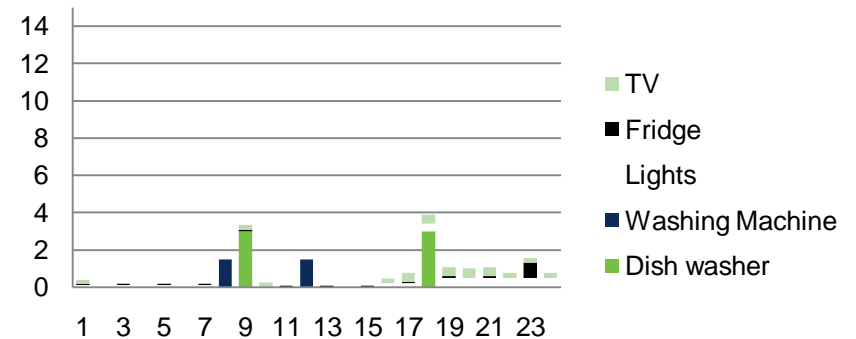
Mike Taylor
Strategic Development Manager



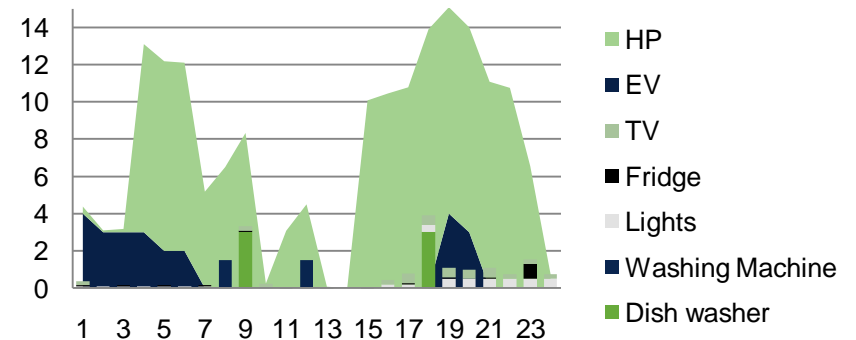
The Scale of the Challenge

	By 2025
Domestic demand	<ul style="list-style-type: none"> ➤6GW even with optimal scheduling ➤20% of growth occurs by 2023 ➤Domestic ADMD 2kW
Heating	Domestic Heat pumps 700 000 fitted by 2030 8-10kW for 8 hours Additional >2 GW
Transport	31% UK12M vehicles will be EV/Hybrid 720 000 Domestic EVs 80 000 E-Vans 3-8kW for 8+ hours. 50kW fast chargers. Additional >2 GW Manchester >400MW
Generation	93% from renewable / Carbon neutral Sources. 700 MW connected in last 18 months

Domestic demand profile 2012



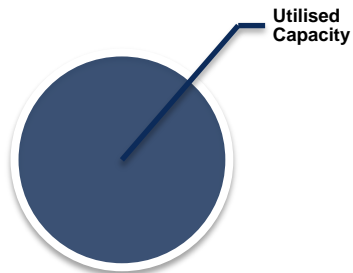
Domestic demand profile 2025



What is Capacity to Customers?

Capacity to Customers

Total available network capacity



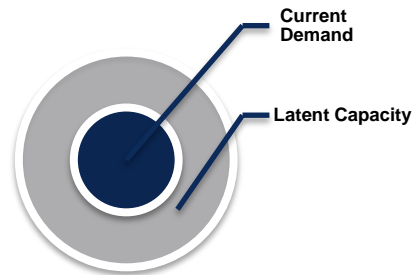
Combining proven technology and new commercial contracts

Allows ENWL to release significant network capacity back to customers

Facilitating connection of new demand and generation without reinforcement

Technical Innovation

Total available network capacity



Apply remote control equipment to the HV circuit and close the normal open point

Enhance network management software

This effectively doubles the available capacity of the circuit negating the need for traditional reinforcement

New Commercial Contracts



To retain customers' security of supply we will utilise innovative demand side response contracts

These contracts will allow ENWL to control the consumption of customers on a circuit at the time of fault



How will C₂C work?

