# **Celectricity**

4

C<sub>2</sub>C

electricity

Bringing energy to your door

Bringing energy to your door

## **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





#### Agenda



- An Introduction to Electricity North West & the Low Carbon Challenge
- Capacity to Customers (C<sub>2</sub>C)
- **C**<sub>2</sub>**C** New Connections Process

Steve Cox, Future Networks Manager

Mike Taylor, Strategic Development Manager

Victoria Turnham, Future Networks Engineer Mark Crane, Commercial Manager

 $C_2C$  in Practice – Case Studies

Round Table Case Study Exercise

- **C<sub>2</sub>C 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



#### Who is **Switched on** to the needs of our customers . . .

#### The world's **GREATEST** football clubs

#### electricity northwest

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

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

Destaurous a star and

### electricity northwest

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

#### The region's **BUSIEST** Hospitals

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

100

Platform A

- hall

#### Transport Systems

Metro

tana



#### 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**



- 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



#### **Our Values**



### 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

#### Customer







#### People



Investing in the region:

Workforce Renewal:

£20 million investment to 2015









Workforce Renewal:

**250** Apprentices, Graduates and Trainees to 2015



#### Safety

- 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





#### Performance





Ipsos MORI Electricity North West Employee Opinion Survey 2012



#### Innovation



- £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





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 (C<sub>2</sub>C) project

#### **UK Energy Challenges**



- 2011 position 1/3<sup>rd</sup> Electricity, 1/3<sup>rd</sup> Gas, 1/3<sup>rd</sup> Oil
- 2020 34% reduction in CO<sub>2</sub>
  - 40% from Wind / PV & new Nuclear
  - 5% Transport 120,000 EV / Hybrid
  - 26M Smart Meters fitted
- 2050 80% reduction in CO<sub>2</sub>
  - 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



#### Our Smart Grid Development



- 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:



C<sub>2</sub>C 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 (C<sub>2</sub>C)

## Mike Taylor Strategic Development Manager



#### The Scale of the Challenge



	By 2025	Domestic demand profile
Domestic demand	<ul> <li>6GW even with optimal scheduling</li> <li>20% of growth occurs by 2023</li> <li>Domestic ADMD 2kW</li> </ul>	<b>2012</b>
Heating	Domestic Heat pumps 700 000 fitted by 2030 8-10kW for 8 hours Additional >2 GW	<ul> <li>Fridge</li> <li>Lights</li> <li>Washing Machine</li> <li>Dish washer</li> <li>1 3 5 7 9 11 13 15 17 19 21 23</li> </ul>
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	Domestic demand profile 2025         14
Generation	<ul><li>93% from renewable / Carbon neutral</li><li>Sources.</li><li>700 MW connected in last 18 months</li></ul>	Lights Lights Lights Uashing Machine 1 3 5 7 9 11 13 15 17 19 21 23 Lights Uashing Machine Dish washer
		24

#### What is Capacity to Customers?







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



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

#### **Technical Partners**





The University of Manchester







#### How will $C_2C$ 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**







# Session 2: C<sub>2</sub>C New Connections Process

## Victoria Turnham Future Networks Engineer







- How can opting for a C<sub>2</sub>C managed supply save you money on your new connection?
  - No network reinforcement charges
  - Reduced connection asset costs

#### C<sub>2</sub>C Managed Supply Arrangements



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 C<sub>2</sub>C Trial Area



- C<sub>2</sub>C 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 than100kVA
- On or near trial circuit
- Quotations for eligible C<sub>2</sub>C managed connections available to all formal applications from January 2013

#### The C<sub>2</sub>C Offer



New C<sub>2</sub>C managed connections are available to all eligible applicants

Application type	What will the C <sub>2</sub> C offer include?	Who will sign the C <sub>2</sub> 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?





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







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Submit your application in line with our usual Connections process

Initial check for C<sub>2</sub>C eligibility









- Preferred option is accepted
- Customer Relationship Manager will meet with customer to sign C<sub>2</sub>C agreement and take receipt of acceptance





- 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)



# C<sub>2</sub>C Commercial Presentation

## Mark Crane Commercial Manager







#### What this all means for you



- 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

#### Network Load Curve



The C<sub>2</sub>C 'delayed restoration' will only occur if your part of the network is overloaded at the time of the fault



#### **Customer** Questionnaire



C 200 existing **Industrial & Commercial** customers were surveyed

A significant number found the concept appealing



#### Key Questionnaire Findings





#### Summary of Contract Terms

**Celectricity** 

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 C<sub>2</sub>C 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

#### **Contract Structure**





#### Timeline







# Session 3: C<sub>2</sub>C In Practice – Case Studies







#### C<sub>2</sub>C in Practice - Case Studies



- During this session we will show you two case studies that have been prepared, in line with our C<sub>2</sub>C 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



- Following the earlier presentations, what gaps do you still have in your understanding of the new C<sub>2</sub>C Connections Process?
- **2.** What do you think are remaining barriers to  $C_2C$ ?
- **3.** What are your motivations to get involved in  $C_2C$ ?



# Session 4: C<sub>2</sub>C Project Summary and Next Steps

Steve Cox Future Networks Manager





#### C<sub>2</sub>C Project Summary and Next Steps



- Technology installed
- New commercial contracts
- C<sub>2</sub>C managed connections process
- C<sub>2</sub>C trial starts

end of December 2012

1<sup>st</sup> January 2013

1<sup>st</sup> January 2013

1<sup>st</sup> April 2013



# Session 5: Questions & Answers









If you want to know more, or speak to someone if you are interested in partaking in the Capacity to Customers  $C_2C$  initiative, you can contact us by:

## **0800 195 4141**, option 3

# www.enwl.co.uk/c2c

# futurenetworks@enwl.co.uk

# **Celectricity**

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