

PUBLIC

Address Data Quality

Consultation

Joint Office
of Gas Transporters

SEC
Smart Energy Code

MRA
MRA Service Company

SPAA

iGT | UNC

ELEXON

Address Data Working Group

ADWG 01

19 August 2015

ADDRESS DATA QUALITY

ADDRESS DATA QUALITY

CONTENTS

1. Executive Summary	4
2. Introduction	5
2.1 Background	5
2.2 Objective	5
2.3 Scope	6
2.4 The Address Data Working Group	6
2.5 Report Content	6
2.6 Next Steps	6
3. Current processes and customer switching journey	8
3.1 Electricity Processes	8
3.2 Gas Processes	8
3.3 Customer Switching Journey	9
3.4 Consultation Questions	11
4. Unique Property Reference Number	12
4.1 What is a UPRN?	12
4.2 Roles and Responsibilities	12
4.3 Address Products	12
4.4 The UPRN Lifecycle	13
4.5 Licensing Considerations	13
4.6 Past Initiatives	14
4.7 Current Initiatives	14
4.8 Consultation Question	15
5. Address Data Quality Issues	16
5.1 Impacts of poor address data quality	16
5.2 Types and causes of address data quality issues	16
5.3 Consultation Questions	18
6. Solution Options	19
6.1 Introduction	19
6.2 Option A	19
6.3 Option B	20
6.4 Other Options	20

ADDRESS DATA QUALITY

6.5	Theft Risk Assessment Service	21
6.6	Consultation Questions	21
7.	Centralised Registration Service	23
7.1	UPRNs and the CRS.....	23
7.2	Network Addresses.....	23
7.3	Consultation Questions	24
Appendix A	Consultation Questions.....	25
Appendix B	Address Data Working Group Members	28
Appendix C	Glossary	29
Appendix D	Address Formats.....	31

ADDRESS DATA QUALITY

1. EXECUTIVE SUMMARY

Further to the work on improving the quality of gas and electricity data, Ofgem has asked electricity and gas code administrators to establish an expert group (the Address Data Working Group (ADWG)) to look at address data. The objective is to explore potential options for harmonising address formats and utilising Unique Property Reference Numbers (UPRNs) to support the launch of a Centralised Registration Service (CRS).

The purpose of this consultation is to seek the views of electricity and gas market participants and other interested parties in order to inform the ADWG's final report and recommendations to Ofgem.

The consultation seeks views on the high-level costs, benefits, impacts and risks of introducing a mandate for Gas Transporters, Independent Gas Transporters and electricity Distribution Businesses to populate registration systems with UPRNs for new connections and all existing Supply Points/Meter Points. The UPRN would be used in conjunction with local authority and Post Office data to improve the quality of the address data held in the registration systems.

The consultation also seeks views on whether the use of UPRNs should be extended to the wider industry (Suppliers, agents and, potentially, switching sites). It also questions whether there are benefits in using the UPRN in the switching process itself.

Alternative proposals for improving address data quality are also welcome.

The consultation also invites:

- a review of the customer journey on Change of Supplier;
- an assessment of address data quality issues and the extent to which they impact the customer switching process; and
- a review of the benefits of using the UPRN (or other data cleaning and data harmonisation options) in the context of the proposed CRS.

Members of the ADWG will present the draft Address Data Quality Report for comment to industry panels in October and November 2015. The ADWG will send its report to Ofgem at the end of November 2015.

The report will include all consultation responses as an attachment and the ADWG will publish the report on one or more code websites. If you would like the final report to exclude all or part of your response, please indicate clearly on your response form.

Please send your responses to design.authority@elexon.co.uk by **5.00pm on Thursday 17 September 2015**.

ADDRESS DATA QUALITY

2. INTRODUCTION

2.1 Background

One of the key objectives of Ofgem's 'Promoting smarter energy markets' work programme is to deliver improvements to the consumer switching process. In 2013 Ofgem established the Change of Supplier Expert Group (COSEG) to help it deliver a 'fast, reliable and cost-effective Change of Supplier process, which will facilitate competition and build consumer confidence'. COSEG members identified poor industry data quality (in both electricity and gas markets) as a barrier to fast and reliable customer switching.

In June 2014 Ofgem responded¹ by asking industry to provide an evidence-based assessment of relevant data items (e.g. metering and address data), ownership and governance by the end of 2014. The relevant industry panels set up two cross-code Data Quality Working Groups (DQWG) to review electricity and gas data quality respectively. The groups delivered their reports to Ofgem in December 2014².

Both electricity and gas reports recommended that industry should consider further:

- Use of a standardised and consistent address format across both gas and electricity markets; and
- Adopting the Unique Property Reference Number (UPRN) to improve the quality of industry address data and provide a further control as part of the switching process.

The reports recommended that Ofgem set up a dual fuel working group for this purpose.

On 10 February 2015, Ofgem published its decision³ to lead a programme of work to introduce reliable next-day customer switching by 2019. Ofgem expects the Data and Communications Company (DCC) to procure and run a Centralised Registration Service (CRS) to facilitate the delivery of next-day switching.

On 24 March 2015 Ofgem published an open letter⁴ agreeing with the recommendations in the data quality reports and asking industry to establish a group to review options for improving address data quality. Ofgem requested ELEXON to chair this group. Ofgem also asked the dual fuel working group to provide views on how faster switching using centralised registration can be designed to maximise data quality. Ofgem expects that the findings of the group will contribute to the business process design for its next-day switching programme.

Ofgem requested a report delivery date of the end of November 2015, to help inform the blueprint phase of the 'Moving to Reliable Next Day Switching' programme.

In May 2015, gas and electricity code administrators set up the Address Data Working Group (ADWG) to meet Ofgem's request.

2.2 Objective

The objective of the final report to Ofgem in November is to consider the introduction of potential address data quality remedies to support the aspiration of faster and more reliable consumer switching. In particular, the report will consider:

- The potential harmonisation of electricity and gas address formats;
- Options for adopting the UPRN; and

¹ [Industry data quality, ownership and governance](#) (24 June 2014)

² [Electricity Data Quality Report](#) (ELEXON/MRASCo, BSC Panel paper 231/07a, December 2014) and [Cross Gas Codes Final Report on Industry Data Quality, Ownership and Governance](#) (Joint Office of Gas Transporters/iGT UNC/SPAA, December 2014)

³ [Decision on moving to reliable next-day switching](#) (10 February 2015)

⁴ [Open Letter: Industry data quality, ownership and governance](#) (24 March 2015)

ADDRESS DATA QUALITY

- The potential benefits of address harmonisation and/or UPRNs in supporting Ofgem's 'Moving to Reliable Next-Day Switching' programme.

The objective of this consultation is to gather views (and, where available, evidence) on options to improve the quality of address data and the high-level costs and benefits of those options. The ADWG will use the consultation responses to inform the content and recommendations in the final report to Ofgem.

2.3 Scope

The ADWG will consider what changes are required to the market design in order to deliver any improvement options. There is no cross-governance between the gas and electricity industries and so the ADWG has no mandate to raise formal changes to the relevant code panels. Industry parties will need to raise modifications under the relevant industry governance arrangements to give effect to any recommended solutions. These modifications are outside the terms of reference of the ADWG.