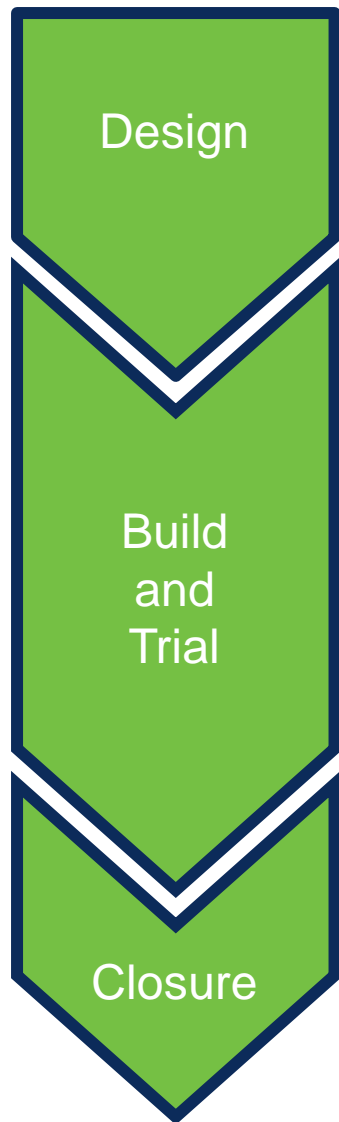
- These slides have been removed from this printable version of the presentation.

You can view these slides on the presentation,
via our website:

www.enwl.co.uk/c2c



Project Timeline



2012

- ✔ Project start up ✔
- ✔ Software design ✔
- ✔ Circuit selection and methodology ✔
- ✔ Customer engagement plans & survey ✔
- ✔ New commercial templates and processes

2013/14

- ✔ Software user acceptance testing
- ✔ Equipment installation & commissioning
- ✔ Trial 'go live'
- ✔ Recruit trial participants
- ✔ Carbon economic & losses impact assessments
- ✔ Continuously engage customers and stakeholders

Q4 2014

- ✔ Closedown report & closure





Session 2: C₂C New Connections Process

Victoria Turnham
Future Networks Engineer

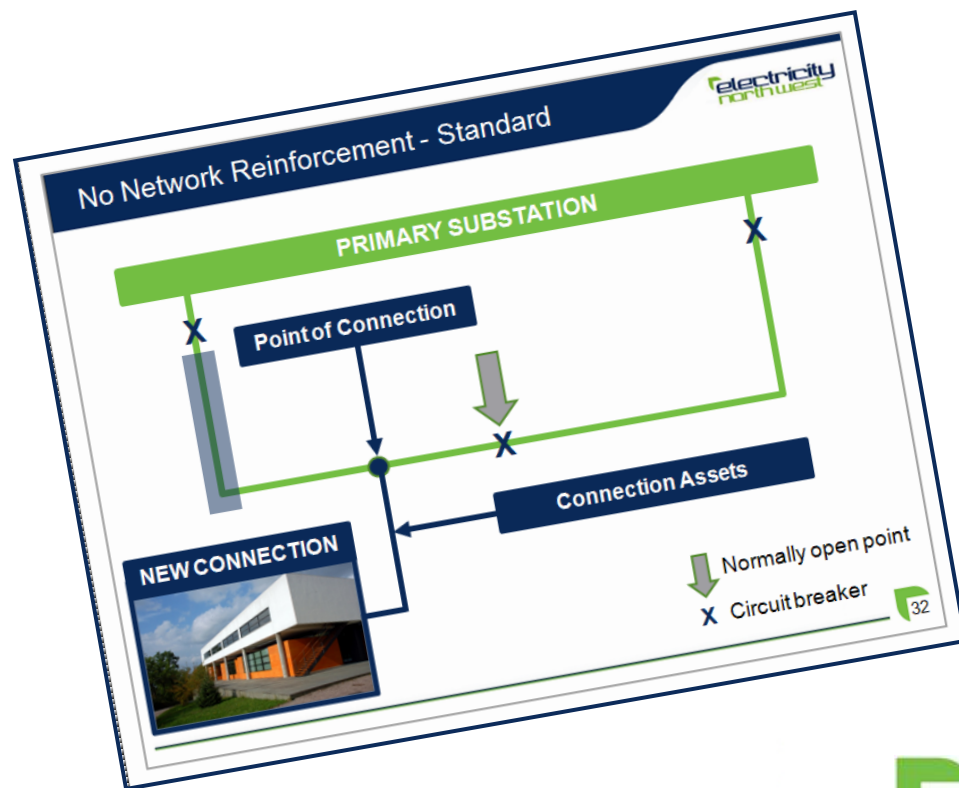


- ▣ How can opting for a C₂C managed supply save you money on your new connection?
 - **No network reinforcement charges**
 - **Reduced connection asset costs**

- These slides have been removed from this printable version of the presentation.

You can view these slides on the presentation,
via our website:

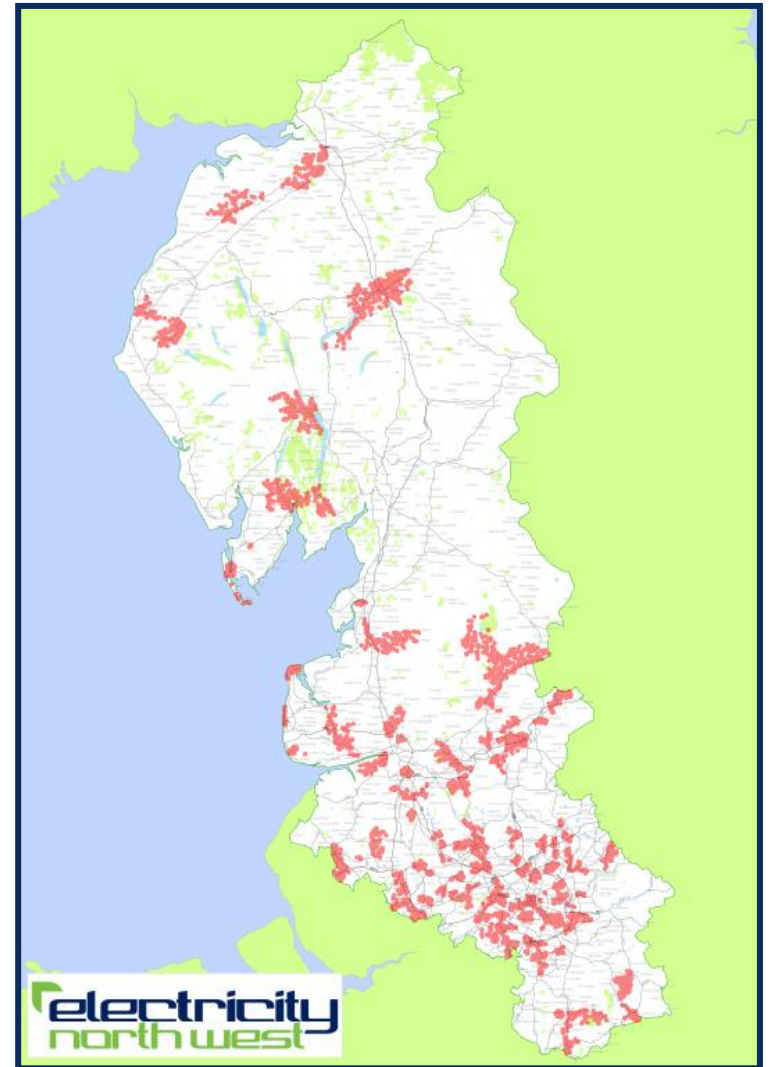
www.enwl.co.uk/c2c



The C₂C Trial Area

- C₂C is a publicly funded **Research & Development** (R&D) project only available on a portion of our network
- The trial area is all our **132 & 33kV network** and approximately 10% of our HV network
- To find out if your location is included in our HV trial area, enter your postcode on our website

www.enwl.co.uk/c2c/are-you-affected



- **Industrial and Commercial** customers
- Applying for a demand or generation connection with a total load **greater than 100kVA**
- On or near **trial circuit**
- Quotations for eligible C₂C managed connections available to all formal applications from January 2013

- New C₂C managed connections are available to all eligible applicants

Application type	What will the C ₂ C offer include?	Who will sign the C ₂ C managed connection agreement?
Statutory	POC Contestable Non contestable	End user
ICP	POC Non contestable	End user facilitated by ICP
IDNO	POC Contestable Non contestable	Bi-lateral agreement between ENWL and IDNO. IDNO must implement back to back contract with its end user(s).