2.4 The Address Data Working Group

The gas and electricity code administrators, with support from Ofgem, invited industry experts, a consumer representative and Ordnance Survey (as a technical advisor on the use of UPRNs) to join the ADWG. Group members, their organisations and meeting attendance details are included in Appendix B. ELEXON chairs the ADWG and is drafting the consultation and report on behalf of the group. Gemserv is providing secretariat services.

The ADWG developed this consultation at two meetings, on 17 June 2015 and 22 July 2015. Group members then reviewed the draft consultation individually.

2.5 Report Content

Section 3 summarises the current electricity and gas processes for maintaining address data, including code obligations, registration systems and address types and formats. It also includes a 'customer journey' map showing how address data is used by switching sites and Suppliers in the switching process and the customer experience.

Section 4 provides background information on the UPRN and details of current industry initiatives in relation to the UPRN and gas/electricity addresses.

Section 5 considers the causes of poor quality address data and the impacts that this can have on business processes and customer switching.

Section 6 sets out two solution options and considers potential further options.

Section 7 considers the requirements for improved address data quality and the potential use of the UPRN in the context of the proposed CRS.

2.6 Next Steps

The ADWG will meet again in late September to discuss the responses to this consultation. The draft report will consist of this consultation document and a summary of the consultation responses. The report will also include the full consultation responses (excluding any confidential responses) as an attachment. The ADWG will then make recommendations to Ofgem, based on the range of consultation responses.

Nominated ADWG members will present the draft report for review and comment to the following industry panels and committees during late October and early November 2015:

- Uniform Network Code (UNC) Committee;
- Supply Point Administration Agreement (SPAA) Executive Committee;
- Master Registration Agreement (MRA) Executive Committee (MEC);

ADDRESS DATA QUALITY

- Balancing and Settlement Code (BSC) Panel;
- Smart Energy Code (SEC) Panel;
- Independent Gas Transporter (iGT) UNC Committee.

The final report will be delivered to Ofgem at the end of November 2015 and will include a section on feedback from the above industry panels and committees.

ADDRESS DATA QUALITY

3. CURRENT PROCESSES AND CUSTOMER SWITCHING JOURNEY

3.1 Electricity Processes

Schedule 2 of the [MRA](#) defines the Distribution Business as responsible for the Metering Point Address (including Postcode). The MRA requires each Distribution Business to hold the Metering Point Address as part of the registration data within its Meter Point Administration Service (MPAS) Registration System. In most cases, the Metering Point Address is the location of the connection to the distribution (or transmission) network or of a planned connection point. Exceptions include unmetered supplies. Other industry parties, including Suppliers and their agents, may hold other addresses for different reasons, typically for billing and correspondence.

As well as being held in individual MPAS Registration Systems, addresses are made available nationally, to authorised parties, via the Electricity Central Online Enquiry Service (ECOES). Authorised parties have online access to the data to which they are entitled and Suppliers receive monthly data extracts on DVDs.

The MRA requires Distribution Businesses to hold address data in Standard Address Format (SAF). This is a minor variant on the Postcode Address File (PAF) format used by the Post Office and defined in British Standard 7666. MRA Agreed Procedure [Standard Address Format and Guidance Notes for Address Maintenance \(MAP09\)](#) provides further details on the use of the SAF. Appendix D shows the SAF and PAF address formats and highlights the differences between the two formats.

The MRA also sets out requirements in relation to the timing of address updates – within 60 working days of the publication by Royal Mail of an update to PAF addresses or 10 working days for other updates.

As Suppliers usually have more contact with customers than Distribution Businesses, they may be able to identify a change to a Metering Point Address ahead of the Distribution Business. While a Supplier can alert the Distribution Business to a potential address update, the Distribution Business is not obligated to apply the change, where a good reason exists. There are requirements on Distribution Business to notify Suppliers within defined timescales that they have accepted or rejected a requested change (together with the reason for rejection).

3.2 Gas Processes

Large Gas Transporters (GTs) and small Gas Transporters/Pipeline Operators (iGTs) own address data. However, Shippers have an obligation to update address data during the switching process.

Xoserve acts as an agent for the GTs providing centralised information and data services for GTs and Shippers, including applying PAF updates. Xoserve administers the Sites and Meters database, part of the suite of UK Link applications, on behalf of GTs and Shippers. iGTs maintain their own registration services. Project Nexus will consolidate the registration services across GTs and iGTs into one service, which Xoserve will operate. Project Nexus is due to complete by October 2016.

Xoserve also publishes registration data on behalf of all Gas Transporters via the Single Centralised On-Line Gas Enquiry Service (SCOGES).

As in the electricity registration arrangements, the address relates to the point of offtake, the Emergency Control Valve (ECV). The registration database holds address data in PAF format with a minor variation, the inclusion of a 'delivery point alias'.

Under the gas registration arrangements, Suppliers can change addresses, unlike the electricity arrangements, where Suppliers can propose changes, but Distribution Businesses retain a right of refusal. Xoserve validates requests to change address data and only accepts address changes that are consistent with the PAF, except for new developments where the address is not yet included in the PAF.

ADDRESS DATA QUALITY

3.3 Customer Switching Journey

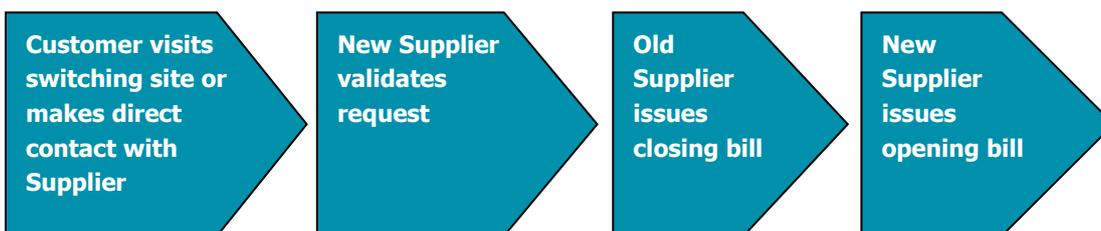
A Customer Journey map for the switching process is shown below. The map focuses on the use of addresses in the switching process and how Suppliers determine the correct MPAN/MPRN.



CUSTOMER PROCESS	<p>Customer visits price comparison website, selects a new tariff with a new Supplier. Customer typically enters postcode, selects address from list of addresses with that postcode. The switching site would typically take these addresses from the PAF. The customer is not usually expected to know their MPAN/MPRN, but it may be displayed to the customer, if available to the switching site⁵.</p> <p>Alternatively the customer contacts the Supplier directly (via service desk or website), or is routed to the Supplier website via a cashback website etc.</p> <p>Where contact is direct, the customer provides postcode, confirms address and may be asked for MPAN/MPRN and MSN, depending on</p>	<p>The new Supplier validates the data that the customer has provided, directly or passed from a switching site.</p>	<p>Customer receives closing bill from old Supplier.</p>	<p>Customer receives welcome letter from new Supplier, followed by initial bill.</p>
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⁵ Energy Suppliers provide registration data to third party service providers, who, in turn, use web services to share this data other with authorised agents and Third Party Intermediaries (TPIs), such as utility switching (price comparison) services. This allows switching sites to present the MPAN/MPRN associated with an address.