What is the Process?

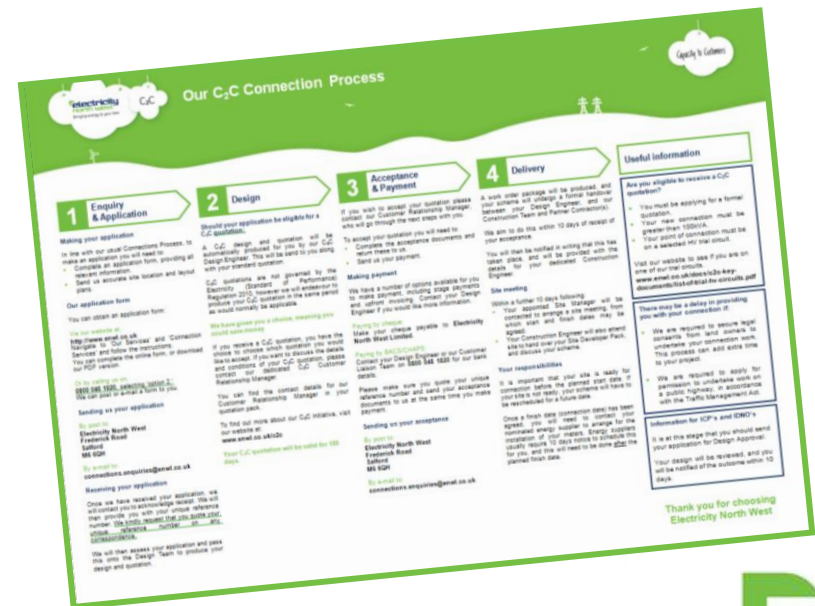
1 Enquiry & Application

2 Design

3 Acceptance & Payment

4 Delivery

- ✔ We have produced a **4 step** process document
- ✔ Published process on our website www.enwl.co.uk/c2c
- ✔ Copy in your seminar information pack



The C₂C Connections Process

1 Enquiry & Application

✔ C₂C **eligibility confirmed**

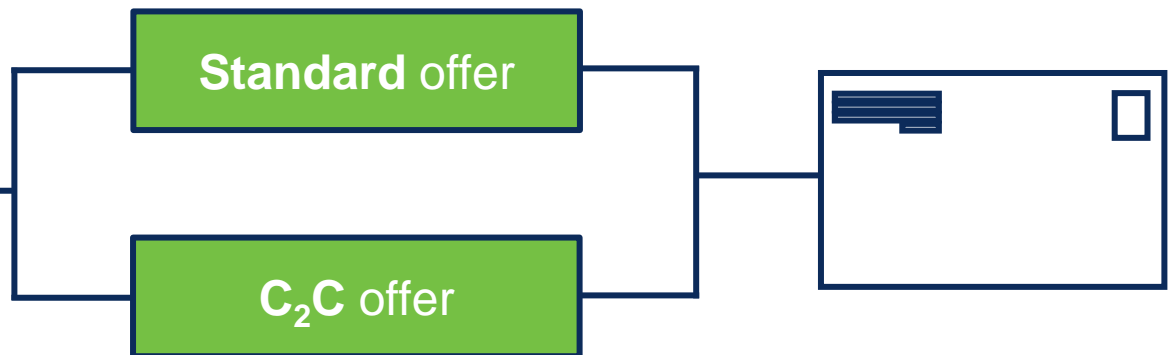
2 Design

✔ Standard offer and C₂C offer are **prepared in parallel**

3 Acceptance & Payment

✔ **Offers delivered** by Customer Relationship Manager, C₂C contract terms are refined