ADDRESS DATA QUALITY



	the Supplier.			
MARKET PROCESS	Supplier receives customer request and validates (as per next step)	Supplier 'triangulates' MPAN/MPRN, address and MSN (as available), and notifies registration service of MPAN gain.	Old Supplier notified of loss by registration service. Closing reading received via Change of Supplier process.	New Supplier initiates Change of Supplier process and bills customer on initial reading.
 POSITIVE CONSUMER OUTCOMES	Customer's postcode known to switching site, customer able to select own address from list.	Customer details (from switching site or direct contact) pass validation and registration process is successful.	Timely and accurate closing bill received.	Timely opening bill received. Initial reading consistent with closing reading from old Supplier.
 NEGATIVE CONSUMER OUTCOMES/ CAUSES	Customer's postcode unknown (new, unavailable within the PAF or switching site/Supplier hasn't applied PAF update). Or the customer's view of their address does not match those presented by the switching site. This could result in a delayed or aborted switch. Customer inadvertently confirms switch. Customer picks wrong address from list. Customer picks right address but the wrong MPAN /MPRN is assigned to that address.	MPAN/MPRN, address, MSN (where provided) fail 'triangulation' test, resulting in a delayed or abandoned switch. Erroneous Transfer (ET) Customer has a crossed meter.	Customer continues to be billed by old Supplier because of ET. Closing bill received by customer who has not attempted to switch (ET)	No communication from new Supplier due to erroneous transfer. Opening/closing bill mismatch.

ADDRESS DATA QUALITY

3.4 Consultation Questions

Reference	Question
3.1	<p>Please provide details of the different types of address that you hold (e.g. Meter/Supply Point Address, Billing Address) and for each type of address, give details of:</p> <ul style="list-style-type: none">• what purpose it fulfils;• where it is held and in what format;• how it is validated and maintained;• if and how it is shared with other market participants; and• what role, if any, it plays in the customer switching process.
3.2	<p>(for Suppliers and price comparison/switching service providers)</p> <p>Please provide comments on the completeness and accuracy of the 'customer journey'. In doing so, please list and explain the steps you take to support each customer and market process (with particular reference to the use of addresses).</p>
3.3	<p>(for Suppliers and price comparison/switching service providers)</p> <p>Please provide details of any best practice validation and address-related controls you apply during the initiation of the switching process in order to mitigate the risk of erroneous customer transfers.</p> <p>(for Suppliers)</p> <p>Please include details of the information you request from customers (e.g. MPAN/MPRN, Meter Serial Number), when and how you perform 'triangulation' and when and how you contact customers to resolve triangulation failures or MPAN/MPRN and address ambiguities.</p>

ADDRESS DATA QUALITY

4. UNIQUE PROPERTY REFERENCE NUMBER

4.1 What is a UPRN?

A UPRN is a unique identifier for every addressable location in Great Britain. Local authorities assign UPRNs to properties as part of their statutory responsibilities. The Ordnance Survey allocates additional UPRNs for objects on the landscape, which may not otherwise have an address. Examples are car parks, mobile phone masts and churches.

Please note that references to UPRN throughout this document relate to the identifiers assigned by local authorities and used by Ordnance Survey address products (see 4.3 below). Whilst there have been alternative property references used historically, the UPRN appears to have emerged as a de facto standard, in the public sector at least, through widespread adoption.

4.2 Roles and Responsibilities

Local authorities have a statutory obligation to implement British Standard BS7666 and to maintain Local Land and Property Gazetteers (LLPG) in England and Wales and Corporate Address Gazetteers (CAG) in Scotland. Their responsibilities include providing names and numbers for every street and property and allocating UPRNs.

GeoPlace[®], a public sector limited liability partnership between the Local Government Association and Ordnance Survey, is responsible for issuing UPRNs to local authorities and ensuring that UPRNs are unique. GeoPlace also acts as a co-ordination point for inputs from the LLPGs, Ordnance Survey, Royal Mail, the Valuation Office Agency (VOA) and the Improvement Service in Scotland.

4.3 Address Products

Whilst the UPRN has value as a unique and persistent identifier, to unlock additional value (as described in 4.4 below) requires a database of address data. Ordnance Survey offers three such datasets:

- AddressBase[™] includes (in addition to the UPRN);
 - National Grid co-ordinates;
 - Classification (type of use of a property e.g. ZW00CH = church);
 - PAF address
 - Royal Mail Unique Delivery Point Reference Number (UDPRN);
- AddressBase Plus[™] adds non-PAF elements such as Local Authority geographic addresses, Ordnance Survey MasterMap Topographical Identifiers (TOIDs), multiple occupancy data and Objects Without Postal Addresses (OWPA); and
- AddressBase Premium[™] adds full lifecycle details to the current view, including provisional (pre-build) properties, historical addresses and alternative addresses.

Licensed partners can provide software that utilises the Ordnance Survey datasets.

Although the UPRN is freely available as an identifier, its value can only be unlocked with access to the associated local authority and PAF address data and OWPA data from Ordnance Survey. This suggests that, other market available products would need to either access the Ordnance Survey datasets or risk providing an inconsistent view.

ADDRESS DATA QUALITY

4.4 The UPRN Lifecycle

A UPRN is a persistent identifier. Guidance states that local authorities should enter UPRNs against a record as soon as 'Construction' begins or the local authority has carried out 'street naming and numbering', whichever is the earlier.

Throughout its lifecycle, information on the address of a property can change. This may be due to a change of name, a sub-division or aggregation of an address within a building, change of use, such as from single occupancy to multi occupancy, or the eventual demolition of the property. All of these historic, alias and provisional addresses are recorded against the same UPRN.

So for example, if a house is sub-divided into flats, the house will retain its UPRN and the flats will be allocated new UPRNs, which are then linked (through a child-parent relationship) to the UPRN of the original house. A UPRN is never reused.

The UPRN can be used to cross-reference data associated with it, such as a PAF address, local authority address or the precise property level geographical co-ordinates. If an address or postcode is changed (for example, the renaming or renumbering of buildings, flats or streets), the UPRN will persist, such that the new address can be traced to the old address and vice versa. The address products associated with the UPRN provide information about address changes every six weeks.

AddressBase allows users to link addresses to alternative addresses (e.g. 'Dunroamin' for 6 Acacia Avenue) to help avoid duplicate records.

In AddressBase, a 'Basic Land and Property Unit (BLPU) State' can be used to track the lifecycle of the property or land object, through 'planning permission granted', 'under construction', 'in use', 'unoccupied', 'no longer existing'. A UPRN is usually created before a PAF address. Local authorities first capture addresses in their LLPG or CAG from planning applications, building warrants and the statutory street naming and numbering process. For a new multiple occupancy development (such as a housing estate), the local authority may allocate a batch of UPRNs and record the geographical coordinates as a single point on the development site. At this stage the UPRNs can change location, but within six weeks of construction starting, the geographical location of the UPRN is fixed. Some local authorities wait until construction begins before assigning a UPRN. The ADWG noted that there were regional variations in the relationships between property developers and local authorities that could result in inconsistencies in the timeliness of assigning pre-build UPRNs. Furthermore, not all developers include UPRNs in initial planning applications.

4.5 Licensing Considerations

The Ordnance Survey licenses its address products to public sector organisations under the Public Sector Mapping Agreement (PSMA). The PSMA is partnership between the Department of Business, Innovation and Skills (BIS) and Ordnance Survey. Members include town and parish councils, London boroughs, NHS Health Trusts, police constabularies and government departments, including the Department of Energy and Climate Change (DECC). DECC has a 10 year agreement under the PSMA, pre-licensed with Ordnance Survey, to use its products for the purposes of government requirements. This covers the DCC for the purposes of the smart metering rollout and emergency services, but not the utility companies. The UNC Modification 0468 workgroup (see section 4.7 Current Initiatives) believes these to be 'single use' licences.

The Ordnance Survey also licenses its address products to commercial organisations via a Framework Contract (Direct Customers) (FCDC) or a Frame Contract (Partners) (FCP) licence.

There is no requirement to hold a licence to exchange UPRNs. However, recipients of a UPRN would need a licence to access the associated data held by the address database products. Licences are of the order of £174,000 per

ADDRESS DATA QUALITY

year. Depending on what solution, if any, the industry adopts, Distribution Businesses, Gas Transporters, Suppliers/Shippers and (potentially) Supplier agents might need to hold licences. Alternatively, the industry could attempt to negotiate an industry-wide licence.

By way of comparison, a PAF licence allows the originating GT/iGT or Distribution Business to pass the PAF address on three times. So a Distribution Business can pass a PAF address to a Supplier, who can pass it to a Meter Operator or Data Collector, all under the terms of the same licence.

4.6 Past Initiatives

In 2011 DECC's Smart Metering Implementation Programme (SMIP) considered the changes that would be needed to facilitate the rollout of smart metering. DECC noted in its ['Legacy Systems Changes'](#) paper (October 2011) that:

"UPRN provides a reference key to join related address records across different Gas and Electric MPAN and MPRN datasets.

Although this data item is not required directly for access control purposes, the DCC would benefit from having access to this information for its inventory management. There is a requirement for DCC to identify all smart metering equipment at a customer's premise to assist suppliers with their rollout planning especially when single fuel installations occur with time delays between the utility installations. A spatial reference is required per customer premise for each utility in order to tie together the electric MPAN and gas MPRN".

This resulted in consequential changes to both the electricity and gas arrangements to ensure that the new smart metering flows could accommodate the transfer of the UPRN between parties once the data item was available.

MRA CP 199 introduced the UPRN as a new item within the Meter Point Administration Data (MPAD) which is held by the MPAS registration systems. The UPRN is owned by Distribution Businesses, as part of the address data, but there is no mandate for Distribution Businesses to populate the data item.

The UPRN was also added, as an optional data item, to ECOES and a number of data flows, allowing the UPRN to be passed to Suppliers and to the DCC. Again, there is no mandate for Distribution Businesses to include the UPRN in flows to Suppliers and the DCC, or to populate ECOES.

UNC Modification 430 'Inclusion of data items relevant to smart metering into existing industry systems' (and iGT UNC Modification 47) added the UPRN in data flows for smart meters, unlike the electricity changes, which apply to all meters. The UPRN was included in the list of data items, which Transporters could, subject to availability, pass to the DCC on request. The Final Modification Report noted that the UPRN is 'likely to be blank in initial phases – requirement has been identified but method of population remains outstanding and subject to a DECC policy decision'. The UPRN was also added to the data enquiry service, although it is not currently populated.

4.7 Current Initiatives

E.On has raised two modifications to introduce UPRNs under the gas arrangements:

- [UNC Modification 0468 'Unique Property Reference Number \(UPRN\) Population by Gas Transporters'](#) (September 2013) requires GTs to populate the UPRN into the address data set; and
- [iGT UNC Modification 056 'Unique Property Reference Number \(UPRN\) Population by Pipeline Operators' \(October 2013\)](#) requires iGTs to include the UPRN as part of the premise address details for each supply point.

Both modifications are currently in the Working Group phase. The modifications argue that the government is introducing energy policies, which relate to a 'premise' rather than to a specific customer. There is no reliable or consistent mechanism which uniquely identifies the premises that will support future policy delivery.

ADDRESS DATA QUALITY

The modifications cite difficulties in matching addresses in different systems without a reliable unique reference. The difficulties are exacerbated by lifecycle changes to addresses, which usually start life as a plot reference and then are updated by property developers, the Post Office, local authorities and customers.

The modifications seek to introduce obligations on GTs and iGTs respectively to include the UPRN as part of the address details for each supply point. This would apply to all currently connected premises as well as all future connections. GTs and iGTs would be required to use the UPRN to help validate address data and to keep addresses up-to-date. The UNC and iGT UNC modifications do not direct the use of any particular address database product. There will be no requirements to pass the UPRN to other market participants, so avoiding any potential licensing issues for other participants.

If approved, the implementation date for the modifications will be after the implementation of Project Nexus (currently planned for October 2016).

In the electricity market, some electricity Distribution Businesses have elected to populate the UPRN in their registration databases. They are either using or considering using address database products to improve the quality and management of addresses. They have chosen to use UPRNs for network management and asset tracking purposes, and as preparation for the introduction of smart grids. There has been no voluntary uptake of UPRNs by GTs/iGTs, but some Shippers are using UPRNs for their own purposes (e.g. asset management).

4.8 Consultation Question

Reference	Question
4.1	Has Section 4 of the consultation captured the uses of the UPRN and AddressBase products, and any relevant licensing considerations?

ADDRESS DATA QUALITY

5. ADDRESS DATA QUALITY ISSUES

5.1 Impacts of poor address data quality

Ofgem presented data to the COSEG in 2013 showing that the so-called 'Big Six' Suppliers were transferring the wrong customer (erroneous transfers) in around 1% of cases. Ofgem estimated that it costs Suppliers at least £10m per annum to administer the erroneous transfer process. Most erroneous transfers have a negative impact on two customers, the one whom a Supplier transferred in error and the one whose transfer was delayed as a result. There can also be delays for a customer who wishes to change their Supplier, in the event that the customer provides their (correct) address, but this does not match the (incorrect) address held for that customer in the registration system.

Ofgem's data estimated that 71% of erroneous transfers in the electricity market and 70% in the gas market (based on sample data for 2012) were the result of selecting the incorrect MPAN/MPRN. Energy UK also presented an analysis of 39 erroneous transfers to the COSEG. 16 of 39 cases were due to manual errors (the Supplier selecting the wrong customer to transfer). "Poor industry data" accounted for a further 14 cases. This category included where there is incorrect data on central systems and when it was not clear from central data what the correct site was (e.g. naming conventions for flats) and the Supplier had selected the wrong customer. The remainder of the sample (9/39) related to incorrect data provided by broker or customers.

Suppliers, Shippers, GTs, iGTs and Distribution Businesses incur the costs of processing address queries. These include processes to resolve (and where necessary) correct inconsistent views of address data.

5.2 Types and causes of address data quality issues

The table below lists types of address data quality issue, along with some of the root causes. This information is summarised from the electricity and gas reports on data quality and incorporates additional information taken from ADWG discussions.