4 Delivery



The C₂C Connections Process

1 Enquiry
& Application

2 Design

3 **Acceptance
& Payment**

4 Delivery

✔ Preferred option is accepted

✔ Customer Relationship Manager will meet with customer to **sign C₂C agreement** and take receipt of acceptance

Preferred option



The C₂C Connections Process

1 Enquiry
& Application

2 Design

3 Acceptance
& Payment

4 Delivery

- ✔ Your **connection will be undertaken** in line with our standard process
- ✔ Your **connection will be completed** in accordance with the Guaranteed Standards of Performance (GSoP)



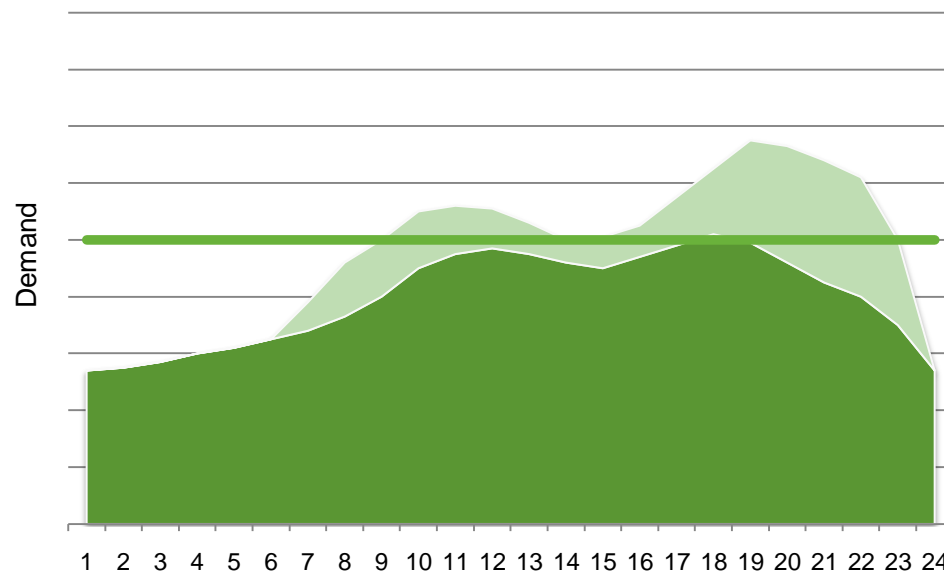
C₂C Commercial Presentation

Mark Crane
Commercial Manager



- Accepting a managed supply contract will give you a **substantial saving** on a new connection
- As a customer your supply will be as **reliable as usual**
- The smart grid technology installed will allow us to restore supplies to customers **faster than we can today**

- The C₂C 'delayed restoration' will only occur if **your part of the network** is overloaded at the time of the fault



- ✔ 200 existing **Industrial & Commercial** customers were surveyed
- ✔ A **significant number** found the concept appealing