Issue	Description
Inconsistent gas/electricity formats	The ADWG does not believe that the use of the SAF format for electricity and (a minor variant) on the PAF format for gas presents a significant issue. Most applications present all lines of the address to the user, rather than working on a line-by-line basis. If the CRS design uses a single address for both fuels, a common format would need to be agreed.
Inconsistent gas/electricity address contents	For dual fuel customers, the Supplier should be able to resolve any inconsistencies between the electricity and gas addresses, subject to the GT/iGT or Distribution Business agreeing the change. So long as the postcodes are consistent, this should not cause significant switching issues. DECC has carried out a review of gas data and matched 96% of gas MPRNs to electricity MPANs.
Incomplete address data	Once a property has a postcode and PAF address, regular PAF updates should mitigate the risk of incomplete address data. For issues with immature (and hence skeletal) addresses see 'plot-to-postcode' issues below.
Plot-to-postcode issues	New, multi-occupancy developments (like new housing estates) are allocated plot numbers until such time as local government allocates an address and the Post Office allocates a postcode. Difficulties in linking the PAF address back to the plot number can result in a Supplier/Shipper requesting an MPAN/MPRN without being aware that one already exists. This leads to duplicate MPAN/MPRNs, which in turn can cause double billing and issues for subsequent

ADDRESS DATA QUALITY

Issue	Description
	<p>CoS events.</p> <p>Plot-to-postcode issues may be exacerbated, if the developer changes the scope at the development stage and adds, removes or renumbers plot numbers.</p>
Historic churn and timing of address updates	Delays to switching can occur if registration systems do not keep up-to-date with address changes. Change of use, merging or subdividing properties, house renumbering and street renaming can all result in customers attempting to change their Supplier with an address that isn't recognised by industry systems or isn't recognised as the customer's address by industry systems.
Crossed meters	Crossed meters result from meters being matched incorrectly to customer addresses and MPAN/MPRNs. In blocks of flats, meters can be installed in a shared room which is physically removed from the customers' flats. If a customer's MPRN/MPAN is associated with the wrong meter, the customer's bills will be based on a neighbour's consumption. Crossed meters occur in relatively low numbers but can be difficult to resolve, especially when they impact multiple customers, Suppliers and Meter Operators. The MRA Issue Resolution Expert Group (IREG) is reviewing the process to resolve crossed meters, following a recommendation in the Electricity Data Quality Report.
Use of multiple addresses	Industry parties have different requirements for addresses. GTs, iGTs and Distribution Businesses need the address of the physical connection to the premise. Meter Operators and Data Collectors need to know where to find the meter. Suppliers need to know where the customer lives and where to send communications. If parties request a change to the address details to reflect their own requirements, this can lead to errors in central systems. If a customer provides a 'vanity' address (for example 'SeaView', instead of a house number), this could cause rejections when validating Data Flows, which can then cause delays in the switching process. Any non-PAF addresses can vary between systems.
Poor quality or ambiguous data provided by the customer or switching site	A customer using a switching site typically provides their postcode to obtain price comparison data. To obtain more detail about alternative Supplier tariffs and to request a switch, the customer is typically asked to select their address from a list of properties associated with their postcode. The switching site may also be asked to provide their MPAN/MPRN. The customer may select the wrong address if the addresses on the list are similar. These would tend to be the PAF addresses, so any ambiguity wouldn't be the result of industry address data quality. Suppliers will validate the data sent by the switching site and (where supplied) match the MPAN/MPRN and address using industry registration data. Validation failures can result in the switch not taking place or in erroneous transfers. Customers can also unwittingly request a transfer, if they misunderstand the switching site process. They can also submit other people's postcodes for the purposes of comparing prices and inadvertently proceed to the point of requesting a transfer. Customers requesting a transfer directly with a Supplier may provide an incorrect MPAN/MPRN or address.
Supplier address updates	Suppliers can propose address changes in good faith, when requested by a customer, without being aware of the impact on adjacent properties (which they

ADDRESS DATA QUALITY

Issue	Description
	don't supply). In doing so, they may introduce duplication or ambiguity, which may also go unchecked by the Transporter or Distribution Business applying the change.

5.3 Consultation Questions

Reference	Question
5.1	<p>What are the most common causes of poor address data quality? And what are the most common effects of poor address data quality on your business processes?</p> <p>Please focus on those problems that give rise to (or could give rise to) erroneous transfers, present barriers to customer switching or otherwise adversely affect the switching (or billing) experience for the consumer. Please also include estimates of the costs you incur in processing address queries.</p>
5.2	<p>Please provide any analysis (quantitative and/or qualitative) you have to support the relative impacts of the problems described in your answer to question 5.1.</p> <p>For example, the number (or %) of erroneous transfers per month, along with any categorisation/quantification of causes (inaccurate or ambiguous address in industry systems, customer providing incorrect or ambiguous address etc).</p>
5.3	<p>Please provide details of any controls that you have applied successfully to reduce the extent of the problems described in your answer to question 5.1.</p>

ADDRESS DATA QUALITY

6. SOLUTION OPTIONS

6.1 Introduction

This section considers potential changes that industry could make in the shorter term, pending the proposed implementation of the CRS. Section 7 seeks further views on the potential benefits of address harmonisation and/or the use of UPRNs in the context of Ofgem's 'Moving to Reliable Next-Day Switching' programme and the introduction of the CRS.

The two options described below are incremental rather than alternatives. Option A describes the use of the UPRN and associated address database products to cleanse the existing registration data and provide better address lifecycle management on an enduring basis. Option B extends option A to use the UPRN as an industry wide identifier to associate electricity MPANs and gas MPRNs.

The ADWG discussed a number of other options, as described in section 6.4. Options such as labelling the Meter Point/Supply Point (ECV) are stand alone and could be implemented independently of Options A and B.

6.2 Option A

Option A is to progress and implement the two gas modifications (UNC Modification 0468 and iGT UNC Modification 056) and to raise an MRA Change Proposal to progress and implement a similar change for the electricity market.

The requirements would be on GTs, iGTs and Distribution Businesses to populate the UPRN for all MPRN/MPANs (new and existing). Like the gas modifications, the MRA Change Proposal would not specify the use of a particular address database product. The use of such a product would, however, be implied by the need to allocate UPRNs accurately to existing Metering Points.

There would be no requirement to make the UPRN available to other industry participants. The objective would be to improve the quality of address data in a number of ways:

- Gas and electricity addresses should match, if both derived correctly from the same UPRN;
- Registration data should be more up-to-date in terms of reflecting plot-to-postcode changes, the merging and splitting of properties, street renumbering and renaming etc;
- Registration data would be more accurate in terms of the relationship between units of occupation and parent sites; and
- Registration data would be easier to maintain for sites without postal addresses (such as mobile phone masts), which are not included in the PAF dataset.

GTs, iGTs and Distribution Businesses would need to use address database product to realise the above benefits. As part of the initial population of UPRNs, they would need to resolve any ambiguities in existing addresses in order to allocate the correct UPRN. As such, adopting UPRNs brings the additional benefit of enforcing initial data cleansing (although, conversely, it requires reasonably "clean" address data to be feasible).

Under Option A, the switching process will use addresses rather than UPRNs. Switching by address should be more robust, if the gas and electricity addresses have been cleansed using the UPRN and associated address database product. There would also be benefits for registration services in terms of reducing the number of address queries and/or the time spent resolving them.

The ADWG noted that UPRNs are likely to be less reliable (or be allocated less reliably) in atypical circumstances (particularly in the pre-build stages). This carries the risk that categories of site that are currently susceptible to erroneous transfers, could be the same sites for which UPRN allocation is less certain.

ADDRESS DATA QUALITY

6.3 Option B

Option B builds upon Option A by introducing requirements on registration services to share the UPRN with other market participants. This option would need additional UNC and iGT UNC Modifications and an MRA CP to mandate the transfer of the UPRN using the already-modified industry data flows. In the gas market, only those flows for smart meters include the UPRN, so there may be a need to extend the requirement to flows for legacy meters.

Although Option A should deliver improvements to address data quality in the gas and electricity registration services, it will do so independently within the two markets. For this reason, the dual fuel benefits of Option A would be limited. For example, having both the UPRN and address for both fuels, would allow a Supplier/Shipper to identify whether the Distribution Business and Gas Transporter had assigned the UPRN consistently.

The UPRN makes it easier to identify when different users are referring to the same property. It facilitates a view of a customer premise across multiple users and systems. Making the UPRN available to Suppliers could have benefits in terms of matching customer premises across multiple applications and schemes. These might include the smart metering rollout, the Feed In Tariff Scheme (FITS), Green Deal and Theft Risk Assessment Service (TRAS), as well as any future government schemes. However, in order to realise these benefits, all relevant databases would need to hold the UPRN.

Where the information is available, Suppliers use 'triangulation' to ensure they have correctly identified the MPAN or MPRN to be switched. This is a comparison of the MPAN/MPRN, address and Meter Serial Number (MSN). A UPRN would offer a further control. The ADWG noted that it would not be reasonable to expect customers to have to know and quote their UPRN as part of the switching process. However, there could be an option for the customer to provide a UPRN, where known. Alternatively, presenting the UPRN in a 'pick list' of address matches, could help to resolve ambiguities, but the customer would need to know their UPRN and the switching site would need access to UPRN data. A UPRN could go some way towards mitigating the risk that a switching site presents an address, which doesn't match industry registration system address records. In this respect, the UPRN would arguably serve the same purpose as an MPAN/MPRN. The ADWG questioned the value of adding another long numeric code into the mix (UPRNs may contain up to 12 digits, MPANs 13 digits and MPRNs 10 digits). Unlike the MPAN and MPRN, the UPRN does not include a check digit.

The ADWG has only considered Option B at a high level. If the consultation responses indicate a positive high level business case for including the UPRN in the switching process itself, further work will be required to agree and specify how the UPRN should be used and how this should be incorporated within electricity and gas governance. It may be appropriate to consider the use of the UPRN within the switching process itself as part of Ofgem's next-day switching programme, rather than do so in the shorter term.

The UPRN will have value to Suppliers as a shared, unique and persistent key. However, Suppliers will not have access to the associated address data without the need for a licence to use an address database product. Without this licence, they would need to take the UPRNs from the GT, iGT and Distribution Business on trust. If the GT/iGT and Distribution Business make UPRN changes at different times, a dual fuel Supplier might not be able to make sense of the change without access to an address database product. Similarly, GTs/iGTs and Distribution Businesses could allocate UPRNs to an incorrect address. For Suppliers/Shippers to successfully validate and challenge addresses within the registration services, it would be more efficient for them to have access to the same address data sources as the GTs, iGTs and Distribution Businesses themselves. If all Suppliers and Shippers need access to address database products (in order to realise the full benefits of UPRNs), there will be significant licencing cost implications. This would be particularly acute, if licencing is on a per-organisation basis. Small players and new entrants could be impacted disproportionately.

6.4 Other Options

The ADWG considered using an alternative key to the UPRN to associate the electricity MPAN and gas MPRN. Suppliers could use this as a reference in customer billing. However, it noted that the benefit of the UPRN was not

ADDRESS DATA QUALITY

just as a common identifier, but also as a key to unlock spatial data from a number of sources – including local authorities, the Royal Mail and Ordnance Survey.

The ADWG also discussed whether the switching process could make better use of the MPAN and MPRN, for example by making it clearer on customer statements. This could be a viable alternative to using the UPRN within the switching process.

One of the recommendations of the 'Cross Gas Codes Final Report on Industry Data Quality, Ownership and Governance'² was to strengthen the current requirement to label ECVs in the Institution of Gas Engineers and Managers (IGEM) Standard TD/4. This would help to resolve crossed meters (particularly at multi-occupancy sites). The 'Electricity Data Quality Report'² also recommended further analysis of the costs and benefits of mandatory labelling of the Meter Point (cut-out) with the MPAN. The consultation seeks views on the proposals.

The group also considered whether registration services could carry out an address data cleansing exercise without the need for a UPRN (for example, an 'offline' comparison between gas and electricity data). Any data cleansing exercise would need a view of a 'correct address' to cleanse to. By associating local authority and PAF addresses using a persistent key, the UPRN (and associated address database) offers a target for cleansing to. However, this would not necessarily preclude 'offline' data cleansing using address database products other than Ordnance Survey's AddressBase.

The AWG also noted that the installation visits during the smart metering rollout would present an opportunity to check MPAN/MPRN and address data. Installers will need to carry out checks to ensure that the MPAN/MPRN associated with the smart meter at a customer premises is the correct MPAN/MPRN for that customer. The challenge will be to ensure that when installers discover inconsistencies in existing registration data, that Suppliers ensure that the registration data is corrected.

6.5 Theft Risk Assessment Service

In 2014, Ofgem made directions under the electricity and gas supply licences to introduce a new, dual-fuel TRAS. The directive requires electricity and gas suppliers to implement a central service to assess the risk of theft at consumer premises and to help target investigations of theft.

Industry has appointed Electralink (under SPAA and Distribution Connection and Use of System Agreement (DCUSA) governance) as dual fuel energy TRAS Project and Procurement Manager. Experian plc has been appointed as single Energy TRAS provider. Experian will develop a dual fuel database, including address data. Suppliers will provide customer address data, which the technical provider will then cleanse, to create a consolidated dual fuel database. The TRAS will use the PAF as its reference point for standardised addresses and a unique Location Identity Number (internal to Experian) for each property.

By the time that the CRS is developed, there could be two dual fuel databases containing address data, the TRAS and the CRS. The focus of the TRAS Project is on implementation, so it is too early to consider whether market participants could use TRAS data to support address data cleansing and the transition to the CRS. Industry would need to consider further issues such as data ownership, data protection and development timelines and costs. Statistics on the quality of address data, derived from the TRAS population exercise, could help inform the development of the CRS.

6.6 Consultation Questions

Reference	Question
6.1	Please provide your views of the (high-level) costs, benefits, impacts and risks of introducing a mandate for Gas Transporters, Independent Gas Transporters and electricity distributors to populate registration systems with UPRNs for new connections and all existing Supply Points/Meter

ADDRESS DATA QUALITY

	<p>Points (Option A).</p> <p>Please indicate the extent to which you consider Option A will address the data quality issues described in Section 5 and your response to question 5.1.</p>
6.2	<p>Please provide your views of the (high-level) incremental costs, benefits, impacts and risks (i.e. over-and-above those described in your response to question 6.1) of extending the use of UPRNs to the wider industry (Suppliers, agents and, potentially, switching sites) (Option B). Please include any views on the use of the UPRN in the switching process itself.</p> <p>Please indicate the extent to which you consider Option B will address the data quality issues described in Section 5 and your response to question 5.1.</p>
6.3	<p>What other solutions do you believe there are for improving the quality of industry address data? Please provide details, including a high-level view of the costs, impacts and benefits and supporting rationale.</p> <p>Please indicate the extent to which you consider these alternative solutions will address the data quality issues described in Section 5 and your response to question 5.1. In particular, please provide any views on the benefits of labelling Meter Points/Supply Points (ECV) with the MPAN/MPRN.</p>
6.4	<p>What is your preferred solution (of those referenced in questions 6.1, 6.2 and 6.3) and why?</p>

ADDRESS DATA QUALITY

7. CENTRALISED REGISTRATION SERVICE

7.1 UPRNs and the CRS

Ofgem has set out the Target Operating Model (TOM)⁶ for its work programme to implement reliable next-day switching on a CRS, governed by the SEC and managed and operated by the DCC. Ofgem proposes to lead a programme of work, starting in November this year, to deliver these policy proposals for consumers by 2019.