Uncertainty, regarding
disruption or multiple
disruptions

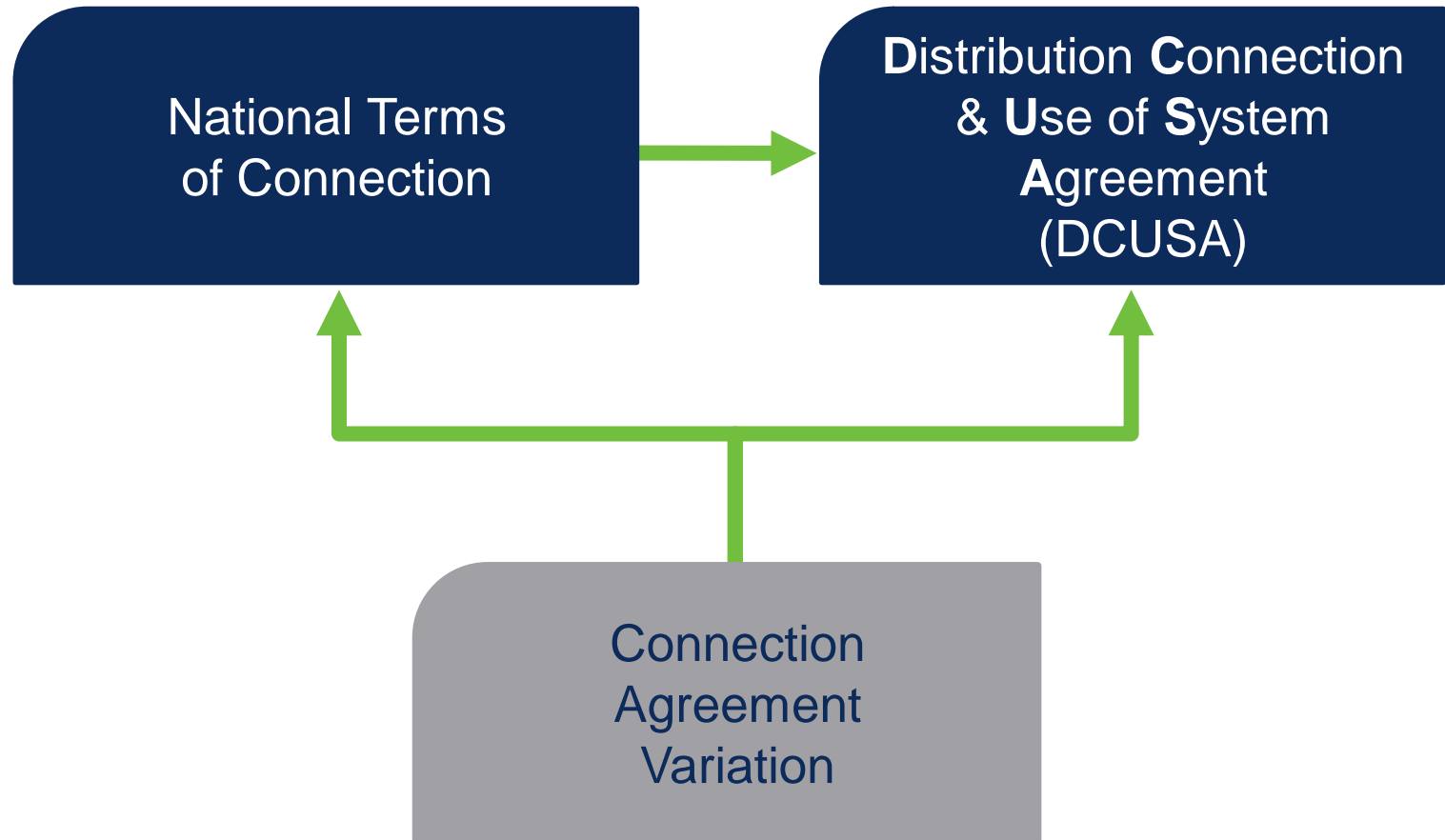
Length of contract

Contract terms

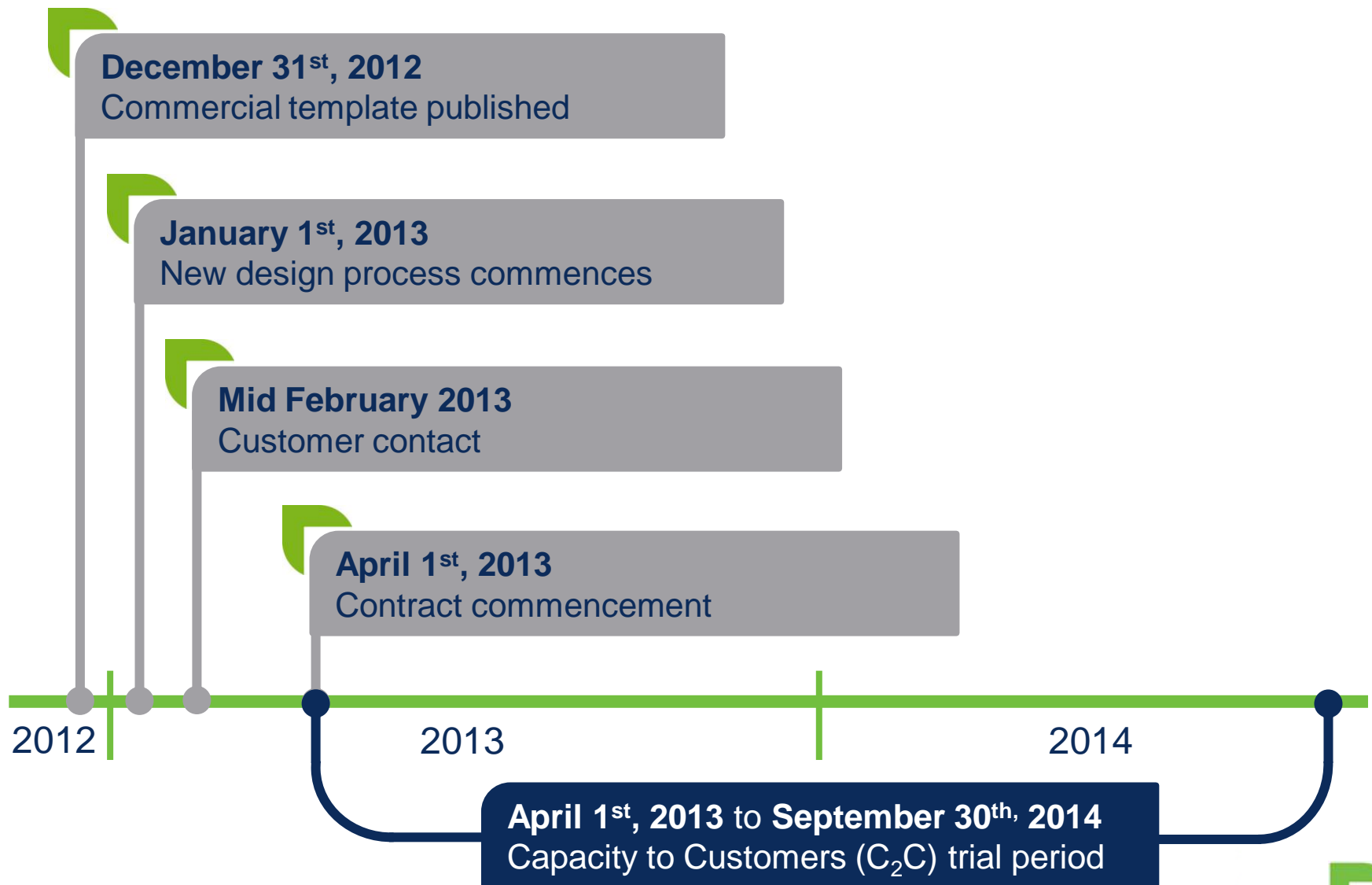
- The contract will be **permanent** with the following termination clauses in existence for both parties:
 - You can terminate
 - We can terminate the agreement post trial

- Should you wish to enter into other **Demand Side Response** (DSR) activities with third parties, then you must obtain our permission before agreeing to these so that any potential conflicts in demand availability can be determined

- The C₂C managed demand may be called upon at **any time**
- Following a fault event where your supply is managed, you **will not suffer a delay in restoration** of its supply greater than the agreed time after its incoming supply is made live



Timeline





Session 3: C₂C In Practice – Case Studies



- During this session we will show you two case studies that have been prepared, in line with our C₂C connections process

- **Part one** *(15 minutes)*
Case Studies presented by your tables
Electricity North West representative

- **Part two** *(15 minutes)*
Round table discussion

- **Part three** *(15 minutes)*
Group discussion

- 1. Following the earlier presentations, what gaps do you still have in your **understanding** of the new C₂C Connections Process?**
- 2. What do you think are remaining **barriers** to C₂C?**
- 3. What are your **motivations** to get involved in C₂C?**



Session 4: C₂C Project Summary and Next Steps

Steve Cox
Future Networks Manager



- Technology installed end of December 2012
- New commercial contracts 1st January 2013
- C₂C managed connections process 1st January 2013
- C₂C trial starts 1st April 2013



Session 5: Questions & Answers



Want to know more?

If you want to know more, or speak to someone if you are interested in partaking in the Capacity to Customers C₂C initiative, you can contact us by:

 **0800 195 4141, option 3**

 **www.enwl.co.uk/c2c**

 **futurenetworks@enwl.co.uk**

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