In order to control access to smart meters by registered suppliers, the DCC will hold registration data from 2016 onwards. The DCC will populate its registration data by daily updates from the current electricity and gas registration systems. The electricity and gas data flows which provide these updates allow for the inclusion of both address data and UPRNs. The DCC will hold separate records of the addresses associated with the electricity MPAN and gas MPRN. This address data will allow single fuel Suppliers to query whether the 'other Supplier' has already installed a communications hub at a customer premises.

As part of the CRS design, Ofgem and the DCC will need to consider whether the CRS continues, as at go-live, to hold separate electricity and gas addresses (associated by a common network address and/or UPRN, or other identifier), or to combine them into a single address per premises. The latter would seem to align better with Ofgem's aspiration to "simplify and harmonise the gas and electricity switching arrangements where possible". There may, though, be a small number of cases, at large and/or rural locations, where the electricity and gas supply points for the same customer are geographically distinct, with separate addresses and UPRNs.

Holding a single address would reduce the burden of having to maintain what is effectively the same address, in two distinct utility markets. There would, of course, be governance considerations in terms of the shared maintenance responsibilities across the electricity and gas markets. There may be a need for a joint cross-fuel new connections process setting out the respective Distribution Business and GT/IGT responsibilities for initiating (and subsequently amending) the CRS address record. There would also need to be new rules for the processing and communication of Supplier-led address changes to cater for premises with separate gas and electricity Suppliers.

The benefits case for mandating the use of the UPRN depends to some extent on what the CRS solution will look like. If the initial population of the CRS needs UPRNs to link electricity MPANs and gas MPRNs, then early population of the UPRN in electricity and gas registration services could facilitate an efficient and more effective transition to the CRS. However, as the target design of the CRS and transition arrangements are, as yet, undefined, it is possibly too early to know whether the pre-population of UPRNs in the existing gas and electricity registrations systems will be of benefit to the CRS. There may, however, be enduring benefits of using the UPRN, that apply equally to the CRS and the existing registration systems. For example, the UPRN could provide value in the new connections process, when the MPAN and MPRN are first created.

7.2 Network Addresses

The communications hub network address will provide a link between all devices on the same Home Area Network (HAN). The HAN may relate to a single premise (with a single UPRN) or cover more than one premise at multiple occupancy locations.

The UPRN would provide an additional spatial reference to link the electricity MPAN and gas MPRN. It would give the DCC the opportunity to validate that for the majority of premises, the MPAN and MPRN associated with the smart electricity meter(s) and smart gas meter respectively sharing a communications hub, also have the same UPRN. This would help avoid crossed meters.

⁶ [Moving to reliable next-day switching: Consultation on Target Operating Model and Delivery Approach](#) (10 February 2015)

ADDRESS DATA QUALITY

7.3 Consultation Questions

Reference	Question
7.1	<p>Please provide any views on how best to manage address data within the proposed Centralised Registration Service in order to realise faster and more reliable customer switching.</p> <p>Please provide views on the options of holding a) a single address, b) separate unlinked addresses for gas and electricity and c) separate gas and electricity addresses linked by a UPRN or alternative identifier.</p>
7.2	<p>To what extent would a common address format support the options in question 7.1? Which format (PAF, SAF or other) would be most beneficial and why?</p>
7.3	<p>Ofgem's 'Moving to reliable next-day switching' Target Operating Model (TOM) paragraph 7.09 proposes that "a gaining supplier will be able to send a single transfer request to the CRS to coordinate the switching of both gas and electricity supply points". To what extent would a UPRN and/or common address format support this aim?</p>
7.4	<p>Please provide views on the potential benefits of the UPRN as part of the new connections process (i.e. creating linked MPAN and MPRNs within the CRS) and the process and governance implications.</p>
7.5	<p>Please provide views on how well the solution options in Section 6 support the harmonisation of electricity and gas address data within a Centralised Registration Service. How will the solution options support a) the establishment of the CRS and b) the enduring operation of the CRS?</p> <p>What are the benefits and risks of implementing one of the solutions in Section 6 ahead of the CRS, as opposed to incorporating such changes as part of the Next Day Switching Programme?</p>

ADDRESS DATA QUALITY

Appendix A Consultation Questions

Attachment 1 includes the consultation questions in Word format. Please use Attachment 1 as a template for your responses to the consultation.

Section 3: Current processes and customer switching journey

Question 3.1

Please provide details of the different types of address that you hold (e.g. Meter/Supply Point Address, Billing Address) and for each type of address, give details of:

- what purpose it fulfils;
- where it is held and in what format;
- how it is validated and maintained;
- if and how it is shared with other market participants; and
- what role, if any, it plays in the customer switching process.

Question 3.2

(for Suppliers and price comparison/switching service providers)

Please provide comments on the completeness and accuracy of the 'customer journey'. In doing so, please list and explain the steps you take to support each customer and market process (with particular reference to the use of addresses).

Question 3.3

(for Suppliers and price comparison/switching service providers)

Please provide details of any best practice validation and address-related controls you apply during the initiation of the switching process in order to mitigate the risk of erroneous customer transfers.

(for Suppliers)

Please include details of the information you request from customers (e.g. MPAN/MPRN, Meter Serial Number), when and how you perform 'triangulation' and when and how you contact customers to resolve triangulation failures or MPAN/MPRN and address ambiguities.

Section 4: Unique Property Reference Number

Question 4.1

Has Section 4 of the consultation captured the uses of the UPRN and AddressBase products, and any relevant licensing considerations?

Section 5: Address data quality issues

Question 5.1

What are the most common causes of poor address data quality? And what are the most common effects of poor address data quality on your business processes?

Please focus on those problems that give rise to (or could give rise to) erroneous transfers, present barriers to customer switching or otherwise adversely affect the switching (or billing) experience for the consumer. Please also include estimates of the costs you incur in processing address queries.

Question 5.2:

ADDRESS DATA QUALITY

Please provide any analysis (quantitative and/or qualitative) you have to support the relative impacts of the problems described in your answer to question 5.1.

For example, the number (or %) of erroneous transfers per month, along with any categorisation/quantification of causes (inaccurate or ambiguous address in industry systems, customer providing incorrect or ambiguous address etc).

Question 5.3:

Please provide details of any controls that you have applied successfully to reduce the extent of the problems described in your answer to question 5.1.

Section 6: Solution Options

Question 6.1

Please provide your views of the (high-level) costs, benefits, impacts and risks of introducing a mandate for Gas Transporters, Independent Gas Transporters and electricity distributors to populate registration systems with UPRNs for new connections and all existing Supply Points/Meter Points (Option A).

Please indicate the extent to which you consider Option A will address the data quality issues described in Section 5 and your response to question 5.1.

Question 6.2

Please provide your views of the (high-level) incremental costs, benefits, impacts and risks (i.e. over-and-above those described in your response to question 6.1) of extending the use of UPRNs to the wider industry (Suppliers, agents and, potentially, switching sites) (Option B). Please include any views on the use of the UPRN in the switching process itself.

Please indicate the extent to which you consider Option B will address the data quality issues described in Section 5 and your response to question 5.1.

Question 6.3

What other solutions do you believe there are for improving the quality of industry address data? Please provide details, including a high-level view of the costs, impacts and benefits and supporting rationale.

Please indicate the extent to which you consider these alternative solutions will address the data quality issues described in Section 5 and your response to question 5.1. In particular, please provide any views on the benefits of labelling Meter Points/Supply Points (ECV) with the MPAN/MPRN.

Question 6.4

What is your preferred solution (of those referenced in questions 6.1, 6.2 and 6.3) and why?

Section 7: Centralised Registration Service

Question 7.1

Please provide any views on how best to manage address data within the proposed Centralised Registration Service in order to realise faster and more reliable customer switching.

Please provide views on the options of holding a) a single address, b) separate unlinked addresses for gas and electricity and c) separate gas and electricity addresses linked by a UPRN or alternative identifier.

Question 7.2

To what extent would a common address format support the options in question 7.1? Which format (PAF, SAF or other) would be most beneficial and why?

ADDRESS DATA QUALITY

Question 7.3

Ofgem's 'Moving to reliable next-day switching' Target Operating Model (TOM) paragraph 7.09 proposes that "a gaining supplier will be able to send a single transfer request to the CRS to coordinate the switching of both gas and electricity supply points". To what extent would a UPRN and/or common address format support this aim?

Question 7.4

Please provide views on the potential benefits of the UPRN as part of the new connections process (i.e. creating linked MPAN and MPRNs within the CRS) and the process and governance implications.

Question 7.5

Please provide views on how well the solution options in Section 6 support the harmonisation of electricity and gas address data within a Centralised Registration Service. How will the solution options support a) the establishment of the CRS and b) the enduring operation of the CRS?

What are the benefits and risks of implementing one of the solutions in Section 6 ahead of the CRS, as opposed to incorporating such changes as part of the Next Day Switching Programme?

General

Please provide any further comments on the content of the consultation.

ADDRESS DATA QUALITY

Appendix B Address Data Working Group Members

Group Member	Organisation (and role)	17/06/15	22/07/15	23/09/15
Justin Andrews	ELEXON (Meeting Chair)	✓	✓	
Nick Good	Gemserv (Technical Secretary)	✓	✓	
Adam Iles	British Gas	✓	✓	
Oorlagh Chapman	British Gas	✓	✓	
Conrad Steel	Citizens Advice Bureau	✓	✓	
Simon Quayle	Data & Communications Company	✗	✓	
Colette Baldwin	E.On	✗	✓	
Paul Gath	Electralink	✓	✗	
Sarah Jones	Electralink (SPAA Advisor)	✓	✗	
Ben Haworth	Electralink	✗	✓	
Jon Spence	ELEXON (BSC Advisor)	✓	✓	
Katy Binch	ES Pipelines, Association of IGTs	✓	✓	
Jeremy Guard	First Utility	✗	✓	
Glenn Sheern	Gemserv (MRA Advisor)	✓	✗	
Andy Knowles	Gemserv (MRA Advisor)	✗	✓	
Andy Clasper	National Grid	✓	✗	
Maitrayee Bhomwick-Jewkes	Npower	✗	✓	
Ciaran MacCann	Ofgem	✓	✓	
Peat Allan	Ordnance Survey	✓	✓	
Alex Ross-Shaw	Northern Gas Networks	✓	✗	
David Mitchell	Scottish Gas Networks	✓	✓	
Victoria Burkett	Scottish and Southern Energy	✓	✗	
Anne Jackson	Scottish and Southern Energy	✗	✓	
Jonathan Purdy	UK Power Networks	✗	✓	
Jane Jones	Western Power Distribution	✗	✓	
David Addison	Xoserve	✓	✓	
Emma Lyndon	Xoserve	✗	✓	

ADDRESS DATA QUALITY

Appendix C Glossary

Abbreviation / Term	Name / Definition
ADWG	Address Data Working Group. A cross fuel group tasked with reporting to Ofgem on options for improving address data quality in the context of the proposed CRS.
BLPU	Basic Land and Property Unit. An area of land, property or structure of fixed location having uniform occupation, ownership or function.
BSC	Balancing and Settlement Code
CAG	Corporate Address Gazetteer
COSEG	Change of Supplier Expert Group
CRS	Centralised Registration Service
DCC	Data and Communications Company
DCUSA	Distribution Connection and Use of System Agreement
DQWG	Data Quality Working Groups. Two cross-code groups convened in 2014 to report to Ofgem on data quality in the gas and electricity markets respectively.
ECOES	Electricity Central Online Enquiry Service
ECV	Emergency Control Valve
ET	Erroneous Transfer
GT	Gas Transporter
HAN	Home Area Network
iGT	Independent Gas Transporter
LLPG	Local Land and Property Gazetteer
MEC	MRA Executive Committee
MPAD	Meter Point Administration Data
MPAS	Meter Point Administration Service
MRA	Master Registration Agreement
MSN	Meter Serial Number
OWPA	Objects Without Postal Addresses
PAF	Postcode Address File [®] . Also defined in the MRA as Post Office Address Format to distinguish the address structure from the licensed data file.
PSMA	Public Sector Mapping Agreement
SAF	Standard Address Format
SCOGES	Single Centralised On-Line Gas Enquiry Service (SCOGES) currently provided on behalf of all Gas Transporters by xoserve.

ADDRESS DATA QUALITY

Abbreviation / Term	Name / Definition
SPAA	Supply Point Administration Agreement
TOM	Target Operating Model
TPI	Third Party Intermediary
TRAS	Theft Risk Assessment Service
UDPRN	Unique Delivery Point Reference Number. This is an 8-digit code that can be used instead of the current address keys on PAF. A new UDPRN is assigned to each new delivery point added to the PAF. It is unlikely to be used when an address expires.
UNC	Uniform Network Code
UPRN	Unique Property Reference Number
VOA	Valuation Office Agency

ADDRESS DATA QUALITY

Appendix D Address Formats

The table below shows the SAF and PAF address formats and highlights the difference between the two formats.

PAF			SAF				
Element	Field Name	Max length	Line	Data Item	Description	length	Notes
Organisation	Organisation Name	60	1	Metering Point Address Line 1	Free Text	40	Contains 'Unmetered Supply' where relevant. May contain an organisation name.
	Department Name	60					
Premises	Sub building name	30	2	Metering Point Address Line 2	Sub-building Name/Number	40	
	Building Name	50	3	Metering Point Address Line 3	Building Name/Number	40	SAF Address Line 3 concatenates two PAF fields in the form [building name];[building number]
	Building Number	4					
Thoroughfare	Dependent Thoroughfare Name	60	4	Metering Point Address Line 4	Dependent Thoroughfare	40	
	Dependent Thoroughfare Descriptor	20	5	Metering Point Address Line 5	Thoroughfare	40	
	Thoroughfare Name	60					
	Thoroughfare Descriptor	20					
Locality	Double Dependent Locality (small villages)	35	6	Metering Point Address Line 6	Double Dependent Locality	40	
	Dependent Locality	35	7	Metering Point Address Line	Dependent Locality	40	

ADDRESS DATA QUALITY

PAF			SAF				
Element	Field Name	Max length	Line	Data Item	Description	length	Notes
				7			
	Post Town	30	8	Metering Point Address Line 8	Locality (Post Town)	40	
			9	Metering Point Address Line 9	County	40	An optional non-PAF element
Postcode	Postcode	7	10	Meter Point Postcode	Postcode	10	
PO Box	PO Box	6					